2018 Annual Long-Term Monitoring Report
Area C (PICA-206) Groundwater

Picatinny Arsenal, New Jersey

Prepared for

Prepared by

EA Engineering, Science, and Technology, Inc., PBC
Contract No. W91ZLK-13-D-0004-0009

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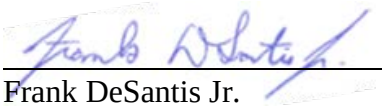
U.S. Army Environmental Command

Prepared by

EA Engineering, Science, and Technology, Inc., PBC
225 Schilling Circle, Suite 400
Hunt Valley, Maryland 21031
(410) 584-7000



31 October 2018
Frank DeSantis Jr. — Date
Project Manager

31 October 2018
James Costello — Date
Deputy Program Manager

October 2018
EA Project No. 62686.09

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ACRONYMS AND ABBREVIATIONS

µg/L	Micrograms per Liter
µm	Micron
%	Percent
AEDB-R	Army Environmental Database-Restoration
ARAR	Applicable or Relevant and Appropriate Requirement
bgs	Below Ground Surface
COC	Contaminant of Concern
DO	Dissolved Oxygen
EA	EA Engineering, Science, and Technology, Inc., PBC
ft/ft	Foot per Foot
H	Hypotheses
IRP	Installation Restoration Program
LLC	Limited Liability Company
LOC	Level of Concern
MCL	Maximum Contaminant Level
MDL	Method Detection Limit
mg/L	Milligrams per Liter
msl	Mean Sea Level
mV	Millivolt
ND	Non-detect
NJDEP	New Jersey Department of Environmental Protection
ORP	Oxidation Reduction Potential
PICA	Picatinny Arsenal
QAPP	Quality Assurance Project Plan
R&D	Research and Development
RDX	Hexahydro-1,3,5-trinitro-1,3,5-triazine
Redox	Reduction-oxidation
Shaw	Shaw Environmental, Inc.

UCL	Upper Confidence Limit
USACE	United States Army Corps of Engineers
USAEC	United States Army Environmental Command
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VOC	Volatile Organic Compound

1. INTRODUCTION

1.1 PURPOSE

EA Engineering, Science, and Technology, Inc., PBC (EA) has been retained by the United States Army Environmental Command (USAEC) to perform Installation Restoration Program (IRP) activities at Picatinny Arsenal (PICA), located in Morris County, New Jersey (**Figure 1-1**). This work is being performed under the Environmental Remediation Multiple Award Indefinite Delivery/Indefinite Quantity Contract W91ZLK-13-D-0004 Delivery Order 0009, and is overseen by the USAEC and the United States Army Corps of Engineers (USACE) for PICA, under approval by the New Jersey Department of Environmental Protection (NJDEP) and United States Environmental Protection Agency (USEPA) Region 2. Field activities associated with this contract are completed by EA's subcontractor Sovereign Consulting, Inc.

Area C groundwater is designated as Army Environmental Database-Restoration (AEDB-R) Site PICA-206. The long-term monitoring actions for Area C are being performed in accordance with a Record of Decision signed by the USEPA on 1 September 2009 (USEPA 2009). The selected remedies for Area C include:

- Establish land use controls
- Use the existing Classification Exception Area/Well Restriction Area that is in place throughout PICA
- Establish and implement a long-term monitoring program
- Develop an exit strategy to define triggers for reevaluating, reducing, or eliminating groundwater monitoring
- Perform Comprehensive Environmental Response, Compensation, and Liability Act 5-year reviews.

The objective of the groundwater remedy is to ensure protectiveness of human health and the environment through monitoring a network of wells in Area C, including wells along the downgradient southern boundary of PICA. All sampling rounds performed to date are listed in **Table 1-1**. In accordance with the approved long-term monitoring plan, groundwater samples were collected for chemical analysis semi-annually for a minimum of 2 years. To evaluate temporal changes or seasonal fluctuations, the first four semi-annual sampling events were conducted seasonally. During Year One, 2010, the sampling events were conducted in winter (January/February) and in summer (July/August). For additional information, refer to the Round A and Round B long-term monitoring reports (Shaw Environmental, Inc. [Shaw] 2010a and 2010b, respectively), which are in the administrative record for PICA.

During Year Two, 2011, the sampling events were conducted in spring (April) and fall (October/November). Refer to the Round C and Round D long-term monitoring reports (WESTON 2011 and 2012, respectively), available in the administrative record for PICA for

additional information regarding these monitoring events. Note that the first statistical evaluation was conducted after the fourth monitoring event in accordance with the approved long-term monitoring plan.

This document presents a summary and interpretation of groundwater data collected during July 2018. A statistical evaluation of the long-term monitoring data is included in this report, as discussed in Section 6.

1.2 INSTALLATION SETTING

PICA, which covers approximately 5,801 acres, is located in Morris County, New Jersey, approximately 45 miles west of New York City, in the Highlands Region. The Installation is bordered by numerous major highways including State Route 15, Interstate 80, and U.S. Route 46.

PICA was initially established in the late 1800s as a storage and powder depot. Production activities began in the 1890s, and by the beginning of World War I, PICA was manufacturing smokeless powder and munitions of various sizes. By the end of the war, PICA had begun new operations, including the melt-loading of projectiles; the manufacture of pyrotechnic signals and flares; the experimental manufacture of modern propellants, high explosives, fuses, and metal components; and the loading of trinitrotoluene and amatol into bombs and projectiles.

During World War II, PICA produced artillery ammunition, bombs, high explosives, pyrotechnics, and other ordnance. After World War II, PICA's primary role was the research and engineering of new ordnance; however, PICA resumed the production and development of explosives, ammunition, and mine systems during the Korean and Vietnam conflicts. In recent years, PICA's mission has shifted to conducting and managing research and development (R&D), lifecycle engineering, and support of other military weapons and weapon systems.

It was determined, under the Base Realignment and Closure process in 2005, that PICA will remain open and will be realigned, gaining new missions. PICA's primary mission is to become an integrated weapons and armaments specialty site for guns and ammunition. To help support this mission, PICA is the site of the Armaments Research, Development and Engineering Center, the mission of which is to conduct and manage R&D for all assigned weapons systems. PICA has also established several partnerships with academia and industry and has involved them in the R&D process.

1.3 AREA C SETTING AND HISTORY

Area C is approximately 126 acres and is located in the southwestern corner of PICA, near the ridge that forms the eastern boundary of the arsenal. **Figure 1-1** depicts the location of Area C (PICA-206) groundwater. As shown on **Figure 1-2**, Area C is bounded by Green Pond Brook to the northwest, Route 15 to the southwest, and a steep hillside running adjacent to Parker Road to the east. There are five PICA sites located within Area C: Site 19 (Pyrotechnic Demonstration Area), Site 25/26 (Former Sanitary Landfill/Dredge Pile), Site 163 (Baseball Fields), and

Site 180 (Waste Burial Area). Groundwater at these Sites is included in the Area C long-term monitoring program.

Two additional sites, Site 34 (Burning Ground) and a Former Skeet Range, have also been identified in this area (Figure 1-2). However, these sites are being investigated or monitored separately and are not considered part of Area C. Site 34 (Burning Ground) has its own groundwater monitoring plan, and investigations are currently ongoing at the Former Skeet Range (AEDB-R Number CC-057).

Numerous environmental investigations, including groundwater monitoring, have been conducted within Area C and along the southern boundary of PICA to evaluate the nature and extent of groundwater contamination throughout this area. These investigations revealed sporadic, low-concentration detections of volatile organic compounds (VOCs), dioxins/furans, explosives, and naturally occurring metals such as iron and manganese. Two metals, arsenic and lead, were found to be more widespread within Area C; however, their source was not identified. Results of the prior investigations were used during the feasibility study phase to develop remedial action objectives, identify contaminants of concern (COCs), and evaluate remedial alternatives. The COCs identified within Area C groundwater are vinyl chloride, arsenic, and lead. COCs were identified by comparing groundwater concentrations to the Levels of Concern (LOCs) selected for PICA. The LOCs for Area C are the more stringent of the following:

- Federal Maximum Contaminant Levels (MCLs)
- NJDEP MCLs
- NJDEP Groundwater Quality Criteria
- Any non-zero federal MCL goal.

If a chemical is not listed under the above-referenced promulgated standards, the LOC is taken from the lowest of the USEPA Regional Screening Level Resident Tapwater Table (USEPA 2015) and the USEPA Table of Regulated Drinking Water Contaminants (USEPA 2016a).

1.4 SCOPE OF LONG-TERM GROUNDWATER MONITORING

The scope of work for the long-term monitoring, as described in the long-term monitoring plan, includes the sampling and monitoring of 4 monitoring wells within Area C, 16 monitoring wells at the southern boundary of PICA (referred to as southern boundary wells), and 2 upgradient monitoring wells, as follows:

- Area C monitoring wells
  - MW25-8
  - DM19-1
  - DM19-2
  - DM25-2.

- Southern boundary monitoring wells
  - SB1-1
  - SB1-2
  - SB1-3
  - SB1-5
  - SB1-6
  - SB1-7
  - SB2-1A
  - SB2-2
  - SB2-3
  - SB3-1B
  - SB3-2
  - SB3-3
  - SB4-1
  - SB4-2
  - SB4-3
  - SB4-4.

- Upgradient monitoring wells
  - MW25-6A
  - MW25-6B.

As listed above, there are four Area C monitoring wells still being sampled. Vinyl chloride and arsenic are the only COCs remaining in the Area C long-term monitoring program.

Note that the number of the above referenced wells being sampled could change after each round of samples is conducted. Refer to **Figure 1-3** for additional information. While vinyl chloride and arsenic have been identified as the remaining COCs for Area C groundwater, the long-term monitoring plan specified that the monitoring of a subset of Area C wells also be conducted for those constituents that historically exceeded the groundwater LOCs. These wells include the 16 southern boundary wells, which are monitored for a larger set of parameters because these wells provide an early warning if contaminated groundwater appears to be migrating off-post. Analyses for the southern boundary wells included VOCs, metals, and explosives; the results are discussed in Section 5.

The monitoring activities summarized in this annual report were performed during one annual event that occurred during July 2018. The July event occurred from 17-18 and 30 July. Twenty-two wells were sampled, including 4 monitoring wells in Area C (MW25-8, DM19-1, DM19-2, and MW25-2), 2 upgradient wells (MW25-6A and MW25-6B), and 16 southern boundary wells (SB1-1, SB1-2, SB1-3, SB1-5, SB1-6, SB1-7, SB2-1A, SB2-2, SB2-3, SB3-1B, SB3-2, SB3-3, SB4-1, SB4-2, SB4-3, and SB4-4).

Prior to 2018, 3 Area C monitoring wells, MW-16, MW25-7, and C1-A, were decommissioned, 2 wells were recommended for decommissioning in 2014 (DM25-3 and LF-2), and 1 well,

MW3548-3, has been removed from the sampling program as it cannot be located and is assumed to have been destroyed. Area C groundwater monitoring well MW180-1 was observed to be damaged in 2017 and was decommissioned in February 2018 (EA 2018). The details of the sampling program are discussed in Section 3 of this report.

1.5 LONG-TERM MONITORING STATISTICAL ANALYSES

1.5.1 General

The purpose of the statistical evaluation is to determine how the exit strategy outlined in the long-term monitoring plan should be implemented. The exit strategy, which is shown on **Figure 1-3**, is used to determine whether the frequency of groundwater monitoring for a well should be altered or discontinued. For several parameters, the statistical analyses also depend on trigger levels. With the exception of lead, the trigger levels, which are shown in **Table 1-2**, were based on the maximum concentration of the analyte detected during previous sampling events. Because the maximum lead concentration detected, 320 micrograms per liter (µg/L), is more than 60 times the applicable or relevant and appropriate requirement (ARAR), the trigger level was established at 10 times the ARAR for lead.

1.5.2 Previous Statistical Evaluations

Prior to this report, eight statistical evaluations were conducted (**Table 1-1**); these evaluations are summarized below.

- ***First Statistical Evaluation***—In accordance with the long-term monitoring plan, the first statistical evaluation was conducted after the first 2 years of sampling were completed, which was after the Fall 2011 sampling event. The complete statistical evaluation is contained in the Round D long-term monitoring report (WESTON 2012). Several modifications were made to the long-term monitoring program based on the results of the first statistical evaluation; these modifications are summarized in the Round E long-term monitoring report (WESTON 2013a).

- ***Second Statistical Evaluation***—The results of the second statistical evaluation are included in the Round E monitoring report and evaluated July 2012 data (WESTON 2013a). As with the first statistical evaluation, a series of modifications were made to the long-term monitoring program based on the results of the second statistical evaluation. Specifically, while all analytes from the Summer 2012 program were retained in the sampling program, several wells passed Step A of the long-term monitoring statistical evaluation for specific analytes. Therefore, sampling for certain analytes in specific wells was no longer required. In addition, sampling for some analytes in certain wells was reduced from annual to semi-annual.

- ***Third Statistical Evaluation***—In the third (March 2013) statistical evaluation (WESTON 2013b), three analytes passed Step A for all monitoring wells and, therefore, were removed from the long-term monitoring program. These analytes were cis-1,2-dichloroethene, chromium, and hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX).

- ***Fourth Statistical Evaluation***—The results of the fourth statistical evaluation are included in the October 2013 monitoring report (WESTON 2014a). As a result of this evaluation, nickel was removed from the long-term monitoring program. Therefore, the only analytes remaining included vinyl chloride, arsenic, lead, and thallium.

- ***Fifth Statistical Evaluation***—The results of the fifth statistical evaluation are included in the Spring 2014 monitoring report (WESTON 2014b). The report concluded that thallium shall be removed from the long-term monitoring program after review of the Round H data. Because thallium was not detected in all monitoring wells for the four sampling events prior to 2014, a statistical evaluation was not required. Therefore, the only analytes remaining included vinyl chloride, arsenic, and lead.

- ***Sixth Statistical Evaluation***—The results of the sixth statistical evaluation (August 2014) are included in the Round I monitoring report (WESTON 2014c). The report concluded that vinyl chloride, arsenic, and lead should remain in the long-term monitoring program.

- ***Seventh Statistical Evaluation***—The results of the seventh statistical evaluation are included in the 2015 monitoring report (EA 2016a). The report concluded that vinyl chloride, arsenic, and lead should remain in the long-term monitoring program.

- ***Eighth Statistical Evaluation***—The results of the eighth statistical evaluation are included in the 2016 monitoring report (EA 2016b). The report concluded that vinyl chloride and arsenic (arsenic in select wells only) should remain in the long-term monitoring program, while lead was removed from the long-term monitoring program. Refer to Section 1.4 for a summary of the 2016 monitoring report recommendations (EA 2016b) concerning analytes in the long-term monitoring program. The analytes sampled for in each well, and the frequency at which they are sampled for, are listed in **Table 1-3**.

2. AREA C CHARACTERISTICS

2.1 GEOLOGY AND HYDROGEOLOGY

PICA lies within Green Pond Valley, a glaciated river valley bounded by Green Pond Mountain to the northwest and Copperas Mountain to the southeast. Elevations at PICA range from approximately 680 to 1,200 feet above mean sea level (msl). Green Pond Valley is filled with glacially derived sediments (attributable to Wisconsin-age glaciation) surrounded and underlain by bedrock. The basement rocks are faulted by a series of northeast/southwest trending faults. Bedrock of the eastern ridge adjacent to Area C consists of Precambrian gneiss and is overlain by approximately 5-130 feet of glacial deposits. The Leithsville Dolomite occurs beneath the valley region of Area C, where it is overlain by up to 210 feet of glacial deposits near the center of the valley (Shaw 2009).

Green Pond Brook, the main surface water drainage pathway within the valley, runs along the western boundary of Area C (**Figure 1-1**). The western half of Area C is flat and in the floodplain of Green Pond Brook. The topography in Area C does not vary considerably as the entire area is flat floodplain, approximately 685-695 feet above msl (Shaw 2009). The following four major aquifers have been identified beneath Area C:

- ***Unconfined Glacial Aquifer***—This aquifer occurs within the valley floor and has a thickness of approximately 3-35 feet. The unconfined aquifer is continuous throughout the valley, with the exception of areas on ridges where bedrock is exposed at the surface. Groundwater within this hydrogeologic unit, which occurs from relatively near ground surface to approximately 30 feet below ground surface (bgs) in upland areas, generally flows toward Green Pond Brook. Groundwater flow velocities vary greatly based on varying permeability and gradient, and are estimated to range from 50 to more than 300 feet per year.

- ***Upper Semi-Confined Glacial Aquifer***—This aquifer, which is generally encountered in the southern half of the valley, corresponds to the intermediate fine-grained unit of sediments and is encountered at depths ranging from 20 to 25 feet bgs. This aquifer is made up predominantly of silt and clay and is a low-permeability unit. Because the upper semi-confined aquifer is finer grained than the overlying and underlying aquifers, it retards downward groundwater flow to the semi-confined and bedrock aquifers (Shaw 2009).

- ***Lower Semi-Confined Glacial Aquifer***—This aquifer occurs beneath the upper semi-confined aquifer only in the central valley portion of Area C. As the unconsolidated sediments become thinner on the sides of the valley, this lower aquifer pinches out against the bedrock. The top of the lower semi-confined aquifer is encountered at depths ranging from 35 feet bgs in the northern portion of Area C to 150 feet bgs near the southern portion. The thickness of this aquifer ranges from 0 feet on the southeastern ridge to 163 feet in the valley center (Shaw 2009). The groundwater flow direction in the semi-confined aquifer is generally down valley to the southwest and toward surface water discharge areas. Vertical flow is typically upward toward discharge areas, except where

affected by groundwater withdrawal wells. Groundwater flow velocities are generally similar to the unconfined aquifer, although in some areas, the lower semi-confined aquifer consists of a coarser deposit with generally low hydraulic gradients.

- ***Bedrock Aquifer***—This aquifer exhibits faults, fold axes, bedding planes, and foliation trends that affect contaminant transport. Groundwater flow in the bedrock is generally toward the central valley and surface water features; however, locally, the foliation and fracturing can alter and control flow directions along fractures and fault planes.

2.2 GROUNDWATER ELEVATION AND FLOW DIRECTION

Groundwater movement is generally from the topographically high areas toward areas of discharge (surface water bodies) in the center of the valley. However, groundwater flow within the unconfined (water table) aquifer at the southern boundary of PICA may, at certain times, be locally affected by seepage (recharge) from Green Pond Brook (United States Geological Survey [USGS] 1996). A round of synoptic groundwater level measurements was collected from 25 groundwater monitoring wells in July 2018. **Table 2-1** presents depth-to-groundwater measurements and groundwater elevations for the 2018 sampling event. These values were compared to data collected during the 2017 sampling event.

Groundwater elevations were generally higher than the elevations measured at the same wells in 2017. Updated groundwater contour and elevation maps, which were generated based on the 2018 water levels, are included as **Figures 2-1** through **2-4**. Descriptions of groundwater elevations and flow directions for each aquifer, based on the 2018 sampling event, are provided below:

- ***Unconfined Glacial Aquifer***—Groundwater elevations in the unconfined water table aquifer were observed to range from 681.77 (1181-3) to 688.93 (MW25-6A) feet above msl. Groundwater elevation contours indicate groundwater flows are similar to recent sampling events. Locally, groundwater flows northwest, west, and southwest toward Green Pond Brook and its unnamed tributaries. The groundwater elevation contours are presented on **Figure 2-1**. Due to compromised well integrity, elevations from MW180-1 were not considered for contouring. The integrity of this well and subsequent abandonment is discussed further in Section 3.6.

- ***Upper Semi-Confined Glacial Aquifer***—Depths to groundwater in the upper semi-confined aquifer were measured at two monitoring wells and elevations were 685.89 (SB1-3) and 686.26 (SB4-3) feet above msl. Vertical components of the hydraulic gradient are present between the unconfined and upper semi-confined glacial aquifers. The following vertical gradients were estimated by using the potentiometric elevations and distances between center points of the well screens in well pairs: SB1-2/SB1-3 (0 foot per foot [ft/ft] – no vertical gradient), SB1-6/SB1-3 (0.113 ft/ft – upwards), SB1-7/SB1-3 (0.013 ft/ft – upwards), and SB4-2/SB4-3 (0.017 ft/ft – downwards). Potentiometric elevations are shown on **Figure 2-2**; contours of the potentiometric surface are not shown for the following reasons:

— Contours cannot be drawn with data from only two wells.

— SB4-3 is located west of Green Pond Brook and SB1-3 is located to the east of Green Pond Brook.

— Potentiometric elevation in SB1-3 (685.89 msl) was similar to that in SB1-2 (685.9 msl); SB1-2 is screened in the unconfined glacial aquifer.

— These observations suggest that groundwater flow in the upper semi-confined aquifer is likely to be similar to that within the unconfined glacial aquifer, toward Green Pond Brook.

- ***Lower Semi-Confined Glacial Aquifer***—Groundwater elevations in the lower semi-confined aquifer were observed to range between 674.39 (SB2-1A) and 683.38 (MW25-6B) feet above msl. Groundwater elevation contours were developed from water level measurements collected from four wells screened in the lower semi-confined aquifer; these are presented on **Figure 2-3**. As indicated by the elevation contours, groundwater flow is down the valley toward the southwest and south. From a single well pair (SB4-3/SB4-4), a vertical component of the hydraulic gradient between the upper and lower semi-confined aquifers was estimated at 0.136 ft/ft – downwards.

- ***Bedrock Aquifer***—The bedrock aquifer is subdivided into two hydrostratigraphic units: the Precambrian Gneiss, located beneath the eastern side of Area C, and the Leithsville Dolomite, located in the central valley of Area C. Groundwater in these aquifers is expected to flow away from the valley walls toward the central part of Area C, with a slight southwest component. For the Precambrian Gneiss, groundwater elevations in two nearly adjacent wells was measured as 686.5 (SB1-5) and 686.84 (SB1-1) feet above msl. For the Leithsville Dolomite, groundwater elevation was measured at three monitoring wells and ranged from 673.02 (SB2-3) and 676.5 (SB3-1B) feet above msl.

As indicated by the potentiometric elevations on **Figure 2-4**, groundwater flow is away from the valley walls toward the central part of Area C. Vertical components of the hydraulic gradient are present between the lower semi-confined glacial aquifer and bedrock. These were estimated using the potentiometric elevations and distances between center points of the well screens in the following well pairs: SB2-1A/SB2-3 (0.016 ft/ft – downwards), SB3-2/SB3-1B (0 ft/ft – no vertical gradient), and SB4-4/SB4-1 (0.006 ft/ft – downwards).

While potentiometric elevations from all bedrock wells are shown on **Figure 2-4**; contours are not shown for the following reasons:

- Three wells in the dolomite are too few to be representative.

- All five dolomite and gneiss bedrock wells are essentially aligned in a northwest to southeast corridor such that there is insufficient areal coverage within Area C.

2.3 SUMMARY AND FINDINGS OF PREVIOUS SITE INVESTIGATIONS

Between 1998 and the present, numerous groundwater investigations have been performed within Area C. These investigations and the corresponding data are described in detail in the Final Feasibility Study (Shaw 2005) and the Round A and Round B long-term monitoring reports (Shaw 2010a and 2010b, respectively).

Overall, sampling has indicated limited exceedances of a few VOCs and metals in groundwater in Area C; this contamination appears to be isolated and of limited extent. Lead and arsenic are more widespread throughout the area with no specific identifiable source (Dames and Moore 1998). Other metals detected, such as iron, manganese, aluminum, and sodium, may also be naturally occurring and associated with the local geology, or are not known to be related to PICA activities.

3. SAMPLING AND ANALYTICAL PROCEDURES

3.1 GENERAL

The 2018 annual groundwater event was conducted 17-18 and 30 July. Groundwater samples were collected from 22 wells during the 2018 event, including 4 Area C wells, 2 upgradient wells, and 16 southern boundary wells.

Figure 3-1 illustrates the 22 monitoring wells that remain in the long-term monitoring program and additional wells used for determining groundwater elevations and flow direction. **Table 3-1** summarizes the long-term monitoring well designation, hydrogeologic unit, and analytical program implemented for each well. The 16 southern boundary wells are designated with an "SB;" the other wells sampled are associated with specific Sites within Area C.

All field activities and chemical analyses were conducted in accordance with the Quality Assurance Project Plan (QAPP) (EA 2016c) and the Accident Prevention Plan (EA 2015). In addition, field activities and chemical analyses were performed in accordance with guidance from USACE, NJDEP, and USEPA Region 2, including the NJDEP Field Sampling Procedures Manual (NJDEP 2005) and the Technical Requirements for Site Remediation (NJDEP 2011).

3.2 WELL ASSESSMENTS

As part of the long-term monitoring, a well assessment was performed at each well prior to purging and sampling. The Well Assessment Checklists are provided in **Appendix A**. A summary of the results of the well assessment is provided in **Table 3-2**.

3.3 SAMPLING PROCEDURES AND FIELD MEASUREMENTS

In July 2018, 21 of 22 monitoring wells were sampled using low-flow sampling procedures. Field indicator parameters monitored during sampling included conductivity, dissolved oxygen (DO), pH, oxidation reduction potential (ORP) or reduction-oxidation (redox) potential, turbidity, and temperature. One monitoring well, SB1-5, was sampled using a Hydrasleeve due the presence of a restriction at approximately 10 feet bgs. The passive diffusion sampler was deployed 6 July and collected 17 July. Field indicator parameters were collected during retrieval. As discussed in Section 2.2, water level measurements were also collected from each well. **Table 3-3** summarizes the field parameter values at the time each well was sampled during the monitoring events. The sampling data sheets are provided in **Appendix A**.

3.4 SAMPLE ANALYSES

SGS, a National Environmental Laboratory Accreditation Program-certified and U.S. Department of Defense Environmental Laboratory Accreditation Program-certified laboratory, provided all analytical services for the 2015 through 2018 monitoring events. Copies of the 2018 laboratory analytical data packages are provided in **Appendix B**. Analytical data were evaluated in accordance with Installation-specific requirements defined in the January 2016 QAPP (EA 2016c). The data validation report is provided in **Appendix B**.

For previous monitoring events, TestAmerica, limited liability company (LLC) provided analytical services for the Winter 2010, Spring 2011, Fall 2011, Summer 2012, Winter 2013, Fall 2013, and Spring 2014 sampling events. Empirical Laboratory, LLC provided analytical services for the Summer 2010 sampling event. Refer to the Tables in **Appendix C** for summaries of all long-term monitoring data.

3.5 DATA USABILITY

All data collected for this project were validated in accordance with the January 2016 QAPP (EA 2016c). As discussed in the QAPP, the validation criteria for long-term monitoring data include a review of the laboratory report narrative for noted deficiencies and the potential impact to data usability with the data primarily being evaluated based on the trend analysis. Therefore, a review of chain-of-custodies, sample preservation, sample receipt logs, and quality control parameters was performed for all data packages. No major deficiencies were identified during the data validation; therefore, no additional review was performed and data were found to be acceptable for use as qualified. A copy of the Data Validation Report is included with **Appendix B**.

3.6 WELL-SPECIFIC ISSUES

There were no new well issues observed in 2018. Groundwater monitoring well MW180-1 was decommissioned in February 2018 due to a well blockage as discussed in previous reports (reports are listed in Section 1.1). Additionally, SB1-5 was again sampled with a Hydrasleeve in 2018 and will continue to be sampled with Hydrasleeves in the future due to the restriction around 10 feet bgs.

4. FACTORS AFFECTING ANALYTICAL RESULTS

The COCs still being monitored at Area C are vinyl chloride and arsenic. As discussed in Section 4.3, a lead-specific analysis was removed from the monitoring program as recommended in the 2016 monitoring report (EA 2016b). Several field parameters can significantly impact the solubility of certain metals, and therefore, metals concentrations in groundwater. A brief summary of the potential effects of these parameters on arsenic and lead is provided below. This information was obtained from the following reports:

- USEPA Science Forum 2005, C. Stein, W. Brandon, and D. McTiguel, *Arsenic Behavior Under Sulfate-Reducing Conditions: Beware of the "Danger Zone"* (Stein et al 2005).

- USEPA, Office of Research and Development, Office of Solid Waste and Emergency Response, *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures*, EPA/540/S-95/504 (USEPA 1996).

- USEPA, Office of Research and Development, Office of Solid Waste and Emergency Response, *Behavior of Metals in Soils*, EPA/540/S-92/018 (USEPA 1992).

- USEPA, Office of Research and Development, National Risk Management Research Laboratory, *Monitored Natural Attenuation of Inorganic Contaminants in Groundwater*, EPA/600/R-07/140 (USEPA 2007).

- USGS, *Occurrence and distribution of iron, manganese, and selected trace elements in ground water in the glacial aquifer system of the Northern United States* (USGS 2009).

4.1 ARSENIC CONCENTRATIONS

The main factors affecting arsenic concentrations in groundwater include desorption and dissolution. Desorption and dissolution can be affected by an influx of competing ions, such as phosphate (PO_4^{3-}) or carbonate (CO_3^{2-}), or through changes in the groundwater chemistry, mainly pH and redox potential, that cause the sorbent material to no longer be stable. A strong correlation between pH and arsenic concentrations in groundwater has been identified, with concentrations typically increasing as the pH increases.

Arsenic mobility is strongly affected by the redox environment. Arsenic itself is redox-sensitive[1] and adsorption dynamics are highly dependent on whether arsenic is present as As(V) (arsenate) or As(III) (arsenite). Specifically, although arsenate tends to adsorb more strongly than arsenite, the dynamics are highly pH dependent (Campbell and Hering 2008). Arsenic release from soils occurs most readily and most commonly under iron reducing conditions, resulting from the reductive dissolution of iron and the subsequent release of adsorbed and co-precipitated arsenic. Under this circumstance, elevated arsenic in groundwater is typically correlated with low redox potential (below 100 to 200 millivolts [mV]), very low DO, and elevated dissolved iron and

[1] Redox-sensitive is defined as "an element that occurs dissolved in near neutral pH (between pH 5 and 9) groundwater under more than one common oxidation state and where one or more oxidation states are more soluble than others."

manganese (Smedley and Kinniburgh 2002). Accordingly, arsenic concentrations in groundwater are expected to be highest when DO and nitrate concentrations are less than 0.5 milligrams per liter (mg/L), dissolved iron is at least 100 µg/L, and the ORP is around -50 mV or lower (accounting for a +200 mV calibration shift when using a silver chloride reference electrode), which is indicative of iron reducing conditions (Smedley and Kinniburgh 2002; USGS 2009). This analysis must be made with caution, as low DO and redox potential do not necessarily imply that arsenic concentrations will be high.

Due to adsorption to soil particles, concentrations of arsenic in groundwater typically increase with increased turbidity.

4.2 NATURALLY-OCCURRING ARSENIC

While some inorganic contaminants exhibiting random distribution or likely attributable to background conditions or site geology were removed from COC consideration during the human health risk assessment (Dames and Moore 1998), arsenic was detected at concetrations greater than promulgated groundwater comparison criteria, were not sporadic, and were confirmed at multiple locations during multiple rounds of sampling. As a result, arsenic and lead were defined as COCs. Subsequent studies on metals have shown that, in northern New Jersey, metals such as aluminum, cadmium, lead, and arsenic concentrations appear to be mostly natural in origin. One study stated that potential sources of regional occurrence of arsenic in groundwater are use of arsenical pesticides and natural minerals in the bedrock and soil (Serfes 2004). Arsenic in groundwater within the Highlands Province where PICA is located can range from less than 5 to greater than 20 µg/L (Vowinkel et al. 2001). The *Fifth Five-Year Review Report* states that detections of constituents above the LOC in groundwater have been potentially related to local background geology. The Leithsville Dolomite, which underlies Area C, contains numerous accessory minerals including arsenopyrite and galena, which may be contributing to metals concentrations (including arsenic) in groundwater (USACE 2016).

With the continued persistence of arsenic in the southern boundary wells, Site wells, and upgradient wells, it is suspected that concentrations of arsenic and other metals observed in the wells are a result of local background geology and not Site contamination.

4.3 OVERALL EVALUATION

An evaluation of field parameter values and anion concentrations versus arsenic concentrations was conducted for the long-term monitoring sampling data to determine if the arsenic and lead concentrations appear to be affected by field parameter values and anion concentrations. Refer to **Tables 4-1** for a summary of the field parameters and arsenic concentrations. Only wells that had arsenic concentrations greater than the LOC (3 µg/L) are included in **Table 4-1**. Overall, the data do indicate that many of the highest arsenic concentrations are correlated with low DO and redox potential (and in some cases turbidity), indicating that iron-reducing conditions may be contributing to arsenic in some areas. During the July 2018 sampling event, the groundwater samples were analyzed for total (unfiltered) metals.

5. SUMMARY OF ANALYTICAL RESULTS

Groundwater samples were collected to monitor changes in the selected analyte list in support of the long-term monitoring program specified in the 2009 Record of Decision (USEPA 2009). The 2018 annual groundwater event is the fifteenth event to be conducted following implementation of the long-term monitoring program. The tables in **Appendix C** present the results for all wells currently in the long-term monitoring program. A summary of analytical results associated with the sampling events is provided below, and **Figure 5-1** presents a summary of 2018 long-term monitoring data above the LOCs. A statistical evaluation for arsenic long-term monitoring data is included in this report, as described in Section 6. A summary of vinyl chloride and arsenic detected in Area C wells and southern boundary wells during the current sampling Round O are provided in **Table 5-1**. The full analytical data packages are provided in **Appendix B**. **Table 5-2** presents a summary of the analyte exceedances of vinyl chloride and arsenic since 2010 for the four Area C wells currently remaining in the long-term monitoring program.

5.1 VOLATILE ORGANIC COMPOUNDS

Samples analyzed for vinyl chloride (the only VOC remaining in the long-term monitoring program) were collected from Area C wells DM19-1 and DM25-2, as well as upgradient wells MW25-6A and MW25-6B. Vinyl chloride was not detected in either of the upgradient wells; however, it was detected in both monitoring wells DM19-1 and DM25-2. During the July 2018 sampling event, the concentration was 5.8 µg/L at DM19-1 and an estimated 0.76 µg/L at DM25-2. The DM19-1 concentration is greater than the LOC of 1 µg/L, as summarized in **Tables 5-1** through **5-3**.

5.2 ARSENIC

All southern boundary wells, two Area C wells (MW25-8, and DM19-2), and the two upgradient wells (MW25-6A and MW25-6B) were sampled for arsenic. Refer to **Table 3-1** for a summary of sampling locations and analytical parameters. As shown in **Tables 5-1** and **5-3**, arsenic was detected above the LOC of 3 µg/L in five wells (SB2-1A, SB2-2, MW25-8, DM19-2, and upgradient well MW25-6A). Arsenic concentrations greater than the LOC ranged from 3.8 µg/L (SB2-1A) to 140 µg/L (DM19-2).

5.3 SOUTHERN BOUNDARY MONITORING

During the July 2018 sampling event an expanded analyte list, including explosives, all VOCs on the target compound list, and metals, continued to be included at the 16 southern boundary wells. The southern boundary wells are the southern boundary for Area C as well as for PICA. This expanded list was added to the annual Area C sampling to monitor for potential off-Installation migration.

Results for the expanded list are included in **Table 5-4**. The explosive RDX exceeded the New Jersey Ground Water Quality Standard (0.5 µg/L) at SB4-3 (0.57 µg/L) in 2017, but was not detected during the July 2018 event. No other explosives were detected at any of the southern

boundary wells. In 2016, benzene at SB4-1 was the only VOC detected above the New Jersey Ground Water Quality Standard (1 µg/L). In 2017 and 2018, benzene was detected at a concentration less than the standard at SB4-1; therefore, there were no VOCs with concentrations greater than the standards in 2018. Several metals were detected above the New Jersey criterion; however, none were detected at concentrations greater than the USEPA MCL. Arsenic is discussed further in Section 6 and 7.

The 16 southern boundary wells will continue to be monitored annually using the expanded analyte list (explosives, all VOCs on the target compound list, and all metals), and the data will be used as an early warning for these constituents to determine if they are migrating off PICA.

6. STATISTICAL EVALUATION

Tables 1 through 26 in **Appendix C** include the data for analytes remaining in the long-term monitoring program for all 15 rounds of sampling. These data were used to determine if the long-term monitoring program should be modified based on the exit strategy outlined in the long-term monitoring plan and summarized in Section 1.5 and **Figure 1-3**. The sections below summarize steps A, B, and C in the exit strategy. The following inputs/assumptions were used in this evaluation:

- Unless otherwise indicated, no substitution was conducted for non-detect (ND) values because reporting limits, not method detection limits (MDLs), are included in the ePrism database for the historical data.

- The analyses assume that only one data value per time period exists. Therefore, when field duplicate results are present, a conservative selection based on the magnitude of data or the detected value was used to determine what data to include in the analyses.

6.1 STEP A: ANALYTES TO REMOVE FROM PROGRAM

Step A of the long-term monitoring plan indicates that if measurements for an analyte are less than the ARAR (corresponding to the LOC) for four or more consecutive sampling events, sampling for that analyte under the long-term monitoring program should be discontinued. Step A does not apply to the southern boundary wells, unless an analyte has been removed from the analytical list for all Area C wells, because it is the intent of the long-term monitoring program to be protective of offsite migration of contaminated groundwater. Step A also does not apply to the upgradient wells, unless an analyte has been removed from the analytical list for all Area C wells, because MW25-6A and MW25-6B are used to monitor whether contaminated groundwater is migrating from outside of Area C into Area C. Based on the results of the 2018 monitoring event, none of the COCs (vinyl chloride and arsenic) meet the Step A criteria.

6.2 STEP B: DETERMINE FREQUENCY OF SAMPLING FOR ANALYTES REMAINING IN PROGRAM

Step B of the long-term monitoring plan indicates that if measurements for an analyte at a sampling point are consistent over four or more consecutive sampling events or are not increasing over that period, then monitoring for that analyte at that sampling point may be reduced to annual monitoring.

Vinyl chloride and arsenic are both sampled on an annual basis based on statistics performed on the 2016 data (EA 2016b) showing that the concentrations in these wells were found to be consistent over the previous four sampling events (i.e., were not increasing); therefore, the Step B statistical evaluation is not needed for the most recent data collected in 2018 to reduce the sampling interval to annual. However, the mean concentration of arsenic at groundwater monitoring well DM19-2 was calculated to be greater than trigger level (Step C) and the Step B statistical evaluation was completed to determine if there was a statistically significant trend. The description of the steps is described below.

Step B consists of two steps, described below as Steps B1 and B2. First, an evaluation must be conducted to determine if analyte concentrations in a well are increasing or decreasing over time (Step B1). If the concentrations are decreasing, the frequency of sample collection and analysis can be reduced to annual and Step B2 does not have to be conducted. If there is no evidence that the concentrations have decreased over the recent sampling period, it must be determined if the concentrations are consistent with the historical data (Step B2).

Note that a statistical evaluation is not conducted for the following wells and/or well/analyte pairs:

- ***MW25-6A and MW25-6B***—Because these are upgradient wells, the frequency of sample collection and analyses will be determined by the most conservative sampling frequency required for the Site and southern boundary wells.

6.2.1 Step B1: Determining if Concentrations are Decreasing

The first step was to determine on a well-by-well basis whether the measurement for an analyte has significantly decreased over the eight most recent sampling events of the long-term monitoring period. The following steps were followed for this evaluation:

- In accordance with the long-term monitoring plan, concentrations near or at the MDL are evaluated on an individual basis to determine consistency. If all results for an analyte in a well during the long-term monitoring are ND or below LOCs, the data are considered to be not increasing/consistent and no further evaluation is conducted.

Further evaluation is required for analytes in wells that were not all ND and/or less than LOCs (i.e., there was at least one detection above the LOC for an analyte in a well).

- If there is at least one detection above the LOC for an analyte in a well during the eight most recent sampling rounds, the Mann-Whitney U test was performed using ProUCL Version 5.1, a USEPA-approved statistical software (USEPA 2016b). The Mann-Whitney U test is a non-parametric test that computes a U statistic that indicates whether individual concentrations of an analyte in a well are decreasing or increasing over time. This analysis was selected because the data sets do not need to conform to any particular distribution, and data reported as NDs can be included by assigning a common value to all NDs and any detects less than the highest ND, such that this common value ranks lower than the remaining detected results. The approach and assumptions used in this evaluation are listed below. Note that this evaluation is conducted in accordance with NJDEP's Technical Requirements for Site Remediation - Appendix B (NJDEP 2011).

- The test is applied to eight consecutive sampling events for each analyte per well. The four most recent consecutive valid sampling events (recent) and the previous four consecutive valid sampling events (historical) are used.

- In instances where one of the most recent or historical data points is found to be unusable, the next recent data point is used in the analysis.

- The following hypotheses (H) are tested. Note that the null hypothesis is that the concentrations of a specific analyte have not decreased with time, and the alternative hypothesis is that the concentrations of a specific analyte have decreased with time over the last eight events. θ_1 represents the historical sampling events, and θ_2 represents the recent sampling events.

  — H0: $\theta_1 \leq \theta_2$ (null hypothesis)
  — H1: $\theta_1 > \theta_2$ (alternate hypothesis).

- The H test evaluation can be performed using Form 1 or Form 2 of the null hypothesis (described below):

  — Form 1 right-sided p-value or critical value: If the right-tailed significant probability (P-value) of U was less than 0.1 (or equivalently U_1 > right-tailed $U_{critical}$ [i.e., 12]), the null hypothesis is rejected, and it is concluded, with at least 90 percent (%) confidence, that the concentration for the individual contaminant has decreased over time at the specific monitoring well. The Form 1 evaluation is used to evaluate the data collected beginning in 2015 and all subsequent data.

  — Form 2 left-sided p-value or critical value: If U_2 < left-tailed $U_{critical}$, (i.e., 3), the null hypothesis is rejected, and it is concluded with 90% or greater confidence that the concentration for the individual contaminant has decreased over time at the specific monitoring well. The Form 2 evaluation was used to evaluate data collected prior to 2015.

- All ND values or values detected below the limits of quantitation are ranked as zero.

Refer to **Table 6-1** for a summary of the Mann-Whitney U statistic calculations. Based on the Mann-Whitney test, the following conclusions were made.

- ***Null Hypothesis Not Rejected***—The null hypothesis is not rejected and it could not be determined with 90% or greater confidence that the analyte concentration at that well has decreased (i.e., right-tailed P-value > 0.1; $U_1 < 12$). Therefore, further evaluation (i.e., Step B2) is conducted, as described in Section 6.2.2.

  — Arsenic: DM19-2.

- ***Null Hypothesis Rejected***—The null hypothesis is rejected at the 90% confidence level, and it is concluded that the analyte concentration at that well has decreased over time (i.e., right-tailed P-value < 0.1; $U_1 > 12$). Therefore, sampling should be performed annually and further evaluation (Step B2) is not conducted.

6.2.2 Step B2: Determining if Concentrations are Consistent

To investigate consistency of those analytes with no significant decreasing trend as defined in Section 6.2.1, the average concentration of the four most recent consecutive sampling data is compared to the 95% confidence window of the historical data. The following assumptions/inputs are used in this evaluation:

- All valid historical data are used.
- The data distribution for the historical data set is determined.
- The confidence limits are not determined for analyte data sets with less than four distinct values.
- ProUCL Version 5.1 (USEPA 2016b) is used to calculate the 95% upper confidence limit (UCL) statistics, including data distribution and 95% confidence limits. For purposes of this analysis, the recommended UCL value of the individual historical analyte data is compared to the mean of the recent data. When the UCL exceeds the range of concentrations detected or the data set does not meet the criteria for the number of observations necessary to calculate any meaningful statistics, the maximum value of the data set is used in the evaluation.
- The 95% UCL is determined and then compared to the mean or maximum of the most recent sampling events. If the most recent sampling data set has at least two ND values, the maximum instead of the mean value is used in the analysis.
- The option to determine the statistics with NDs is selected for all analyses in ProUCL. Analytes with mean values for the most recent sampling period that are less than the 95% UCL of the historical data are considered consistent.
- Most of the historical data sets are small and do not yield any meaningful UCL statistics. Therefore, the concentration range of the historical data is used to compare to the mean of the most recent data.

Table 6-2 presents a summary of the ProUCL calculations.

For the following analyte/well pairs, the mean or maximum concentration of the analyte did not fall within the 95% confidence window of the historical data based on the **Table 6-2** results. Therefore, these data are not considered consistent and arsenic in the following wells do not meet the requirements of Step B:

- Arsenic: DM19-2.

None of the analyte/well pairs' mean or maximum concentrations of the analyte fell within the 95% confidence window of the historical data based on the **Table 6-2** results.

Table 6-3 presents a summary of the Step B results.

6.3 STEP C: DETERMINE IF ANALYTES ARE PRESENT ABOVE TRIGGER LEVELS

Step C of the long-term monitoring plan must be evaluated for an analyte/well pair if the following conditions are met:

- If average concentrations of an analyte in a well for the two most recent consecutive sampling events are above the trigger levels provided in **Table 1-2**

- Concentrations at that sampling point have shown a statistically significant increase over the span of the long-term monitoring program (Step B statistics).

As shown in **Table 5-2**, arsenic was detected at 140 µg/L during the 2018 event and at 66.3 µg/L during the 2017 event, which results in an average concentration of 103 µg/L. This average concentration is greater than the trigger level of 49.6 µg/L. However, the long-term monitoring plan indicates that an analyte does not fail Step C unless the concentrations at a sampling point (or sampling points) have shown a statistically significant increase over the span of the long-term monitoring program. Based on the trend analysis, concentrations for this analyte in this well during the sampling period are not increasing with respect to the historical data. Therefore, the arsenic concentrations in well DM19-1 do not fail Step C of the long-term monitoring program.

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7. SUMMARY

A summary of the Area C and southern boundary long-term monitoring sample results is presented below, as well as a summary of studies about naturally occurring metals in groundwater at the Site.

7.1 AREA C PROGRAM WELLS

While the Area C long-term monitoring program has shown some detections of analytes at concentrations above the LOCs, overall, the long-term monitoring is demonstrating that the majority of the analyte concentrations in the Area C wells either are decreasing or are consistent with historical data.

- ***VOCs***—Vinyl chloride is the only VOC included in the Area C long-term monitoring program; since 2010, concentrations have been greater than the LOC of 1 µg/L at 2 wells: DM19-1 and DM25-2. At DM19-1, vinyl chloride was detected above the LOC during the 2018 event (5.8 µg/L). Vinyl chloride was not detected at a concentration greater than the LOC in DM25-2 during 2018 (an estimated 0.76 µg/L). Historical vinyl chloride results are provided for these wells in **Table 5-2**. Per the 2016 statistical analysis (EA 2016b), it can be concluded (with at least 90% confidence), that the concentration for vinyl chloride has decreased over time at DM19-1. Statistics were not performed on the 2018 data (refer to Section 6).

- ***Arsenic***—Arsenic has been detected above the LOC of 3 µg/L at two of the Area C wells in the long-term monitoring program and two upgradient monitoring wells since long-term monitoring sampling began in 2010. The historical results of these wells are summarized in **Table 5-2**. Arsenic detections in the Area C wells and both upgradient wells during the 2018 sampling are provided below:

  - **MW25-8:** 26.3 µg/L
  - **DM19-2:** 140 µg/L
  - **MW25-6A (upgradient):** 4.1 µg/L
  - **MW25-6B (upgradient):** estimated 0.25 µg/L.

7.2 SOUTHERN BOUNDARY PROGRAM WELLS

As discussed below, there does not appear to be significant offsite migration of contamination associated with Area C activities, as indicated by the southern boundary well results. Note that the southern boundary data discussed below include long-term monitoring results since 2010.

- ***VOCs***—Vinyl chloride has not been detected during the long-term monitoring program in any of the southern boundary wells. In 2016, benzene at SB4-1 was the only VOC detected (1.1 µg/L) above the New Jersey Ground Water Quality Standard of 1 µg/L. In 2017 and 2018, benzene was detected at concentrations less than the standard at SB4-1.

- ***Arsenic***—Arsenic was detected in two southern boundary wells above the LOC of 3 µg/L during the long-term monitoring program: SB2-1A and SB2-2. **Table 5-1** summarizes analytical results from 2018 for all wells. Historical analytical results are summarized in **Table 5-2**. Southern boundary groundwater monitoring wells with a concentration in 2018 that exceeds the LOC are noted below:

  — **SB2-1A:** 3.8 µg/L
  — **SB2-2:** 8.6 µg/L.

- ***Lead—***Lead was observed above the LOC of 5 µg/L at southern boundary wells SB1-5 (7.5 µg/L) and SB2-1A (7.5 µg/L) during the Summer 2018 sampling event. These analytical results are presented in **Table 5-4**. While elevated lead levels have been found during the long-term monitoring in many of the southern boundary wells since sampling commenced, the majority of the elevated concentrations were detected during the Summer 2010 event. During subsequent events, most of the detections were less than the LOC. In addition, a field-filtration analysis based on the methods of Bailey et al. (2005) for samples from SB1-1 and SB1-2 demonstrated that the lead in groundwater in these areas is associated with a colloid fraction that likely has extremely low mobility in groundwater.

- ***Explosives***—The explosive RDX exceeded the New Jersey Ground Water Quality Standard of 0.5 µg/L at SB4-3 (0.57 µg/L) in 2017. No explosives were detected in groundwater at the southern boundary wells during the July 2018 sampling event.

8. CONCLUSIONS AND RECOMMENDATIONS

The support for the recommendations for sampling frequency and analyses presented in **Table 8-1** and **Table 8-2** is provided below.

8.1 AREA C PROGRAM LONG-TERM MONITORING

The 2018 analytical results are summarized in Section 7. Vinyl chloride is the only VOC included in the Area C long-term monitoring program. Sampling is currently performed annually for vinyl chloride at DM19-1 and DM25-2. It is recommended that these wells should continue to be sampled annually for vinyl chloride.

As summarized in Section 4, arsenic has been removed from the long-term monitoring program for all Site wells except MW25-8 and DM19-2. Arsenic is sampled for annually in these wells. Historically, as well as in 2018, concentrations of arsenic in these two wells are typically an order of magnitude above concentrations observed in the upgradient wells and are above the range of concentrations observed in the remaining Site wells. Although elevated concentrations of arsenic are likely background or naturally occurring and not site related, due to the increased concentration detected in 2018, it is recommended that MW25-8 and DM19-2 continue to be sampled annually for arsenic.

The frequency of sample collection and analyses of the upgradient wells is determined by the most conservative sampling frequency required for the Site and southern boundary wells. Since DM19-1 and DM25-2 are sampled annually for vinyl chloride and MW25-8 and DM19-2 are sampled annually for arsenic, the upgradient wells are also sampled annually for these constituents. Long-term monitoring sampling frequency recommendations are summarized in **Table 8-1**.

8.2 SOUTHERN BOUNDARY PROGRAM LONG-TERM MONITORING

It is recommended that the 16 southern boundary wells continue to be sampled annually for explosives, metals, and VOCs as an early warning that these constituents may be migrating off the PICA property, as shown on **Table 8-2**.

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FIGURES

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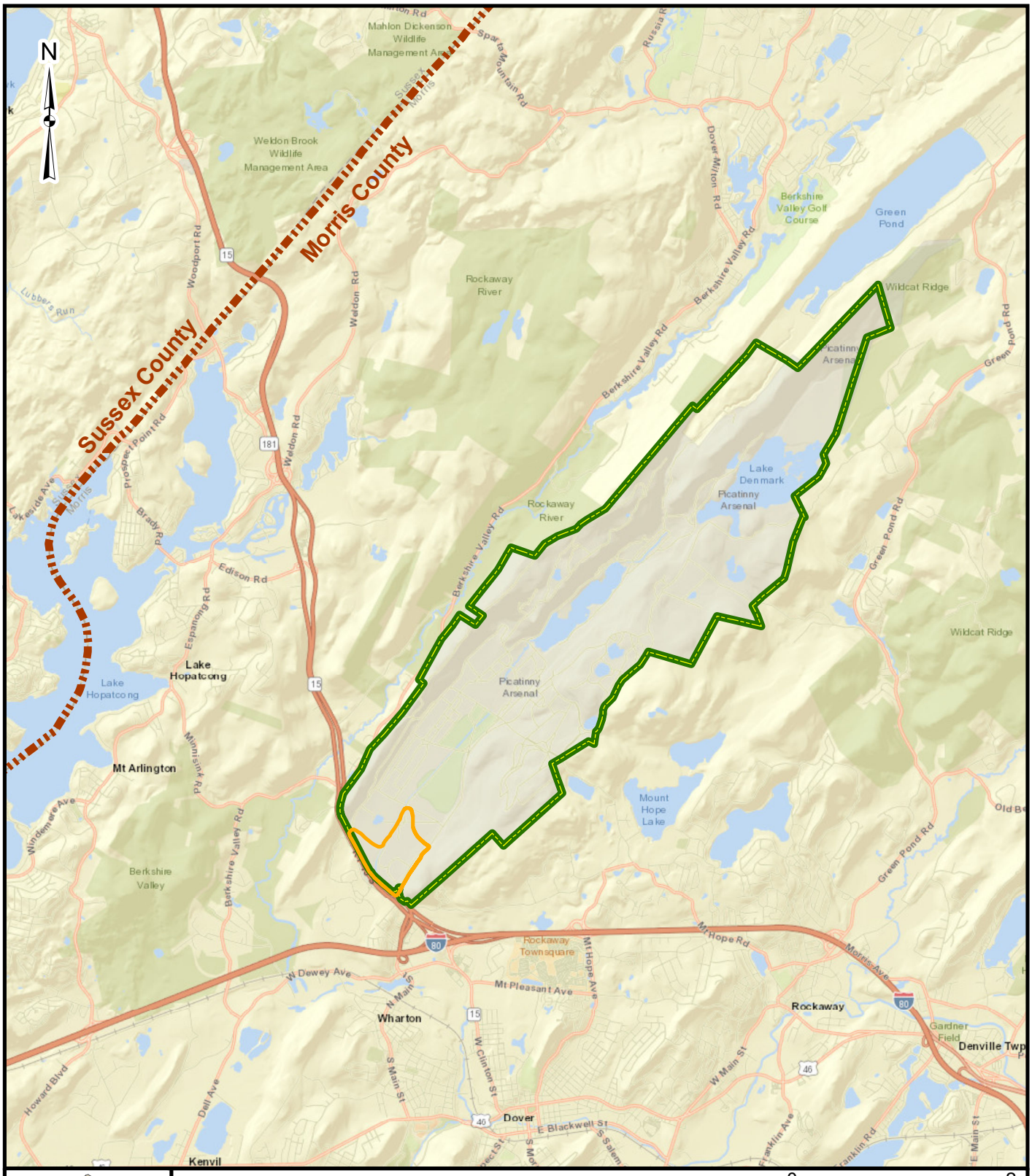

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2018 ANNUAL REPORT
AREA C (PICA-206)
PICATINNY ARSENAL

Figure 1-1
Location of Area C and Picatinny Arsenal

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Legend

- Area C (PICA-206)
- PICA Areas
- PICA Site Boundary
- Picatinny Arsenal Boundary
- Green Pond Brook
- Sites Not Included in Area C

2018 ANNUAL REPORT
AREA C (PICA-206)
PICATINNY ARSENAL

Figure 1-2
Area C (PICA-206)
Site Map

0 300 600 1,200 Feet

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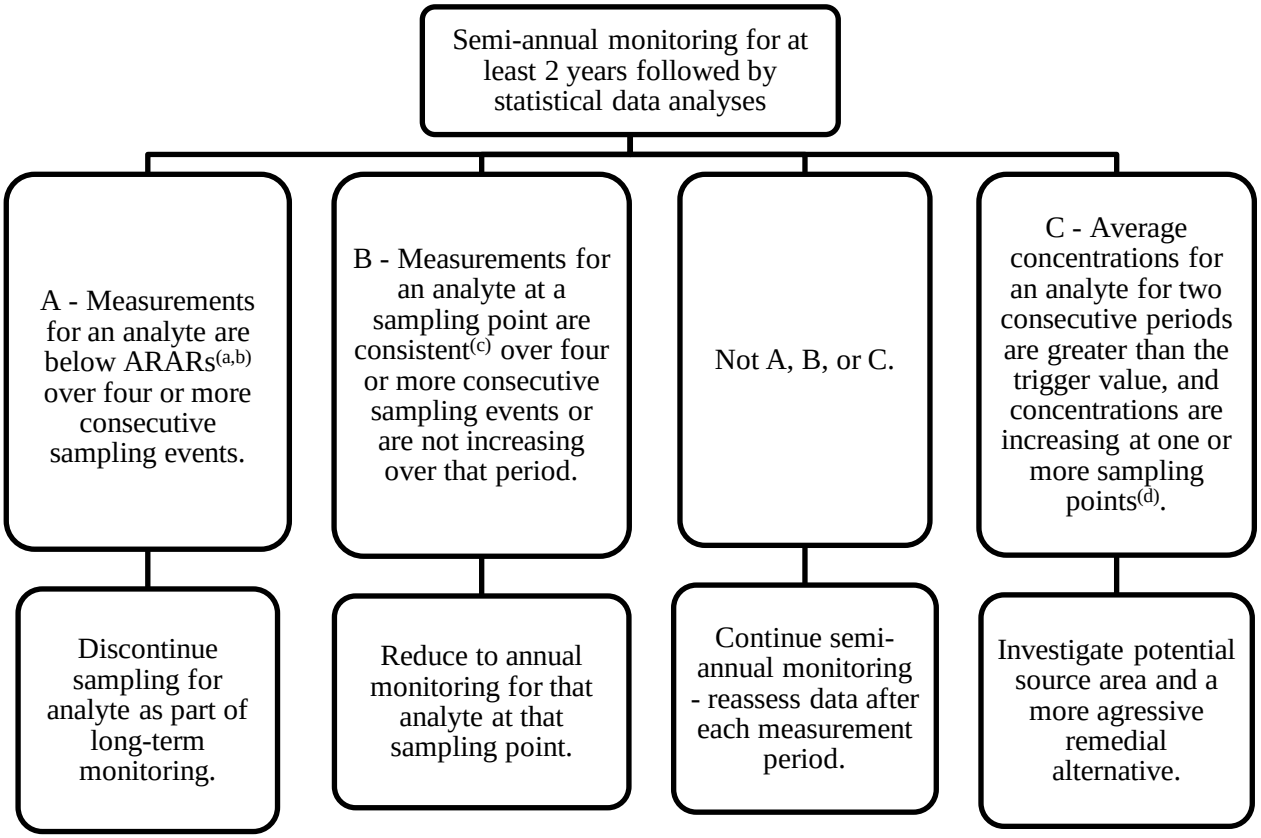
Figure 1-3 Long-Term Monitoring Exit Strategy



(a) The applicable or relevant and appropriate requirements (ARARs) are the levels of concern listed in Section 1.3.

(b) For arsenic and lead, the exit strategy will also include an evaluation of groundwater quality parameters (e.g., pH and turbidity).

(c) Measurements are considered consistent if they fall within the 95 percent (%) confidence window.

(d) A more aggressive remedial action would be required when the average (i.e., arithmetic mean) concentration for that analyte, for all sampling points for that sampling period, exceed the upper 95% confidence interval for two consecutive sampling events, and the concentrations at a sampling point (or points) has shown a statistically significant increase over the span of the long-term monitoring program. A statistically significant increase will be determined using the Mann-Whitney test.

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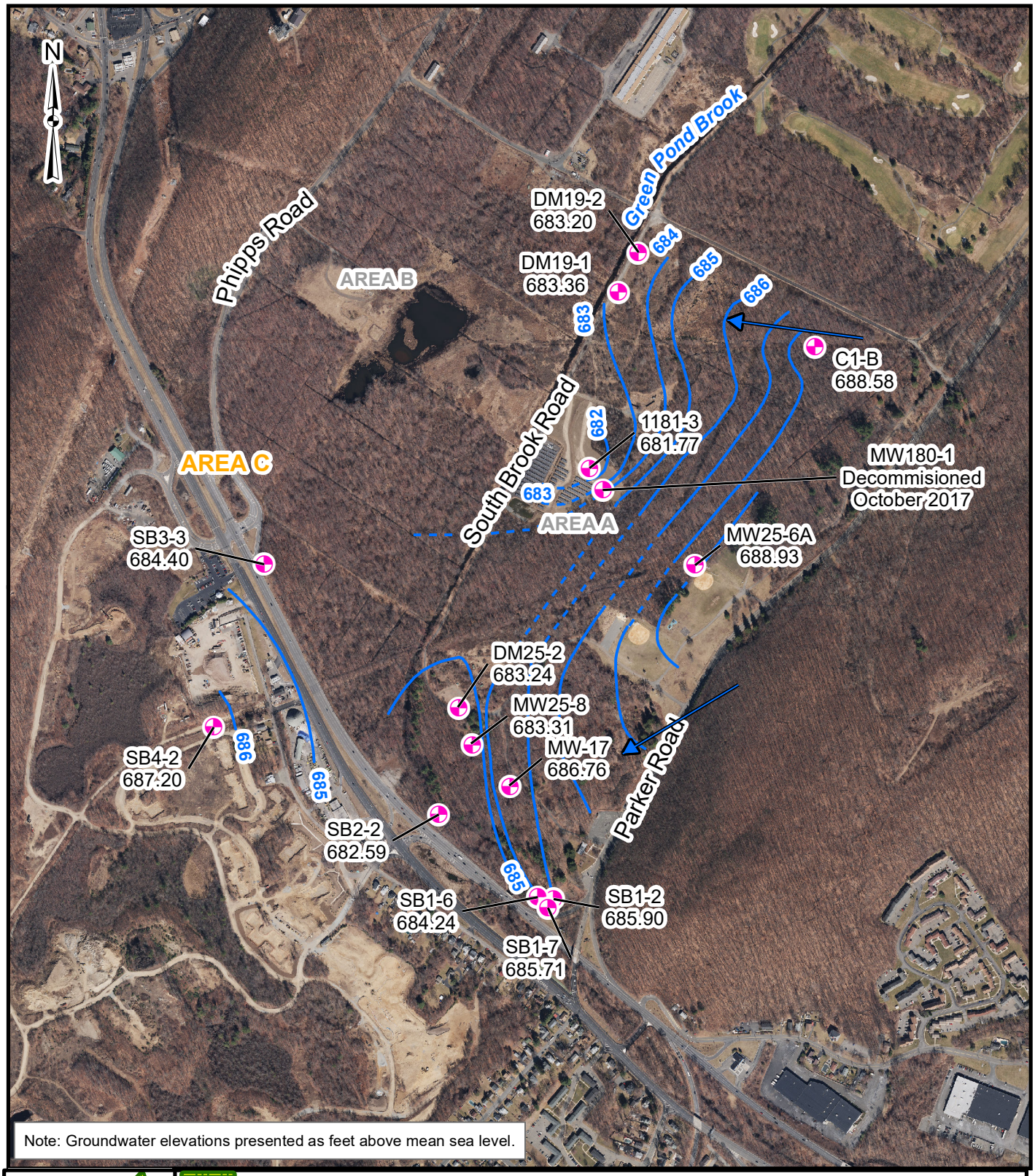

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AREA C (PICA-206)
PICATINNY ARSENAL

Figure 2-1
Unconfined Aquifer
Groundwater Contours
July 2018

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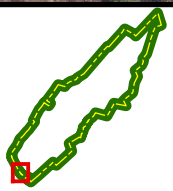

Picatinny Arsenal Boundary
Area C (PICA-206)
PICA Site Boundary
Well screened within the upper semi-confined aquifer

0 700
Feet

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AREA C (PICA-206)
PICATINNY ARSENAL

Figure 2-2
Upper Semi-confined Aquifer
Groundwater Elevations
July 2018

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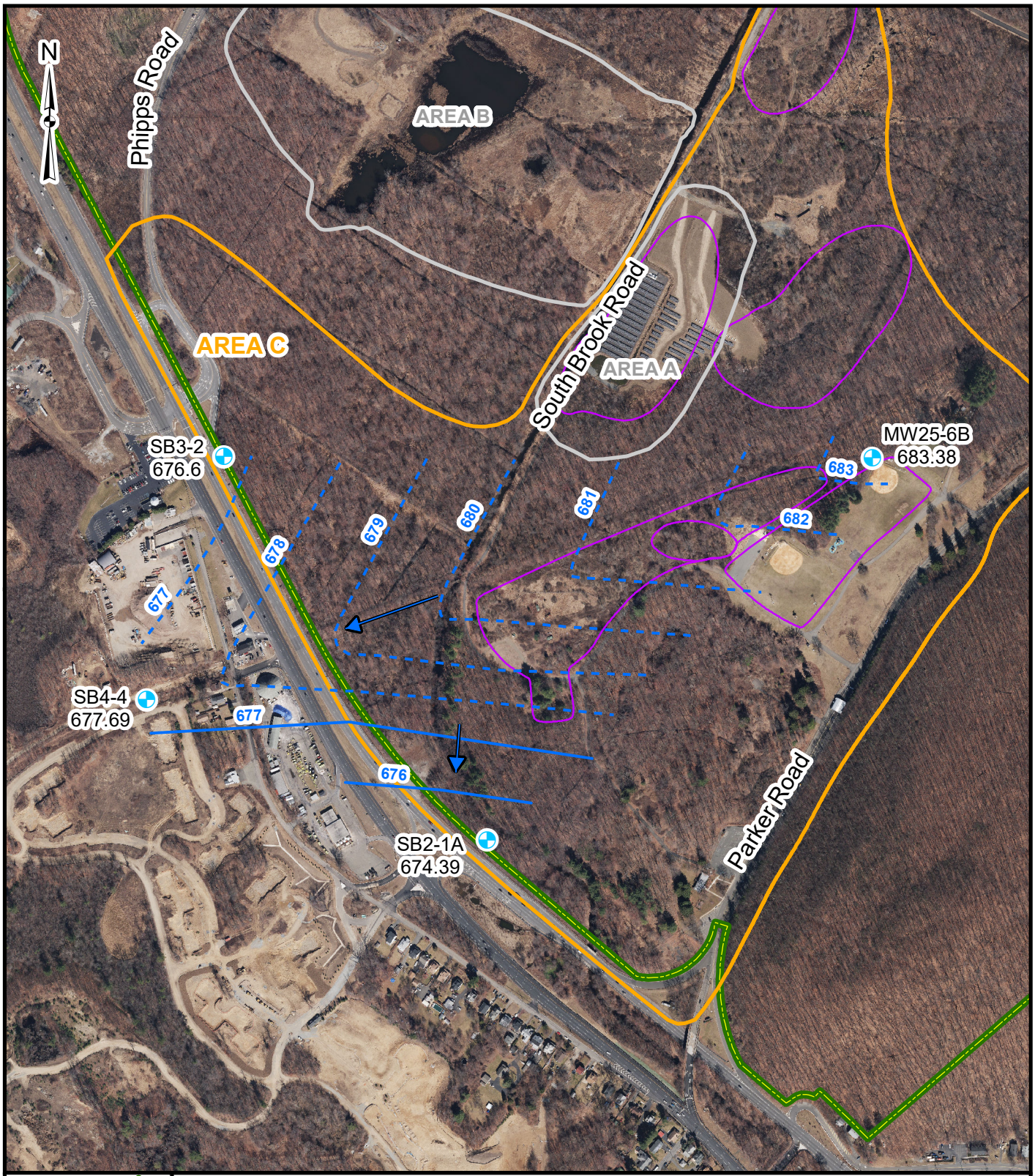

Picatinny Arsenal Boundary
Area C (PICA-206)
PICA Site Boundary
Well screened within the lower semi-confined aquifer
Groundwater Contour
Inferred GW Contour
General direction of GW flow

0 1,000
Feet

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AREA C (PICA-206)
PICATINNY ARSENAL

Figure 2-3
Lower Semi-confined Aquifer
Groundwater Contours
July 2018

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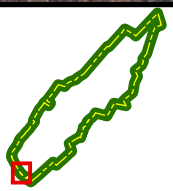

Picatinny Arsenal Boundary
Area C (PICA-206)
PICA Site Boundary
Well screened within the bedrock aquifer

0 750
Feet

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AREA C (PICA-206)
PICATINNY ARSENAL

Figure 2-4
Bedrock Aquifer
Groundwater Elevations
July 2018

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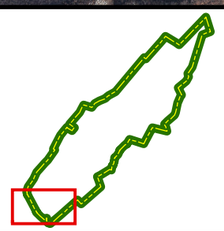

Legend

- Area C (PICA-206)
- Picatinny Arsenal Boundary
- Well screened in the unconfined aquifer
- Well screened within the lower semi-confined aquifer
- Well screened within the upper semi-confined aquifer
- Well screened within the bedrock aquifer

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AREA C (PICA-206)
PICATINNY ARSENAL

Figure 3-1
Long-Term Groundwater
Monitoring Well Locations

0 300 600 1,200 Feet

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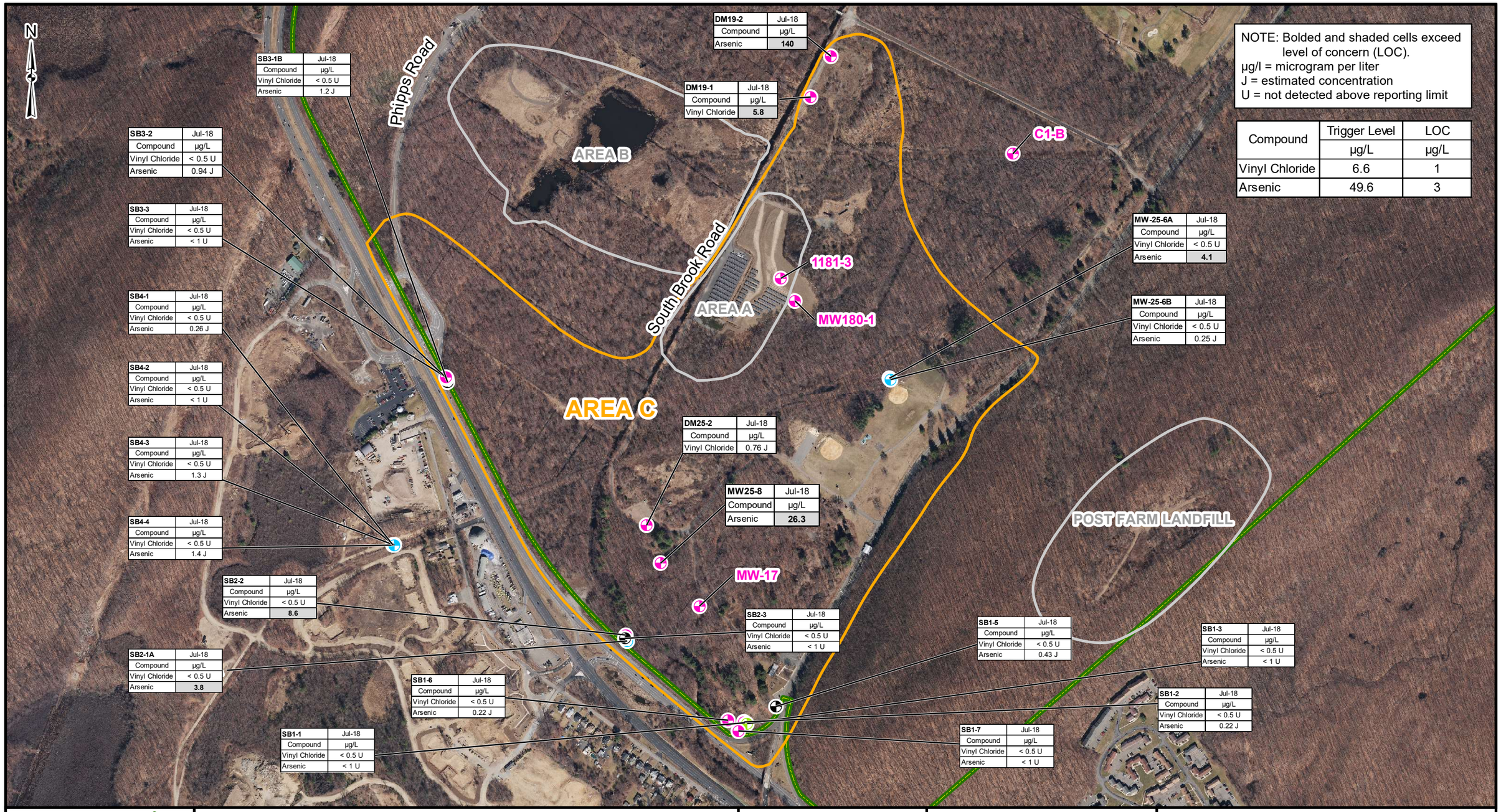

NOTE: Bolded and shaded cells exceed level of concern (LOC).
µg/l = microgram per liter
J = estimated concentration
U = not detected above reporting limit

Compound	Trigger Level	LOC
	µg/L	µg/L
Vinyl Chloride	6.6	1
Arsenic	49.6	3

Legend

- Well screened in the unconfined aquifer
- Well screened within the lower semi-confined aquifer
- Well screened within the upper semi-confined aquifer
- Well screened within the bedrock aquifer
- Area C (PICA-206)
- Picatinny Arsenal Boundary

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AREA C (PICA-206)
PICATINNY ARSENAL

Figure 5-1
Area C Monitoring Well
Groundwater Results
(July 2018)

0 300 600 1,200 Feet

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TABLES

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Table 1-1 Sampling Events

Season	Date	Year	Sampling Round	Statistics Round	Reference
Winter	January/ February 2010	1	A/1	-	Shaw 2010a
Summer	July/August 2010		B/2	-	Shaw 2010b
Spring	April 2011	2	C/3	-	WESTON 2011
Fall	October/ November 2011		D/4	1	WESTON 2012
Summer	July 2012	3	E/5	2	WESTON 2013a
Winter	March 2013	4	F/6	3	WESTON 2013b
Fall	October 2013		G/7	4	WESTON 2014a
Spring	April 2014	5	H/8	5	WESTON 2014b
Summer	August 2014		I/9	6	WESTON 2014c
Fall	September 2015	6	J/10	7	EA 2016a
Fall	November 2015		K/11		
Spring	May 2016	7	L/12	8	EA 2016b
Summer	July 2016		M/13		
Summer	July 2017	8	N/14	-	EA 2017
Summer	July 2018	9	O/15		Current Report

Table 1-2 Trigger Levels

Chemical[(a)]	Trigger Level µg/L
VOCs	
Vinyl chloride	6.6
Inorganics	
Arsenic	49.6

(a) Only analytes that remained in the long-term monitoring program after completion of the eighth statistical evaluation are shown in this table.

NOTE: µg/L = Micrograms per liter.

Table 1-3 2018 Long-Term Monitoring Sampling Schedule

Southern Boundary Well ID	Volatile Organic Compounds	Metals	Explosives
SB1-1	Annual	Annual	Annual
SB1-2	Annual	Annual	Annual
SB1-3	Annual	Annual	Annual
SB1-5	Annual	Annual	Annual
SB1-6	Annual	Annual	Annual
SB1-7	Annual	Annual	Annual
SB2-1A	Annual	Annual	Annual
SB2-2	Annual	Annual	Annual
SB2-3	Annual	Annual	Annual
SB3-1B	Annual	Annual	Annual
SB3-2	Annual	Annual	Annual
SB3-3	Annual	Annual	Annual
SB4-1	Annual	Annual	Annual
SB4-2	Annual	Annual	Annual
SB4-3	Annual	Annual	Annual
SB4-4	Annual	Annual	Annual
Area C Well ID	**Vinyl Chloride**	**Arsenic**	
MW-16	Previously Decommissioned		
MW-17	NR	NR	
MW25-7	Previously Decommissioned		
MW25-8	NR	Annual	
MW3548-3	Previously Decommissioned		
DM19-1	Annual	NR	
DM19-2	NR	Annual	
DM25-2	Annual	NR	
DM25-3	Previously decommissioned		
LF-2	Previously decommissioned		
1181-3	NR	NR	
MW180-1[(a)]	NR	NR	
C1-A	Previously Decommissioned		
C1-B	NR	NR	
MW25-6A[(b)]	Annual	Annual	
MW25-6B[(b)]	Annual	Annual	

(a) Blockage in well, and well could not be sampled. The well was subsequently determined to be damaged and decommissioned in 2017 following the sampling event.

(b) The frequency of sample collection and analyses for the upgradient wells, MW25-6A and MW25-6B, was determined by the most conservative sampling frequency required for the Site and sentinel wells.

NOTE: NR = Sampling for this analyte is not required for this well.

Table 2-1 Groundwater Elevations

Well	Location	Aquifer	Top of Inner Casing Elevation (feet above msl)	Depth to Water, Summer 2018 (feet below inner casing)	Groundwater Elevation, Summer 2018 (feet above msl)	Groundwater Elevation, Summer 2017 (feet above msl)
SB1-1	SB	Bedrock - Gneiss	691.88	5.04	686.84	686.19
SB1-2	SB	Unconfined	691.74	5.84	685.9	685.33
SB1-3	SB	Upper Semi-Confined	692.17	6.28	685.89	685.33
SB1-5	SB	Bedrock - Gneiss	708.87	22.37	686.5	682.39
SB1-6	SB	Unconfined	690.75	6.51	684.24	684.63
SB1-7	SB	Unconfined	691.66	5.95	685.71	685.92
SB2-1A	SB	Lower Semi-Confined	691.77	17.38	674.39	674.73
SB2-2	SB	Unconfined	690.16	7.57	682.59	683.45
SB2-3	SB	Bedrock - Dolomite	691.07	18.05	673.02	673.39
SB3-1B	SB	Bedrock - Dolomite	701.55	25.05	676.5	677.47
SB3-2	SB	Lower Semi-Confined	701.56	24.96	676.6	676.78
SB3-3	SB	Unconfined	701.04	16.64	684.4	684.91
SB4-1	SB	Bedrock - Dolomite	707.17	30.72	676.45	674.71
SB4-2	SB	Unconfined	708.47	21.27	687.2	686.28
SB4-3	SB	Upper Semi-Confined	708.14	21.88	686.26	685.4
SB4-4	SB	Lower Semi-Confined	708.02	30.33	677.69	677.3
MW25-6A	UG	Unconfined	699.33	10.4	688.93	689.9
MW25-6B	UG	Lower Semi-Confined	692.98	9.6	683.38	684.03
MW-17	Site	Unconfined	692.98	6.22	686.76	686.09
MW25-8	Site	Unconfined	690.22	6.91	683.31	684.04
DM19-1	Site	Unconfined	692.18	8.82	683.36	683.97
DM19-2	Site	Unconfined	692.82	9.62	683.2	683.77
DM25-2	Site	Unconfined	694.99	11.75	683.24	684
1181-3	Site	Unconfined	691.25	9.48	681.77	682.62
MW180-1	Site	Unconfined	693.72	not measured-blockage	-	-
C1-B	Site	Unconfined	690.6	2.02	688.58	687.68

NOTE: msl = Mean sea level.
SB = Southern boundary.
UG = Upgradient.
- = Indicates the elevation could not be calculated.

Table 3-1 Summary of Wells Included in the Long-Term Monitoring Program

Southern Boundary Well ID	Well Designation	Aquifer	Volatile Organic Compounds	Metals	Explosives
SB1-1	Southern Boundary	Bedrock - Gneiss	X	X	X
SB1-2	Southern Boundary	Unconfined	X	X	X
SB1-3	Southern Boundary	Upper Semi-Confined	X	X	X
SB1-5	Southern Boundary	Bedrock - Gneiss	X	X	X
SB1-6	Southern Boundary	Unconfined	X	X	X
SB1-7	Southern Boundary	Unconfined	X	X	X
SB2-1A	Southern Boundary	Lower Semi-Confined	X	X	X
SB2-2	Southern Boundary	Unconfined	X	X	X
SB2-3	Southern Boundary	Bedrock - Dolomite	X	X	X
SB3-1B	Southern Boundary	Bedrock - Dolomite	X	X	X
SB3-2	Southern Boundary	Lower Semi-Confined	X	X	X
SB3-3	Southern Boundary	Unconfined	X	X	X
SB4-1	Southern Boundary	Bedrock - Dolomite	X	X	X
SB4-2	Southern Boundary	Unconfined	X	X	X
SB4-3	Southern Boundary	Upper Semi-Confined	X	X	X
SB4-4	Southern Boundary	Lower Semi-Confined	X	X	X

Area C Well ID	Well Designation	Aquifer	Vinyl Chloride	Arsenic
MW25-6A	Upgradient	Unconfined	X	X
MW25-6B	Upgradient	Lower Semi-Confined	X	X
MW25-8	Site	Unconfined		X
DM19-1	Site	Unconfined	X	
DM19-2	Site	Unconfined		X
DM25-2	Site	Unconfined	X	

Table 3-2 Monitoring Well Assessment

Well ID	Screened Interval (feet bgs)	Completion Depth (feet bgs)	Prior Well Assessment Spring/Summer 2017	Actions Taken During Summer 2017 Sampling	Current Well Assessment Summer 2018[a]
SB1-1	83-93	93	No action necessary	No action necessary	No action necessary
SB1-2	8-18	18	No action necessary	No action necessary	No action necessary
SB1-3	24-34	34	No action necessary	No action necessary	No action necessary
SB1-5	90-110	110[b]	Downhole camera did not note blockage but well is restricted at 10 feet	Well was sampled with Hydrasleeve.	Well was sampled with Hydrasleeve.
SB1-6	8-18	18[b]	No action necessary	No action necessary	No action necessary
SB1-7	9.5-19.5	19.5[b]	No action necessary	No action necessary	No action necessary
SB2-1A	158-168	168	No action necessary	No action necessary	No action necessary
SB2-2	25-35	35	No action necessary	No action necessary	No action necessary
SB2-3	243-253	253	No action necessary	No action necessary	No action necessary
SB3-1B	326-336	336	No action necessary	No action necessary	No action necessary
SB3-2	170-180	180	No action necessary	No action necessary	No action necessary
SB3-3	21-31	31	No action necessary	No action necessary	No action necessary
SB4-1	369-379	379	No action necessary	No action necessary	No action necessary
SB4-2	36-46	46	No action necessary	No action necessary	No action necessary
SB4-3	92-102	102	No action necessary	No action necessary	No action necessary
SB4-4	155-165	165	No action necessary	No action necessary	No action necessary
MW25-6A	10-20	20	No action necessary	No action necessary	No action necessary
MW25-6B	65-75	75	No action necessary	No action necessary	No action necessary
MW-17	7-19	19[b]	No action necessary	No action necessary	No action necessary
MW25-8	20-30	30	No action necessary	No action necessary	No action necessary
DM19-1	9.5-19.5	19.5	No action necessary	No action necessary	No action necessary
DM19-2	9.5-19.5	19.5	No action necessary	No action necessary	No action necessary
DM25-2	9.9-20.1	20.1	No action necessary	No action necessary	No action necessary

Table 3-2 Monitoring Well Assessment

Well ID	Screened Interval (feet bgs)	Completion Depth (feet bgs)	Prior Well Assessment Spring/Summer 2017	Actions Taken During Summer 2017 Sampling	Current Well Assessment Summer 2018[a]
1181-3	12.5-22.5	22.5[b]	No action necessary	No action necessary	No action necessary
MW180-1	5-15	15	Downhole camera noted blockage; well is not reparable and will be abandoned.	Well was decommissioned in February 2018	--
C1-B	12.3-22.3	22.3[b]	No action necessary	No action necessary	No action necessary

(a) All necessary actions identified during the 2018 assessment will be completed during the next round of sampling.

(b) Well logs are not available for these wells; therefore, the completion depths are based on information contained in previous reports.

NOTE: bgs = Below ground surface.

Table 3-3 Field Parameter Values, 2010-2018

Well No.	Date	Conductivity (mS/cm)	DO (mg/L)	pH (s.u.)	Redox (mV)	Turbidity (NTU)
SB1-1	1/26/2010	0.872	8.65	6.09	178.4	8.4
	7/20/2010	0.581	10.1	6.24	156.8	6.4
	4/12/2011	0.849	10	6.15	200	72
	11/1/2011	0.794	7.58	6.05	243	6.2
	7/27/2012	0.874	7.83	6.17	210	8.9
	3/20/2013	0.877	9.65	6.17	210	5.4
	10/24/2013	0.732	9.80	6.32	204	3.7
	4/1/2014	0.632	7.76	6.18	242	13.3
	8/19/2014	0.811	6.31	5.66	234	25.4
	9/2/2015	0.894	6.22	6.25	229	1.39
	7/6/2016	1.11	5.99	6.06	163	5.70
	7/13/2017	1.05	4.25	6.41	189	8.5
	7/30/2018	0.973	5.55	6.58	292	44.2
SB1-2	1/26/2010	1.664	7.65	6.26	208.4	7.6
	7/20/2010	2.261	4.25	6.03	248.1	0
	4/12/2011	1.8	10.36	6.2	223	22.3
	11/3/2011	1.06	5.42	6.39	197	0
	7/27/2012	1.31	4.65	6.26	292	3
	3/20/2013	1.13	5.78	6.34	235	1.9
	10/24/2013	1.97	2.94	6.05	196	0
	4/1/2014	1.48	5.85	6.52	259	6.1
	8/15/2014	3.79	5.10	5.37	246	7.8
	9/2/2015	1.59	0.45	6.36	198	0.99
	7/6/2016	2.81	3.40	3.95	220	3.30
	7/13/2017	1.18	2.44	10.51	187	8.9
	7/30/2018	1.28	1.10	6.74	115	5.6
SB1-3	1/26/2010	0.889	9.08	6.31	193	2.3
	7/20/2010	1.563	9.17	6.13	190.3	1
	4/12/2011	0.884	9.19	6.17	250	12.4
	11/1/2011	1.07	7.06	6.14	240	6.9
	7/27/2012	1.25	6.78	6.33	292	5.4
	3/20/2013	0.881	6.95	6.41	232	2.7
	10/24/2013	1.43	7.00	6.24	210	0
	4/1/2014	0.887	8.08	6.61	272	7.2
	8/19/2014	1.59	5.80	6.16	214	0.0
	9/2/2015	1.63	6.65	6.43	366	0.86
	11/2/2015	2.73	6.06	8.58	128	6.11
	5/4/2016	1.30	5.64	6.99	130	2.6
	7/6/2016	1.30	5.97	4.10	211	2.04
	7/13/2017	1.06	7.52	8.04	267	15.7
	7/30/2018	1.46	5.40	7.24	121	4.6
SB1-5	1/26/2010	0.983	1.66	7.02	20.5	8.8
	7/20/2010	0.313	2.29	6.99	17.8	4.2
	4/13/2011	0.453	2.67	6.62	194	22.2
	11/1/2011	0.362	3.22	6.66	190	2.3
	7/27/2012	0.346	3.22	6.87	32	22.7
	3/18/2013	0.398	5.55	6.88	245	0.8
	10/24/2013	0.374	1.88	6.67	49	0

Table 3-3 Field Parameter Values, 2010-2018

Well No.	Date	Conductivity (mS/cm)	DO (mg/L)	pH (s.u.)	Redox (mV)	Turbidity (NTU)
SB1-5	4/1/2014	0.686	5.77	7.14	49	0
	8/19/2014	0.405	1.69	6.21	39	18.8
	9/3/2015	0.440	3.89	7.10	119	6.57
	9/7/2016[(b)]	0.312	2.04	6.27	295	34.0
	7/13/2017[(b)]	0.431	3.72	7.22	130	127
	7/17/2018[(b)]	0.653	0.80	7.39	24	36.7
SB1-6	1/28/2010	1.311	8.62	6.24	152	9.8
	7/20/2010	1.204	8.39	6.34	120.4	8.6
	4/14/2011	0.91	8.7	6.12	405	150
	11/3/2011	1.2	5.68	6.43	191	7.8
	7/27/2012	1.12	9.53	6.34	192	27.4
	3/20/2013	1.08	5.63	6.38	197	9.4
	10/24/2013	0.884	4.81	6.22	176	27.6
	4/1/2014	1.83	5.97	6.43	192	6.2
	8/19/2014	1.25	5.32	6.15	214	18.1
	9/2/2015	0.866	4.99	6.38	398	5.26
	7/6/2016	1.03	3.40	6.19	189	0.71
	7/13/2017	1.29	3.31	6.45	198	11.6
	7/17/2018	1.07	1.15	6.42	136	7.01
SB1-7	1/28/2010	0.826	11.11	6.35	154	6.6
	7/20/2010	0.736	15.61	6.01	227.7	9.8
	4/14/2011	0.686	9.13	6.47	245	51.6
	11/3/2011	0.818	9.71	6.21	219	14.4
	7/27/2012	0.828	7.6	6.39	288	25.5
	3/20/2013	0.343	7.93	5.91	256	0.0
	10/24/2013	0.753	1.04	4.87	334	8.3
	4/1/2014	0.843	7.83	6.36	228	2.6
	8/19/2014	0.844	7.14	6.26	214	0.1
	9/2/2015	0.782	4.66	6.42	395	9.69
	7/6/2016	1.15	6.09	6.33	169	38.6
	7/13/2017	1.14	5.88	6.54	199	8.16
	7/18/2018	0.879	3.73	6.36	198	4.52
SB2-1A	2/2/2010	1.882	0.67	11.89	-185	1.4
	8/4/2010	256.7	0.19	11.66	4.5	0
	4/15/2011	1.3	0.58	11.72	-39	21.9
	11/4/2011	0.409	0	10.37	-130	0
	7/26/2012	1.3	0	11.54	-101	1
	10/22/2013	1.46	8.27	11.88	-287	2.3
	4/2/2014	2.26	0.72	12.14	-66	0
	8/20/2014	2.14	0.57	10.88	-122	0.0
	9/22/2015	2.85	0.88	11.06	37	1.23
	7/6/2016	4.59	0	12.11	-129	4.66
	7/13/2017	4.19	0.37	13.98	-13	8.92
	7/18/18	3.99	0	12.24	-89	3.29
SB2-2	2/2/2010	3.91	0.74	6.69	-87	50
	8/4/2010	3.585	0.25	6.67	-107.9	8.9
	4/15/2011	3.22	0	6.66	-60	117

Table 3-3 Field Parameter Values, 2010-2018

Well No.	Date	Conductivity (mS/cm)	DO (mg/L)	pH (s.u.)	Redox (mV)	Turbidity (NTU)
SB2-2	11/4/2011	2.58	0	6.54	-86	18.7
	7/26/2012	3.33	0	6.71	-108	48.1
	3/21/2013	3.75	6.82	6.81	-103	6.6
	10/22/2013	4.47	0.58	6.73	-95	29.3
	4/2/2014	5.47	0.38	6.55	-104	45.0
	8/20/2014	5.95	1.84	5.41	73	8.2
	9/22/2015	6.67	0.77	8.16	-127	91.1
	11/2/2015	6.98	0.05	7.33	-149	25.4
	5/4/2016	6.89	0	6.30	-55	14.2
	7/6/2016	6.02	0	7.02	-152	9.43
	7/13/2017	5.11	0.16	9.20	-97	47.8
	7/18/18	5.65	0	6.54	-78	51.7
SB2-3	2/2/2010	0.177	0.34	8.27	-145	1.6
	8/4/2010	43.94	0.49	8	122.8	0
	4/15/2011	0.189	0.23	8.3	99	3.3
	11/4/2011	0.174	0	8.05	133	0
	7/26/2012	0.193	1.38	8.17	51	0
	10/22/2013	0.198	0.59	7.68	-50	0.7
	4/2/2014	0.208	0.66	8.26	128	0
	8/20/2014	0.184	0.78	7.71	49	0.0
	9/22/2015	0.169	2.38	6.59	289	0.94
	7/6/2016	0.225	0.34	7.61	147	2.55
	7/13/2017	0.153	0.28	13.3	73	7.6
	7/18/2018	0.142	1.26	8.07	103	7.13
SB3-1B	1/27/2010	0.428	0.27	11.22	-255	6
	3/17/2010	0.276	0.49	11.24	-218	2.3
	7/21/2010	0.735	0.19	10.89	-254.2	7.9
	4/18/2011	0.358	0	10.29	-13	8
	11/4/2011	0.344	0	11.03	-294	0.2
	7/30/2012	0.335	0	10.47	-244	0.9
	3/20/2013	.201	1.07	9.90	23	44.3
	10/24/2013	0.302	2.90	10.68	-226	0
	4/2/2014	0.352	3.81	10.83	-192	0
	8/20/2014	0.338	0.76	9.96	-187	0.0
	9/22/2015	0.274	0.51	9.88	-17	1.54
	7/6/2016	0.419	0	10.86	-195	4.94
	7/13/2017	0.285	0.36	12.46	-219	8.14
	7/18/2018	0.256	0.51	11.00	-57	4.24
SB3-2	1/27/2010	0.174	0.39	8.29	-171	7.2
	7/20/2010	3.447	1.25	8.13	298.1	0
	4/18/2011	0.179	0	8.07	184	0.5
	11/4/2011	0.188	0	8.1	82	0
	7/30/2012	0.175	0	7.21	182	0
	3/21/2013	0.189	0	8.29	60	0
	10/22/2013	0.183	1.02	6.98	115	0.8
	4/2/2014	0.186	0.94	7.67	47	0
	8/20/2014	0.175	1.18	7.80	81	0.0
	9/22/2015	0.448	0.36	9.26	93	6.50

Table 3-3 Field Parameter Values, 2010-2018

Well No.	Date	Conductivity (mS/cm)	DO (mg/L)	pH (s.u.)	Redox (mV)	Turbidity (NTU)
SB3-2	7/6/2016	0.208	0.50	7.65	12	9.79
	7/13/2017	0.147	0.90	11.52	-4	16.8
	7/18/2018	0.144	0.144	8.24	96	6.59
SB3-3	1/27/2010	0.303	11.08	6.07	103	5.5
	8/5/2010	1.481	1.24	6.61	118.2	9.5
	4/18/2011	0.271	9.8	6.21	312	4.2
	11/4/2011	0.246	6.86	5.7	255	1
	7/30/2012	0.439	4.12	5.81	246	48.4
	10/22/2013	0.778	0.93	6.57	188	1.2
	4/2/2014	0.546	8.29	6.19	174	18.1
	8/20/2014	1.26	0.32	6.55	127	10.4
	9/22/2015	0.202	1.78	9.79	63	5.07
	7/6/2016	0.565	1.22	3.79	214	1.47
	7/13/2017	0.495	1.36	9.03	126	14.7
	7/18/2018	0.389	4.77	6.14	209	3.15
SB4-1	1/11/2010	0.176	0.4	11.47	-412	4.8
	3/17/2010	0.193	0.26	11.21	-335	2.8
	8/3/2010	0.236	0.42	10.74	-254.2	0
	4/20/2011	0.271	0.17	9.36	-374	8
	11/1/2011	0.267	0	10.31	-278	3.2
	7/31/2012	0.229	0	10.47	-325	2.5
	10/25/2013	0.185	0.97	7.38	-56	2.3
	4/3/2014	0.159	0.42	8.89	-212	0
	8/21/2014	0.168	2.64	7.89	-181	0.0
	9/22/2015	0.229	1.36	10.73	-302	2.51
	7/6/2016	0.300	0.44	8.76	-273	1.83
	7/13/2017	0.240	0.31	12.35	-292	18.9
	7/30/2018	0.2925	0	10.80	-281	46.2
SB4-2	1/12/2010	0.195	1.03	5.9	95.6	15.9
	8/3/2010	20.23	1.57	5.78	132.7	6.9
	4/20/2011	0.255	2.02	5.88	173	17.2
	11/1/2011	0.259	1.16	6	139	66.4
	7/31/2012	0.252	1.15	5.91	96	6.1
	10/25/2013	0.316	0.85	6.02	124	4.4
	4/3/2014	0.294	2.30	5.77	100	4.8
	8/21/2014	0.260	2.03	5.66	95	23.9
	9/22/2015	0.226	1.18	5.98	138	5.37
	7/6/2016	0.302	1.04	6.01	80	1.80
	7/13/2017	0.227	2.85	6.33	143	28.5
	7/30/2018	0.237	0.41	5.80	79	16.1
SB4-3	1/12/2010	0.465	0.66	7.33	-141.1	6.3
	8/3/2010	0.528	0.52	7.12	-122	5.2
	4/20/2011	0.676	0.14	7.18	-107	16.5
	11/1/2011	0.635	0	7.01	-94	120
	7/31/2012	0.687	3.39	7.12	-90	7
	10/25/2013	0.765	5.17	7.07	-121	7.7
	4/3/2014	0.605	3.14	7.28	81	0
	8/21/2014	0.757	2.48	6.91	-131	6.9

Table 3-3 Field Parameter Values, 2010-2018

Well No.	Date	Conductivity (mS/cm)	DO (mg/L)	pH (s.u.)	Redox (mV)	Turbidity (NTU)
SB4-3	9/22/2015	0.613	0.33	7.62	-91	214
	7/6/2016	1.08	0	7.05	-113	2.17
	7/13/2017	1.02	0.44	8.82	-128	19.4
	7/30/2018	0.974	0	7.31	-88	124
SB4-4	1/12/2010	0.145	0.36	8.45	92.9	9.7
	7/3/2010	16.38	0.23	8.43	-57.3	9.5
	4/20/2011	0.209	0.39	8.23	147	88.9
	11/1/2011	0.202	0	8.1	65	11.3
	7/31/2012	0.204	0.02	8.17	78	8.1
	10/25/2013	0.216	1.54	8.06	148	0
	4/3/2014	0.212	1.43	8.34	129	0
	8/21/2014	0.196	0.66	7.62	322	0.0
	9/22/2015	0.170	1.01	9.98	-118	11.0
	7/6/2016	0.195	0.82	5.22	103	1.11
	7/13/2017	0.157	1.70	10.81	-11	25.5
	7/30/2018	0.224	1.08	8.43	194	48.7
MW-17 (c)	1/19/2010	0.163	7.17	6.54	124.4	8.1
	7/22/2010	0.143	3.81	6.2	102.9	5.7
	4/20/2011	0.128	7.44	6.36	359	29.3
	11/3/2011	0.105	2.18	4.09	413	5.1
	7/26/2012	0.098	6.78	6.35	214	44.9
	10/23/2013	0.117	3.26	6.62	153	14.2
	8/19/2014	0.116	4.27	4.95	239	6.4
	9/3/2015	0.091	8.87	6.62	186	3.5
	7/6/2016	0.096	5.54	6.82	29	1.12
DM19-1	1/28/2010	0.61	0.18	6.47	-94	4.6
	7/15/2010	0.547	0.58	6.59	76.9	-4.9
	4/13/2011	0.741	0	6.47	-76	27.4
	11/2/2011	0.66	0	6.41	-93	1.9
	7/26/2012	0.289	0	6.66	-106	11.8
	3/19/2013	.607	5.35	6.67	-73	24.7
	10/21/2013	0.342	0.97	6.73	-110	0.8
	3/31/2014	0.455	0.70	6.73	-86	48.2
	8/18/2014	0.329	0.84	7.08	-149	0.0
	9/3/2015	0.461	2.63	6.59	-74	6.19
	11/2/2015	0.700	0.09	7.13	-130	8.90
	5/4/2016	0.639	0	8.07	-103	100
	7/6/2016	0.593	0.05	6.18	-54	5.71
	7/13/2017	0.538	0.51	6.47	-33	52.8
	7/17/2018	0.349	0	6.62	-102	12.1
DM19-2	1/19/2010	0.618	0.21	6.71	-52	38.5
	7/15/2010	20.78	0.62	6.48	-84.4	0
	4/13/2011	0.542	8.16	6.77	-72	57.3
	11/2/2011	0.565	0	6.36	-102	63.9
	7/26/2012	0.316	0	7.16	-166	32.9
	3/19/2013	0.621	5.12	6.75	-53	19.7
	10/21/2013	0.778	0.35	5.65	62	21.2
	8/18/2014	0.358	0.55	7.50	-155	6.2

Table 3-3 Field Parameter Values, 2010-2018

Well No.	Date	Conductivity (mS/cm)	DO (mg/L)	pH (s.u.)	Redox (mV)	Turbidity (NTU)
DM19-2	9/3/2015	0.510	2.01	7.16	-113	10.9
	7/6/2016	0.825	0.15	6.32	-55	4.30
	7/13/2017	0.646	0	6.81	-69	59.2
	7/17/2018	0.600	0	8.04	-57	137
DM25-2	1/18/2010	0.516	0.78	6.2	-65.3	9.3
	7/15/2010	0.79	0.23	5.99	-49.6	1.9
	4/18/2011	0.45	0.07	6.32	-55	39.8
	11/2/2011	0.382	0	6	-22	0
	7/25/2012	0.345	0	6.18	-42	23.5
	10/23/2013	0.372	1.19	6.25	-48	3.0
	8/21/2014	0.351	1.48	5.77	-78	9.7
	9/3/2015	0.362	0.68	6.09	-50	12.2
	7/6/2016	0.334	0	6.02	-20	0.59
	7/13/2017	0.298	0	6.54	-38	31.3
	7/17/2018	0.290	3.82	6.02	-62	26.2
MW25-6A	1/13/2010	0.13	9.4	6.8	157.7	1.2
	7/15/2010	5.71	9.31	6.33	191.2	0
	4/21/2011	0.364	7.81	7.1	283	0
	11/2/2011	0.449	2.57	5.19	258	0
	7/25/2012	0.58	1.47	5.6	221	5.5
	3/19/2013	0.365	6.84	7.00	212	0.5
	10/21/2013	0.295	4.78	6.40	226	3.5
	3/31/2014	0.183	7.85	6.74	209	0
	8/18/2014	0.689	0.90	7.75	79.0	0.0
	9/2/2015	0.545	2.80	7.60	294	5.27
	11/2/2015	0.757	1.07	7.05	-9	4.59
	5/4/2016	0.364	5.53	8.30	257	0.2
	7/6/2016	0.808	1.51	4.83	187	4.13
	7/13/2017	0.662	0	7.96	-109	8.32
	7/17/2018	0.634	0.21	7.68	50	4.90
MW25-6B	1/13/2010	0.369	1.25	8.68	147.9	10.4
	7/15/2010	1.053	0.67	8.01	-130.5	7.8
	4/21/2011	0.687	-26	7.73	330	25.7
	11/2/2011	0.686	0	7.7	27	0.8
	7/25/2012	0.702	0.25	8.12	20	11.6
	3/19/2013	0.751	0.57	7.95	-3.00	4.1
	10/21/2013	0.681	2.73	9.80	28	28
	3/31//2014	0.702	2.70	9.92	74	8.7
	8/18/2014	0.734	1.69	8.86	35	0.0
	9/2/2015	1.20	6.01	11.99	-21	15.0
	11/2/2015	0.938	4.98	10.29	-45	26.2
	5/4/2016	1.10	10.09	12.79	50	9.8
	7/6/2016	0.988	5.55	11.35	-144	1.04
	7/13/2017	0.947	6.70	13.15	-144	37.8
	7/17/2018	1.10	5.80	12.62	-28	15.8
MW25-8	1/18/2010	0.479	2.21	6.18	-57.2	14.9
	7/22/2010	11.16	0.14	6.21	-38.1	8.1
	4/15/2011	0.27	0	6.35	-52	81.2

Table 3-3 Field Parameter Values, 2010-2018

Well No.	Date	Conductivity (mS/cm)	DO (mg/L)	pH (s.u.)	Redox (mV)	Turbidity (NTU)
MW25-8	11/3/2011	0.358	0	3.83	326	5.5
	7/25/2012	0.416	0	6.21	-17	38.4
	10/22/2013	0.458	0.42	6.26	-39	14.1
	8/21/2014	0.436	0.37	6.06	-61	13.2
	9/3/2015	0.355	1.63	5.59	14	87.3
	7/6/2016	0.405	0	5.98	-16	6.89
	7/13/2017	0.317	0.00	6.34	-29	66.3
	7/17/2018	0.420	0	9.07	-68	293
C1-B (c)	1/5/2010	0.214	0.17	6.95	93.4	2.9
	6/17/2010	0.173	0.25	7.35	8.2	6.6
	4/14/2011	0.245	0.15	7.37	325	12.8
	11/2/2011	0.36	0	6.74	125	0
	7/27/2012	0.172	0	6.07	215	19.4
	3/20/2013	0.286	6.26	7.14	24	15.1
	10/23/2013	0.233	0.84	7.91	97	14.5
	8/18/2014	0.276	0.92	7.31	-63	21.8
	9/3/2015 [(a)]	-	-	-	-	-
	7/6/2016	0.587	0	6.86	-89	5.98
MW180-1 (c)	2/3/2010	0.329	2.15	6.69	8.9	9.6
	7/19/2010	5.889	1.87	6.39	54.2	8.2
	4/13/2011	0.35	2.67	6.54	159	129
	11/2/2011	0.461	0	6.8	18	0
	7/31/2012	0.483	1.6	6.64	77	25.1
	10/23/2013	0.487	1.95	6.77	96	25.6
	9/19/2014	0.491	2.82	7.48	-76	0
	Well abandoned in 2017 (Phase VI Well Decommissioning Report)					
1181-3 (c)	2/3/2010	0.318	0.51	6.71	-96	8.7
	7/22/2010	8.827	0.17	6.67	-92.1	5.8
	4/13/2011	0.259	0.19	6.45	-6	49.8
	11/2/2011	0.331	0	6.65	-76	0
	7/31/2012	0.319	3.26	6.69	-90	9.9
	10/23/2013	0.309	0.91	7.03	-24	21.3
	9/19/2014	0.347	1.97	6.95	-82	0.0
	9/3/2015	0.305	2.39	6.85	-50	349
	7/6/2016	0.358	0	6.92	-105	9.02

(a) The well was not sampled.
(b) Sampled with a Hydrasleeve.
(c) Well removed from sampling schedule in 2017, field parameters no longer collected.

NOTE: DO = Dissolved oxygen.
mg/L = Milligrams per liter.
mS/cm = Millisiemens per centimeter.
mV = Millivolts.
NTU = Nephelometric turbidity units.
Redox = Oxidation reduction potential.
s.u. = Standard units.

Table 4-1 Arsenic Concentrations Versus Field Parameter Values

Well No.	Date	DO (mg/L)	pH (s.u.)	Redox (mV)	Turbidity (NTU)	Arsenic Concentration (µg/L)[a]
SB2-1A	Fall (Sep.) 2015	**0.88**	**11.06**	37	1.23	5.6
	Summer 2016	**3.40**	6.19	189	0.71	6.5
	Summer 2017	**0.37**	13.98	-13	8.92	3.3
	Summer 2018	**0**	12.24	**-89**	3.29	3.8
SB2-2	Winter 2010	**0.74**	6.69	**-87**	50	7.3 J
	Summer 2010	**0.25**	6.67	**-107.9**	8.9	6.4 J
	Spring 2011	**0**	6.66	**-60**	117	5.3 J
	Fall 2011	**0**	6.54	**-86**	18.7	5.1
	Summer 2012	**0**	6.71	**-108**	48.1	6.5
	Winter 2013	NR	6.81	**-103**	6.6	4.9 J
	Fall 2013	**0.58**	6.73	**-95**	29.3	8.8
	Spring 2014	**0.38**	6.55	**-104**	45	6.6
	Summer 2014	**1.84**	5.41	73	8.2	4.8
	Fall (Sep.) 2015	**0.77**	**8.16**	**-127**	91.1	13.3
	Fall (Nov.) 2015	**0.05**	7.33	**-149**	25.4	10.6
	Spring 2016	**0**	6.30	-55	14.2	8.1
	Summer 2016	**0**	7.02	**-152**	9.43	7.2
	Summer 2017	0.16	9.20	**-97**	47.8	7.1
	Summer 2018	**0**	6.54	**-78**	51.7	8.6
SB4-3	Summer 2016	**0**	7.05	**-113**	2.17	4.5
C1-B	Winter 2010	**0.17**	6.95	93.4	2.9	4.9 J
	Summer 2010	**0.25**	7.35	8.2	6.6	7.6 J
	Spring 2011	**0.15**	7.37	325	12.8	8.8 J
	Fall 2011	**0**	6.74	125	0	5.1
	Summer 2012	**0**	6.07	215	19.4	8.4
	Winter 2013	NR	7.14	24	15.1	6.6
	Fall 2013	**0.84**	**7.91**	97	14.5	5.8
	Summer 2016	**0**	6.86	**-89**	5.98	9.4 J-
DM19-1	Summer 2012	**0**	6.66	**-106**	11.8	7.8
	Winter 2013	**5.35**	6.67	**-73**	24.7	3.4
	Fall 2013	**0.97**	6.73	**-110**	0.8	3.3
	Spring 2014	**0.70**	6.73	**-86**	48.2	3.2
	Fall (Nov.) 2015	**0.09**	7.13	**-130**	8.90	3.4
	Summer 2016	**0.05**	6.18	**-54**	5.71	3.8 J
DM19-2	Winter 2010	**0.21**	6.71	**-52**	38.5	45.1
	Summer 2010	**0.62**	6.48	**-84.4**	0	80.3
	Spring 2011	8.16	6.77	**-72**	57.3	97
	Fall 2011	**0**	6.36	**-102**	63.9	60
	Summer 2012	**0**	7.16	**-166**	32.9	95
	Winter 2013	NR	6.75	**-53**	19.7	52
	Fall 2013	**0.35**	5.65	62	21.2	43
	Fall (Sep.) 2015	**2.01**	7.16	**-113**	10.9	51.2
	Summer 2016	**0.15**	6.32	**-55**	4.30	27.8 (27.5)
	Summer 2017	**0**	6.81	**-69**	59.2	66.3
	Summer 2018	**0**	8.04	**-57**	137	140

Table 4-1 Arsenic Concentrations Versus Field Parameter Values

Well No.	Date	DO (mg/L)	pH (s.u.)	Redox (mV)	Turbidity (NTU)	Arsenic Concentration (µg/L)[a]
DM25-2	Winter 2010	**0.78**	6.2	**-65.3**	9.3	11.8
	Summer 2010	**0.23**	5.99	-49.6	1.9	5.6 J
	Fall 2011	**0**	6	-22	0	4.7 J
	Summer 2012	**0**	6.18	-42	23.5	4.5
	Fall 2013	**1.19**	6.25	-48	3.0	4.3 J
	Fall (Sep.) 2015	**0.68**	6.09	**-50**	12.2	5.2
	Summer 2016	**0**	6.02	-20	0.59	3.7 J
MW25-6A	Summer 2017	**0**	**7.96**	**-109**	8.32	4.5
	Summer 2018	**0.21**	**7.68**	50	4.90	4.1
MW25-8	Winter 2010	**2.21**	6.18	**-57.2**	14.9	9.4 J
	Summer 2010	**0.14**	6.21	-38.1	8.1	8.0 J
	Spring 2011	**0**	6.35	**-52**	81.2	13 J
	Fall 2011	**0**	*3.83*	326	5.5	6.7
	Summer 2012	**0**	6.21	-17	38.4	9.1
	Fall 2013	**0.42**	6.26	-39	14.1	9.5
	Fall (Sep.) 2015	**1.63**	5.59	14	87.3	35.0
	Summer 2016	**0**	5.98	-16	6.89	37
	Summer 2017	**0**	6.34	-29	66.3	16.8
	Summer 2018	**0**	9.07	**-68**	293	26.3

(a) Arsenic solubility is affected by pH, oxidation reduction potential (redox), DO, and turbidity. When the solubility is expected to be decreased by a parameter (approximately pH < 5), the value is in *italicized blue font*. When the solubility is expected to be increased by a parameter (approximately 8.2 > pH > 7.4; DO < 8 mg/L; redox < -50 mV), the value is in **bold red font** (Serfes 2004).

NOTE: µg/L = Micrograms per liter.
DO = Dissolved oxygen.
J = Value is estimated.
mg/L = Milligrams per liter.
mV = Millivolts.
NR = DO was not reported during this sample period due to a malfunctioning DO probe.
NTU = Nephelometric turbidity units.
Redox = Oxidation reduction potential.
s.u. = Standard units.

Table 5-1 Round O Well Results

Location ID				SB1-1	SB1-2	SB1-3	SB1-5	SB1-6	SB1-7	SB2-1A	SB2-2	SB2-3	SB3-1B
Sample Name				SB1-1	SB1-2	SB1-3	SB1-5	SB1-6	SB1-7	SB2-1A	SB2-2	SB2-3	SB3-1B
Parent Sample ID													
Sample Date				7/30/2018	7/30/2018	7/30/2018	7/17/2018	7/17/2018	7/18/2018	7/18/2018	7/18/2018	7/18/2018	7/18/2018
Analyte	**Trigger Level [a]**	**LOC [b]**	**Unit**										
Volatile Organic Compounds													
Vinyl chloride	6.6	1	µg/L	NR	NR	NR	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Metals													
Arsenic	49.6	3	µg/L	< 1 U	0.22 J	< 1 U	0.43 J	0.22 J	< 1 U	**3.8**	**8.6**	< 1 U	1.2 J

Notes:

(a) With the exception of lead, the trigger levels were based on the maximum concentration of the analyte detected during previous sampling events. Because the maximum lead concentration detected, 320 µg/L, is more than 60 times the ARAR, the trigger value level was established at 10 times the ARAR.

(b) The Level of Concern (LOC) is the lower of the following: Federal Maximum Contaminant Levels (MCLs), New Jersey Department of Environmental Protection (NJDEP) MCLs, NJDEP Groundwater Quality Criteria, or any non-zero federal MCL goal.

µg/L = Micrograms per liter.

J = Estimated value.

NR = Not required.

U = Compound analyzed but not detected above the method detection limit.

Bold red font = The value is greater than the LOC.

Grey shading = Value is greater than the trigger level.

Table 5-1 Round O Well Results

Location ID				SB3-2	SB3-2	SB3-3	SB4-1	SB4-2	SB4-3	SB4-4	DM19-1	DM19-2	DM25-2	MW25-6A	MW25-6B	MW25-8
Sample Name				SB3-2	DUP-C	SB3-3	SB4-1	SB4-2	SB4-3	SB4-4	DM19-1	DM19-2	DM25-2	MW25-6A	MW25-6B	MW25-8
Parent Sample ID					SB3-2											
Sample Date				7/18/2018	7/18/2018	7/18/2018	7/30/2018	7/30/2018	7/30/2018	7/30/2018	7/17/2018	7/17/2018	7/17/2018	7/17/2018	7/17/2018	7/17/2018
Analyte	**Trigger Level [a]**	**LOC [b]**	**Unit**													
Volatile Organic Compounds																
Vinyl chloride	6.6	1	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	NR	NR	NR	NR	**5.8**	NR	0.76 J	< 0.5 U	< 0.5 U	NR
Metals																
Arsenic	49.6	3	µg/L	0.94 J	0.95 J	< 1 U	0.26 J	< 1 U	1.3 J	1.4 J	NR	**140**	NR	**4.1**	0.25 J	**26.3**

Notes:

(a) With the exception of lead, the trigger levels were based on the maximum concentration of the analyte detected during previous sampling events. Because the maximum lead concentration detected, 320 µg/L, is more than 60 times the ARAR, the trigger value level was established at 10 times the ARAR.

(b) The Level of Concern (LOC) is the lower of the following: Federal Maximum Contaminant Levels (MCLs), New Jersey Department of Environmental Protection (NJDEP) MCLs, NJDEP Groundwater Quality Criteria, or any non-zero federal MCL goal.

µg/L = Micrograms per liter.

J = Estimated value.

NR = Not required.

U = Compound analyzed but not detected above the method detection limit.

Bold red font = The value is greater than the LOC.

Grey shading = Value is greater than the trigger level.

Table 5-2 Long-Term Monitoring Analyte Exceedances of Area C Wells

Well	Trigger Level [a]	LOC [b]	Historical Data Range (µg/L)[c]	Historical Data Mean (µg/L)[c,d]	Winter 2010		Summer 2010		Spring 2011		Fall 2011		Summer 2012		Winter 2013		Fall 2013		Fall 2013 filtered[g]		Spring 2014		Summer 2014		Fall (Sep.) 2015		Fall (Nov.) 2015		Spring 2016		Summer 2016		Summer 2017		Summer 2018	
					Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual
Vinyl Chloride																																				
DM19-1	6.6	1	ND - 2.6	0.97	**5.3**		**10.6 (10.2)[e]**		0.4	U	0.4	U	**24**		**1.6**		**19**		NR		**16**		**15**		**12.5**		**4**		**5.6**		**8**		**2.4**		**5.8**	
DM25-2			ND - 6.6	0.97	**7**		**2.9**		**7.3**		**1.5**	J	**1.5**	J	NR		1	J	NR		NR		0.92	J	**1.4**		NR		NR		1		**1.4**		0.76	J
Arsenic																																				
MW25-8	49.6	3	2.7 - 11	6.2	**9.4**	J	**8**	J	**13**	J	**6.7**		**9.1**		NR		**9.5**		NR		NR		**10**		**35.0**		NR		NR		**37**		**16.8**		**26.3**	
DM19-2			4.2 - 16	10.7	**45**		**80**		**97**		**60**		**95**		**52**		**43**		NR		NR		**87**		**51.2**		NR		NR		**27.8 (27.5)**		**66.3**		**140**	
MW25-6A			Not available		1.7	J	3.0	U	1.2	J	**3.6**	J	**3.7**	J	1.0	J	1.2	J (J)	NR		0.52	J (J)	1.9	J	**3.2**	J	**6.4**		**3.2**	J	**4.7**	J-	**4.5**		**4.1**	
MW25-6B			Not available		Not available		**3** (3)	J (U)	2	J	1.2	J	1.7	J	1.5	J	1.1	J	NR		1.6	J	1.6	J	4.0	U	4.0 (4.0)	U (U)	**3.3** (2.2)	J (J)	2	UJ	0.23	J	0.25	J

Notes:

(a) With the exception of lead, the trigger levels were based on the maximum concentration of the analyte detected during previous sampling events. Because the maximum lead concentration detected, 320 µg/L, is more than 60 times the ARAR, the trigger value level was established at 10 times the ARAR.
(b) The Level of Concern (LOC) is the lower of the following: Federal Maximum Contaminant Levels (MCLs), New Jersey Department of Environmental Protection (NJDEP) MCLs, NJDEP Groundwater Quality Criteria, or any non-zero federal MCL goal.
(c) Historical Data include data collected before 2010.
(d) For the historical data mean, non-detect values were set at the detection limit.
(e) Duplicate sample results are provided in parentheses next to the field sample.

µg/L = micrograms per liter (all sample results are in µg/L)
B = Analyte found in a blank sample.
Conc = Concentration.
J = Estimated value.
LOC = Level of Concern (LOC); see Section 1.3 of the report.
NA = Not applicable.
ND = Non-detect.
NR = Not required.
NS = Well could not be sampled (refer to Table 1-3).
Qual = Qualifier.
R = This result is considered invalid due to the difference between the original and duplicate sample results.
U = The contaminant was not detected in the sample above the reporting limit. When an analyte concentration is non-detect, the method detection limit is shown.
Bold red font = The value is greater than the LOC.
Grey shading = The value is greater than the trigger level.

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Table 5-3 Concentrations Compared to Levels of Concern

Analyte	LOC (µg/L)	Number of Detections Exceeding LOC	Maximum Concentration (µg/L)
Vinyl Chloride	1	1 wells (1 sample)	5.8
Arsenic	3	5 wells (5 samples)	140

NOTE: µg/L = Micrograms per liter.
LOC = Level of concern.

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Table 5-4 Expanded Sampling at the Southern Boundary

Analyte	NJ Criteria	EPA MCL	Unit	Location ID / Sample Name / Parent Sample / Sample Date															
				SB1-1 / SB1-1 / 7/30/2018	SB1-2 / SB1-2 / 7/30/2018	SB1-3 / SB1-3 / 7/30/2018	SB1-5 / SB1-5 / 7/17/2018	SB1-6 / SB1-6 / 7/17/2018	SB1-7 / SB1-7 / 7/18/2018	SB2-1A / SB2-1A / 7/18/2018	SB2-2 / SB2-2 / 7/18/2018	SB2-3 / SB2-3 / 7/18/2018	SB3-1B / SB3-1B / 7/18/2018	SB3-2 / SB3-2 / 7/18/2018	SB3-2 / DUP-C / SB3-2 / 7/18/2018	SB3-3 / SB3-3 / 7/18/2018	SB4-1 / SB4-1 / 7/30/2018	SB4-2 / SB4-2 / 7/30/2018	SB4-3 / SB4-3 / 7/30/2018	SB4-4 / SB4-4 / 7/30/2018
Metals																			
Aluminum	200	NSL	µg/L	< 50 U	< 50 U	< 50 U	253	86.8 J	< 50 U	83.2 J	1130	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Antimony	6	6	µg/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	1.4 J	0.25 J	< 1 U	0.58 J	< 1 U	< 1 U	< 1 U	1.4 J	< 1 U	< 1 U
Arsenic	3	10	µg/L	< 1 U	0.22 J	< 1 U	0.43 J	0.22 J	< 1 U	3.8	8.6	< 1 U	1.2 J	0.94 J	0.95 J	< 1 U	0.26 J	< 1 U	1.3 J	1.4 J
Barium	6000	2000	µg/L	49.6 J+	57 J+	< 1 U	< 1 U	< 1 U	19.9	484	1270	6.9	9.6	7.6	7.5	26.7	< 1 U	< 1 U	469	< 1 U
Beryllium	1	4	µg/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Cadmium	4	5	µg/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Calcium	NSL	NSL	µg/L	< 100 U	< 1000 U	< 1000 U	< 100 U	< 1000 U	36800 J	306000 J	128000 J	13500 J	6140 J	20300 J	20400 J	27800 J	< 100 U	< 100 U	138000 J+	< 100 U
Chromium	70	100	µg/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	2.4 J+	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	3.8 J+	< 1 U
Cobalt	100	NSL	µg/L	< 1 U	< 1 U	0.24 J	0.3 J	0.22 J	< 1 U	< 1 U	0.92 J	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	1.2 J	< 1 U
Copper	1300	1300[a]	µg/L	< 1 UJ	0.27 J	< 1 UJ	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 UJ	< 1 UJ	0.58 J
Iron	300	NSL	µg/L	< 50 U	< 50 U	334	1810	< 50 U	< 50 U	< 50 U	55000	187 J	33.2 J	34.8 J	< 50 UJ	< 50 U	< 50 U	205 J+	6860	< 50 U
Lead	5	15[a]	µg/L	1.3 J	0.22 J	1.4 J	7.5	0.37 J	< 1 U	7.5	1.1 J	0.81 J	0.34 J	0.22 J	0.2 J	< 1 U	< 1 U	< 1 U	0.26 J	< 1 U
Magnesium	NSL	NSL	µg/L	< 50 U	< 50 U	< 50 U	26700	< 50 U	13500 J	< 50 U	29600 J	8800 J	< 50 U	5480 J	5520 J	12400 J	< 50 U	< 50 U	67900 J+	< 50 U
Manganese	50	NSL	µg/L	< 1 U	42.3	< 1 U	33 J	29.2	1.1 J	0.5 J	1110	21.6	0.65 J	24	23.9	4.2	< 1 U	< 1 U	1230	46.4
Mercury	2	2	µg/L	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 UJ	< 0.1 UJ	< 0.1 UJ	< 0.1 UJ	< 0.1 UJ	< 0.1 UJ	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U
Nickel	100	NSL	µg/L	< 1 U	< 1 U	< 1 U	2.3 J+	< 1 U	0.3 J	2.2	1.6 J	0.23 J	0.25 J	< 1 U	< 1 U	0.87 J	< 1 U	2.6 J+	3.5 J+	< 1 U
Potassium	NSL	NSL	µg/L	< 100 U	3100 J+	< 100 U	< 100 U	< 100 U	1570 J	27100 J	4680 J	1460 J	32200 J	1590 J	1600 J	2940 J	34400	< 100 U	< 100 U	< 100 U
Selenium	40	50	µg/L	0.24 J	0.43 J	1.4 J	< 1 U	0.62 J	0.28 J	< 1 U	0.62 J	< 1 U	0.26 J	< 1 U	< 1 U	< 1 U	< 1 U	0.51 J	< 1 U	< 1 U
Silver	40	NSL	µg/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Sodium	50000	NSL	µg/L	147000	223000	244000	52500 J	229000 J	156000 J	303000 J	1060000 J	13900 J	31900 J	3770 J	3940 J	42100 J	< 100 U	< 100 U	173000	< 100 U
Thallium	2	2	µg/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	0.22 J	< 1 UJ	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Vanadium	NSL	NSL	µg/L	< 1 U	< 1 U	< 1 U	1.8 J	0.5 J	0.26 J	4	1.9 J	< 1 U	3.9	0.35 J	0.33 J	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Zinc	2000	NSL	µg/L	< 2 R	< 2 U	< 2 U	24.6 J+	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
Explosives																				
1,3,5-Trinitrobenzene	NSL	NSL	µg/L	< 0.097 U	< 0.096 U	< 0.096 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.097 U	< 0.097 U	< 0.096 U
1,3-Dinitrobenzene	NSL	NSL	µg/L	< 0.097 U	< 0.096 U	< 0.096 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.097 U	< 0.097 U	< 0.096 U
2,4,6-trinitrotoluene	1	NSL	µg/L	< 0.097 U	< 0.096 U	< 0.096 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.097 U	< 0.097 U	< 0.096 U
2,4-dinitrotoluene	10	NSL	µg/L	< 0.097 U	< 0.096 U	< 0.096 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.097 U	< 0.097 U	< 0.096 U
2,6-dinitrotoluene	10	NSL	µg/L	< 0.097 U	< 0.096 U	< 0.096 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.097 U	< 0.097 U	< 0.096 U
2-amino-4,6-dinitrotoluene	NSL	NSL	µg/L	< 0.097 U	< 0.096 U	< 0.096 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.097 U	< 0.097 U	< 0.096 U
2-nitrotoluene	NSL	NSL	µg/L	< 0.097 U	< 0.096 U	< 0.096 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.097 U	< 0.097 U	< 0.096 U
3-nitrotoluene	NSL	NSL	µg/L	< 0.097 UJ	< 0.096 UJ	< 0.096 UJ	< 0.096 UJ	< 0.094 UJ	< 0.095 UJ	< 0.094 UJ	< 0.095 UJ	< 0.095 UJ	< 0.094 UJ	< 0.094 UJ	< 0.094 UJ	< 0.094 UJ	< 0.096 UJ	< 0.097 UJ	< 0.097 UJ	< 0.096 UJ
4-amino-2,6-dinitrotoluene	NSL	NSL	µg/L	< 0.097 U	< 0.096 U	< 0.096 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.097 U	< 0.097 U	< 0.096 U
4-Nitrotoluene	NSL	NSL	µg/L	< 0.097 U	< 0.096 UJ	< 0.096 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.097 U	< 0.097 U	< 0.096 U
HMX	NSL	NSL	µg/L	< 0.097 U	< 0.096 UJ	< 0.096 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.097 U	< 0.097 U	< 0.096 U
Nitrobenzene	6	NSL	µg/L	< 0.097 U	< 0.096 U	< 0.096 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.097 U	< 0.097 U	< 0.096 U
Pentaerythritol tetranitrate	NSL	NSL	µg/L	< 0.97 U	< 0.96 U	< 0.96 U	< 0.96 U	< 0.94 U	< 0.95 U	< 0.94 U	< 0.95 U	< 0.95 U	< 0.94 U	< 0.94 U	< 0.94 U	< 0.94 U	< 0.96 U	< 0.97 U	< 0.97 U	< 0.96 U
RDX	0.5	NSL	µg/L	< 0.097 U	< 0.096 U	< 0.096 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.097 U	< 0.097 U	< 0.096 U
Tetryl	NSL	NSL	µg/L	< 0.097 U	< 0.096 U	< 0.096 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.097 U	< 0.097 U	< 0.096 U

Table 5-4 Expanded Sampling at the Southern Boundary

			Location ID	SB1-1	SB1-2	SB1-3	SB1-5	SB1-6	SB1-7	SB2-1A	SB2-2	SB2-3	SB3-1B	SB3-2	SB3-2	SB3-3	SB4-1	SB4-2	SB4-3	SB4-4
			Sample Name	SB1-1	SB1-2	SB1-3	SB1-5	SB1-6	SB1-7	SB2-1A	SB2-2	SB2-3	SB3-1B	SB3-2	DUP-C	SB3-3	SB4-1	SB4-2	SB4-3	SB4-4
			Parent Sample												SB3-2					
			Sample Date	7/30/2018	7/30/2018	7/30/2018	7/17/2018	7/17/2018	7/18/2018	7/18/2018	7/18/2018	7/18/2018	7/18/2018	7/18/2018	7/18/2018	7/18/2018	7/30/2018	7/30/2018	7/30/2018	7/30/2018
Analyte	**NJ Criteria**	**EPA MCL**	**Unit**																	
Volatile Organic Compounds																				
1,1,1,2-tetrachloroethane	1	NSL	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,1-trichloroethane	30	200	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2,2-tetrachloroethane	1	NSL	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2-trichloroethane	3	5	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-dichloroethane	50	NSL	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-dichloroethene	1	7	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-dichloropropene	NSL	NSL	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2,3-trichlorobenzene	NSL	NSL	µg/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2,3-trichloropropane	0.03	NSL	µg/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2,4-trichlorobenzene	9	70	µg/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2,4-trimethylbenzene	NSL	NSL	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dibromo-3-chloropropane	0.02	0.2	µg/L	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
1,2-dibromoethane	0.03	0.05	µg/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-dichlorobenzene	600	600	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-dichloroethane	2	5	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-dichloropropane	1	5	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,3,5-trimethylbenzene	NSL	NSL	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,3-dichlorobenzene	600	600	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,3-dichloropropane	NSL	NSL	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,4-dichlorobenzene	75	75	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
2,2-dichloropropane	NSL	NSL	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
2-butanone	300	NSL	µg/L	< 3.5 U	< 3.5 U	< 3.5 U	< 3.5 U	< 3.5 U	< 3.5 U	< 3.5 U	< 3.5 U	< 3.5 U	< 3.5 U	< 3.5 U	< 3.5 U	< 3.5 U	< 3.5 U	< 3.5 U	< 3.5 U	< 3.5 U
2-chlorotoluene	NSL	NSL	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
2-hexanone	300	NSL	µg/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
4-chlorotoluene	NSL	NSL	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
4-Isopropyltoluene	NSL	NSL	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
4-methyl-2-pentanone	NSL	NSL	µg/L	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
Acetone	6000	NSL	µg/L	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Benzene	1	5	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.56 J	< 0.5 U	< 0.5 U	< 0.5 U
Bromobenzene	NSL	NSL	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Bromochloromethane	NSL	NSL	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Bromodichloromethane	1	80	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Bromoform	4	80	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Bromomethane	10	NSL	µg/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Carbon disulfide	700	NSL	µg/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Carbon tetrachloride	1	5	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Chlorobenzene	50	100	µg/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U

Table 5-4 Expanded Sampling at the Southern Boundary

				Location ID	SB1-1	SB1-2	SB1-3	SB1-5	SB1-6	SB1-7	SB2-1A	SB2-2	SB2-3	SB3-1B	SB3-2	SB3-2	SB3-3	SB4-1	SB4-2	SB4-3	SB4-4
				Sample Name	SB1-1	SB1-2	SB1-3	SB1-5	SB1-6	SB1-7	SB2-1A	SB2-2	SB2-3	SB3-1B	SB3-2	DUP-C	SB3-3	SB4-1	SB4-2	SB4-3	SB4-4
				Parent Sample												SB3-2					
				Sample Date	7/30/2018	7/30/2018	7/30/2018	7/17/2018	7/17/2018	7/18/2018	7/18/2018	7/18/2018	7/18/2018	7/18/2018	7/18/2018	7/18/2018	7/18/2018	7/30/2018	7/30/2018	7/30/2018	7/30/2018
Analyte	**NJ Criteria**	**EPA MCL**	**Unit**																		
Chloroethane	5	NSL	µg/L		< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ
Chloroform	70	80	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Chloromethane	NSL	NSL	µg/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
cis-1,2-dichloroethene	70	70	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
cis-1,3-dichloropropene	NSL	NSL	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Dibromochloromethane	1	80	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Dibromomethane	NSL	NSL	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Dichlorodifluoromethane	1000	NSL	µg/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Ethylbenzene	700	700	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Hexachloro-1,3-butadiene	1	NSL	µg/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Iodomethane	NSL	NSL	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Isopropylbenzene	700	NSL	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
m,p-Xylene	NSL	10000	µg/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Methyl tert-butyl ether	70	NSL	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.27 J	< 0.5 U	< 0.5 U
Methylene Chloride	3	5	µg/L		< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Naphthalene	300	NSL	µg/L		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
n-Butylbenzene	NSL	NSL	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
N-propylbenzene	NSL	NSL	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
o-Xylene	NSL	NSL	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Sec-butylbenzene	NSL	NSL	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Styrene	100	100	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Tert-butylbenzene	NSL	NSL	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Tetrachloroethene	1	5	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Toluene	600	1000	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
trans-1,2-dichloroethene	100	100	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
trans-1,3-dichloropropene	NSL	NSL	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Trichloroethene	1	5	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Trichlorofluoromethane	2000	NSL	µg/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Vinyl acetate	7000	NSL	µg/L		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Vinyl chloride	1	2	µg/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Xylenes, Total	1000	10000	µg/L		< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U

Note:
(a) There is no MCL for lead or copper. Values provided are considered EPA action levels.
NJ Criteria = New Jersey Ground Water Quality Standards N.J.A.C. 7:9C, the higher value of the practical quantitation levels and Ground Water Quality Criterion, dated July 2011.
EPA MCL = U.S. Environmental Protection Agency's Maximum Contaminant Level, dated May 2018.
µg/L = micrograms per liter (all sample results are in µg/L).
NA = Not Analyzed
B = Blank contamination.
J = Estimated value.
R = Rejected value.
U = Compound analyzed but not detected above the method dection limit.
+ = Value biased high.
Values exceed the EPA MCL.
Values exceed the NJ Criteria.

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Table 6-1 Mann-Whitney U Statistic Values (2018)

	Vinyl Chloride			Arsenic		
				Reject H0?[(a)]	U_1	P-value
DM19-2	Not Required			Do Not Reject H0[(b)]	9	0.443

(a) H0 is the null hypothesis that was evaluated at the 90% significance level as described in Section 6.2.1.

(b) For cells highlighted in green, the null hypothesis was not rejected.

(c) H0 was rejected at the 90% significant level (right-tailed P-value <0.1 or U_1 > right-tailed U_{crit} (i.e., 12) resulting in the conclusion that concentrations have significantly decreased in the 4 most recent sampling rounds compared to the oldest 4 of the most recent 8 sampling rounds.

Table 6-2 ProUCL Statistics (2018)

Well	Distribution of Detected Data in Historical Data Set	Percent Detects for Historical Data[a]	Historical Mean	UCL Method	95% UCL or Range of Historical Data (µg/L)[b]	Maximum/Mean of Recent Data (µg/L)[c, d]	Consistent?
DM19-2	Normal	100	52.9	Student's *t*	70.14	71.25	**No**

(a) The percent detects is based on all historical data, excluding results from the four most recent, consecutive, sampling events.
(b) When the data set is small or the data set contains a large proportion of nondetect values, the range is listed instead of the mean.
(c) If the most recent sampling data set had at least two nondetect values, the maximum value was used in the analysis instead of the mean value.
(d) The recent data include the results of the four most recent valid sampling events.

NOTE: µg/L = Micrograms per liter.
UCL = Upper confidence limit on the mean.

Table 6-3 Step B1/B2 Results (2018)

Well ID	Vinyl Chloride		Arsenic	
	Step B1[(a)]	Step B2[(b)]	Step B1[(a)]	Step B2[(b)]
DM19-2	NR		Decrease Not Determined	Not Consistent

(a) Step B1 Outcomes:
Decreased = It was concluded, with at least 90% confidence, that the concentration for the individual contaminant has decreased over time at the specific monitoring well; sampling should be performed annually.
Decrease Not Determined = It could not be concluded, with at least 90% confidence, that the concentration for the individual contaminant has decreased over time at the specific monitoring well; perform Step B2 statistics and review outcomes.

(b) Step B2 Outcomes:
Consistent = The mean or maximum concentration of the analyte fell within the 95% confidence window of the historical data; sampling should be performed annually.
Not Consistent = Based on the trend analysis, concentrations for this analyte in this well during the sampling period are increasing with respect to the historical data. Therefore, monitoring for this analyte at this well should continue on a semi-annual basis, or be increased, with the data being reassessed after each monitoring period.

NOTE: NR = A statistical evaluation was not required for these analyte/well pairs.

Table 8-1 Area C Long-Term Monitoring Program Recommendations

Well ID	Vinyl Chloride	Arsenic
MW25-8	NR	Annual
DM19-1	Annual	NR
DM19-2	NR	Annual
DM25-2	Annual	NR
MW25-6A	Annual	Annual
MW25-6B	Annual	Annual
NOTE: NR = Not Required.		

Table 8-2 Southern Boundary Long-Term Monitoring Program Recommendations

Well ID	Volatile Organic Compounds	Metals	Explosives
SB1-1	Annual	Annual	Annual
SB1-2	Annual	Annual	Annual
SB1-3	Annual	Annual	Annual
SB1-5	Annual	Annual	Annual
SB1-6	Annual	Annual	Annual
SB1-7	Annual	Annual	Annual
SB2-1A	Annual	Annual	Annual
SB2-2	Annual	Annual	Annual
SB2-3	Annual	Annual	Annual
SB3-1B	Annual	Annual	Annual
SB3-2	Annual	Annual	Annual
SB3-3	Annual	Annual	Annual
SB4-1	Annual	Annual	Annual
SB4-2	Annual	Annual	Annual
SB4-3	Annual	Annual	Annual
SB4-4	Annual	Annual	Annual

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APPENDIX A

AREA C WELL ASSESSMENT CHECKLISTS AND SAMPLING DATA SHEETS

(Provided on CD)

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EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: SB1-1

Facility Information

Site Name:	Picatinny Arsenal	***Area: C***	***Site:***
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-31641
Well Tag ID and Condition:	SB1-1 / 'Good
Well Installation Date:	6/27/1988

	From Log	From GPS [1]
Ground Surface Elevation	690	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	758701	N/A
Easting (State Plane)	469712.99	N/A

Cross Streets (if applicable):	Visitor Center
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one)	***Flush Mount***	***Stick up***	***Multilevel Well*** [2]
Well lock / Security type:	lock		
Elevation (top of inner casing):	691.88		
Surface protective casing material:	steel		
Surface casing diameter (in):	8		
Well diameter (in) and Casing material:	4" pvc		
Well depth (as installed):	93.00		
Well depth (as measured):	93.16		
Well Stick Up Height (as measured):	2.45 ft		
Screen interval:	83 - 93		
Open hole interval:	---		
Depth to water:	5.04		

Date: 7/30/2018 ***Time:*** 0835

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? **Yes** / *No*

Well Condition

Is the concrete pad in good condition?	**Yes**	*No*
Is the well surface casing in good condition?	**Yes**	*No*
Is the surface casing vertical?	**Yes**	*No*
Is there an internal well seal?	**Yes**	*No*
Has there been physical damage to the well?	*Yes*	**No**
Does sounding depth match completed depth?	*Yes*	**No**
Is measuring point marked?	**Yes**	*No*
Is the well clearly labeled?	**Yes**	*No*
Flush mount - is it secure from runoff?	**Yes**	*No*

Overall well condition (circle one) **Good** / *Fair* / *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	**No**
Well needs to be re-surveyed	*Yes*	**No**
Well needs to be repaired	*Yes*	**No**
Well needs to be replaced	*Yes*	**No**
Well needs to be properly abandoned	*Yes*	**No**
No action necessary	**Yes**	*No*

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/30/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: SB1-2

Facility Information

Site Name:	Picatinny Arsenal	***Area: C***	***Site:***
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-31644
Well Tag ID and Condition:	SB1-2 / 'Good
Well Installation Date:	--

	From Log	From GPS [1]
Ground Surface Elevation	690	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	758706.31	N/A
Easting (State Plane)	469708.3	N/A

Cross Streets (if applicable):	Visitor Center
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) ***Flush Mount*** ***Stick up*** ***Multilevel Well [2]***

Well lock / Security type:	lock
Elevation (top of inner casing):	691.74
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4" pvc
Well depth (as installed):	18.00
Well depth (as measured):	18.08
Well Stick Up Height (as measured):	1.75 ft
Screen interval:	8 - 18
Open hole interval:	--
Depth to water:	5.84

Date: 7/30/2018 ***Time:*** 0905

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist?	*Yes*	***No***

Well Condition

Is the concrete pad in good condition?	***Yes***	*No*
Is the well surface casing in good condition?	***Yes***	*No*
Is the surface casing vertical?	***Yes***	*No*
Is there an internal well seal?	***Yes***	*No*
Has there been physical damage to the well?	*Yes*	***No***
Does sounding depth match completed depth?	*Yes*	***No***
Is measuring point marked?	***Yes***	*No*
Is the well clearly labeled?	***Yes***	*No*
Flush mount - is it secure from runoff?	***Yes***	*No*

Overall well condition (circle one) ***Good*** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	***No***
Well needs to be re-surveyed	*Yes*	***No***
Well needs to be repaired	*Yes*	***No***
Well needs to be replaced	*Yes*	***No***
Well needs to be properly abandoned	*Yes*	***No***
No action necessary	***Yes***	*No*

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/30/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: SB1-3

Facility Information

Site Name:	Picatinny Arsenal	***Area: C***	***Site:***
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-31645
Well Tag ID and Condition:	--
Well Installation Date:	7/28/1988

	From Log	From GPS [1]
Ground Surface Elevation	690.17	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	--	N/A
Easting (State Plane)	--	N/A

Cross Streets (if applicable):	Visitor Center
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) ***Flush Mount*** ***Stick up*** ***Multilevel Well*** [2]

Well lock / Security type:	lock
Elevation (top of inner casing):	692.17
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4" pvc
Well depth (as installed):	34.00
Well depth (as measured):	34.05
Well Stick Up Height (as measured):	2.9 ft
Screen interval:	29 - 34
Open hole interval:	--
Depth to water:	6.28

Date: 7/30/2018 ***Time:*** 0815

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist?	*Yes*	***No***

Well Condition

Is the concrete pad in good condition?	***Yes***	*No*
Is the well surface casing in good condition?	***Yes***	*No*
Is the surface casing vertical?	***Yes***	*No*
Is there an internal well seal?	***Yes***	*No*
Has there been physical damage to the well?	*Yes*	***No***
Does sounding depth match completed depth?	*Yes*	***No***
Is measuring point marked?	***Yes***	*No*
Is the well clearly labeled?	***Yes***	*No*
Flush mount - is it secure from runoff?	***Yes***	*No*

Overall well condition (circle one) ***Good*** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	***No***
Well needs to be re-surveyed	*Yes*	***No***
Well needs to be repaired	*Yes*	***No***
Well needs to be replaced	*Yes*	***No***
Well needs to be properly abandoned	*Yes*	***No***
No action necessary	***Yes***	*No*

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/30/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: SB1-5

Facility Information

Site Name:	Picatinny Arsenal	***Area: C***	***Site:***
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-59495
Well Tag ID and Condition:	SB1-5 / 'Good
Well Installation Date:	1/24/2002

	From Log	From GPS [1]
Ground Surface Elevation	708.87	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	758803	N/A
Easting (State Plane)	202372	N/A

Cross Streets (if applicable):	--
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) **Flush Mount** ***Stick up*** ***Multilevel Well [2]***

Well lock / Security type:	manhole cover
Elevation (top of inner casing):	708.87
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4" pvc
Well depth (as installed):	110.00
Well depth (as measured):	109.60
Well Stick Up Height (as measured):	--
Screen interval:	90 - 110
Open hole interval:	--
Depth to water:	22.37

Date: 7/17/2018 ***Time:*** 1140

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? Yes **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	No
Is the well surface casing in good condition?	Yes	**No**
Is the surface casing vertical?	**Yes**	No
Is there an internal well seal?	**Yes**	No
Has there been physical damage to the well?	**Yes**	No
Does sounding depth match completed depth?	Yes	**No**
Is measuring point marked?	**Yes**	No
Is the well clearly labeled?	**Yes**	No
Flush mount - is it secure from runoff?	**Yes**	No

Overall well condition (circle one) Good **Fair** Poor

Other comments:

Recommendations

Well needs to be redeveloped	Yes	**No**
Well needs to be re-surveyed	Yes	**No**
Well needs to be repaired	**Yes**	No
Well needs to be replaced	Yes	**No**
Well needs to be properly abandoned	Yes	**No**
No action necessary	**Yes**	No

Comments

Well casing damaged at depth. Unable to fit downhole probe to obtain reading.

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/17/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: SB1-6

Facility Information

Site Name:	Picatinny Arsenal	**Area: C**	**Site:**
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-59078
Well Tag ID and Condition:	SB1-6 / 'Good
Well Installation Date:	1/28/2002

	From Log	From GPS [1]
Ground Surface Elevation	688.24	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	758722	N/A
Easting (State Plane)	202343	N/A

Cross Streets (if applicable):	Visitor center
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) **Flush Mount** **Stick up** **Multilevel Well [2]**

Well lock / Security type:	lock
Elevation (top of inner casing):	690.75
Surface protective casing material:	steel
Surface casing diameter (in):	6
Well diameter (in) and Casing material:	2" pvc
Well depth (as installed):	18.00
Well depth (as measured):	20.15
Well Stick Up Height (as measured):	
Screen interval:	8 - 18
Open hole interval:	--
Depth to water:	6.51

Date: 7/17/2018 **Time:** 1350

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? Yes **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	No
Is the well surface casing in good condition?	**Yes**	No
Is the surface casing vertical?	**Yes**	No
Is there an internal well seal?	**Yes**	No
Has there been physical damage to the well?	Yes	**No**
Does sounding depth match completed depth?	Yes	**No**
Is measuring point marked?	**Yes**	No
Is the well clearly labeled?	**Yes**	No
Flush mount - is it secure from runoff?	**Yes**	No

Overall well condition (circle one) **Good** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	Yes	**No**
Well needs to be re-surveyed	Yes	**No**
Well needs to be repaired	Yes	**No**
Well needs to be replaced	Yes	**No**
Well needs to be properly abandoned	Yes	**No**
No action necessary	**Yes**	No

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/17/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: SB1-7

Facility Information

Site Name:	Picatinny Arsenal	***Area: C***	***Site:***
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-59079
Well Tag ID and Condition:	SB1-7 / 'Good
Well Installation Date:	1/25/2002

	From Log	From GPS [1]
Ground Surface Elevation	689.16	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	758660	N/A
Easting (State Plane)	202350	N/A

Cross Streets (if applicable):	--
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) ***Flush Mount*** ***Stick up*** ***Multilevel Well*** [2]

Well lock / Security type:	lock
Elevation (top of inner casing):	691.66
Surface protective casing material:	steel
Surface casing diameter (in):	6
Well diameter (in) and Casing material:	2" pvc
Well depth (as installed):	19.50
Well depth (as measured):	20.89
Well Stick Up Height (as measured):	2.30 ft
Screen interval:	9.5 - 19.5
Open hole interval:	--
Depth to water:	5.95

Date: 7/17/2018 ***Time:*** 1410

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist?	*Yes*	***No***

Well Condition

Is the concrete pad in good condition?	***Yes***	*No*
Is the well surface casing in good condition?	***Yes***	*No*
Is the surface casing vertical?	***Yes***	*No*
Is there an internal well seal?	***Yes***	*No*
Has there been physical damage to the well?	*Yes*	***No***
Does sounding depth match completed depth?	*Yes*	***No***
Is measuring point marked?	***Yes***	*No*
Is the well clearly labeled?	***Yes***	*No*
Flush mount - is it secure from runoff?	***Yes***	*No*

Overall well condition (circle one) ***Good*** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	***No***
Well needs to be re-surveyed	*Yes*	***No***
Well needs to be repaired	*Yes*	***No***
Well needs to be replaced	*Yes*	***No***
Well needs to be properly abandoned	*Yes*	***No***
No action necessary	***Yes***	*No*

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/17/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: SB2-1A

Facility Information

Site Name:	Picatinny Arsenal	**Area: C**	**Site:**
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-32577
Well Tag ID and Condition:	SB2-1A / 'Good
Well Installation Date:	12/6/1988

	From Log	From GPS [1]
Ground Surface Elevation	690.17	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	759178.63	N/A
Easting (State Plane)	202285.61	N/A

Cross Streets (if applicable):	Route 15
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) **Flush Mount** **Stick up** **Multilevel Well [2]**

Well lock / Security type:	lock
Elevation (top of inner casing):	691.77
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4" pvc
Well depth (as installed):	168.00
Well depth (as measured):	167.60
Well Stick Up Height (as measured):	
Screen interval:	158-168
Open hole interval:	--
Depth to water:	17.38

Date: 7/18/2018 **Time:** 0950

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? Yes **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	No
Is the well surface casing in good condition?	**Yes**	No
Is the surface casing vertical?	**Yes**	No
Is there an internal well seal?	**Yes**	No
Has there been physical damage to the well?	Yes	**No**
Does sounding depth match completed depth?	Yes	**No**
Is measuring point marked?	**Yes**	No
Is the well clearly labeled?	**Yes**	No
Flush mount - is it secure from runoff?	**Yes**	No

Overall well condition (circle one) **Good** Fair Poor

Other comments:

Recommendations

Well needs to be redeveloped	Yes	**No**
Well needs to be re-surveyed	Yes	**No**
Well needs to be repaired	Yes	**No**
Well needs to be replaced	Yes	**No**
Well needs to be properly abandoned	Yes	**No**
No action necessary	**Yes**	No

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/18/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: SB2-2

Facility Information

Site Name:	Picatinny Arsenal	***Area: C***	***Site:***
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-31646
Well Tag ID and Condition:	SB2-2 / 'Good
Well Installation Date:	8/4/1988

	From Log	From GPS [1]
Ground Surface Elevation	688.43	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	759208.24	N/A
Easting (State Plane)	469026.07	N/A

Cross Streets (if applicable):	Route 15
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) ***Flush Mount*** ***Stick up*** ***Multilevel Well*** [2]

Well lock / Security type:	lock
Elevation (top of inner casing):	690.16
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4" pvc
Well depth (as installed):	35.00
Well depth (as measured):	37.30
Well Stick Up Height (as measured):	
Screen interval:	25-35
Open hole interval:	--
Depth to water:	7.57

Date: 7/18/2018 ***Time:*** 1025

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist?	*Yes*	***No***

Well Condition

Is the concrete pad in good condition?	***Yes***	*No*
Is the well surface casing in good condition?	***Yes***	*No*
Is the surface casing vertical?	***Yes***	*No*
Is there an internal well seal?	***Yes***	*No*
Has there been physical damage to the well?	*Yes*	***No***
Does sounding depth match completed depth?	*Yes*	***No***
Is measuring point marked?	***Yes***	*No*
Is the well clearly labeled?	***Yes***	*No*
Flush mount - is it secure from runoff?	***Yes***	*No*

Overall well condition (circle one) ***Good*** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	***No***
Well needs to be re-surveyed	*Yes*	***No***
Well needs to be repaired	*Yes*	***No***
Well needs to be replaced	*Yes*	***No***
Well needs to be properly abandoned	*Yes*	***No***
No action necessary	***Yes***	*No*

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/18/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: SB2-3

Facility Information

Site Name:	Picatinny Arsenal	***Area: C***	***Site:***
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-32957
Well Tag ID and Condition:	---
Well Installation Date:	12/27/1988

	From Log	From GPS [1]
Ground Surface Elevation	688.8	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	759193.65	N/A
Easting (State Plane)	202284.08	N/A

Cross Streets (if applicable):	Route 15
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) ***Flush Mount*** ***Stick up*** ***Multilevel Well*** [2]

Well lock / Security type:	lock
Elevation (top of inner casing):	691.23
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4" pvc
Well depth (as installed):	253.00
Well depth (as measured):	253.60
Well Stick Up Height (as measured):	
Screen interval:	243 - 253
Open hole interval:	---
Depth to water:	18.05

Date: 7/18/2018 ***Time:*** 0902

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? *Yes* **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	*No*
Is the well surface casing in good condition?	**Yes**	*No*
Is the surface casing vertical?	**Yes**	*No*
Is there an internal well seal?	**Yes**	*No*
Has there been physical damage to the well?	*Yes*	**No**
Does sounding depth match completed depth?	*Yes*	**No**
Is measuring point marked?	**Yes**	*No*
Is the well clearly labeled?	**Yes**	*No*
Flush mount - is it secure from runoff?	**Yes**	*No*

Overall well condition (circle one) **Good** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	**No**
Well needs to be re-surveyed	*Yes*	**No**
Well needs to be repaired	*Yes*	**No**
Well needs to be replaced	*Yes*	**No**
Well needs to be properly abandoned	*Yes*	**No**
No action necessary	**Yes**	*No*

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/18/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: SB3-1B

Facility Information

Site Name:	Picatinny Arsenal	***Area: C***	***Site:***
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-46200
Well Tag ID and Condition:	SB3-1B / 'Good
Well Installation Date:	12/28/2014

	From Log	From GPS [1]
Ground Surface Elevation	699.6	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	760671.57	N/A
Easting (State Plane)	202181.17	N/A

Cross Streets (if applicable):	Route 15
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) ***Flush Mount*** ***Stick up*** ***Multilevel Well [2]***

Well lock / Security type:	lock
Elevation (top of inner casing):	701.55
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4" pvc
Well depth (as installed):	336.00
Well depth (as measured):	332.20
Well Stick Up Height (as measured):	
Screen interval:	326 - 336
Open hole interval:	--
Depth to water:	25.05

Date: 7/18/2018 ***Time:*** 1130

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist?	*Yes*	***No***

Well Condition

Is the concrete pad in good condition?	***Yes***	*No*
Is the well surface casing in good condition?	***Yes***	*No*
Is the surface casing vertical?	***Yes***	*No*
Is there an internal well seal?	***Yes***	*No*
Has there been physical damage to the well?	*Yes*	***No***
Does sounding depth match completed depth?	*Yes*	***No***
Is measuring point marked?	***Yes***	*No*
Is the well clearly labeled?	***Yes***	*No*
Flush mount - is it secure from runoff?	***Yes***	*No*

Overall well condition (circle one) ***Good*** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	***No***
Well needs to be re-surveyed	*Yes*	***No***
Well needs to be repaired	*Yes*	***No***
Well needs to be replaced	*Yes*	***No***
Well needs to be properly abandoned	*Yes*	***No***
No action necessary	***Yes***	*No*

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/18/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: SB3-2

Facility Information

Site Name:	Picatinny Arsenal	*Area: C*	*Site:*
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-33052
Well Tag ID and Condition:	--
Well Installation Date:	2/1/1989

	From Log	From GPS [1]
Ground Surface Elevation	699.49	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	760691.84	N/A
Easting (State Plane)	202181.14	N/A

Cross Streets (if applicable):	Route 15
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) *Flush Mount* **Stick up** *Multilevel Well* [2]

Well lock / Security type:	lock
Elevation (top of inner casing):	701.78
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4" pvc
Well depth (as installed):	180.00
Well depth (as measured):	180.30
Well Stick Up Height (as measured):	
Screen interval:	170 - 180
Open hole interval:	--
Depth to water:	24.96

Date: 7/18/2018 *Time:* 1235

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? *Yes* **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	*No*
Is the well surface casing in good condition?	**Yes**	*No*
Is the surface casing vertical?	**Yes**	*No*
Is there an internal well seal?	**Yes**	*No*
Has there been physical damage to the well?	*Yes*	**No**
Does sounding depth match completed depth?	*Yes*	**No**
Is measuring point marked?	**Yes**	*No*
Is the well clearly labeled?	**Yes**	*No*
Flush mount - is it secure from runoff?	**Yes**	*No*

Overall well condition (circle one) **Good** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	**No**
Well needs to be re-surveyed	*Yes*	**No**
Well needs to be repaired	*Yes*	**No**
Well needs to be replaced	*Yes*	**No**
Well needs to be properly abandoned	*Yes*	**No**
No action necessary	**Yes**	*No*

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/18/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: SB3-3

Facility Information

Site Name:	Picatinny Arsenal	***Area: C***	***Site:***
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	--
Well Tag ID and Condition:	--
Well Installation Date:	2/1/1989

	From Log	From GPS [1]
Ground Surface Elevation	678.79	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	760699.81	N/A
Easting (State Plane)	202180.21	N/A

Cross Streets (if applicable):	Route 15
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) ***Flush Mount*** ***Stick up*** ***Multilevel Well*** [2]

Well lock / Security type:	lock
Elevation (top of inner casing):	701.04
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4 pvc
Well depth (as installed):	31.00
Well depth (as measured):	33.15
Well Stick Up Height (as measured):	
Screen interval:	21 - 31
Open hole interval:	--
Depth to water:	16.64

Date: 7/18/2018 ***Time:*** 1205

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist?	*Yes*	***No***

Well Condition

Is the concrete pad in good condition?	***Yes***	*No*
Is the well surface casing in good condition?	***Yes***	*No*
Is the surface casing vertical?	***Yes***	*No*
Is there an internal well seal?	***Yes***	*No*
Has there been physical damage to the well?	*Yes*	***No***
Does sounding depth match completed depth?	*Yes*	***No***
Is measuring point marked?	***Yes***	*No*
Is the well clearly labeled?	***Yes***	*No*
Flush mount - is it secure from runoff?	***Yes***	*No*

Overall well condition (circle one) ***Good*** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	***No***
Well needs to be re-surveyed	*Yes*	***No***
Well needs to be repaired	*Yes*	***No***
Well needs to be replaced	*Yes*	***No***
Well needs to be properly abandoned	*Yes*	***No***
No action necessary	***Yes***	*No*

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/18/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: SB4-1

Facility Information

Site Name:	Picatinny Arsenal	***Area: C***	***Site:***
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-46118
Well Tag ID and Condition:	--
Well Installation Date:	12/27/1994

	From Log	From GPS [1]
Ground Surface Elevation	705.66	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	759730.1	N/A
Easting (State Plane)	2021503.26	N/A

Cross Streets (if applicable):	--
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) **Flush Mount** | ***Stick up*** | ***Multilevel Well*** [2]

Well lock / Security type:	lock
Elevation (top of inner casing):	707.17
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4" pvc
Well depth (as installed):	379.00
Well depth (as measured):	382.30
Well Stick Up Height (as measured):	--
Screen interval:	369 - 379
Open hole interval:	--
Depth to water:	30.72

Date: 7/30/2018 ***Time:*** 1010

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist?	*Yes*	***No***

Well Condition

Is the concrete pad in good condition?	***Yes***	*No*
Is the well surface casing in good condition?	***Yes***	*No*
Is the surface casing vertical?	***Yes***	*No*
Is there an internal well seal?	***Yes***	*No*
Has there been physical damage to the well?	*Yes*	***No***
Does sounding depth match completed depth?	*Yes*	***No***
Is measuring point marked?	***Yes***	*No*
Is the well clearly labeled?	***Yes***	*No*
Flush mount - is it secure from runoff?	***Yes***	*No*

Overall well condition (circle one) ***Good*** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	***No***
Well needs to be re-surveyed	*Yes*	***No***
Well needs to be repaired	*Yes*	***No***
Well needs to be replaced	*Yes*	***No***
Well needs to be properly abandoned	*Yes*	***No***
No action necessary	***Yes***	*No*

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/30/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: SB4-2

Facility Information

Site Name:	Picatinny Arsenal	***Area: C***	***Site:***
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-45325
Well Tag ID and Condition:	--
Well Installation Date:	1/1/1992

	From Log	From GPS [1]
Ground Surface Elevation	706.24	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	759730.1057	N/A
Easting (State Plane)	202151.9394	N/A

Cross Streets (if applicable):	--
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) ***Flush Mount*** ***Stick up*** ***Multilevel Well*** [2]

Well lock / Security type:	lock
Elevation (top of inner casing):	708.47
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4" pvc
Well depth (as installed):	46.00
Well depth (as measured):	45.75
Well Stick Up Height (as measured):	--
Screen interval:	36 - 46
Open hole interval:	--
Depth to water:	21.27

Date: 7/30/2018 ***Time:*** 1110

1 Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

2 If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist?	*Yes*	***No***

Well Condition

Is the concrete pad in good condition?	***Yes***	*No*
Is the well surface casing in good condition?	***Yes***	*No*
Is the surface casing vertical?	***Yes***	*No*
Is there an internal well seal?	***Yes***	*No*
Has there been physical damage to the well?	*Yes*	***No***
Does sounding depth match completed depth?	*Yes*	***No***
Is measuring point marked?	***Yes***	*No*
Is the well clearly labeled?	***Yes***	*No*
Flush mount - is it secure from runoff?	***Yes***	*No*

Overall well condition (circle one) ***Good*** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	***No***
Well needs to be re-surveyed	*Yes*	***No***
Well needs to be repaired	*Yes*	***No***
Well needs to be replaced	*Yes*	***No***
Well needs to be properly abandoned	*Yes*	***No***
No action necessary	***Yes***	*No*

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/30/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: SB4-3

Facility Information

Site Name:	Picatinny Arsenal	**Area: C**	**Site:**
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-45234
Well Tag ID and Condition:	--
Well Installation Date:	1/1/1992

	From Log	From GPS [1]
Ground Surface Elevation	706.07	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	759730.11	N/A
Easting (State Plane)	2021510.94	N/A

Cross Streets (if applicable):	--
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) **Flush Mount** **Stick up** **Multilevel Well [2]**

Well lock / Security type:	lock
Elevation (top of inner casing):	708.14
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4" pvc
Well depth (as installed):	102.00
Well depth (as measured):	100.20
Well Stick Up Height (as measured):	--
Screen interval:	92 - 102
Open hole interval:	--
Depth to water:	21.88

Date: 7/30/2018 **Time:** 1005

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? Yes **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	No
Is the well surface casing in good condition?	**Yes**	No
Is the surface casing vertical?	**Yes**	No
Is there an internal well seal?	**Yes**	No
Has there been physical damage to the well?	Yes	**No**
Does sounding depth match completed depth?	Yes	**No**
Is measuring point marked?	**Yes**	No
Is the well clearly labeled?	**Yes**	No
Flush mount - is it secure from runoff?	**Yes**	No

Overall well condition (circle one) **Good** Fair Poor

Other comments:

Recommendations

Well needs to be redeveloped	Yes	**No**
Well needs to be re-surveyed	Yes	**No**
Well needs to be repaired	Yes	**No**
Well needs to be replaced	Yes	**No**
Well needs to be properly abandoned	Yes	**No**
No action necessary	**Yes**	No

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/30/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: SB4-4

Facility Information

Site Name:	Picatinny Arsenal	***Area: C***	***Site:***
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-45233
Well Tag ID and Condition:	--
Well Installation Date:	9/3/1994

	From Log	From GPS [1]
Ground Surface Elevation	708.02	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	759730.11	N/A
Easting (State Plane)	2021510.94	N/A

Cross Streets (if applicable):	--
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) ***Flush Mount*** ***Stick up*** ***Multilevel Well*** [2]

Well lock / Security type:	lock
Elevation (top of inner casing):	708.2
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4" pvc
Well depth (as installed):	165.00
Well depth (as measured):	166.85
Well Stick Up Height (as measured):	1.5 ft
Screen interval:	155 - 165
Open hole interval:	--
Depth to water:	30.33

Date: 7/30/2018 ***Time:*** 1100

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist?	*Yes*	***No***

Well Condition

Is the concrete pad in good condition?	***Yes***	*No*
Is the well surface casing in good condition?	***Yes***	*No*
Is the surface casing vertical?	***Yes***	*No*
Is there an internal well seal?	***Yes***	*No*
Has there been physical damage to the well?	*Yes*	***No***
Does sounding depth match completed depth?	*Yes*	***No***
Is measuring point marked?	***Yes***	*No*
Is the well clearly labeled?	***Yes***	*No*
Flush mount - is it secure from runoff?	***Yes***	*No*

Overall well condition (circle one) ***Good*** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	***No***
Well needs to be re-surveyed	*Yes*	***No***
Well needs to be repaired	*Yes*	***No***
Well needs to be replaced	*Yes*	***No***
Well needs to be properly abandoned	*Yes*	***No***
No action necessary	***Yes***	*No*

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/30/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: MW25-6A

Facility Information

Site Name:	Picatinny Arsenal	***Area: C***	***Site:***
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	2544121
Well Tag ID and Condition:	MW25-6A / 'Good
Well Installation Date:	10/22/1993

	From Log	From GPS [1]
Ground Surface Elevation	697.3	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	760699.25	N/A
Easting (State Plane)	202437.87	N/A

Cross Streets (if applicable):	Baseball field
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) ***Flush Mount*** ***Stick up*** ***Multilevel Well*** [2]

Well lock / Security type:	lock
Elevation (top of inner casing):	699.33
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4" pvc
Well depth (as installed):	20.00
Well depth (as measured):	20.10
Well Stick Up Height (as measured):	
Screen interval:	10 - 20
Open hole interval:	--
Depth to water:	10.40

Date: 7/17/2018 ***Time:*** 0830

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist?	*Yes*	***No***

Well Condition

Is the concrete pad in good condition?	***Yes***	*No*
Is the well surface casing in good condition?	***Yes***	*No*
Is the surface casing vertical?	***Yes***	*No*
Is there an internal well seal?	***Yes***	*No*
Has there been physical damage to the well?	*Yes*	***No***
Does sounding depth match completed depth?	*Yes*	***No***
Is measuring point marked?	***Yes***	*No*
Is the well clearly labeled?	***Yes***	*No*
Flush mount - is it secure from runoff?	***Yes***	*No*

Overall well condition (circle one) ***Good*** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	***No***
Well needs to be re-surveyed	*Yes*	***No***
Well needs to be repaired	*Yes*	***No***
Well needs to be replaced	*Yes*	***No***
Well needs to be properly abandoned	*Yes*	***No***
No action necessary	***Yes***	*No*

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/17/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: MW25-6B

Facility Information

Site Name:	Picatinny Arsenal	***Area: C***	***Site:***
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-44329
Well Tag ID and Condition:	MW25-6B / 'Good
Well Installation Date:	10/25/1993

	From Log	From GPS [1]
Ground Surface Elevation	692.58	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	--	N/A
Easting (State Plane)	--	N/A

Cross Streets (if applicable):	Baseball field
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) ***Flush Mount*** ***Stick up*** ***Multilevel Well*** [2]

Well lock / Security type:	lock
Elevation (top of inner casing):	692.58
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4" pvc
Well depth (as installed):	75.00
Well depth (as measured):	75.90
Well Stick Up Height (as measured):	1.3 ft
Screen interval:	65 - 75
Open hole interval:	--
Depth to water:	9.60

Date: 7/17/2018 ***Time:*** 0827

1 Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

2 If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? Yes **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	No
Is the well surface casing in good condition?	**Yes**	No
Is the surface casing vertical?	**Yes**	No
Is there an internal well seal?	**Yes**	No
Has there been physical damage to the well?	Yes	**No**
Does sounding depth match completed depth?	Yes	**No**
Is measuring point marked?	**Yes**	No
Is the well clearly labeled?	**Yes**	No
Flush mount - is it secure from runoff?	**Yes**	No

Overall well condition (circle one) **Good** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	Yes	**No**
Well needs to be re-surveyed	Yes	**No**
Well needs to be repaired	Yes	**No**
Well needs to be replaced	Yes	**No**
Well needs to be properly abandoned	Yes	**No**
No action necessary	**Yes**	No

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/17/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: MW-17

Facility Information

Site Name:	Picatinny Arsenal	***Area: C***	***Site:***
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	--
Well Tag ID and Condition:	MW-17 / 'Good
Well Installation Date:	1/1/1982

	From Log	From GPS [1]
Ground Surface Elevation	692.98	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	759381.5481	N/A
Easting (State Plane)	2023277.15	N/A

Cross Streets (if applicable):	--
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) ***Flush Mount*** ***Stick up*** ***Multilevel Well*** [2]

Well lock / Security type:	lock
Elevation (top of inner casing):	692.98
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4" pvc
Well depth (as installed):	19.00
Well depth (as measured):	21.00
Well Stick Up Height (as measured):	2.25 ft
Screen interval:	7 - 19
Open hole interval:	--
Depth to water:	6.22

Date: 7/26/2018 ***Time:*** 1215

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist?	*Yes*	***No***

Well Condition

Is the concrete pad in good condition?	***Yes***	*No*
Is the well surface casing in good condition?	***Yes***	*No*
Is the surface casing vertical?	***Yes***	*No*
Is there an internal well seal?	***Yes***	*No*
Has there been physical damage to the well?	*Yes*	***No***
Does sounding depth match completed depth?	*Yes*	***No***
Is measuring point marked?	***Yes***	*No*
Is the well clearly labeled?	***Yes***	*No*
Flush mount - is it secure from runoff?	***Yes***	*No*

Overall well condition (circle one) ***Good*** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	***No***
Well needs to be re-surveyed	*Yes*	***No***
Well needs to be repaired	*Yes*	***No***
Well needs to be replaced	*Yes*	***No***
Well needs to be properly abandoned	*Yes*	***No***
No action necessary	***Yes***	*No*

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/26/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: MW25-8

Facility Information

Site Name:	Picatinny Arsenal	***Area: C***	***Site:***
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-44543
Well Tag ID and Condition:	MW25-8 / 'Good
Well Installation Date:	11/7/1993

	From Log	From GPS [1]
Ground Surface Elevation	688.24	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	759627.73	N/A
Easting (State Plane)	202305.11	N/A

Cross Streets (if applicable):	Baseball field
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) ***Flush Mount*** ***Stick up*** ***Multilevel Well [2]***

Well lock / Security type:	lock
Elevation (top of inner casing):	690.22
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4" pvc
Well depth (as installed):	30.00
Well depth (as measured):	31.70
Well Stick Up Height (as measured):	1.85 ft
Screen interval:	20 - 30
Open hole interval:	--
Depth to water:	6.91

Date: 7/17/2018 ***Time:*** 0940

1 Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

2 If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist?	*Yes*	***No***

Well Condition

Is the concrete pad in good condition?	***Yes***	*No*
Is the well surface casing in good condition?	***Yes***	*No*
Is the surface casing vertical?	***Yes***	*No*
Is there an internal well seal?	***Yes***	*No*
Has there been physical damage to the well?	*Yes*	***No***
Does sounding depth match completed depth?	*Yes*	***No***
Is measuring point marked?	***Yes***	*No*
Is the well clearly labeled?	***Yes***	*No*
Flush mount - is it secure from runoff?	***Yes***	*No*

Overall well condition (circle one) ***Good*** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	***No***
Well needs to be re-surveyed	*Yes*	***No***
Well needs to be repaired	*Yes*	***No***
Well needs to be replaced	*Yes*	***No***
Well needs to be properly abandoned	*Yes*	***No***
No action necessary	***Yes***	*No*

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/17/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: DM19-1

Facility Information

Site Name:	Picatinny Arsenal	***Area: C***	***Site:***
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-30835
Well Tag ID and Condition:	DM19-1 / 'Good
Well Installation Date:	12/30/1988

	From Log	From GPS [1]
Ground Surface Elevation	6690.1	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	762313.77	N/A
Easting (State Plane)	470093.91	N/A

Cross Streets (if applicable):	South Brook Rd
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one)	***Flush Mount***	***Stick up***	***Multilevel Well [2]***
Well lock / Security type:	lock		
Elevation (top of inner casing):	692.18		
Surface protective casing material:	steel		
Surface casing diameter (in):	8		
Well diameter (in) and Casing material:	4" pvc		
Well depth (as installed):	19.50		
Well depth (as measured):	21.90		
Well Stick Up Height (as measured):	2.6 ft		
Screen interval:	9.5 - 19.5		
Open hole interval:	--		
Depth to water:	8.82		

Date: 7/17/2018 ***Time:*** 1110

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? Yes **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	No
Is the well surface casing in good condition?	**Yes**	No
Is the surface casing vertical?	**Yes**	No
Is there an internal well seal?	**Yes**	No
Has there been physical damage to the well?	Yes	**No**
Does sounding depth match completed depth?	Yes	**No**
Is measuring point marked?	**Yes**	No
Is the well clearly labeled?	**Yes**	No
Flush mount - is it secure from runoff?	**Yes**	No

Overall well condition (circle one) **Good** Fair Poor

Other comments:

Recommendations

Well needs to be redeveloped	Yes	**No**
Well needs to be re-surveyed	Yes	**No**
Well needs to be repaired	Yes	**No**
Well needs to be replaced	Yes	**No**
Well needs to be properly abandoned	Yes	**No**
No action necessary	**Yes**	No

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/17/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: DMW19-2

Facility Information

Site Name:	Picatinny Arsenal	**Area: C**	**Site:**
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-30836
Well Tag ID and Condition:	DMW19-2 / 'Good
Well Installation Date:	1/4/1988

	From Log	From GPS [1]
Ground Surface Elevation	690.9	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	762549.29	N/A
Easting (State Plane)	470210.6	N/A

Cross Streets (if applicable):	South Brook Rd
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) Flush Mount | **Stick up** | Multilevel Well [2]

Well lock / Security type:	lock
Elevation (top of inner casing):	692.82
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4" pvc
Well depth (as installed):	19.50
Well depth (as measured):	21.40
Well Stick Up Height (as measured):	2.6 ft
Screen interval:	9.5 - 19.5
Open hole interval:	--
Depth to water:	9.62

Date: 7/17/2018 **Time:** 1058

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? Yes **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	No
Is the well surface casing in good condition?	**Yes**	No
Is the surface casing vertical?	**Yes**	No
Is there an internal well seal?	**Yes**	No
Has there been physical damage to the well?	Yes	**No**
Does sounding depth match completed depth?	Yes	**No**
Is measuring point marked?	**Yes**	No
Is the well clearly labeled?	**Yes**	No
Flush mount - is it secure from runoff?	**Yes**	No

Overall well condition (circle one) **Good** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	Yes	**No**
Well needs to be re-surveyed	Yes	**No**
Well needs to be repaired	Yes	**No**
Well needs to be replaced	Yes	**No**
Well needs to be properly abandoned	Yes	**No**
No action necessary	**Yes**	No

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/17/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: DMW25-2

Facility Information

Site Name:	Picatinny Arsenal	**Area: C**	**Site:**
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	2530844
Well Tag ID and Condition:	DMW25-2 / 'Good
Well Installation Date:	12/22/1987

	From Log	From GPS [1]
Ground Surface Elevation	692.8	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	759847.19	N/A
Easting (State Plane)	202297.44	N/A

Cross Streets (if applicable):	South Brook Rd
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) **Flush Mount** **Stick up** **Multilevel Well [2]**

Well lock / Security type:	lock
Elevation (top of inner casing):	694.99
Surface protective casing material:	steel
Surface casing diameter (in):	8
Well diameter (in) and Casing material:	4" pvc
Well depth (as installed):	20.10
Well depth (as measured):	21.71
Well Stick Up Height (as measured):	2.25 ft
Screen interval:	9.9 - 20.10
Open hole interval:	--
Depth to water:	11.75

Date: 7/17/2018 **Time:** 0923

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? Yes **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	No
Is the well surface casing in good condition?	**Yes**	No
Is the surface casing vertical?	**Yes**	No
Is there an internal well seal?	**Yes**	No
Has there been physical damage to the well?	Yes	**No**
Does sounding depth match completed depth?	Yes	**No**
Is measuring point marked?	**Yes**	No
Is the well clearly labeled?	**Yes**	No
Flush mount - is it secure from runoff?	**Yes**	No

Overall well condition (circle one) **Good** Fair Poor

Other comments:

Recommendations

Well needs to be redeveloped	Yes	**No**
Well needs to be re-surveyed	Yes	**No**
Well needs to be repaired	Yes	**No**
Well needs to be replaced	Yes	**No**
Well needs to be properly abandoned	Yes	**No**
No action necessary	**Yes**	No

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 7/17/2018

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: 1181-3

Facility Information

Site Name:	Picatinny Arsenal	**Area: C**	**Site:**
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-33581
Well Tag ID and Condition:	--
Well Installation Date:	4/27/1989

	From Log	From GPS [1]
Ground Surface Elevation	688.5	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	--	N/A
Easting (State Plane)	--	N/A

Cross Streets (if applicable):	--
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) **Flush Mount** **Stick up** **Multilevel Well [2]**

Well lock / Security type:	lock
Elevation (top of inner casing):	--
Surface protective casing material:	steel
Surface casing diameter (in):	6
Well diameter (in) and Casing material:	2" pvc
Well depth (as installed):	22.50
Well depth (as measured):	
Well Stick Up Height (as measured):	2.40 ft
Screen interval:	12.5 - 22.5
Open hole interval:	--
Depth to water:	9.48

Date: 7/17/2018 **Time:** 1130

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? Yes **No**

Well Condition

Is the concrete pad in good condition?	**Yes**	No
Is the well surface casing in good condition?	**Yes**	No
Is the surface casing vertical?	**Yes**	No
Is there an internal well seal?	**Yes**	No
Has there been physical damage to the well?	Yes	**No**
Does sounding depth match completed depth?	Yes	**No**
Is measuring point marked?	**Yes**	No
Is the well clearly labeled?	**Yes**	No
Flush mount - is it secure from runoff?	**Yes**	No

Overall well condition (circle one) **Good** Fair Poor

Other comments:

Recommendations

Well needs to be redeveloped	Yes	**No**
Well needs to be re-surveyed	Yes	**No**
Well needs to be repaired	Yes	**No**
Well needs to be replaced	Yes	**No**
Well needs to be properly abandoned	Yes	**No**
No action necessary	**Yes**	No

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 43298

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: MW180-1

Facility Information

Site Name:	Picatinny Arsenal	**Area: C**	**Site:**
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-44124
Well Tag ID and Condition:	--
Well Installation Date:	10/20/1993

	From Log	From GPS [1]
Ground Surface Elevation	691.6	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	--	N/A
Easting (State Plane)	--	N/A

Cross Streets (if applicable):	--
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) **Flush Mount** **Stick up** **Multilevel Well [2]**

Well lock / Security type:	lock
Elevation (top of inner casing):	--
Surface protective casing material:	steel
Surface casing diameter (in):	6
Well diameter (in) and Casing material:	2" pvc
Well depth (as installed):	15.00
Well depth (as measured):	19.10
Well Stick Up Height (as measured):	
Screen interval:	5 - 15
Open hole interval:	--
Depth to water:	Could Not Locate

Date: -- **Time:** --

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist? *Yes* *No*

Well Condition

Is the concrete pad in good condition?	*Yes*	*No*
Is the well surface casing in good condition?	*Yes*	*No*
Is the surface casing vertical?	*Yes*	*No*
Is there an internal well seal?	*Yes*	*No*
Has there been physical damage to the well?	*Yes*	*No*
Does sounding depth match completed depth?	*Yes*	*No*
Is measuring point marked?	*Yes*	*No*
Is the well clearly labeled?	*Yes*	*No*
Flush mount - is it secure from runoff?	*Yes*	*No*

Overall well condition (circle one) *Good* *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	*No*
Well needs to be re-surveyed	*Yes*	*No*
Well needs to be repaired	*Yes*	*No*
Well needs to be replaced	*Yes*	*No*
Well needs to be properly abandoned	*Yes*	*No*
No action necessary	*Yes*	*No*

Comments

Could Not Locate.

Signatures

Inspected by: D. Thompson

Date Inspected: --

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

EPA Region 2 Superfund Well Assessment Checklist

Owner Well ID: C1-B

Facility Information

Site Name:	Picatinny Arsenal	**Area: C**	**Site:**
Site Address:	North East Office Garrison Bldg. 319, Picatinny, NJ 07806		
Site County:	Morris		
Site State:	New Jersey		
EPA Site ID Number:	NJ3210020704		
Site Owner:	US Department of Army Picatinny Arsenal		
EPA Project Manager:	Sharon Hartzell, USEPA Region II		

Well Location Information

State Well Permit No:	25-33586
Well Tag ID and Condition:	C1-B / 'Good
Well Installation Date:	4/29/1989

	From Log	From GPS [1]
Ground Surface Elevation	691.4	N/A
Latitude	N/A	N/A
Longitude	N/A	N/A
Northing (State Plane)	--	N/A
Easting (State Plane)	--	N/A

Cross Streets (if applicable):	Shinkle Rd
GPS Instrument used: [1]	N/A
Datum:	N/A
Accuracy / Precision:	N/A

Well Construction Details

Type of well (circle one) Flush Mount | **Stick up** | **Multilevel Well [2]**

Well lock / Security type:	lock
Elevation (top of inner casing):	690.6
Surface protective casing material:	steel
Surface casing diameter (in):	4
Well diameter (in) and Casing material:	2" pvc
Well depth (as installed):	22.30
Well depth (as measured):	23.10
Well Stick Up Height (as measured):	1.1 ft
Screen interval:	12.3 - 22.3
Open hole interval:	--
Depth to water:	2.02

Date: 7/17/2018 **Time:** 1140

[1] Picatinny wells will not be resurveyed by GPS unless existing Northing & Easting coordinates from prior survey efforts are not available or other conditions warrant resurveying.

[2] If multilevel well please see attached worksheet.

N/A = Not Applicable

--- = Not Available

Well Headspace Readings

PID/FID Reading taken inside top of casing (if applicable):	N/A	*ppm*
Multi-gas/CGI meter Readings taken (if applicable): [3]		
LEL:	N/A	*% LEL*
O_2:	N/A	*40% Vol.*
CO:	N/A	*ppm*
H_2S:	N/A	*ppm*

Do readings indicate if unsafe conditions exist?	*Yes*	***No***

Well Condition

Is the concrete pad in good condition?	***Yes***	*No*
Is the well surface casing in good condition?	***Yes***	*No*
Is the surface casing vertical?	***Yes***	*No*
Is there an internal well seal?	***Yes***	*No*
Has there been physical damage to the well?	*Yes*	***No***
Does sounding depth match completed depth?	*Yes*	***No***
Is measuring point marked?	***Yes***	*No*
Is the well clearly labeled?	***Yes***	*No*
Flush mount - is it secure from runoff?	***Yes***	*No*

Overall well condition (circle one) ***Good*** *Fair* *Poor*

Other comments:

Recommendations

Well needs to be redeveloped	*Yes*	***No***
Well needs to be re-surveyed	*Yes*	***No***
Well needs to be repaired	*Yes*	***No***
Well needs to be replaced	*Yes*	***No***
Well needs to be properly abandoned	*Yes*	***No***
No action necessary	***Yes***	*No*

Comments

Signatures

Inspected by: A. Roppoli

Date Inspected: 43298

Reviewed by: Ronald L. Traver *(Print)*

(Sign)

[3] Multi-gas readings are considered not applicable for Picatinny wells.

N/A = Not Applicable

--- = Not Available

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Picatinny Arsenal
DATE: 7-30-18
WEATHER: Sunny 80's
CONSULTING FIRM: Sovereign Consulting Inc.
SOV. PROJECT #: RB577
SAMPLER(S): DT/

MONITOR WELL #: SB1-1
WELL PERMIT #:
WELL DEPTH: 93 ft
WELL DIAMETER: 4 inches
SCREENED/OPEN INTERVAL: 83-93 ft

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: 6650L3WO
PUMP INTAKE DEPTH: 85 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 5.04 ft below TOC
Hurricane pump OR Mega Monsoon OR _____ (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C)		pH (pH units)		ORP (REDOX POTENTIAL) (mv)		SPECIFIC CONDUCTIVITY (mS/cm)		TURBIDITY (NTU)		DISSOLVED OXYGEN (mg/L)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
0835	X		14.43	NA	10.84	NA	26	NA	1.22	NA	529	NA	8.98	NA	190	5.11
0840	X		14.35	.08	9.29	1.55	125	99	0.998	.224	49.1	3.8	5.63	3.35		5.13
0845	X		14.45	.10	8.56	.73	160	35	0.972	.026	47.9	1.2	5.89	.26		5.13
0850	X		14.53	.08	8.01	.55	186	26	.968	.004	47.2	.7	5.68	.21		5.13
0855	X		14.46	.07	7.54	.47	212	26	.967	.001	46.2	1.0	5.33	.35		5.13
0900	X		14.60	.14	7.21	.33	234	22	.966	.001	45.9	.3	5.60	.27		5.13
0905	X		14.53	.07	7.01	.20	251	17	.969	.003	45.1	.8	5.39	.21		5.13
0910	X		14.49	.04	6.88	.13	263	12	.970	.001	45.0	.10	5.68	.29		5.13
0915	X		14.64	.15	6.76	.12	275	12	.970	0.0	44.9	.10	5.89	.19		5.13
0920	X		14.70	.06	6.66	.10	279	4	.971	.001	44.8	.16	5.78	.11		5.13
0925	X		14.75	.05	6.63	.03	283	4	.971	0.0	44.6	.02	5.70	.08		5.13
0930	X		14.79	.04	6.62	.01	287	4	.972	.001	44.5	.1	5.61	.09		5.13
0935	X		14.81	.02	6.60	.02	290	3	.973	.001	44.3	.2	5.57	.04		5.13
0940		X	14.83	.02	6.58	.02	292	2	.973	0.0	44.2	.1	5.55	.02		5.13

COMMENTS:

Sample @ 0940

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

% Change = [(Max Value - Min Value of Last 3 Readings) / Last Reading] x 100

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Pica - Area C
CONSULTING FIRM: Sovereign Consulting Inc.
DATE: 7/30/18
SOV. PROJECT #: RB577
WEATHER: 60s sunny
SAMPLER(S): DT

MONITOR WELL #: ~~SB1~~ SB1-2
WELL DEPTH: 18 ft
SCREENED/OPEN INTERVAL: 8-18 ft
WELL PERMIT #:
WELL DIAMETER: 4 inches

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: 'S8294 7XV
PUMP INTAKE DEPTH: 5.84 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : _____ ft below TOC
Hurricane Pump OR ~~Mega-Monsoon~~ OR _____ (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C)		pH (pH units)		ORP (REDOX POTENTIAL) (mv)		SPECIFIC CONDUCTIVITY (mS/cm)		TURBIDITY (NTU)		DISSOLVED OXYGEN (mg/L)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
0905	X		16.33	NA	7.09	NA	112	NA	1.20	NA	7.9	NA	2.52	NA	200	5.93
0910	X		15.97	0.36	6.99	0.10	116	4	1.21	0.01	5.9	2.0	2.16	0.36		5.95
0915	X		15.92	0.05	6.95	0.04	117	1	1.21	0.00	4.8	1.1	1.93	0.23		5.96
0920	X		15.91	0.01	6.90	0.05	116	1	1.22	0.01	5.2	0.4	1.54	0.39		5.95
0925	X		15.94	0.03	6.83	0.07	115	1	1.24	0.02	5.2	0	1.09	0.43		5.94
0930	X		15.97	0.03	6.80	0.03	115	0	1.27	0.03	5.7	0.5	1.10	0.01		5.94
0935	X		16.01	0.04	6.74	0.06	115	0	1.28	0.01	5.6	0.1	1.10	0.00	—	5.94

COMMENTS:

Sampled @ 0935

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

% Change = [(Max Value - Min Value of Last 3 Readings) / Last Reading] x 100

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Pica - Area O
CONSULTING FIRM: Sovereign Consulting Inc.
DATE: 7/30/18
SOV. PROJECT #: RB577
WEATHER: 60s sunny
SAMPLER(S): DT

MONITOR WELL #: SB1-8
WELL DEPTH: 34.05 ft
SCREENED/OPEN INTERVAL: 29-34 ft
WELL PERMIT #:
WELL DIAMETER: 4 inches

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: S8294TXV
PUMP INTAKE DEPTH: 31 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 6.28 ft below TOC
Hurricane pump OR Mega Monsoon OR _____ (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C) READING	TEMPERATURE CHANGE*	pH (pH units) READING	pH CHANGE*	ORP (REDOX POTENTIAL) (mv) READING	ORP CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) READING	SPECIFIC CONDUCTIVITY CHANGE*	TURBIDITY (NTU) READING	TURBIDITY CHANGE*	DISSOLVED OXYGEN (mg/L) READING	DISSOLVED OXYGEN CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
0815	X		17.44	NA	8.83	NA	72	NA	1.44	NA	4.5	NA	5.85	NA	200	6.42
0820	X		16.94	0.5	8.13	0.70	89	17	1.45	0.01	3.0	1.5	5.56	0.29		6.40
0825	X		16.47	0.47	7.79	0.29	99	10	1.46	0.01	3.0	0	5.53	0.03		6.40
0830	X		16.09	0.38	7.50	0.29	109	10	1.47	0.01	4.6	1.6	5.42	0.11		6.39
0835	X		15.98	0.11	7.34	0.16	116	7	1.46	0.01	4.7	0.1	5.41	0.01		
0840	X		15.96	0.02	7.30	0.04	120	4	1.46	0	4.8	0.1	5.40	0.01		
0845	X		15.94	0.02	7.27	0.03	123	3	1.46	0	4.8	0	5.40	0		
0850	X	X	15.91	0.03	7.24	0.03	121	2	1.46	0	4.6	0.2	5.40	0		

COMMENTS:

Sample @ 0850

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

% Change = [(Max Value - Min Value of Last 3 Readings) / Last Reading] x 100

Sovereign Consulting Inc

HydraSleeve Field Form

Site: Picatinny
Location: Areal
Well ID: SB1-5
Well Type: [X] Monitoring [ ] Other:
Well Finish: [ ] Stick-up [X] Flush Mount
Measuring Pt: [X] Top of Casing [ ] Other:
Total Depth (ft bgs): 109.60 Screened Interval: 90-110
Well Casing: Diameter: 2 Material: PVC
Well Screen: Diameter: 2

Deployment

Date and Time of Deployment: Date: 7/6/18 Time: 0955
Weather Conditions: 80s sunny
Depth to GW @ Time of Deployment: 24.12
Deploy Depth (Top of sampler) (ft bgs): 95
Dimensions of HydraSleeve: Length (in.) 30 Diameter (in.) 2
Deployment Method/Position of Weight:
- [X] Bottom Anchor: Weight attached to bottom of HydraSleeve. Weight rests on well bottom
- [ ] Top-Down: Weight attached to bottom of HydraSleeve. Weight suspended in well.
- [ ] Top-Down: Weight attached to top of HydraSleeve. Weight suspended in well.

(Note: 2" diameter sleeves are 30" in length. 4" diameter sleeves are 36" in length)

Retrieval

Date and Time of Retrieval: Date: 7/17/18 Time: 1140
Total # of Days Deployed: 11
Weather Conditions: 80s overcast
Depth to GW at Time of Retrieval: 22.37
Retrieval Method:
- [X] Continuous Pull (preferred)
- [ ] Short Strokes

Downhole Field Parameters Upon Retrieval:

Temp: 21.46 ORP: 24 Turb: 36.7
pH: 7.39 Cond: 0.653 DO: 0.80

Turbidity of GW Sample (dispensed from HydraSleeve):

Turbidity: 36.7 Meter Type: U-52 Serial #: 16501L3WD

Notes/Observations: VOC + Metals sample collected
(Unable to use downhole probe due to damage to well)

Field Sampling Tech: AR/EL Company: Sovereign Consulting Inc.

Sovereign Consulting Inc

HydraSleeve Field Form

Site: Picatinny
Location: Area C
Well ID: SB1-5
Well Type: [X] Monitoring [ ] Other:
Well Finish: [ ] Stick-up [X] Flush Mount
Measuring Pt: [X] Top of Casing [ ] Other:
Total Depth (ft bgs): 109.60 Screened Interval: 90-110
Well Casing: Diameter: 2 Material: PVC
Well Screen: Diameter: 2

Deployment

Date and Time of Deployment: Date: 7/17/18 Time: 1150
Weather Conditions: 80s overcast
Depth to GW @ Time of Deployment: 22.37
Deploy Depth (Top of sampler) (ft bgs): 95
Dimensions of HydraSleeve: Length (in.) 30 Diameter (in.) 2"
Deployment Method/Position of Weight:
[X] Bottom Anchor: Weight attached to bottom of HydraSleeve. Weight rests on well bottom
[ ] Top-Down: Weight attached to bottom of HydraSleeve. Weight suspended in well.
[ ] Top-Down: Weight attached to top of HydraSleeve. Weight suspended in well.

(Note: 2" diameter sleeves are 30" in length. 4" diameter sleeves are 36" in length)

Retrieval

Date and Time of Retrieval: Date: 7/30/18 Time: 0750
Total # of Days Deployed: 13
Weather Conditions: 60s sunny
Depth to GW at Time of Retrieval: 21.28
Retrieval Method: [X] Continuous Pull (preferred) [ ] Short Strokes

Downhole Field Parameters Upon Retrieval:

Temp: 16.37 ORP: -40 Turb: 110
pH: 10.43 Cond: 0.702 DO: 6.05

Turbidity of GW Sample (dispensed from HydraSleeve):

Turbidity: 6.04 Meter Type: U-52 Serial #: 66SOL3WO

Notes/Observations: Explosives sample collected (Unable to use downhole probe due to damage to well)

Field Sampling Tech: Company: Sovereign Consulting Inc.

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Picatinny
DATE: 7/17/18
WEATHER: ~~Sunny~~ overcast/rain 80's
CONSULTING FIRM: Sovereign Consulting Inc.
SOV. PROJECT #:
SAMPLER(S): EL, AR

MONITOR WELL #: SB1-16
WELL PERMIT #:
WELL DEPTH: 20.15 ft
WELL DIAMETER: 2 Inches
SCREENED/OPEN INTERVAL: 8-18 ft

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: WWODHY5X
PUMP INTAKE DEPTH: 15 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 6.51 ft below TOC
Hurricane pump OR Mega Monsoon OR _____ (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C)		pH (pH units)		ORP (REDOX POTENTIAL) (mv)		SPECIFIC CONDUCTIVITY (mS/cm)		TURBIDITY (NTU)		DISSOLVED OXYGEN (mg/L)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1325	X		17.06	NA	6.58	NA	122	NA	1.03	NA	8.16	NA	1.42	NA	200	6.82
1330	X		16.57	0.49	6.53	0.05	125	3	1.04	0.01	7.80	0.36	1.20	0.22		6.79
1335	X		16.32	0.25	6.48	0.05	130	5	1.06	0.02	7.22	0.62	1.18	0.02		6.58
1340	X		16.21	0.11	6.45	0.03	135	5	1.06	0	7.16	0.06	1.16	0.02		6.55
1345	X		16.17	0.04	6.43	0.02	135	0	1.07	0.01	7.08	0.08	1.16	0		6.54
1350	X	X	16.14	0.03	6.42	0.01	136	1	1.07	0	7.01	0.07	1.15	0.01	↓	6.54

COMMENTS:

Sample @ 1350

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

% Change = [(Max Value - Min Value of Last 3 Readings) / Last Reading] x 100

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Piccatinny
DATE: 7/18/18
WEATHER: Sunny 80's
CONSULTING FIRM: Sovereign Consulting Inc.
SOV. PROJECT #:
SAMPLER(S): EL, AR

MONITOR WELL #: SB-7
WELL PERMIT #:
WELL DEPTH: 20.89 ft
WELL DIAMETER: 2 Inches
SCREENED/OPEN INTERVAL: 9-19 ft

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: S82947XV
PUMP INTAKE DEPTH: 15 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 5.95 ft below TOC
Hurricane pump OR Mega Monsoon OR _____ (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C)		pH (pH units)		ORP (REDOX POTENTIAL) (mv)		SPECIFIC CONDUCTIVITY (mS/cm)		TURBIDITY (NTU)		DISSOLVED OXYGEN (mg/L)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1340	X		16.57	NA	7.35	NA	129	NA	0.833	NA	9.32	NA	5.42	NA	200	5.99
1345	X		17.21	0.164	6.64	0.71	167	38	0.850	0.017	8.55	0.77	3.59	1.83	|	5.98
1350	X		16.14	1.07	6.46	0.18	180	13	0.869	0.019	3.21	0.35	3.71	0.12	|	5.96
1355	X		16.02	0.12	6.42	0.04	190	10	0.891	0.002	4.12	0.91	3.72	0.02	|	5.95
1400	X		15.97	0.05	6.40	0.02	195	5	0.872	0.001	4.37	0.25	3.72	0	|	5.95
1405	X		15.92	0.05	6.38	0.02	196	1	0.878	0.006	4.03	0.34	3.73	0.001	|	5.95
1410	X	X	15.88	0.04	6.36	0.02	198	2	0.879	0.001	4.52	0.49	3.73	0	↓	5.95

COMMENTS:

Sample @ 1410

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

% Change = [(Max Value - Min Value of Last 3 Readings) / Last Reading] x 100

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Picatinny
DATE: 7/18/18
WEATHER: Sunny 70s

CONSULTING FIRM: Sovereign Consulting Inc.
SOV. PROJECT #:
SAMPLER(S): EL, AR

MONITOR WELL #: ~~MW~~ SB2-1A
WELL DEPTH: 167.60 ft
SCREENED/OPEN INTERVAL: 158-168 ft
WELL PERMIT #:
WELL DIAMETER: 4 inches

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: 6650L3W0

PUMP INTAKE DEPTH: 162 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 17.38 ft below TOC
Hurricane pump OR Mega Monsoon OR _____ (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C) READING	TEMPERATURE CHANGE*	pH (pH units) READING	pH CHANGE*	ORP (REDOX POTENTIAL) (mv) READING	ORP CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) READING	SPECIFIC CONDUCTIVITY CHANGE*	TURBIDITY (NTU) READING	TURBIDITY CHANGE*	DISSOLVED OXYGEN (mg/L) READING	DISSOLVED OXYGEN CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
0925	X		15.75	NA	12.28	NA	1	NA	3.81	NA	3.38	NA	0.00	NA	200	17.55
0930	X		15.89	0.14	12.21	0.07	-54	55	3.95	0.14	3.44	.06	0.00	0		17.77
0935	X		15.95	0.06	12.22	0.01	-73	19	3.98	0.03	3.40	0.04	0.00	0		17.90
0940	X		15.91	0.04	12.24	0.04	-82	9	3.99	0.01	3.37	0.03	0.00	0		17.97
0945	X		15.90	0.01	12.25	0.01	-88	6	3.99	0	3.33	0.04	0.00	0		17.99
0950	X	X	15.88	0.02	12.24	0.01	-89	1	3.99	0	3.29	0.04	0.00	0		18.04

COMMENTS: Sample @ 0950

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

% Change = [(Max Value - Min Value of Last 3 Readings) / Last Reading] x 100

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Picatinny
DATE: 7/18/18
WEATHER: Sunny 70's
CONSULTING FIRM: Sovereign Consulting Inc.
SOV. PROJECT #:
SAMPLER(S): EL, AR

MONITOR WELL #: SB2-2
WELL PERMIT #:
WELL DEPTH: 37.30 ft
WELL DIAMETER: 4 inches
SCREENED/OPEN INTERVAL: 25-35 ft

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: 66SOL3W0
PUMP INTAKE DEPTH: 30 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 7.57 ft below TOC
Hurricane pump OR Mega Monsoon OR _____ (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C)		pH (pH units)		ORP (REDOX POTENTIAL) (mv)		SPECIFIC CONDUCTIVITY (mS/cm)		TURBIDITY (NTU)		DISSOLVED OXYGEN (mg/L)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1000	X		16.56	NA	7.13	NA	-191	NA	5.55	NA	53.8	NA	0.00	NA	200	7.57
1005	X		17.04	0.48	6.71	0.42	-120	69	5.61	0.06	52.7	1.1	0.00	0		7.57
1010	X		17.31	0.27	6.56	0.15	-91	29	5.64	0.03	52.2	0.5	0.00	0		7.57
1015	X		17.36	0.05	6.55	0.01	-84	7	5.64	0	51.8	0.4	0.00	0		7.57
1020	X		17.40	0.04	6.54	0.01	-80	4	5.65	0.01	51.5	0.3	0.00	0		7.57
1025	X	X	17.43	0.03	6.54	0	-78	2	5.65	0	51.7	0.2	0.00	0		7.57

COMMENTS:

Sample @ 1025

ATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature;
edox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate
Value - Min Value of Last 3 Readings) / Last Reading] x 100

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Picatinny
DATE: 7/18/18
WEATHER: Sunny 70's
CONSULTING FIRM: Sovereign Consulting Inc.
SOV. PROJECT #:
SAMPLER(S): EL, AR

MONITOR WELL #: SB2-3
WELL DEPTH: 253.60 ft
SCREENED/OPEN INTERVAL: 243-253 ft
WELL PERMIT #:
WELL DIAMETER: 4 Inches

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: 66S0L3NO
PUMP INTAKE DEPTH: 248 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 18.05 ft below TOC
Hurricane pump OR Mega Monsoon OR _____ (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C)		pH (pH units)		ORP (REDOX POTENTIAL) (mv)		SPECIFIC CONDUCTIVITY (mS/cm)		TURBIDITY (NTU)		DISSOLVED OXYGEN (mg/L)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
0832	X		20.86	NA	8.36	NA	39	NA	0.130	NA	7.33	NA	4.12	NA	200	18.10
0837	X		17.57	3.29	8.31	0.05	68	29	0.145	0.015	7.21	0.12	2.00	2.12		18.20
0842	X		17.49	0.08	8.25	0.06	80	12	0.144	0.001	7.26	0.05	1.50	0.50		18.24
0847	X		17.42	0.07	8.20	0.05	89	9	0.142	0.002	7.19	0.07	1.29	0.21		18.30
0852	X		17.37	0.05	8.18	0.02	97	8	0.142	0	7.14	0.05	1.27	0.02		18.33
0857	X		17.33	0.04	8.08	0.10	102	5	0.142	0	7.17	0.03	1.27	0		18.38
0902	X	X	17.29	0.04	8.07	0.01	103	1	0.142	0	7.13	0.04	1.26	0.01		18.42
															↓	

COMMENTS:

Sample @ 0902

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

% Change = [(Max Value - Min Value of Last 3 Readings) / Last Reading] x 100

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Picatinny
DATE: 7/18/18
WEATHER: Sunny 80's
CONSULTING FIRM: Sovereign Consulting Inc.
SOV. PROJECT #:
SAMPLER(S): EL, AR

MONITOR WELL #: SB3-1B
WELL PERMIT #:
WELL DEPTH: 332.20 ft
WELL DIAMETER: 4 Inches
SCREENED/OPEN INTERVAL: 326-336 ft

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: 66901300
PUMP INTAKE DEPTH: 331 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 25.05 ft below TOC
Hurricane pump OR Mega Monsoon OR _____ (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C)		pH (pH units)		ORP (REDOX POTENTIAL) (mv)		SPECIFIC CONDUCTIVITY (mS/cm)		TURBIDITY (NTU)		DISSOLVED OXYGEN (mg/L)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1100	X		17.70	NA	10.98	NA	-45	NA	0.304	NA	10.4	NA	3.37	NA	170	25.12
1105	X		16.61	1.09	11.02	0.04	-72	27	0.264	0.04	4.39	6.01	1.22	2.15		25.09
1110	X		16.52	0.09	10.99	0.03	-65	7	0.258	0.006	4.27	0.12	0.72	0.50		25.08
1115	X		16.60	0.08	10.99	0	-61	4	0.257	0.001	4.22	0.05	0.53	0.19		25.07
1120	X		16.67	0.07	11.00	0.01	-58	3	0.256	0.001	4.16	0.08	0.52	0.01		25.06
1125	X		16.69	0.02	11.01	0.01	-57	1	0.256	0	4.19	0.03	0.52	0		25.05
1130	X	X	16.72	0.03	11.00	0	-57	0	0.256	0	4.24	0.05	0.51	0.01		25.05

COMMENTS: Sample @ 1130

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

% Change = [(Max Value - Min Value of Last 3 Readings) / Last Reading] x 100

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Piccadnny
DATE: 7/18/18
WEATHER: Sunny 80's
CONSULTING FIRM: Sovereign Consulting Inc.
SOV. PROJECT #:
SAMPLER(S): EL, AR

MONITOR WELL #: SB3-2
WELL PERMIT #:
WELL DEPTH: 180.30 ft
WELL DIAMETER: 4 Inches
SCREENED/OPEN INTERVAL: 170-180 ft

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: 66SOL3W0
PUMP INTAKE DEPTH: 175 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 24.96 ft below TOC
Hurricane pump OR Mega Monsoon OR _____ (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C)		pH (pH units)		ORP (REDOX POTENTIAL) (mv)		SPECIFIC CONDUCTIVITY (mS/cm)		TURBIDITY (NTU)		DISSOLVED OXYGEN (mg/L)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1210	X		16.55	NA	7.50	NA	130	NA	0.145	NA	6.67	NA	1.65	NA	200	24.98
1215	X		17.45	0.90	7.84	0.34	120	10	0.144	0.001	7.89	1.22	1.66	0.01		24.97
1220	X		18.10	0.65	8.14	0.30	109	11	0.144	0	7.22	0.67	1.67	0.01		24.96
1225	X		18.17	0.07	8.20	0.06	100	9	0.144	0	6.98	0.24	1.68	0.01		24.96
1230	X		18.23	0.06	8.23	0.03	98	2	0.144	0	6.71	0.27	1.69	0.01		24.96
1235	X	X	18.27	0.04	8.24	0.01	96	2	0.144	0	6.59	0.12	1.70	0.01	↓	24.96

COMMENTS:

Sample @ 1235 MS/MSD DUP-C

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

% Change = [(Max Value - Min Value of Last 3 Readings) / Last Reading] x 100

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Picatinny
DATE: 7/18/18
WEATHER: Sunny 80's
CONSULTING FIRM: Sovereign Consulting Inc.
SOV. PROJECT #:
SAMPLER(S): EL, AR

MONITOR WELL #: SB3-3
WELL PERMIT #:
WELL DEPTH: 33.15 ft
WELL DIAMETER: 4 inches
SCREENED/OPEN INTERVAL: 21-31 ft

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: 665OL3WW
PUMP INTAKE DEPTH: 26 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 16.64 ft below TOC
Hurricane pump OR Mega Monsoon OR _____ (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C)		pH (pH units)		ORP (REDOX POTENTIAL) (mv)		SPECIFIC CONDUCTIVITY (mS/cm)		TURBIDITY (NTU)		DISSOLVED OXYGEN (mg/L)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1135	X		15.73	NA	7.91	NA	92	NA	0.384	NA	10.40	NA	5.02	NA	200	16.66
1140	X		16.01	0.28	6.31	1.6	188	96	0.389	0.005	3.01	7.39	4.75	0.27	|	16.66
1145	X		16.13	0.12	6.20	0.11	195	7	0.389	0	3.12	0.11	4.79	0.04	|	16.65
1150	X		16.16	0.03	6.16	0.04	198	3	0.389	0	3.17	0.05	4.79	0	|	16.64
1155	X		16.20	0.04	6.15	0.01	204	6	0.389	0	3.22	0.05	4.78	0.01	|	16.64
1200	X		16.25	0.05	6.15	0	206	2	0.389	0	3.18	0.04	4.78	0	✓	16.64
1205	X	X	16.28	0.03	6.14	0.01	209	3	0.389	0	3.15	0.03	4.77	0.01		16.64

COMMENTS:

Sample @ 1205

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

% Change = [(Max Value - Min Value of Last 3 Readings) / Last Reading] x 100

L

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Pica - Area C
CONSULTING FIRM: Sovereign Consulting Inc.
DATE: 7/30/18
SOV. PROJECT #: RB577
WEATHER: 70s sunny
SAMPLER(S): DT

MONITOR WELL #: SB4-1
WELL DEPTH: 374 ft
SCREENED/OPEN INTERVAL: 369-379 ft
WELL PERMIT #:
WELL DIAMETER: 4 Inches

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: 6650L3W0
PUMP INTAKE DEPTH: 374 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 30.72 ft below TOC
Hurricane pump OR Mega Monsoon OR _____ (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C) READING	TEMPERATURE CHANGE*	pH (pH units) READING	pH CHANGE*	ORP (REDOX POTENTIAL) (mv) READING	ORP CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) READING	SPECIFIC CONDUCTIVITY CHANGE*	TURBIDITY (NTU) READING	TURBIDITY CHANGE*	DISSOLVED OXYGEN (mg/L) READING	DISSOLVED OXYGEN CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1010	X		16.26	NA	7.65	NA	85	NA	0.356	NA	53.9	NA	4.94	NA	200	31.24
1015	X		15.67	.59	10.25	2.60	-208	293	0.292	.064	45.5	8.4	1.26	3.68	↓	31.27
1020	X		15.25	.42	10.71	.46	-265	57	0.285	.007	46.2	.7	0.58	.68		31.32
1025	X		15.11	.14	10.78	.07	-277	12	0.288	.003	46.5	.3	0.06	.52		31.31
1030	X		15.14	0.03	10.78	0	-279	2	0.289	0.001	46.7	0.02	0.00	.06		31.30
1035	X		15.13	0.01	10.78	0	-280	1	0.289	0.000	46.3	0.04	0.00	0.0		31.30
1040	X		15.11	0	10.79	0.01	-280	0	0.290	0.001	46.4	0.01	↓	0		↓
1045	X		15.11	0	10.79	0	-280	0	0.290	0	46.3	0.01		↓		
1050	X	X	15.11	0	10.80	0.01	-281	1	0.292	0.002	46.2	0.01	↓	↓	↓	↓

COMMENTS:

Sample @ 1050

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

% Change = [(Max Value - Min Value of Last 3 Readings) / Last Reading] x 100

R

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Pica - Area C
CONSULTING FIRM: Sovereign Consulting Inc.
DATE: 7/30/18
SOV. PROJECT #: RB577
WEATHER: 70s cloudy
SAMPLER(S): DT

MONITOR WELL #: SB4-2
WELL DEPTH: 47.75 ft
SCREENED/OPEN INTERVAL: 36-46 ft
WELL PERMIT #:
WELL DIAMETER: 4 Inches

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: 582947XV
PUMP INTAKE DEPTH: 40 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 21.27 ft below TOC
Hurricane pump OR Mega Monsoon OR _____ (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C) READING	TEMPERATURE CHANGE*	pH (pH units) READING	pH CHANGE*	ORP (REDOX POTENTIAL) (mv) READING	ORP CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) READING	SPECIFIC CONDUCTIVITY CHANGE*	TURBIDITY (NTU) READING	TURBIDITY CHANGE*	DISSOLVED OXYGEN (mg/L) READING	DISSOLVED OXYGEN CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
1110	X		16.95	NA	7.96	NA	-100	NA	0.323	NA	45.5	NA	3.00	NA	200	21.32
1115	X		16.33	.62	6.56	1.40	0	100	0.257	.066	32.9	12.6	0.84	2.16		21.36
1120	X		15.67	.66	6.04	.52	46	46	0.239	.018	24.2	8.7	0.49	.35		21.38
1125	X		15.60	0.07	6.00	0.04	53	13	0.239	0	23.9		0.47	0.02		21.38
1130	X		15.43	0.17	5.92	0.08	60	13	0.239	0	19.2		0.44	0.03		21.35
1135	X		15.23	0.20	5.84	0.08	71	11	0.238	0.001	17.0		0.43	0.4		21.35
1140	X		15.22	0.01	5.82	0.02	77	6	0.238	0.000	16.2		0.42	0.01		
1145	X	X	15.20	0.02	5.80	0.02	79	2	0.237	0.001	16.1		0.41	0.01		

COMMENTS:

Sample @ 1145

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

% Change = [(Max Value - Min Value of Last 3 Readings) / Last Reading] x 100

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Pixa – Area C
CONSULTING FIRM: Sovereign Consulting Inc.
DATE: 7/30/18
SOV. PROJECT #: RB577
WEATHER: 70s cloudy
SAMPLER(S): DT

MONITOR WELL #: SB4-3
WELL DEPTH: 100.20 ft
SCREENED/OPEN INTERVAL: 92-102 ft
WELL PERMIT #: —
WELL DIAMETER: 4 inches

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: S82947XY
PUMP INTAKE DEPTH: 97 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 21.88 ft below TOC
Hurricane pump OR Mega Monsoon OR _____ (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C)		pH (pH units)		ORP (REDOX POTENTIAL) (mv)		SPECIFIC CONDUCTIVITY (mS/cm)		TURBIDITY (NTU)		DISSOLVED OXYGEN (mg/L)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1005	X		15.71	NA	7.10	NA	1	NA	1.05	NA	149	NA	0.37	NA	200	21.93
1010	X		15.11	0.60	7.27	.17	-31	32	1.05	0.0	139	10	0.00	.37		21.95
1015	X		14.59	.52	7.33	.06	-65	34	1.02	.03	137	2	0.00	00		21.94
1020	X		14.57	0.02	7.33	0	-79	14	0.996	.024	141	4	0.00	0.0		21.94
1025	X		14.60	0.03	7.33	0	-81	2	0.990	0.06	127					
1030	X		14.60	0	7.32	0.01	-83	2	0.977	0.013	124					
1035	X		14.61	0.01	7.32	0	-83	0	0.976	0.001	123					
1040	X		14.63	0.02	7.32	0	-85	2	0.974	0.002	125					
1045	X	X	14.60	0.03	7.31	0.01	-88	3	0.974	0	124	1				

COMMENTS:

Sample @ 1045

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

% Change = [(Max Value - Min Value of Last 3 Readings) / Last Reading] x 100

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Pica - Area C
DATE: 7/30/18
WEATHER: 70s cloudy

CONSULTING FIRM: Sovereign Consulting Inc.
SOV. PROJECT #: 23577
SAMPLER(S): DT

MONITOR WELL #: SB4-4
WELL PERMIT #:
WELL DEPTH: 166.85
WELL DIAMETER: ~~2~~ 4 Inches
SCREENED/OPEN INTERVAL: 155-165 ft

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: 66SQL3WO
PUMP INTAKE DEPTH: 160 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 30.33 ft below TOC
Hurricane pump OR Mega Monsoon OR _____ (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C)		pH (pH units)		ORP (REDOX POTENTIAL) (mv)		SPECIFIC CONDUCTIVITY (mS/cm)		TURBIDITY (NTU)		DISSOLVED OXYGEN (mg/L)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1100	X		13.77	NA	9.89	NA	58	NA	0.226	NA	48.9	NA	1.80	NA	200	30.41
1105	X		14.94	1.17	9.55	.34	43	15	0.223	.003	48.7	.2	1.62	.18		30.44
1110	X		15.24	.30	9.23	.32	44	1	0.224	.001	48.8	.1	1.28	.32		30.47
1115	X		15.28	.04	8.94	.29	79	35	0.224	0.0	49.0	.2	1.19	.09		30.51
1120	X		15.31	.03	8.63	.31	148	69	0.224	0.0	49.2	.2	1.00	.19		30.50
1125	X		15.35	0.04	8.60	0.03	167	19	0.223	0.001	49.0	0.2	1.11	0.01		30.49
1130	X		15.36	0.01	8.50	0.10	186	19	0.222	0.001	48.5	1.5	1.10	0.01		30.49
1135	X		15.06	0.30	8.44	0.06	190	4	0.224	0.002	48.3	0.2	1.09	0.01		
1140	X	X	15.00	0.06	8.43	0.01	194	4	0.224	0.000	48.7	0.4	1.08	0.01		

COMMENTS:

Sample @ 1140

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

% Change = [(Max Value - Min Value of Last 3 Readings) / Last Reading] x 100

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Picatinny
DATE: ~~08/23~~ 7/17/18
WEATHER: overcast 80's
CONSULTING FIRM: Sovereign Consulting Inc.
SOV. PROJECT #:
SAMPLER(S): EL/AR

MONITOR WELL #: MW25-6A
WELL DEPTH: 20.10 ft
SCREENED/OPEN INTERVAL: 10-20 ft
WELL PERMIT #:
WELL DIAMETER: 4 inches

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: WWODHY5X
PUMP INTAKE DEPTH: 15 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 10.4 ft below TOC
Hurricane or Monsoon SS submersible pumps OR QED Sample Pro MicroPurge Bladder Pump used (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C) READING	TEMPERATURE CHANGE*	pH (pH units) READING	pH CHANGE*	ORP (REDOX POTENTIAL) (mv) READING	ORP CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) READING	SPECIFIC CONDUCTIVITY CHANGE*	TURBIDITY (NTU) READING	TURBIDITY CHANGE*	DISSOLVED OXYGEN (mg/L) READING	DISSOLVED OXYGEN CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
0805	X		18.07	NA	7.97	NA	-10	NA	0.697	NA	8.63	NA	0.00	NA	200	10.46
0810	X		19.88	0.81	7.69	0.28	25	35	0.658	0.039	5.51	3.12	0.21	0.21		10.42
0815	X		19.94	0.06	7.64	0.05	38	13	0.646	0.012	4.99	0.52	0.16	0.05		10.40
0820	X		20.00	0.06	7.66	0.02	43	5	0.640	0.006	4.95	0.04	0.18	0.02		10.40
0825	X		20.04	0.04	7.67	0.01	47	5	0.636	0.004	4.91	0.04	0.20	0.02		10.40
0830	X	X	20.01	0.03	7.68	0.01	50	3	0.634	0.002	4.90	0.01	0.21	0.01		10.40

COMMENTS:

Sample @ 0830

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

*Analysis Methods: SM 2510 B - Specific Conductivity; EPA 180.1 - Turbidity; SM4500-O G - Dissolved Oxygen; SM4500-H B - pH; SM2550 B - Temperature

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: ~~244 Market St, Brentwood Park, NJ~~ Picatinny

CONSULTING FIRM: Sovereign Consulting Inc.

DATE: ~~8/16~~ 7/17/18

SOV. PROJECT #: [redacted]

WEATHER: Overcast 80's

SAMPLER(S): AR / EL

MONITOR WELL #: MW25-6B

WELL DEPTH: 75.96 ft

SCREENED/OPEN INTERVAL: 65-70 ft

WELL PERMIT #:

WELL DIAMETER: 4 Inches

PID/FID READINGS (ppm):

HORIBA U-52 Water Quality Meter SN: [redacted]82947XV

PUMP INTAKE DEPTH: ~~65~~ 68 ft below TOC

DEPTH TO WATER BEFORE PUMP INSTALLATION : 9.6 ft below TOC

Hurricane or Monsoon SS submersible pumps OR QED Sample Pro MicroPurge Bladder Pump used (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C)		pH (pH units)		ORP (REDOX POTENTIAL) (mv)		SPECIFIC CONDUCTIVITY (mS/cm)		TURBIDITY (NTU)		DISSOLVED OXYGEN (mg/L)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
0757	X		16.12	NA	12.29	NA	-47	NA	1.10	NA	18.5	NA	7.80	NA	200	10.02
0802	X		16.96	0.84	12.48	0.19	-47	20	1.13	0.03	18.9	0.4	4.19	1.61	|	10.35
0807	X		17.85	0.89	12.49	0.01	-40	7	1.12	0.01	16.6	2.3	5.95	0.24	|	10.52
0812	X		17.56	0.29	12.52	0.03	-38	2	1.12	0	16.2	0.4	5.92	0.03	|	10.48
0817	X		17.80	0.24	12.57	0.05	-34	4	1.11	0.01	16.5	0.3	5.88	0.04	|	10.75
0822	X		17.85	0.05	12.60	0.03	-30	4	1.10	0.01	16.1	0.4	5.82	0.06	|	10.78
0827	X	X	17.87	0.02	12.62	0.02	-28	2	1.10	0	15.8	0.2	5.80	0.02	|	10.81
															↓	

COMMENTS:

Sample @ 0827

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

*Analysis Methods: SM 2510 B - Specific Conductivity; EPA 180.1 - Turbidity; SM4500-O G - Dissolved Oxygen; SM4500-H B - pH; SM2550 B - Temperature

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Piccadilly
DATE: 7/17/18
WEATHER: 80's Sunny
CONSULTING FIRM: Sovereign Consulting Inc.
SOV. PROJECT #:
SAMPLER(S): EI

MONITOR WELL #: MW25-8
WELL DEPTH: 31.70 ft
SCREENED/OPEN INTERVAL: 20-30 ft
WELL PERMIT #:
WELL DIAMETER: 4 inches

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: WWODHYSX
PUMP INTAKE DEPTH: 25 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 6.91 ft below TOC
Hurricane or Monsoon SS submersible pumps OR QED Sample Pro MicroPurge Bladder Pump used (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C) READING	TEMPERATURE CHANGE*	pH (pH units) READING	pH CHANGE*	ORP (REDOX POTENTIAL) (mv) READING	ORP CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) READING	SPECIFIC CONDUCTIVITY CHANGE*	TURBIDITY (NTU) READING	TURBIDITY CHANGE*	DISSOLVED OXYGEN (mg/L) READING	DISSOLVED OXYGEN CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
0940	X		13.32	NA	10.51	NA	-134	NA	0.430	NA	393	NA	0.00	NA	200	7.08
0945	X		13.19	0.13	9.78	0.73	-101	33	0.427	0.003	356	37	0.00	0		7.03
0950	X		13.07	0.08	9.21	0.57	-82	19	0.425	0.002	302	54	0.00	0		7.00
0955	X		13.03	0.05	9.15	0.06	-77	5	0.422	0.003	298	4	0.00	0		6.97
1000	X		13.00	0.03	9.11	0.04	-70	7	0.421	0.001	295	3	0.00	0		6.96
1005	X	X	12.99	0.01	9.07	0.04	-68	2	0.420	0.001	293	2	0.00	0	↓	6.95

COMMENTS:

Sample @ 1005

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

*Analysis Methods: SM 2510 B - Specific Conductivity; EPA 180.1 - Turbidity; SM4500-O G - Dissolved Oxygen; SM4500-H B - pH; SM2550 B - Temperature

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Dicatiny
DATE: 7/17/18
WEATHER: Sunny 80's

CONSULTING FIRM: Sovereign Consulting Inc.
SOV. PROJECT #:
SAMPLER(S): EL

MONITOR WELL #: DM19-1
WELL PERMIT #:
WELL DEPTH: 21.90 ft
WELL DIAMETER: 4 inches
SCREENED/OPEN INTERVAL: 9.5-19.5 ft

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: WWODHY5X
PUMP INTAKE DEPTH: 15 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 8.82 ft below TOC
Hurricane pump OR Mega Monsoon OR _____ (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C)		pH (pH units)		ORP (REDOX POTENTIAL) (mv)		SPECIFIC CONDUCTIVITY (mS/cm)		TURBIDITY (NTU)		DISSOLVED OXYGEN (mg/L)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1050	X		21.80	NA	6.84	NA	-110	NA	0.331	NA	22.6	NA	0.00	NA	200	8.92
1055	X		19.40	2.4	6.68	0.16	-105	5	0.348	0.017	13.8	8.8	0	0		8.89
1100	X		19.20	0.20	6.65	0.03	-104	1	0.348	0	13.1	0.7	0	0		8.87
1105	X		19.14	0.06	6.63	0.02	-103	1	0.349	0.001	12.8	0.7	0	0		8.84
1110	X	X	19.09	0.05	6.62	0.01	-102	1	0.349	0	12.1	0.7	0	0	↓	8.83

COMMENTS:

Sample @ 1110

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

% Change = [(Max Value - Min Value of Last 3 Readings) / Last Reading] x 100

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: Picatinny Arsenal
CONSULTING FIRM: Sovereign Consulting Inc.
DATE: 7/17/18
SOV. PROJECT #: RB577
WEATHER: 80s sunny
SAMPLER(S): AR

MONITOR WELL #: DM19-2
WELL DEPTH: 19.5 ft
SCREENED/OPEN INTERVAL: 9.5-19.5 ft
WELL PERMIT #:
WELL DIAMETER: 4 inches

PID/FID READINGS (ppm):
HORIBA U-52 Water Quality Meter SN: S8294TXV
PUMP INTAKE DEPTH: 15 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: ~~15~~ 9.62 ft below TOC
Hurricane or Monsoon-SS submersible pumps OR QED Sample Pro MicroPurge Bladder Pump used (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C)		pH (pH units)		ORP (REDOX POTENTIAL) (mv)		SPECIFIC CONDUCTIVITY (mS/cm)		TURBIDITY (NTU)		DISSOLVED OXYGEN (mg/L)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1020	Y		14.41	NA	8.32	NA	-28	NA	0.586	NA	156	NA	0.00	NA	150	9.67
1025	Y		14.44	0.03	8.19	0.13	-41	13	0.593	0.007	155	1	0.00	0		9.73
1030	Y		14.55	0.11	8.16	0.03	-46	5	0.597	0.004	150	5				9.72
1035	Y		14.59	0.04	8.13	0.03	-47	1	0.598	0.001	142	8				9.70
1040	Y		14.60	0.01	8.00	0.03	-50	3	0.599	0.001	145	3				9.70
1045	Y		14.63	0.03	8.08	0.02	-53	3	0.600	0.001	140	5				
1050	Y	Y	14.67	0.04	8.04	0.04	-57	4	0.600	0	137	3	↓	↓	↓	↓

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

*Analysis Methods: SM 2510 B - Specific Conductivity; EPA 180.1 - Turbidity; SM4500-O G - Dissolved Oxygen; SM4500-H B - pH; SM2550 B - Temperature

SOVEREIGN CONSULTING INC.

LOW FLOW SAMPLING PURGE FORM

SITE: ~~AP66 Bonanza 2000~~

DATE: ~~04/~~ 7/17/18

WEATHER: Overcast 80's humid / C

CONSULTING FIRM: Sovereign Consulting Inc.

SOV. PROJECT #: ~~AN000.002~~

SAMPLER(S): EL / AR

MONITOR WELL #: DM25-2

WELL DEPTH: 21.71 ft

SCREENED/OPEN INTERVAL: 9.9 - 20.10 ft

WELL PERMIT #:

WELL DIAMETER: 4 inches

PID/FID READINGS (ppm):

HORIBA U-52 Water Quality Meter SN: 669DL3WO

PUMP INTAKE DEPTH: 15 ft below TOC

DEPTH TO WATER BEFORE PUMP INSTALLATION : 11.75 ft below TOC

Hurricane or Monsoon SS submersible pumps OR QED Sample Pro MicroPurge Bladder Pump used (Circle One.)

TIME	PURGING	SAMPLING	TEMPERATURE (degrees C)		pH (pH units)		ORP (REDOX POTENTIAL) (mv)		SPECIFIC CONDUCTIVITY (mS/cm)		TURBIDITY (NTU)		DISSOLVED OXYGEN (mg/L)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
0858	X		18.39	NA	6.19	NA	-75	NA	0.298	NA	24.9	NA	6.17	NA	200	11.87
0903	X		18.20	0.19	6.11	0.08	-71	4	0.295	0.003	25.0	0.1	5.05	1.12	|	11.85
0908	X		17.98	0.22	6.07	0.04	-69	2	0.294	0.001	25.1	0.1	4.20	0.85	|	11.82
0913	X		17.90	0.08	6.05	0.02	-64	5	0.292	0.002	25.6	0.5	3.86	0.34	|	11.80
0918	X		17.84	0.06	6.03	0.02	-63	1	0.291	0.001	25.9	0.3	3.85	0.01	✓	11.73
0923	X	X	17.80	0.04	6.02	0.01	-62	1	0.290	0.001	26.2	0.30	3.82	0.03	200	11.75

COMMENTS:

Sample @ 0923

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity; 0.30' Max. Drawdown; 100-500 mL flow rate

*Analysis Methods: SM 2510 B - Specific Conductivity; EPA 180.1 - Turbidity; SM4500-O G - Dissolved Oxygen; SM4500-H B - pH; SM2550 B - Temperature

SOVEREIGN CONSULTING INC.

Lab ID Number: 11021

Horiba U-52 Daily Calibration Log

Sampler/Calibrator: A. Poppoli
Office: Rville
Site Name: Pica

Date: 7/17/18
Horiba Serial #: S82947XY
Site Address:

Morning Calibration
Record Weekly Winkler Titration result below. Date of Winkler Titration: 7/16/18

Start Time: 0500
End Time: 0540

Dissolved Oxygen (mg/L)					
Standard Value	Cal'd Reading[1]	Temperature (C)	Horiba Result	Winkler Result	Horiba vs Winkler
0	0	24.71	If Winkler vs Winkler Cal is > +/- 0.3, apply the difference to field readings as a correction factor.		
Air/Sat.Water (circle one)	8.94	24.71	7.47	7.40	0.07

Conductivity (mS/cm)					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
0	0		24.71	DIW -	
1.413	1.41	(+/- 0.014)/ 0	24.71	7GK390	11/18

pH (standard units)					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
10	10.00	(+/- 0.05)/ 0	24.71	7GJ765	10/19
4	4.00	(+/- 0.05)/ 0	24.71	8GB644	2/20
Cal chk 7	7.01	(+/- 0.10)/ 0.01	24.71	7GK331	11/19

ORP (millivolts - mV) - Calibrate only if ORP measurement is required (consult work order or PM)					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
229	229		24.71	7GL796	9/18

Field QC Checks (Use standard from different Lot # than that used for calibration)

pH Field Checks(standard units)					
	Initial	3 hr	6 hr	9 hr	12 hr
pH 7.0 to be checked @ start of job ("initial") & every 3 hours. Record time of day.	Time: 0710	Time: 1015	Time:	Time:	Time:
	Value: 7.04	Value: 7.08	Value:	Value:	Value:
	Acc. (+/-0.1): 0.04	Acc. (+/-0.2): 0.08	Acc. (+/-0.2):	Acc. (+/-0.2):	Acc. (+/-0.2):

[1]Record the calibrated reading.
[2]Calculate difference between calibrated reading and calibration std value. Calibrated reading must be within +/- the value shown.
Acc. = Accuracy. Initial field chk must be within +/-0.1 unit of std value; 3-hr rdings must be within +/-0.2 units.
% Difference = [(reading - std value)/std value]x100.

Signature: [signature]
Date: 7/17/18

SOVEREIGN CONSULTING INC.

Lab ID Number: 11021

Horiba U-52 Daily Calibration Log

Sampler/Calibrator: A. Roppoli
Office: Ruille
Site Name: Pica

Date: 7/17/18
Horiba Serial #: WWDIMY5X
Site Address:

Morning Calibration
Record Weekly Winkler Titration result below. Date of Winkler Titration: ___/___/___

Start Time: 0500
End Time: 0645

Dissolved Oxygen (mg/L)					
Standard Value	Cal'd Reading[2]	Temperature (C)	Horiba Result	Winkler Result	Horiba vs Winkler
0	0	24.71	If Winkler vs Winkler Cal is >+/- 0.3, apply the difference to field readings as a correction factor.		
Air/Sat. Water (circle one)	8.94	24.71	RENTAL from PINE		

Conductivity (mS/cm)					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
0	0		24.72	DIW -	
1.413	1.41	(+/- 0.014)/ 0	24.72	7GK380	11/18

pH (standard units)					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
10	10.00	(+/- 0.05)/ 0	24.71	7GJ765	10/19
4	4.00	(+/- 0.05)/ 0	24.72	8GB644	2/20
Cal chk 7	7.02	(+/- 0.10)/ 0.02	24.70	7GK331	11/19

ORP (millivolts - mV) - Calibrate only if ORP measurement is required (consult work order or PM)					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
229	229		24.71	7GL796	9/18

Field QC Checks (Use standard from different Lot # than that used for calibration)

pH Field Checks (standard units)					
	Initial	3 hr	6 hr	9 hr	12 hr
pH 7.0 to be checked @ start of job ("initial") & every 3 hours. Record time of day.	Time: 0710	Time: 0930	Time:	Time:	Time:
	Value: 7.05	Value: 7.07	Value:	Value:	Value:
	Acc. (+/-0.1): 0.05	Acc. (+/-0.2): 0.07	Acc. (+/-0.2):	Acc. (+/-0.2):	Acc. (+/-0.2):

[1]Record the calibrated reading.
[2]Calculate difference between calibrated reading and calibration std value. Calibrated reading must be within +/- the value shown.
Acc. = Accuracy. Initial field chk must be within +/-0.1 unit of std value; 3-hr rdings must be within +/-0.2 units.
% Difference = [(reading - std value)/std value]x100.

Signature: [signature] Date: 7/17/18

SOVEREIGN CONSULTING INC.

Lab ID Number: 11021

Horiba U-52 Daily Calibration Log

Sampler/Calibrator: A. Roppoli
Office: Rville
Site Name: Pica

Date: 7/18/18
Horiba Serial #: 882947XV
Site Address:

Morning Calibration
Record Weekly Winkler Titration result below. Date of Winkler Titration: 7/16/18

Start Time: 0500 End Time: 0545

Dissolved Oxygen (mg/L)					
Standard Value	Cal'd Reading[1]	Temperature (C)	Horiba Result	Winkler Result	Horiba vs Winkler
0	0	24.68	If Winkler vs Winkler Cal is > +/- 0.3, apply the difference to field readings as a correction factor.		
Air/Sat.Water (circle one)	8.90	24.68	7.47	7.40	0.07

Conductivity (mS/cm)					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
0	0		24.68	DIW -	—
1.413	1.41	(+/- 0.014)/	24.68	7GK390	11/18

pH (standard units)					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
10	10.00	(+/- 0.05)/ 0	24.68	7GJ785	10/19
4	4.00	(+/- 0.05)/ 0	24.68	8GB644	2/20
Cal chk 7	7.03	(+/- 0.10)/ 0.03	24.68	7GK331	11/19

ORP (millivolts - mV) - Calibrate only if ORP measurement is required (consult work order or PM)					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
229	229		24.68	7GL796	9/18

Field QC Checks (Use standard from different Lot # than that used for calibration)

pH Field Checks(standard units)					
	Initial	3 hr	6 hr	9 hr	12 hr
pH 7.0 to be checked @ start of job ("Initial") & every 3 hours. Record time of day.	Time: 0710	Time: 0955	Time: 1240	Time:	Time:
	Value: 7.04	Value: 7.09	Value: 7.12	Value:	Value:
	Acc. (+/-0.1): 0.04	Acc. (+/-0.2): 0.09	Acc. (+/-0.2): 0.12	Acc. (+/-0.2):	Acc. (+/-0.2):

[1]Record the calibrated reading.
[2]Calculate difference between calibrated reading and calibration std value. Calibrated reading must be within +/- the value shown.
Acc. = Accuracy. Initial field chk must be within +/-0.1 unit of std value; 3-hr rdings must be within +/-0.2 units.
% Difference = [(reading - std value)/std value]x100.

Signature: [signature] Date: 7/18/18

SOVEREIGN CONSULTING INC.

Lab ID Number: 11021

Horiba U-52 Daily Calibration Log

Sampler/Calibrator: A. Ruppert Date: 7/30/18

Office: Ruille Horiba Serial #: 382947X V

Site Name: Pica Site Address:

Morning Calibration Start Time: 0510 End Time: 0545

Record Weekly Winkler Titration result below. Date of Winkler Titration: 7/27/18

Dissolved Oxygen (mg/L)					
Standard Value	Cal'd Reading[1]	Temperature (C)	Horiba Result	Winkler Result	Horiba vs Winkler
0	0	25.08	If Winkler vs Winkler Cal is > +/- 0.3, apply the difference to field readings as a correction factor.		
Air/Sat.Water (circle one)	8.90	25.08	6.75	6.80	0.05

Conductivity (mS/cm)					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
0	0		25.08	DIW -	
1.413	1.41	(+/- 0.014)/ 0	25.08	7GK390	4/18

pH (standard units)					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
10	10.00	(+/- 0.05)/ 0	25.08	7GJ765	6/19
4	4.00	(+/- 0.05)/ 0	25.08	8GB644	2/20
Cal chk 7	7.03	(+/- 0.10)/ 0.03	25.08	7GK331	11/19

ORP (millivolts - mV) - Calibrate only if ORP measurement is required (consult work order or PM)					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
229	229		25.08	7GL796	9/18

Field QC Checks (Use standard from different Lot # than that used for calibration)

pH Field Checks(standard units)					
	Initial	3 hr	6 hr	9 hr	12 hr
pH 7.0 to be checked @ start of job ("Initial") & every 3 hours. Record time of day.	Time: 0720	Time: 0950	Time:	Time:	Time:
	Value: 7.02	Value: 7.05	Value:	Value:	Value:
	Acc. (+/-0.1): 0.02	Acc. (+/-0.2): 0.05	Acc. (+/-0.2):	Acc. (+/-0.2):	Acc. (+/-0.2):

[1]Record the calibrated reading.

[2]Calculate difference between calibrated reading and calibration std value. Calibrated reading must be within +/- the value shown.

Acc. = Accuracy. Initial field chk must be within +/-0.1 unit of std value; 3-hr rdings must be within +/-0.2 units.

% Difference = [(reading - std value)/std value]x100.

Signature: _____ Date: 7/30/18

SOVEREIGN CONSULTING INC.

Lab ID Number: 11021

Horiba U-52 Daily Calibration Log

Sampler/Calibrator: A. Roppolo
Date: 7/30/18
Office: Reville
Horiba Serial #: 665UL3WD
Site Name: Pica
Site Address:

Morning Calibration
Start Time: 0510
End Time: 0545
Record Weekly Winkler Titration result below. Date of Winkler Titration: 6/27/18

Dissolved Oxygen (mg/L)					
Standard Value	Cal'd Reading[2]	Temperature (C)	Horiba Result	Winkler Result	Horiba vs Winkler
0	0	25.08	If Winkler vs Winkler Cal is > +/- 0.3, apply the difference to field readings as a correction factor.		
Air/Sat.Water (circle one)	8.90	25.08	6.90	6.80	.0.10

Conductivity (mS/cm)					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
0	0		25.08	DIW - ✓	✓
1.413	1.41	(+/- 0.014)/ 0	25.08	7GK390	11/18

pH (standard units)					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
10	10.00	(+/- 0.05)/ 0	25.08	7GJ765	10/19
4	4.00	(+/- 0.05)/ 0	25.08	8GB644	2/20
Cal chk 7	7.04	(+/- 0.10)/ 0.04	25.08	7GK331	11/19

ORP (millivolts - mV) - Calibrate only if ORP measurement is required (consult work order or PM)					
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Temperature (C)	Cal. Soln. Lot #	Cal. Soln. Exp. Date
229	229		25.08	7GL796	9/18

Field QC Checks (Use standard from different Lot # than that used for calibration)

pH Field Checks(standard units)					
	Initial	3 hr	6 hr	9 hr	12 hr
pH 7.0 to be checked @ start of job ("Initial") & every 3 hours. Record time of day.	Time: 0720	Time: 0950	Time:	Time:	Time:
	Value: 7.05	Value: 7.09	Value:	Value:	Value:
	Acc. (+/-0.1): 0.05	Acc. (+/-0.2): 0.09	Acc. (+/-0.2):	Acc. (+/-0.2):	Acc. (+/-0.2):

[1]Record the calibrated reading.
[2]Calculate difference between calibrated reading and calibration std value. Calibrated reading must be within +/- the value shown.
Acc. = Accuracy. Initial field chk must be within +/-0.1 unit of std value; 3-hr rdings must be within +/-0.2 units.
% Difference = [(reading - std value)/std value]x100.

Signature: [signature]
Date: 7/30/18

SOVEREIGN CONSULTING INC.

Lab ID Number: 11021

Hach 2100Q Daily Calibration Log

Sampler/Calibrator: A. Poppoli Date: 7/17/18

Office: Bville Hach Serial #: 038158

Site Name: Pica Site Address:

Morning Calibration Start Time: 0500 End Time: 0510

Turbidity (NTU)				
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Cal. Soln. Lot #	Cal. Soln. Exp. Date
0	0.31		DIW -	
20	21.3	(+/- 2)/ 0.3	A7303	1/19
100	100.7	(+/- 10)/ 0.7	A7303	↓
800	805	(+/- 80)/ 5	A7299	
Cal chk 10*	10.7	(+/- 1)/ 0.7	A7299	

[1]Record the calibrated reading.

[2]Calculate difference between calibrated reading and calibration std value. Calibrated reading must be within +/- the value shown.

Signature: Date: 7/17/18

SOVEREIGN CONSULTING INC.

Lab ID Number: 11021

Hach 2100Q Daily Calibration Log

Sampler/Calibrator: A. Ruppoli

Date: 7/17/18

Office: Fville

Hach Serial #: C0012176

Site Name: Pica

Site Address:

Morning Calibration Start Time: 0510 End Time: 0520

Turbidity (NTU)				
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Cal. Soln. Lot #	Cal. Soln. Exp. Date
0	0.45		DIW -	—
20	19.6	(+/- 2)/ 0.4	A7074	6/18
100	103	(+/- 10)/ 3	A7120	8/18
800	802	(+/- 80)/ 2	A7124	8/18
Cal chk 10*	10.2	(+/- 1)/ 0.2	A7213	11/18

[1]Record the calibrated reading.

[2]Calculate difference between calibrated reading and calibration std value. Calibrated reading must be within +/- the value shown.

Signature: Date:

SOVEREIGN CONSULTING INC.

Lab ID Number: 11021

Hach 2100Q Daily Calibration Log

Sampler/Calibrator: A. Roppolo Date: 7/18/18

Office: Rville Hach Serial #: 038158

Site Name: Pizza Site Address:

Morning Calibration Start Time: 0500 End Time: 0510

Turbidity (NTU)				
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Cal. Soln. Lot #	Cal. Soln. Exp. Date
0	0.1		DIW - 6719	✓
20	19.6	(+/- 2)/ 0.4	A7303	1/19
100	101.2	(+/- 10)/ 1.2	A7303	↓
800	799	(+/- 80)/ 1	A7299	
Cal chk 10*	10.3	(+/- 1)/ 0.3	A7299	

[1]Record the calibrated reading.

[2]Calculate difference between calibrated reading and calibration std value. Calibrated reading must be within +/- the value shown.

Signature: Date: 7/18/18

SOVEREIGN CONSULTING INC.

Lab ID Number: 11021

Hach 2100Q Daily Calibration Log

Sampler/Calibrator: A. Roppoli Date: 7/30/18

Office: Rville Hach Serial #: 038158

Site Name: Pica Site Address:

Morning Calibration Start Time: 0500 End Time: 0510

Turbidity (NTU)				
Standard Value	Cal'd Reading[1]	ΔCal'd vs Std Value[2]	Cal. Soln. Lot #	Cal. Soln. Exp. Date
0	0.2		DIW - 6719	✓
20	19.9	(+/- 2)/ 0.01	A7303	1/19
100	100.7	(+/- 10)/ 0.7	A7303	↓
800	812	(+/- 80)/ 12	A7299	
Cal chk 10*	10.2	(+/- 1)/ 0.2	A7299	

[1]Record the calibrated reading.

[2]Calculate difference between calibrated reading and calibration std value. Calibrated reading must be within +/- the value shown.

Signature: Date: 7/30/18

APPENDIX B

LABORATORY DATA AND DATA VALIDATION REPORT

(Provided on CD)

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The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

EA Engineering

SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

RB577

SGS Job Number: FA55914

Sampling Date: 07/17/18

Report to:

EA Engineering
6712 Brooklawn Pkwy Suite 104
Syracuse, NY 13211
asmith@eaest.com; hwilliams@eaest.com;
tlamond@eaest.com; fdesantis@eaest.com
ATTN: Amanda Smith

Total number of pages in report: **661**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Caitlin Brice, M.S.
General Manager

Client Service contact: Ariel Hartney 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AK, AR, IA, KY, MA, MS, ND, NH, NV, OK, OR, UT, WA, WV

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EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

EA Engineering

Job No: FA55914

SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Project No: RB577

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA55914-1	07/17/18	11:40	ELAR	07/18/18	AQ	Ground Water	SB1-5
FA55914-2	07/17/18	13:50	ELAR	07/18/18	AQ	Ground Water	SB1-6
FA55914-3	07/17/18	08:30	ELAR	07/18/18	AQ	Ground Water	MW25-6A
FA55914-4	07/17/18	08:27	ELAR	07/18/18	AQ	Ground Water	MW25-6B
FA55914-5	07/17/18	11:10	ELAR	07/18/18	AQ	Ground Water	DM19-1
FA55914-6	07/17/18	10:50	ELAR	07/18/18	AQ	Ground Water	DM19-2
FA55914-7	07/17/18	09:23	ELAR	07/18/18	AQ	Ground Water	DM25-2
FA55914-8	07/17/18	10:05	ELAR	07/18/18	AQ	Ground Water	MW25-8
FA55914-9	07/17/18	14:00	ELAR	07/18/18	AQ	Field Blank Water	FB
FA55914-10	07/17/18	06:00	ELAR	07/18/18	AQ	Trip Blank Water	TB

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: EA Engineering **Job No:** FA55914

Site: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ **Report Date:** 7/31/2018 4:49:58

8 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) were collected on 07/17/2018 and were received at SGS North America Inc - Orlando on 07/18/2018 properly preserved, at 3 Deg. C and intact. These Samples received an SGS Orlando job number of FA55914. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Please refer to the QC Evaluation: DOD QSM5 Limits Summary Section for recoveries or RPDs exceeding control limits.

MS Volatiles By Method SW846 8260C

Matrix: AQ **Batch ID:** VI1685

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA55941-5MS, FA55941-5MSD were used as the QC samples indicated.

GC/LC Semi-volatiles By Method SW846 8330A

Matrix: AQ **Batch ID:** OP71008

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA55941-5MS, FA55941-5MSD were used as the QC samples indicated.

Metals Analysis By Method SW846 6020A

Matrix: AQ **Batch ID:** MP34080

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) FA55941-5DUP, FA55941-5MS, FA55941-5MSD, FA55941-5SDL were used as the QC samples for metals.

RPD(s) for Duplicate for Chromium, Copper, Iron, Lead, Thallium are outside control limits for sample MP34080-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Aluminum, Arsenic, Chromium, Copper, Iron, Lead, Thallium, Vanadium, Calcium, Magnesium, Potassium, Sodium are outside control limits for sample MP34080-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP34080-MB1 for Zinc: All associated samples with results >MDL "B" coded.

MP34080-MB1 for Copper: All associated samples with results >MDL "B" coded.

MP34080-SD1 for Calcium: Serial dilution indicates possible matrix interference.

MP34080-SD1 for Magnesium: Serial dilution indicates possible matrix interference.

MP34080-SD1 for Potassium: Serial dilution indicates possible matrix interference.

MP34080-SD1 for Sodium: Serial dilution indicates possible matrix interference.

FA55914-1 for Copper: Analyte detected in the associated MB.

FA55914-1 for Zinc: Analyte detected in the associated MB.

FA55914-2 for Copper: Analyte detected in the associated MB.

FA55914-2 for Zinc: Analyte detected in the associated MB.

FA55914-9 for Zinc: Analyte detected in the associated MB.

Metals Analysis By Method SW846 7470A

Matrix: AQ **Batch ID:** MP34053

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA55914-1DUP, FA55914-1MS, FA55914-1MSD, FA55914-1SDL were used as the QC samples for metals.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____

Kim Benham, Client Services (signature on file)

Summary of Hits

Job Number: FA55914
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/17/18

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA55914-1	**SB1-5**					
Aluminum		253	200	50	ug/l	SW846 6020A
Arsenic		0.43 J	2.0	1.0	ug/l	SW846 6020A
Barium		8.8	2.0	1.0	ug/l	SW846 6020A
Calcium		39300	200	100	ug/l	SW846 6020A
Chromium		1.6 J	2.0	1.0	ug/l	SW846 6020A
Cobalt		0.30 J	2.0	1.0	ug/l	SW846 6020A
Copper [a]		2.1 B	2.0	1.0	ug/l	SW846 6020A
Iron		1810	200	50	ug/l	SW846 6020A
Lead		7.5	2.0	1.0	ug/l	SW846 6020A
Magnesium		26700	200	50	ug/l	SW846 6020A
Manganese		33.0	2.0	1.0	ug/l	SW846 6020A
Nickel		2.3	2.0	1.0	ug/l	SW846 6020A
Potassium		2670	200	100	ug/l	SW846 6020A
Sodium		52500	500	250	ug/l	SW846 6020A
Vanadium		1.8 J	2.0	1.0	ug/l	SW846 6020A
Zinc [a]		24.6 B	4.0	2.0	ug/l	SW846 6020A
FA55914-2	**SB1-6**					
Aluminum		86.8 J	200	50	ug/l	SW846 6020A
Arsenic		0.22 J	2.0	1.0	ug/l	SW846 6020A
Barium		48.1	2.0	1.0	ug/l	SW846 6020A
Calcium		53500	2000	1000	ug/l	SW846 6020A
Chromium		0.40 J	2.0	1.0	ug/l	SW846 6020A
Cobalt		0.22 J	2.0	1.0	ug/l	SW846 6020A
Copper [a]		0.31 JB	2.0	1.0	ug/l	SW846 6020A
Iron		197 J	200	50	ug/l	SW846 6020A
Lead		0.37 J	2.0	1.0	ug/l	SW846 6020A
Magnesium		16100	200	50	ug/l	SW846 6020A
Manganese		29.2	2.0	1.0	ug/l	SW846 6020A
Nickel		0.67 J	2.0	1.0	ug/l	SW846 6020A
Potassium		2350	200	100	ug/l	SW846 6020A
Selenium		0.62 J	2.0	1.0	ug/l	SW846 6020A
Sodium		229000	2000	1000	ug/l	SW846 6020A
Vanadium		0.50 J	2.0	1.0	ug/l	SW846 6020A
Zinc [a]		5.8 B	4.0	2.0	ug/l	SW846 6020A
FA55914-3	**MW25-6A**					
Arsenic		4.1	2.0	1.0	ug/l	SW846 6020A

Summary of Hits

Job Number: FA55914
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/17/18

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA55914-4	**MW25-6B**					
Arsenic		0.25 J	2.0	1.0	ug/l	SW846 6020A
FA55914-5	**DM19-1**					
Vinyl Chloride		5.8	1.0	0.50	ug/l	SW846 8260C
FA55914-6	**DM19-2**					
Arsenic		140	2.0	1.0	ug/l	SW846 6020A
FA55914-7	**DM25-2**					
Vinyl Chloride		0.76 J	1.0	0.50	ug/l	SW846 8260C
FA55914-8	**MW25-8**					
Arsenic		26.3	2.0	1.0	ug/l	SW846 6020A
FA55914-9	**FB**					
Methylene Chloride		2.0 J	5.0	4.0	ug/l	SW846 8260C
Toluene		2.0	1.0	0.50	ug/l	SW846 8260C
Barium		20.6	2.0	1.0	ug/l	SW846 6020A
Calcium		36100	200	100	ug/l	SW846 6020A
Chromium		0.44 J	2.0	1.0	ug/l	SW846 6020A
Iron		66.2 J	200	50	ug/l	SW846 6020A
Magnesium		8540	200	50	ug/l	SW846 6020A
Manganese		2.8	2.0	1.0	ug/l	SW846 6020A
Nickel		0.29 J	2.0	1.0	ug/l	SW846 6020A
Potassium		941	200	100	ug/l	SW846 6020A
Sodium		11000	200	100	ug/l	SW846 6020A
Zinc [a]		7.7 B	4.0	2.0	ug/l	SW846 6020A
FA55914-10	**TB**					

No hits reported in this sample.

(a) Analyte detected in the associated MB.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB1-5		
Lab Sample ID:	FA55914-1	**Date Sampled:**	07/17/18
Matrix:	AQ - Ground Water	**Date Received:**	07/18/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56359.D	1	07/27/18 13:02	AJ	n/a	n/a	VI1685
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB1-5		
Lab Sample ID:	FA55914-1	**Date Sampled:**	07/17/18
Matrix:	AQ - Ground Water	**Date Received:**	07/18/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB1-5		
Lab Sample ID:	FA55914-1	**Date Sampled:**	07/17/18
Matrix:	AQ - Ground Water	**Date Received:**	07/18/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	101%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	99%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB1-5
Lab Sample ID: FA55914-1 **Date Sampled:** 07/17/18
Matrix: AQ - Ground Water **Date Received:** 07/18/18
Percent Solids: n/a
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	253	200	50	22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Antimony	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Arsenic	0.43 J	2.0	1.0	0.21	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Barium	8.8	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Calcium	39300	200	100	36	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Chromium	1.6 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cobalt	0.30 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Copper [a]	2.1 B	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Iron	1810	200	50	23	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Lead	7.5	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Magnesium	26700	200	50	19	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Manganese	33.0	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	07/23/18	07/23/18	JC	SW846 7470A [1]	SW846 7470A [3]
Nickel	2.3	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Potassium	2670	200	100	75	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Selenium	1.0 U	2.0	1.0	0.22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Sodium	52500	500	250	60	ug/l	5	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Vanadium	1.8 J	2.0	1.0	0.24	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Zinc [a]	24.6 B	4.0	2.0	1.7	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA15064
(2) Instrument QC Batch: MA15082
(3) Prep QC Batch: MP34053
(4) Prep QC Batch: MP34080

(a) Analyte detected in the associated MB.

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB1-6		
Lab Sample ID:	FA55914-2	**Date Sampled:**	07/17/18
Matrix:	AQ - Ground Water	**Date Received:**	07/18/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56360.D	1	07/27/18 13:26	AJ	n/a	n/a	VI1685
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB1-6		
Lab Sample ID:	FA55914-2	**Date Sampled:**	07/17/18
Matrix:	AQ - Ground Water	**Date Received:**	07/18/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB1-6		
Lab Sample ID:	FA55914-2	**Date Sampled:**	07/17/18
Matrix:	AQ - Ground Water	**Date Received:**	07/18/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB1-6		
Lab Sample ID:	FA55914-2	**Date Sampled:**	07/17/18
Matrix:	AQ - Ground Water	**Date Received:**	07/18/18
Method:	SW846 8330A SW846 3535A	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060357.D	1	07/24/18 21:17	WH	07/23/18 09:30	OP71008	GBB1754
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.094 U	0.19	0.094	0.075	ug/l	
121-82-4	RDX	0.094 U	0.19	0.094	0.075	ug/l	
99-65-0	1,3-Dinitrobenzene	0.094 U	0.19	0.094	0.075	ug/l	
606-20-2	2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
121-14-2	2,4-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
98-95-3	Nitrobenzene	0.094 U	0.19	0.094	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-08-1	m-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-99-0	p-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
479-45-8	Tetryl	0.094 U	0.19	0.094	0.075	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.094 U	0.19	0.094	0.093	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
78-11-5	PETN	0.94 U	1.9	0.94	0.47	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	88%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB1-6
Lab Sample ID: FA55914-2
Matrix: AQ - Ground Water
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Date Sampled: 07/17/18
Date Received: 07/18/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	86.8 J	200	50	22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Antimony	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Arsenic	0.22 J	2.0	1.0	0.21	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Barium	48.1	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Calcium	53500	2000	1000	360	ug/l	20	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Chromium	0.40 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cobalt	0.22 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Copper [a]	0.31 JB	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Iron	197 J	200	50	23	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Lead	0.37 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Magnesium	16100	200	50	19	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Manganese	29.2	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	07/23/18	07/23/18	JC	SW846 7470A [1]	SW846 7470A [3]
Nickel	0.67 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Potassium	2350	200	100	75	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Selenium	0.62 J	2.0	1.0	0.22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Sodium	229000	2000	1000	240	ug/l	20	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Vanadium	0.50 J	2.0	1.0	0.24	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Zinc [a]	5.8 B	4.0	2.0	1.7	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA15064
(2) Instrument QC Batch: MA15082
(3) Prep QC Batch: MP34053
(4) Prep QC Batch: MP34080

(a) Analyte detected in the associated MB.

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	MW25-6A		
Lab Sample ID:	FA55914-3	**Date Sampled:**	07/17/18
Matrix:	AQ - Ground Water	**Date Received:**	07/18/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56361.D	1	07/27/18 14:11	AJ	n/a	n/a	VI1685
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW25-6A		
Lab Sample ID:	FA55914-3	**Date Sampled:**	07/17/18
Matrix:	AQ - Ground Water	**Date Received:**	07/18/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	4.1	2.0	1.0	0.21	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA15082
(2) Prep QC Batch: MP34080

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	MW25-6B		
Lab Sample ID:	FA55914-4	**Date Sampled:**	07/17/18
Matrix:	AQ - Ground Water	**Date Received:**	07/18/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56362.D	1	07/27/18 14:35	AJ	n/a	n/a	VI1685
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW25-6B		
Lab Sample ID:	FA55914-4	**Date Sampled:**	07/17/18
Matrix:	AQ - Ground Water	**Date Received:**	07/18/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	0.25 J	2.0	1.0	0.21	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA15082
(2) Prep QC Batch: MP34080

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	DM19-1		
Lab Sample ID:	FA55914-5	**Date Sampled:**	07/17/18
Matrix:	AQ - Ground Water	**Date Received:**	07/18/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56363.D	1	07/27/18 14:59	AJ	n/a	n/a	VI1685
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
75-01-4	Vinyl Chloride	5.8	1.0	0.50	0.41	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		83-118%
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	95%		85-112%
460-00-4	4-Bromofluorobenzene	99%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DM19-2		
Lab Sample ID:	FA55914-6	**Date Sampled:**	07/17/18
Matrix:	AQ - Ground Water	**Date Received:**	07/18/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	140	2.0	1.0	0.21	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA15082
(2) Prep QC Batch: MP34080

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	DM25-2		
Lab Sample ID:	FA55914-7	**Date Sampled:**	07/17/18
Matrix:	AQ - Ground Water	**Date Received:**	07/18/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56364.D	1	07/27/18 15:23	AJ	n/a	n/a	VI1685
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
75-01-4	Vinyl Chloride	0.76	1.0	0.50	0.41	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW25-8		
Lab Sample ID:	FA55914-8	**Date Sampled:**	07/17/18
Matrix:	AQ - Ground Water	**Date Received:**	07/18/18
		Percent Solids:	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	26.3	2.0	1.0	0.21	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA15082
(2) Prep QC Batch: MP34080

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	FB		
Lab Sample ID:	FA55914-9	**Date Sampled:**	07/17/18
Matrix:	AQ - Field Blank Water	**Date Received:**	07/18/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56365.D	1	07/27/18 15:46	AJ	n/a	n/a	VI1685
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB		
Lab Sample ID:	FA55914-9	**Date Sampled:**	07/17/18
Matrix:	AQ - Field Blank Water	**Date Received:**	07/18/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	2.0	5.0	4.0	2.0	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	2.0	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB		
Lab Sample ID:	FA55914-9	**Date Sampled:**	07/17/18
Matrix:	AQ - Field Blank Water	**Date Received:**	07/18/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FB		
Lab Sample ID:	FA55914-9	**Date Sampled:**	07/17/18
Matrix:	AQ - Field Blank Water	**Date Received:**	07/18/18
Method:	SW846 8330A SW846 3535A	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060358.D	1	07/24/18 21:46	WH	07/23/18 09:30	OP71008	GBB1754
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.094 U	0.19	0.094	0.075	ug/l	
121-82-4	RDX	0.094 U	0.19	0.094	0.075	ug/l	
99-65-0	1,3-Dinitrobenzene	0.094 U	0.19	0.094	0.075	ug/l	
606-20-2	2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
121-14-2	2,4-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
98-95-3	Nitrobenzene	0.094 U	0.19	0.094	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-08-1	m-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-99-0	p-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
479-45-8	Tetryl	0.094 U	0.19	0.094	0.075	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.094 U	0.19	0.094	0.093	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
78-11-5	PETN	0.94 U	1.9	0.94	0.47	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	94%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: FB
Lab Sample ID: FA55914-9
Matrix: AQ - Field Blank Water
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Date Sampled: 07/17/18
Date Received: 07/18/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	50 U	200	50	22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Antimony	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Arsenic	1.0 U	2.0	1.0	0.21	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Barium	20.6	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Calcium	36100	200	100	36	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Chromium	0.44 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cobalt	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Copper	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Iron	66.2 J	200	50	23	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Lead	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Magnesium	8540	200	50	19	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Manganese	2.8	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	07/23/18	07/23/18	JC	SW846 7470A [1]	SW846 7470A [3]
Nickel	0.29 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Potassium	941	200	100	75	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Selenium	1.0 U	2.0	1.0	0.22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Sodium	11000	200	100	24	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Vanadium	1.0 U	2.0	1.0	0.24	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Zinc [a]	7.7 B	4.0	2.0	1.7	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA15064
(2) Instrument QC Batch: MA15082
(3) Prep QC Batch: MP34053
(4) Prep QC Batch: MP34080

(a) Analyte detected in the associated MB.

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	TB		
Lab Sample ID:	FA55914-10	**Date Sampled:**	07/17/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	07/18/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56366.D	1	07/27/18 16:10	AJ	n/a	n/a	VI1685
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB		
Lab Sample ID:	FA55914-10	**Date Sampled:**	07/17/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	07/18/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB		
Lab Sample ID:	FA55914-10	**Date Sampled:**	07/17/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	07/18/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	99%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5 Limits

ACCUTEST LABORATORIES

CHAIN OF CUSTODY FLA.

PAGE 1 OF 1

FA55914

www.accutest.com

FED-EX Tracking # | Bottle Order Control #

Accutest Quote # | Accutest Job #

Client / Reporting Information

Company Name: EA. Science & Technology
Street Address: 6712 Brooklawn Prkway Suite 104
City State Zip: Syracuse, NY 13211
Project Contact: Frank DeSantis Jr | E-mail:
Phone #: 315 - 565 - 6554 | Fax #:
Sampler(s) Name(s): Doug Thompson and Aaron Roppoli | Phone #:

Project Information

Project Name: Picatinny Arsenal
Street: Rte. 15, Picatinny Arsenal
City State:
Project #: RB577
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Waste Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	H3PO4	Explosives by EPA 8330A	VOCs by EPA 8260B	Vinyl Chloride by EPA 8260B	Arsenic by EPA 6020	Alkalinity by SM2320B	Nitrate/Nitrite by 300.0	Dissolved Gases by RSK-175	Dissolved Iron by EPA 6020	Total Metals by EPA 6020	Dissolved Metals by EPA 6020	Total Iron by 6020	LAB USE ONLY
1	SB1-5		7/17/18	1140	EL/AR	GW	4	X		X							X							X			
2	SB1-6			1350	EL/AR		6	X		X		X				X	X							X			
3	MW25-6A			0830	EL/AR		4	X		X								X	X							
4	MW25-6B			0827	EL/AR		4	X		X								X	X							
5	DM19-1			1110	EL/AR		3	X										X								
6	DM19-2			1050	EL/AR		1			X									X							
7	DM25-2			0923	EL/AR		3	X										X								
8	MW25-8			1005	EL/AR		1			X									X							
9	FB			1400	EL/AR	FB	6	X		X		X				X	X	X						X			
10	TB		7/17/18	0600	EL/AR	TB	2	X									X										

Turnaround Time (Business days)

- Std. 10 Business Days
- 5 Day RUSH
- 3 Day RUSH
- 2 Day RUSH
- 1 Day RUSH
- other

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- Commercial "A" (Level 1)
- Commercial "B" (Level 2)
- FULLT1 (Level 3+4)
- NJ Reduced
- Commercial "C"
- NJ Data of Known Quality Protocol Reporting
- NYASP Category A
- NYASP Category B
- State Forms
- EDD Format
- Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

SHIP ALL SAMPLES TO ORLANDO, FL LAB.

collected by: (SCI - Sovereign Consulting)

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		7/17/18 1615			7-17-18 1642	Fed Ex
2						
3	Fed Ex		07/18/18 915			
4						
5						

Custody Seal # | Intact | Not Intact | Preserved where applicable | On Ice | Cooler Temp 3.0

SGS Sample Receipt Summary

Job Number: FA55914 **Client:** EA. SCIENCE & TECH **Project:** PICATINNY ARSENAL

Date / Time Received: 7/18/2018 9:15:00 AM **Delivery Method:** FEDEX **Airbill #'s:** 1001891722560003281100563393520065

Therm ID: IR 1; **Therm CF:** 0.1; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (2.9);

Cooler Temps (Corrected) °C: Cooler 1: (3.0);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☑		☐	☐
2. Trip Blank listed on COC	☑		☐	☐

	W	or	S	N/A
3. Type Of TB Received	☑		☐	☐

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☑	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: SHAYLAP Date: 7/18/2018 9:15:00 AM Reviewer: _____ Date: _____

FA55914: Chain of Custody
Page 2 of 2

QC Evaluation: DOD QSM5 Limits

Job Number: FA55914
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/17/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VI1685	SW846 8260C						
VI1685-BS	67-64-1	Acetone	BSP	REC	96	%	39-160
VI1685-BS	71-43-2	Benzene	BSP	REC	102	%	79-120
VI1685-BS	108-86-1	Bromobenzene	BSP	REC	100	%	80-120
VI1685-BS	74-97-5	Bromochloromethane	BSP	REC	102	%	78-123
VI1685-BS	75-27-4	Bromodichloromethane	BSP	REC	103	%	79-125
VI1685-BS	75-25-2	Bromoform	BSP	REC	95	%	66-130
VI1685-BS	78-93-3	2-Butanone (MEK)	BSP	REC	98	%	56-143
VI1685-BS	104-51-8	n-Butylbenzene	BSP	REC	111	%	75-128
VI1685-BS	135-98-8	sec-Butylbenzene	BSP	REC	106	%	77-126
VI1685-BS	98-06-6	tert-Butylbenzene	BSP	REC	103	%	78-124
VI1685-BS	75-15-0	Carbon Disulfide	BSP	REC	111	%	64-133
VI1685-BS	56-23-5	Carbon Tetrachloride	BSP	REC	101	%	72-136
VI1685-BS	108-90-7	Chlorobenzene	BSP	REC	99	%	82-118
VI1685-BS	75-00-3	Chloroethane	BSP	REC	93	%	60-138
VI1685-BS	67-66-3	Chloroform	BSP	REC	101	%	79-124
VI1685-BS	95-49-8	o-Chlorotoluene	BSP	REC	102	%	79-122
VI1685-BS	106-43-4	p-Chlorotoluene	BSP	REC	102	%	78-122
VI1685-BS	124-48-1	Dibromochloromethane	BSP	REC	103	%	74-126
VI1685-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	93	%	62-128
VI1685-BS	106-93-4	1,2-Dibromoethane	BSP	REC	102	%	77-121
VI1685-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	106	%	32-152
VI1685-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	100	%	80-119
VI1685-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	102	%	80-119
VI1685-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	97	%	79-118
VI1685-BS	75-34-3	1,1-Dichloroethane	BSP	REC	106	%	77-125
VI1685-BS	107-06-2	1,2-Dichloroethane	BSP	REC	98	%	73-128
VI1685-BS	75-35-4	1,1-Dichloroethylene	BSP	REC	107	%	71-131
VI1685-BS	156-59-2	cis-1,2-Dichloroethylene	BSP	REC	104	%	78-123
VI1685-BS	156-60-5	trans-1,2-Dichloroethylene	BSP	REC	106	%	75-124
VI1685-BS	78-87-5	1,2-Dichloropropane	BSP	REC	104	%	78-122
VI1685-BS	142-28-9	1,3-Dichloropropane	BSP	REC	97	%	80-119
VI1685-BS	594-20-7	2,2-Dichloropropane	BSP	REC	117	%	60-139
VI1685-BS	563-58-6	1,1-Dichloropropene	BSP	REC	108	%	79-125
VI1685-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	96	%	75-124
VI1685-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	102	%	73-127
VI1685-BS	100-41-4	Ethylbenzene	BSP	REC	103	%	79-121
VI1685-BS	87-68-3	Hexachlorobutadiene	BSP	REC	108	%	66-134
VI1685-BS	591-78-6	2-Hexanone	BSP	REC	98	%	57-139
VI1685-BS	98-82-8	Isopropylbenzene	BSP	REC	111	%	72-131
VI1685-BS	99-87-6	p-Isopropyltoluene	BSP	REC	107	%	77-127
VI1685-BS	74-83-9	Methyl Bromide	BSP	REC	99	%	53-141
VI1685-BS	74-87-3	Methyl Chloride	BSP	REC	92	%	50-139

* Sample used for QC is not from job FA55914

QC Evaluation: DOD QSM5 Limits

Job Number: FA55914
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/17/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VI1685-BS	74-88-4	Methyl Iodide	BSP	REC	98	%	69-131
VI1685-BS	74-95-3	Methylene Bromide	BSP	REC	102	%	79-123
VI1685-BS	75-09-2	Methylene Chloride	BSP	REC	104	%	74-124
VI1685-BS	108-10-1	4-Methyl-2-pentanone (MIBK)	BSP	REC	98	%	67-130
VI1685-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	100	%	71-124
VI1685-BS	91-20-3	Naphthalene	BSP	REC	96	%	61-128
VI1685-BS	103-65-1	n-Propylbenzene	BSP	REC	104	%	76-126
VI1685-BS	100-42-5	Styrene	BSP	REC	106	%	78-123
VI1685-BS	630-20-6	1,1,1,2-Tetrachloroethane	BSP	REC	99	%	78-124
VI1685-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	102	%	71-121
VI1685-BS	127-18-4	Tetrachloroethylene	BSP	REC	104	%	74-129
VI1685-BS	108-88-3	Toluene	BSP	REC	101	%	80-121
VI1685-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	103	%	69-129
VI1685-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	103	%	69-130
VI1685-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	102	%	74-131
VI1685-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	102	%	80-119
VI1685-BS	79-01-6	Trichloroethylene	BSP	REC	103	%	79-123
VI1685-BS	75-69-4	Trichlorofluoromethane	BSP	REC	106	%	65-141
VI1685-BS	96-18-4	1,2,3-Trichloropropane	BSP	REC	98	%	73-122
VI1685-BS	95-63-6	1,2,4-Trimethylbenzene	BSP	REC	102	%	76-124
VI1685-BS	108-67-8	1,3,5-Trimethylbenzene	BSP	REC	106	%	75-124
VI1685-BS	108-05-4	Vinyl Acetate	BSP	REC	95	%	54-146
VI1685-BS	75-01-4	Vinyl Chloride	BSP	REC	101	%	58-137
VI1685-BS		m,p-Xylene	BSP	REC	104	%	80-121
VI1685-BS	95-47-6	o-Xylene	BSP	REC	104	%	78-122
VI1685-BS	1330-20-7	Xylene (total)	BSP	REC	104	%	79-121
VI1685-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	101	%	80-119
VI1685-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	101	%	81-118
VI1685-BS	2037-26-5	Toluene-D8	BSP	SURR	100	%	89-112
VI1685-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	100	%	85-114
FA55941-5MS*	67-64-1	Acetone	MS	REC	86	%	39-160
FA55941-5MS*	71-43-2	Benzene	MS	REC	98	%	79-120
FA55941-5MS*	108-86-1	Bromobenzene	MS	REC	98	%	80-120
FA55941-5MS*	74-97-5	Bromochloromethane	MS	REC	100	%	78-123
FA55941-5MS*	75-27-4	Bromodichloromethane	MS	REC	98	%	79-125
FA55941-5MS*	75-25-2	Bromoform	MS	REC	82	%	66-130
FA55941-5MS*	78-93-3	2-Butanone (MEK)	MS	REC	91	%	56-143
FA55941-5MS*	104-51-8	n-Butylbenzene	MS	REC	104	%	75-128
FA55941-5MS*	135-98-8	sec-Butylbenzene	MS	REC	102	%	77-126
FA55941-5MS*	98-06-6	tert-Butylbenzene	MS	REC	98	%	78-124
FA55941-5MS*	75-15-0	Carbon Disulfide	MS	REC	90	%	64-133
FA55941-5MS*	56-23-5	Carbon Tetrachloride	MS	REC	95	%	72-136
FA55941-5MS*	108-90-7	Chlorobenzene	MS	REC	96	%	82-118
FA55941-5MS*	75-00-3	Chloroethane	MS	REC	90	%	60-138
FA55941-5MS*	67-66-3	Chloroform	MS	REC	96	%	79-124

* Sample used for QC is not from job FA55914

QC Evaluation: DOD QSM5 Limits

Job Number: FA55914
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/17/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA55941-5MS*	95-49-8	o-Chlorotoluene	MS	REC	99	%	79-122
FA55941-5MS*	106-43-4	p-Chlorotoluene	MS	REC	99	%	78-122
FA55941-5MS*	124-48-1	Dibromochloromethane	MS	REC	94	%	74-126
FA55941-5MS*	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	85	%	62-128
FA55941-5MS*	106-93-4	1,2-Dibromoethane	MS	REC	96	%	77-121
FA55941-5MS*	75-71-8	Dichlorodifluoromethane	MS	REC	102	%	32-152
FA55941-5MS*	95-50-1	1,2-Dichlorobenzene	MS	REC	95	%	80-119
FA55941-5MS*	541-73-1	1,3-Dichlorobenzene	MS	REC	98	%	80-119
FA55941-5MS*	106-46-7	1,4-Dichlorobenzene	MS	REC	94	%	79-118
FA55941-5MS*	75-34-3	1,1-Dichloroethane	MS	REC	103	%	77-125
FA55941-5MS*	107-06-2	1,2-Dichloroethane	MS	REC	95	%	73-128
FA55941-5MS*	75-35-4	1,1-Dichloroethylene	MS	REC	104	%	71-131
FA55941-5MS*	156-59-2	cis-1,2-Dichloroethylene	MS	REC	98	%	78-123
FA55941-5MS*	156-60-5	trans-1,2-Dichloroethylene	MS	REC	101	%	75-124
FA55941-5MS*	78-87-5	1,2-Dichloropropane	MS	REC	101	%	78-122
FA55941-5MS*	142-28-9	1,3-Dichloropropane	MS	REC	93	%	80-119
FA55941-5MS*	594-20-7	2,2-Dichloropropane	MS	REC	106	%	60-139
FA55941-5MS*	563-58-6	1,1-Dichloropropene	MS	REC	102	%	79-125
FA55941-5MS*	10061-01-5	cis-1,3-Dichloropropene	MS	REC	83	%	75-124
FA55941-5MS*	10061-02-6	trans-1,3-Dichloropropene	MS	REC	101	%	73-127
FA55941-5MS*	100-41-4	Ethylbenzene	MS	REC	98	%	79-121
FA55941-5MS*	87-68-3	Hexachlorobutadiene	MS	REC	101	%	66-134
FA55941-5MS*	591-78-6	2-Hexanone	MS	REC	94	%	57-139
FA55941-5MS*	98-82-8	Isopropylbenzene	MS	REC	106	%	72-131
FA55941-5MS*	99-87-6	p-Isopropyltoluene	MS	REC	103	%	77-127
FA55941-5MS*	74-83-9	Methyl Bromide	MS	REC	92	%	53-141
FA55941-5MS*	74-87-3	Methyl Chloride	MS	REC	92	%	50-139
FA55941-5MS*	74-88-4	Methyl Iodide	MS	REC	94	%	69-131
FA55941-5MS*	74-95-3	Methylene Bromide	MS	REC	98	%	79-123
FA55941-5MS*	75-09-2	Methylene Chloride	MS	REC	104	%	74-124
FA55941-5MS*	108-10-1	4-Methyl-2-pentanone (MIBK)	MS	REC	96	%	67-130
FA55941-5MS*	1634-04-4	Methyl Tert Butyl Ether	MS	REC	92	%	71-124
FA55941-5MS*	91-20-3	Naphthalene	MS	REC	90	%	61-128
FA55941-5MS*	103-65-1	n-Propylbenzene	MS	REC	100	%	76-126
FA55941-5MS*	100-42-5	Styrene	MS	REC	101	%	78-123
FA55941-5MS*	630-20-6	1,1,1,2-Tetrachloroethane	MS	REC	94	%	78-124
FA55941-5MS*	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	100	%	71-121
FA55941-5MS*	127-18-4	Tetrachloroethylene	MS	REC	97	%	74-129
FA55941-5MS*	108-88-3	Toluene	MS	REC	98	%	80-121
FA55941-5MS*	87-61-6	1,2,3-Trichlorobenzene	MS	REC	96	%	69-129
FA55941-5MS*	120-82-1	1,2,4-Trichlorobenzene	MS	REC	96	%	69-130
FA55941-5MS*	71-55-6	1,1,1-Trichloroethane	MS	REC	98	%	74-131
FA55941-5MS*	79-00-5	1,1,2-Trichloroethane	MS	REC	100	%	80-119
FA55941-5MS*	79-01-6	Trichloroethylene	MS	REC	101	%	79-123
FA55941-5MS*	75-69-4	Trichlorofluoromethane	MS	REC	107	%	65-141

* Sample used for QC is not from job FA55914

QC Evaluation: DOD QSM5 Limits

Job Number: FA55914
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/17/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA55941-5MS*	96-18-4	1,2,3-Trichloropropane	MS	REC	96	%	73-122
FA55941-5MS*	95-63-6	1,2,4-Trimethylbenzene	MS	REC	97	%	76-124
FA55941-5MS*	108-67-8	1,3,5-Trimethylbenzene	MS	REC	101	%	75-124
FA55941-5MS*	108-05-4	Vinyl Acetate	MS	REC	90	%	54-146
FA55941-5MS*	75-01-4	Vinyl Chloride	MS	REC	91	%	58-137
FA55941-5MS*		m,p-Xylene	MS	REC	101	%	80-121
FA55941-5MS*	95-47-6	o-Xylene	MS	REC	99	%	78-122
FA55941-5MS*	1330-20-7	Xylene (total)	MS	REC	100	%	79-121
FA55941-5MS*	1868-53-7	Dibromofluoromethane	MS	SURR	101	%	80-119
FA55941-5MS*	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	101	%	81-118
FA55941-5MS*	2037-26-5	Toluene-D8	MS	SURR	99	%	89-112
FA55941-5MS*	460-00-4	4-Bromofluorobenzene	MS	SURR	100	%	85-114
FA55941-5MSD*	67-64-1	Acetone	MSD	REC	90	%	39-160
FA55941-5MSD*	67-64-1	Acetone	MSD	RPD	5	%	20
FA55941-5MSD*	71-43-2	Benzene	MSD	REC	101	%	79-120
FA55941-5MSD*	71-43-2	Benzene	MSD	RPD	3	%	20
FA55941-5MSD*	108-86-1	Bromobenzene	MSD	REC	100	%	80-120
FA55941-5MSD*	108-86-1	Bromobenzene	MSD	RPD	2	%	20
FA55941-5MSD*	74-97-5	Bromochloromethane	MSD	REC	102	%	78-123
FA55941-5MSD*	74-97-5	Bromochloromethane	MSD	RPD	2	%	20
FA55941-5MSD*	75-27-4	Bromodichloromethane	MSD	REC	100	%	79-125
FA55941-5MSD*	75-27-4	Bromodichloromethane	MSD	RPD	2	%	20
FA55941-5MSD*	75-25-2	Bromoform	MSD	REC	86	%	66-130
FA55941-5MSD*	75-25-2	Bromoform	MSD	RPD	4	%	20
FA55941-5MSD*	78-93-3	2-Butanone (MEK)	MSD	REC	96	%	56-143
FA55941-5MSD*	78-93-3	2-Butanone (MEK)	MSD	RPD	5	%	20
FA55941-5MSD*	104-51-8	n-Butylbenzene	MSD	REC	108	%	75-128
FA55941-5MSD*	104-51-8	n-Butylbenzene	MSD	RPD	3	%	20
FA55941-5MSD*	135-98-8	sec-Butylbenzene	MSD	REC	104	%	77-126
FA55941-5MSD*	135-98-8	sec-Butylbenzene	MSD	RPD	2	%	20
FA55941-5MSD*	98-06-6	tert-Butylbenzene	MSD	REC	102	%	78-124
FA55941-5MSD*	98-06-6	tert-Butylbenzene	MSD	RPD	4	%	20
FA55941-5MSD*	75-15-0	Carbon Disulfide	MSD	REC	93	%	64-133
FA55941-5MSD*	75-15-0	Carbon Disulfide	MSD	RPD	4	%	20
FA55941-5MSD*	56-23-5	Carbon Tetrachloride	MSD	REC	98	%	72-136
FA55941-5MSD*	56-23-5	Carbon Tetrachloride	MSD	RPD	2	%	20
FA55941-5MSD*	108-90-7	Chlorobenzene	MSD	REC	98	%	82-118
FA55941-5MSD*	108-90-7	Chlorobenzene	MSD	RPD	2	%	20
FA55941-5MSD*	75-00-3	Chloroethane	MSD	REC	94	%	60-138
FA55941-5MSD*	75-00-3	Chloroethane	MSD	RPD	3	%	20
FA55941-5MSD*	67-66-3	Chloroform	MSD	REC	98	%	79-124
FA55941-5MSD*	67-66-3	Chloroform	MSD	RPD	2	%	20
FA55941-5MSD*	95-49-8	o-Chlorotoluene	MSD	REC	102	%	79-122
FA55941-5MSD*	95-49-8	o-Chlorotoluene	MSD	RPD	3	%	20
FA55941-5MSD*	106-43-4	p-Chlorotoluene	MSD	REC	102	%	78-122

* Sample used for QC is not from job FA55914

QC Evaluation: DOD QSM5 Limits

Job Number: FA55914
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/17/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA55941-5MSD*	106-43-4	p-Chlorotoluene	MSD	RPD	3	%	20
FA55941-5MSD*	124-48-1	Dibromochloromethane	MSD	REC	98	%	74-126
FA55941-5MSD*	124-48-1	Dibromochloromethane	MSD	RPD	3	%	20
FA55941-5MSD*	96-12-8	1,2-Dibromo-3-chloropropane	MSD	REC	88	%	62-128
FA55941-5MSD*	96-12-8	1,2-Dibromo-3-chloropropane	MSD	RPD	4	%	20
FA55941-5MSD*	106-93-4	1,2-Dibromoethane	MSD	REC	100	%	77-121
FA55941-5MSD*	106-93-4	1,2-Dibromoethane	MSD	RPD	4	%	20
FA55941-5MSD*	75-71-8	Dichlorodifluoromethane	MSD	REC	104	%	32-152
FA55941-5MSD*	75-71-8	Dichlorodifluoromethane	MSD	RPD	2	%	20
FA55941-5MSD*	95-50-1	1,2-Dichlorobenzene	MSD	REC	98	%	80-119
FA55941-5MSD*	95-50-1	1,2-Dichlorobenzene	MSD	RPD	3	%	20
FA55941-5MSD*	541-73-1	1,3-Dichlorobenzene	MSD	REC	101	%	80-119
FA55941-5MSD*	541-73-1	1,3-Dichlorobenzene	MSD	RPD	2	%	20
FA55941-5MSD*	106-46-7	1,4-Dichlorobenzene	MSD	REC	97	%	79-118
FA55941-5MSD*	106-46-7	1,4-Dichlorobenzene	MSD	RPD	3	%	20
FA55941-5MSD*	75-34-3	1,1-Dichloroethane	MSD	REC	106	%	77-125
FA55941-5MSD*	75-34-3	1,1-Dichloroethane	MSD	RPD	3	%	20
FA55941-5MSD*	107-06-2	1,2-Dichloroethane	MSD	REC	99	%	73-128
FA55941-5MSD*	107-06-2	1,2-Dichloroethane	MSD	RPD	4	%	20
FA55941-5MSD*	75-35-4	1,1-Dichloroethylene	MSD	REC	107	%	71-131
FA55941-5MSD*	75-35-4	1,1-Dichloroethylene	MSD	RPD	3	%	20
FA55941-5MSD*	156-59-2	cis-1,2-Dichloroethylene	MSD	REC	102	%	78-123
FA55941-5MSD*	156-59-2	cis-1,2-Dichloroethylene	MSD	RPD	4	%	20
FA55941-5MSD*	156-60-5	trans-1,2-Dichloroethylene	MSD	REC	106	%	75-124
FA55941-5MSD*	156-60-5	trans-1,2-Dichloroethylene	MSD	RPD	4	%	20
FA55941-5MSD*	78-87-5	1,2-Dichloropropane	MSD	REC	104	%	78-122
FA55941-5MSD*	78-87-5	1,2-Dichloropropane	MSD	RPD	2	%	20
FA55941-5MSD*	142-28-9	1,3-Dichloropropane	MSD	REC	97	%	80-119
FA55941-5MSD*	142-28-9	1,3-Dichloropropane	MSD	RPD	4	%	20
FA55941-5MSD*	594-20-7	2,2-Dichloropropane	MSD	REC	113	%	60-139
FA55941-5MSD*	594-20-7	2,2-Dichloropropane	MSD	RPD	6	%	20
FA55941-5MSD*	563-58-6	1,1-Dichloropropene	MSD	REC	106	%	79-125
FA55941-5MSD*	563-58-6	1,1-Dichloropropene	MSD	RPD	3	%	20
FA55941-5MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	86	%	75-124
FA55941-5MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	4	%	20
FA55941-5MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	108	%	73-127
FA55941-5MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	6	%	20
FA55941-5MSD*	100-41-4	Ethylbenzene	MSD	REC	101	%	79-121
FA55941-5MSD*	100-41-4	Ethylbenzene	MSD	RPD	3	%	20
FA55941-5MSD*	87-68-3	Hexachlorobutadiene	MSD	REC	106	%	66-134
FA55941-5MSD*	87-68-3	Hexachlorobutadiene	MSD	RPD	5	%	20
FA55941-5MSD*	591-78-6	2-Hexanone	MSD	REC	99	%	57-139
FA55941-5MSD*	591-78-6	2-Hexanone	MSD	RPD	6	%	20
FA55941-5MSD*	98-82-8	Isopropylbenzene	MSD	REC	110	%	72-131
FA55941-5MSD*	98-82-8	Isopropylbenzene	MSD	RPD	4	%	20

* Sample used for QC is not from job FA55914

QC Evaluation: DOD QSM5 Limits

Job Number: FA55914
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/17/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA55941-5MSD*	99-87-6	p-Isopropyltoluene	MSD	REC	106	%	77-127
FA55941-5MSD*	99-87-6	p-Isopropyltoluene	MSD	RPD	3	%	20
FA55941-5MSD*	74-83-9	Methyl Bromide	MSD	REC	94	%	53-141
FA55941-5MSD*	74-83-9	Methyl Bromide	MSD	RPD	2	%	20
FA55941-5MSD*	74-87-3	Methyl Chloride	MSD	REC	92	%	50-139
FA55941-5MSD*	74-87-3	Methyl Chloride	MSD	RPD	0	%	20
FA55941-5MSD*	74-88-4	Methyl Iodide	MSD	REC	98	%	69-131
FA55941-5MSD*	74-88-4	Methyl Iodide	MSD	RPD	5	%	20
FA55941-5MSD*	74-95-3	Methylene Bromide	MSD	REC	101	%	79-123
FA55941-5MSD*	74-95-3	Methylene Bromide	MSD	RPD	2	%	20
FA55941-5MSD*	75-09-2	Methylene Chloride	MSD	REC	105	%	74-124
FA55941-5MSD*	75-09-2	Methylene Chloride	MSD	RPD	2	%	20
FA55941-5MSD*	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	REC	101	%	67-130
FA55941-5MSD*	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	RPD	5	%	20
FA55941-5MSD*	1634-04-4	Methyl Tert Butyl Ether	MSD	REC	98	%	71-124
FA55941-5MSD*	1634-04-4	Methyl Tert Butyl Ether	MSD	RPD	6	%	20
FA55941-5MSD*	91-20-3	Naphthalene	MSD	REC	94	%	61-128
FA55941-5MSD*	91-20-3	Naphthalene	MSD	RPD	5	%	20
FA55941-5MSD*	103-65-1	n-Propylbenzene	MSD	REC	103	%	76-126
FA55941-5MSD*	103-65-1	n-Propylbenzene	MSD	RPD	3	%	20
FA55941-5MSD*	100-42-5	Styrene	MSD	REC	104	%	78-123
FA55941-5MSD*	100-42-5	Styrene	MSD	RPD	3	%	20
FA55941-5MSD*	630-20-6	1,1,1,2-Tetrachloroethane	MSD	REC	96	%	78-124
FA55941-5MSD*	630-20-6	1,1,1,2-Tetrachloroethane	MSD	RPD	2	%	20
FA55941-5MSD*	79-34-5	1,1,2,2-Tetrachloroethane	MSD	REC	102	%	71-121
FA55941-5MSD*	79-34-5	1,1,2,2-Tetrachloroethane	MSD	RPD	2	%	20
FA55941-5MSD*	127-18-4	Tetrachloroethylene	MSD	REC	100	%	74-129
FA55941-5MSD*	127-18-4	Tetrachloroethylene	MSD	RPD	2	%	20
FA55941-5MSD*	108-88-3	Toluene	MSD	REC	100	%	80-121
FA55941-5MSD*	108-88-3	Toluene	MSD	RPD	3	%	20
FA55941-5MSD*	87-61-6	1,2,3-Trichlorobenzene	MSD	REC	100	%	69-129
FA55941-5MSD*	87-61-6	1,2,3-Trichlorobenzene	MSD	RPD	4	%	20
FA55941-5MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	99	%	69-130
FA55941-5MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	3	%	20
FA55941-5MSD*	71-55-6	1,1,1-Trichloroethane	MSD	REC	100	%	74-131
FA55941-5MSD*	71-55-6	1,1,1-Trichloroethane	MSD	RPD	3	%	20
FA55941-5MSD*	79-00-5	1,1,2-Trichloroethane	MSD	REC	102	%	80-119
FA55941-5MSD*	79-00-5	1,1,2-Trichloroethane	MSD	RPD	2	%	20
FA55941-5MSD*	79-01-6	Trichloroethylene	MSD	REC	103	%	79-123
FA55941-5MSD*	79-01-6	Trichloroethylene	MSD	RPD	2	%	20
FA55941-5MSD*	75-69-4	Trichlorofluoromethane	MSD	REC	108	%	65-141
FA55941-5MSD*	75-69-4	Trichlorofluoromethane	MSD	RPD	1	%	20
FA55941-5MSD*	96-18-4	1,2,3-Trichloropropane	MSD	REC	98	%	73-122
FA55941-5MSD*	96-18-4	1,2,3-Trichloropropane	MSD	RPD	2	%	20
FA55941-5MSD*	95-63-6	1,2,4-Trimethylbenzene	MSD	REC	100	%	76-124

* Sample used for QC is not from job FA55914

QC Evaluation: DOD QSM5 Limits

Job Number: FA55914
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/17/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA55941-5MSD*	95-63-6	1,2,4-Trimethylbenzene	MSD	RPD	2	%	20
FA55941-5MSD*	108-67-8	1,3,5-Trimethylbenzene	MSD	REC	104	%	75-124
FA55941-5MSD*	108-67-8	1,3,5-Trimethylbenzene	MSD	RPD	3	%	20
FA55941-5MSD*	108-05-4	Vinyl Acetate	MSD	REC	94	%	54-146
FA55941-5MSD*	108-05-4	Vinyl Acetate	MSD	RPD	4	%	20
FA55941-5MSD*	75-01-4	Vinyl Chloride	MSD	REC	94	%	58-137
FA55941-5MSD*	75-01-4	Vinyl Chloride	MSD	RPD	4	%	20
FA55941-5MSD*		m,p-Xylene	MSD	REC	103	%	80-121
FA55941-5MSD*		m,p-Xylene	MSD	RPD	3	%	20
FA55941-5MSD*	95-47-6	o-Xylene	MSD	REC	103	%	78-122
FA55941-5MSD*	95-47-6	o-Xylene	MSD	RPD	4	%	20
FA55941-5MSD*	1330-20-7	Xylene (total)	MSD	REC	103	%	79-121
FA55941-5MSD*	1330-20-7	Xylene (total)	MSD	RPD	3	%	20
FA55941-5MSD*	1868-53-7	Dibromofluoromethane	MSD	SURR	101	%	80-119
FA55941-5MSD*	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	101	%	81-118
FA55941-5MSD*	2037-26-5	Toluene-D8	MSD	SURR	99	%	89-112
FA55941-5MSD*	460-00-4	4-Bromofluorobenzene	MSD	SURR	99	%	85-114
VI1685-MB	1868-53-7	Dibromofluoromethane	MB	SURR	96	%	80-119
VI1685-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	100	%	81-118
VI1685-MB	2037-26-5	Toluene-D8	MB	SURR	99	%	89-112
VI1685-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	100	%	85-114
FA55914-1	1868-53-7	Dibromofluoromethane	SAMP	SURR	97	%	80-119
FA55914-1	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	101	%	81-118
FA55914-1	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
FA55914-1	460-00-4	4-Bromofluorobenzene	SAMP	SURR	99	%	85-114
FA55914-2	1868-53-7	Dibromofluoromethane	SAMP	SURR	97	%	80-119
FA55914-2	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	102	%	81-118
FA55914-2	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
FA55914-2	460-00-4	4-Bromofluorobenzene	SAMP	SURR	98	%	85-114
FA55914-3	1868-53-7	Dibromofluoromethane	SAMP	SURR	98	%	80-119
FA55914-3	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	102	%	81-118
FA55914-3	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA55914-3	460-00-4	4-Bromofluorobenzene	SAMP	SURR	98	%	85-114
FA55914-4	1868-53-7	Dibromofluoromethane	SAMP	SURR	98	%	80-119
FA55914-4	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	102	%	81-118
FA55914-4	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA55914-4	460-00-4	4-Bromofluorobenzene	SAMP	SURR	98	%	85-114
FA55914-5	1868-53-7	Dibromofluoromethane	SAMP	SURR	99	%	80-119
FA55914-5	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	102	%	81-118
FA55914-5	2037-26-5	Toluene-D8	SAMP	SURR	95	%	89-112
FA55914-5	460-00-4	4-Bromofluorobenzene	SAMP	SURR	99	%	85-114
FA55914-7	1868-53-7	Dibromofluoromethane	SAMP	SURR	98	%	80-119
FA55914-7	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
FA55914-7	2037-26-5	Toluene-D8	SAMP	SURR	96	%	89-112
FA55914-7	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114

* Sample used for QC is not from job FA55914

QC Evaluation: DOD QSM5 Limits

Job Number: FA55914
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/17/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA55914-9	1868-53-7	Dibromofluoromethane	SAMP	SURR	98	%	80-119
FA55914-9	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
FA55914-9	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA55914-9	460-00-4	4-Bromofluorobenzene	SAMP	SURR	98	%	85-114
FA55914-10	1868-53-7	Dibromofluoromethane	SAMP	SURR	99	%	80-119
FA55914-10	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
FA55914-10	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA55914-10	460-00-4	4-Bromofluorobenzene	SAMP	SURR	99	%	85-114
OP71008	SW846 8330A						
OP71008-BS	2691-41-0	HMX	BSP	REC	88	%	65-135
OP71008-BS	121-82-4	RDX	BSP	REC	98	%	68-130
OP71008-BS	99-65-0	1,3-Dinitrobenzene	BSP	REC	94	%	78-120
OP71008-BS	606-20-2	2,6-Dinitrotoluene	BSP	REC	102	%	77-127
OP71008-BS	121-14-2	2,4-Dinitrotoluene	BSP	REC	92	%	78-120
OP71008-BS	35572-78-2	2-amino-4,6-Dinitrotoluene	BSP	REC	86	%	79-120
OP71008-BS	19406-51-0	4-amino-2,6-Dinitrotoluene	BSP	REC	102	%	76-125
OP71008-BS	98-95-3	Nitrobenzene	BSP	REC	92	%	65-134
OP71008-BS	88-72-2	o-Nitrotoluene	BSP	REC	102	%	70-127
OP71008-BS	99-08-1	m-Nitrotoluene	BSP	REC	98	%	73-125
OP71008-BS	99-99-0	p-Nitrotoluene	BSP	REC	94	%	71-127
OP71008-BS	479-45-8	Tetryl	BSP	REC	104	%	64-128
OP71008-BS	99-35-4	1,3,5-Trinitrobenzene	BSP	REC	96	%	73-125
OP71008-BS	118-96-7	2,4,6-Trinitrotoluene	BSP	REC	108	%	71-123
OP71008-BS	78-11-5	PETN	BSP	REC	109	%	73-127
OP71008-MS*	2691-41-0	HMX	MS	REC	86	%	65-135
OP71008-MS*	121-82-4	RDX	MS	REC	96	%	68-130
OP71008-MS*	99-65-0	1,3-Dinitrobenzene	MS	REC	94	%	78-120
OP71008-MS*	606-20-2	2,6-Dinitrotoluene	MS	REC	102	%	77-127
OP71008-MS*	121-14-2	2,4-Dinitrotoluene	MS	REC	90	%	78-120
OP71008-MS*	35572-78-2	2-amino-4,6-Dinitrotoluene	MS	REC	83	%	79-120
OP71008-MS*	19406-51-0	4-amino-2,6-Dinitrotoluene	MS	REC	97	%	76-125
OP71008-MS*	98-95-3	Nitrobenzene	MS	REC	90	%	65-134
OP71008-MS*	88-72-2	o-Nitrotoluene	MS	REC	101	%	70-127
OP71008-MS*	99-08-1	m-Nitrotoluene	MS	REC	100	%	73-125
OP71008-MS*	99-99-0	p-Nitrotoluene	MS	REC	96	%	71-127
OP71008-MS*	479-45-8	Tetryl	MS	REC	82	%	64-128
OP71008-MS*	99-35-4	1,3,5-Trinitrobenzene	MS	REC	97	%	73-125
OP71008-MS*	118-96-7	2,4,6-Trinitrotoluene	MS	REC	110	%	71-123
OP71008-MS*	78-11-5	PETN	MS	REC	105	%	73-127
OP71008-MSD*	2691-41-0	HMX	MSD	REC	85	%	65-135
OP71008-MSD*	2691-41-0	HMX	MSD	RPD	1	%	30
OP71008-MSD*	121-82-4	RDX	MSD	REC	96	%	68-130
OP71008-MSD*	121-82-4	RDX	MSD	RPD	0	%	30

* Sample used for QC is not from job FA55914

QC Evaluation: DOD QSM5 Limits

Job Number: FA55914
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/17/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP71008-MSD*	99-65-0	1,3-Dinitrobenzene	MSD	REC	93	%	78-120
OP71008-MSD*	99-65-0	1,3-Dinitrobenzene	MSD	RPD	1	%	30
OP71008-MSD*	606-20-2	2,6-Dinitrotoluene	MSD	REC	99	%	77-127
OP71008-MSD*	606-20-2	2,6-Dinitrotoluene	MSD	RPD	3	%	30
OP71008-MSD*	121-14-2	2,4-Dinitrotoluene	MSD	REC	93	%	78-120
OP71008-MSD*	121-14-2	2,4-Dinitrotoluene	MSD	RPD	2	%	30
OP71008-MSD*	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	REC	85	%	79-120
OP71008-MSD*	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	RPD	2	%	30
OP71008-MSD*	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	REC	99	%	76-125
OP71008-MSD*	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	RPD	2	%	30
OP71008-MSD*	98-95-3	Nitrobenzene	MSD	REC	90	%	65-134
OP71008-MSD*	98-95-3	Nitrobenzene	MSD	RPD	0	%	30
OP71008-MSD*	88-72-2	o-Nitrotoluene	MSD	REC	101	%	70-127
OP71008-MSD*	88-72-2	o-Nitrotoluene	MSD	RPD	0	%	30
OP71008-MSD*	99-08-1	m-Nitrotoluene	MSD	REC	94	%	73-125
OP71008-MSD*	99-08-1	m-Nitrotoluene	MSD	RPD	6	%	30
OP71008-MSD*	99-99-0	p-Nitrotoluene	MSD	REC	92	%	71-127
OP71008-MSD*	99-99-0	p-Nitrotoluene	MSD	RPD	4	%	30
OP71008-MSD*	479-45-8	Tetryl	MSD	REC	83	%	64-128
OP71008-MSD*	479-45-8	Tetryl	MSD	RPD	1	%	30
OP71008-MSD*	99-35-4	1,3,5-Trinitrobenzene	MSD	REC	94	%	73-125
OP71008-MSD*	99-35-4	1,3,5-Trinitrobenzene	MSD	RPD	3	%	30
OP71008-MSD*	118-96-7	2,4,6-Trinitrotoluene	MSD	REC	103	%	71-123
OP71008-MSD*	118-96-7	2,4,6-Trinitrotoluene	MSD	RPD	7	%	30
OP71008-MSD*	78-11-5	PETN	MSD	REC	108	%	73-127
OP71008-MSD*	78-11-5	PETN	MSD	RPD	2	%	30
MP34053	SW846 7470A						
MP34053-B1	7439-97-6	Mercury	BSP	REC	96.7	%	82-119
MP34053-S1	7439-97-6	Mercury	MS	REC	96.7	%	82-119
MP34053-S2	7439-97-6	Mercury	MSD	REC	93.3	%	82-119
MP34053-S2	7439-97-6	Mercury	MSD	RPD	3.5	%	20
MP34053-D1	7439-97-6	Mercury	DUP	RPD	0	%	20
MP34080	SW846 6020A						
MP34080-B1	7429-90-5	Aluminum	BSP	REC	91	%	84-117
MP34080-B1	7440-36-0	Antimony	BSP	REC	104	%	85-117
MP34080-B1	7440-38-2	Arsenic	BSP	REC	108	%	84-116
MP34080-B1	7440-39-3	Barium	BSP	REC	104.5	%	86-114
MP34080-B1	7440-41-7	Beryllium	BSP	REC	109.5	%	83-121
MP34080-B1	7440-43-9	Cadmium	BSP	REC	106.5	%	87-115
MP34080-B1	7440-70-2	Calcium	BSP	REC	100.5	%	87-118
MP34080-B1	7440-47-3	Chromium	BSP	REC	109.5	%	85-116

* Sample used for QC is not from job FA55914

QC Evaluation: DOD QSM5 Limits

Job Number: FA55914
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/17/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP34080-B1	7440-48-4	Cobalt	BSP	REC	110	%	86-115
MP34080-B1	7440-50-8	Copper	BSP	REC	110	%	85-118
MP34080-B1	7439-89-6	Iron	BSP	REC	106.5	%	87-118
MP34080-B1	7439-92-1	Lead	BSP	REC	106	%	88-115
MP34080-B1	7439-95-4	Magnesium	BSP	REC	104.5	%	83-118
MP34080-B1	7439-96-5	Manganese	BSP	REC	105	%	87-115
MP34080-B1	7440-02-0	Nickel	BSP	REC	109.5	%	85-117
MP34080-B1	7440-09-7	Potassium	BSP	REC	100.5	%	87-115
MP34080-B1	7782-49-2	Selenium	BSP	REC	93	%	80-120
MP34080-B1	7440-22-4	Silver	BSP	REC	108	%	85-116
MP34080-B1	7440-23-5	Sodium	BSP	REC	105	%	85-117
MP34080-B1	7440-28-0	Thallium	BSP	REC	106.5	%	82-116
MP34080-B1	7440-62-2	Vanadium	BSP	REC	110	%	86-115
MP34080-B1	7440-66-6	Zinc	BSP	REC	101	%	83-119
MP34080-S1*	7429-90-5	Aluminum	MS	REC	85.4	%	84-117
MP34080-S1*	7440-36-0	Antimony	MS	REC	97.5	%	85-117
MP34080-S1*	7440-38-2	Arsenic	MS	REC	103	%	84-116
MP34080-S1*	7440-39-3	Barium	MS	REC	101.2	%	86-114
MP34080-S1*	7440-41-7	Beryllium	MS	REC	104.5	%	83-121
MP34080-S1*	7440-43-9	Cadmium	MS	REC	100	%	87-115
MP34080-S1*	7440-70-2	Calcium	MS	REC	94.5	%	87-118
MP34080-S1*	7440-47-3	Chromium	MS	REC	103.7	%	85-116
MP34080-S1*	7440-48-4	Cobalt	MS	REC	104	%	86-115
MP34080-S1*	7440-50-8	Copper	MS	REC	103.7	%	85-118
MP34080-S1*	7439-89-6	Iron	MS	REC	100.8	%	87-118
MP34080-S1*	7439-92-1	Lead	MS	REC	102.4	%	88-115
MP34080-S1*	7439-95-4	Magnesium	MS	REC	99.6	%	83-118
MP34080-S1*	7439-96-5	Manganese	MS	REC	99.5	%	87-115
MP34080-S1*	7440-02-0	Nickel	MS	REC	103.5	%	85-117
MP34080-S1*	7440-09-7	Potassium	MS	REC	95.6	%	87-115
MP34080-S1*	7782-49-2	Selenium	MS	REC	88.5	%	80-120
MP34080-S1*	7440-22-4	Silver	MS	REC	104	%	85-116
MP34080-S1*	7440-23-5	Sodium	MS	REC	100.2	%	85-117
MP34080-S1*	7440-28-0	Thallium	MS	REC	102.4	%	82-116
MP34080-S1*	7440-62-2	Vanadium	MS	REC	103.8	%	86-115
MP34080-S1*	7440-66-6	Zinc	MS	REC	93.6	%	83-119
MP34080-S2*	7429-90-5	Aluminum	MSD	REC	89.4	%	84-117
MP34080-S2*	7429-90-5	Aluminum	MSD	RPD	4.6	%	20
MP34080-S2*	7440-36-0	Antimony	MSD	REC	101.5	%	85-117
MP34080-S2*	7440-36-0	Antimony	MSD	RPD	4	%	20
MP34080-S2*	7440-38-2	Arsenic	MSD	REC	108	%	84-116
MP34080-S2*	7440-38-2	Arsenic	MSD	RPD	4.7	%	20
MP34080-S2*	7440-39-3	Barium	MSD	REC	107.7	%	86-114
MP34080-S2*	7440-39-3	Barium	MSD	RPD	6	%	20
MP34080-S2*	7440-41-7	Beryllium	MSD	REC	110.5	%	83-121

* Sample used for QC is not from job FA55914

QC Evaluation: DOD QSM5 Limits

Job Number: FA55914
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/17/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP34080-S2*	7440-41-7	Beryllium	MSD	RPD	5.6	%	20
MP34080-S2*	7440-43-9	Cadmium	MSD	REC	104	%	87-115
MP34080-S2*	7440-43-9	Cadmium	MSD	RPD	3.9	%	20
MP34080-S2*	7440-70-2	Calcium	MSD	REC	101	%	87-118
MP34080-S2*	7440-70-2	Calcium	MSD	RPD	3.3	%	20
MP34080-S2*	7440-47-3	Chromium	MSD	REC	110.2	%	85-116
MP34080-S2*	7440-47-3	Chromium	MSD	RPD	6.1	%	20
MP34080-S2*	7440-48-4	Cobalt	MSD	REC	110.5	%	86-115
MP34080-S2*	7440-48-4	Cobalt	MSD	RPD	6.1	%	20
MP34080-S2*	7440-50-8	Copper	MSD	REC	110.2	%	85-118
MP34080-S2*	7440-50-8	Copper	MSD	RPD	6.1	%	20
MP34080-S2*	7439-89-6	Iron	MSD	REC	106.3	%	87-118
MP34080-S2*	7439-89-6	Iron	MSD	RPD	5.3	%	20
MP34080-S2*	7439-92-1	Lead	MSD	REC	106.9	%	88-115
MP34080-S2*	7439-92-1	Lead	MSD	RPD	4.3	%	20
MP34080-S2*	7439-95-4	Magnesium	MSD	REC	106.6	%	83-118
MP34080-S2*	7439-95-4	Magnesium	MSD	RPD	5.4	%	20
MP34080-S2*	7439-96-5	Manganese	MSD	REC	105.5	%	87-115
MP34080-S2*	7439-96-5	Manganese	MSD	RPD	5.2	%	20
MP34080-S2*	7440-02-0	Nickel	MSD	REC	109	%	85-117
MP34080-S2*	7440-02-0	Nickel	MSD	RPD	5.2	%	20
MP34080-S2*	7440-09-7	Potassium	MSD	REC	103.1	%	87-115
MP34080-S2*	7440-09-7	Potassium	MSD	RPD	7	%	20
MP34080-S2*	7782-49-2	Selenium	MSD	REC	94	%	80-120
MP34080-S2*	7782-49-2	Selenium	MSD	RPD	6	%	20
MP34080-S2*	7440-22-4	Silver	MSD	REC	112	%	85-116
MP34080-S2*	7440-22-4	Silver	MSD	RPD	7.4	%	20
MP34080-S2*	7440-23-5	Sodium	MSD	REC	106.7	%	85-117
MP34080-S2*	7440-23-5	Sodium	MSD	RPD	5.3	%	20
MP34080-S2*	7440-28-0	Thallium	MSD	REC	108.4	%	82-116
MP34080-S2*	7440-28-0	Thallium	MSD	RPD	5.7	%	20
MP34080-S2*	7440-62-2	Vanadium	MSD	REC	108.8	%	86-115
MP34080-S2*	7440-62-2	Vanadium	MSD	RPD	4.7	%	20
MP34080-S2*	7440-66-6	Zinc	MSD	REC	98.1	%	83-119
MP34080-S2*	7440-66-6	Zinc	MSD	RPD	4.5	%	20
MP34080-D1*	7429-90-5	Aluminum	DUP	RPD	9.8	%	20
MP34080-D1*	7440-36-0	Antimony	DUP	RPD	0	%	20
MP34080-D1*	7440-38-2	Arsenic	DUP	RPD	0	%	20
MP34080-D1*	7440-39-3	Barium	DUP	RPD	1.3	%	20
MP34080-D1*	7440-41-7	Beryllium	DUP	RPD	0	%	20
MP34080-D1*	7440-43-9	Cadmium	DUP	RPD	0	%	20
MP34080-D1*	7440-70-2	Calcium	DUP	RPD	.5	%	20
MP34080-D1*	7440-47-3	Chromium	DUP	RPD	29.8 [a]	%	20
MP34080-D1*	7440-48-4	Cobalt	DUP	RPD	0	%	20
MP34080-D1*	7440-50-8	Copper	DUP	RPD	200 [a]	%	20

* Sample used for QC is not from job FA55914

QC Evaluation: DOD QSM5 Limits

Job Number: FA55914
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/17/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP34080-D1*	7439-89-6	Iron	DUP	RPD	200 [a]	%	20
MP34080-D1*	7439-92-1	Lead	DUP	RPD	200 [a]	%	20
MP34080-D1*	7439-95-4	Magnesium	DUP	RPD	.9	%	20
MP34080-D1*	7439-96-5	Manganese	DUP	RPD	.4	%	20
MP34080-D1*	7440-02-0	Nickel	DUP	RPD	0	%	20
MP34080-D1*	7440-09-7	Potassium	DUP	RPD	0	%	20
MP34080-D1*	7782-49-2	Selenium	DUP	RPD	0	%	20
MP34080-D1*	7440-22-4	Silver	DUP	RPD	0	%	20
MP34080-D1*	7440-23-5	Sodium	DUP	RPD	.5	%	20
MP34080-D1*	7440-28-0	Thallium	DUP	RPD	200 [a]	%	20
MP34080-D1*	7440-62-2	Vanadium	DUP	RPD	5.6	%	20
MP34080-D1*	7440-66-6	Zinc	DUP	RPD	0	%	20

(a) RPD acceptable due to low duplicate and sample concentrations.

* Sample used for QC is not from job FA55914

MS Volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1685-MB	I56358.D	1	07/27/18	AJ	n/a	n/a	VI1685

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55914-1, FA55914-2, FA55914-3, FA55914-4, FA55914-5, FA55914-7, FA55914-9, FA55914-10

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.37	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.23	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.24	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.31	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.31	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.24	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	

Method Blank Summary

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1685-MB	I56358.D	1	07/27/18	AJ	n/a	n/a	VI1685

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55914-1, FA55914-2, FA55914-3, FA55914-4, FA55914-5, FA55914-7, FA55914-9, FA55914-10

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	0.45	2.0	0.30	ug/l	J
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl Iodide	ND	1.0	0.27	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.37	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.29	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.27	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	2.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

Method Blank Summary

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1685-MB	I56358.D	1	07/27/18	AJ	n/a	n/a	VI1685

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55914-1, FA55914-2, FA55914-3, FA55914-4, FA55914-5, FA55914-7, FA55914-9, FA55914-10

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

Blank Spike Summary

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1685-BS	I56357.D	1	07/27/18	AJ	n/a	n/a	VI1685

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55914-1, FA55914-2, FA55914-3, FA55914-4, FA55914-5, FA55914-7, FA55914-9, FA55914-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	120	96	50-147
71-43-2	Benzene	25	25.4	102	81-122
108-86-1	Bromobenzene	25	25.1	100	80-121
74-97-5	Bromochloromethane	25	25.5	102	76-123
75-27-4	Bromodichloromethane	25	25.8	103	79-123
75-25-2	Bromoform	25	23.7	95	66-123
78-93-3	2-Butanone (MEK)	125	122	98	56-143
104-51-8	n-Butylbenzene	25	27.7	111	79-126
135-98-8	sec-Butylbenzene	25	26.6	106	83-133
98-06-6	tert-Butylbenzene	25	25.8	103	80-133
75-15-0	Carbon Disulfide	25	27.7	111	66-148
56-23-5	Carbon Tetrachloride	25	25.3	101	76-136
108-90-7	Chlorobenzene	25	24.7	99	82-124
75-00-3	Chloroethane	25	23.3	93	62-144
67-66-3	Chloroform	25	25.2	101	80-124
95-49-8	o-Chlorotoluene	25	25.6	102	81-127
106-43-4	p-Chlorotoluene	25	25.6	102	83-130
124-48-1	Dibromochloromethane	25	25.7	103	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	23.2	93	64-123
106-93-4	1,2-Dibromoethane	25	25.5	102	75-120
75-71-8	Dichlorodifluoromethane	25	26.5	106	42-167
95-50-1	1,2-Dichlorobenzene	25	24.9	100	82-124
541-73-1	1,3-Dichlorobenzene	25	25.6	102	84-125
106-46-7	1,4-Dichlorobenzene	25	24.3	97	78-120
75-34-3	1,1-Dichloroethane	25	26.6	106	81-122
107-06-2	1,2-Dichloroethane	25	24.6	98	75-125
75-35-4	1,1-Dichloroethylene	25	26.8	107	78-137
156-59-2	cis-1,2-Dichloroethylene	25	26.0	104	78-120
156-60-5	trans-1,2-Dichloroethylene	25	26.6	106	76-127
78-87-5	1,2-Dichloropropane	25	26.0	104	76-124
142-28-9	1,3-Dichloropropane	25	24.2	97	80-118
594-20-7	2,2-Dichloropropane	25	29.2	117	74-139
563-58-6	1,1-Dichloropropene	25	27.0	108	79-131
10061-01-5	cis-1,3-Dichloropropene	25	23.9	96	75-118
10061-02-6	trans-1,3-Dichloropropene	25	25.6	102	80-120
100-41-4	Ethylbenzene	25	25.7	103	81-121

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1685-BS	I56357.D	1	07/27/18	AJ	n/a	n/a	VI1685

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55914-1, FA55914-2, FA55914-3, FA55914-4, FA55914-5, FA55914-7, FA55914-9, FA55914-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
87-68-3	Hexachlorobutadiene	25	27.1	108	75-142
591-78-6	2-Hexanone	125	123	98	61-129
98-82-8	Isopropylbenzene	25	27.8	111	83-132
99-87-6	p-Isopropyltoluene	25	26.8	107	79-130
74-83-9	Methyl Bromide	25	24.8	99	59-143
74-87-3	Methyl Chloride	25	23.1	92	50-159
74-88-4	Methyl Iodide	25	24.5	98	73-123
74-95-3	Methylene Bromide	25	25.4	102	78-119
75-09-2	Methylene Chloride	25	25.9	104	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	123	98	66-122
1634-04-4	Methyl Tert Butyl Ether	25	25.1	100	72-117
91-20-3	Naphthalene	25	24.1	96	63-132
103-65-1	n-Propylbenzene	25	26.0	104	82-133
100-42-5	Styrene	25	26.6	106	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	24.8	99	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	25.5	102	72-120
127-18-4	Tetrachloroethylene	25	26.1	104	76-135
108-88-3	Toluene	25	25.3	101	80-120
87-61-6	1,2,3-Trichlorobenzene	25	25.7	103	68-131
120-82-1	1,2,4-Trichlorobenzene	25	25.8	103	73-129
71-55-6	1,1,1-Trichloroethane	25	25.6	102	75-130
79-00-5	1,1,2-Trichloroethane	25	25.4	102	76-119
79-01-6	Trichloroethylene	25	25.8	103	81-126
75-69-4	Trichlorofluoromethane	25	26.5	106	71-156
96-18-4	1,2,3-Trichloropropane	25	24.5	98	77-120
95-63-6	1,2,4-Trimethylbenzene	25	25.4	102	79-120
108-67-8	1,3,5-Trimethylbenzene	25	26.5	106	79-120
108-05-4	Vinyl Acetate	125	119	95	43-154
75-01-4	Vinyl Chloride	25	25.2	101	69-159
	m,p-Xylene	50	52.2	104	79-126
95-47-6	o-Xylene	25	26.1	104	80-127
1330-20-7	Xylene (total)	75	78.3	104	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1685-BS	I56357.D	1	07/27/18	AJ	n/a	n/a	VI1685

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55914-1, FA55914-2, FA55914-3, FA55914-4, FA55914-5, FA55914-7, FA55914-9, FA55914-10

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA55941-5MS	I56370.D	1	07/27/18	AJ	n/a	n/a	VI1685
FA55941-5MSD	I56371.D	1	07/27/18	AJ	n/a	n/a	VI1685
FA55941-5	I56367.D	1	07/27/18	AJ	n/a	n/a	VI1685

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55914-1, FA55914-2, FA55914-3, FA55914-4, FA55914-5, FA55914-7, FA55914-9, FA55914-10

CAS No.	Compound	FA55941-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25 U		125	107	86	125	113	90	5	50-147/21
71-43-2	Benzene	1.0 U		25	24.5	98	25	25.3	101	3	81-122/14
108-86-1	Bromobenzene	1.0 U		25	24.4	98	25	24.9	100	2	80-121/14
74-97-5	Bromochloromethane	1.0 U		25	25.1	100	25	25.5	102	2	76-123/14
75-27-4	Bromodichloromethane	1.0 U		25	24.4	98	25	25.0	100	2	79-123/19
75-25-2	Bromoform	1.0 U		25	20.5	82	25	21.4	86	4	66-123/21
78-93-3	2-Butanone (MEK)	5.0 U		125	114	91	125	120	96	5	56-143/18
104-51-8	n-Butylbenzene	1.0 U		25	26.1	104	25	26.9	108	3	79-126/16
135-98-8	sec-Butylbenzene	1.0 U		25	25.4	102	25	26.0	104	2	83-133/16
98-06-6	tert-Butylbenzene	1.0 U		25	24.5	98	25	25.4	102	4	80-133/16
75-15-0	Carbon Disulfide	2.0 U		25	22.4	90	25	23.3	93	4	66-148/23
56-23-5	Carbon Tetrachloride	1.0 U		25	23.8	95	25	24.4	98	2	76-136/23
108-90-7	Chlorobenzene	1.0 U		25	24.0	96	25	24.5	98	2	82-124/14
75-00-3	Chloroethane	2.0 U		25	22.6	90	25	23.4	94	3	62-144/20
67-66-3	Chloroform	1.0 U		25	23.9	96	25	24.4	98	2	80-124/15
95-49-8	o-Chlorotoluene	1.0 U		25	24.7	99	25	25.4	102	3	81-127/15
106-43-4	p-Chlorotoluene	1.0 U		25	24.7	99	25	25.4	102	3	83-130/15
124-48-1	Dibromochloromethane	1.0 U		25	23.6	94	25	24.4	98	3	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U		25	21.3	85	25	22.1	88	4	64-123/18
106-93-4	1,2-Dibromoethane	2.0 U		25	24.1	96	25	25.1	100	4	75-120/13
75-71-8	Dichlorodifluoromethane	2.0 U		25	25.4	102	25	26.0	104	2	42-167/19
95-50-1	1,2-Dichlorobenzene	1.0 U		25	23.8	95	25	24.5	98	3	82-124/14
541-73-1	1,3-Dichlorobenzene	1.0 U		25	24.6	98	25	25.2	101	2	84-125/14
106-46-7	1,4-Dichlorobenzene	1.0 U		25	23.6	94	25	24.2	97	3	78-120/15
75-34-3	1,1-Dichloroethane	1.0 U		25	25.8	103	25	26.6	106	3	81-122/15
107-06-2	1,2-Dichloroethane	1.0 U		25	23.8	95	25	24.8	99	4	75-125/14
75-35-4	1,1-Dichloroethylene	1.0 U		25	25.9	104	25	26.7	107	3	78-137/18
156-59-2	cis-1,2-Dichloroethylene	1.0 U		25	24.6	98	25	25.5	102	4	78-120/15
156-60-5	trans-1,2-Dichloroethylene	1.0 U		25	25.3	101	25	26.4	106	4	76-127/17
78-87-5	1,2-Dichloropropane	1.0 U		25	25.3	101	25	25.9	104	2	76-124/14
142-28-9	1,3-Dichloropropane	1.0 U		25	23.3	93	25	24.3	97	4	80-118/13
594-20-7	2,2-Dichloropropane	1.0 U		25	26.6	106	25	28.2	113	6	74-139/17
563-58-6	1,1-Dichloropropene	1.0 U		25	25.6	102	25	26.5	106	3	79-131/16
10061-01-5	cis-1,3-Dichloropropene	1.0 U		25	20.7	83	25	21.5	86	4	75-118/23
10061-02-6	trans-1,3-Dichloropropene	1.0 U		25	25.3	101	25	26.9	108	6	80-120/22
100-41-4	Ethylbenzene	1.0 U		25	24.6	98	25	25.3	101	3	81-121/14

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA55941-5MS	I56370.D	1	07/27/18	AJ	n/a	n/a	VI1685
FA55941-5MSD	I56371.D	1	07/27/18	AJ	n/a	n/a	VI1685
FA55941-5	I56367.D	1	07/27/18	AJ	n/a	n/a	VI1685

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55914-1, FA55914-2, FA55914-3, FA55914-4, FA55914-5, FA55914-7, FA55914-9, FA55914-10

CAS No.	Compound	FA55941-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	2.0 U		25	25.2	101	25	26.5	106	5	75-142/19
591-78-6	2-Hexanone	10 U		125	117	94	125	124	99	6	61-129/18
98-82-8	Isopropylbenzene	1.0 U		25	26.5	106	25	27.5	110	4	83-132/15
99-87-6	p-Isopropyltoluene	1.0 U		25	25.7	103	25	26.4	106	3	79-130/16
74-83-9	Methyl Bromide	2.0 U		25	23.0	92	25	23.5	94	2	59-143/19
74-87-3	Methyl Chloride	2.0 U		25	23.0	92	25	22.9	92	0	50-159/19
74-88-4	Methyl Iodide	1.0 U		25	23.4	94	25	24.5	98	5	73-123/16
74-95-3	Methylene Bromide	2.0 U		25	24.6	98	25	25.2	101	2	78-119/14
75-09-2	Methylene Chloride	5.0 U		25	25.9	104	25	26.3	105	2	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U		125	120	96	125	126	101	5	66-122/16
1634-04-4	Methyl Tert Butyl Ether	1.0 U		25	22.9	92	25	24.4	98	6	72-117/14
91-20-3	Naphthalene	5.0 U		25	22.5	90	25	23.6	94	5	63-132/25
103-65-1	n-Propylbenzene	1.0 U		25	24.9	100	25	25.7	103	3	82-133/15
100-42-5	Styrene	1.0 U		25	25.3	101	25	26.1	104	3	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U		25	23.5	94	25	24.0	96	2	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		25	25.0	100	25	25.4	102	2	72-120/14
127-18-4	Tetrachloroethylene	1.0 U		25	24.3	97	25	24.9	100	2	76-135/16
108-88-3	Toluene	1.0 U		25	24.4	98	25	25.1	100	3	80-120/14
87-61-6	1,2,3-Trichlorobenzene	2.0 U		25	24.0	96	25	25.1	100	4	68-131/25
120-82-1	1,2,4-Trichlorobenzene	2.0 U		25	24.0	96	25	24.8	99	3	73-129/20
71-55-6	1,1,1-Trichloroethane	1.0 U		25	24.4	98	25	25.1	100	3	75-130/16
79-00-5	1,1,2-Trichloroethane	1.0 U		25	25.0	100	25	25.4	102	2	76-119/14
79-01-6	Trichloroethylene	1.0 U		25	25.3	101	25	25.8	103	2	81-126/15
75-69-4	Trichlorofluoromethane	2.0 U		25	26.7	107	25	27.0	108	1	71-156/21
96-18-4	1,2,3-Trichloropropane	2.0 U		25	24.1	96	25	24.5	98	2	77-120/16
95-63-6	1,2,4-Trimethylbenzene	1.0 U		25	24.3	97	25	24.9	100	2	79-120/18
108-67-8	1,3,5-Trimethylbenzene	1.0 U		25	25.3	101	25	26.1	104	3	79-120/19
108-05-4	Vinyl Acetate	10 U		125	112	90	125	117	94	4	43-154/14
75-01-4	Vinyl Chloride	1.0 U		25	22.7	91	25	23.6	94	4	69-159/18
	m,p-Xylene	2.0 U		50	50.3	101	50	51.6	103	3	79-126/15
95-47-6	o-Xylene	1.0 U		25	24.8	99	25	25.7	103	4	80-127/14
1330-20-7	Xylene (total)	3.0 U		75	75.1	100	75	77.4	103	3	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA55941-5MS	I56370.D	1	07/27/18	AJ	n/a	n/a	VI1685
FA55941-5MSD	I56371.D	1	07/27/18	AJ	n/a	n/a	VI1685
FA55941-5	I56367.D	1	07/27/18	AJ	n/a	n/a	VI1685

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55914-1, FA55914-2, FA55914-3, FA55914-4, FA55914-5, FA55914-7, FA55914-9, FA55914-10

CAS No.	Surrogate Recoveries	MS	MSD	FA55941-5	Limits
1868-53-7	Dibromofluoromethane	101%	101%	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	101%	103%	79-125%
2037-26-5	Toluene-D8	99%	99%	99%	85-112%
460-00-4	4-Bromofluorobenzene	100%	99%	98%	83-118%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample:	VI1683-BFB	**Injection Date:**	07/25/18
Lab File ID:	I56313.D	**Injection Time:**	14:36
Instrument ID:	GCMSI		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	74779	24.9		Pass
75	30.0 - 60.0% of mass 95	151371	50.4		Pass
95	Base peak, 100% relative abundance	300437	100.0		Pass
96	5.0 - 9.0% of mass 95	21401	7.12		Pass
173	Less than 2.0% of mass 174	1809	0.60	(0.84) [a]	Pass
174	50.0 - 100.0% of mass 95	215941	71.9		Pass
175	5.0 - 9.0% of mass 174	15559	5.18	(7.21) [a]	Pass
176	95.0 - 101.0% of mass 174	207501	69.1	(96.1) [a]	Pass
177	5.0 - 9.0% of mass 176	13778	4.59	(6.64) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VI1683-IC1683	I56314.D	07/25/18	15:14	00:38	Initial cal 1
VI1683-IC1683	I56315.D	07/25/18	15:37	01:01	Initial cal 2
VI1683-IC1683	I56316.D	07/25/18	16:01	01:25	Initial cal 3
VI1683-IC1683	I56317.D	07/25/18	16:25	01:49	Initial cal 4
VI1683-ICC1683	I56318.D	07/25/18	16:49	02:13	Initial cal 5
VI1683-IC1683	I56319.D	07/25/18	17:13	02:37	Initial cal 6
VI1683-IC1683	I56320.D	07/25/18	17:36	03:00	Initial cal 7
VI1683-ICV1683	I56322.D	07/25/18	18:24	03:48	Initial cal verification 5
VI1683-BS	I56323.D	07/25/18	18:48	04:12	Blank Spike
VI1683-MB	I56324.D	07/25/18	19:12	04:36	Method Blank

Instrument Performance Check (BFB)

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample: VI1685-BFB
Lab File ID: I56355.D
Instrument ID: GCMSI
Injection Date: 07/27/18
Injection Time: 08:25

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	75584	25.3		Pass
75	30.0 - 60.0% of mass 95	151317	50.7		Pass
95	Base peak, 100% relative abundance	298347	100.0		Pass
96	5.0 - 9.0% of mass 95	20582	6.90		Pass
173	Less than 2.0% of mass 174	1647	0.55	(0.76) [a]	Pass
174	50.0 - 100.0% of mass 95	217544	72.9		Pass
175	5.0 - 9.0% of mass 174	15969	5.35	(7.34) [a]	Pass
176	95.0 - 101.0% of mass 174	209861	70.3	(96.5) [a]	Pass
177	5.0 - 9.0% of mass 176	13887	4.65	(6.62) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VI1685-CC1683	I56356.D	07/27/18	08:49	00:24	Continuing cal 5
VI1685-BS	I56357.D	07/27/18	09:30	01:05	Blank Spike
VI1685-MB	I56358.D	07/27/18	09:54	01:29	Method Blank
FA55914-1	I56359.D	07/27/18	13:02	04:37	SB1-5
FA55914-2	I56360.D	07/27/18	13:26	05:01	SB1-6
FA55914-3	I56361.D	07/27/18	14:11	05:46	MW25-6A
FA55914-4	I56362.D	07/27/18	14:35	06:10	MW25-6B
FA55914-5	I56363.D	07/27/18	14:59	06:34	DM19-1
FA55914-7	I56364.D	07/27/18	15:23	06:58	DM25-2
FA55914-9	I56365.D	07/27/18	15:46	07:21	FB
FA55914-10	I56366.D	07/27/18	16:10	07:45	TB
FA55941-5	I56367.D	07/27/18	16:34	08:09	(used for QC only; not part of job FA55914)
ZZZZZZ	I56368.D	07/27/18	16:58	08:33	(unrelated sample)
ZZZZZZ	I56369.D	07/27/18	17:22	08:57	(unrelated sample)
FA55941-5MS	I56370.D	07/27/18	17:45	09:20	Matrix Spike
FA55941-5MSD	I56371.D	07/27/18	18:09	09:44	Matrix Spike Duplicate
ZZZZZZ	I56372.D	07/27/18	18:33	10:08	(unrelated sample)
ZZZZZZ	I56373.D	07/27/18	18:57	10:32	(unrelated sample)
ZZZZZZ	I56374.D	07/27/18	19:21	10:56	(unrelated sample)
ZZZZZZ	I56375.D	07/27/18	19:44	11:19	(unrelated sample)
VI1685-ECC1683	I56376.D	07/27/18	20:08	11:43	Ending cal 5

Internal Standard Area Summary

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Check Std: VI1685-CC1683 **Injection Date:** 07/27/18
Lab File ID: I56356.D **Injection Time:** 08:49
Instrument ID: GCMSI **Method:** SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Initial Cal [a]	1197770	9.42	847395	12.46	427469	14.13	101391	5.62
Check Std [b]	1141426	9.42	807815	12.46	414777	14.13	92605	5.62
Upper Limit [c]	2282852	9.59	1615630	12.63	829554	14.30	185210	5.79
Lower Limit [d]	570713	9.25	403908	12.29	207389	13.96	46303	5.45

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VI1685-BS	1193275	9.41	835432	12.45	428829	14.13	103713	5.60
VI1685-MB	1198027	9.42	840362	12.46	420454	14.13	94245	5.60
FA55914-1	1172205	9.41	821755	12.45	416449	14.13	82148	5.59
FA55914-2	1148075	9.42	813117	12.46	412195	14.13	82404	5.60
FA55914-3	1147470	9.41	802699	12.46	409630	14.13	84123	5.59
FA55914-4	1123505	9.42	782702	12.46	398440	14.13	80264	5.60
FA55914-5	1060234	9.41	757007	12.46	380382	14.13	76653	5.60
FA55914-7	1105011	9.41	783406	12.46	403786	14.13	84044	5.60
FA55914-9	1127823	9.42	787779	12.46	400956	14.13	82416	5.60
FA55914-10	1118772	9.42	790973	12.46	397200	14.13	83703	5.61
FA55941-5	1109535	9.42	782241	12.46	395278	14.13	80772	5.60
ZZZZZZ	1110213	9.42	773127	12.46	394320	14.13	80163	5.60
ZZZZZZ	1103420	9.42	771857	12.46	390455	14.13	82474	5.61
FA55941-5MS	1131731	9.41	801051	12.46	409193	14.13	87339	5.61
FA55941-5MSD	1160621	9.42	816157	12.46	418002	14.13	96925	5.62
ZZZZZZ	1145374	9.42	805762	12.46	405826	14.13	91111	5.60
ZZZZZZ	1124261	9.42	785470	12.46	400710	14.13	85813	5.61
ZZZZZZ	1112479	9.42	784067	12.46	398573	14.13	81920	5.60
ZZZZZZ	1101495	9.42	776003	12.46	392252	14.13	78872	5.61
VI1685-ECC1683	1141769	9.42	805903	12.46	413011	14.13	94281	5.62

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Initial Cal is: VI1683-ICC1683 I56318.D 07/25/18 16:49
(b) Check Std Limit = -50 to + 100% of initial cal area.
(c) Upper Limit = + 100% of check standard area; Retention time + 0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

Surrogate Recovery Summary

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Method: SW846 8260C **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
FA55914-1	I56359.D	97	101	98	99
FA55914-2	I56360.D	97	102	98	98
FA55914-3	I56361.D	98	102	99	98
FA55914-4	I56362.D	98	102	99	98
FA55914-5	I56363.D	99	102	95	99
FA55914-7	I56364.D	98	103	96	97
FA55914-9	I56365.D	98	103	99	98
FA55914-10	I56366.D	99	103	99	99
FA55941-5MS	I56370.D	101	101	99	100
FA55941-5MSD	I56371.D	101	101	99	99
VI1685-BS	I56357.D	101	101	100	100
VI1685-MB	I56358.D	96	100	99	100

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	83-118%
S2 = 1,2-Dichloroethane-D4	79-125%
S3 = Toluene-D8	85-112%
S4 = 4-Bromofluorobenzene	83-118%

Initial Calibration Summary

Job Number: FA55914 **Sample:** VI1683-ICC1683
Account: EAENYS EA Engineering **Lab FileID:** I56318.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Response Factor Report MSVOA16

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Calibration Files
1 =I56314.D 2 =I56315.D 3 =I56316.D 4 =I56317.D
5 =I56318.D 6 =I56319.D 7 =I56320.D

Compound	1	2	3	4	5	6	7	Avg	%RSD
1) I Fluorobenzene	----------ISTD----------								
2) Dichlorodifluorom	0.274	0.308	0.275	0.288	0.282	0.279	0.287	0.285	4.07
3)P Chloromethane	0.439	0.418	0.390	0.384	0.365	0.372	0.369	0.391	7.09
4) 1,3-Butadiene	0.243	0.200	0.180	0.199	0.216	0.213	0.224	0.211	9.50
5)C Vinyl Chloride	0.339	0.331	0.304	0.327	0.330	0.329	0.342	0.329	3.79
6) Bromomethane	0.215	0.184	0.175	0.163	0.159	0.157	0.152	0.172	12.56
7) Chloroethane	0.195	0.163	0.138	0.102	0.084	0.070		0.126	38.75
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9922									
Response Ratio = 0.00000 + 0.11744 *A + -0.03433 *A^2									
8) Trichlorofluorome	0.416	0.422	0.374	0.398	0.356	0.352	0.326	0.378	9.50
9) Ethyl Ether	0.287	0.284	0.290	0.295	0.295	0.291	0.298	0.291	1.65
10) 1,2-Dichlorotrifl	0.349	0.365	0.335	0.354	0.348	0.346	0.352	0.350	2.61
11)C 1,1-Dichloroethen	0.470	0.459	0.442	0.470	0.475	0.473	0.485	0.468	2.95
12) Freon 113	0.264	0.274	0.251	0.261	0.262	0.255	0.261	0.261	2.85
13) Carbon Disulfide	0.691	0.709	0.684	0.748	0.769	0.780	0.809	0.741	6.48
14) Iodomethane	0.407	0.394	0.376	0.402	0.403	0.405	0.418	0.401	3.23
15) Allyl chloride	0.345	0.385	0.375	0.412	0.424	0.433	0.442	0.402	8.77
16) Methylene Chlorid	0.695	0.509	0.486	0.470	0.463	0.452	0.456	0.504	17.15
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
Response Ratio = 0.00000 + 0.46608 *A + -0.00604 *A^2									
17) Acetone	0.077	0.079	0.081	0.085	0.089	0.085	0.086	0.083	5.21
18) Methyl acetate	0.106	0.153	0.179	0.205	0.210	0.207	0.213	0.182	22.04
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997									
Response Ratio = 0.00000 + 0.19960 *A + 0.00134 *A^2									
19) trans-1,2-Dichlor	0.434	0.448	0.441	0.468	0.473	0.475	0.487	0.461	4.29
20) Hexane	0.375	0.374	0.347	0.362	0.349	0.335	0.334	0.354	4.75
21) Methyl Tert Butyl	0.521	0.540	0.544	0.584	0.597	0.602	0.626	0.573	6.78
22) Acetonitrile		0.024	0.025	0.030	0.032	0.031	0.031	0.029	12.16
23) Di-isopropyl ethe	0.960	0.979	0.979	1.061	1.064	1.075	1.093	1.030	5.34
24) Chloroprene	0.388	0.442	0.438	0.497	0.505	0.522	0.527	0.474	10.97
25)P 1,1-Dichloroethan	0.559	0.554	0.538	0.555	0.555	0.557	0.568	0.555	1.61
26) Acrylonitrile	0.021	0.079	0.098	0.118	0.125	0.126	0.131	0.100	39.36
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996									
Response Ratio = 0.00000 + 0.11541 *A + 0.00153 *A^2									
27) ETBE	0.692	0.772	0.796	0.867	0.881	0.891	0.916	0.831	9.68
28) Vinyl acetate	0.361	0.527	0.591	0.664	0.662	0.697	0.699	0.600	20.36
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997									
Response Ratio = 0.00000 + 0.64932 *A + 0.00524 *A^2									
29) cis-1,2-Dichloroe	0.233	0.262	0.258	0.272	0.271	0.277	0.287	0.266	6.54
30) 2,2-Dichloropropa	0.197	0.207	0.206	0.240	0.248	0.269	0.284	0.236	14.34
31) Bromochloromethan	0.111	0.127	0.126	0.133	0.133	0.137	0.140	0.130	7.26

Initial Calibration Summary

Job Number: FA55914 **Sample:** VI1683-ICC1683
Account: EAENYS EA Engineering **Lab FileID:** I56318.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

32)	Cyclohexane	0.574	0.619	0.589	0.636	0.633	0.622	0.635	0.615	3.98
33)C	Chloroform	0.524	0.481	0.457	0.469	0.467	0.469	0.479	0.478	4.58
34)	Ethyl acetate	0.133	0.239	0.263	0.291	0.292	0.293	0.297	0.258	22.86
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 0.28449 *A + 0.00127 *A^2									
35)	Tetrahydrofuran	0.135	0.164	0.180	0.186	0.187	0.182	0.183	0.174	10.81
36)S	Dibromofluorometh	0.258	0.258	0.262	0.266	0.268	0.269	0.269	0.264	1.85
37)	Carbon Tetrachlor	0.270	0.283	0.266	0.291	0.295	0.299	0.310	0.288	5.54
38)	1,1,1-Trichloroet	0.363	0.369	0.358	0.390	0.398	0.401	0.415	0.385	5.62
39)	2-Butanone	0.068	0.097	0.111	0.124	0.129	0.128	0.132	0.113	20.61
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998									
	Response Ratio = 0.00000 + 0.12222 *A + 0.00095 *A^2									
40)	1,1-Dichloroprope	0.303	0.331	0.322	0.355	0.354	0.357	0.364	0.341	6.63
41)	tert-Butyl format	0.071	0.073	0.081	0.097	0.110	0.128	0.143	0.100	27.67
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998									
	Response Ratio = 0.00000 + 0.08592 *A + 0.00287 *A^2									
42)	Propionitrile	0.034	0.041	0.044	0.047	0.048	0.046	0.046	0.044	11.50
43)	Methacrylonitrile	0.155	0.175	0.173	0.181	0.179	0.169	0.166	0.171	5.14
44)	Benzene	1.055	1.024	0.986	1.021	1.005	1.009	1.026	1.018	2.10
45)	TAME	0.455	0.507	0.518	0.576	0.590	0.606	0.632	0.555	11.39
46)S	1,2-Dichloroethan	0.359	0.360	0.358	0.357	0.356	0.354	0.355	0.357	0.69
47)	1,2-Dichloroethan	0.449	0.447	0.432	0.442	0.434	0.435	0.438	0.440	1.50
48)	Trichloroethene	0.266	0.268	0.258	0.272	0.270	0.272	0.276	0.269	2.16
49)	Methylcyclohexane	0.427	0.432	0.417	0.449	0.450	0.446	0.458	0.440	3.35
50)	Dibromomethane	0.152	0.160	0.162	0.171	0.170	0.173	0.176	0.166	5.13
51)C	1,2-Dichloropropa	0.307	0.318	0.314	0.334	0.331	0.335	0.338	0.325	3.74
52)	Bromodichlorometh	0.283	0.300	0.306	0.334	0.336	0.346	0.354	0.323	8.20
53)	Methyl methacryla	0.126	0.161	0.190	0.224	0.240	0.250	0.255	0.206	23.73
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996									
	Response Ratio = 0.00000 + 0.22300 *A + 0.01651 *A^2									
54)	2-Chloroethyl vin	0.138	0.176	0.190	0.206	0.211	0.212	0.209	0.192	14.08
55)	cis-1,3-Dichlorop	0.281	0.335	0.351	0.407	0.416	0.429	0.443	0.380	15.61
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 0.39225 *A + 0.02559 *A^2									
56) I	Chlorobenzene-d5	----------ISTD----------								
57)S	Toluene-d8	1.379	1.375	1.386	1.372	1.371	1.393	1.383	1.380	0.57
58)C	Toluene	1.621	1.533	1.488	1.546	1.506	1.552	1.565	1.544	2.79
59)	2-Nitropropane	0.052	0.060	0.069	0.083	0.085	0.088	0.091	0.076	20.26
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997									
	Response Ratio = 0.00000 + 0.08026 *A + 0.00110 *A^2									
60)	4-Methyl-2-pentan	0.414	0.399	0.412	0.428	0.425	0.411	0.402	0.413	2.56
61)	trans-1,3-Dichlor	0.026	0.029	0.032	0.033	0.031	0.030	0.031	0.030	7.78
62)	Tetrachloroethene	0.376	0.400	0.391	0.417	0.431	0.384	0.388	0.398	4.90
63)	Ethyl methacrylat	0.241	0.347	0.372	0.435	0.454	0.471	0.481	0.400	21.58
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998									
	Response Ratio = 0.00000 + 0.42779 *A + 0.02741 *A^2									
64)	1,1,2-Trichloroet	0.270	0.289	0.292	0.300	0.289	0.294	0.295	0.290	3.33
65)	Dibromochlorometh	0.259	0.319	0.328	0.363	0.366	0.381	0.388	0.344	13.19
66)	1,3-Dichloropropa	0.559	0.574	0.571	0.598	0.587	0.593	0.598	0.583	2.59
67)	1,2-Dibromoethane	0.267	0.298	0.312	0.336	0.334	0.340	0.348	0.319	9.04
68)	2-hexanone	0.345	0.331	0.343	0.360	0.361	0.336	0.319	0.342	4.40
69)	1-Chlorohexane	0.533	0.513	0.498	0.522	0.540	0.540	0.564	0.530	4.07

Initial Calibration Summary

Job Number: FA55914 **Sample:** VI1683-ICC1683
Account: EAENYS EA Engineering **Lab FileID:** I56318.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

70)C	Ethylbenzene	1.789	1.768	1.700	1.795	1.745	1.796	1.772	1.766	1.95
71)P	Chlorobenzene	1.095	1.025	0.972	0.997	0.967	0.986	0.991	1.005	4.39
72)	1,1,1,2-Tetrachlo	0.271	0.296	0.292	0.320	0.319	0.331	0.339	0.310	7.87
73)	m,p-Xylene	1.272	1.355	1.304	1.386	1.362	1.377	1.362	1.345	3.08
74)	o-Xylene	1.170	1.298	1.302	1.411	1.391	1.428	1.445	1.349	7.28
75)	Styrene	0.708	0.900	0.904	1.009	1.009	1.046	1.062	0.948	13.06
76)P	Bromoform	0.150	0.176	0.186	0.215	0.220	0.230	0.238	0.202	15.84

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999
Response Ratio = 0.00000 + 0.20580 *A + 0.01648 *A^2

77)	Isopropylbenzene	1.255	1.458	1.435	1.558	1.540	1.579	1.583	1.487	7.91
78) I	1,4-Dichlorobenzene-d	----------ISTD----------								
79)S	4-Bromofluorobenz	0.771	0.777	0.783	0.795	0.793	0.803	0.805	0.790	1.66
80)	cis-1,4-Dichloro-	0.266	0.277	0.273	0.321	0.331	0.341	0.344	0.308	11.12
81)	n-Propylbenzene	3.811	3.967	3.861	4.158	4.076	4.078	4.070	4.003	3.19
82)	Bromobenzene	0.747	0.769	0.745	0.787	0.786	0.796	0.800	0.776	2.90
83)P	1,1,2,2-Tetrachlo	0.863	0.881	0.853	0.895	0.880	0.868	0.876	0.874	1.59
84)	1,3,5-Trimethylbe	2.158	2.462	2.447	2.652	2.630	2.656	2.652	2.523	7.33
85)	2-Chlorotoluene	2.301	2.386	2.324	2.479	2.477	2.517	2.540	2.432	3.91
86)	trans-1,4-Dichlor	0.222	0.250	0.273	0.310	0.311	0.312	0.318	0.285	13.13
87)	1,2,3-Trichloropr	0.209	0.246	0.228	0.246	0.241	0.238	0.239	0.235	5.62
88)	Cyclohexanone	0.028	0.035	0.036	0.042	0.042	0.040	0.039	0.037	13.12
89)	4-Chlorotoluene	2.301	2.386	2.324	2.479	2.477	2.517	2.540	2.432	3.91
90)	tert-Butylbenzene	1.426	1.509	1.485	1.608	1.615	1.635	1.651	1.561	5.55
91)	a-Methyl styrene			0.019					0.019	0.00
92)	1,2,4-Trimethylbe	2.186	2.557	2.549	2.731	2.717	2.751	2.772	2.609	7.96
93)	Pentachloroethane	0.332	0.368	0.364	0.409	0.388	0.491	0.500	0.407	15.90

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9973
Response Ratio = 0.00000 + 0.37152 *A + 0.06751 *A^2

94)	sec-Butylbenzene	2.894	3.181	3.101	3.351	3.326	3.329	3.363	3.221	5.42
95)	4-Isopropyltoluen	2.192	2.514	2.513	2.743	2.738	2.763	2.811	2.611	8.45
96)	1,3-Dichlorobenze	1.420	1.396	1.381	1.465	1.450	1.473	1.495	1.440	2.92
97)	1,4-Dichlorobenze	1.690	1.579	1.523	1.567	1.516	1.539	1.556	1.567	3.75
98)	n-Butylbenzene	1.268	1.415	1.422	1.577	1.584	1.610	1.647	1.503	9.16
99)	Benzyl Chloride	0.060	0.100	0.116	0.174	0.187	0.227	0.245	0.158	43.26

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9990
Response Ratio = 0.00000 + 0.15325 *A + 0.04719 *A^2

100)	1,2-Dichlorobenze	1.367	1.373	1.341	1.429	1.419	1.434	1.454	1.402	2.99
101)	1,2-Dibromo-3-Chl	0.097	0.110	0.117	0.142	0.146	0.149	0.156	0.131	17.38

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998
Response Ratio = 0.00000 + 0.13512 *A + 0.01035 *A^2

102)	Hexachlorobutadie	0.452	0.437	0.427	0.472	0.477	0.486	0.510	0.466	6.25
103)	1,2,4-Trichlorobe	0.819	0.854	0.871	0.964	0.977	0.999	1.032	0.931	8.78
104)	Naphthalene	1.500	1.903	2.074	2.394	2.447	2.466	2.529	2.188	17.42

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998
Response Ratio = 0.00000 + 2.33042 *A + 0.09975 *A^2

105)	1,2,3-Trichlorobe	0.797	0.809	0.839	0.893	0.907	0.917	0.948	0.873	6.64
106) I	Tert Butyl Alcohol-d1	----------ISTD----------								
107)	Ethanol		0.048	0.180	0.189	0.188	0.188	0.181	0.182	0.165	31.33

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998
Response Ratio = 0.00000 + 0.18817 *A + -0.00089 *A^2

108)	Acrolein		1.222	3.681	3.841	4.096	4.035	4.093	3.992	3.566	29.28

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998

Initial Calibration Summary

Job Number: FA55914 **Sample:** VI1683-ICC1683
Account: EAENYS EA Engineering **Lab FileID:** I56318.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

```
               Response Ratio = 0.00000 + 4.12258 *A + -0.05810 *A^2

109)  Tert Butyl Alcoho 1.600 1.540 1.597 1.658 1.616 1.584 1.621 1.602   2.27
110)  Isobutyl alcohol  0.649 0.563 0.600 0.707 0.700 0.707 0.711 0.662   9.07
111)  Tert Amyl Alcohol 0.768 0.848 0.914 1.091 1.077 1.100 1.159 0.994  15.04
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9997
               Response Ratio = 0.00000 + 1.00771 *A + 0.03719 *A^2

112)  1,4-Dioxane       0.060 0.132 0.142 0.171 0.160 0.158 0.157 0.140  26.92
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9994
               Response Ratio = 0.00000 + 0.16309 *A + -0.00084 *A^2

113)  3,3-Dimethyl-1-bu 1.650 1.596 1.594 1.790 1.873 1.748 1.682 1.705   6.10
 ----------------------------------------------------------------------------
 (#) = Out of Range

          I-July2518.M        Thu Jul 26 08:21:24 2018
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Initial Calibration Verification

Job Number: FA55914 **Sample:** VI1683-ICV1683
Account: EAENYS EA Engineering **Lab FileID:** I56322.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\2\DATA\072518\I56322.D Vial: 9
Acq On : 25 Jul 2018 6:24 pm Operator: ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Jul 26 08:15:52 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	104	0.00	9.42
2	Dichlorodifluoromethane	0.285	0.296	-3.9	109	0.00	2.25
3 P	Chloromethane	0.391	0.351	10.2	100	-0.01	2.53
4	1,3-Butadiene	0.211	0.180	14.7	86	-0.01	2.64
5 C	Vinyl Chloride	0.329	0.320	2.7	101	-0.01	2.66
6	Bromomethane	0.172	0.172	0.0	112	-0.01	3.10
	----------	Amount	Calc.	%Drift		----------	
7	Chloroethane	40.000	32.088	19.8	95	-0.02	3.26
	----------	AvgRF	CCRF	%Dev		----------	
8	Trichlorofluoromethane	0.378	0.389	-2.9	113	-0.01	3.51
9	Ethyl Ether	0.291	0.297	-2.1	105	0.00	3.92
10	1,2-Dichlorotrifluoroetha	0.350	0.353	-0.9	105	0.00	4.23
11 C	1,1-Dichloroethene	0.468	0.490	-4.7	107	-0.01	4.21
12	Freon 113	0.261	0.236	9.6	94	-0.01	4.31
13	Carbon Disulfide	0.741	0.817	-10.3	110	-0.02	4.26
14	Iodomethane	0.401	0.409	-2.0	105	-0.01	4.42
15	Allyl chloride	0.402	0.403	-0.2	99	-0.01	4.92
	----------	Amount	Calc.	%Drift		----------	
16	Methylene Chloride	40.000	41.556	-3.9	107	0.00	5.10
	----------	AvgRF	CCRF	%Dev		----------	
17	Acetone	0.083	0.084	-1.2	98	0.00	5.16
	----------	Amount	Calc.	%Drift		----------	
18	Methyl acetate	200.000	206.883	-3.4	105	0.00	5.37
	----------	AvgRF	CCRF	%Dev		----------	
19	trans-1,2-Dichloroethene	0.461	0.477	-3.5	104	0.00	5.35
20	Hexane	0.354	0.340	4.0	101	0.00	5.49
21	Methyl Tert Butyl Ether	0.573	0.622	-8.6	108	-0.01	5.55
22	Acetonitrile	0.029	0.032	-10.3	104	0.00	5.88
23	Di-isopropyl ether	1.030	1.099	-6.7	107	0.00	6.18
24	Chloroprene	0.474	0.484	-2.1	100	0.00	6.31
25 P	1,1-Dichloroethane	0.555	0.584	-5.2	109	0.00	6.34
	----------	Amount	Calc.	%Drift		----------	
26	Acrylonitrile	200.000	205.471	-2.7	104	0.00	6.39
	----------	AvgRF	CCRF	%Dev		----------	

Initial Calibration Verification

Job Number: FA55914 **Sample:** VI1683-ICV1683
Account: EAENYS EA Engineering **Lab FileID:** I56322.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

27		ETBE	0.831	0.930	-11.9	110	0.00	6.80
			Amount	Calc.	%Drift			
28		Vinyl acetate	200.000	194.769	2.6	102	0.00	6.77
			AvgRF	CCRF	%Dev			
29		cis-1,2-Dichloroethene	0.266	0.279	-4.9	107	-0.01	7.26
30		2,2-Dichloropropane	0.236	0.259	-9.7	108	-0.01	7.45
31		Bromochloromethane	0.130	0.135	-3.8	105	0.00	7.61
32		Cyclohexane	0.615	0.632	-2.8	104	0.00	7.65
33	C	Chloroform	0.478	0.475	0.6	105	-0.01	7.76
			Amount	Calc.	%Drift			
34		Ethyl acetate	200.000	201.997	-1.0	104	0.00	8.00
			AvgRF	CCRF	%Dev			
35		Tetrahydrofuran	0.174	0.187	-7.5	104	0.00	8.03
36	S	Dibromofluoromethane	0.264	0.264	0.0	102	0.00	8.09
37		Carbon Tetrachloride	0.288	0.277	3.8	98	0.00	8.02
38		1,1,1-Trichloroethane	0.385	0.387	-0.5	101	0.00	8.13
			Amount	Calc.	%Drift			
39		2-Butanone	200.000	209.892	-4.9	106	0.00	8.30
			AvgRF	CCRF	%Dev			
40		1,1-Dichloropropene	0.341	0.358	-5.0	105	0.00	8.36
			Amount	Calc.	%Drift			
41		tert-Butyl formate	400.000	296.136	26.0#	72	0.00	8.57
			AvgRF	CCRF	%Dev			
42		Propionitrile	0.044	0.047	-6.8	101	0.00	8.79
43		Methacrylonitrile	0.171	0.176	-2.9	102	0.00	8.84
44		Benzene	1.018	1.030	-1.2	106	0.00	8.79
45		TAME	0.555	0.608	-9.5	107	0.00	9.02
46	S	1,2-Dichloroethane-d4	0.357	0.353	1.1	103	0.00	8.99
47		1,2-Dichloroethane	0.440	0.441	-0.2	105	0.00	9.10
48		Trichloroethene	0.269	0.273	-1.5	105	0.00	9.66
49		Methylcyclohexane	0.440	0.461	-4.8	106	0.00	9.65
50		Dibromomethane	0.166	0.175	-5.4	107	0.00	10.15
51	C	1,2-Dichloropropane	0.325	0.342	-5.2	107	0.00	10.25
52		Bromodichloromethane	0.323	0.346	-7.1	107	0.00	10.34
			Amount	Calc.	%Drift			
53		Methyl methacrylate	40.000	39.888	0.3	102	0.00	10.51
			AvgRF	CCRF	%Dev			
54		2-Chloroethyl vinyl ether	0.192	0.226	-17.7	111	0.00	10.91
			Amount	Calc.	%Drift			
55		cis-1,3-Dichloropropene	40.000	39.535	1.2	102	0.00	10.98
			AvgRF	CCRF	%Dev			
56	I	Chlorobenzene-d5	1.000	1.000	0.0	104	0.00	12.46
57	S	Toluene-d8	1.380	1.375	0.4	104	0.00	11.15
58	C	Toluene	1.544	1.553	-0.6	107	0.00	11.20
			Amount	Calc.	%Drift			
59		2-Nitropropane	200.000	178.791	10.6	91	0.00	11.38

Initial Calibration Verification

Job Number: FA55914 **Sample:** VI1683-ICV1683
Account: EAENYS EA Engineering **Lab FileID:** I56322.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			AvgRF	CCRF	%Dev			
60		4-Methyl-2-pentanone	0.413	0.434	-5.1	106	0.00	11.52
61		trans-1,3-Dichloropropene	0.030	0.032	-6.7	108	0.00	11.93
62		Tetrachloroethene	0.398	0.390	2.0	94	0.00	11.55
			Amount	Calc.	%Drift			
63		Ethyl methacrylate	40.000	41.227	-3.1	106	0.00	11.70
			AvgRF	CCRF	%Dev			
64		1,1,2-Trichloroethane	0.290	0.304	-4.8	109	0.00	11.70
65		Dibromochloromethane	0.344	0.376	-9.3	106	0.00	11.86
66		1,3-Dichloropropane	0.583	0.587	-0.7	104	0.00	11.93
67		1,2-Dibromoethane	0.319	0.342	-7.2	106	0.00	12.05
68		2-hexanone	0.342	0.357	-4.4	102	0.00	12.21
69		1-Chlorohexane	0.530	0.549	-3.6	105	0.00	12.44
70	C	Ethylbenzene	1.766	1.790	-1.4	106	0.00	12.48
71	P	Chlorobenzene	1.005	0.998	0.7	107	0.00	12.47
72		1,1,1,2-Tetrachloroethane	0.310	0.320	-3.2	104	0.00	12.52
73		m,p-Xylene	1.345	1.401	-4.2	107	0.00	12.59
74		o-Xylene	1.349	1.441	-6.8	107	0.00	12.91
75		Styrene	0.948	1.057	-11.5	109	0.00	12.95
			Amount	Calc.	%Drift			
76	P	Bromoform	40.000	40.604	-1.5	105	0.00	12.99
			AvgRF	CCRF	%Dev			
77		Isopropylbenzene	1.487	1.662	-11.8	112	0.00	13.13
78	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	14.13
79	S	4-Bromofluorobenzene	0.790	0.799	-1.1	105	0.00	13.35
80		cis-1,4-Dichloro-2-butene	0.308	0.304	1.3	96	0.00	13.38
81		n-Propylbenzene	4.003	4.146	-3.6	106	0.00	13.43
82		Bromobenzene	0.776	0.811	-4.5	107	0.00	13.44
83	P	1,1,2,2-Tetrachloroethane	0.874	0.934	-6.9	111	0.00	13.47
84		1,3,5-Trimethylbenzene	2.523	2.727	-8.1	108	0.00	13.55
85		2-Chlorotoluene	2.432	2.551	-4.9	107	0.00	13.67
86		trans-1,4-Dichloro-2-Bute	0.285	0.285	0.0	96	0.00	13.60
87		1,2,3-Trichloropropane	0.235	0.248	-5.5	107	0.00	13.58
88		Cyclohexanone	0.037	0.032	13.5	80	0.00	13.62
89		4-Chlorotoluene	2.432	2.551	-4.9	107	0.00	13.67
90		tert-Butylbenzene	1.561	1.631	-4.5	105	0.00	13.79
91		a-Methyl styrene		----------NA----------				
92		1,2,4-Trimethylbenzene	2.609	2.724	-4.4	104	0.00	13.83
			Amount	Calc.	%Drift			
93		Pentachloroethane	40.000	39.863	0.3	114	0.00	13.82
			AvgRF	CCRF	%Dev			
94		sec-Butylbenzene	3.221	3.389	-5.2	106	0.00	13.91
95		4-Isopropyltoluene	2.611	2.841	-8.8	108	0.00	13.99
96		1,3-Dichlorobenzene	1.440	1.524	-5.8	110	0.00	14.08
97		1,4-Dichlorobenzene	1.567	1.568	-0.1	108	0.00	14.14
98		n-Butylbenzene	1.503	1.640	-9.1	108	0.00	14.29
			Amount	Calc.	%Drift			
99		Benzyl Chloride	40.000	39.157	2.1	104	0.00	14.30
			AvgRF	CCRF	%Dev			
100		1,2-Dichlorobenzene	1.402	1.449	-3.4	106	0.00	14.43

Initial Calibration Verification

Job Number: FA55914 **Sample:** VI1683-ICV1683
Account: EAENYS EA Engineering **Lab FileID:** I56322.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			Amount	Calc.	%Drift			
101	1,2-Dibromo-3-Chloropropa		40.000	40.578	-1.4	104	0.00	14.96
			AvgRF	CCRF	%Dev			
102	Hexachlorobutadiene		0.466	0.493	-5.8	108	0.00	15.38
103	1,2,4-Trichlorobenzene		0.931	1.019	-9.5	109	0.00	15.41
			Amount	Calc.	%Drift			
104	Naphthalene		40.000	41.942	-4.9	108	0.00	15.63
			AvgRF	CCRF	%Dev			
105	1,2,3-Trichlorobenzene		0.873	0.937	-7.3	108	0.00	15.75
106	Tert Butyl Alcohol-d10	I	1.000	1.000	0.0	106	0.00	5.62
			Amount	Calc.	%Drift			
107	Ethanol		800.000	819.004	-2.4	107	0.00	4.23
108	Acrolein		200.000	151.695	24.2#	81	0.00	4.70
			AvgRF	CCRF	%Dev			
109	Tert Butyl Alcohol		1.602	1.841	-14.9	121	0.00	5.73
110	Isobutyl alcohol		0.662	0.700	-5.7	106	0.00	9.21
			Amount	Calc.	%Drift			
111	Tert Amyl Alcohol		400.000	416.240	-4.1	110	0.00	9.33
112	1,4-Dioxane		800.000	823.330	-2.9	110	0.00	10.55
			AvgRF	CCRF	%Dev			
113	3,3-Dimethyl-1-butanol		1.705	1.738	-1.9	98	0.00	12.20

(#) = Out of Range SPCC's out = 0 CCC's out = 0
I56318.D I-July2518.M Thu Jul 26 08:21:15 2018

Continuing Calibration Summary

Job Number: FA55914 **Sample:** VI1685-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56356.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\2\DATA\072718\I56356.D Vial: 1
Acq On : 27 Jul 2018 8:49 am Operator: ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40895,VI1685,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Jul 26 08:15:52 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	95	0.00	9.42
2		Dichlorodifluoromethane	0.285	0.271	4.9	92	0.00	2.25
3	P	Chloromethane	0.391	0.366	6.4	95	0.00	2.53
4		1,3-Butadiene	0.211	0.197	6.6	87	0.00	2.64
5	C	Vinyl Chloride	0.329	0.323	1.8	93	0.00	2.67
6		Bromomethane	0.172	0.160	7.0	96	0.00	3.11
		----------	Amount	Calc.	%Drift		----------	
7		Chloroethane	40.000	36.516	8.7	96	0.00	3.27
		----------	AvgRF	CCRF	%Dev		----------	
8		Trichlorofluoromethane	0.378	0.364	3.7	97	0.00	3.51
9		Ethyl Ether	0.291	0.294	-1.0	95	0.00	3.92
10		1,2-Dichlorotrifluoroetha	0.350	0.358	-2.3	98	0.00	4.24
11	C	1,1-Dichloroethene	0.468	0.479	-2.4	96	0.00	4.22
12		Freon 113	0.261	0.266	-1.9	97	-0.01	4.31
13		Carbon Disulfide	0.741	0.776	-4.7	96	0.00	4.27
14		Iodomethane	0.401	0.401	0.0	95	0.00	4.43
15		Allyl chloride	0.402	0.416	-3.5	93	0.00	4.93
		----------	Amount	Calc.	%Drift		----------	
16		Methylene Chloride	40.000	41.266	-3.2	98	0.00	5.10
		----------	AvgRF	CCRF	%Dev		----------	
17		Acetone	0.083	0.090	-8.4	97	0.00	5.16
		----------	Amount	Calc.	%Drift		----------	
18		Methyl acetate	200.000	204.695	-2.3	95	0.00	5.37
		----------	AvgRF	CCRF	%Dev		----------	
19		trans-1,2-Dichloroethene	0.461	0.477	-3.5	96	0.00	5.35
20		Hexane	0.354	0.353	0.3	96	0.00	5.49
21		Methyl Tert Butyl Ether	0.573	0.585	-2.1	93	0.00	5.56
22		Acetonitrile	0.029	0.032	-10.3	98	0.00	5.88
23		Di-isopropyl ether	1.030	1.076	-4.5	96	0.00	6.18
24		Chloroprene	0.474	0.487	-2.7	92	0.00	6.31
25	P	1,1-Dichloroethane	0.555	0.559	-0.7	96	0.00	6.34
		----------	Amount	Calc.	%Drift		----------	
26		Acrylonitrile	200.000	205.078	-2.5	95	0.00	6.39
		----------	AvgRF	CCRF	%Dev		----------	

Continuing Calibration Summary

Job Number: FA55914 **Sample:** VI1685-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56356.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

27		ETBE	0.831	0.910	-9.5	98	0.00	6.80
			Amount	Calc.	%Drift			
28		Vinyl acetate	200.000	205.697	-2.8	99	0.00	6.77
			AvgRF	CCRF	%Dev			
29		cis-1,2-Dichloroethene	0.266	0.271	-1.9	95	-0.01	7.26
30		2,2-Dichloropropane	0.236	0.265	-12.3	102	0.00	7.46
31		Bromochloromethane	0.130	0.135	-3.8	97	0.00	7.61
32		Cyclohexane	0.615	0.643	-4.6	97	0.00	7.65
33	C	Chloroform	0.478	0.463	3.1	95	0.00	7.77
			Amount	Calc.	%Drift			
34		Ethyl acetate	200.000	203.312	-1.7	96	0.00	8.00
			AvgRF	CCRF	%Dev			
35		Tetrahydrofuran	0.174	0.188	-8.0	96	0.00	8.03
36	S	Dibromofluoromethane	0.264	0.266	-0.8	95	0.00	8.09
37		Carbon Tetrachloride	0.288	0.299	-3.8	96	0.00	8.02
38		1,1,1-Trichloroethane	0.385	0.398	-3.4	95	0.00	8.13
			Amount	Calc.	%Drift			
39		2-Butanone	200.000	204.927	-2.5	95	0.00	8.30
			AvgRF	CCRF	%Dev			
40		1,1-Dichloropropene	0.341	0.352	-3.2	95	0.00	8.36
			Amount	Calc.	%Drift			
41		tert-Butyl formate	400.000	469.638	-17.4	115	0.00	8.57
			AvgRF	CCRF	%Dev			
42		Propionitrile	0.044	0.048	-9.1	95	0.00	8.79
43		Methacrylonitrile	0.171	0.180	-5.3	96	0.00	8.84
44		Benzene	1.018	1.005	1.3	95	0.00	8.79
45		TAME	0.555	0.595	-7.2	96	0.00	9.03
46	S	1,2-Dichloroethane-d4	0.357	0.358	-0.3	96	0.00	9.00
47		1,2-Dichloroethane	0.440	0.435	1.1	96	0.00	9.10
48		Trichloroethene	0.269	0.268	0.4	95	0.00	9.66
49		Methylcyclohexane	0.440	0.449	-2.0	95	0.00	9.65
50		Dibromomethane	0.166	0.172	-3.6	97	0.00	10.15
51	C	1,2-Dichloropropane	0.325	0.332	-2.2	96	0.00	10.25
52		Bromodichloromethane	0.323	0.336	-4.0	95	0.00	10.34
			Amount	Calc.	%Drift			
53		Methyl methacrylate	40.000	40.224	-0.6	95	0.00	10.51
			AvgRF	CCRF	%Dev			
54		2-Chloroethyl vinyl ether	0.192	0.214	-11.5	97	0.00	10.91
			Amount	Calc.	%Drift			
55		cis-1,3-Dichloropropene	40.000	40.578	-1.4	96	0.00	10.98
			AvgRF	CCRF	%Dev			
56	I	Chlorobenzene-d5	1.000	1.000	0.0	95	0.00	12.46
57	S	Toluene-d8	1.380	1.362	1.3	95	0.00	11.15
58	C	Toluene	1.544	1.523	1.4	96	0.00	11.20
			Amount	Calc.	%Drift			
59		2-Nitropropane	200.000	200.788	-0.4	95	0.00	11.38

Continuing Calibration Summary

Job Number: FA55914 **Sample:** VI1685-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56356.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			AvgRF	CCRF	%Dev			
60		4-Methyl-2-pentanone	0.413	0.434	-5.1	97	0.00	11.52
61		trans-1,3-Dichloropropene	0.030	0.032	-6.7	98	0.00	11.93
62		Tetrachloroethene	0.398	0.388	2.5	86	0.00	11.55
			Amount	Calc.	%Drift			
63		Ethyl methacrylate	40.000	39.062	2.3	92	0.00	11.69
			AvgRF	CCRF	%Dev			
64		1,1,2-Trichloroethane	0.290	0.296	-2.1	98	0.00	11.70
65		Dibromochloromethane	0.344	0.367	-6.7	95	0.00	11.86
66		1,3-Dichloropropane	0.583	0.591	-1.4	96	0.00	11.93
67		1,2-Dibromoethane	0.319	0.335	-5.0	96	0.00	12.05
68		2-hexanone	0.342	0.362	-5.8	96	0.00	12.21
69		1-Chlorohexane	0.530	0.523	1.3	92	0.00	12.44
70	C	Ethylbenzene	1.766	1.769	-0.2	97	0.00	12.48
71	P	Chlorobenzene	1.005	0.982	2.3	97	0.00	12.47
72		1,1,1,2-Tetrachloroethane	0.310	0.318	-2.6	95	0.00	12.52
73		m,p-Xylene	1.345	1.364	-1.4	95	0.00	12.59
74		o-Xylene	1.349	1.393	-3.3	95	0.00	12.91
75		Styrene	0.948	1.007	-6.2	95	0.00	12.95
			Amount	Calc.	%Drift			
76	P	Bromoform	40.000	40.213	-0.5	95	0.00	12.99
			AvgRF	CCRF	%Dev			
77		Isopropylbenzene	1.487	1.543	-3.8	96	0.00	13.13
78	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	14.13
79	S	4-Bromofluorobenzene	0.790	0.791	-0.1	97	0.00	13.35
80		cis-1,4-Dichloro-2-butene	0.308	0.330	-7.1	97	0.00	13.38
81		n-Propylbenzene	4.003	4.077	-1.8	97	0.00	13.43
82		Bromobenzene	0.776	0.783	-0.9	97	0.00	13.44
83	P	1,1,2,2-Tetrachloroethane	0.874	0.873	0.1	96	0.00	13.47
84		1,3,5-Trimethylbenzene	2.523	2.607	-3.3	96	0.00	13.55
85		2-Chlorotoluene	2.432	2.451	-0.8	96	0.00	13.67
86		trans-1,4-Dichloro-2-Bute	0.285	0.313	-9.8	98	0.00	13.59
87		1,2,3-Trichloropropane	0.235	0.238	-1.3	96	0.00	13.58
88		Cyclohexanone	0.037	0.043	-16.2	100	0.00	13.62
89		4-Chlorotoluene	2.432	2.451	-0.8	96	0.00	13.67
90		tert-Butylbenzene	1.561	1.589	-1.8	96	0.00	13.79
91		a-Methyl styrene		----------NA----------				
92		1,2,4-Trimethylbenzene	2.609	2.696	-3.3	96	0.00	13.83
			Amount	Calc.	%Drift			
93		Pentachloroethane	40.000	40.655	-1.6	108	0.00	13.82
			AvgRF	CCRF	%Dev			
94		sec-Butylbenzene	3.221	3.290	-2.1	96	0.00	13.91
95		4-Isopropyltoluene	2.611	2.710	-3.8	96	0.00	13.99
96		1,3-Dichlorobenzene	1.440	1.440	0.0	96	0.00	14.08
97		1,4-Dichlorobenzene	1.567	1.513	3.4	97	0.00	14.14
98		n-Butylbenzene	1.503	1.582	-5.3	97	0.00	14.29
			Amount	Calc.	%Drift			
99		Benzyl Chloride	40.000	41.244	-3.1	103	0.00	14.30
			AvgRF	CCRF	%Dev			
100		1,2-Dichlorobenzene	1.402	1.399	0.2	96	0.00	14.43

Continuing Calibration Summary

Job Number: FA55914 **Sample:** VI1685-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56356.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			Amount	Calc.	%Drift			
101		1,2-Dibromo-3-Chloropropa	40.000	39.553	1.1	94	0.00	14.96
			AvgRF	CCRF	%Dev			
102		Hexachlorobutadiene	0.466	0.466	0.0	95	0.00	15.38
103		1,2,4-Trichlorobenzene	0.931	0.963	-3.4	96	0.00	15.41
			Amount	Calc.	%Drift			
104		Naphthalene	40.000	39.819	0.5	95	0.00	15.63
			AvgRF	CCRF	%Dev			
105		1,2,3-Trichlorobenzene	0.873	0.897	-2.7	96	0.00	15.76
106	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	91	0.00	5.62
			Amount	Calc.	%Drift			
107		Ethanol	800.000	854.534	-6.8	96	0.00	4.21
108		Acrolein	200.000	211.556	-5.8	98	0.00	4.71
			AvgRF	CCRF	%Dev			
109		Tert Butyl Alcohol	1.602	1.629	-1.7	92	0.00	5.73
110		Isobutyl alcohol	0.662	0.721	-8.9	94	0.00	9.21
			Amount	Calc.	%Drift			
111		Tert Amyl Alcohol	400.000	415.999	-4.0	94	0.00	9.33
112		1,4-Dioxane	800.000	827.319	-3.4	95	0.00	10.55
			AvgRF	CCRF	%Dev			
113		3,3-Dimethyl-1-butanol	1.705	1.884	-10.5	92	0.00	12.19

(#) = Out of Range SPCC's out = 0 CCC's out = 0
I56318.D I-July2518.M Fri Jul 27 09:17:00 2018

Continuing Calibration Summary

Job Number: FA55914 **Sample:** VI1685-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56376.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\2\DATA\072718\I56376.D Vial: 18
Acq On : 27 Jul 2018 8:08 pm Operator: ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40907,VI1685,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Jul 26 08:15:52 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	95	0.00	9.42
2		Dichlorodifluoromethane	0.285	0.260	8.8	88	0.00	2.26
3	P	Chloromethane	0.391	0.345	11.8	90	0.00	2.53
4		1,3-Butadiene	0.211	0.191	9.5	84	0.00	2.64
5	C	Vinyl Chloride	0.329	0.312	5.2	90	-0.01	2.66
6		Bromomethane	0.172	0.153	11.0	91	0.00	3.11
			Amount	Calc.	%Drift			
7		Chloroethane	40.000	34.950	12.6	93	0.00	3.27
			AvgRF	CCRF	%Dev			
8		Trichlorofluoromethane	0.378	0.383	-1.3	103	-0.01	3.51
9		Ethyl Ether	0.291	0.288	1.0	93	0.00	3.93
10		1,2-Dichlorotrifluoroetha	0.350	0.347	0.9	95	0.00	4.24
11	C	1,1-Dichloroethene	0.468	0.460	1.7	92	0.00	4.22
12		Freon 113	0.261	0.254	2.7	92	0.00	4.32
13		Carbon Disulfide	0.741	0.747	-0.8	93	0.00	4.27
14		Iodomethane	0.401	0.388	3.2	92	0.00	4.43
15		Allyl chloride	0.402	0.410	-2.0	92	0.00	4.93
			Amount	Calc.	%Drift			
16		Methylene Chloride	40.000	41.781	-4.5	99	0.00	5.10
			AvgRF	CCRF	%Dev			
17		Acetone	0.083	0.088	-6.0	94	0.00	5.17
			Amount	Calc.	%Drift			
18		Methyl acetate	200.000	207.023	-3.5	96	0.00	5.37
			AvgRF	CCRF	%Dev			
19		trans-1,2-Dichloroethene	0.461	0.471	-2.2	95	0.00	5.36
20		Hexane	0.354	0.343	3.1	94	0.00	5.50
21		Methyl Tert Butyl Ether	0.573	0.572	0.2	91	0.00	5.56
22		Acetonitrile	0.029	0.033	-13.8	99	0.00	5.88
23		Di-isopropyl ether	1.030	1.075	-4.4	96	0.00	6.18
24		Chloroprene	0.474	0.495	-4.4	94	0.00	6.31
25	P	1,1-Dichloroethane	0.555	0.562	-1.3	96	0.00	6.34
			Amount	Calc.	%Drift			
26		Acrylonitrile	200.000	208.993	-4.5	97	0.00	6.40
			AvgRF	CCRF	%Dev			

Continuing Calibration Summary

Job Number: FA55914 **Sample:** VI1685-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56376.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

27		ETBE	0.831	0.895	-7.7	97	0.00	6.80
			Amount	Calc.	%Drift			
28		Vinyl acetate	200.000	208.158	-4.1	101	0.00	6.77
			AvgRF	CCRF	%Dev			
29		cis-1,2-Dichloroethene	0.266	0.271	-1.9	95	0.00	7.27
30		2,2-Dichloropropane	0.236	0.242	-2.5	93	0.00	7.46
31		Bromochloromethane	0.130	0.134	-3.1	96	0.00	7.61
32		Cyclohexane	0.615	0.624	-1.5	94	0.00	7.65
33	C	Chloroform	0.478	0.463	3.1	95	0.00	7.77
			Amount	Calc.	%Drift			
34		Ethyl acetate	200.000	208.175	-4.1	98	0.00	8.00
			AvgRF	CCRF	%Dev			
35		Tetrahydrofuran	0.174	0.191	-9.8	98	0.00	8.04
36	S	Dibromofluoromethane	0.264	0.268	-1.5	96	0.00	8.09
37		Carbon Tetrachloride	0.288	0.274	4.9	89	0.00	8.02
38		1,1,1-Trichloroethane	0.385	0.385	0.0	92	0.00	8.13
			Amount	Calc.	%Drift			
39		2-Butanone	200.000	206.237	-3.1	96	0.00	8.30
			AvgRF	CCRF	%Dev			
40		1,1-Dichloropropene	0.341	0.345	-1.2	93	0.00	8.37
			Amount	Calc.	%Drift			
41		tert-Butyl formate	400.000	459.057	-14.8	112	0.00	8.58
			AvgRF	CCRF	%Dev			
42		Propionitrile	0.044	0.048	-9.1	96	0.00	8.79
43		Methacrylonitrile	0.171	0.184	-7.6	98	0.00	8.84
44		Benzene	1.018	1.007	1.1	95	0.00	8.80
45		TAME	0.555	0.580	-4.5	94	0.00	9.03
46	S	1,2-Dichloroethane-d4	0.357	0.363	-1.7	97	0.00	9.00
47		1,2-Dichloroethane	0.440	0.441	-0.2	97	0.00	9.10
48		Trichloroethene	0.269	0.271	-0.7	96	0.00	9.66
49		Methylcyclohexane	0.440	0.432	1.8	91	0.00	9.65
50		Dibromomethane	0.166	0.170	-2.4	95	0.00	10.15
51	C	1,2-Dichloropropane	0.325	0.335	-3.1	96	0.00	10.25
52		Bromodichloromethane	0.323	0.326	-0.9	93	0.00	10.34
			Amount	Calc.	%Drift			
53		Methyl methacrylate	40.000	40.027	-0.1	94	0.00	10.51
			AvgRF	CCRF	%Dev			
54		2-Chloroethyl vinyl ether	0.192	0.214	-11.5	97	0.00	10.91
			Amount	Calc.	%Drift			
55		cis-1,3-Dichloropropene	40.000	38.955	2.6	92	0.00	10.98
			AvgRF	CCRF	%Dev			
56	I	Chlorobenzene-d5	1.000	1.000	0.0	95	0.00	12.46
57	S	Toluene-d8	1.380	1.365	1.1	95	0.00	11.15
58	C	Toluene	1.544	1.513	2.0	96	0.00	11.20
			Amount	Calc.	%Drift			
59		2-Nitropropane	200.000	181.134	9.4	85	0.00	11.38

Continuing Calibration Summary

Job Number: FA55914 **Sample:** VI1685-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56376.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			AvgRF	CCRF	%Dev			
60		4-Methyl-2-pentanone	0.413	0.441	-6.8	99	0.00	11.52
61		trans-1,3-Dichloropropene	0.030	0.033	-10.0	100	0.00	11.93
62		Tetrachloroethene	0.398	0.401	-0.8	89	0.00	11.55
			Amount	Calc.	%Drift			
63		Ethyl methacrylate	40.000	38.846	2.9	91	0.00	11.70
			AvgRF	CCRF	%Dev			
64		1,1,2-Trichloroethane	0.290	0.296	-2.1	98	0.00	11.70
65		Dibromochloromethane	0.344	0.350	-1.7	91	0.00	11.86
66		1,3-Dichloropropane	0.583	0.588	-0.9	95	0.00	11.93
67		1,2-Dibromoethane	0.319	0.332	-4.1	95	0.00	12.05
68		2-hexanone	0.342	0.371	-8.5	98	0.00	12.21
69		1-Chlorohexane	0.530	0.528	0.4	93	0.00	12.44
70	C	Ethylbenzene	1.766	1.735	1.8	95	0.00	12.48
71	P	Chlorobenzene	1.005	0.972	3.3	96	0.00	12.47
72		1,1,1,2-Tetrachloroethane	0.310	0.306	1.3	91	0.00	12.52
73		m,p-Xylene	1.345	1.355	-0.7	95	0.00	12.59
74		o-Xylene	1.349	1.389	-3.0	95	0.00	12.91
75		Styrene	0.948	1.005	-6.0	95	0.00	12.95
			Amount	Calc.	%Drift			
76	P	Bromoform	40.000	37.578	6.1	89	0.00	12.99
			AvgRF	CCRF	%Dev			
77		Isopropylbenzene	1.487	1.530	-2.9	94	0.00	13.13
78	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	14.13
79	S	4-Bromofluorobenzene	0.790	0.780	1.3	95	0.00	13.35
80		cis-1,4-Dichloro-2-butene	0.308	0.318	-3.2	93	0.00	13.38
81		n-Propylbenzene	4.003	4.041	-0.9	96	0.00	13.43
82		Bromobenzene	0.776	0.773	0.4	95	0.00	13.44
83	P	1,1,2,2-Tetrachloroethane	0.874	0.870	0.5	96	0.00	13.47
84		1,3,5-Trimethylbenzene	2.523	2.585	-2.5	95	0.00	13.55
85		2-Chlorotoluene	2.432	2.450	-0.7	96	0.00	13.67
86		trans-1,4-Dichloro-2-Bute	0.285	0.306	-7.4	95	0.00	13.60
87		1,2,3-Trichloropropane	0.235	0.242	-3.0	97	0.00	13.58
88		Cyclohexanone	0.037	0.041	-10.8	94	0.00	13.62
89		4-Chlorotoluene	2.432	2.450	-0.7	96	0.00	13.67
90		tert-Butylbenzene	1.561	1.583	-1.4	95	0.00	13.79
91		a-Methyl styrene		----------NA----------				
92		1,2,4-Trimethylbenzene	2.609	2.677	-2.6	95	0.00	13.83
			Amount	Calc.	%Drift			
93		Pentachloroethane	40.000	37.081	7.3	97	0.00	13.82
			AvgRF	CCRF	%Dev			
94		sec-Butylbenzene	3.221	3.243	-0.7	94	0.00	13.91
95		4-Isopropyltoluene	2.611	2.660	-1.9	94	0.00	13.99
96		1,3-Dichlorobenzene	1.440	1.436	0.3	96	0.00	14.08
97		1,4-Dichlorobenzene	1.567	1.514	3.4	96	0.00	14.14
98		n-Butylbenzene	1.503	1.546	-2.9	94	0.00	14.29
			Amount	Calc.	%Drift			
99		Benzyl Chloride	40.000	37.013	7.5	90	0.00	14.30
			AvgRF	CCRF	%Dev			
100		1,2-Dichlorobenzene	1.402	1.394	0.6	95	0.00	14.43

Continuing Calibration Summary

Job Number: FA55914 **Sample:** VI1685-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56376.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			Amount	Calc.	%Drift			
101		1,2-Dibromo-3-Chloropropa	40.000	37.652	5.9	89	0.00	14.96
			AvgRF	CCRF	%Dev			
102		Hexachlorobutadiene	0.466	0.456	2.1	92	0.00	15.38
103		1,2,4-Trichlorobenzene	0.931	0.947	-1.7	94	0.00	15.41
			Amount	Calc.	%Drift			
104		Naphthalene	40.000	39.612	1.0	94	0.00	15.63
			AvgRF	CCRF	%Dev			
105		1,2,3-Trichlorobenzene	0.873	0.882	-1.0	94	0.00	15.76
106	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	93	0.00	5.62
			Amount	Calc.	%Drift			
107		Ethanol	800.000	797.658	0.3	91	0.02	4.24
108		Acrolein	200.000	201.925	-1.0	95	0.00	4.71
			AvgRF	CCRF	%Dev			
109		Tert Butyl Alcohol	1.602	1.572	1.9	90	0.00	5.73
110		Isobutyl alcohol	0.662	0.717	-8.3	95	0.00	9.21
			Amount	Calc.	%Drift			
111		Tert Amyl Alcohol	400.000	411.493	-2.9	95	0.00	9.33
112		1,4-Dioxane	800.000	798.588	0.2	93	0.00	10.55
			AvgRF	CCRF	%Dev			
113		3,3-Dimethyl-1-butanol	1.705	1.903	-11.6	94	0.00	12.20

(#) = Out of Range SPCC's out = 0 CCC's out = 0
I56318.D I-July2518.M Mon Jul 30 07:03:51 2018

MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56359.D
Acq On : 27 Jul 2018 1:02 pm
Operator : ANAJ
Sample : FA55914-1 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 27 13:20:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

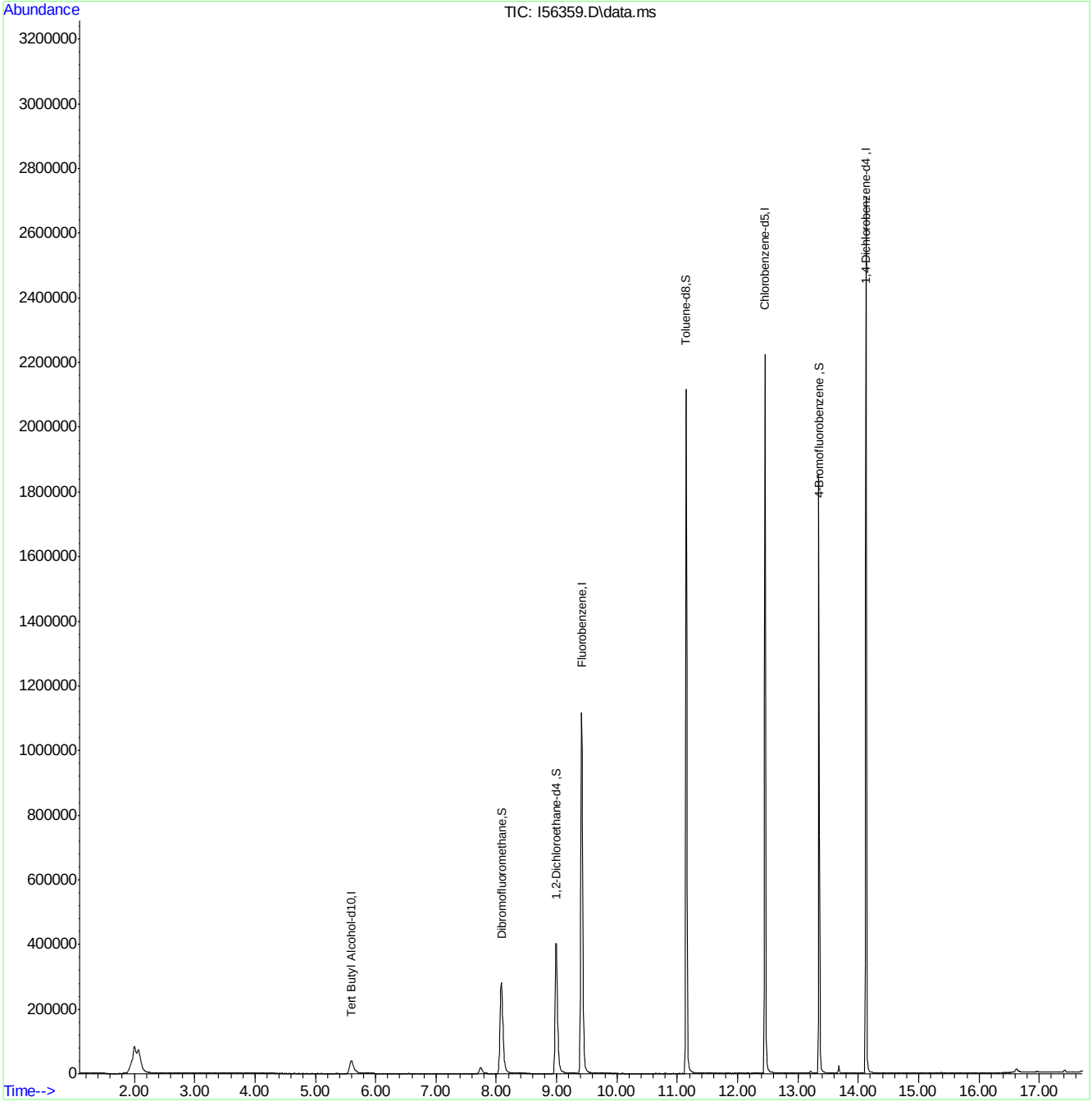
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.415	96	1172205	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.450	117	821755	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	416449	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.592	65	82148	250.00	ug/L	-0.03
System Monitoring Compounds						
36) Dibromofluoromethane	8.085	113	300197	48.51	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.02%			
46) 1,2-Dichloroethane-d4	8.994	65	423667	50.63	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.26%			
57) Toluene-d8	11.146	98	1116268	49.23	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.46%			
79) 4-Bromofluorobenzene	13.353	174	326440	49.63	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.26%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56359.D
Acq On : 27 Jul 2018 1:02 pm
Operator : ANAJ
Sample : FA55914-1 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 27 13:20:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56360.D
Acq On : 27 Jul 2018 1:26 pm
Operator : ANAJ
Sample : FA55914-2 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 27 14:10:42 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

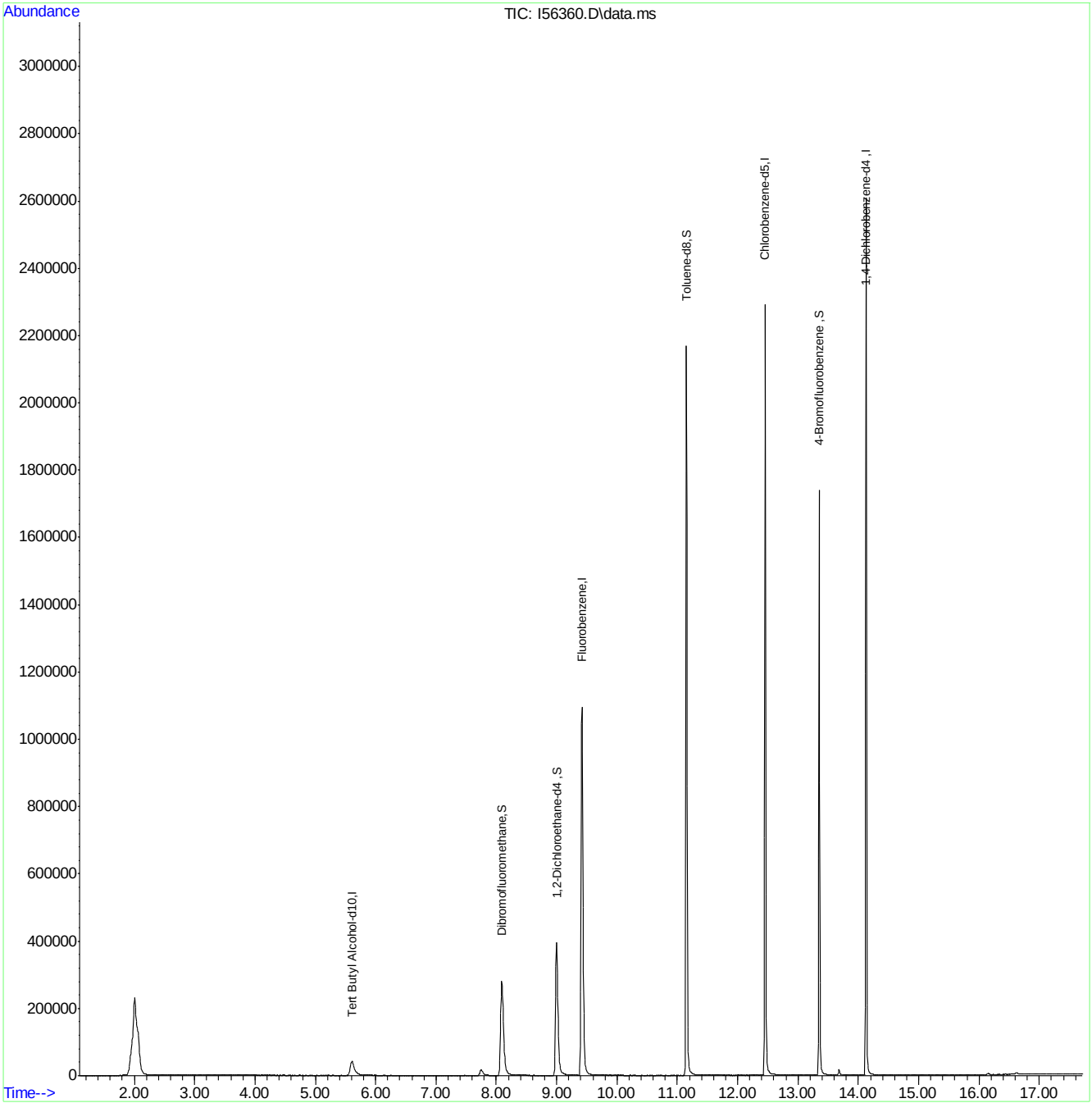
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.420	96	1148075	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	813117	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	412195	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	82404	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.091	113	294743	48.63	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.26%			
46) 1,2-Dichloroethane-d4	9.000	65	417141	50.89	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.78%			
57) Toluene-d8	11.152	98	1103952	49.20	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.40%			
79) 4-Bromofluorobenzene	13.353	174	319509	49.08	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.16%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56360.D
Acq On : 27 Jul 2018 1:26 pm
Operator : ANAJ
Sample : FA55914-2 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 27 14:10:42 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56361.D
Acq On : 27 Jul 2018 2:11 pm
Operator : ANAJ
Sample : FA55914-3 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 27 14:29:24 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

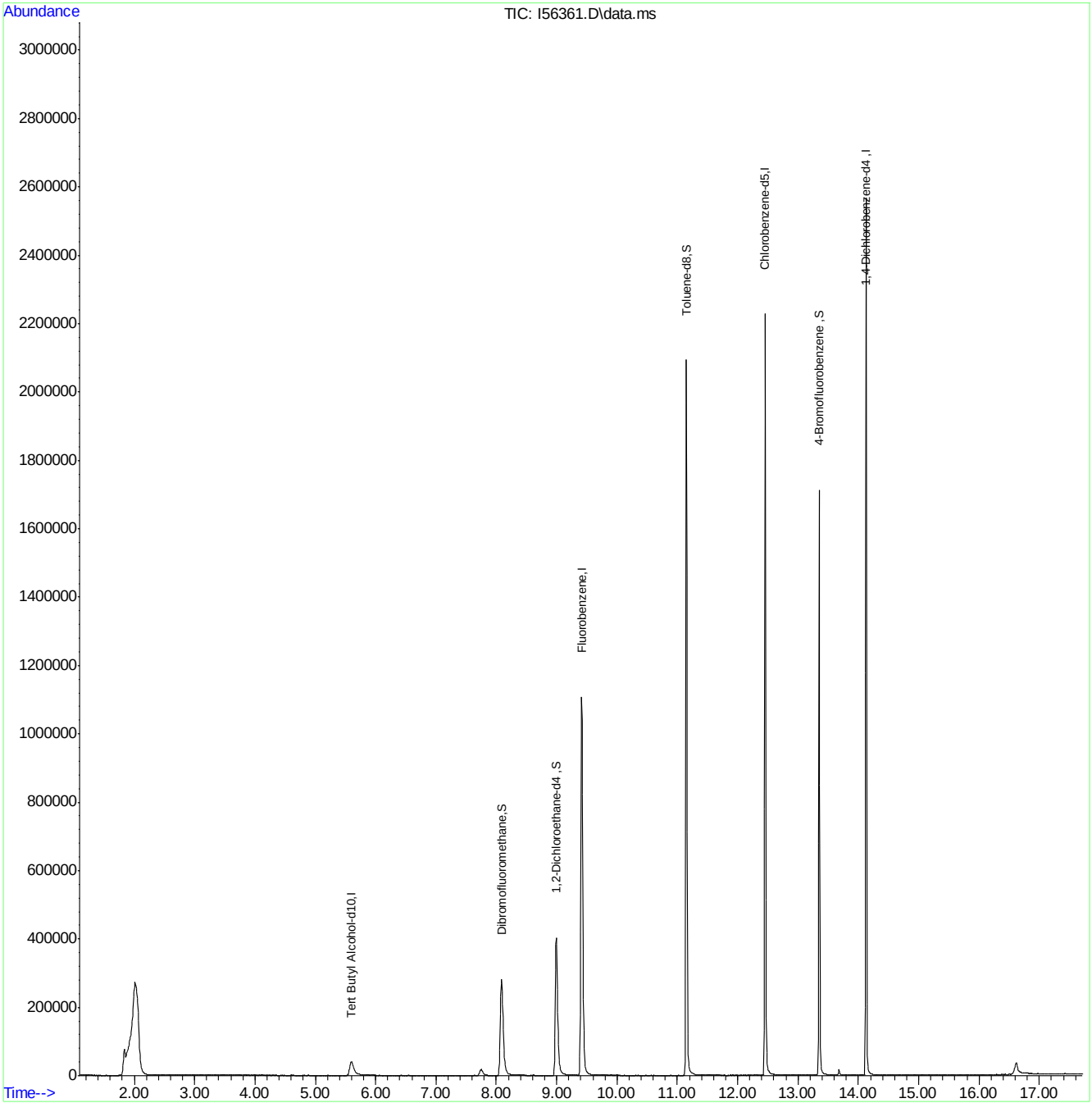
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.414	96	1147470	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	802699	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	409630	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.592	65	84123	250.00	ug/L	-0.03
System Monitoring Compounds						
36) Dibromofluoromethane	8.085	113	297288	49.07	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.14%			
46) 1,2-Dichloroethane-d4	8.994	65	419718	51.24	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.48%			
57) Toluene-d8	11.152	98	1098191	49.58	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.16%			
79) 4-Bromofluorobenzene	13.353	174	316180	48.87	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.74%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56361.D
Acq On : 27 Jul 2018 2:11 pm
Operator : ANAJ
Sample : FA55914-3 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 27 14:29:24 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56362.D
Acq On : 27 Jul 2018 2:35 pm
Operator : ANAJ
Sample : FA55914-4 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 27 15:01:24 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

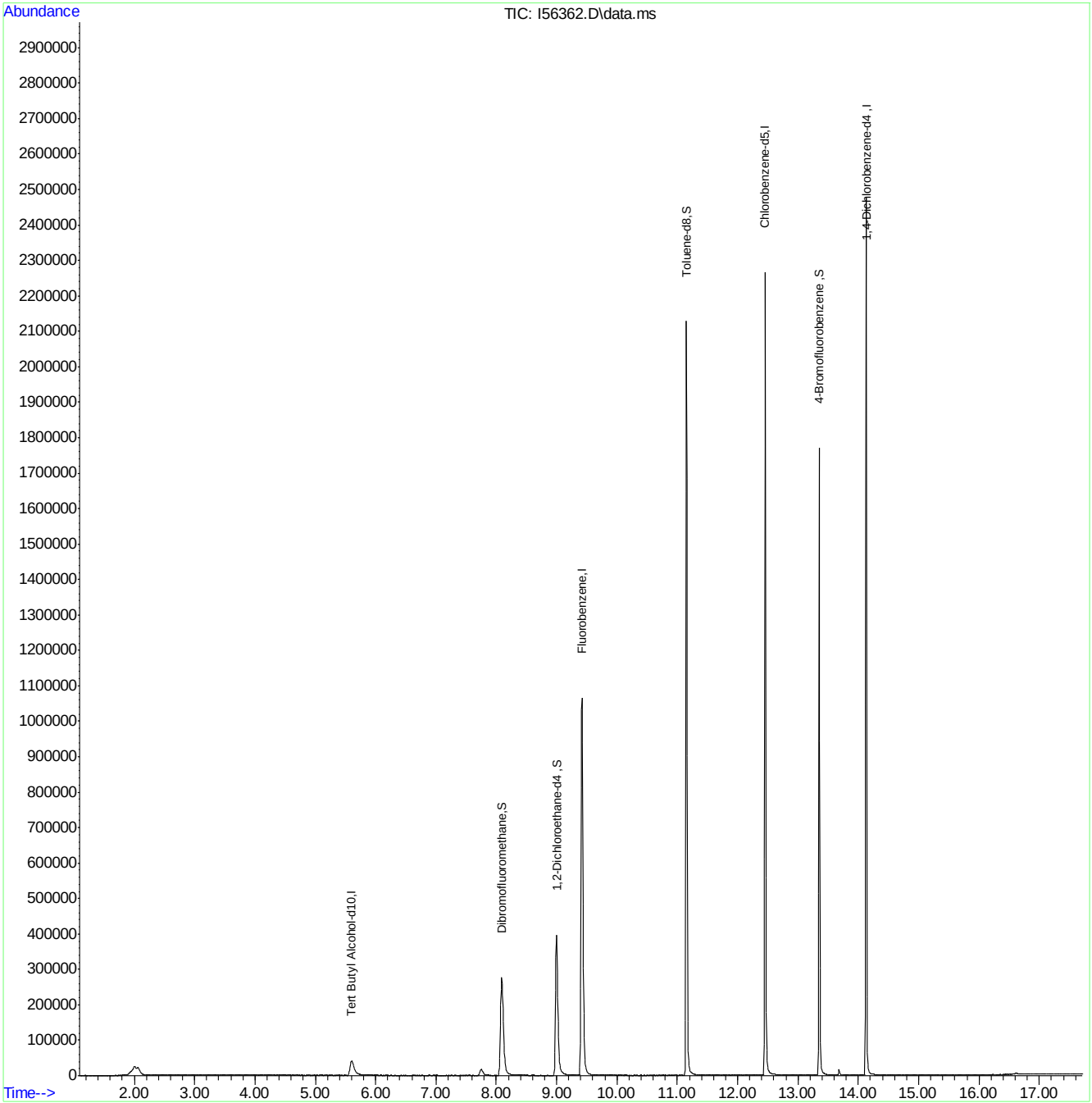
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.420	96	1123505	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	782702	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	398440	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	80264	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.091	113	291169	49.09	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.18%			
46) 1,2-Dichloroethane-d4	9.000	65	408293	50.90	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.80%			
57) Toluene-d8	11.152	98	1069200	49.50	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.00%			
79) 4-Bromofluorobenzene	13.353	174	306832	48.76	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.52%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56362.D
Acq On : 27 Jul 2018 2:35 pm
Operator : ANAJ
Sample : FA55914-4 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 27 15:01:24 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56363.D
Acq On : 27 Jul 2018 2:59 pm
Operator : ANAJ
Sample : FA55914-5 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 27 16:42:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

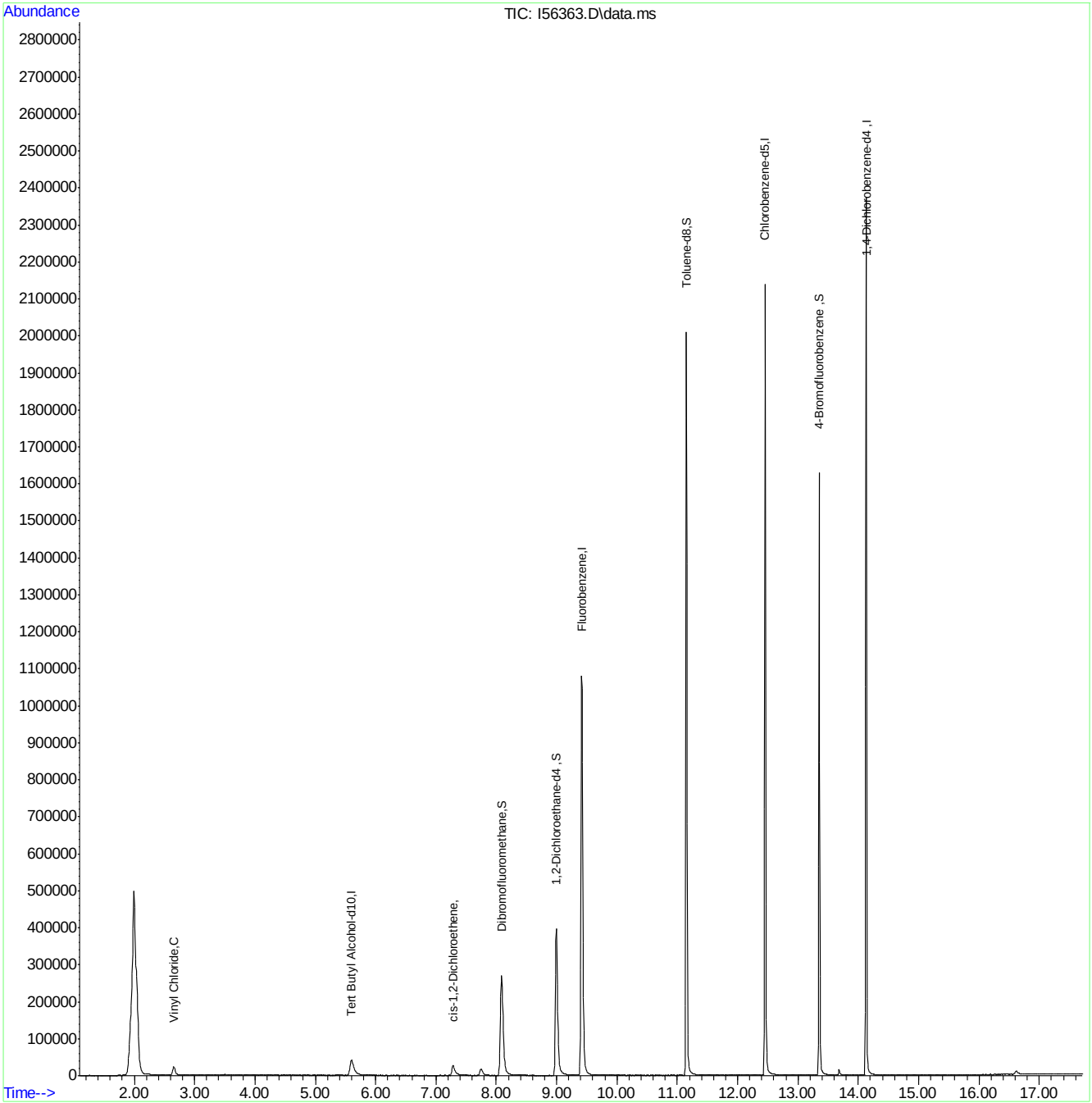
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.414	96	1060234	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	757007	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	380382	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	76653	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.085	113	276114	49.33	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.66%			
46) 1,2-Dichloroethane-d4	8.994	65	387752	51.23	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.46%			
57) Toluene-d8	11.152	98	997168	47.73	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 95.46%			
79) 4-Bromofluorobenzene	13.353	174	296152	49.29	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.58%			
Target Compounds						Qvalue
5) Vinyl Chloride	2.654	62	40782	5.85	ug/L	100
29) cis-1,2-Dichloroethene	7.287	96	21183	3.76	ug/L	95

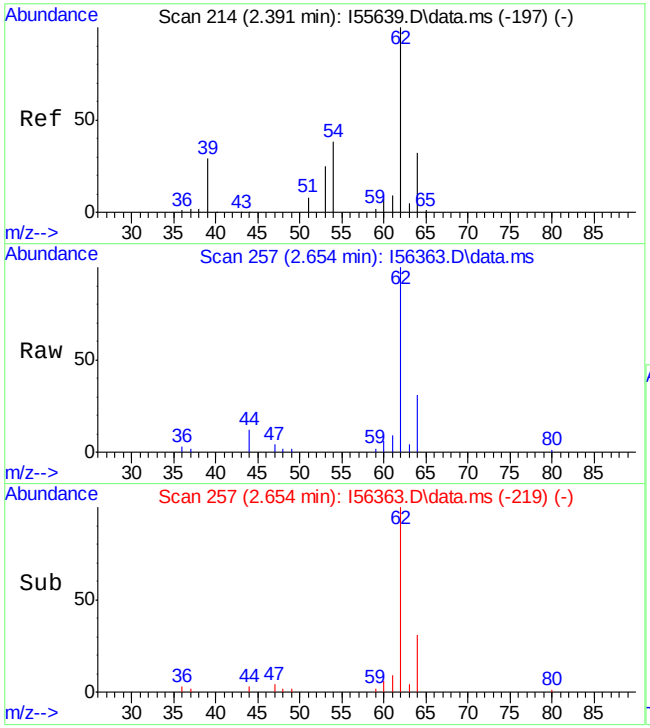
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56363.D
Acq On : 27 Jul 2018 2:59 pm
Operator : ANAJ
Sample : FA55914-5 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 27 16:42:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

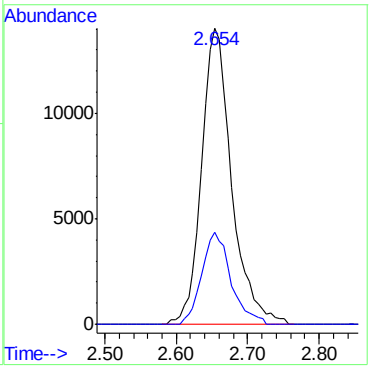


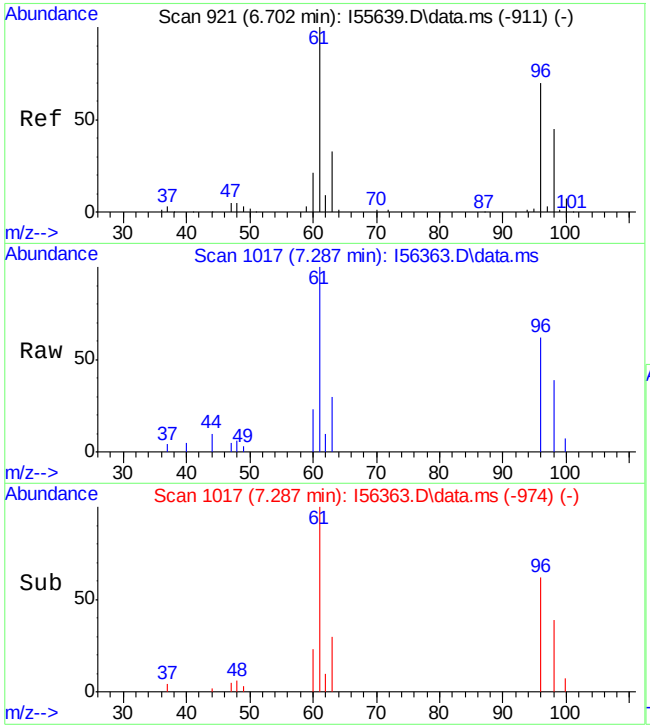


#5
Vinyl Chloride
Concen: 5.85 ug/L
RT: 2.654 min Scan# 257
Delta R.T. -0.018 min
Lab File: I56363.D
Acq: 27 Jul 2018 2:59 pm

Tgt Ion: 62 Resp: 40782

Ion	Ratio	Lower	Upper
62	100		
64	31.2	1.0	61.0

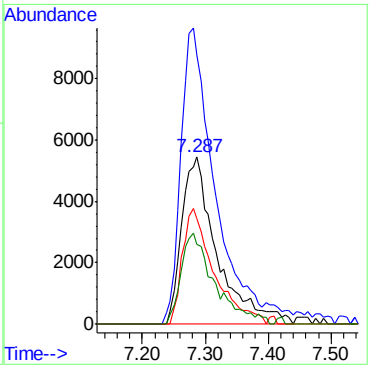




#29
cis-1,2-Dichloroethene
Concen: 3.76 ug/L
RT: 7.287 min Scan# 1017
Delta R.T. 0.012 min
Lab File: I56363.D
Acq: 27 Jul 2018 2:59 pm

Tgt Ion: 96 Resp: 21183

Ion	Ratio	Lower	Upper
96	100		
61	161.4	138.9	198.9
98	63.4	34.0	94.0
63	48.1	22.5	82.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56364.D
Acq On : 27 Jul 2018 3:23 pm
Operator : ANAJ
Sample : FA55914-7 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 27 16:43:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

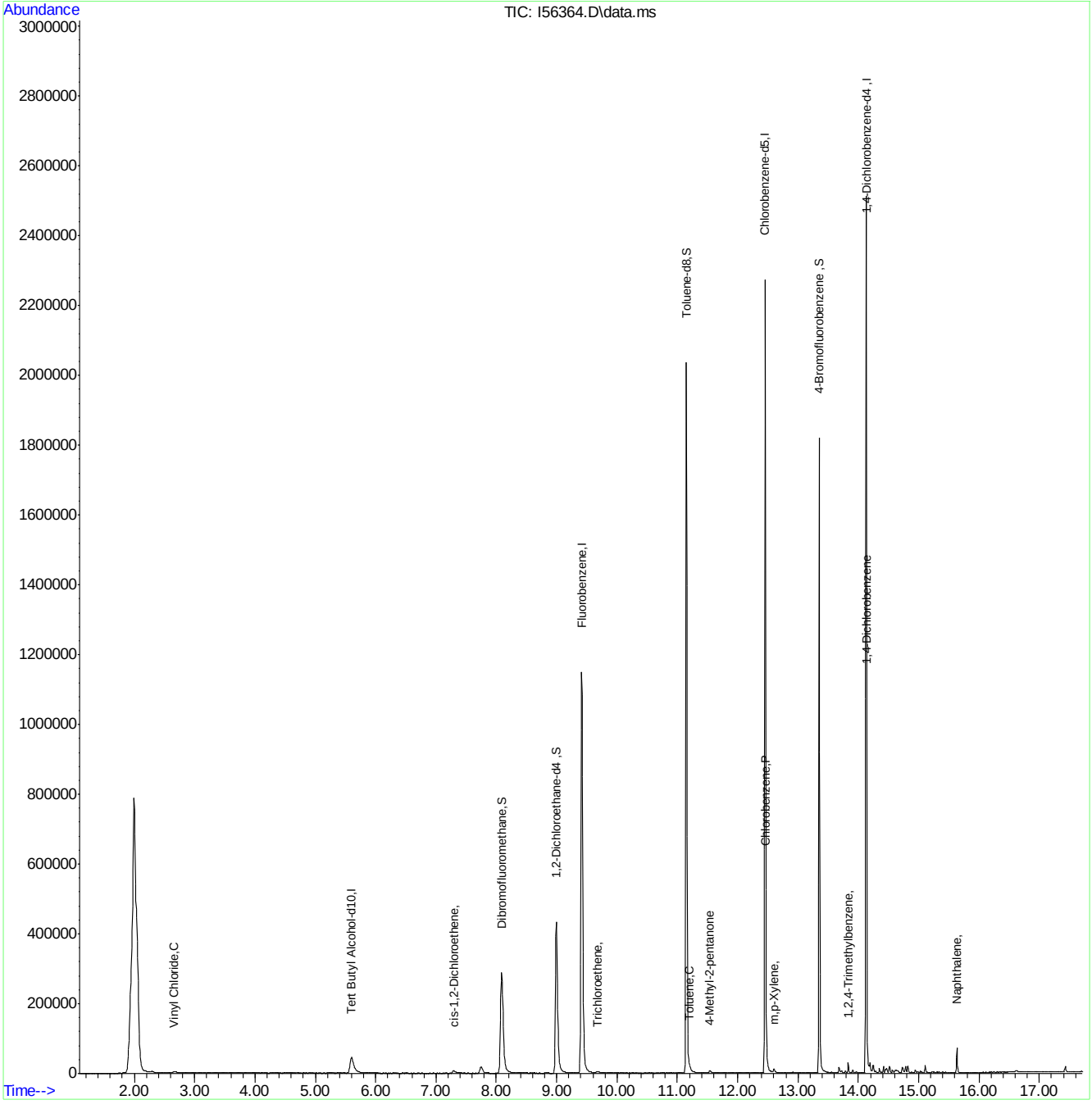
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	9.414	96	1105011	50.00	ug/L		0.00
56) Chlorobenzene-d5	12.456	117	783406	50.00	ug/L		0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	403786	50.00	ug/L		0.00
106) Tert Butyl Alcohol-d10	5.598	65	84044	250.00	ug/L		-0.02
System Monitoring Compounds							
36) Dibromofluoromethane	8.091	113	286919	49.18	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.36%				
46) 1,2-Dichloroethane-d4	8.994	65	404368	51.26	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.52%				
57) Toluene-d8	11.152	98	1033762	47.82	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 95.64%				
79) 4-Bromofluorobenzene	13.353	174	310144	48.63	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.26%				
Target Compounds							Qvalue
5) Vinyl Chloride	2.660	62	5520	0.76	ug/L		90
29) cis-1,2-Dichloroethene	7.293	96	5996	1.02	ug/L		94
48) Trichloroethene	9.670	95	2424	0.41	ug/L		94
58) Toluene	11.207	91	6681	0.28	ug/L		92
60) 4-Methyl-2-pentanone	11.536	43	6985	1.08	ug/L		94
71) Chlorobenzene	12.469	112	5503	0.35	ug/L	#	69
73) m,p-Xylene	12.597	91	5219	0.25	ug/L		98
92) 1,2,4-Trimethylbenzene	13.834	105	11901	0.56	ug/L		98
97) 1,4-Dichlorobenzene	14.139	146	13065	1.03	ug/L	#	25
104) Naphthalene	15.633	128	36540	1.94	ug/L		100

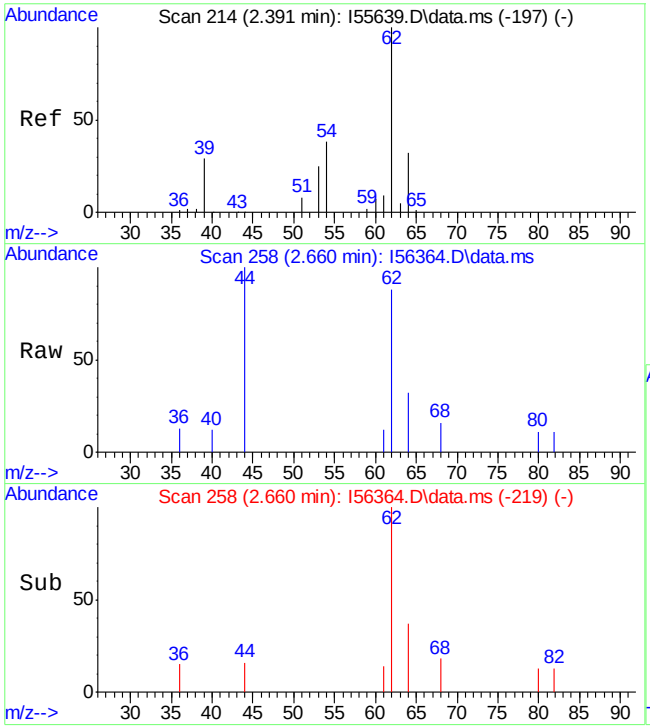
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56364.D
Acq On : 27 Jul 2018 3:23 pm
Operator : ANAJ
Sample : FA55914-7 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 27 16:43:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

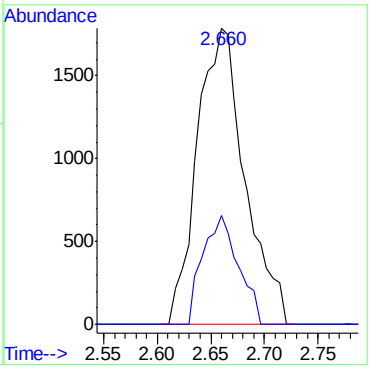


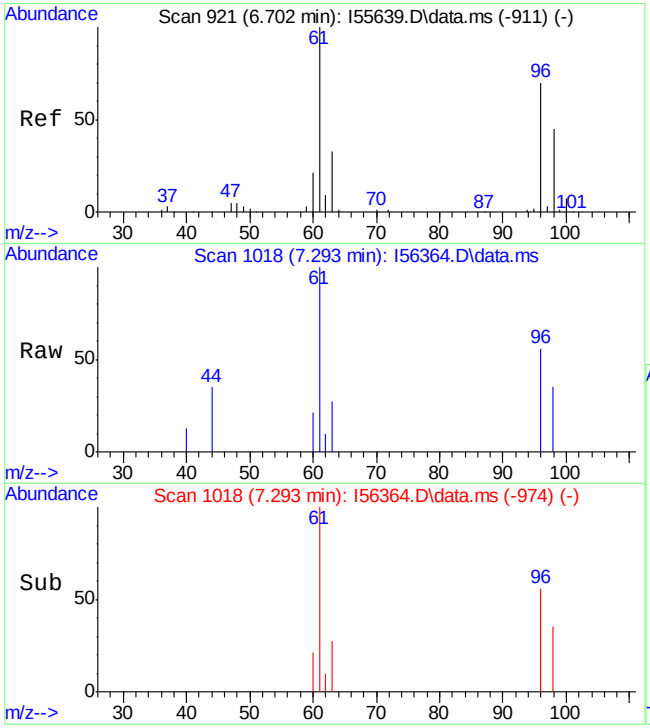


#5
Vinyl Chloride
Concen: 0.76 ug/L
RT: 2.660 min Scan# 258
Delta R.T. -0.012 min
Lab File: I56364.D
Acq: 27 Jul 2018 3:23 pm

Tgt Ion: 62 Resp: 5520

Ion	Ratio	Lower	Upper
62	100		
64	36.7	1.0	61.0

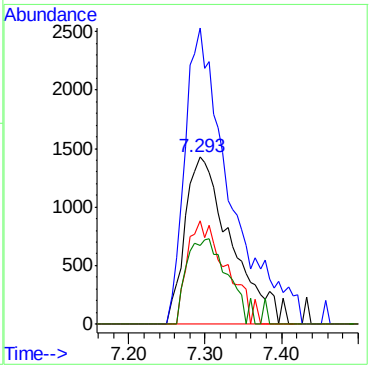


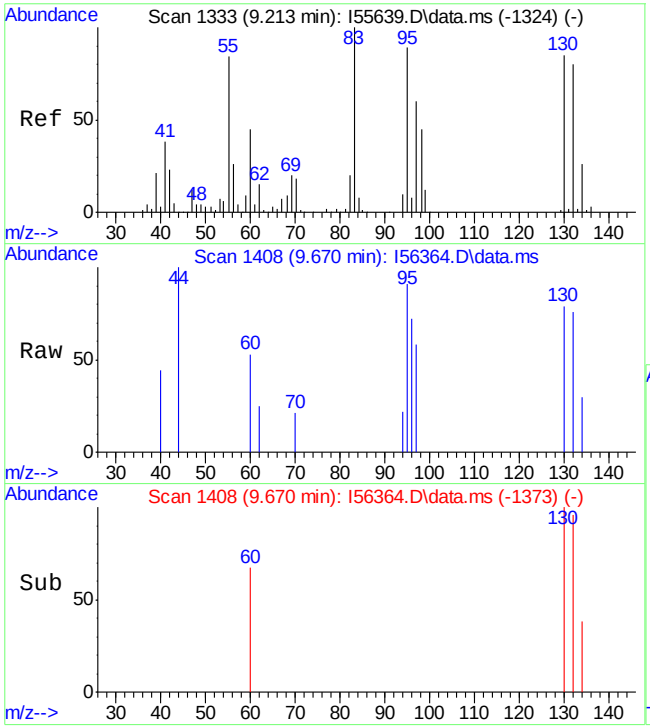


#29
cis-1,2-Dichloroethene
Concen: 1.02 ug/L
RT: 7.293 min Scan# 1018
Delta R.T. 0.018 min
Lab File: I56364.D
Acq: 27 Jul 2018 3:23 pm

Tgt Ion: 96 Resp: 5996

Ion	Ratio	Lower	Upper
96	100		
61	177.3	138.9	198.9
98	61.9	34.0	94.0
63	47.1	22.5	82.5

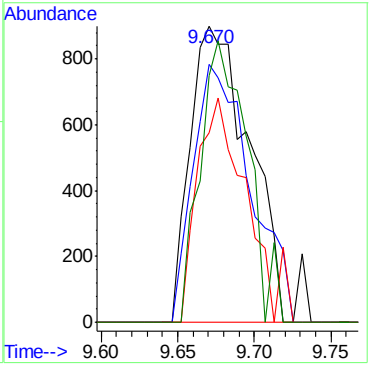


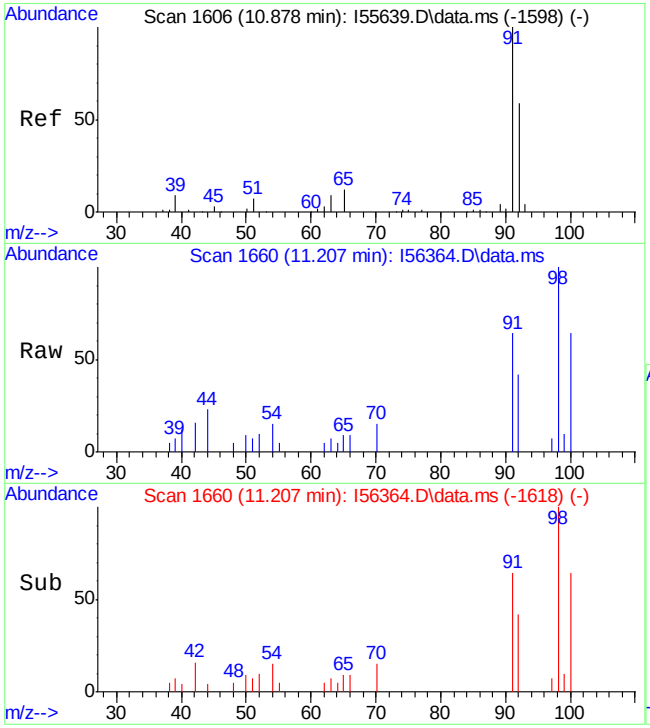


#48
Trichloroethene
Concen: 0.41 ug/L
RT: 9.670 min Scan# 1408
Delta R.T. 0.012 min
Lab File: I56364.D
Acq: 27 Jul 2018 3:23 pm

Tgt Ion: 95 Resp: 2424

Ion	Ratio	Lower	Upper
95	100		
130	87.1	64.2	124.2
97	64.2	37.2	97.2
132	83.4	60.6	120.6

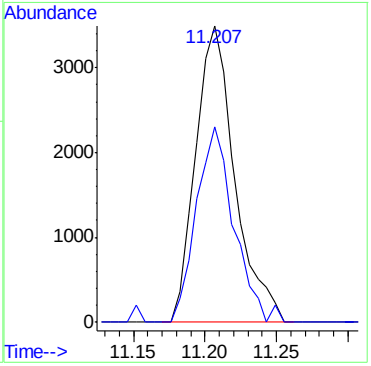


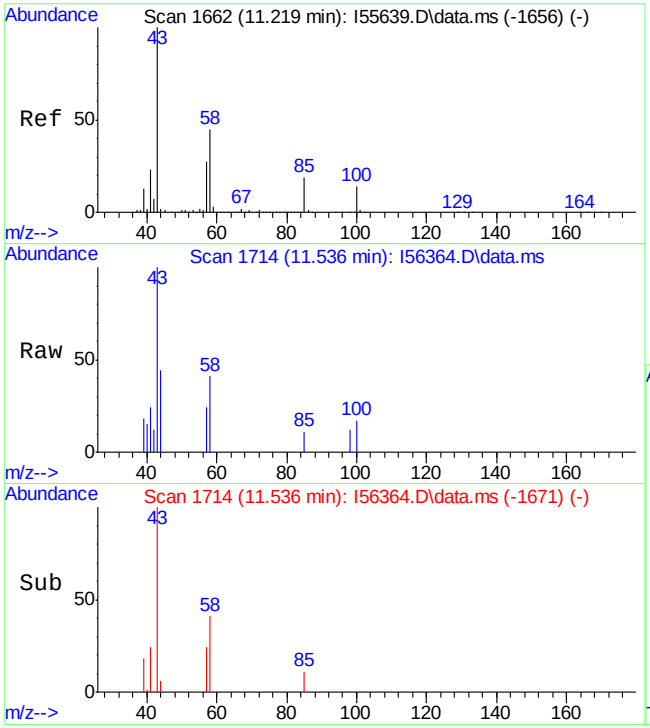


#58
Toluene
Concen: 0.28 ug/L
RT: 11.207 min Scan# 1660
Delta R.T. 0.006 min
Lab File: I56364.D
Acq: 27 Jul 2018 3:23 pm

Tgt Ion: 91 Resp: 6681

Ion	Ratio	Lower	Upper
91	100		
92	66.1	29.8	89.8

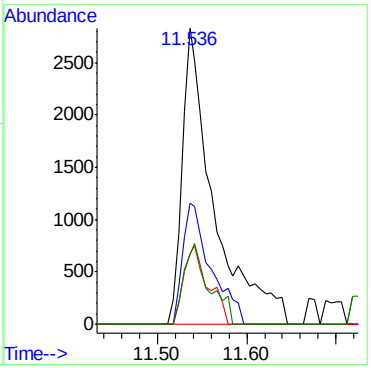


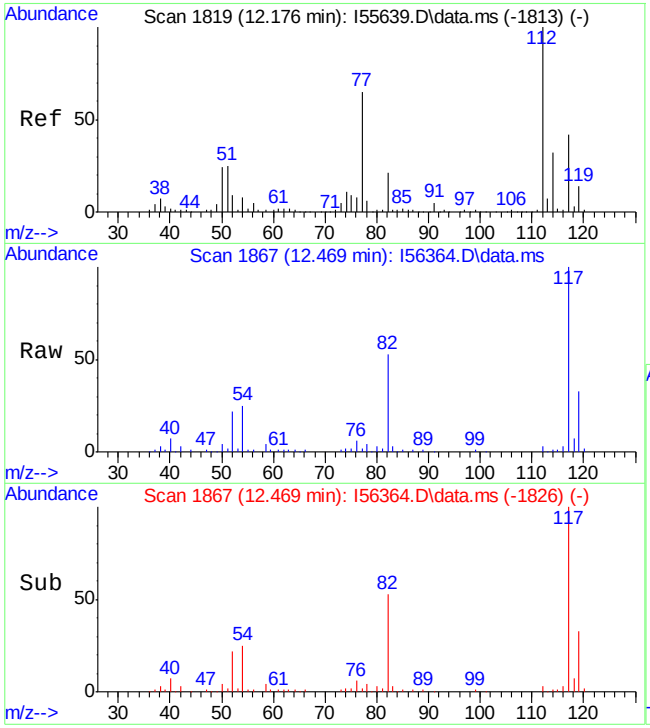


#60
4-Methyl-2-pentanone
Concen: 1.08 ug/L
RT: 11.536 min Scan# 1714
Delta R.T. 0.012 min
Lab File: I56364.D
Acq: 27 Jul 2018 3:23 pm

Tgt Ion: 43 Resp: 6985

Ion	Ratio	Lower	Upper
43	100		
58	41.1	15.1	75.1
57	23.9	0.0	57.5
41	23.6	0.0	51.9

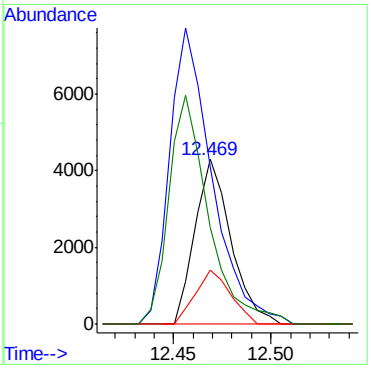


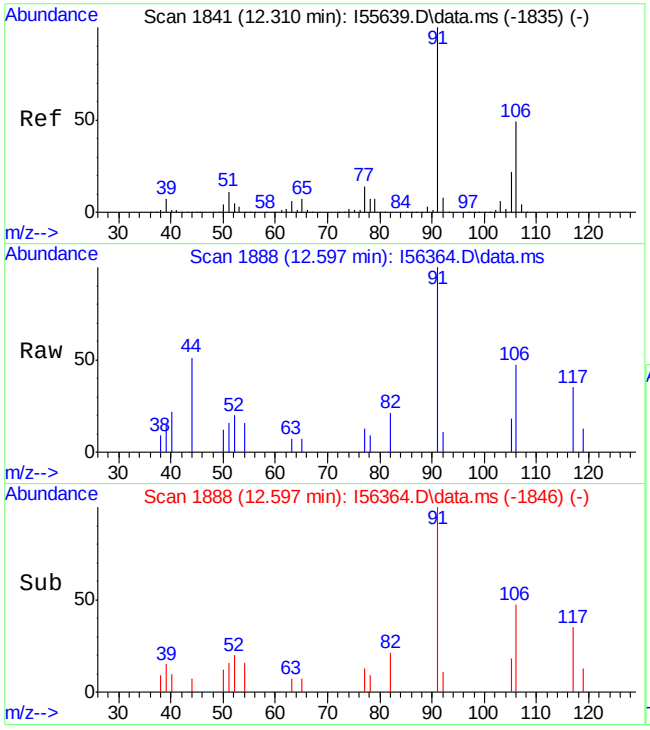


#71
Chlorobenzene
Concen: 0.35 ug/L
RT: 12.469 min Scan# 1867
Delta R.T. -0.000 min
Lab File: I56364.D
Acq: 27 Jul 2018 3:23 pm

Tgt Ion:112 Resp: 5503

Ion	Ratio	Lower	Upper
112	100		
77	95.3	34.8	94.8#
114	32.8	1.8	61.8
51	58.6	3.8	63.8

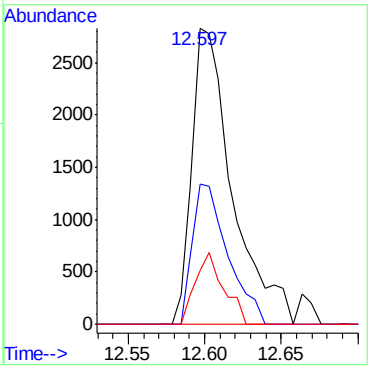


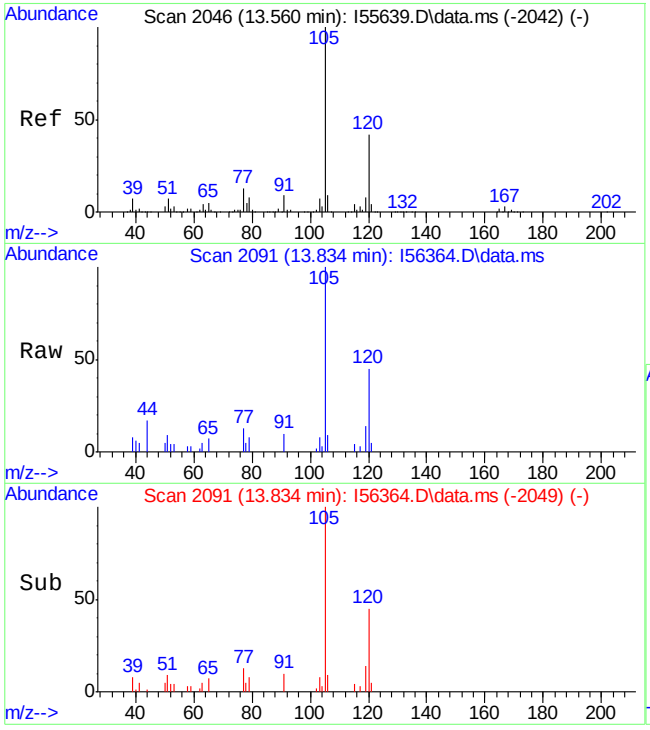


#73
m,p-Xylene
Concen: 0.25 ug/L
RT: 12.597 min Scan# 1888
Delta R.T. 0.006 min
Lab File: I56364.D
Acq: 27 Jul 2018 3:23 pm

Tgt Ion: 91 Resp: 5219

Ion	Ratio	Lower	Upper
91	100		
106	47.4	17.0	77.0
105	18.2	0.0	51.3

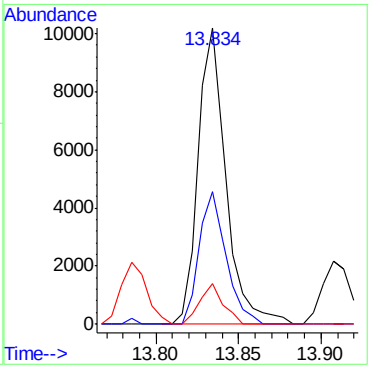


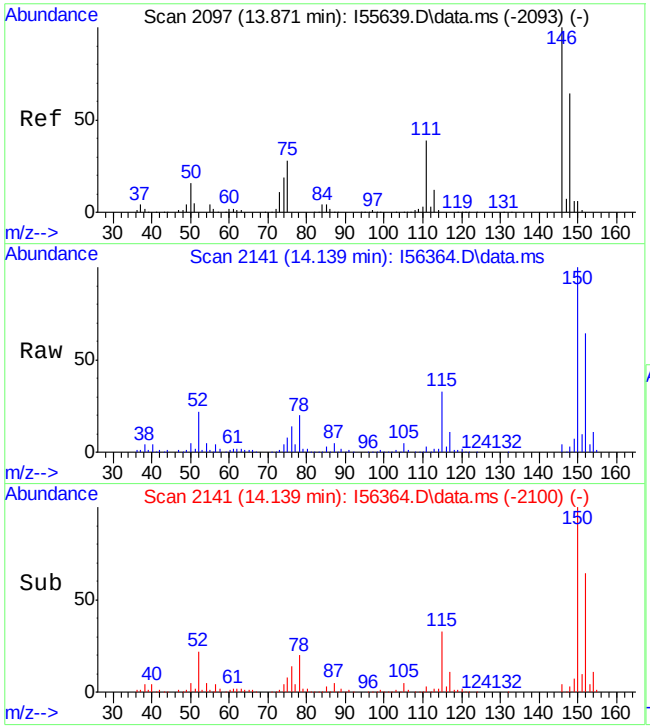


#92
1,2,4-Trimethylbenzene
Concen: 0.56 ug/L
RT: 13.834 min Scan# 2091
Delta R.T. 0.006 min
Lab File: I56364.D
Acq: 27 Jul 2018 3:23 pm

Tgt Ion:105 Resp: 11901

Ion	Ratio	Lower	Upper
105	100		
120	44.6	14.5	74.5
119	13.9	0.0	47.4

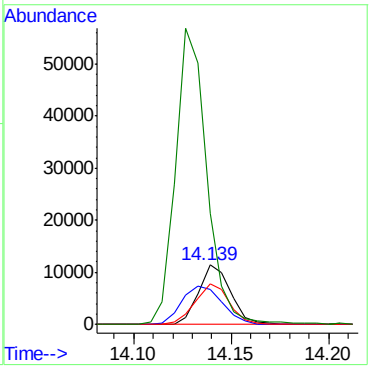


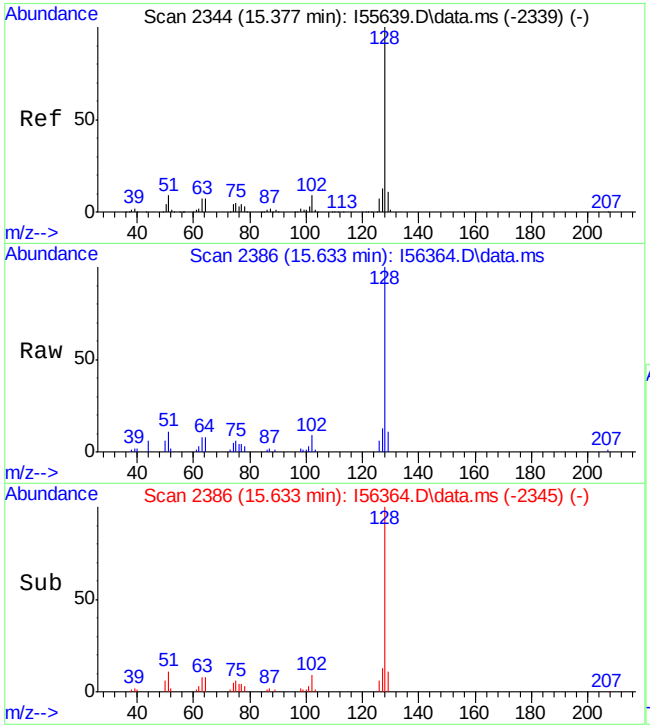


#97
1,4-Dichlorobenzene
Concen: 1.03 ug/L
RT: 14.139 min Scan# 2141
Delta R.T. -0.000 min
Lab File: I56364.D
Acq: 27 Jul 2018 3:23 pm

Tgt Ion:146 Resp: 13065

Ion	Ratio	Lower	Upper
146	100		
111	58.5	11.7	71.7
148	67.8	33.5	93.5
75	184.4	7.9	67.9#

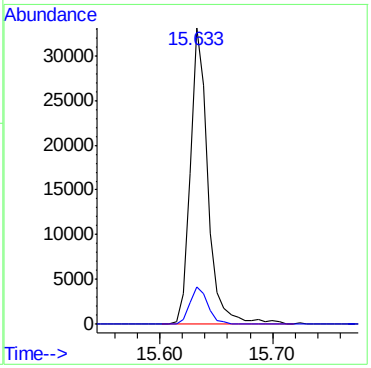




#104
Naphthalene
Concen: 1.94 ug/L
RT: 15.633 min Scan# 2386
Delta R.T. -0.000 min
Lab File: I56364.D
Acq: 27 Jul 2018 3:23 pm

Tgt Ion:128 Resp: 36540

Ion	Ratio	Lower	Upper
128	100		
127	12.6	0.0	42.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56365.D
Acq On : 27 Jul 2018 3:46 pm
Operator : ANAJ
Sample : FA55914-9 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 27 16:43:24 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

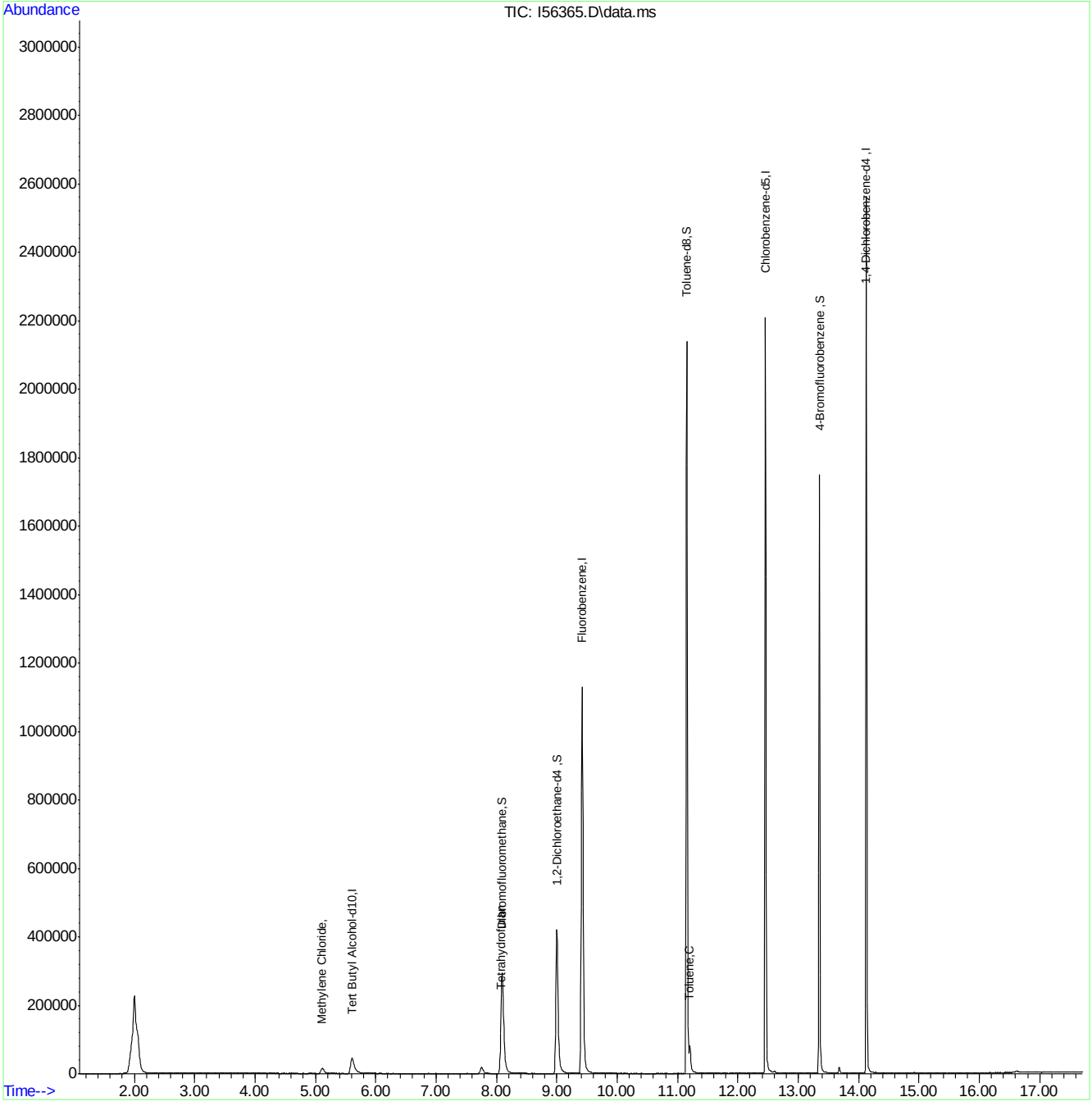
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1127823	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	787779	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	400956	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	82416	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	290716	48.82	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.64%			
46) 1,2-Dichloroethane-d4	9.000	65	415420	51.59	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 103.18%			
57) Toluene-d8	11.152	98	1072877	49.35	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.70%			
79) 4-Bromofluorobenzene	13.353	174	309875	48.93	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.86%			
Target Compounds						Qvalue
16) Methylene Chloride	5.111	49	21493	2.05	ug/L	93
35) Tetrahydrofuran	8.067	42	9742	2.49	ug/L	77
58) Toluene	11.201	91	47628	1.96	ug/L	95

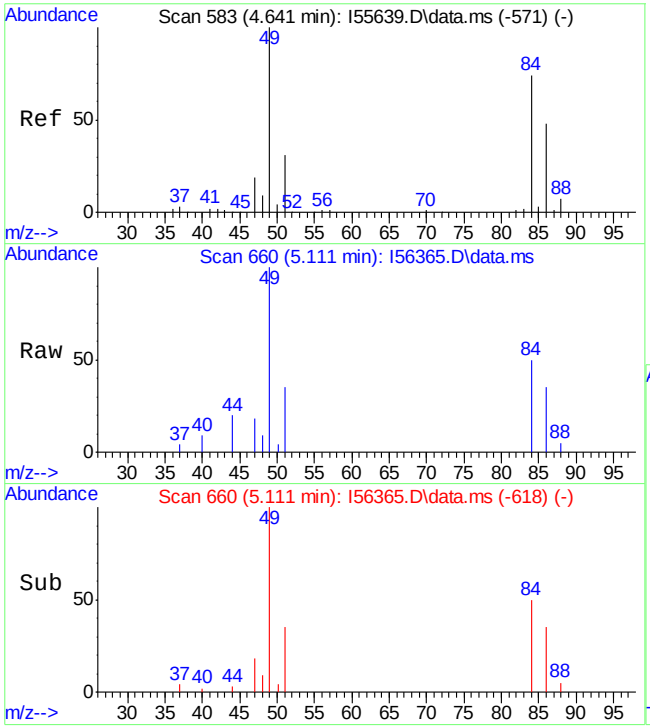
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56365.D
Acq On : 27 Jul 2018 3:46 pm
Operator : ANAJ
Sample : FA55914-9 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 27 16:43:24 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

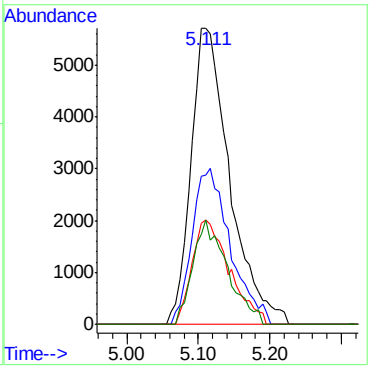


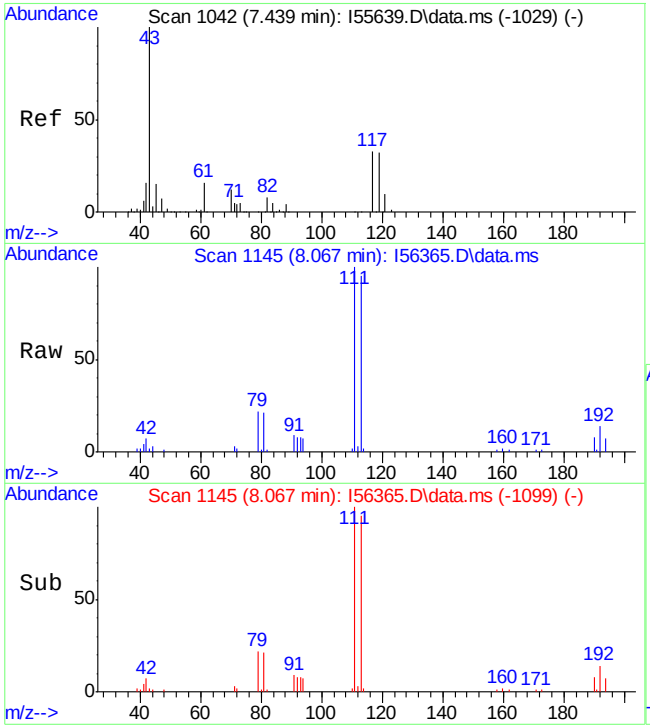


#16
Methylene Chloride
Concen: 2.05 ug/L
RT: 5.111 min Scan# 660
Delta R.T. 0.006 min
Lab File: I56365.D
Acq: 27 Jul 2018 3:46 pm

Tgt Ion: 49 Resp: 21493

Ion	Ratio	Lower	Upper
49	100		
84	50.3	27.9	87.9
86	35.3	7.1	67.1
51	35.4	1.7	61.7

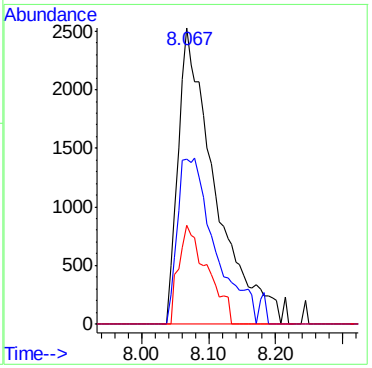


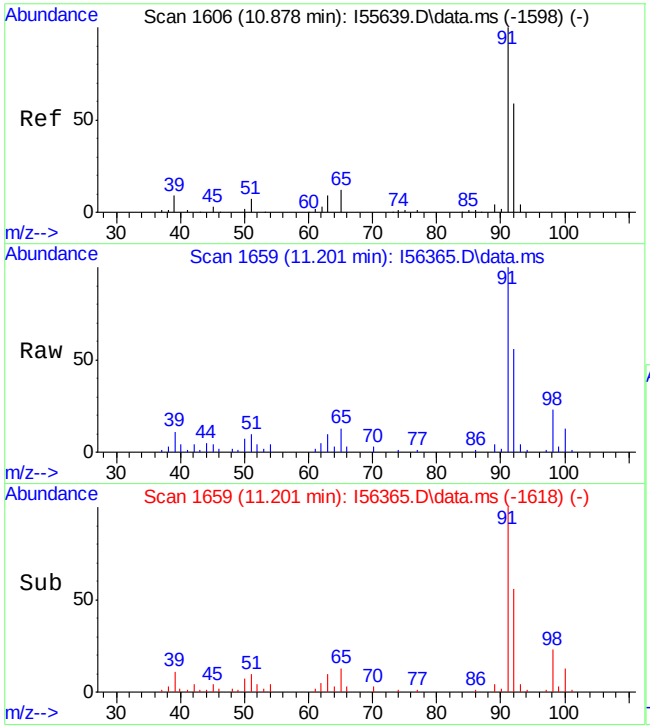


#35
Tetrahydrofuran
Concen: 2.49 ug/L
RT: 8.067 min Scan# 1145
Delta R.T. 0.030 min
Lab File: I56365.D
Acq: 27 Jul 2018 3:46 pm

Tgt Ion: 42 Resp: 9742

Ion	Ratio	Lower	Upper
42	100		
41	55.6	20.4	60.4
72	33.5	3.5	43.5

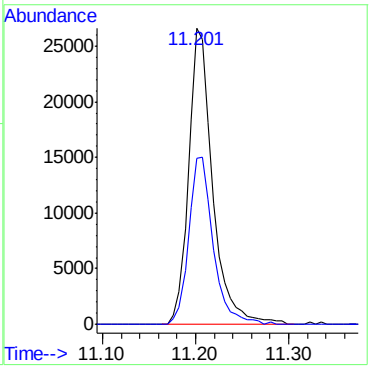




#58
Toluene
Concen: 1.96 ug/L
RT: 11.201 min Scan# 1659
Delta R.T. 0.000 min
Lab File: I56365.D
Acq: 27 Jul 2018 3:46 pm

Tgt Ion: 91 Resp: 47628

Ion	Ratio	Lower	Upper
91	100		
92	56.2	29.8	89.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56366.D
Acq On : 27 Jul 2018 4:10 pm
Operator : ANAJ
Sample : FA55914-10 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 27 16:43:40 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

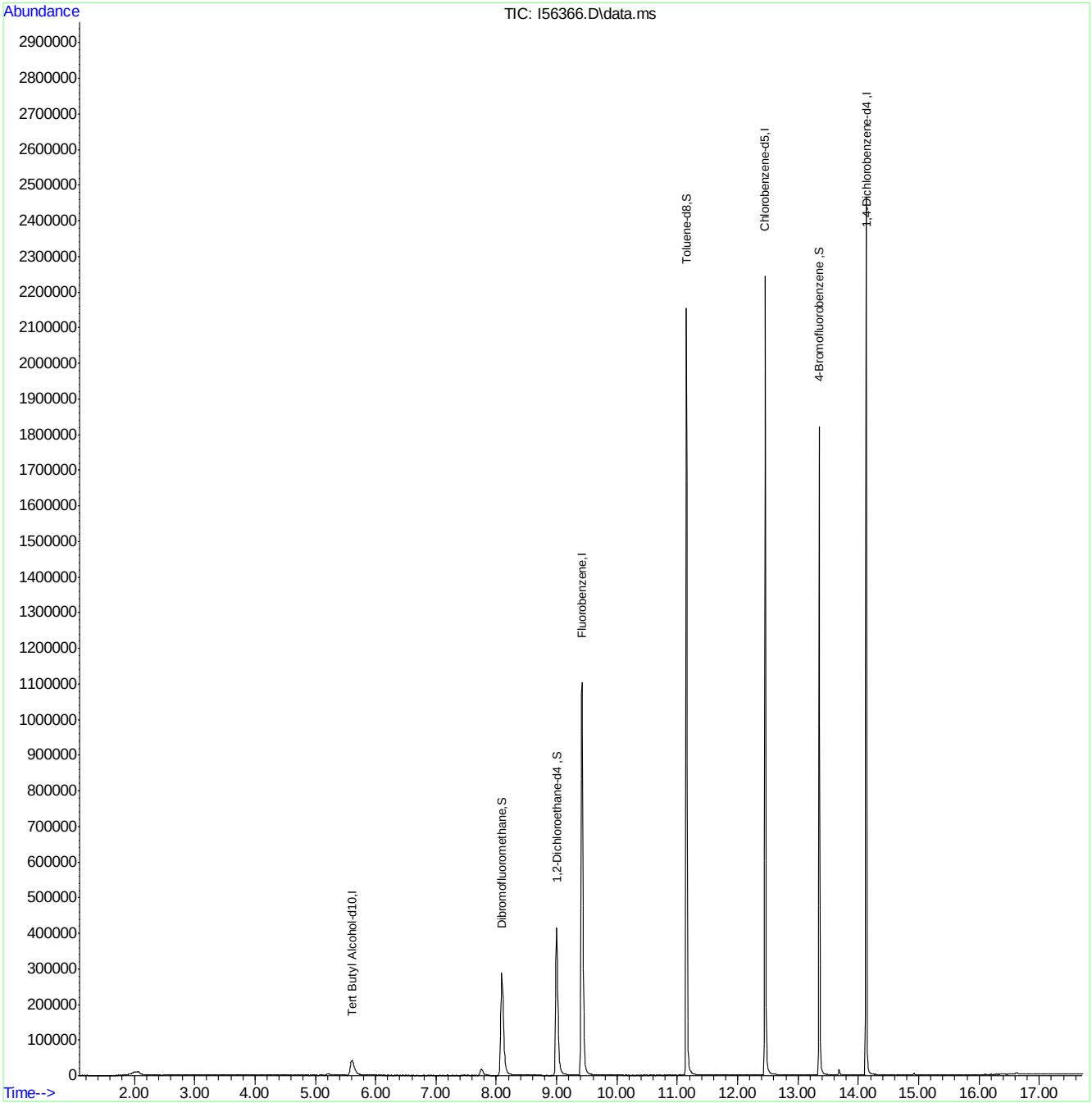
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.420	96	1118772	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	790973	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	397200	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	83703	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.091	113	292420	49.51	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.02%			
46) 1,2-Dichloroethane-d4	9.000	65	411582	51.53	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 103.06%			
57) Toluene-d8	11.152	98	1081427	49.54	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.08%			
79) 4-Bromofluorobenzene	13.353	174	309757	49.38	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.76%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56366.D
Acq On : 27 Jul 2018 4:10 pm
Operator : ANAJ
Sample : FA55914-10 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 27 16:43:40 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56358.D
Acq On : 27 Jul 2018 9:54 am
Operator : ANAJ
Sample : MB MA Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 27 10:14:08 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

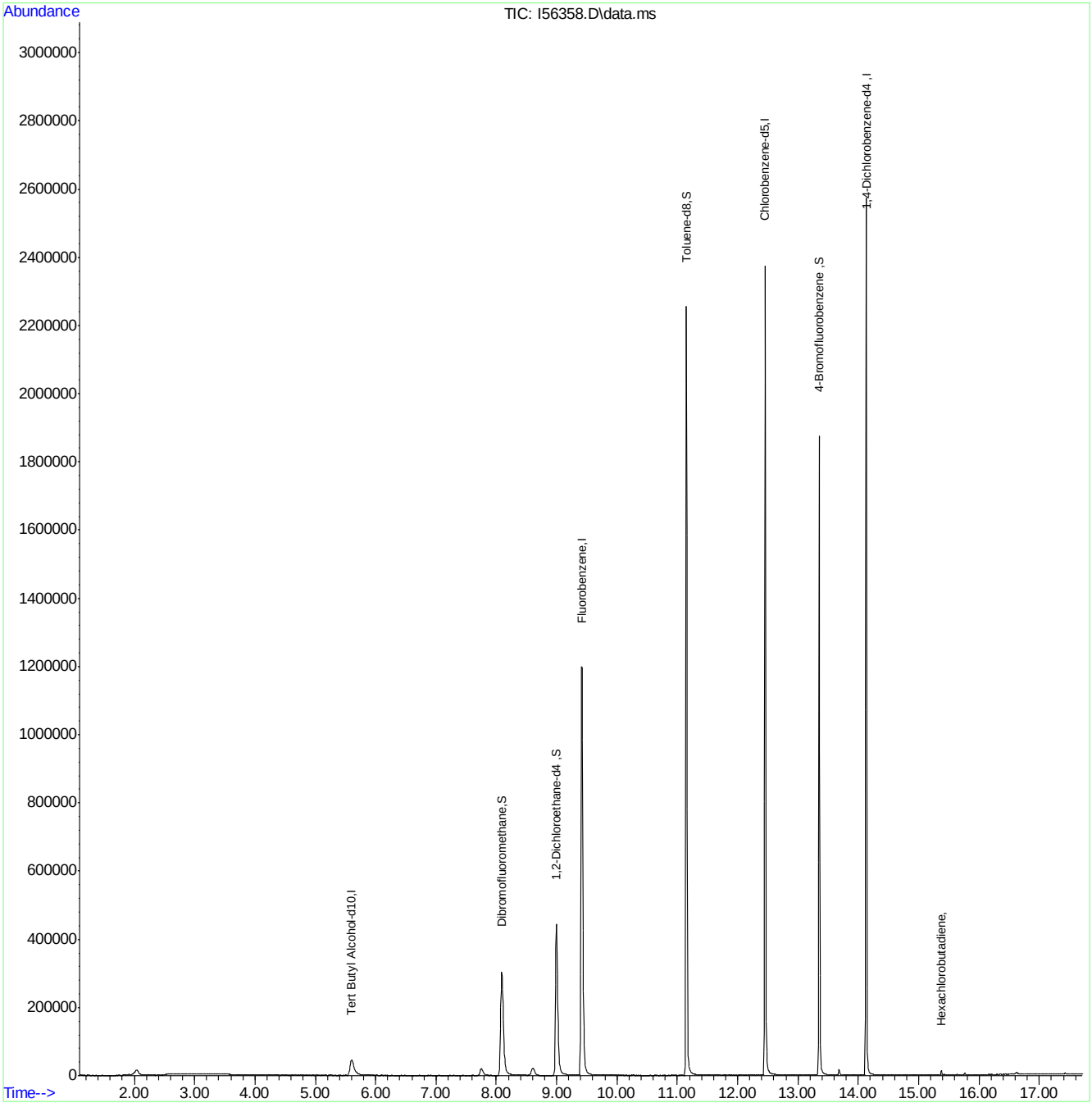
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1198027	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	840362	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	420454	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	94245	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	304628	48.16	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.32%			
46) 1,2-Dichloroethane-d4	8.994	65	428711	50.12	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 100.24%			
57) Toluene-d8	11.152	98	1143399	49.31	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.62%			
79) 4-Bromofluorobenzene	13.353	174	332498	50.07	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.14%			
Target Compounds						Qvalue
102) Hexachlorobutadiene	15.377	225	1776	0.45	ug/L	93

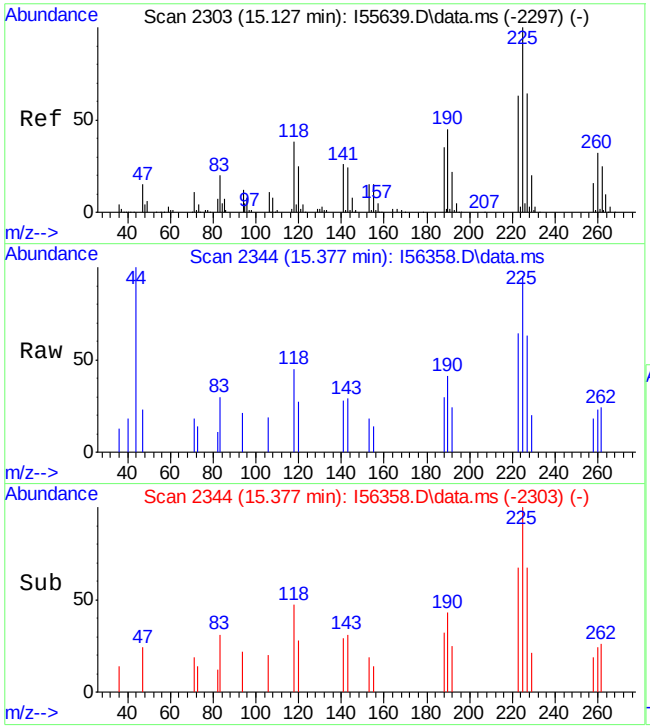
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56358.D
Acq On : 27 Jul 2018 9:54 am
Operator : ANAJ
Sample : MB MA Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 27 10:14:08 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

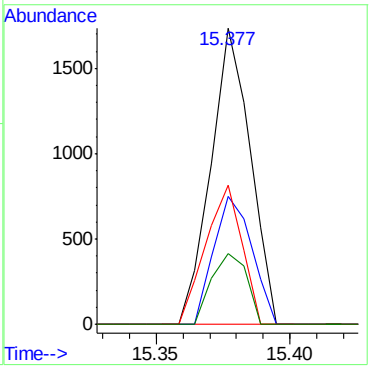




#102
Hexachlorobutadiene
Concen: 0.45 ug/L
RT: 15.377 min Scan# 2344
Delta R.T. 0.000 min
Lab File: I56358.D
Acq: 27 Jul 2018 9:54 am

Tgt Ion:225 Resp: 1776

Ion	Ratio	Lower	Upper
225	100		
190	43.1	18.6	78.6
118	47.1	15.2	75.2
260	23.7	0.0	59.9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56357.D
Acq On : 27 Jul 2018 9:30 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 27 09:49:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.408	96	1193275	50.00	ug/L	-0.01
56) Chlorobenzene-d5	12.450	117	835432	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	428829	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	103713	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.079	113	318651	50.58	ug/L	-0.01
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.16%			
46) 1,2-Dichloroethane-d4	8.994	65	429828	50.46	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 100.92%			
57) Toluene-d8	11.146	98	1147929	49.79	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.58%			
79) 4-Bromofluorobenzene	13.353	174	337583	49.84	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.68%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.251	85	180368	26.54	ug/L	100
3) Chloromethane	2.526	50	215824	23.13	ug/L	99
4) 1,3-Butadiene	2.641	39	92024	18.29	ug/L	99
5) Vinyl Chloride	2.660	62	197742	25.20	ug/L	97
6) Bromomethane	3.105	94	101893	24.80	ug/L	98
7) Chloroethane	3.263	64	56427	23.31	ug/L	98
8) Trichlorofluoromethane	3.507	101	238917	26.50	ug/L	99
9) Ethyl Ether	3.916	59	174150	25.05	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.220	67	217569	26.06	ug/L	99
11) 1,1-Dichloroethene	4.208	61	299243	26.81	ug/L	99
12) Freon 113	4.312	101	145928	23.41	ug/L	98
13) Carbon Disulfide	4.257	76	490233	27.70	ug/L	99
14) Iodomethane	4.422	142	234575	24.53	ug/L	98
15) Allyl chloride	4.921	41	255211	26.59	ug/L	97
16) Methylene Chloride	5.092	49	286244	25.91	ug/L	98
17) Acetone	5.159	43	237928	120.10	ug/L	100
18) Methyl acetate	5.366	43	606259	125.17	ug/L	100
19) trans-1,2-Dichloroethene	5.354	61	292578	26.60	ug/L	99
20) Hexane	5.488	56	222876	26.42	ug/L	97
21) Methyl Tert Butyl Ether	5.549	73	343446	25.10	ug/L	96
22) Acetonitrile	5.885	41	183953	269.74	ug/L	99
23) Di-isopropyl ether	6.177	45	635194	25.84	ug/L	99
24) Chloroprene	6.299	53	302373	26.73	ug/L	99
25) 1,1-Dichloroethane	6.330	63	352487	26.60	ug/L	100
26) Acrylonitrile	6.391	53	351584	123.60	ug/L	99
27) ETBE	6.787	59	532312	26.85	ug/L	100
28) Vinyl acetate	6.763	43	1877211	118.86	ug/L	100
29) cis-1,2-Dichloroethene	7.262	96	164871	25.99	ug/L	99
30) 2,2-Dichloropropane	7.451	77	164419	29.18	ug/L	98
31) Bromochloromethane	7.604	128	78816	25.49	ug/L	98
32) Cyclohexane	7.640	56	392738	26.74	ug/L	98
33) Chloroform	7.762	83	287695	25.22	ug/L	97
34) Ethyl acetate	7.994	43	830199	120.97	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56357.D
Acq On : 27 Jul 2018 9:30 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 27 09:49:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.031	42	63931	15.42	ug/L		97
37) Carbon Tetrachloride	8.012	117	174014	25.35	ug/L		99
38) 1,1,1-Trichloroethane	8.128	97	235336	25.63	ug/L		99
39) 2-Butanone	8.299	43	361813	121.73	ug/L		99
40) 1,1-Dichloropropene	8.354	75	219207	26.96	ug/L		98
41) tert-Butyl formate	8.567	59	442417	191.33	ug/L		94
42) Propionitrile	8.787	54	272689	261.39	ug/L		94
43) Methacrylonitrile	8.829	41	1069117	261.66	ug/L		100
44) Benzene	8.787	78	616469	25.37	ug/L		100
45) TAME	9.018	73	331073	25.00	ug/L		97
47) 1,2-Dichloroethane	9.097	62	257683	24.55	ug/L		100
48) Trichloroethene	9.652	95	165765	25.83	ug/L		99
49) Methylcyclohexane	9.646	83	281918	26.85	ug/L		99
50) Dibromomethane	10.140	93	100587	25.35	ug/L		96
51) 1,2-Dichloropropane	10.244	63	201898	26.00	ug/L		99
52) Bromodichloromethane	10.335	83	198407	25.75	ug/L		100
53) Methyl methacrylate	10.512	41	127590	23.18	ug/L		99
54) 2-Chloroethyl vinyl ether	10.914	63	646960	141.25	ug/L		99
55) cis-1,3-Dichloropropene	10.969	75	230611	23.89	ug/L		97
58) Toluene	11.195	91	653480	25.33	ug/L		98
59) 2-Nitropropane	11.384	41	142562	103.38	ug/L		100
60) 4-Methyl-2-pentanone	11.518	43	849507	123.15	ug/L		98
61) trans-1,3-Dichloropropene	11.926	75	12964	25.61	ug/L		95
62) Tetrachloroethene	11.554	166	173268	26.05	ug/L		97
63) Ethyl methacrylate	11.694	69	177930	24.15	ug/L		92
64) 1,1,2-Trichloroethane	11.701	83	123152	25.44	ug/L		98
65) Dibromochloromethane	11.859	129	147559	25.70	ug/L		100
66) 1,3-Dichloropropane	11.926	76	235750	24.21	ug/L		99
67) 1,2-Dibromoethane	12.054	107	135801	25.46	ug/L		98
68) 2-hexanone	12.207	43	705012	123.30	ug/L		85
69) 1-Chlorohexane	12.438	91	227501	25.70	ug/L		99
70) Ethylbenzene	12.481	91	758289	25.69	ug/L		99
71) Chlorobenzene	12.469	112	415532	24.75	ug/L		97
72) 1,1,1,2-Tetrachloroethane	12.511	131	128473	24.82	ug/L		99
73) m,p-Xylene	12.591	91	1172469	52.16	ug/L		100
74) o-Xylene	12.914	91	588654	26.11	ug/L		99
75) Styrene	12.950	104	421383	26.60	ug/L		99
76) Bromoform	12.987	173	84736	23.74	ug/L		98
77) Isopropylbenzene	13.133	105	690912	27.81	ug/L		100
80) cis-1,4-Dichloro-2-butene	13.377	53	66910	25.36	ug/L		94
81) n-Propylbenzene	13.426	91	891414	25.96	ug/L		96
82) Bromobenzene	13.432	156	166880	25.09	ug/L		97
83) 1,1,2,2-Tetrachloroethane	13.475	83	191462	25.55	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	572581	26.47	ug/L		100
85) 2-Chlorotoluene	13.670	91	533951	25.60	ug/L		99
86) trans-1,4-Dichloro-2-B...	13.590	53	60106	24.60	ug/L	#	81
87) 1,2,3-Trichloropropane	13.578	110	49446	24.50	ug/L		98
88) Cyclohexanone	13.615	55	31575	98.19	ug/L		94
89) 4-Chlorotoluene	13.670	91	533951	25.60	ug/L		99
90) tert-Butylbenzene	13.786	91	345643	25.81	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56357.D
Acq On : 27 Jul 2018 9:30 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 27 09:49:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

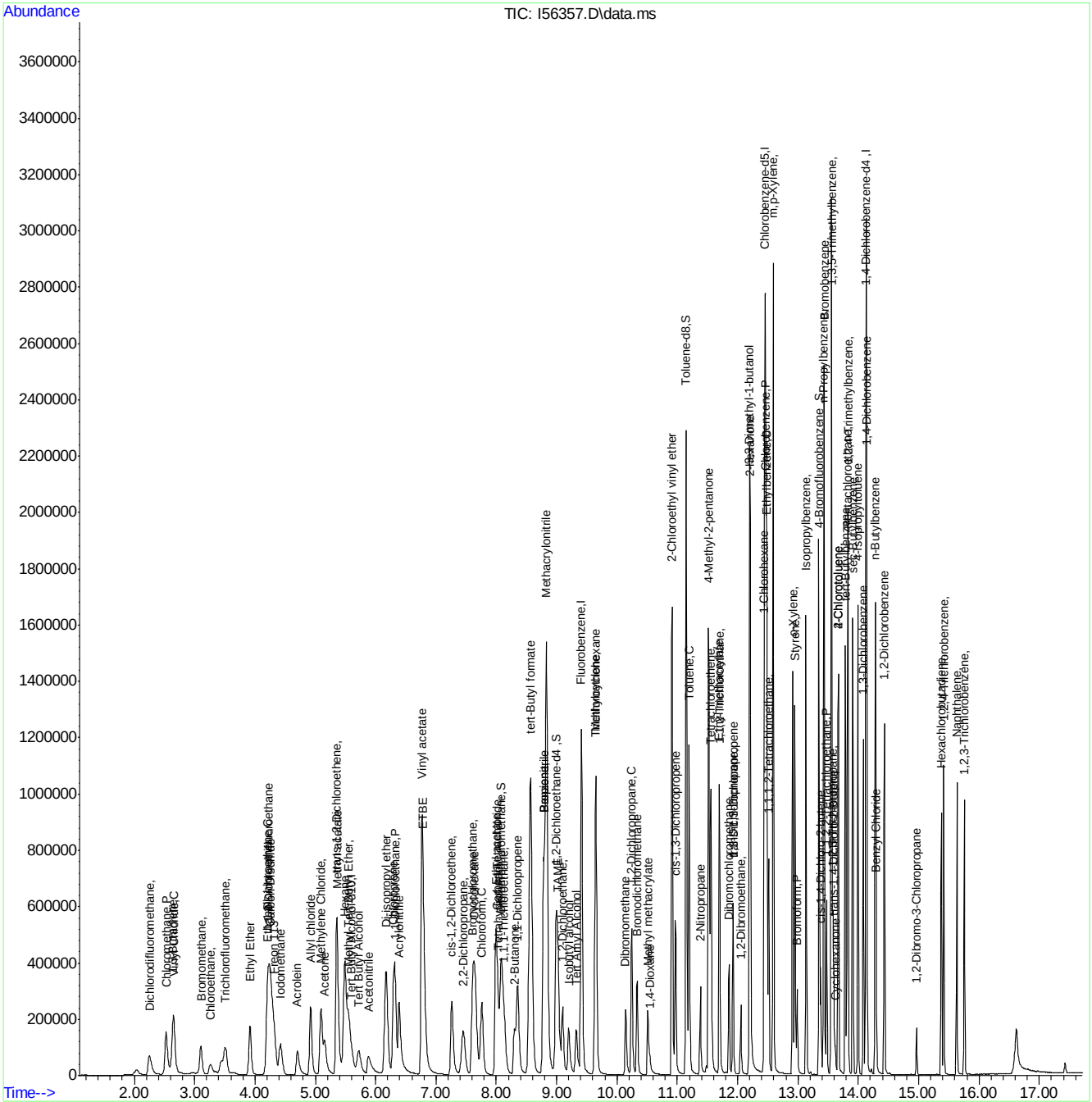
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	1,2,4-Trimethylbenzene	13.828	105	568238	25.40	ug/L		99
93)	Pentachloroethane	13.822	167	83185	24.01	ug/L		97
94)	sec-Butylbenzene	13.907	105	735204	26.62	ug/L		99
95)	4-Isopropyltoluene	13.993	119	599831	26.79	ug/L		100
96)	1,3-Dichlorobenzene	14.084	146	315968	25.58	ug/L		100
97)	1,4-Dichlorobenzene	14.139	146	327127	24.34	ug/L		99
98)	n-Butylbenzene	14.279	92	356908	27.69	ug/L		91
99)	Benzyl Chloride	14.298	126	37019	24.48	ug/L	#	94
100)	1,2-Dichlorobenzene	14.432	146	298992	24.86	ug/L		99
101)	1,2-Dibromo-3-Chloropr...	14.962	75	27822	23.18	ug/L		81
102)	Hexachlorobutadiene	15.377	225	108107	27.06	ug/L		99
103)	1,2,4-Trichlorobenzene	15.413	180	205599	25.76	ug/L		98
104)	Naphthalene	15.633	128	492345	24.13	ug/L		100
105)	1,2,3-Trichlorobenzene	15.761	180	192172	25.67	ug/L		99
107)	Ethanol	4.202	45	39557	511.66	ug/L		94
108)	Acrolein	4.702	56	152829	89.81	ug/L		99
109)	Tert Butyl Alcohol	5.720	59	174013	261.79	ug/L		94
110)	Isobutyl alcohol	9.201	43	133329	485.23	ug/L		98
111)	Tert Amyl Alcohol	9.323	59	101974	235.72	ug/L		95
112)	1,4-Dioxane	10.542	88	31462	469.53	ug/L		98
113)	3,3-Dimethyl-1-butanol	12.194	57	814280	1151.47	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56357.D
Acq On : 27 Jul 2018 9:30 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 27 09:49:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Evita Martinez
07/30/18 09:03

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56370.D
Acq On : 27 Jul 2018 5:45 pm
Operator : ANAJ
Sample : FA55941-5ms MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 30 06:54:43 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.414	96	1131731	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	801051	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	409193	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	87339	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.085	113	300536	50.30	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.60%			
46) 1,2-Dichloroethane-d4	8.994	65	409484	50.68	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.36%			
57) Toluene-d8	11.152	98	1094044	49.49	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.98%			
79) 4-Bromofluorobenzene	13.353	174	322063	49.83	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.66%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.245	85	163976	25.44	ug/L	98
3) Chloromethane	2.519	50	203892	23.04	ug/L	100
4) 1,3-Butadiene	2.635	39	94445	19.79	ug/L	99
5) Vinyl Chloride	2.654	62	168870	22.69	ug/L	98
6) Bromomethane	3.099	94	89450	22.95	ug/L	99
7) Chloroethane	3.263	64	52117	22.59	ug/L	97
8) Trichlorofluoromethane	3.501	101	227973	26.66	ug/L	98
9) Ethyl Ether	3.922	59	160041	24.27	ug/L	98
10) 1,2-Dichlorotrifluoroe...	4.226	67	205486	25.95	ug/L	98
11) 1,1-Dichloroethene	4.214	61	273819	25.86	ug/L	99
12) Freon 113	4.312	101	140048	23.69	ug/L	98
13) Carbon Disulfide	4.263	76	375783	22.39	ug/L	97
14) Iodomethane	4.422	142	212083	23.39	ug/L	96
15) Allyl chloride	4.921	41	198463	21.80	ug/L	98
16) Methylene Chloride	5.098	49	270903	25.85	ug/L	99
17) Acetone	5.159	43	201114	107.04	ug/L	98
18) Methyl acetate	5.373	43	535111	116.62	ug/L	98
19) trans-1,2-Dichloroethene	5.354	61	264237	25.33	ug/L	100
20) Hexane	5.494	56	209606	26.20	ug/L	97
21) Methyl Tert Butyl Ether	5.549	73	296934	22.88	ug/L	93
22) Acetonitrile	5.885	41	162492	251.23	ug/L	98
23) Di-isopropyl ether	6.177	45	572307	24.55	ug/L	99
24) Chloroprene	6.305	53	265281	24.72	ug/L	100
25) 1,1-Dichloroethane	6.330	63	324083	25.79	ug/L	96
26) Acrylonitrile	6.397	53	304629	113.22	ug/L	99
27) ETBE	6.799	59	478443	25.45	ug/L	99
28) Vinyl acetate	6.775	43	1677189	112.09	ug/L	99
29) cis-1,2-Dichloroethene	7.269	96	147989	24.60	ug/L	97
30) 2,2-Dichloropropane	7.457	77	142346	26.63	ug/L	99
31) Bromochloromethane	7.610	128	73460	25.05	ug/L	97
32) Cyclohexane	7.646	56	362691	26.03	ug/L	98
33) Chloroform	7.762	83	258762	23.92	ug/L	97
34) Ethyl acetate	8.006	43	733067	112.71	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56370.D
Acq On : 27 Jul 2018 5:45 pm
Operator : ANAJ
Sample : FA55941-5ms MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 30 06:54:43 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.037	42	97056	24.69	ug/L		100
37) Carbon Tetrachloride	8.018	117	154730	23.76	ug/L		99
38) 1,1,1-Trichloroethane	8.128	97	212759	24.43	ug/L		97
39) 2-Butanone	8.311	43	322070	114.38	ug/L		97
40) 1,1-Dichloropropene	8.360	75	197356	25.59	ug/L		96
41) tert-Butyl formate	8.579	59	257108	122.24	ug/L	#	87
42) Propionitrile	8.799	54	239847	242.42	ug/L		91
43) Methacrylonitrile	8.835	41	957948	247.20	ug/L		99
44) Benzene	8.793	78	565528	24.54	ug/L		100
45) TAME	9.024	73	287190	22.87	ug/L		91
47) 1,2-Dichloroethane	9.104	62	237244	23.83	ug/L		98
48) Trichloroethene	9.658	95	153918	25.29	ug/L		99
49) Methylcyclohexane	9.652	83	259141	26.02	ug/L		98
50) Dibromomethane	10.152	93	92416	24.56	ug/L		99
51) 1,2-Dichloropropane	10.250	63	186239	25.29	ug/L		98
52) Bromodichloromethane	10.341	83	178525	24.43	ug/L		99
53) Methyl methacrylate	10.518	41	108358	20.82	ug/L		98
55) cis-1,3-Dichloropropene	10.981	75	188791	20.70	ug/L		98
58) Toluene	11.201	91	603778	24.40	ug/L		99
59) 2-Nitropropane	11.384	41	122662	93.03	ug/L		97
60) 4-Methyl-2-pentanone	11.524	43	794865	120.18	ug/L		98
61) trans-1,3-Dichloropropene	11.926	75	12266	25.27	ug/L		92
62) Tetrachloroethene	11.554	166	154763	24.27	ug/L		98
63) Ethyl methacrylate	11.701	69	149769	21.27	ug/L		95
64) 1,1,2-Trichloroethane	11.701	83	116025	24.99	ug/L		96
65) Dibromochloromethane	11.859	129	130000	23.62	ug/L		99
66) 1,3-Dichloropropane	11.926	76	217440	23.29	ug/L		95
67) 1,2-Dibromoethane	12.054	107	123237	24.09	ug/L		100
68) 2-hexanone	12.213	43	641986	117.10	ug/L	#	73
69) 1-Chlorohexane	12.444	91	209133	24.63	ug/L		96
70) Ethylbenzene	12.481	91	696357	24.61	ug/L		100
71) Chlorobenzene	12.469	112	386462	24.01	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.518	131	116724	23.52	ug/L		99
73) m,p-Xylene	12.591	91	1083361	50.26	ug/L		99
74) o-Xylene	12.914	91	536122	24.80	ug/L		99
75) Styrene	12.950	104	384091	25.29	ug/L		99
76) Bromoform	12.987	173	69980	20.55	ug/L		98
77) Isopropylbenzene	13.139	105	631307	26.50	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.383	53	49376	19.61	ug/L		93
81) n-Propylbenzene	13.432	91	817243	24.95	ug/L		99
82) Bromobenzene	13.438	156	154835	24.39	ug/L		98
83) 1,1,2,2-Tetrachloroethane	13.475	83	178673	24.99	ug/L		98
84) 1,3,5-Trimethylbenzene	13.554	105	521616	25.27	ug/L		100
85) 2-Chlorotoluene	13.670	91	490785	24.66	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.597	53	47930	20.55	ug/L		90
87) 1,2,3-Trichloropropane	13.578	110	46423	24.10	ug/L		99
88) Cyclohexanone	13.621	55	29209	95.19	ug/L		96
89) 4-Chlorotoluene	13.670	91	490785	24.66	ug/L		100
90) tert-Butylbenzene	13.786	91	313629	24.55	ug/L		98
92) 1,2,4-Trimethylbenzene	13.828	105	518338	24.28	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56370.D
Acq On : 27 Jul 2018 5:45 pm
Operator : ANAJ
Sample : FA55941-5ms MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 30 06:54:43 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

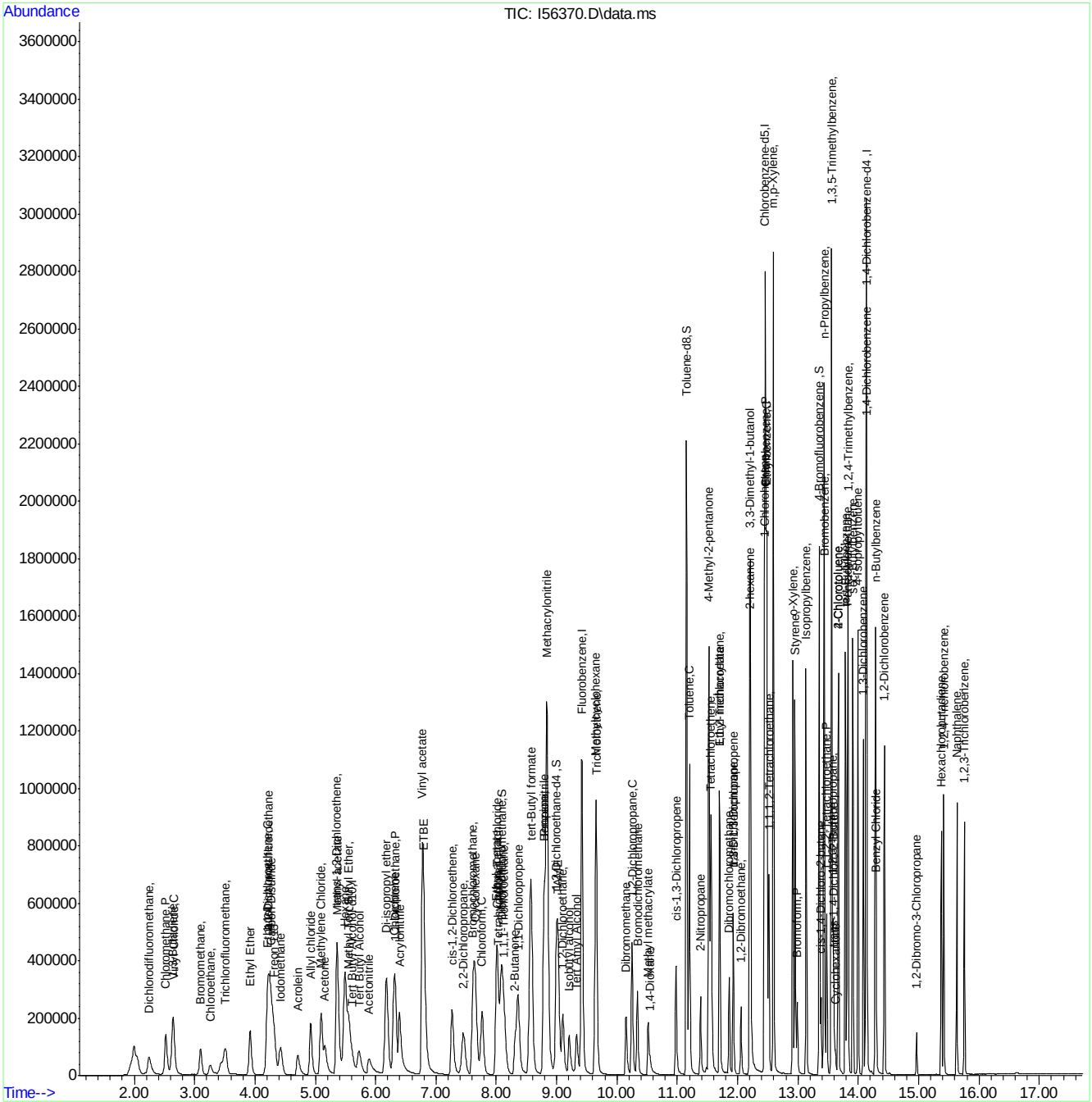
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
93) Pentachloroethane	13.822	167	73316	22.31	ug/L		98
94) sec-Butylbenzene	13.907	105	669488	25.40	ug/L		100
95) 4-Isopropyltoluene	13.993	119	549180	25.70	ug/L		100
96) 1,3-Dichlorobenzene	14.084	146	290220	24.63	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	302906	23.62	ug/L		99
98) n-Butylbenzene	14.285	92	321094	26.10	ug/L		98
99) Benzyl Chloride	14.298	126	30799	21.67	ug/L	#	87
100) 1,2-Dichlorobenzene	14.432	146	273315	23.81	ug/L		98
101) 1,2-Dibromo-3-Chloropr...	14.962	75	24352	21.33	ug/L		76
102) Hexachlorobutadiene	15.377	225	96065	25.20	ug/L		99
103) 1,2,4-Trichlorobenzene	15.413	180	182698	23.99	ug/L		99
104) Naphthalene	15.633	128	437867	22.52	ug/L		99
105) 1,2,3-Trichlorobenzene	15.761	180	171110	23.96	ug/L		99
107) Ethanol	4.202	45	32557m	499.95	ug/L		
108) Acrolein	4.708	56	128985	90.01	ug/L		99
109) Tert Butyl Alcohol	5.726	59	155071	277.03	ug/L		98
110) Isobutyl alcohol	9.207	43	107925	466.41	ug/L		98
111) Tert Amyl Alcohol	9.329	59	83359	229.04	ug/L		86
112) 1,4-Dioxane	10.548	88	26868	476.21	ug/L		94
113) 3,3-Dimethyl-1-butanol	12.200	57	673953	1131.71	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56370.D
Acq On : 27 Jul 2018 5:45 pm
Operator : ANAJ
Sample : FA55941-5ms MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 30 06:54:43 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number: FA55941-5MS
Lab FileID: I56370.D
Injection Time: 07/27/18 17:45

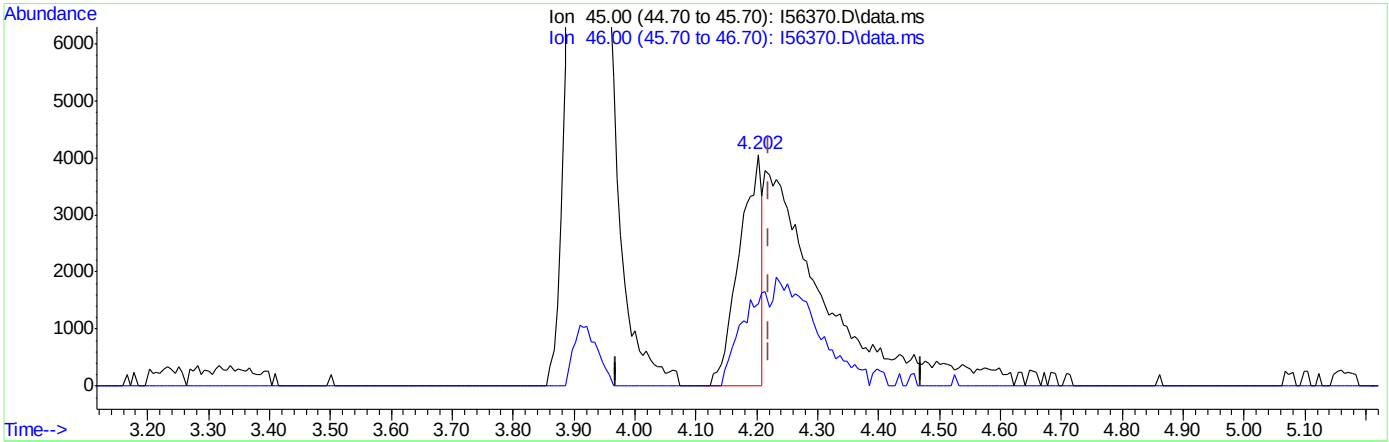
Method: SW846 8260C
Analyst approved: 07/30/18 07:10 Ana Jimenez
Supervisor approved: 07/30/18 09:03 Evita Martinez

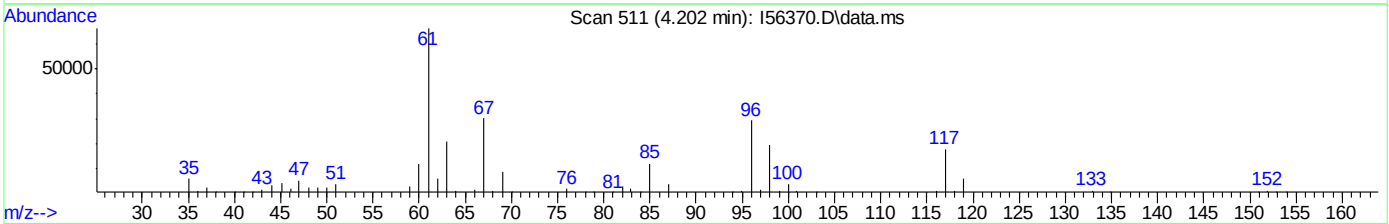
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		4.20	Poor instrument integration

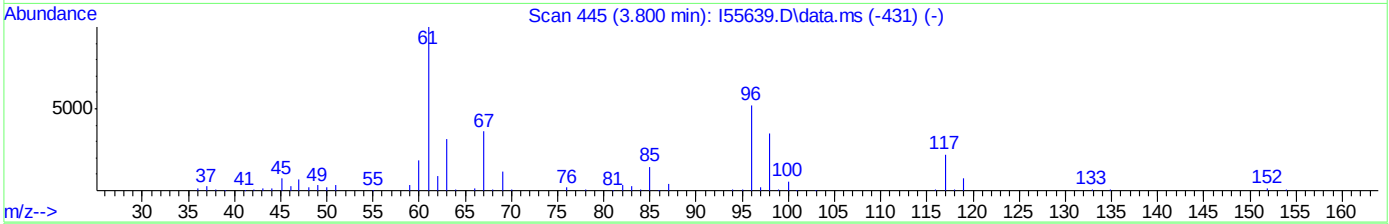
Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56370.D
Acq On : 27 Jul 2018 5:45 pm
Operator : ANAJ
Sample : FA55941-5ms MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 30 06:46:19 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration







TIC: I56370.D\data.ms

(107) Ethanol

4.202min (-0.018) 159.87ug/L

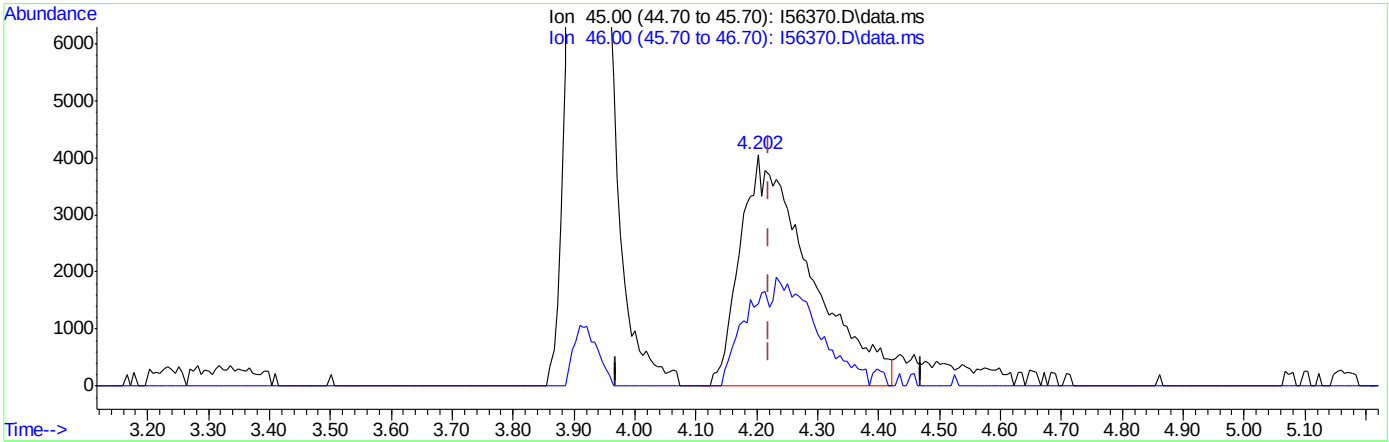
response 10478

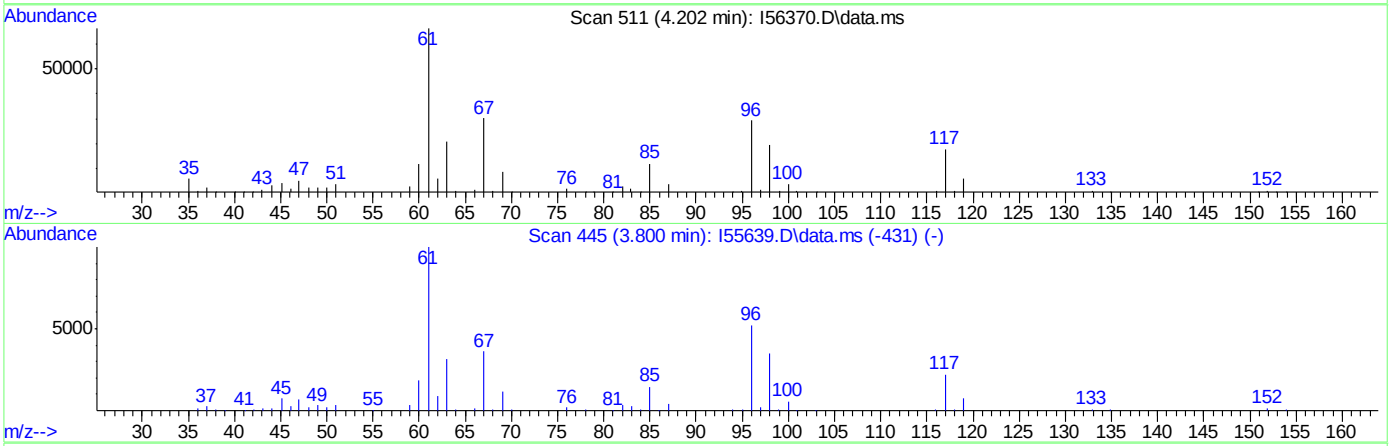
Ion	Exp%	Act%
45.00	100	100
46.00	38.30	35.52
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56370.D
Acq On : 27 Jul 2018 5:45 pm
Operator : ANAJ
Sample : FA55941-5ms MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 30 06:46:19 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration





TIC: I56370.D\data.ms

(107) Ethanol

4.202min (-0.018) 499.95ug/L m

response 32557

Ion	Exp%	Act%
45.00	100	100
46.00	38.30	35.52
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Evita Martinez 07/30/18 09:03

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56371.D
Acq On : 27 Jul 2018 6:09 pm
Operator : ANAJ
Sample : FA55941-5msd MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 30 06:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1160621	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	816157	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	418002	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.622	65	96925	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.091	113	310947	50.74	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.48%			
46) 1,2-Dichloroethane-d4	9.000	65	420201	50.71	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.42%			
57) Toluene-d8	11.152	98	1120443	49.75	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.50%			
79) 4-Bromofluorobenzene	13.353	174	325844	49.36	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.72%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.251	85	172080	26.03	ug/L	99
3) Chloromethane	2.526	50	208071	22.93	ug/L	99
4) 1,3-Butadiene	2.641	39	97221	19.86	ug/L	98
5) Vinyl Chloride	2.660	62	180322	23.62	ug/L	99
6) Bromomethane	3.105	94	94103	23.55	ug/L	100
7) Chloroethane	3.263	64	55141	23.44	ug/L	98
8) Trichlorofluoromethane	3.513	101	236380	26.96	ug/L	100
9) Ethyl Ether	3.928	59	169025	25.00	ug/L	98
10) 1,2-Dichlorotrifluoroe...	4.232	67	214080	26.36	ug/L	97
11) 1,1-Dichloroethene	4.226	61	289890	26.70	ug/L	98
12) Freon 113	4.318	101	142719	23.54	ug/L	99
13) Carbon Disulfide	4.275	76	401796	23.35	ug/L	100
14) Iodomethane	4.428	142	227938	24.51	ug/L	100
15) Allyl chloride	4.934	41	216938	23.24	ug/L	97
16) Methylene Chloride	5.104	49	283030	26.34	ug/L	97
17) Acetone	5.165	43	217792	113.03	ug/L	99
18) Methyl acetate	5.372	43	568067	120.65	ug/L	99
19) trans-1,2-Dichloroethene	5.360	61	283002	26.45	ug/L	99
20) Hexane	5.494	56	216508	26.39	ug/L	95
21) Methyl Tert Butyl Ether	5.561	73	324790	24.41	ug/L	99
22) Acetonitrile	5.891	41	174196	262.62	ug/L	100
23) Di-isopropyl ether	6.183	45	612648	25.62	ug/L	99
24) Chloroprene	6.305	53	282612	25.68	ug/L	96
25) 1,1-Dichloroethane	6.336	63	342605	26.58	ug/L	99
26) Acrylonitrile	6.403	53	326924	118.32	ug/L	100
27) ETBE	6.799	59	515414	26.73	ug/L	99
28) Vinyl acetate	6.781	43	1793227	116.77	ug/L	100
29) cis-1,2-Dichloroethene	7.268	96	157148	25.47	ug/L	95
30) 2,2-Dichloropropane	7.464	77	154405	28.17	ug/L	99
31) Bromochloromethane	7.616	128	76659	25.49	ug/L	97
32) Cyclohexane	7.653	56	382493	26.77	ug/L	98
33) Chloroform	7.768	83	270905	24.42	ug/L	98
34) Ethyl acetate	8.006	43	783678	117.44	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56371.D
Acq On : 27 Jul 2018 6:09 pm
Operator : ANAJ
Sample : FA55941-5msd MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 30 06:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.043	42	103906	25.77	ug/L		96
37) Carbon Tetrachloride	8.018	117	163047	24.42	ug/L		98
38) 1,1,1-Trichloroethane	8.128	97	224559	25.15	ug/L		97
39) 2-Butanone	8.311	43	346919	120.04	ug/L		99
40) 1,1-Dichloropropene	8.366	75	209474	26.49	ug/L		94
41) tert-Butyl formate	8.579	59	227953	106.70	ug/L	#	87
42) Propionitrile	8.799	54	257377	253.66	ug/L		92
43) Methacrylonitrile	8.841	41	1021625	257.07	ug/L		99
44) Benzene	8.793	78	597109	25.27	ug/L		99
45) TAME	9.030	73	310975	24.15	ug/L		94
47) 1,2-Dichloroethane	9.103	62	253495	24.83	ug/L		98
48) Trichloroethene	9.658	95	161287	25.84	ug/L		99
49) Methylcyclohexane	9.652	83	270857	26.52	ug/L		98
50) Dibromomethane	10.152	93	97410	25.24	ug/L		98
51) 1,2-Dichloropropane	10.250	63	195284	25.86	ug/L		98
52) Bromodichloromethane	10.341	83	187147	24.97	ug/L		99
53) Methyl methacrylate	10.518	41	119572	22.36	ug/L		97
55) cis-1,3-Dichloropropene	10.981	75	201033	21.48	ug/L		96
58) Toluene	11.201	91	632548	25.09	ug/L		100
59) 2-Nitropropane	11.384	41	127403	94.79	ug/L		97
60) 4-Methyl-2-pentanone	11.524	43	849370	126.04	ug/L		97
61) trans-1,3-Dichloropropene	11.926	75	13295	26.89	ug/L		96
62) Tetrachloroethene	11.554	166	161500	24.86	ug/L		99
63) Ethyl methacrylate	11.701	69	166735	23.19	ug/L		96
64) 1,1,2-Trichloroethane	11.701	83	119907	25.35	ug/L		97
65) Dibromochloromethane	11.865	129	136982	24.42	ug/L		99
66) 1,3-Dichloropropane	11.926	76	230745	24.26	ug/L		96
67) 1,2-Dibromoethane	12.054	107	130681	25.08	ug/L		99
68) 2-hexanone	12.213	43	694588	124.35	ug/L	#	75
69) 1-Chlorohexane	12.444	91	219927	25.43	ug/L		96
70) Ethylbenzene	12.481	91	729936	25.32	ug/L		99
71) Chlorobenzene	12.469	112	401682	24.49	ug/L		100
72) 1,1,1,2-Tetrachloroethane	12.517	131	121539	24.04	ug/L		97
73) m,p-Xylene	12.591	91	1133707	51.62	ug/L		99
74) o-Xylene	12.914	91	567062	25.75	ug/L		100
75) Styrene	12.950	104	403809	26.09	ug/L		99
76) Bromoform	12.987	173	74447	21.43	ug/L		99
77) Isopropylbenzene	13.133	105	666306	27.45	ug/L		100
80) cis-1,4-Dichloro-2-butene	13.383	53	53638	20.86	ug/L		93
81) n-Propylbenzene	13.432	91	859730	25.69	ug/L		99
82) Bromobenzene	13.438	156	161467	24.90	ug/L		98
83) 1,1,2,2-Tetrachloroethane	13.475	83	185826	25.44	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	549843	26.07	ug/L		99
85) 2-Chlorotoluene	13.670	91	516706	25.41	ug/L		99
86) trans-1,4-Dichloro-2-B...	13.597	53	51744	21.72	ug/L		90
87) 1,2,3-Trichloropropane	13.578	110	48251	24.52	ug/L		99
88) Cyclohexanone	13.621	55	30488	97.26	ug/L		98
89) 4-Chlorotoluene	13.670	91	516706	25.41	ug/L		99
90) tert-Butylbenzene	13.786	91	331695	25.41	ug/L		98
92) 1,2,4-Trimethylbenzene	13.828	105	543122	24.90	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56371.D
Acq On : 27 Jul 2018 6:09 pm
Operator : ANAJ
Sample : FA55941-5msd MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 30 06:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

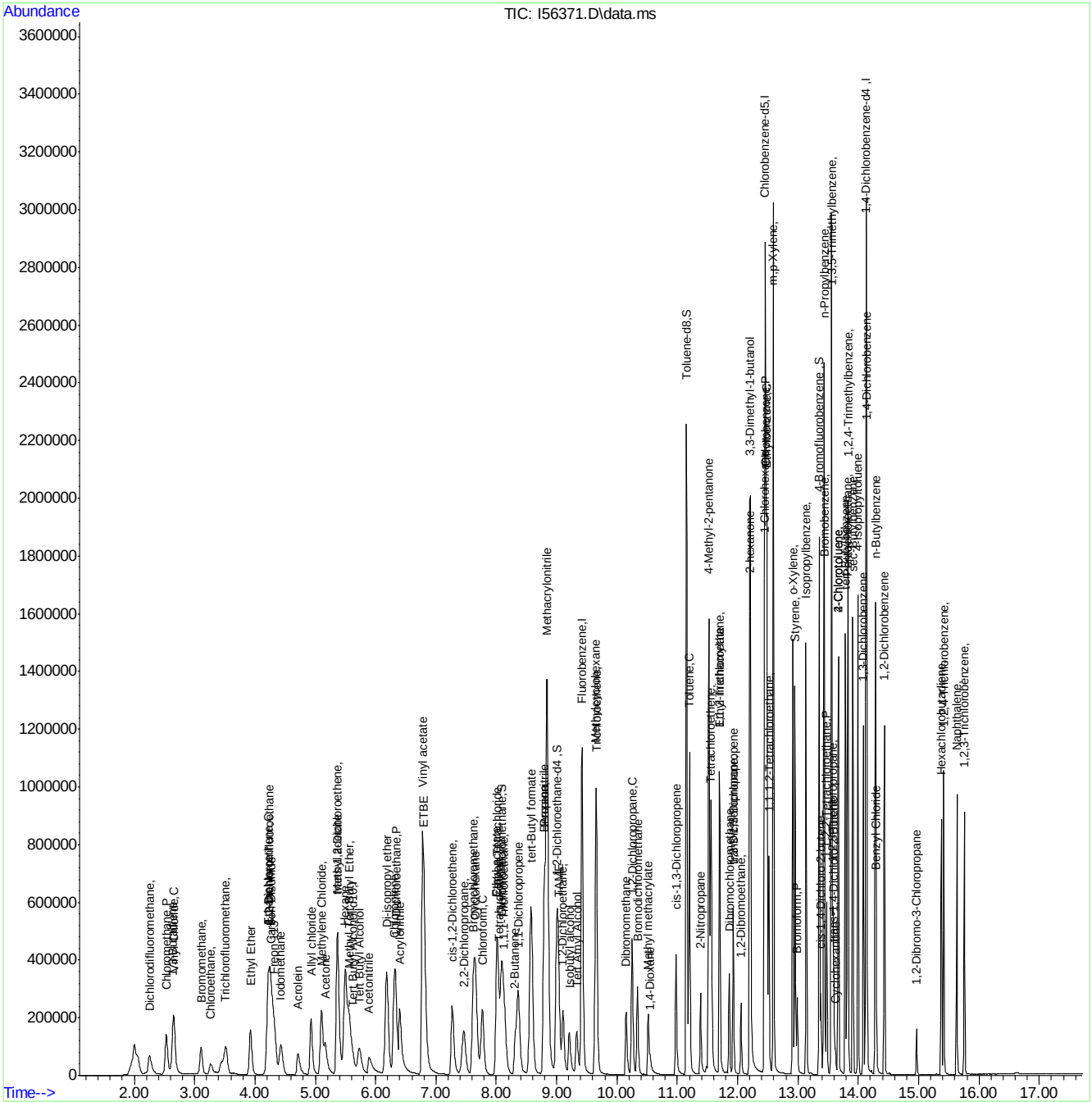
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
93) Pentachloroethane	13.822	167	77371	22.99	ug/L		98
94) sec-Butylbenzene	13.907	105	700213	26.01	ug/L		99
95) 4-Isopropyltoluene	13.993	119	576115	26.40	ug/L		99
96) 1,3-Dichlorobenzene	14.084	146	302898	25.16	ug/L		100
97) 1,4-Dichlorobenzene	14.139	146	317546	24.24	ug/L		99
98) n-Butylbenzene	14.285	92	337711	26.87	ug/L		99
99) Benzyl Chloride	14.298	126	33082	22.66	ug/L	#	87
100) 1,2-Dichlorobenzene	14.432	146	286865	24.47	ug/L		99
101) 1,2-Dibromo-3-Chloropr...	14.962	75	25855	22.14	ug/L		76
102) Hexachlorobutadiene	15.377	225	103002	26.45	ug/L		100
103) 1,2,4-Trichlorobenzene	15.413	180	193258	24.84	ug/L		100
104) Naphthalene	15.633	128	468386	23.57	ug/L		100
105) 1,2,3-Trichlorobenzene	15.761	180	182928	25.07	ug/L		99
107) Ethanol	4.226	45	36522m	505.43	ug/L		
108) Acrolein	4.714	56	141950	89.26	ug/L		96
109) Tert Butyl Alcohol	5.732	59	183135	294.81	ug/L		93
110) Isobutyl alcohol	9.213	43	121717	473.99	ug/L		99
111) Tert Amyl Alcohol	9.335	59	92745	229.61	ug/L		93
112) 1,4-Dioxane	10.548	88	29196	466.20	ug/L		95
113) 3,3-Dimethyl-1-butanol	12.200	57	773302	1170.11	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56371.D
Acq On : 27 Jul 2018 6:09 pm
Operator : ANAJ
Sample : FA55941-5msd MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 30 06:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number: FA55941-5MSD
Lab FileID: I56371.D
Injection Time: 07/27/18 18:09

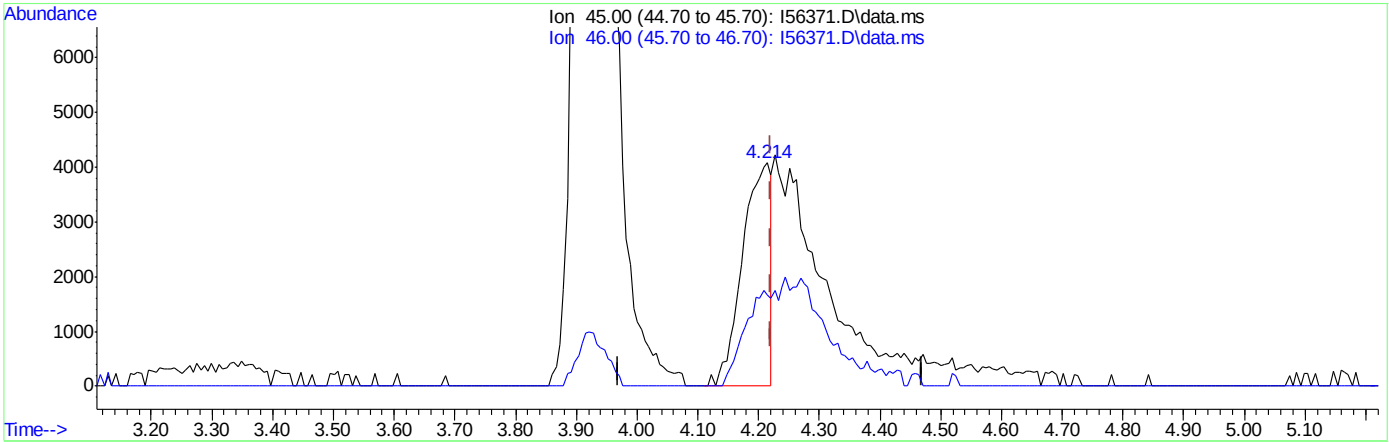
Method: SW846 8260C
Analyst approved: 07/30/18 07:10 Ana Jimenez
Supervisor approved: 07/30/18 09:03 Evita Martinez

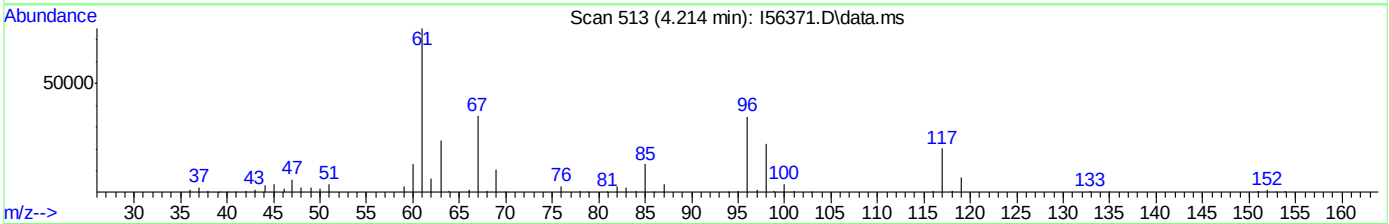
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		4.23	Poor instrument integration

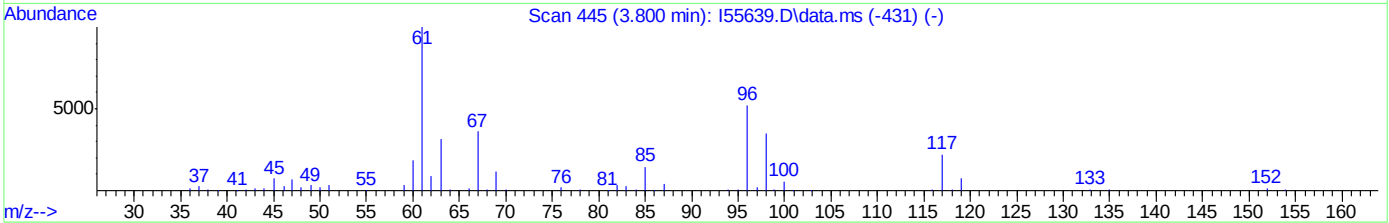
Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56371.D
Acq On : 27 Jul 2018 6:09 pm
Operator : ANAJ
Sample : FA55941-5msd MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 30 06:46:23 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration







TIC: I56371.D\data.ms

(107) Ethanol

4.214min (-0.006) 183.50ug/L

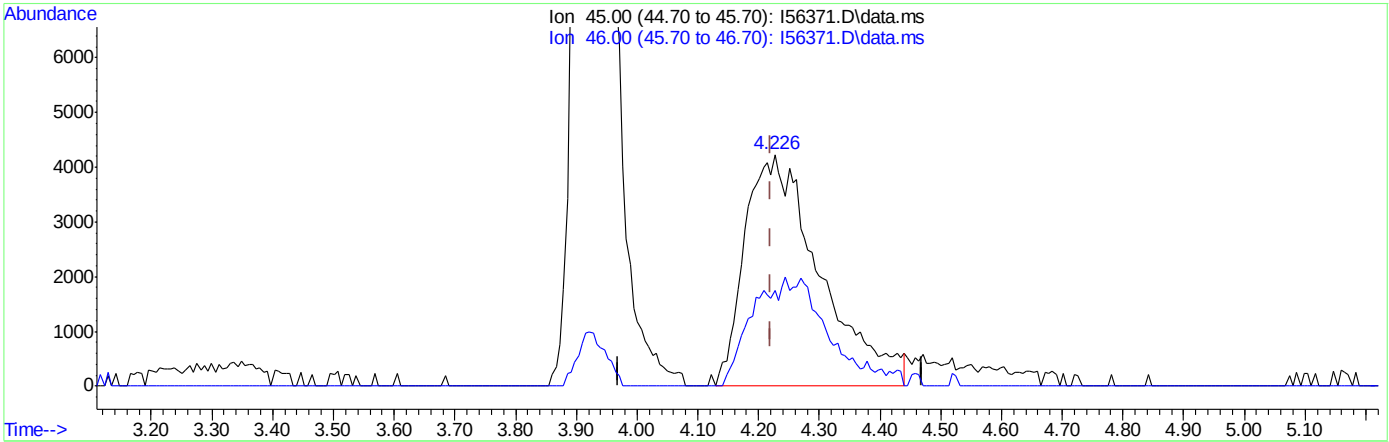
response 13341

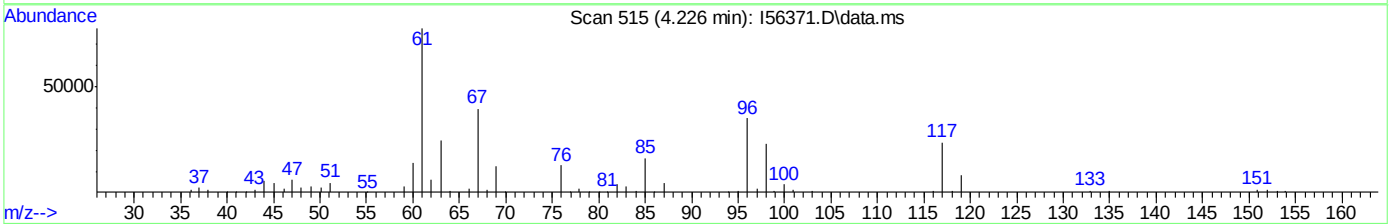
Ion	Exp%	Act%
45.00	100	100
46.00	38.30	40.78
0.00	0.00	0.00
0.00	0.00	0.00

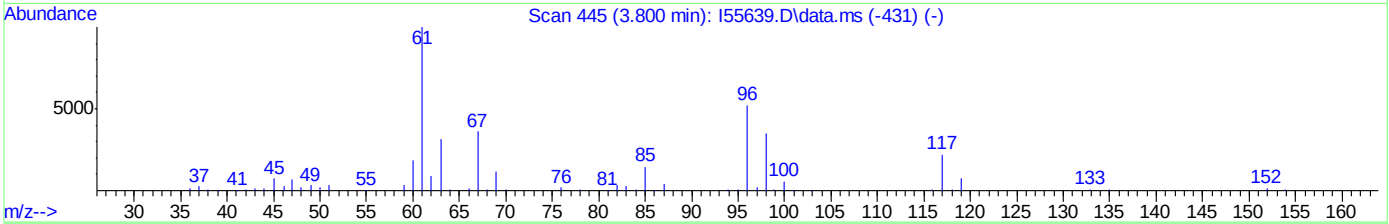
Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56371.D
Acq On : 27 Jul 2018 6:09 pm
Operator : ANAJ
Sample : FA55941-5msd MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 30 06:46:23 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration







TIC: I56371.D\data.ms

(107) Ethanol

4.226min (+0.006) 505.43ug/L m

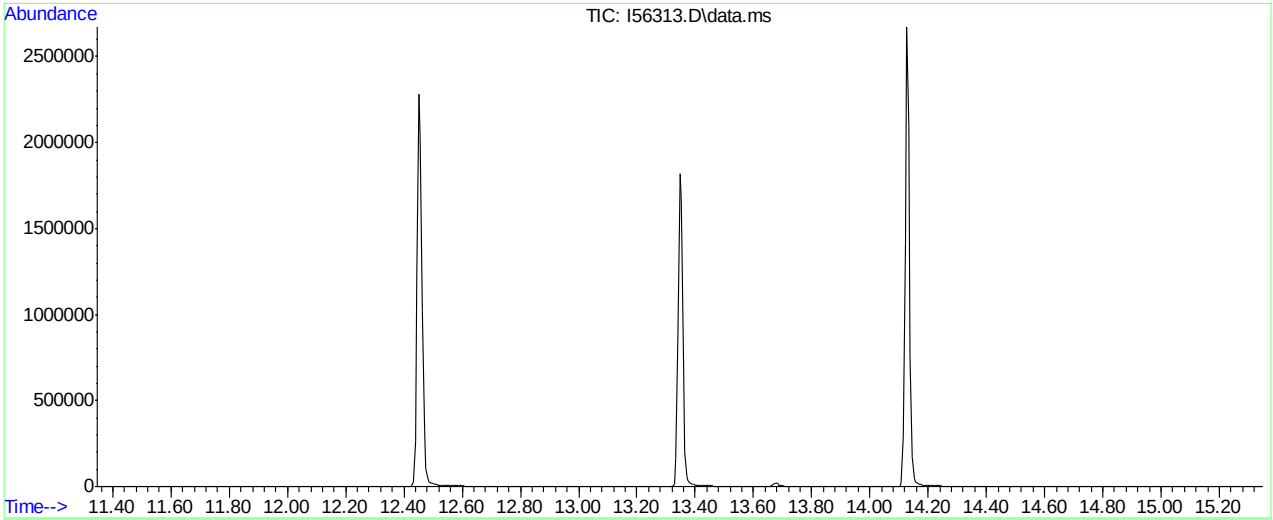
response 36522

Ion	Exp%	Act%
45.00	100	100
46.00	38.30	41.52
0.00	0.00	0.00
0.00	0.00	0.00

Methods: SW-846 8260B

Data File : C:\msdchem\2\DATA\072518\I56313.D Vial: 1
Acq On : 25 Jul 2018 2:36 pm Operator: ANAJ
Sample : BFB Inst : MSVOA16
Misc : MS40872,VI1683,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B



AutoFind: Scans 2010, 2011, 2012; Background Corrected with Scan 2005

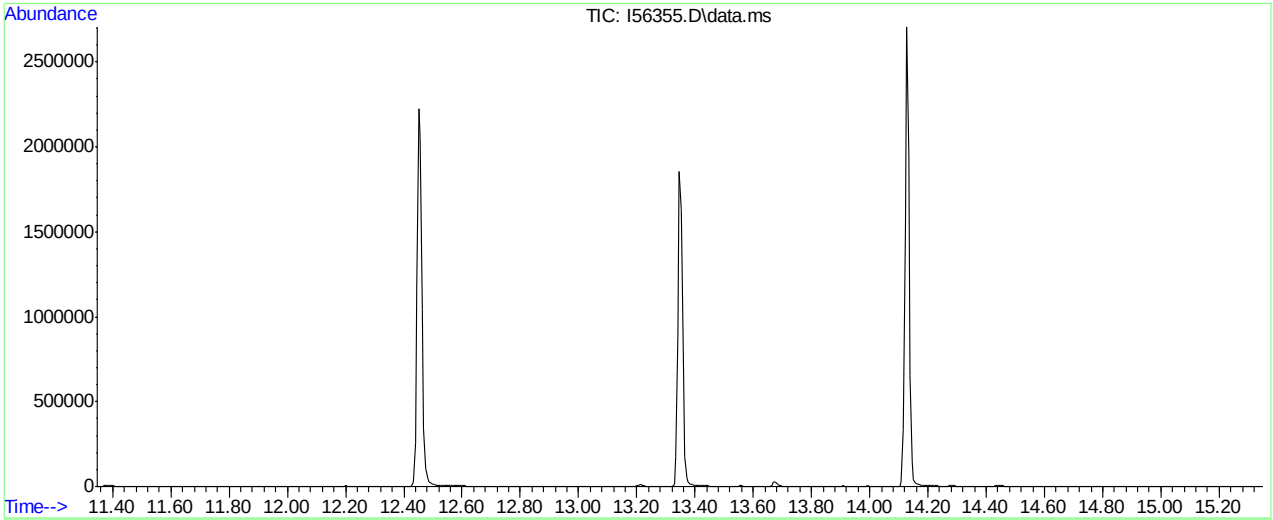
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.9	74779	PASS
75	95	30	60	50.4	151371	PASS
95	95	100	100	100.0	300437	PASS
96	95	5	9	7.1	21401	PASS
173	174	0.00	2	0.8	1809	PASS
174	95	50	100	71.9	215941	PASS
175	174	5	9	7.2	15559	PASS
176	174	95	101	96.1	207501	PASS
177	176	5	9	6.6	13778	PASS

I56313.D I-July2518.M Thu Jul 26 07:51:42 2018

Methods: SW-846 8260B

Data File : C:\msdchem\2\DATA\072718\I56355.D Vial: 1
Acq On : 27 Jul 2018 8:25 am Operator: ANAJ
Sample : BFB Inst : MSVOA16
Misc : MS40895,VI1685,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B



AutoFind: Scans 2010, 2011, 2012; Background Corrected with Scan 2005

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.3	75584	PASS
75	95	30	60	50.7	151317	PASS
95	95	100	100	100.0	298347	PASS
96	95	5	9	6.9	20582	PASS
173	174	0.00	2	0.8	1647	PASS
174	95	50	100	72.9	217544	PASS
175	174	5	9	7.3	15969	PASS
176	174	95	101	96.5	209861	PASS
177	176	5	9	6.6	13887	PASS

I56355.D I-July2518.M Fri Jul 27 08:44:09 2018

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:49:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	9.414	96	1178758	50.00	ug/L		0.00
56) Chlorobenzene-d5	12.456	117	823712	50.00	ug/L		0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	417514	50.00	ug/L		0.00
106) Tert Butyl Alcohol-d10	5.598	65	81030	250.00	ug/L		-0.01
System Monitoring Compounds							
36) Dibromofluoromethane	8.079	113	303832	47.18	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.36%				
46) 1,2-Dichloroethane-d4	8.994	65	423388	51.55	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 103.10%				
57) Toluene-d8	11.152	98	1135661	50.58	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 101.16%				
79) 4-Bromofluorobenzene	13.353	174	321741	46.88	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 93.76%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.263	85	6470	1.01	ug/L		91
3) Chloromethane	2.538	50	10356	1.77	ug/L		89
4) 1,3-Butadiene	2.647	39	5718	1.40	ug/L		84
5) Vinyl Chloride	2.666	62	8002	1.41	ug/L		93
6) Bromomethane	3.111	94	5059	1.52	ug/L		86
7) Chloroethane	3.275	64	4608	2.20	ug/L		89
8) Trichlorofluoromethane	3.519	101	9819m	1.29	ug/L		
9) Ethyl Ether	3.928	59	6761	1.16	ug/L		92
10) 1,2-Dichlorotrifluoroe...	4.232	67	8233	1.05	ug/L		92
11) 1,1-Dichloroethene	4.214	61	11083	1.06	ug/L		98
12) Freon 113	4.318	101	6220	0.98	ug/L		91
13) Carbon Disulfide	4.275	76	16288	0.95	ug/L		96
14) Iodomethane	4.428	142	9590	0.95	ug/L		98
15) Allyl chloride	4.927	41	8131	1.15	ug/L		92
16) Methylene Chloride	5.104	49	16395	1.69	ug/L		93
17) Acetone	5.202	43	9056	4.83	ug/L		94
18) Methyl acetate	5.409	43	12443	2.65	ug/L		97
19) trans-1,2-Dichloroethene	5.372	61	10229	1.00	ug/L		95
20) Hexane	5.494	56	8830	1.28	ug/L	#	84
21) Methyl Tert Butyl Ether	5.561	73	12273	0.88	ug/L		90
23) Di-isopropyl ether	6.177	45	22633	1.14	ug/L		92
24) Chloroprene	6.311	53	9155	0.84	ug/L		91
25) 1,1-Dichloroethane	6.336	63	13170	1.08	ug/L		100
26) Acrylonitrile	6.500	53	2477	0.94	ug/L		80
27) ETBE	6.811	59	16309	0.85	ug/L		94
28) Vinyl acetate	6.817	43	42549	8.47	ug/L		88
29) cis-1,2-Dichloroethene	7.287	96	5482	0.87	ug/L		86
30) 2,2-Dichloropropane	7.457	77	4643	1.37	ug/L		88
31) Bromochloromethane	7.640	128	2625	0.83	ug/L		93
32) Cyclohexane	7.653	56	13529	1.07	ug/L		97
33) Chloroform	7.768	83	12358	1.13	ug/L		78
34) Ethyl acetate	8.037	43	15723	2.64	ug/L		98
35) Tetrahydrofuran	8.067	42	3178	0.83	ug/L	#	75

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:49:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) Carbon Tetrachloride	8.024	117	6369	0.86	ug/L		87
38) 1,1,1-Trichloroethane	8.128	97	8558	0.91	ug/L		92
39) 2-Butanone	8.366	43	8037	3.00	ug/L		94
40) 1,1-Dichloropropene	8.366	75	7136	0.91	ug/L		92
41) tert-Butyl formate	8.573	59	16754	14.35	ug/L	#	17
42) Propionitrile	8.829	54	7933	10.70	ug/L	#	1
43) Methacrylonitrile	8.854	41	36482	11.52	ug/L		87
44) Benzene	8.805	78	24872	1.09	ug/L		89
45) TAME	9.024	73	10724	0.79	ug/L	#	65
47) 1,2-Dichloroethane	9.116	62	10596	1.07	ug/L		95
48) Trichloroethene	9.664	95	6279	0.97	ug/L		96
49) Methylcyclohexane	9.646	83	10061	1.05	ug/L		94
50) Dibromomethane	10.164	93	3576	0.89	ug/L		96
51) 1,2-Dichloropropane	10.256	63	7237	1.01	ug/L		88
52) Bromodichloromethane	10.341	83	6682	0.89	ug/L		97
53) Methyl methacrylate	10.548	41	2970	0.61	ug/L	#	86
54) 2-Chloroethyl vinyl ether	10.932	63	16313	3.06	ug/L		96
55) cis-1,3-Dichloropropene	10.987	75	6614	0.76	ug/L		92
58) Toluene	11.201	91	26702	1.08	ug/L		97
59) 2-Nitropropane	11.384	41	4288	3.95	ug/L		88
60) 4-Methyl-2-pentanone	11.530	43	34107	6.52	ug/L		95
62) Tetrachloroethene	11.560	166	6197	0.67	ug/L		95
63) Ethyl methacrylate	11.713	69	3966	0.58	ug/L	#	77
64) 1,1,2-Trichloroethane	11.707	83	4441	0.92	ug/L		89
65) Dibromochloromethane	11.865	129	4260	0.72	ug/L		97
66) 1,3-Dichloropropane	11.932	76	9210	0.98	ug/L		96
67) 1,2-Dibromoethane	12.066	107	4403	0.79	ug/L		95
68) 2-hexanone	12.219	43	28428	6.33	ug/L		77
69) 1-Chlorohexane	12.444	91	8783	1.07	ug/L	#	53
70) Ethylbenzene	12.481	91	29467	1.01	ug/L		98
71) Chlorobenzene	12.469	112	18043	1.09	ug/L		96
72) 1,1,1,2-Tetrachloroethane	12.517	131	4460	0.83	ug/L		83
73) m,p-Xylene	12.591	91	41920	1.97	ug/L		100
74) o-Xylene	12.914	91	19271	0.88	ug/L		98
75) Styrene	12.956	104	11657	0.72	ug/L		96
76) Bromoform	12.993	173	2477	0.70	ug/L		95
77) Isopropylbenzene	13.139	105	20667	0.85	ug/L		94
80) cis-1,4-Dichloro-2-butene	13.383	53	2223	1.15	ug/L	#	65
81) n-Propylbenzene	13.432	91	31826	1.04	ug/L		98
82) Bromobenzene	13.438	156	6239	0.96	ug/L		92
83) 1,1,2,2-Tetrachloroethane	13.475	83	7208	1.01	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	18018	0.90	ug/L		97
85) 2-Chlorotoluene	13.670	91	19216	0.94	ug/L		96
86) trans-1,4-Dichloro-2-B...	13.603	53	1852	0.98	ug/L	#	50
87) 1,2,3-Trichloropropane	13.578	110	1743	0.87	ug/L		95
88) Cyclohexanone	13.621	55	1169	4.81	ug/L		84
89) 4-Chlorotoluene	13.670	91	19216	0.99	ug/L		96
90) tert-Butylbenzene	13.785	91	11910	0.97	ug/L		92
92) 1,2,4-Trimethylbenzene	13.828	105	18251	0.88	ug/L		94
93) Pentachloroethane	13.822	167	2770	0.71	ug/L		93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:49:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

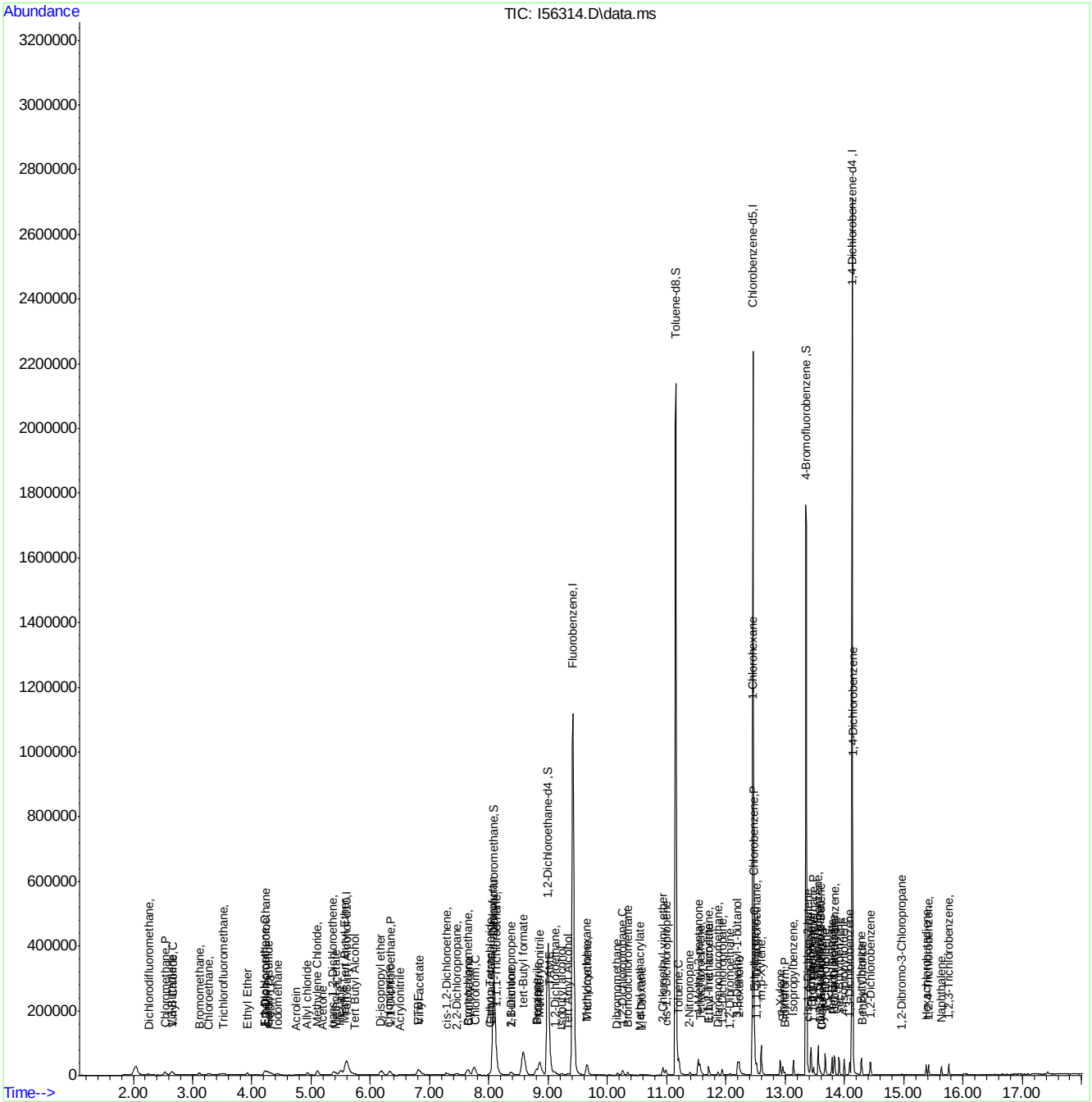
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
94) sec-Butylbenzene	13.907	105	24167	0.96	ug/L		99
95) 4-Isopropyltoluene	13.993	119	18302	0.89	ug/L		99
96) 1,3-Dichlorobenzene	14.084	146	11857	0.99	ug/L		94
97) 1,4-Dichlorobenzene	14.139	146	14115m	1.10	ug/L		
98) n-Butylbenzene	14.285	92	10587	0.91	ug/L		99
99) Benzyl Chloride	14.298	126	504	0.74	ug/L	#	85
100) 1,2-Dichlorobenzene	14.438	146	11416	0.96	ug/L		95
101) 1,2-Dibromo-3-Chloropr...	14.962	75	806	0.69	ug/L		77
102) Hexachlorobutadiene	15.377	225	3778	0.95	ug/L		97
103) 1,2,4-Trichlorobenzene	15.419	180	6838	0.84	ug/L		95
104) Naphthalene	15.633	128	12522	0.61	ug/L		100
105) 1,2,3-Trichlorobenzene	15.761	180	6652	0.84	ug/L		99
107) Ethanol	4.214	45	312m	6.57	ug/L		
108) Acrolein	4.738	56	1981	2.15	ug/L		88
109) Tert Butyl Alcohol	5.738	59	5186	9.77	ug/L	#	57
110) Isobutyl alcohol	9.231	43	4204	25.03	ug/L		89
111) Tert Amyl Alcohol	9.341	59	2488	7.90	ug/L		86
112) 1,4-Dioxane	10.579	88	386m	7.69	ug/L		
113) 3,3-Dimethyl-1-butanol	12.194	57	26739	59.13	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:49:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

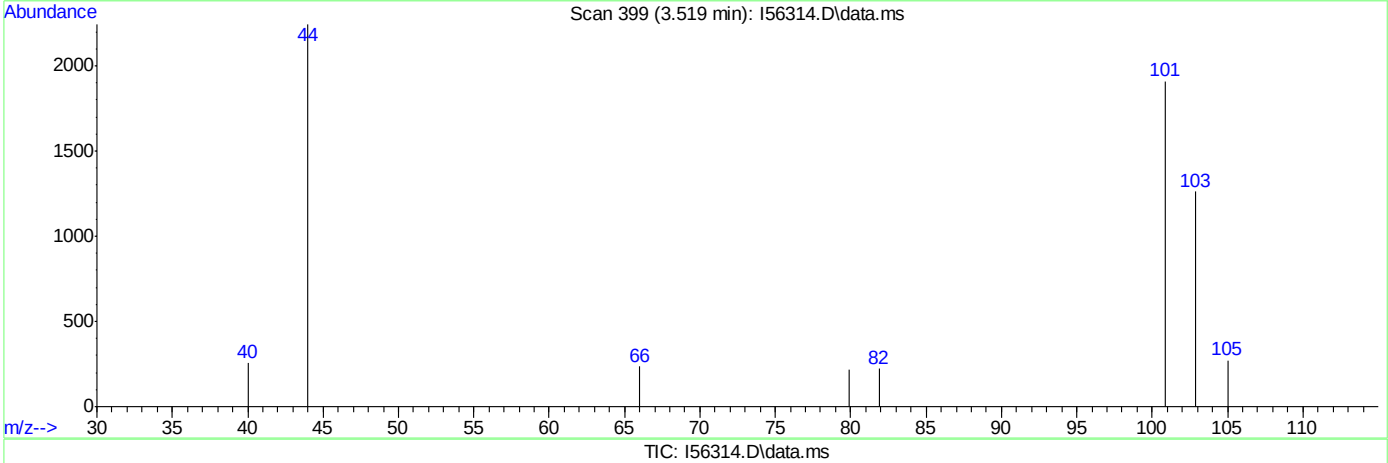
Sample Number: VI1683-IC1683
Lab FileID: I56314.D
Injection Time: 07/25/18 15:14
Method: SW846 8260B
Analyst approved: 07/26/18 08:26 Ana Jimenez
Supervisor approved: 07/31/18 15:11 Melissa Mangual

Parameter	CAS	Sig#	R.T. (min.)	Reason
Trichlorofluoromethane	75-69-4		3.52	Split peak
Ethyl Alcohol	64-17-5		4.21	Missed peak
1,4-Dioxane	123-91-1		10.58	Missed peak
1,4-Dichlorobenzene	106-46-7		14.14	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



TIC: I56314.D\data.ms

(8) Trichlorofluoromethane ( )

3.519min (+0.006) 0.98ug/L

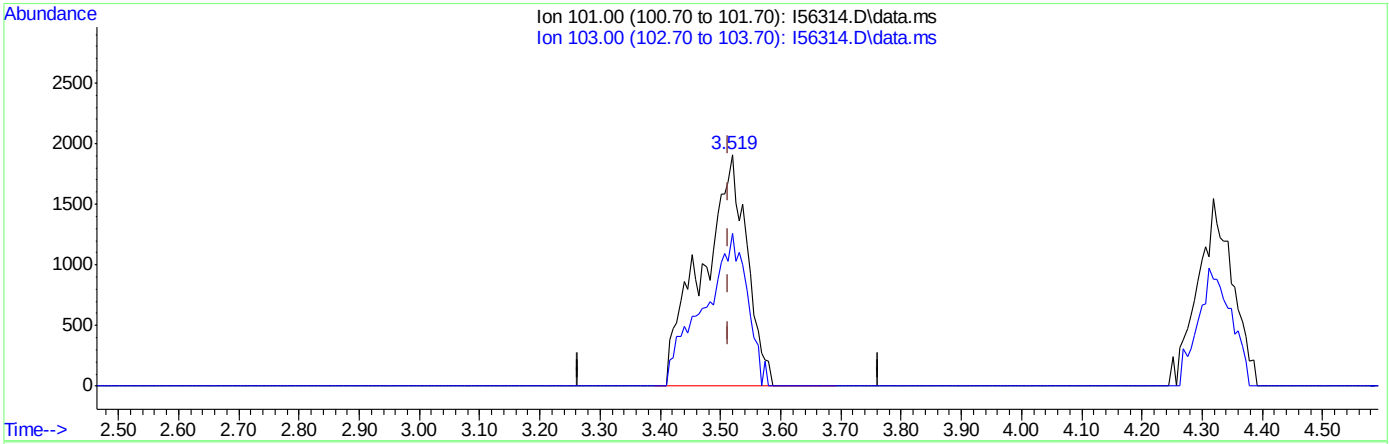
response 7458

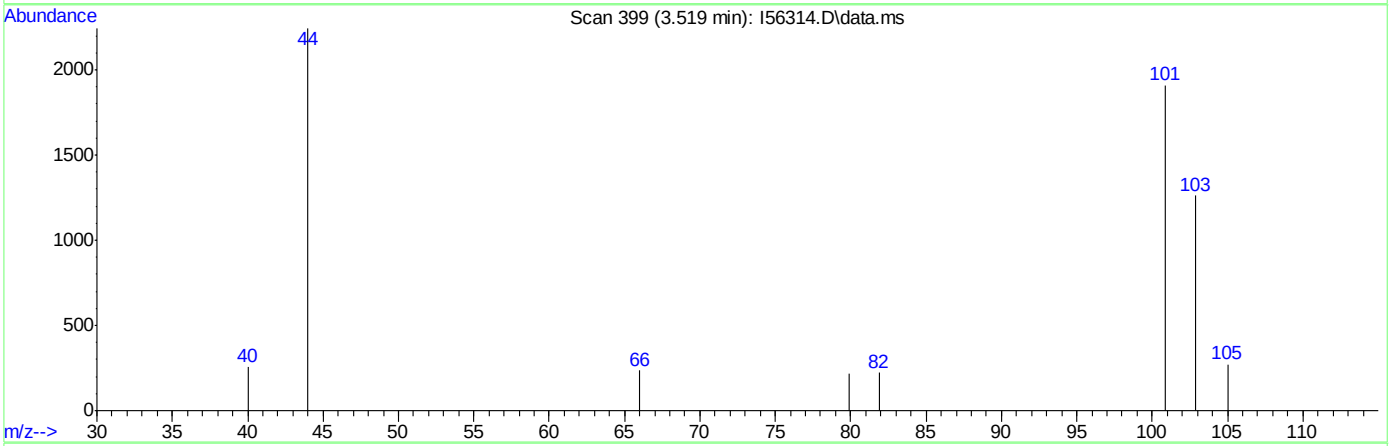
Ion	Exp%	Act%
101.00	100	100
103.00	63.30	66.07
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(8) Trichlorofluoromethane ( )

3.519min (+0.006) 1.29ug/L m

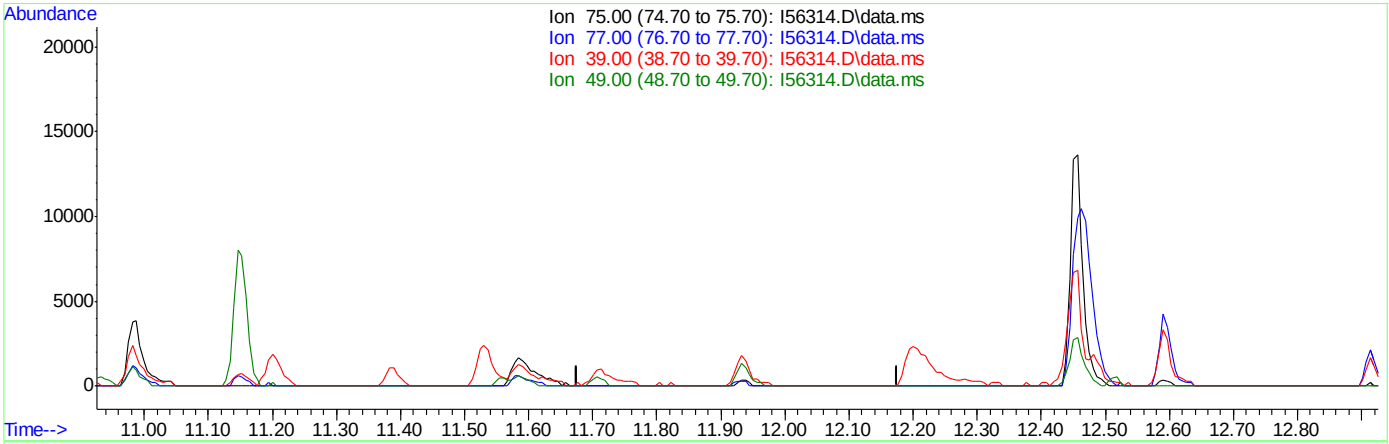
response 9819

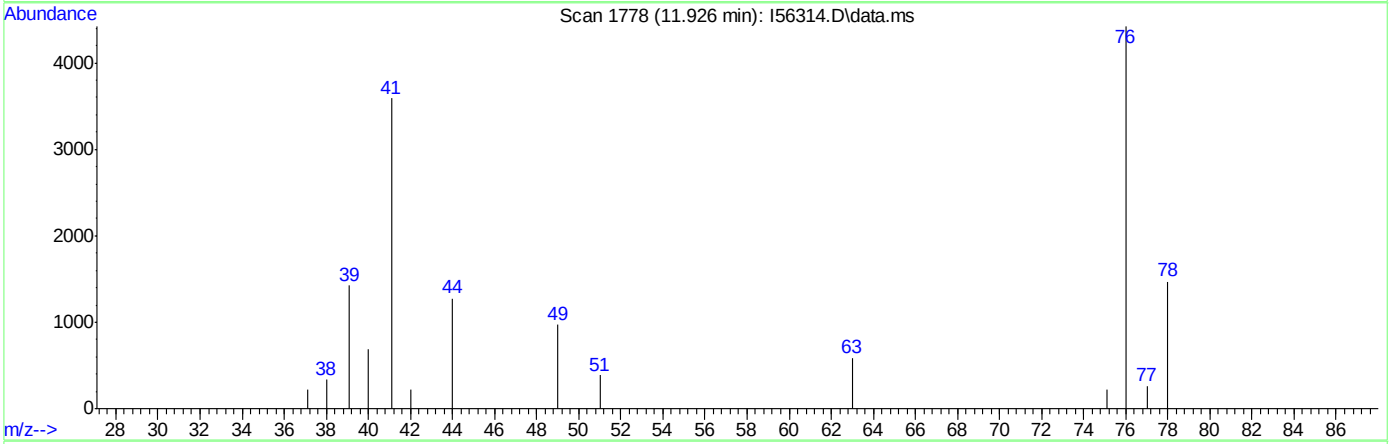
Ion	Exp%	Act%
101.00	100	100
103.00	63.30	66.07
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(61) trans-1,3-Dichloropropene

11.926min (-11.926) 0.00ug/L

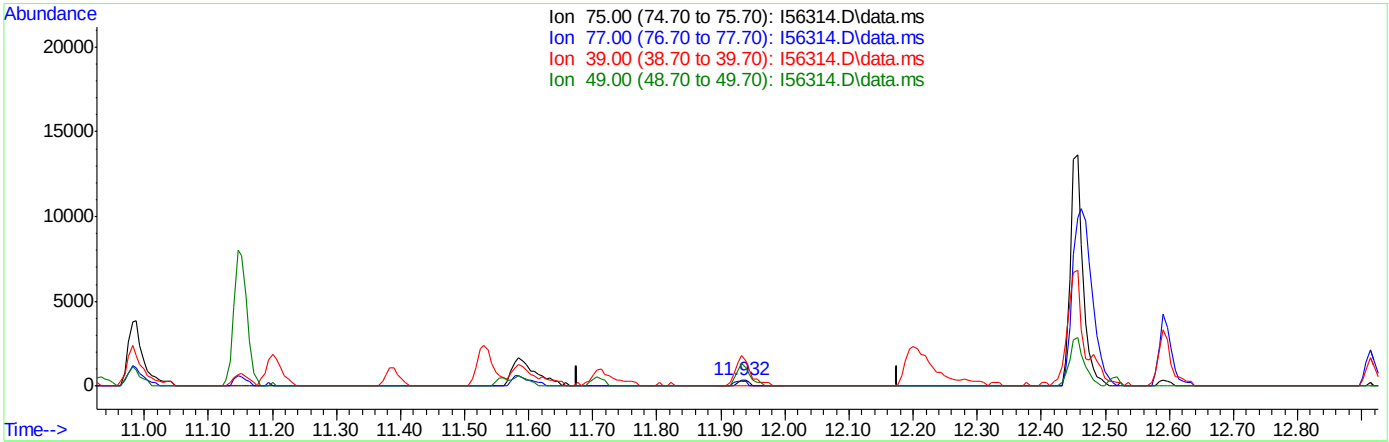
response 0

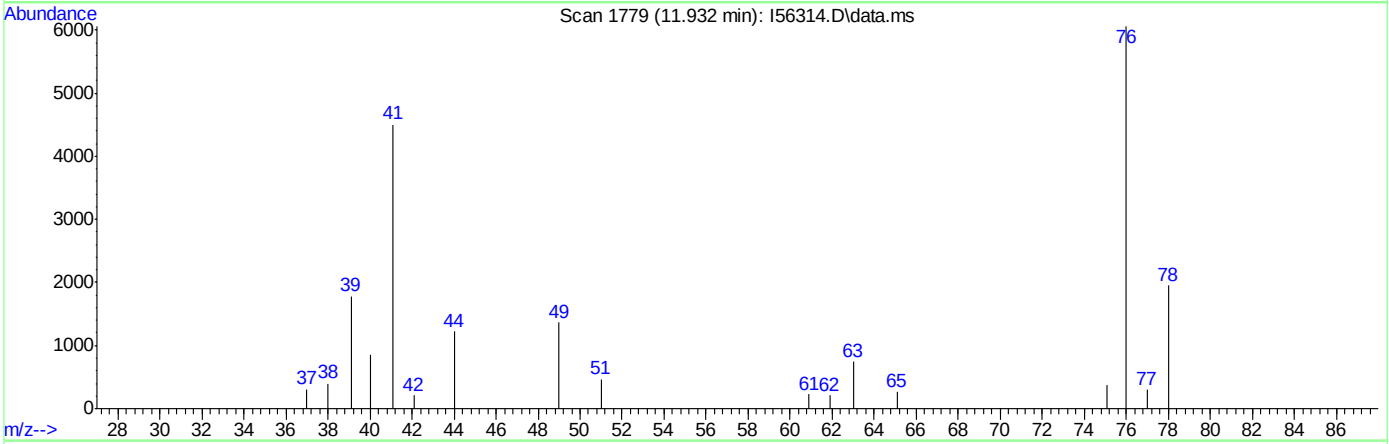
Ion	Exp%	Act%
75.00	100	0.00
77.00	103.00	0.00#
39.00	522.70	0.00#
49.00	420.40	0.00#

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(61) trans-1,3-Dichloropropene

11.932min (+0.006) 0.16ug/L m

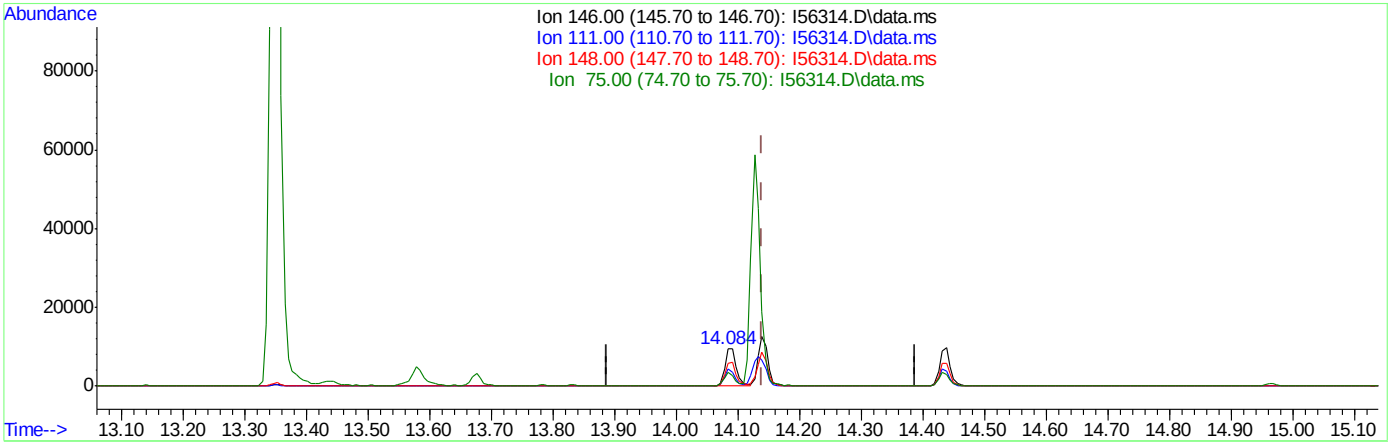
response 428

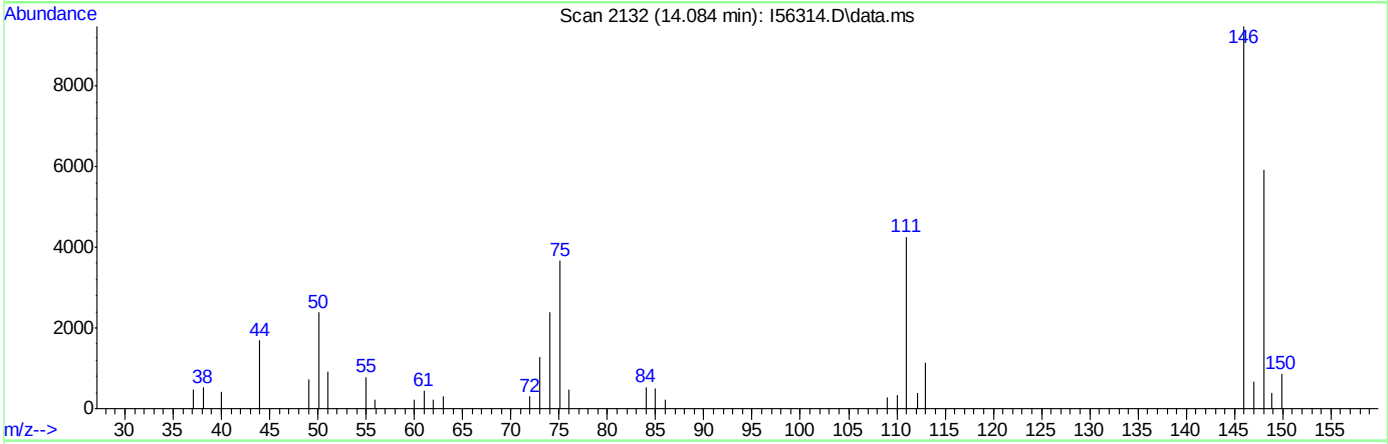
Ion	Exp%	Act%
75.00	100	100
77.00	103.00	78.25
39.00	522.70	472.94#
49.00	420.40	362.07#

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(97) 1,4-Dichlorobenzene

14.084min (-0.055) 0.92ug/L

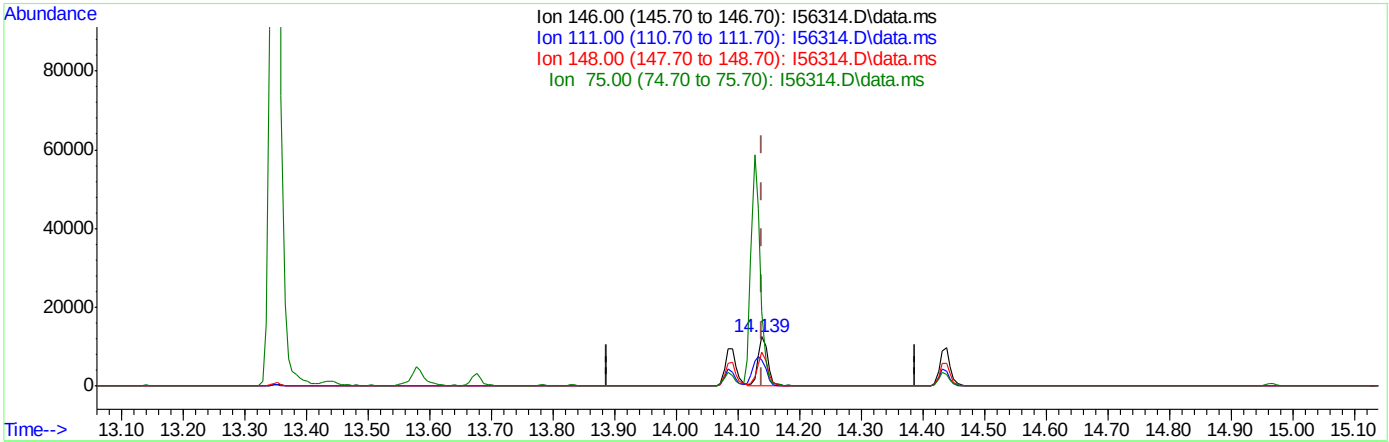
response 11857

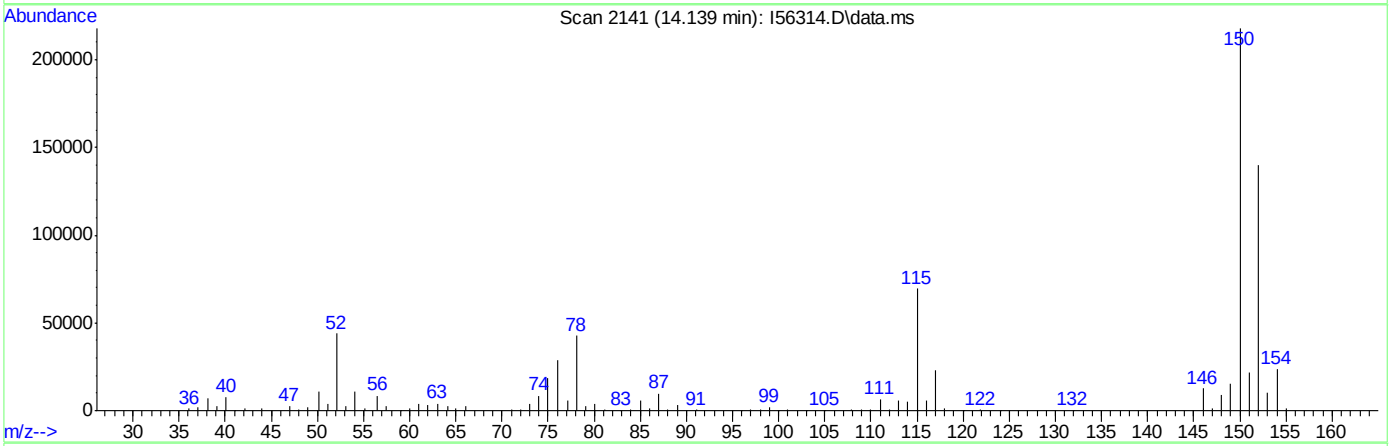
Ion	Exp%	Act%
146.00	100	100
111.00	40.90	44.88
148.00	63.00	62.35
75.00	35.90	38.59

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(97) 1,4-Dichlorobenzene

14.139min (+0.000) 1.10ug/L m

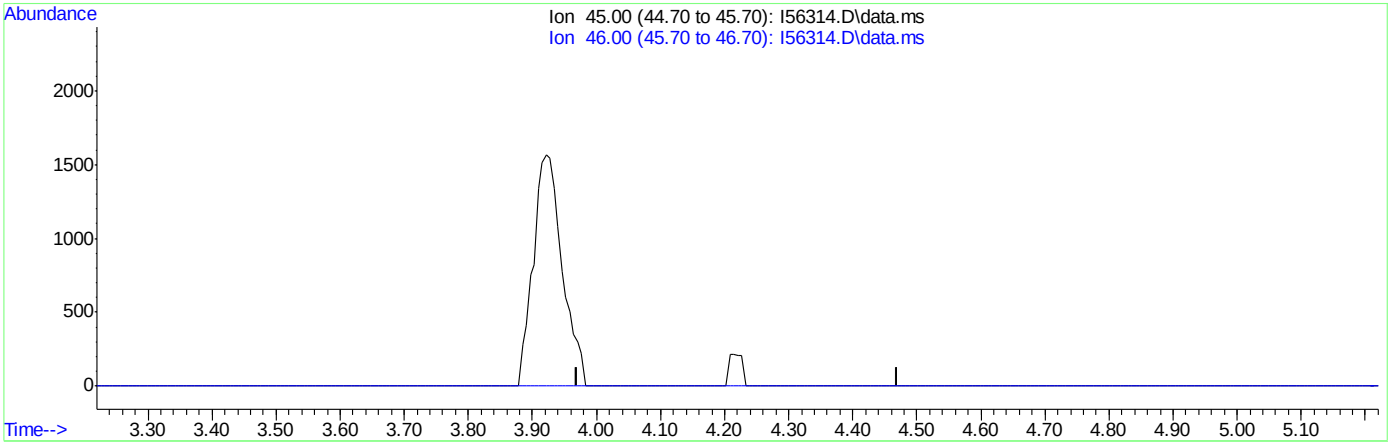
response 14115

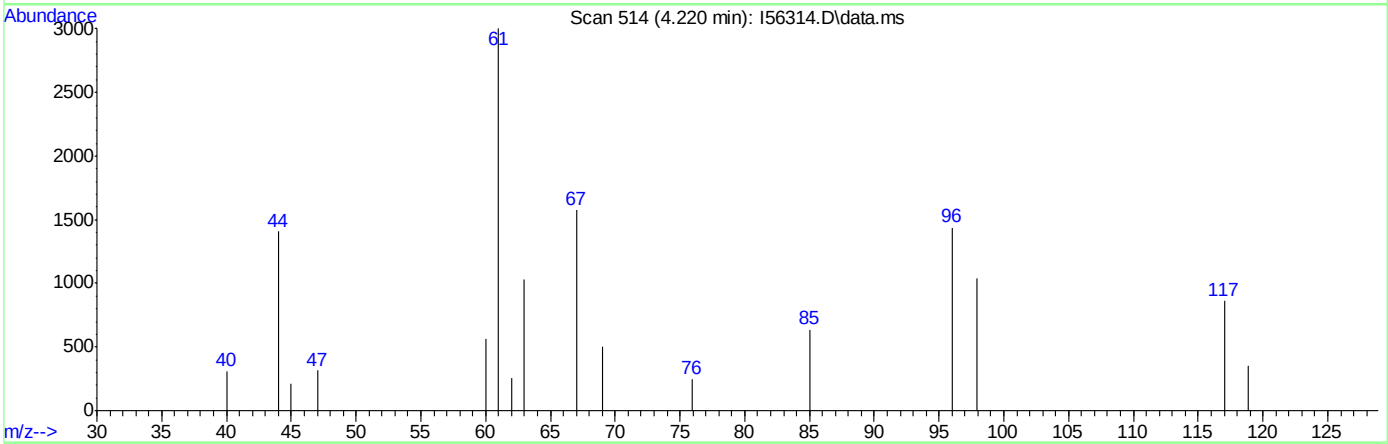
Ion	Exp%	Act%
146.00	100	100
111.00	40.90	52.06
148.00	63.00	69.44
75.00	35.90	150.46#

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(107) Ethanol

4.220min (-4.220) 0.00ug/L

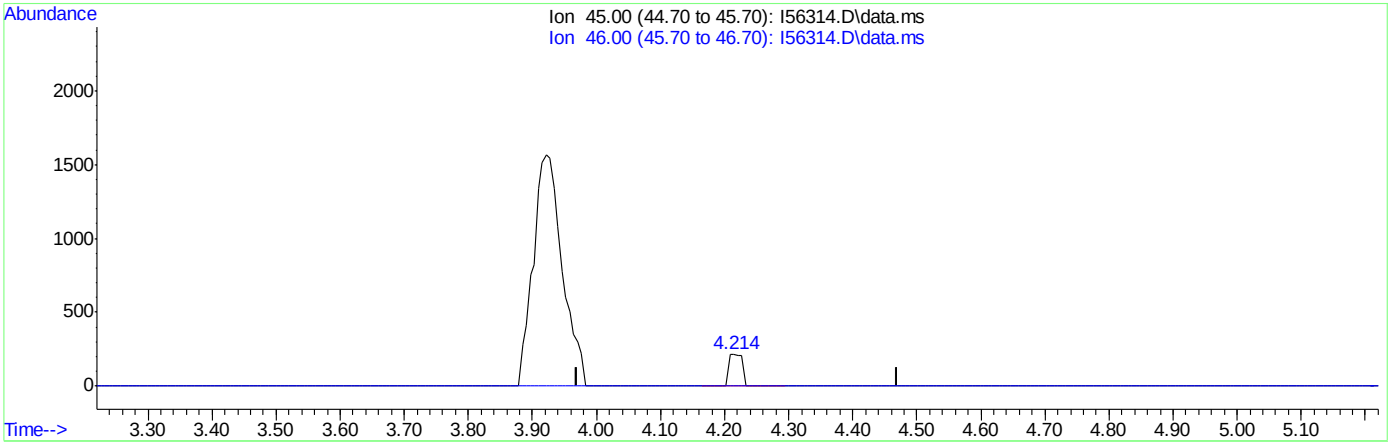
response 0

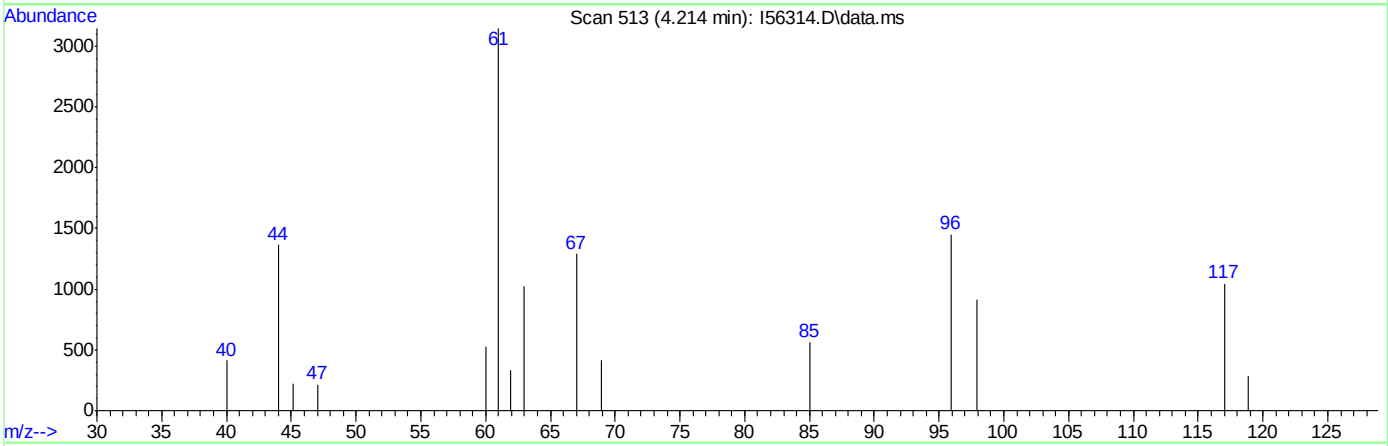
Ion	Exp%	Act%
45.00	100	0.00
46.00	35.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(107) Ethanol

4.214min (-0.006) 6.57ug/L m

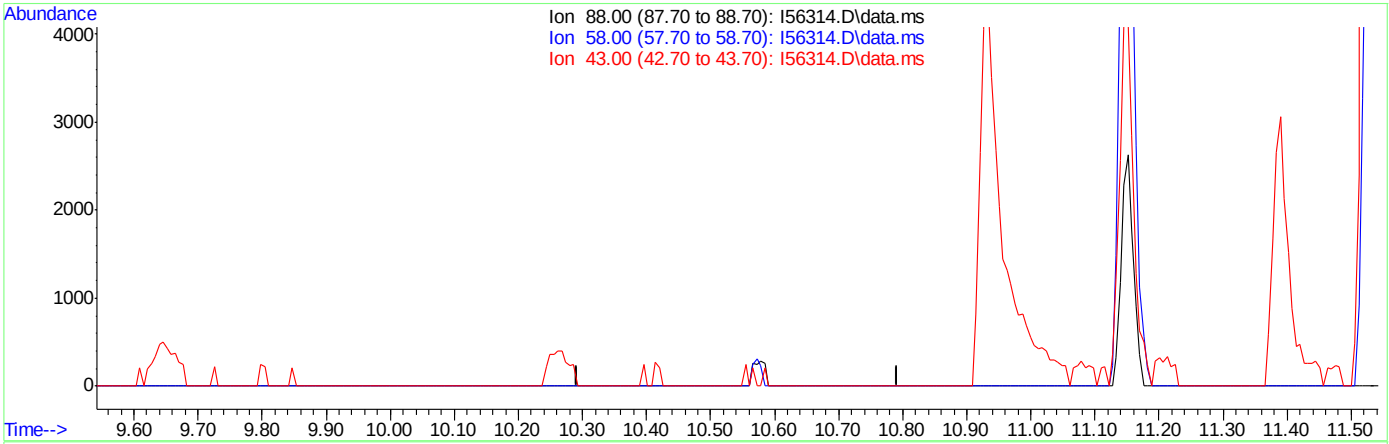
response 312

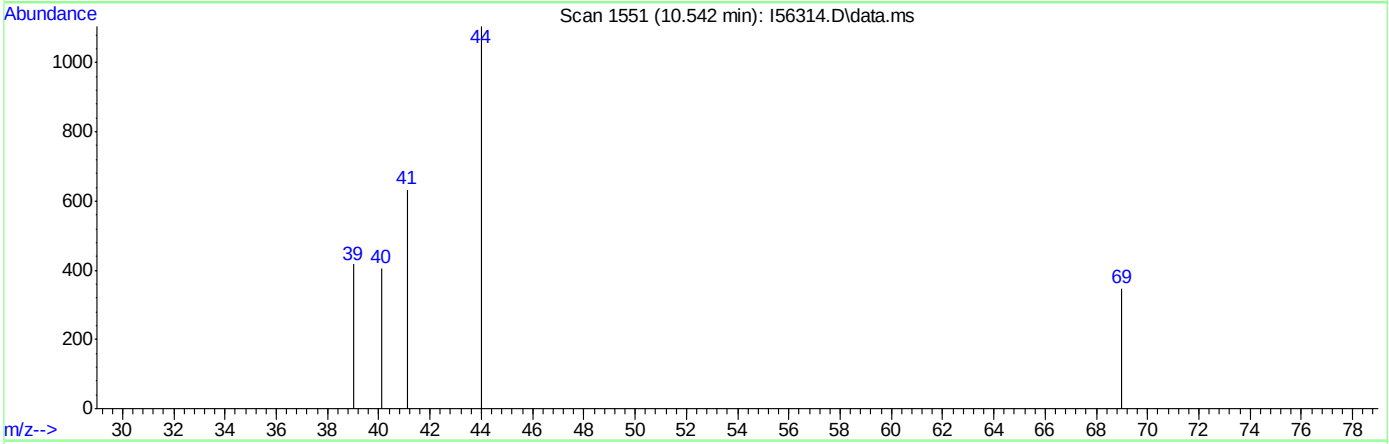
Ion	Exp%	Act%
45.00	100	100
46.00	35.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(112) 1,4-Dioxane

10.542min (-10.542) 0.00ug/L

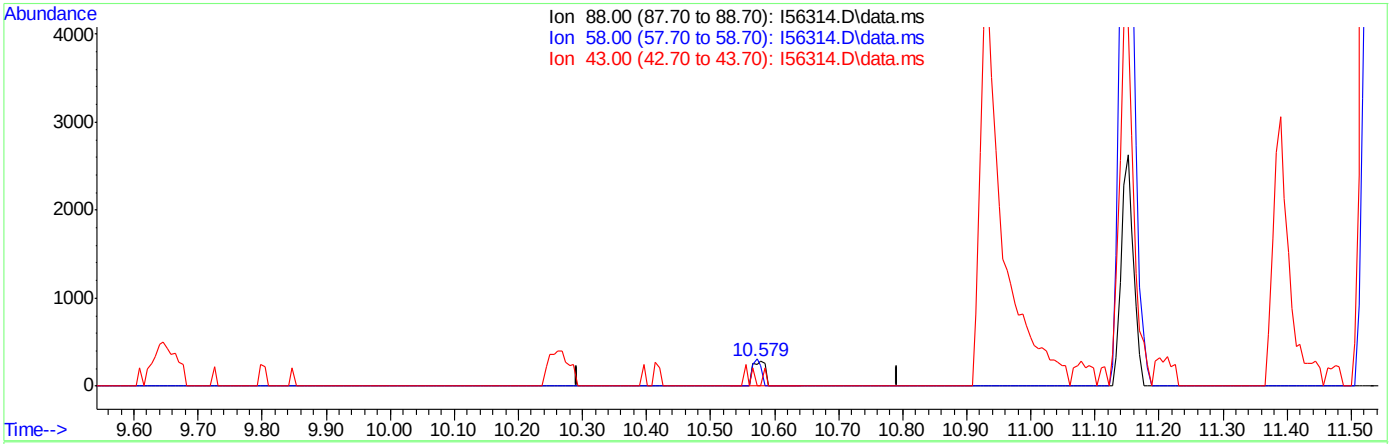
response 0

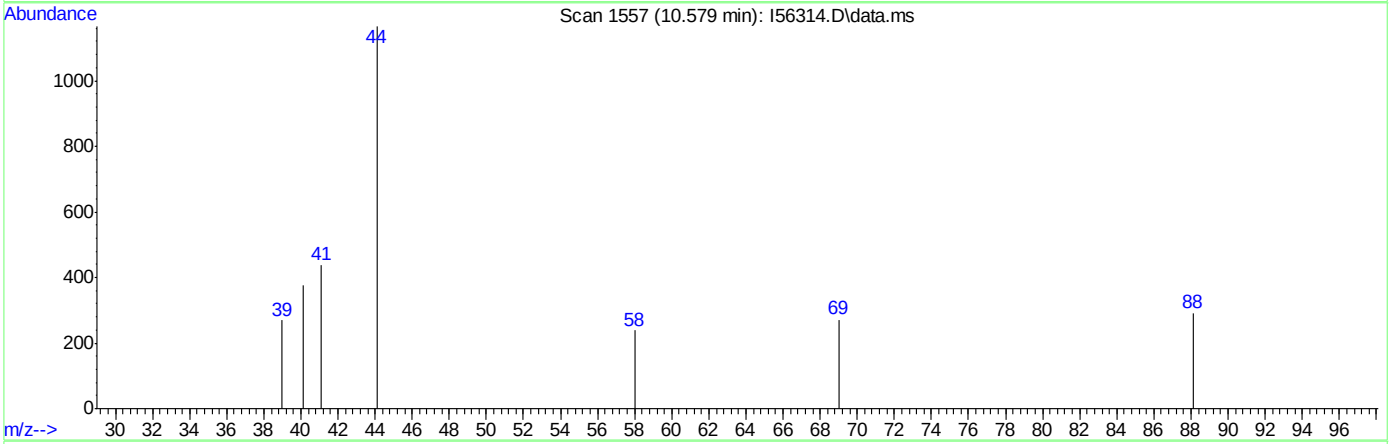
Ion	Exp%	Act%
88.00	100	0.00
58.00	90.10	0.00#
43.00	34.60	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(112) 1,4-Dioxane

10.579min (+0.037) 7.69ug/L m

response 386

Ion	Exp%	Act%
88.00	100	100
58.00	90.10	82.13
43.00	34.60	0.00#
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:53:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.414	96	1174301	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	820971	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	420628	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	87673	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.085	113	302635	47.17	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.34%			
46) 1,2-Dichloroethane-d4	8.994	65	423232	51.72	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 103.44%			
57) Toluene-d8	11.152	98	1128905	50.44	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.88%			
79) 4-Bromofluorobenzene	13.353	174	326886	47.27	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.54%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.245	85	36189	5.66	ug/L	97
3) Chloromethane	2.525	50	49045	8.44	ug/L	98
4) 1,3-Butadiene	2.641	39	23478	5.78	ug/L	97
5) Vinyl Chloride	2.654	62	38854	6.87	ug/L	97
6) Bromomethane	3.105	94	21605	6.51	ug/L	95
7) Chloroethane	3.263	64	19183	9.42	ug/L	96
8) Trichlorofluoromethane	3.507	101	49582m	6.53	ug/L	
9) Ethyl Ether	3.922	59	33369	5.72	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.226	67	42909	5.47	ug/L	98
11) 1,1-Dichloroethene	4.220	61	53914	5.17	ug/L	97
12) Freon 113	4.318	101	32228	5.11	ug/L	93
13) Carbon Disulfide	4.263	76	83280	4.85	ug/L	97
14) Iodomethane	4.428	142	46277	4.60	ug/L	97
15) Allyl chloride	4.927	41	45160	6.40	ug/L	99
16) Methylene Chloride	5.098	49	59817	6.19	ug/L	97
17) Acetone	5.171	43	46414	24.97	ug/L	100
18) Methyl acetate	5.385	43	89659	19.26	ug/L	97
19) trans-1,2-Dichloroethene	5.360	61	52638	5.15	ug/L	97
20) Hexane	5.501	56	43867	6.40	ug/L	97
21) Methyl Tert Butyl Ether	5.549	73	63365	4.55	ug/L	95
22) Acetonitrile	5.927	41	27632	41.56	ug/L	99
23) Di-isopropyl ether	6.183	45	114930	5.79	ug/L	100
24) Chloroprene	6.311	53	51892	4.79	ug/L	97
25) 1,1-Dichloroethane	6.336	63	65042	5.37	ug/L	99
26) Acrylonitrile	6.427	53	46411	17.70	ug/L	96
27) ETBE	6.799	59	90663	4.73	ug/L	97
28) Vinyl acetate	6.787	43	309659	54.66	ug/L	85
29) cis-1,2-Dichloroethene	7.281	96	30784	4.91	ug/L	96
30) 2,2-Dichloropropane	7.457	77	24335	6.75	ug/L	98
31) Bromochloromethane	7.622	128	14916	4.72	ug/L	93
32) Cyclohexane	7.646	56	72666	5.78	ug/L	97
33) Chloroform	7.768	83	56462	5.20	ug/L	96
34) Ethyl acetate	8.012	43	140470	23.78	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:53:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.049	42	19250	5.09	ug/L		92
37) Carbon Tetrachloride	8.018	117	33200	4.50	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	43324	4.63	ug/L		98
39) 2-Butanone	8.329	43	56839	21.38	ug/L		97
40) 1,1-Dichloropropene	8.366	75	38852	4.95	ug/L		96
41) tert-Butyl formate	8.573	59	86111	66.05	ug/L	#	77
42) Propionitrile	8.805	54	48038	65.05	ug/L	#	1
43) Methacrylonitrile	8.841	41	205491	65.16	ug/L		98
44) Benzene	8.793	78	120244	5.28	ug/L		92
45) TAME	9.030	73	59527	4.41	ug/L		87
47) 1,2-Dichloroethane	9.103	62	52471	5.29	ug/L		99
48) Trichloroethene	9.658	95	31438	4.86	ug/L		98
49) Methylcyclohexane	9.652	83	50753	5.30	ug/L		96
50) Dibromomethane	10.158	93	18826	4.68	ug/L		96
51) 1,2-Dichloropropane	10.250	63	37354	5.24	ug/L		94
52) Bromodichloromethane	10.341	83	35181	4.72	ug/L		97
53) Methyl methacrylate	10.524	41	18906	3.89	ug/L		96
54) 2-Chloroethyl vinyl ether	10.920	63	103489	19.65	ug/L		97
55) cis-1,3-Dichloropropene	10.975	75	39389	4.50	ug/L		95
58) Toluene	11.201	91	125814	5.12	ug/L		98
59) 2-Nitropropane	11.384	41	24476	22.45	ug/L		97
60) 4-Methyl-2-pentanone	11.524	43	163864	31.44	ug/L		96
61) trans-1,3-Dichloropropene	11.926	75	2346	0.88	ug/L		93
62) Tetrachloroethene	11.554	166	32804	3.59	ug/L		97
63) Ethyl methacrylate	11.701	69	28466	4.15	ug/L	#	81
64) 1,1,2-Trichloroethane	11.701	83	23759	4.91	ug/L		95
65) Dibromochloromethane	11.865	129	26229	4.39	ug/L		99
66) 1,3-Dichloropropane	11.932	76	47108	5.05	ug/L		97
67) 1,2-Dibromoethane	12.060	107	24427	4.41	ug/L		98
68) 2-hexanone	12.213	43	136039	30.40	ug/L		84
69) 1-Chlorohexane	12.438	91	42077	5.14	ug/L		91
70) Ethylbenzene	12.481	91	145187	5.01	ug/L		99
71) Chlorobenzene	12.469	112	84152	5.09	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.517	131	24290	4.51	ug/L		100
73) m,p-Xylene	12.591	91	222431	10.48	ug/L		100
74) o-Xylene	12.914	91	106558	4.86	ug/L		99
75) Styrene	12.950	104	73864	4.55	ug/L		96
76) Bromoform	12.987	173	14480	4.05	ug/L		98
77) Isopropylbenzene	13.139	105	119732	4.92	ug/L		98
80) cis-1,4-Dichloro-2-butene	13.383	53	11645	5.89	ug/L		80
81) n-Propylbenzene	13.432	91	166867	5.39	ug/L		99
82) Bromobenzene	13.438	156	32353	4.94	ug/L		97
83) 1,1,2,2-Tetrachloroethane	13.475	83	37069	5.15	ug/L		97
84) 1,3,5-Trimethylbenzene	13.554	105	103578	5.15	ug/L		99
85) 2-Chlorotoluene	13.670	91	100346	4.88	ug/L		98
86) trans-1,4-Dichloro-2-B...	13.597	53	10530	5.49	ug/L	#	40
87) 1,2,3-Trichloropropane	13.578	110	10362	5.13	ug/L		97
88) Cyclohexanone	13.621	55	7399	30.23	ug/L		96
89) 4-Chlorotoluene	13.670	91	100346	5.16	ug/L		99
90) tert-Butylbenzene	13.785	91	63472	5.11	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:53:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

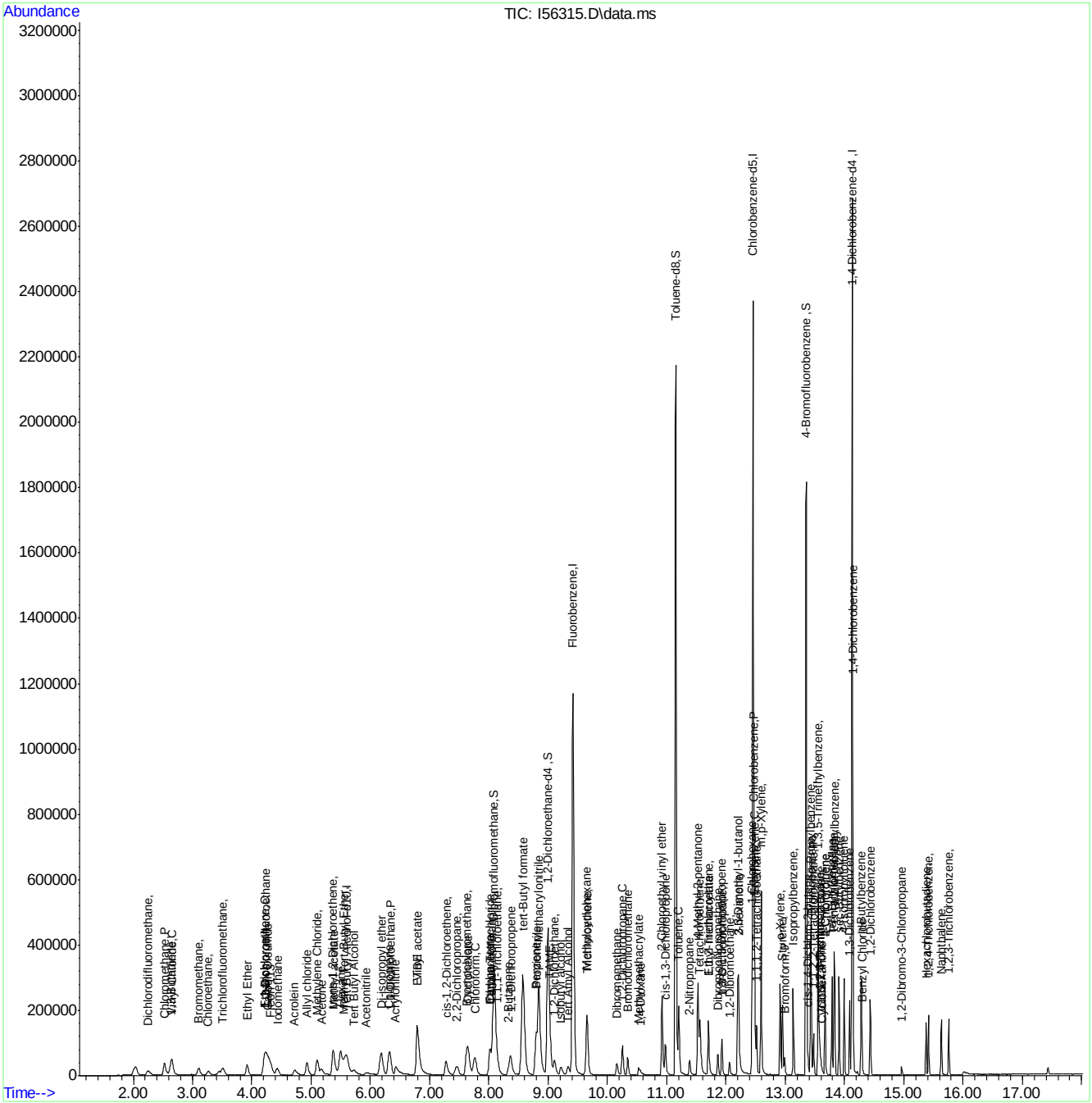
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	107541	5.15	ug/L		96
93) Pentachloroethane	13.822	167	15492	3.96	ug/L		87
94) sec-Butylbenzene	13.907	105	133807	5.29	ug/L		99
95) 4-Isopropyltoluene	13.993	119	105730	5.08	ug/L		99
96) 1,3-Dichlorobenzene	14.084	146	58728	4.87	ug/L		98
97) 1,4-Dichlorobenzene	14.139	146	66431	5.13	ug/L		89
98) n-Butylbenzene	14.285	92	59516	5.08	ug/L		95
99) Benzyl Chloride	14.298	126	4194	5.44	ug/L	#	43
100) 1,2-Dichlorobenzene	14.432	146	57770	4.81	ug/L		97
101) 1,2-Dibromo-3-Chloropr...	14.968	75	4634	3.90	ug/L		88
102) Hexachlorobutadiene	15.377	225	18366	4.56	ug/L		97
103) 1,2,4-Trichlorobenzene	15.419	180	35906	4.36	ug/L		95
104) Naphthalene	15.633	128	80065	3.85	ug/L		99
105) 1,2,3-Trichlorobenzene	15.761	180	34036	4.25	ug/L		98
107) Ethanol	4.220	45	6295m	122.47	ug/L		
108) Acrolein	4.714	56	32275	32.38	ug/L		94
109) Tert Butyl Alcohol	5.720	59	26996	47.00	ug/L		92
110) Isobutyl alcohol	9.213	43	19745	108.64	ug/L		95
111) Tert Amyl Alcohol	9.335	59	14861	43.64	ug/L	#	78
112) 1,4-Dioxane	10.554	88	4632	85.44	ug/L		95
113) 3,3-Dimethyl-1-butanol	12.200	57	139946	286.02	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:53:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number: VI1683-IC1683
Lab FileID: I56315.D
Injection Time: 07/25/18 15:37

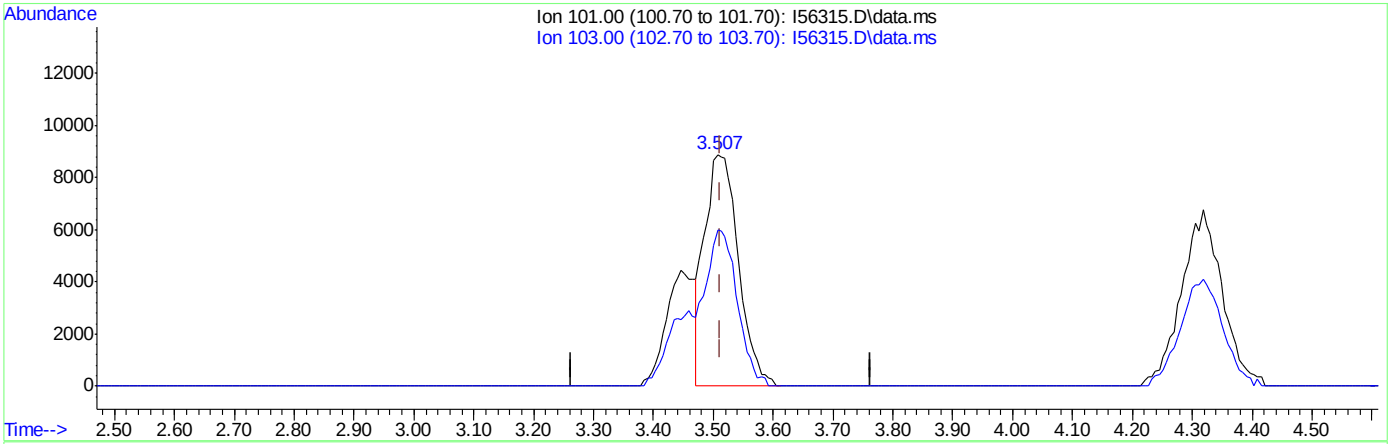
Method: SW846 8260B
Analyst approved: 07/26/18 08:26 Ana Jimenez
Supervisor approved: 07/31/18 15:11 Melissa Mangual

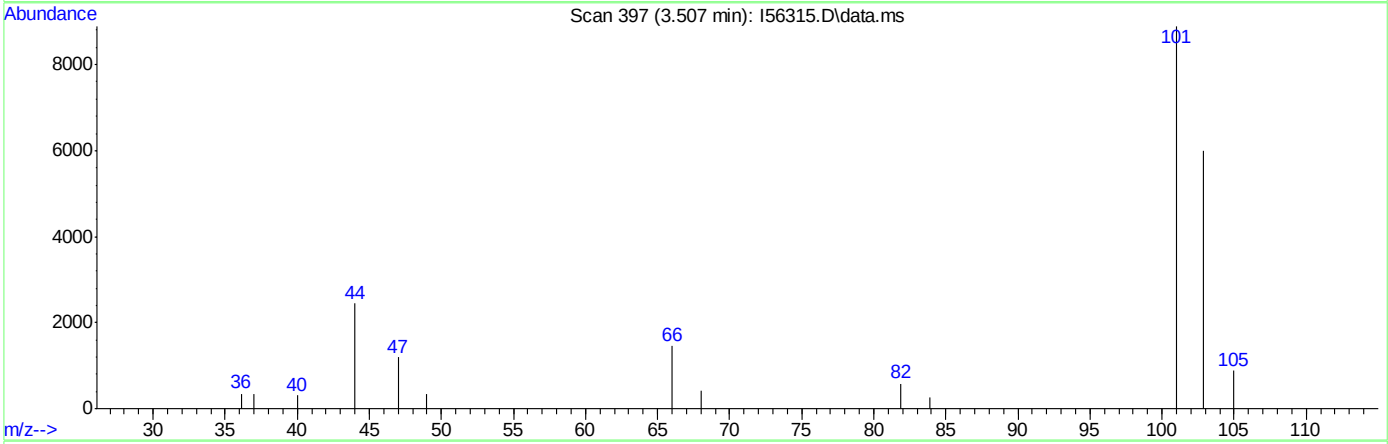
Parameter	CAS	Sig#	R.T. (min.)	Reason
Trichlorofluoromethane	75-69-4		3.51	Split peak
Ethyl Alcohol	64-17-5		4.22	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:26:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56315.D\data.ms

(8) Trichlorofluoromethane ( )

3.507min (-0.006) 4.59ug/L

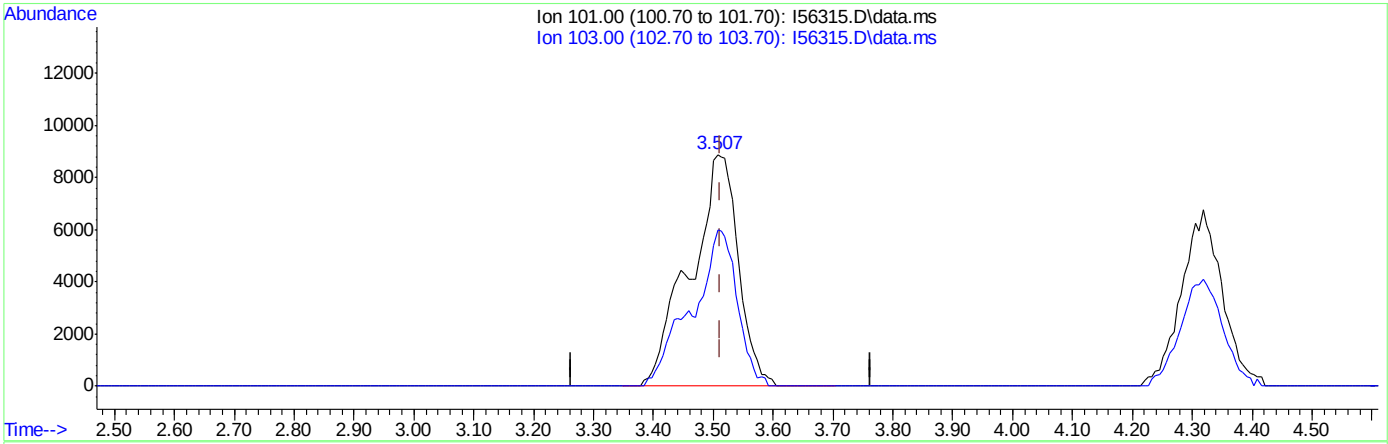
response 34888

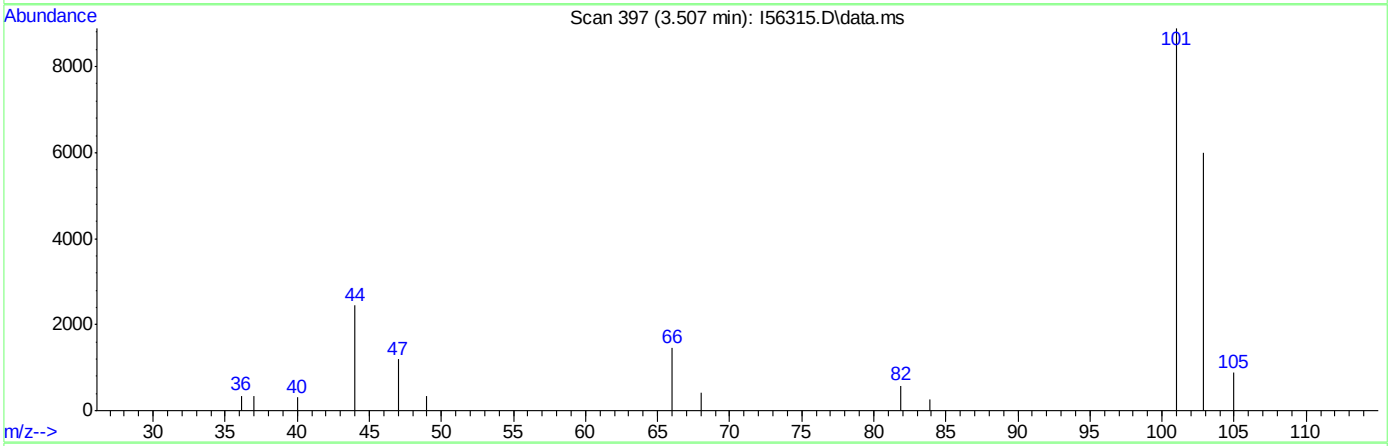
Ion	Exp%	Act%
101.00	100	100
103.00	63.30	67.57
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:26:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56315.D\data.ms

(8) Trichlorofluoromethane ( )

3.507min (-0.006) 6.53ug/L m

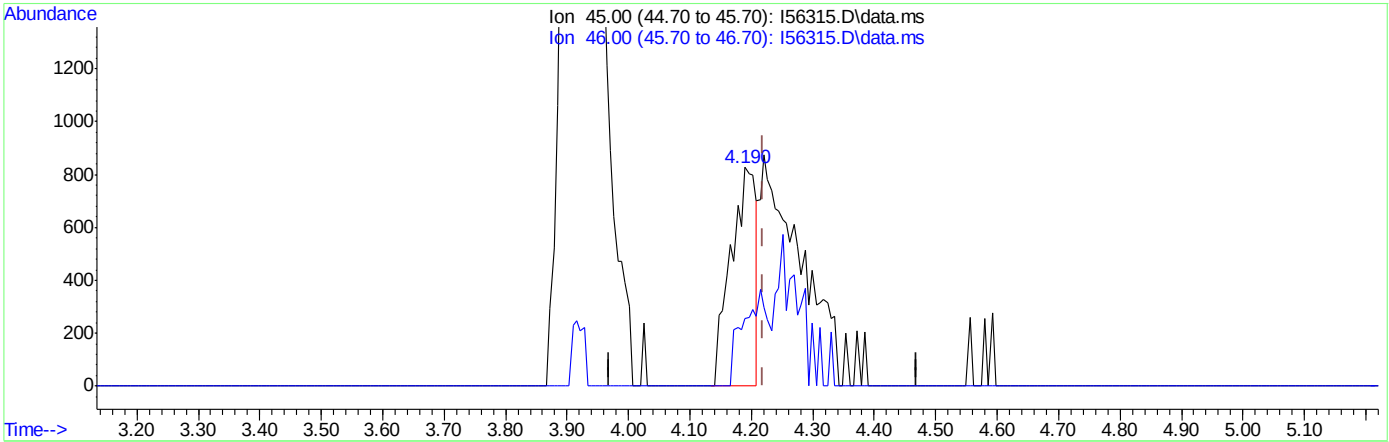
response 49582

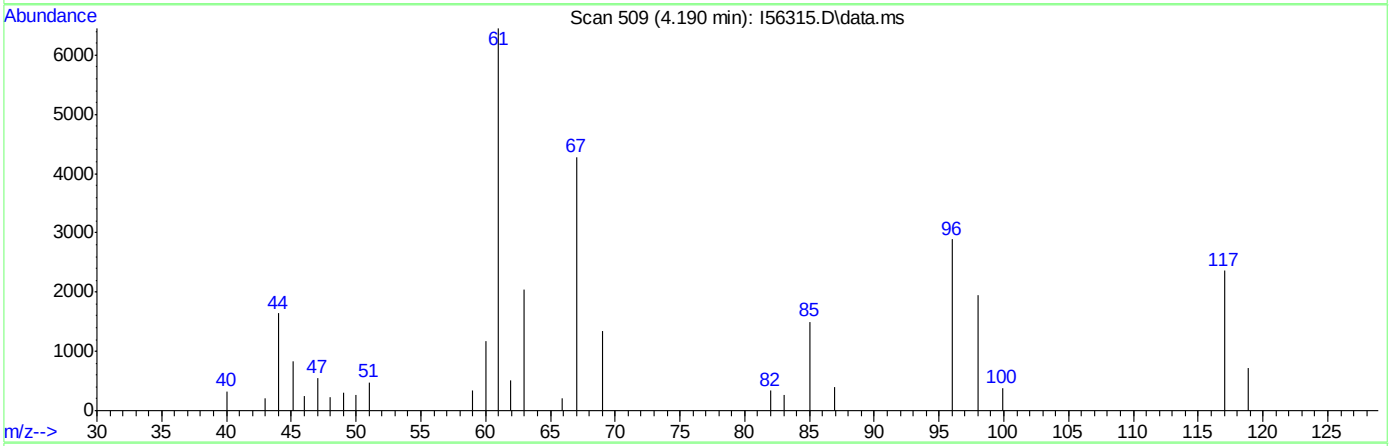
Ion	Exp%	Act%
101.00	100	100
103.00	63.30	67.57
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:26:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56315.D\data.ms

(107) Ethanol

4.190min (-0.030) 45.47ug/L

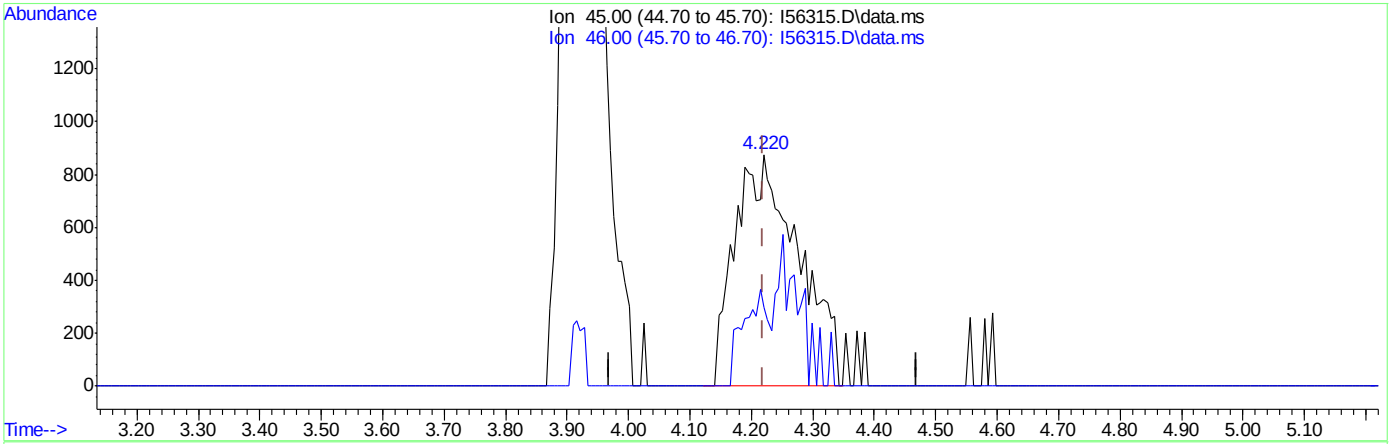
response 2337

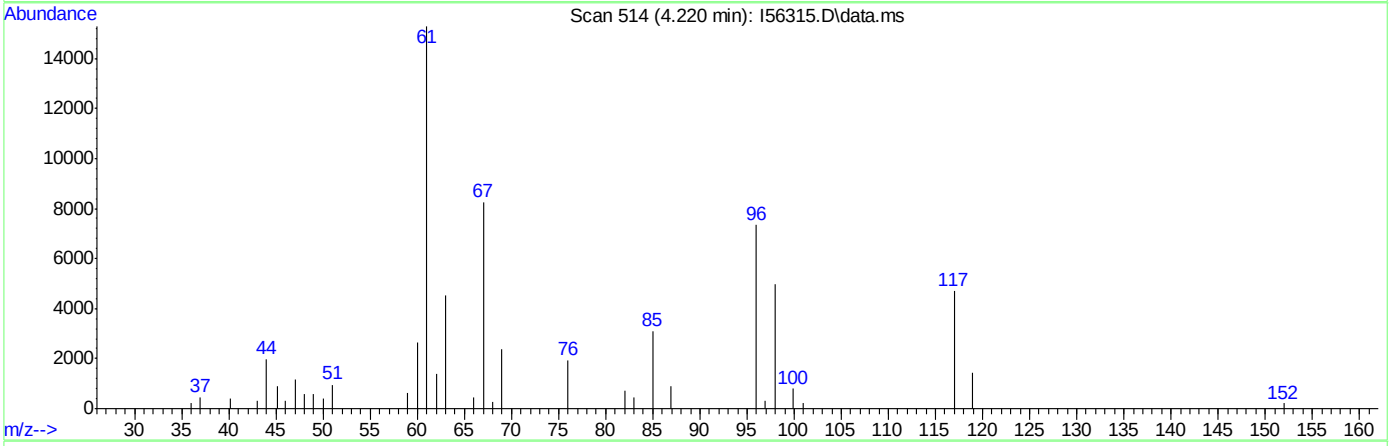
Ion	Exp%	Act%
45.00	100	100
46.00	35.80	30.83
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:26:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56315.D\data.ms

(107) Ethanol

4.220min (+0.000) 122.47ug/L m

response 6295

Ion	Exp%	Act%
45.00	100	100
46.00	35.80	34.13
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:54:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1188171	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	827532	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	421155	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	93674	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	311075	47.92	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.84%			
46) 1,2-Dichloroethane-d4	8.994	65	425687	51.42	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.84%			
57) Toluene-d8	11.152	98	1146655	50.83	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 101.66%			
79) 4-Bromofluorobenzene	13.353	174	329891	47.65	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.30%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	65368	10.09	ug/L	94
3) Chloromethane	2.526	50	92568	15.74	ug/L	99
4) 1,3-Butadiene	2.635	39	42842	10.44	ug/L	96
5) Vinyl Chloride	2.660	62	72171	12.61	ug/L	98
6) Bromomethane	3.105	94	41522	12.37	ug/L	97
7) Chloroethane	3.269	64	32912	16.38	ug/L	95
8) Trichlorofluoromethane	3.513	101	88783	11.55	ug/L	99
9) Ethyl Ether	3.916	59	68894	11.68	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.227	67	79625	10.04	ug/L	93
11) 1,1-Dichloroethene	4.214	61	104999	9.95	ug/L	96
12) Freon 113	4.318	101	59534	9.33	ug/L	97
13) Carbon Disulfide	4.269	76	162464	9.27	ug/L	98
14) Iodomethane	4.428	142	89357	8.78	ug/L	99
15) Allyl chloride	4.928	41	89012	12.48	ug/L	98
16) Methylene Chloride	5.098	49	115428	11.80	ug/L	97
17) Acetone	5.165	43	95675	51.23	ug/L	100
18) Methyl acetate	5.373	43	212277	45.41	ug/L	98
19) trans-1,2-Dichloroethene	5.361	61	104902	10.15	ug/L	99
20) Hexane	5.495	56	82394	11.88	ug/L	99
21) Methyl Tert Butyl Ether	5.556	73	129199	9.17	ug/L	97
22) Acetonitrile	5.909	41	58883	88.49	ug/L	96
23) Di-isopropyl ether	6.184	45	232647	11.58	ug/L	99
24) Chloroprene	6.305	53	104050	9.52	ug/L	97
25) 1,1-Dichloroethane	6.336	63	127861	10.43	ug/L	99
26) Acrylonitrile	6.415	53	116807	44.09	ug/L	99
27) ETBE	6.799	59	189060	9.75	ug/L	99
28) Vinyl acetate	6.781	43	702335	108.00	ug/L	83
29) cis-1,2-Dichloroethene	7.275	96	61351	9.67	ug/L	99
30) 2,2-Dichloropropane	7.458	77	48978	12.54	ug/L	97
31) Bromochloromethane	7.622	128	29943	9.37	ug/L	96
32) Cyclohexane	7.641	56	140021	11.00	ug/L	95
33) Chloroform	7.769	83	108530	9.89	ug/L	97
34) Ethyl acetate	8.012	43	312124	52.66	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:54:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.049	42	42685	11.23	ug/L		96
37) Carbon Tetrachloride	8.019	117	63111	8.45	ug/L		98
38) 1,1,1-Trichloroethane	8.134	97	85033	8.97	ug/L		97
39) 2-Butanone	8.317	43	132290	49.51	ug/L		97
40) 1,1-Dichloropropene	8.366	75	76533	9.61	ug/L		98
41) tert-Butyl formate	8.573	59	191740	128.56	ug/L		91
42) Propionitrile	8.805	54	104197	139.45	ug/L	#	1
43) Methacrylonitrile	8.842	41	412253	129.19	ug/L		100
44) Benzene	8.793	78	234317	10.18	ug/L		96
45) TAME	9.024	73	123033	9.01	ug/L		93
47) 1,2-Dichloroethane	9.104	62	102766	10.25	ug/L		99
48) Trichloroethene	9.658	95	61269	9.37	ug/L		98
49) Methylcyclohexane	9.646	83	99174	10.23	ug/L		96
50) Dibromomethane	10.152	93	38503	9.47	ug/L		97
51) 1,2-Dichloropropane	10.250	63	74627	10.35	ug/L		96
52) Bromodichloromethane	10.341	83	72742	9.64	ug/L		97
53) Methyl methacrylate	10.524	41	45204	9.21	ug/L		96
54) 2-Chloroethyl vinyl ether	10.920	63	226330	42.92	ug/L		96
55) cis-1,3-Dichloropropene	10.975	75	83293	9.32	ug/L		96
58) Toluene	11.201	91	246293	9.94	ug/L		99
59) 2-Nitropropane	11.384	41	57350	51.64	ug/L		93
60) 4-Methyl-2-pentanone	11.524	43	340691	64.85	ug/L		98
61) trans-1,3-Dichloropropene	11.926	75	5255	1.91	ug/L	#	91
62) Tetrachloroethene	11.554	166	64653	7.07	ug/L		98
63) Ethyl methacrylate	11.701	69	61488	8.84	ug/L		91
64) 1,1,2-Trichloroethane	11.707	83	48277	9.90	ug/L		95
65) Dibromochloromethane	11.865	129	54367	8.95	ug/L		97
66) 1,3-Dichloropropane	11.932	76	94499	10.06	ug/L		99
67) 1,2-Dibromoethane	12.060	107	51606	9.25	ug/L		97
68) 2-hexanone	12.213	43	283655	62.89	ug/L		85
69) 1-Chlorohexane	12.444	91	82389	9.98	ug/L		96
70) Ethylbenzene	12.481	91	281342	9.64	ug/L		99
71) Chlorobenzene	12.469	112	160825	9.65	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.518	131	48327	8.91	ug/L		97
73) m,p-Xylene	12.591	91	431764	20.18	ug/L		99
74) o-Xylene	12.914	91	215543	9.76	ug/L		99
75) Styrene	12.950	104	149578	9.10	ug/L		97
76) Bromoform	12.987	173	30841	8.44	ug/L		98
77) Isopropylbenzene	13.139	105	237557	9.64	ug/L		100
80) cis-1,4-Dichloro-2-butene	13.383	53	22995	11.45	ug/L		86
81) n-Propylbenzene	13.432	91	325205	10.50	ug/L		98
82) Bromobenzene	13.438	156	62714	9.57	ug/L		100
83) 1,1,2,2-Tetrachloroethane	13.475	83	71819	9.96	ug/L		98
84) 1,3,5-Trimethylbenzene	13.554	105	206149	10.23	ug/L		99
85) 2-Chlorotoluene	13.670	91	195726	9.50	ug/L		98
86) trans-1,4-Dichloro-2-B...	13.597	53	22971	11.78	ug/L	#	55
87) 1,2,3-Trichloropropane	13.578	110	19202	9.50	ug/L		94
88) Cyclohexanone	13.621	55	15216	62.08	ug/L		97
89) 4-Chlorotoluene	13.670	91	195726	10.05	ug/L		99
90) tert-Butylbenzene	13.786	91	125125	10.06	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:54:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

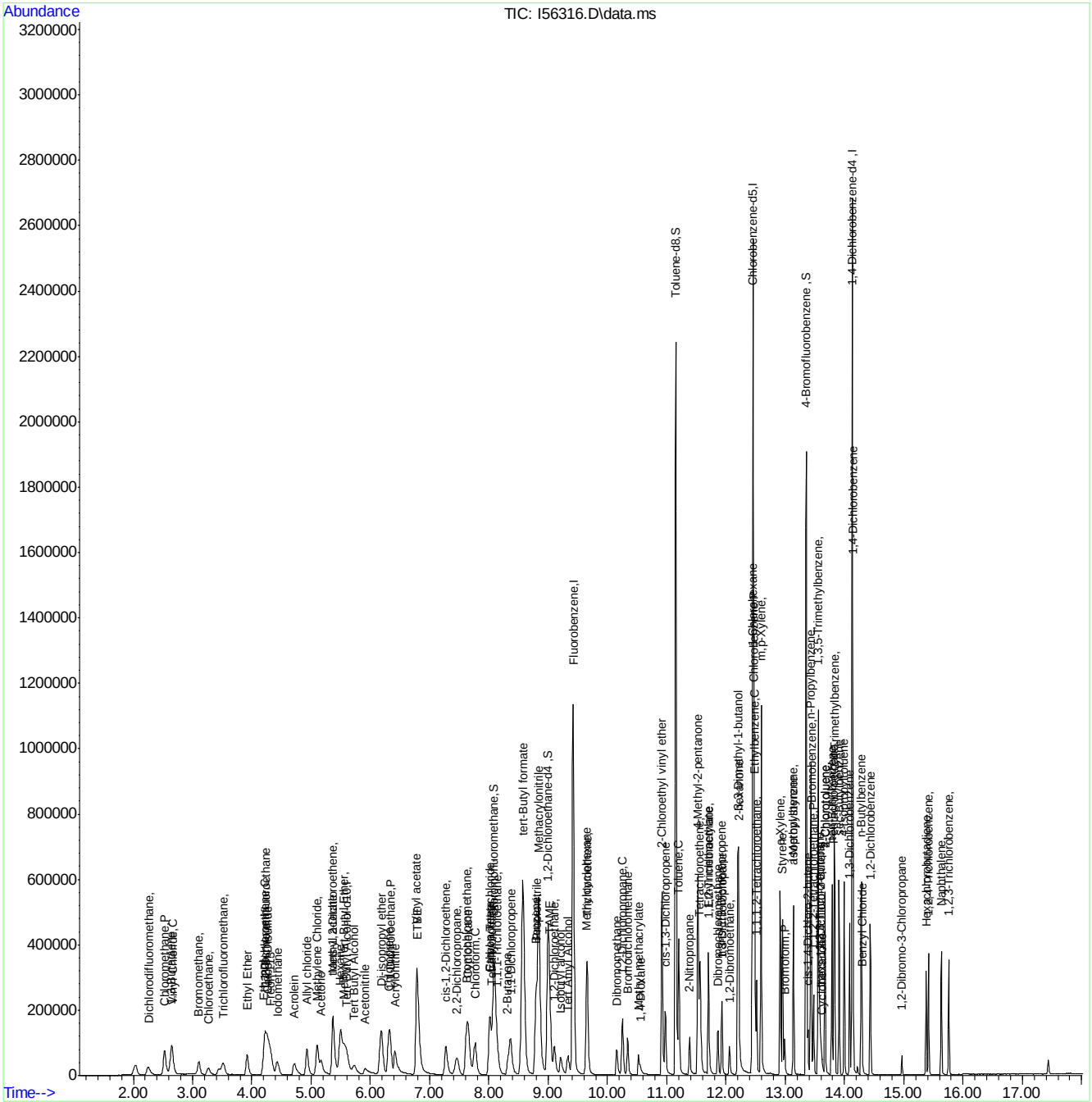
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) a-Methyl styrene	13.133	118	1605	20.99	ug/L #	1
92) 1,2,4-Trimethylbenzene	13.828	105	214701	10.26	ug/L	97
93) Pentachloroethane	13.822	167	30638	7.83	ug/L	90
94) sec-Butylbenzene	13.908	105	261171	10.31	ug/L	99
95) 4-Isopropyltoluene	13.993	119	211670	10.15	ug/L	98
96) 1,3-Dichlorobenzene	14.084	146	116318	9.63	ug/L	98
97) 1,4-Dichlorobenzene	14.139	146	128277	9.89	ug/L	94
98) n-Butylbenzene	14.286	92	119746	10.22	ug/L	94
99) Benzyl Chloride	14.298	126	9746	11.10	ug/L #	47
100) 1,2-Dichlorobenzene	14.432	146	112915	9.40	ug/L	98
101) 1,2-Dibromo-3-Chloropr...	14.968	75	9836	8.20	ug/L	86
102) Hexachlorobutadiene	15.377	225	35925	8.92	ug/L	96
103) 1,2,4-Trichlorobenzene	15.420	180	73365	8.91	ug/L	95
104) Naphthalene	15.633	128	174701	8.40	ug/L	99
105) 1,2,3-Trichlorobenzene	15.761	180	70673	8.82	ug/L	98
107) Ethanol	4.202	45	14189m	258.36	ug/L	
108) Acrolein	4.708	56	71951	67.56	ug/L	99
109) Tert Butyl Alcohol	5.726	59	59835	97.50	ug/L	92
110) Isobutyl alcohol	9.213	43	44980	231.62	ug/L	99
111) Tert Amyl Alcohol	9.329	59	34243	94.11	ug/L	90
112) 1,4-Dioxane	10.555	88	10606	183.47	ug/L	91
113) 3,3-Dimethyl-1-butanol	12.201	57	298636	571.24	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:54:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

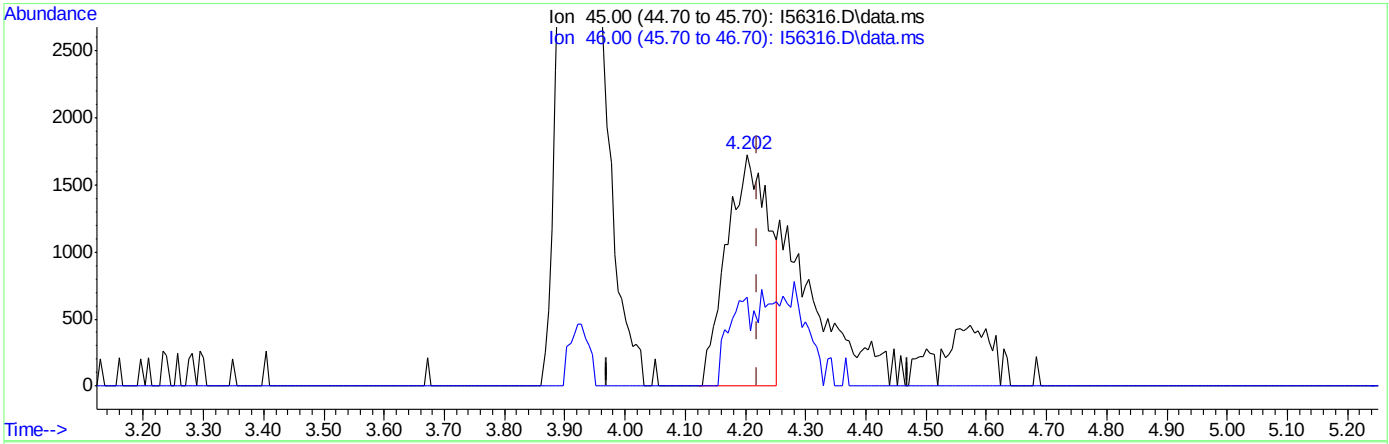
Sample Number: VI1683-IC1683
Lab FileID: I56316.D
Injection Time: 07/25/18 16:01
Method: SW846 8260B
Analyst approved: 07/26/18 08:26 Ana Jimenez
Supervisor approved: 07/31/18 15:11 Melissa Mangual

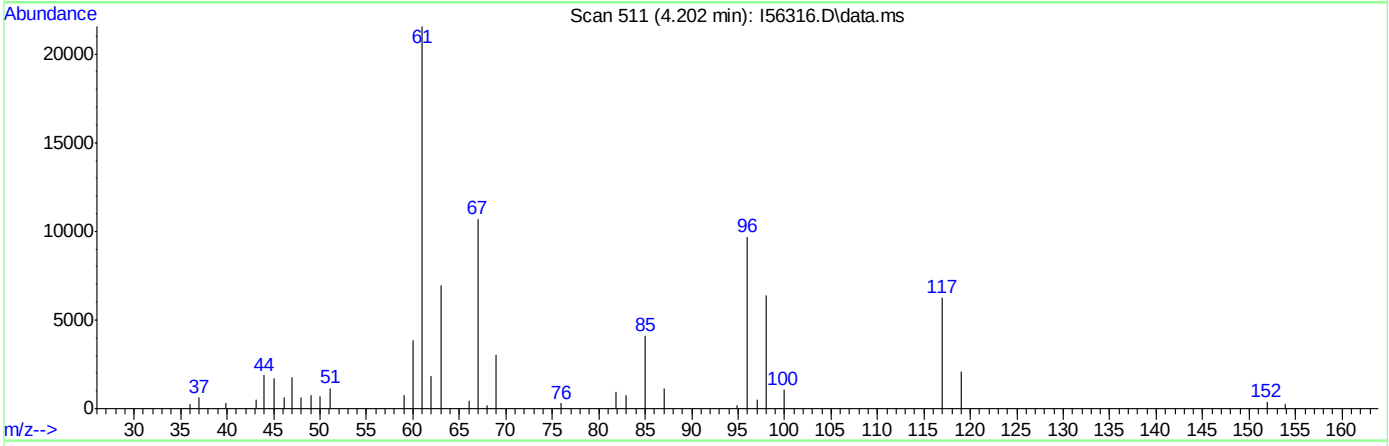
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		4.20	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:26:05 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56316.D\data.ms

(107) Ethanol

4.202min (-0.018) 151.55ug/L

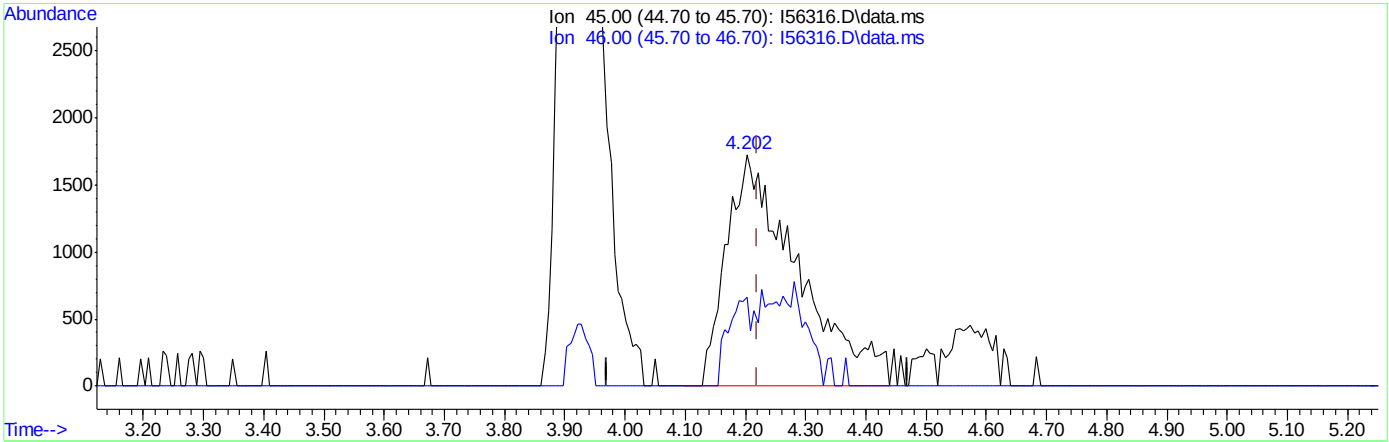
response 8323

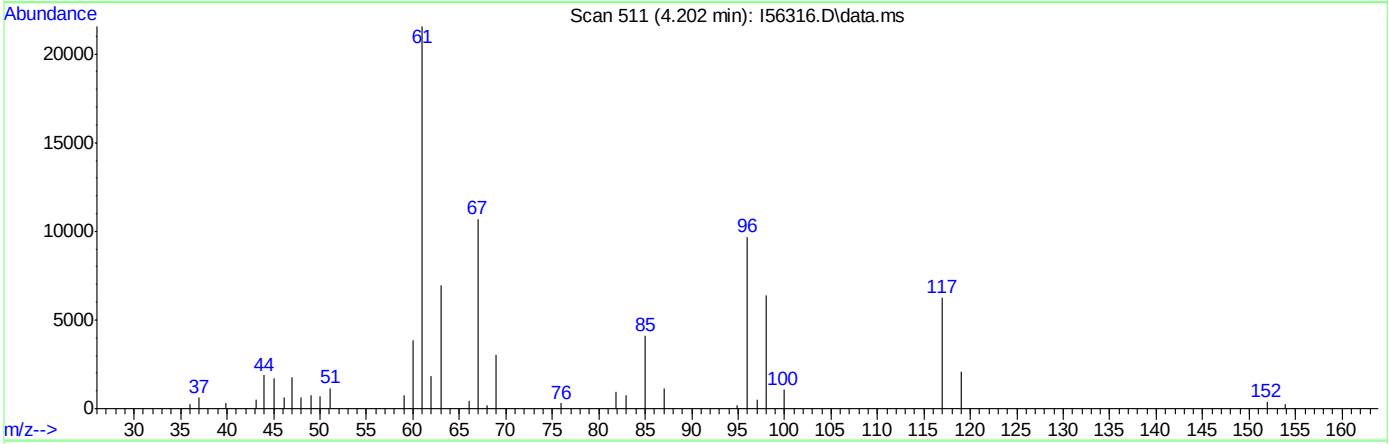
Ion	Exp%	Act%
45.00	100	100
46.00	35.80	38.45
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:26:05 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56316.D\data.ms

(107) Ethanol

4.202min (-0.018) 258.36ug/L m

response 14189

Ion	Exp%	Act%
45.00	100	100
46.00	35.80	38.45
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 08:04:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1187789	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	833915	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	422900	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	95487	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	315544	48.62	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.24%			
46) 1,2-Dichloroethane-d4	8.994	65	423727	51.20	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.40%			
57) Toluene-d8	11.152	98	1144174	50.33	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.66%			
79) 4-Bromofluorobenzene	13.353	174	336250	48.37	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.74%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	171014	26.32	ug/L	95
3) Chloromethane	2.532	50	228004	38.77	ug/L	100
4) 1,3-Butadiene	2.641	39	118335	29.08	ug/L	96
5) Vinyl Chloride	2.666	62	194288	33.96	ug/L	100
6) Bromomethane	3.105	94	96545	28.76	ug/L	99
7) Chloroethane	3.269	64	60507	32.00	ug/L	97
8) Trichlorofluoromethane	3.513	101	236325	30.75	ug/L	98
9) Ethyl Ether	3.922	59	175010	29.67	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.239	67	210096	26.49	ug/L	99
11) 1,1-Dichloroethene	4.220	61	279025	26.44	ug/L	97
12) Freon 113	4.318	101	155288	24.36	ug/L	98
13) Carbon Disulfide	4.269	76	444363	24.70	ug/L	98
14) Iodomethane	4.434	142	238944	23.49	ug/L	99
15) Allyl chloride	4.928	41	244771	34.32	ug/L	98
16) Methylene Chloride	5.104	49	278989	28.54	ug/L	100
17) Acetone	5.165	43	252625	138.61	ug/L	100
18) Methyl acetate	5.373	43	607770	133.42	ug/L	99
19) trans-1,2-Dichloroethene	5.360	61	277830	26.88	ug/L	99
20) Hexane	5.495	56	214757	30.98	ug/L	98
21) Methyl Tert Butyl Ether	5.555	73	347014	24.65	ug/L	98
22) Acetonitrile	5.891	41	179052	282.01	ug/L	100
23) Di-isopropyl ether	6.183	45	630130	31.36	ug/L	98
24) Chloroprene	6.305	53	295165	27.39	ug/L	99
25) 1,1-Dichloroethane	6.336	63	329776	26.91	ug/L	99
26) Acrylonitrile	6.397	53	350191	132.74	ug/L	99
27) ETBE	6.805	59	514679	26.55	ug/L	99
28) Vinyl acetate	6.775	43	1973067	236.24	ug/L	82
29) cis-1,2-Dichloroethene	7.269	96	161786	25.51	ug/L	95
30) 2,2-Dichloropropane	7.458	77	142755	30.38	ug/L	98
31) Bromochloromethane	7.610	128	78826	24.66	ug/L	97
32) Cyclohexane	7.653	56	377491	29.66	ug/L	100
33) Chloroform	7.768	83	278697	25.40	ug/L	98
34) Ethyl acetate	8.000	43	864970	150.14	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 08:04:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.037	42	110528m	29.77	ug/L		
37) Carbon Tetrachloride	8.024	117	172593	23.10	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	231376	24.43	ug/L		97
39) 2-Butanone	8.311	43	368463	141.13	ug/L		100
40) 1,1-Dichloropropene	8.360	75	210697	26.16	ug/L		99
41) tert-Butyl formate	8.579	59	573132	294.26	ug/L	#	80
42) Propionitrile	8.793	54	278427m	372.74	ug/L		
43) Methacrylonitrile	8.835	41	1072501	336.21	ug/L		99
44) Benzene	8.793	78	606413	26.35	ug/L		100
45) TAME	9.030	73	342268	25.08	ug/L		97
47) 1,2-Dichloroethane	9.104	62	262623	26.20	ug/L		99
48) Trichloroethene	9.658	95	161835	24.75	ug/L		99
49) Methylcyclohexane	9.652	83	266657	27.51	ug/L		98
50) Dibromomethane	10.146	93	101719	25.02	ug/L		99
51) 1,2-Dichloropropane	10.250	63	198340	27.51	ug/L		98
52) Bromodichloromethane	10.341	83	198642	26.35	ug/L		99
53) Methyl methacrylate	10.512	41	132963	27.38	ug/L		98
54) 2-Chloroethyl vinyl ether	10.914	63	613040	120.50	ug/L		97
55) cis-1,3-Dichloropropene	10.975	75	241610	26.22	ug/L		99
58) Toluene	11.201	91	644416	25.80	ug/L		100
59) 2-Nitropropane	11.384	41	173832	150.08	ug/L		98
60) 4-Methyl-2-pentanone	11.524	43	891306	168.36	ug/L		98
61) trans-1,3-Dichloropropene	11.926	75	13809	4.65	ug/L		97
62) Tetrachloroethene	11.554	166	173745	19.40	ug/L		99
63) Ethyl methacrylate	11.701	69	181372	25.40	ug/L		90
64) 1,1,2-Trichloroethane	11.701	83	125040	25.45	ug/L		97
65) Dibromochloromethane	11.859	129	151361	24.08	ug/L		98
66) 1,3-Dichloropropane	11.926	76	249441	26.35	ug/L		97
67) 1,2-Dibromoethane	12.054	107	140147	24.93	ug/L		97
68) 2-hexanone	12.207	43	749583	164.91	ug/L		97
69) 1-Chlorohexane	12.438	91	217455	26.14	ug/L		99
70) Ethylbenzene	12.481	91	748561	25.44	ug/L		99
71) Chlorobenzene	12.469	112	415841	24.76	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.518	131	133450	24.41	ug/L		99
73) m,p-Xylene	12.591	91	1155600	53.60	ug/L		100
74) o-Xylene	12.914	91	588232	26.42	ug/L		99
75) Styrene	12.950	104	420727	25.04	ug/L		99
76) Bromoform	12.987	173	89793	23.35	ug/L		99
77) Isopropylbenzene	13.133	105	649513	25.78	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.377	53	67861	31.92	ug/L		85
81) n-Propylbenzene	13.432	91	879177	28.26	ug/L		99
82) Bromobenzene	13.438	156	166446	25.30	ug/L		99
83) 1,1,2,2-Tetrachloroethane	13.475	83	189353	26.15	ug/L		100
84) 1,3,5-Trimethylbenzene	13.554	105	560790	27.72	ug/L		100
85) 2-Chlorotoluene	13.670	91	524217	25.35	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.597	53	65548	31.94	ug/L	#	65
87) 1,2,3-Trichloropropane	13.578	110	51940	25.58	ug/L		97
88) Cyclohexanone	13.621	55	43986	178.72	ug/L		98
89) 4-Chlorotoluene	13.670	91	524217	26.80	ug/L		100
90) tert-Butylbenzene	13.786	91	339960	27.22	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 08:04:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

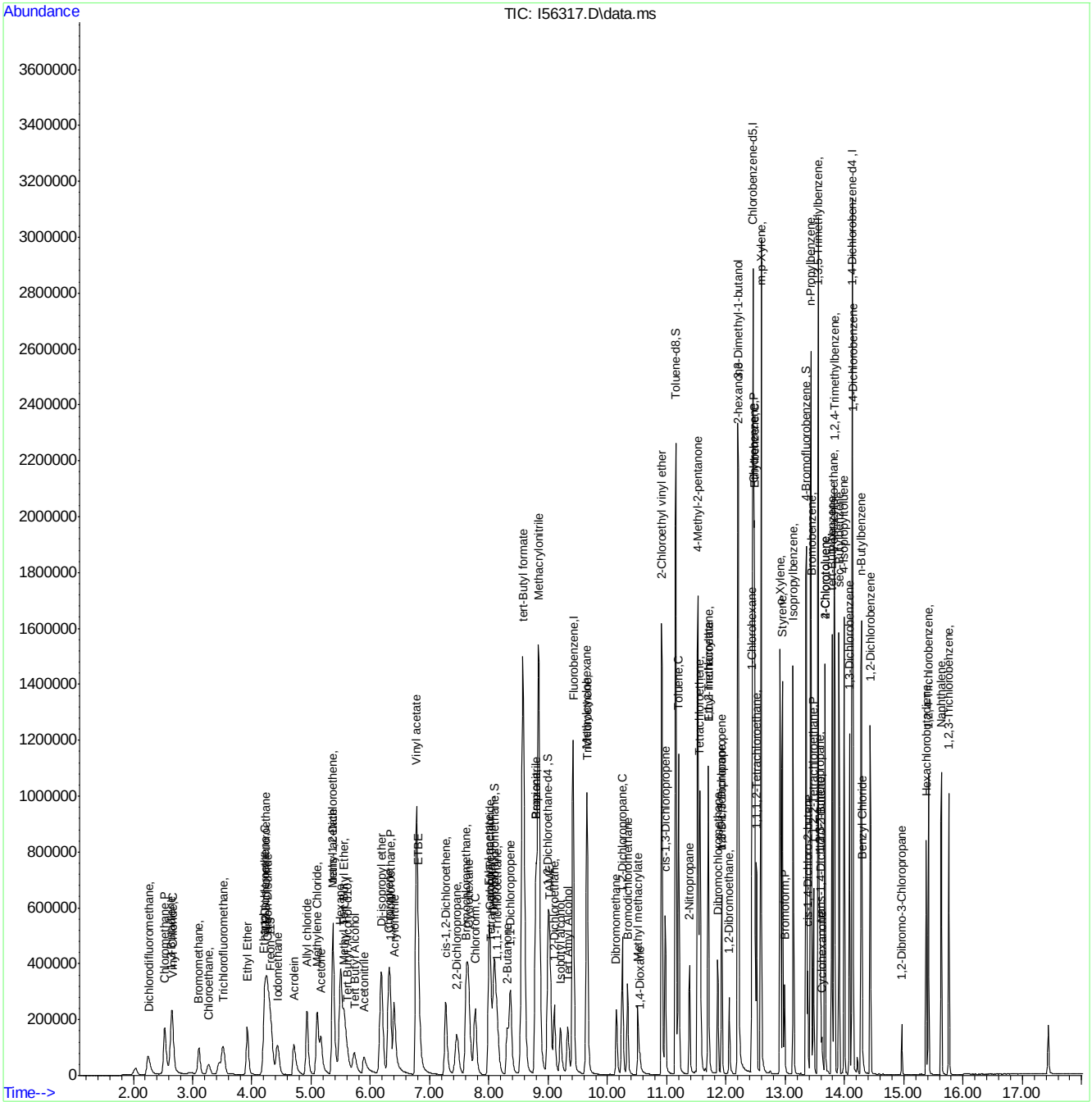
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	577530	27.49	ug/L		97
93) Pentachloroethane	13.822	167	86505	22.08	ug/L		87
94) sec-Butylbenzene	13.908	105	708570	27.84	ug/L		100
95) 4-Isopropyltoluene	13.993	119	580069	27.71	ug/L		100
96) 1,3-Dichlorobenzene	14.084	146	309758	25.53	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	331259	25.44	ug/L		99
98) n-Butylbenzene	14.285	92	333353	28.33	ug/L		92
99) Benzyl Chloride	14.298	126	36846	29.89	ug/L	#	25
100) 1,2-Dichlorobenzene	14.432	146	302159	25.04	ug/L		98
101) 1,2-Dibromo-3-Chloropr...	14.968	75	29930	24.11	ug/L		88
102) Hexachlorobutadiene	15.377	225	99788	24.67	ug/L		99
103) 1,2,4-Trichlorobenzene	15.413	180	203788	24.63	ug/L		99
104) Naphthalene	15.633	128	506198	24.23	ug/L		100
105) 1,2,3-Trichlorobenzene	15.761	180	188794	23.46	ug/L		97
107) Ethanol	4.208	45	35828	639.98	ug/L		92
108) Acrolein	4.708	56	195542	180.13	ug/L		99
109) Tert Butyl Alcohol	5.732	59	158363	253.14	ug/L		88
110) Isobutyl alcohol	9.207	43	134984	681.90	ug/L		97
111) Tert Amyl Alcohol	9.329	59	104219	280.99	ug/L		99
112) 1,4-Dioxane	10.548	88	32745	559.90	ug/L		94
113) 3,3-Dimethyl-1-butanol	12.201	57	854393	1603.28	ug/L		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 08:04:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

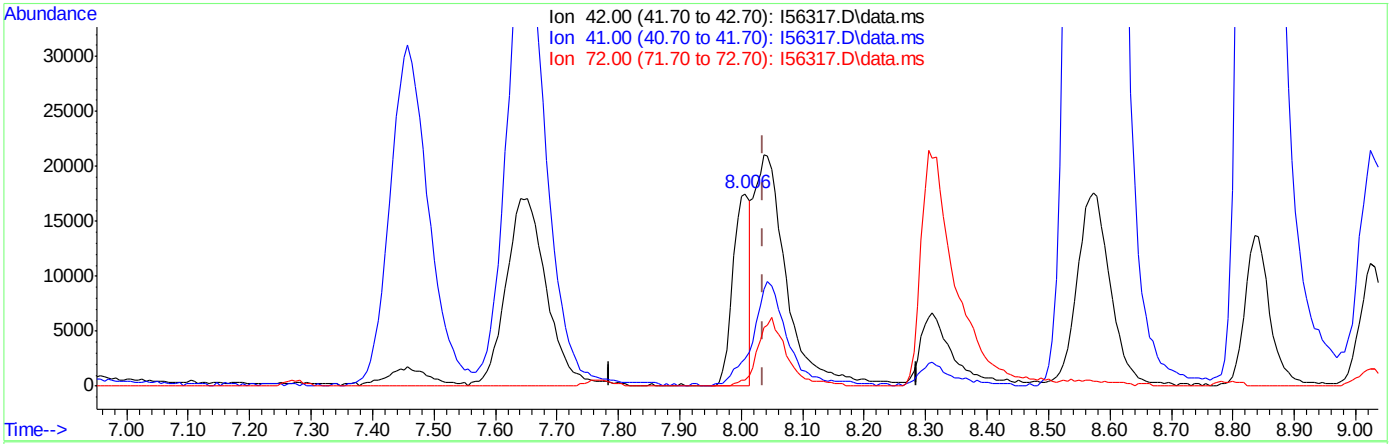
Sample Number: VI1683-IC1683
Lab FileID: I56317.D
Injection Time: 07/25/18 16:25
Method: SW846 8260B
Analyst approved: 07/26/18 08:26 Ana Jimenez
Supervisor approved: 07/31/18 15:11 Melissa Mangual

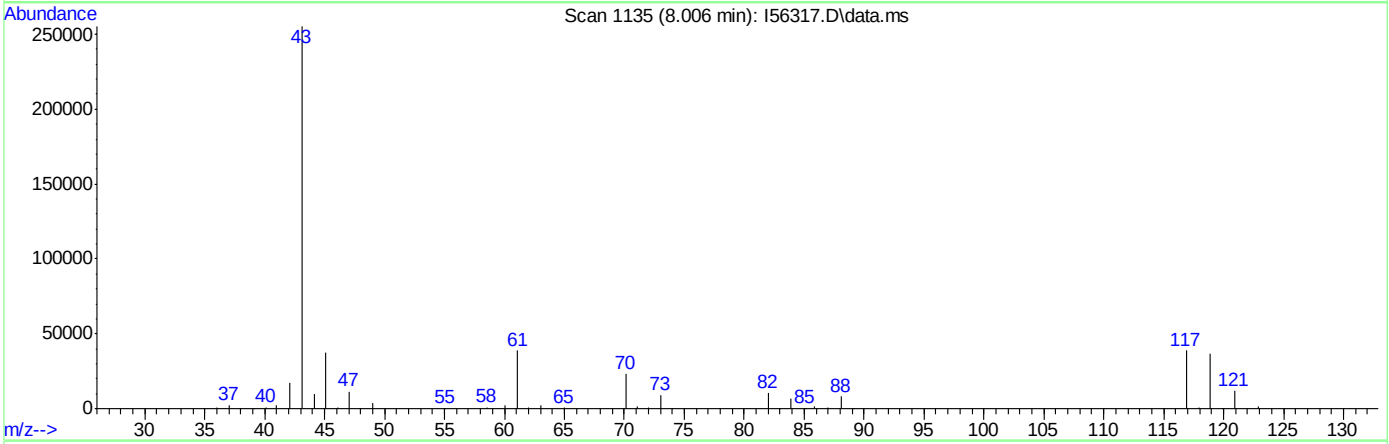
Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrahydrofuran	109-99-9		8.04	Missed peak
Propionitrile	107-12-0		8.79	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 07:54:55 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56317.D\data.ms

(35) Tetrahydrofuran

8.006min (-0.030) 8.74ug/L

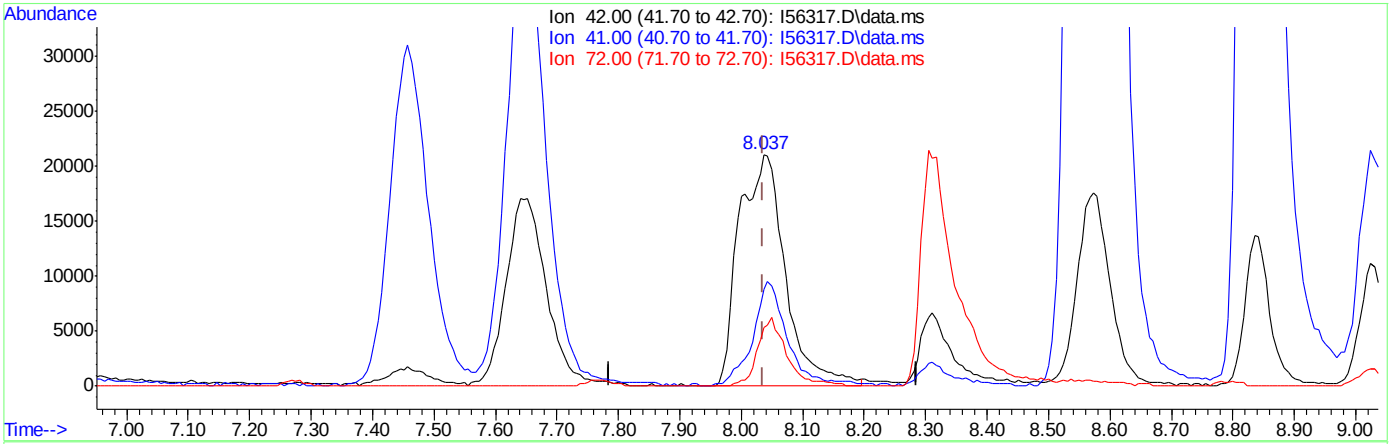
response 33296

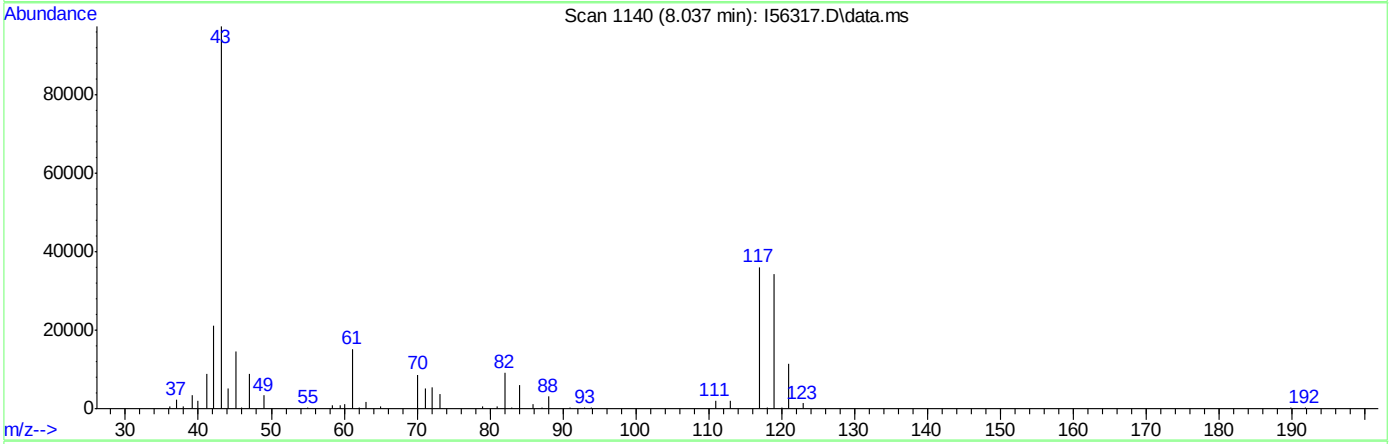
Ion	Exp%	Act%
42.00	100	100
41.00	43.50	14.08#
72.00	26.50	2.93#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 07:54:55 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56317.D\data.ms

(35) Tetrahydrofuran

8.037min (+0.000) 29.77ug/L m

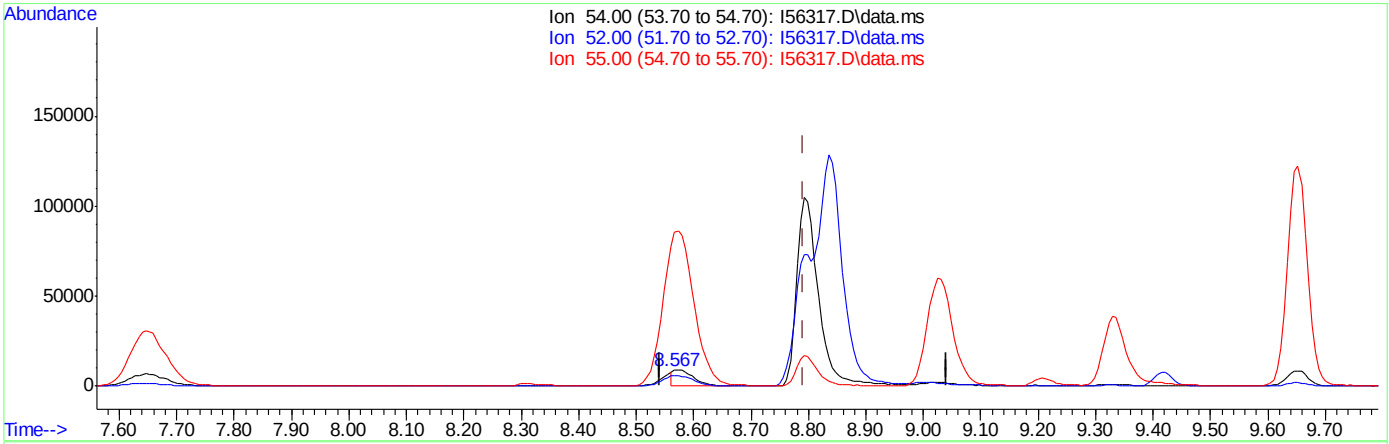
response 110528

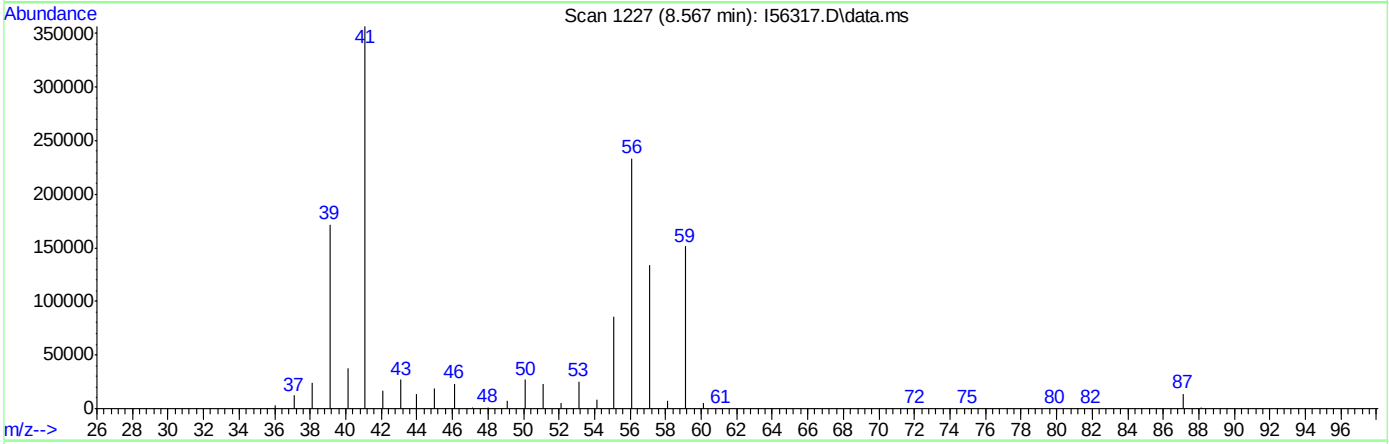
Ion	Exp%	Act%
42.00	100	100
41.00	43.50	41.79
72.00	26.50	25.42
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 07:54:55 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56317.D\data.ms

(42) Propionitrile

8.567min (-0.225) 28.82ug/L

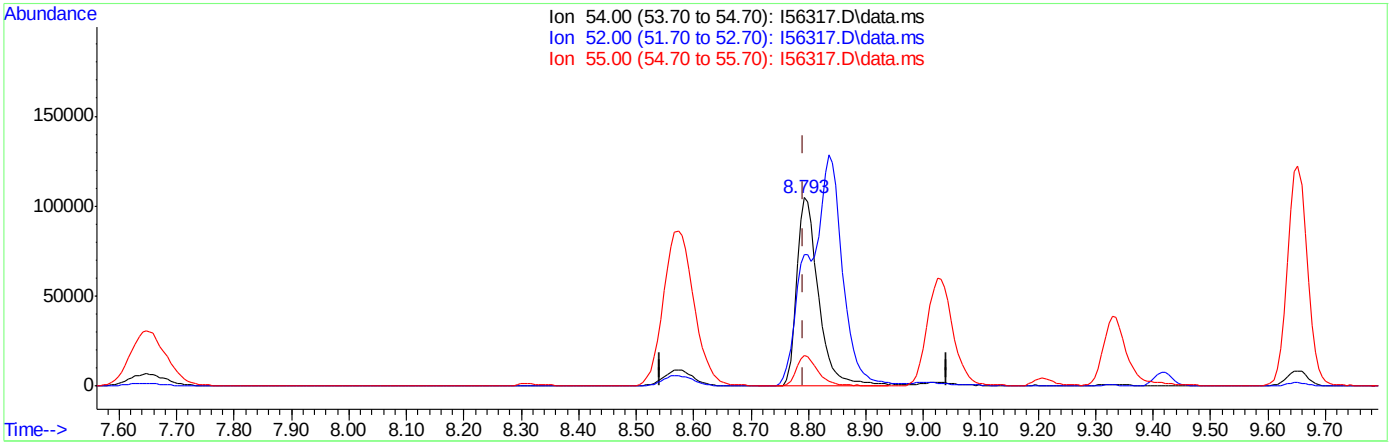
response 21529

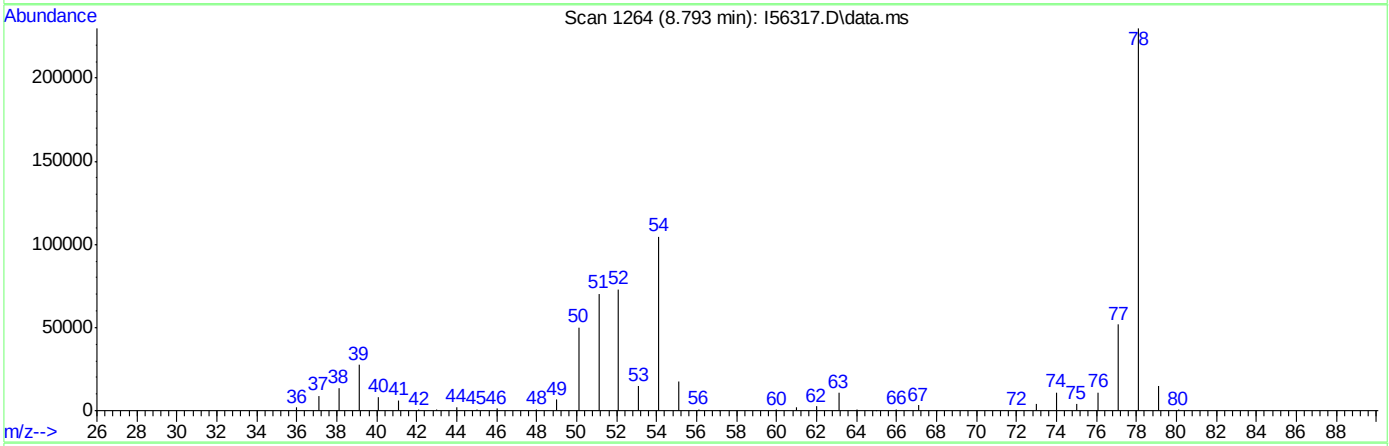
Ion	Exp%	Act%
54.00	100	100
52.00	72.00	62.57
55.00	936.40	944.20
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 07:54:55 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56317.D\data.ms

(42) Propionitrile

8.793min (+0.001) 372.74ug/L m

response 278427

Ion	Exp%	Act%
54.00	100	100
52.00	72.00	69.88
55.00	936.40	16.59#
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.420	96	1197770	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	847395	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	427469	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.622	65	101391	250.00	ug/L	0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.091	113	320406	48.96	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.92%			
46) 1,2-Dichloroethane-d4	9.000	65	426438	51.10	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.20%			
57) Toluene-d8	11.152	98	1161852	50.30	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.60%			
79) 4-Bromofluorobenzene	13.353	174	339161	48.26	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.52%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	269748	41.02	ug/L	99
3) Chloromethane	2.538	50	349931	59.01	ug/L	100
4) 1,3-Butadiene	2.647	39	207338	51.00	ug/L	94
5) Vinyl Chloride	2.672	62	316050	54.79	ug/L	99
6) Bromomethane	3.111	94	152715	45.12	ug/L	98
7) Chloroethane	3.275	64	80260	44.26	ug/L	95
8) Trichlorofluoromethane	3.519	101	341564	44.07	ug/L	100
9) Ethyl Ether	3.928	59	282284	47.46	ug/L	100
10) 1,2-Dichlorotrifluoroe...	4.239	67	333047	41.64	ug/L	99
11) 1,1-Dichloroethene	4.226	61	455426	42.79	ug/L	98
12) Freon 113	4.324	101	251148	39.06	ug/L	99
13) Carbon Disulfide	4.275	76	737059	39.62	ug/L	98
14) Iodomethane	4.434	142	385865	37.61	ug/L	99
15) Allyl chloride	4.934	41	406190	56.48	ug/L	100
16) Methylene Chloride	5.104	49	443311	44.97	ug/L	98
17) Acetone	5.165	43	426831	238.88	ug/L	99
18) Methyl acetate	5.372	43	1005514	224.94	ug/L	100
19) trans-1,2-Dichloroethene	5.360	61	453662	43.53	ug/L	99
20) Hexane	5.500	56	334136	47.80	ug/L	97
21) Methyl Tert Butyl Ether	5.561	73	571827	40.28	ug/L	95
22) Acetonitrile	5.885	41	302092	498.44	ug/L	98
23) Di-isopropyl ether	6.183	45	1019299	50.31	ug/L	100
24) Chloroprene	6.311	53	483479	45.10	ug/L	98
25) 1,1-Dichloroethane	6.336	63	532201	43.07	ug/L	100
26) Acrylonitrile	6.397	53	598041	225.71	ug/L	99
27) ETBE	6.799	59	843810	43.17	ug/L	99
28) Vinyl acetate	6.775	43	3172433	326.06	ug/L	82
29) cis-1,2-Dichloroethene	7.275	96	260142	40.68	ug/L	99
30) 2,2-Dichloropropane	7.464	77	238030	44.35	ug/L	97
31) Bromochloromethane	7.616	128	127605	39.59	ug/L	96
32) Cyclohexane	7.646	56	606813	47.29	ug/L	98
33) Chloroform	7.774	83	447448	40.43	ug/L	98
34) Ethyl acetate	8.000	43	1401056	248.30	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.037	42	178761	48.90	ug/L		95
37) Carbon Tetrachloride	8.024	117	282742	37.53	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	381586	39.95	ug/L		99
39) 2-Butanone	8.311	43	618739	241.07	ug/L		99
40) 1,1-Dichloropropene	8.366	75	339085	41.32	ug/L		99
41) tert-Butyl formate	8.579	59	1052189	442.70	ug/L	#	70
42) Propionitrile	8.793	54	460083	610.80	ug/L	#	1
43) Methacrylonitrile	8.841	41	1714141	532.88	ug/L		99
44) Benzene	8.793	78	962873	41.49	ug/L		99
45) TAME	9.030	73	565392	41.09	ug/L		95
47) 1,2-Dichloroethane	9.103	62	415956	41.15	ug/L		99
48) Trichloroethene	9.658	95	258338	39.18	ug/L		99
49) Methylcyclohexane	9.652	83	431420	44.14	ug/L		97
50) Dibromomethane	10.146	93	162965	39.75	ug/L		99
51) 1,2-Dichloropropane	10.250	63	317247	43.64	ug/L		99
52) Bromodichloromethane	10.341	83	321893	42.34	ug/L		99
53) Methyl methacrylate	10.512	41	229558	47.41	ug/L		100
54) 2-Chloroethyl vinyl ether	10.914	63	1009003	204.72	ug/L		99
55) cis-1,3-Dichloropropene	10.975	75	398548	41.74	ug/L		99
58) Toluene	11.201	91	1020914	40.22	ug/L		99
59) 2-Nitropropane	11.383	41	289107	238.42	ug/L		98
60) 4-Methyl-2-pentanone	11.524	43	1439325	267.56	ug/L		99
61) trans-1,3-Dichloropropene	11.926	75	21044	6.65	ug/L		98
62) Tetrachloroethene	11.554	166	292334	33.20	ug/L		97
63) Ethyl methacrylate	11.701	69	307851	41.67	ug/L		91
64) 1,1,2-Trichloroethane	11.701	83	195905	39.24	ug/L		99
65) Dibromochloromethane	11.859	129	248456	37.99	ug/L		99
66) 1,3-Dichloropropane	11.926	76	397819	41.36	ug/L		98
67) 1,2-Dibromoethane	12.054	107	226316	39.62	ug/L		100
68) 2-hexanone	12.207	43	1224604	265.13	ug/L		88
69) 1-Chlorohexane	12.438	91	366183	43.33	ug/L		99
70) Ethylbenzene	12.481	91	1182795	39.56	ug/L		99
71) Chlorobenzene	12.469	112	655881	38.43	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.517	131	216200	38.92	ug/L		99
73) m,p-Xylene	12.591	91	1846344	84.27	ug/L		100
74) o-Xylene	12.914	91	942734	41.67	ug/L		99
75) Styrene	12.950	104	683982	39.55	ug/L		99
76) Bromoform	12.987	173	149177	36.75	ug/L		99
77) Isopropylbenzene	13.133	105	1043689	40.25	ug/L		100
80) cis-1,4-Dichloro-2-butene	13.377	53	113292	50.37	ug/L		91
81) n-Propylbenzene	13.432	91	1393875	44.32	ug/L		100
82) Bromobenzene	13.438	156	268764	40.42	ug/L		99
83) 1,1,2,2-Tetrachloroethane	13.475	83	300838	41.11	ug/L		98
84) 1,3,5-Trimethylbenzene	13.554	105	899266	43.97	ug/L		99
85) 2-Chlorotoluene	13.670	91	847092	40.52	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.596	53	106216	49.25	ug/L	#	67
87) 1,2,3-Trichloropropane	13.578	110	82561	40.23	ug/L		98
88) Cyclohexanone	13.621	55	71672	288.10	ug/L		99
89) 4-Chlorotoluene	13.670	91	847092	42.84	ug/L		100
90) tert-Butylbenzene	13.785	91	552121	43.73	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

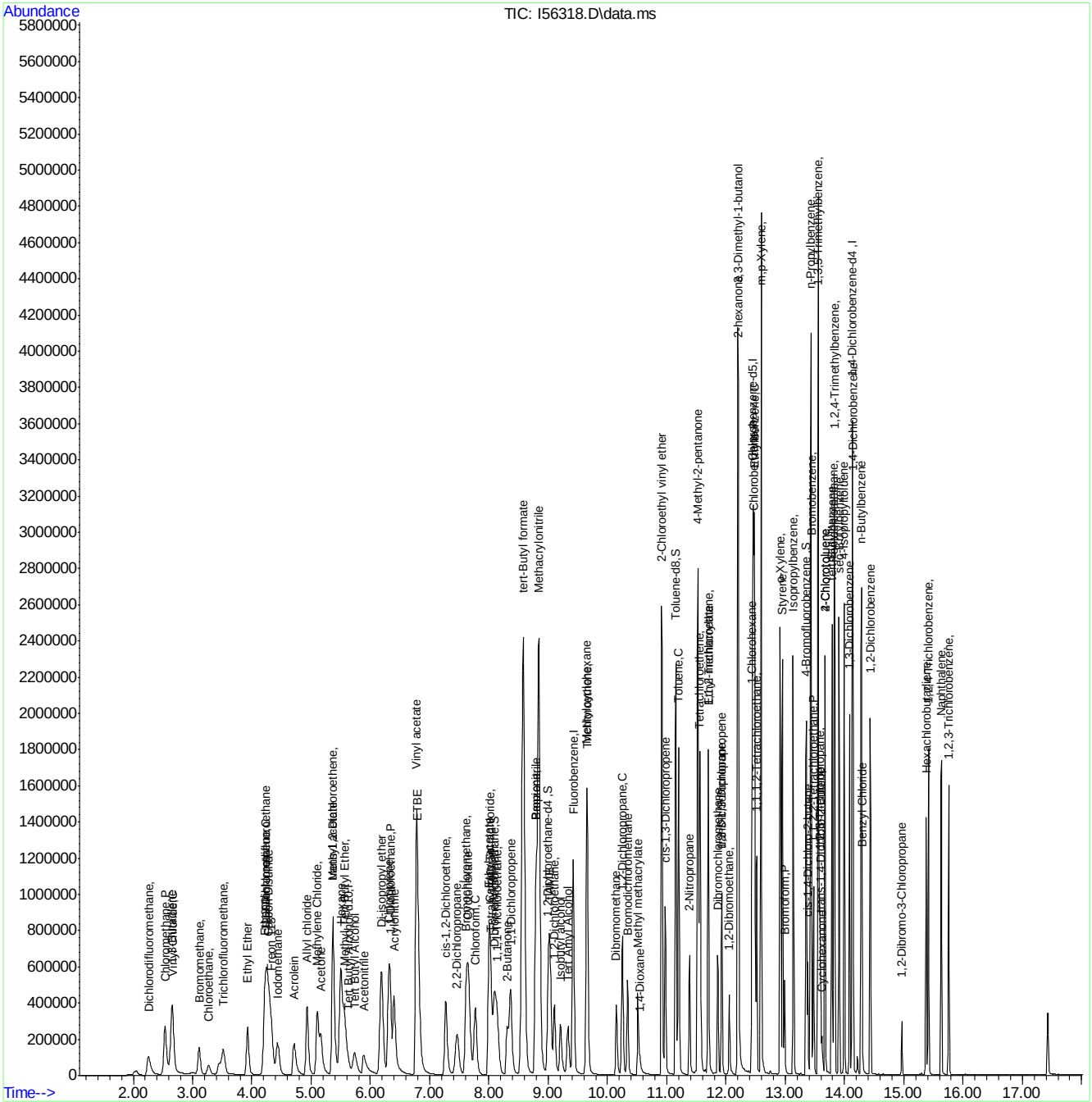
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	929216	43.76	ug/L		96
93) Pentachloroethane	13.822	167	132556	33.57	ug/L	#	86
94) sec-Butylbenzene	13.907	105	1137301	44.21	ug/L		99
95) 4-Isopropyltoluene	13.993	119	936301	44.25	ug/L		100
96) 1,3-Dichlorobenzene	14.084	146	495696	40.42	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	518535	39.40	ug/L		98
98) n-Butylbenzene	14.285	92	541621	45.53	ug/L		91
99) Benzyl Chloride	14.298	126	63928	42.86	ug/L	#	23
100) 1,2-Dichlorobenzene	14.432	146	485102	39.77	ug/L		99
101) 1,2-Dibromo-3-Chloropr...	14.968	75	49793	38.65	ug/L		86
102) Hexachlorobutadiene	15.377	225	163234	39.92	ug/L		99
103) 1,2,4-Trichlorobenzene	15.413	180	334178	39.96	ug/L		99
104) Naphthalene	15.633	128	836749	39.62	ug/L		100
105) 1,2,3-Trichlorobenzene	15.761	180	310052	38.11	ug/L		99
107) Ethanol	4.220	45	61069m	1027.33	ug/L		
108) Acrolein	4.708	56	327318	283.97	ug/L		99
109) Tert Butyl Alcohol	5.732	59	262125	394.61	ug/L		89
110) Isobutyl alcohol	9.207	43	227223	1081.02	ug/L		98
111) Tert Amyl Alcohol	9.335	59	174704	443.60	ug/L		92
112) 1,4-Dioxane	10.548	88	51803	838.89	ug/L		100
113) 3,3-Dimethyl-1-butanol	12.200	57	1518899	2684.27	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

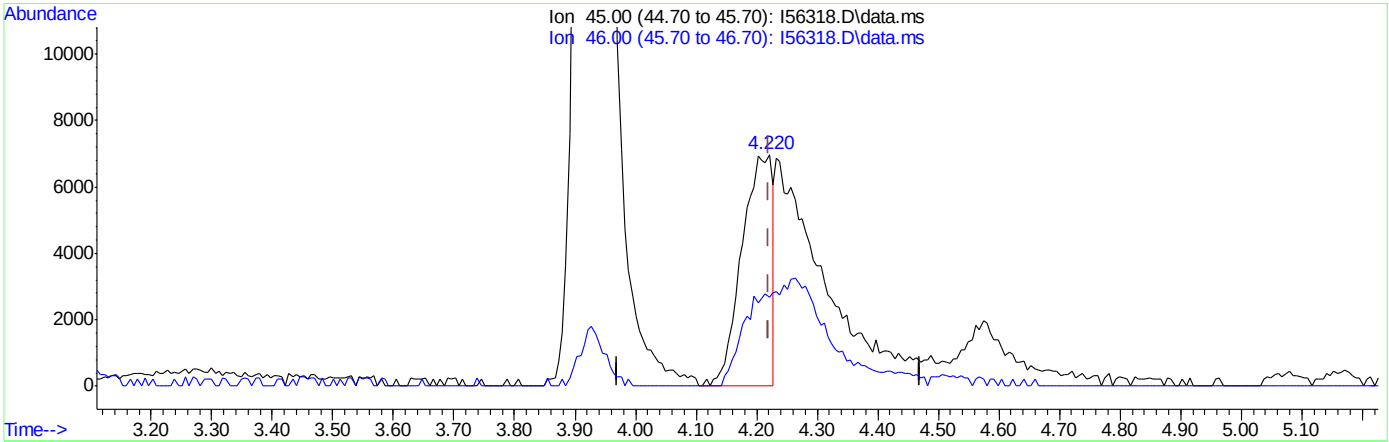
Sample Number: VI1683-ICC1683
Lab FileID: I56318.D
Injection Time: 07/25/18 16:49
Method: SW846 8260B
Analyst approved: 07/26/18 08:26 Ana Jimenez
Supervisor approved: 07/31/18 15:11 Melissa Mangual

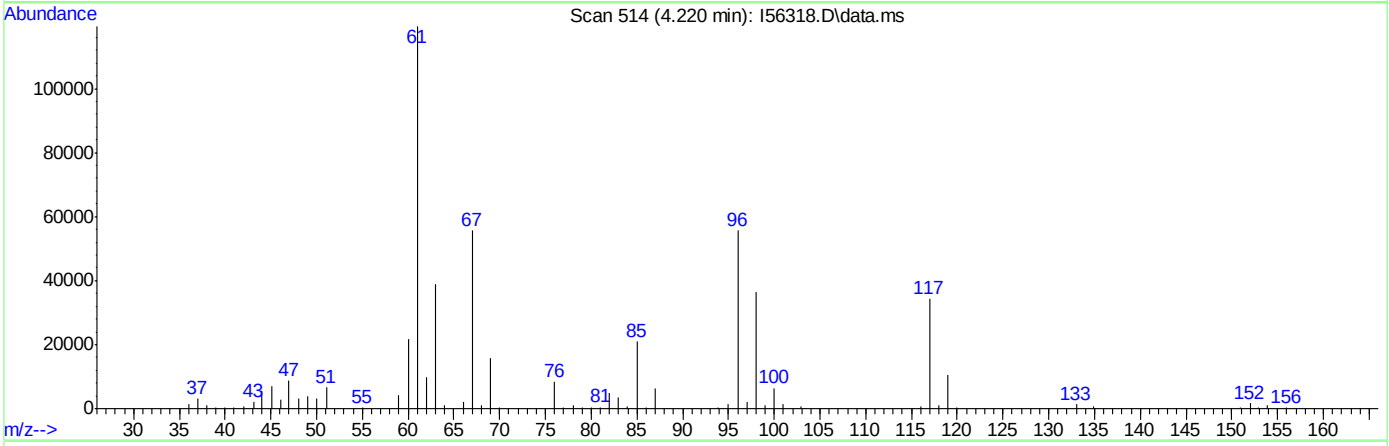
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		4.22	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:26:11 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56318.D\data.ms

(107) Ethanol

4.220min (+0.000) 408.87ug/L

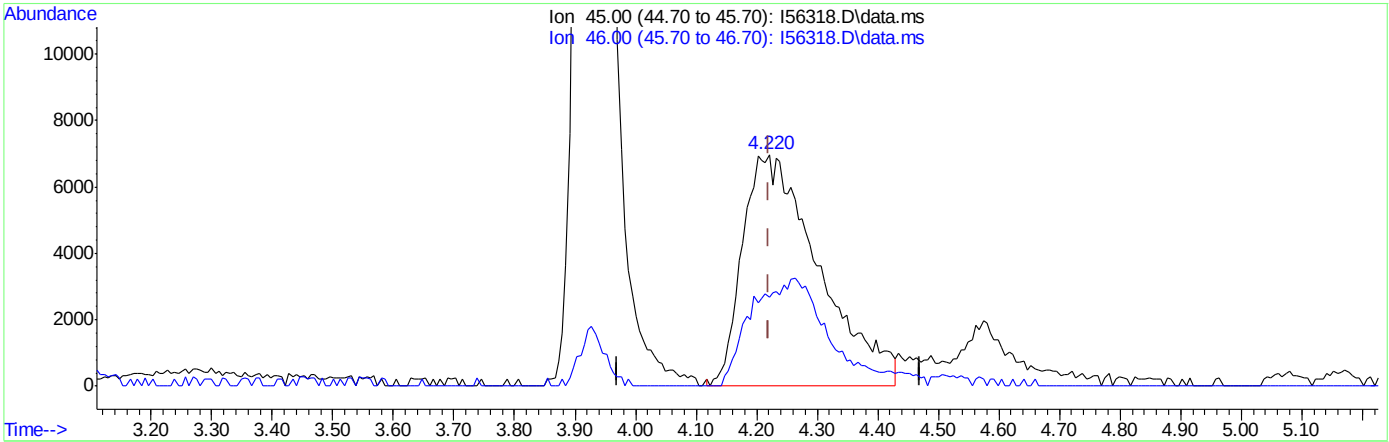
response 24305

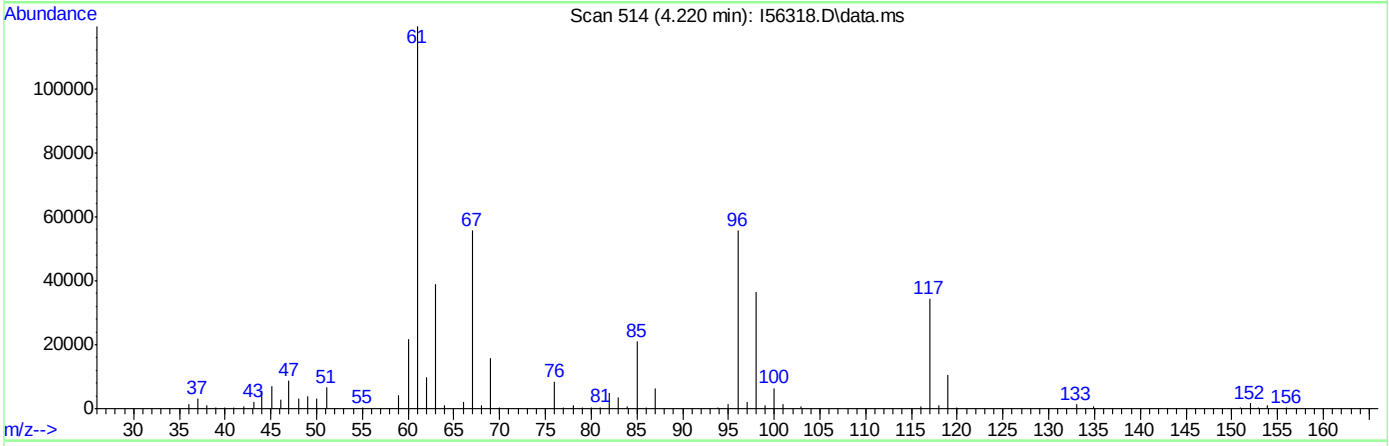
Ion	Exp%	Act%
45.00	100	100
46.00	35.80	38.35
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:26:11 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56318.D\data.ms

(107) Ethanol

4.220min (+0.000) 1027.33ug/L m

response 61069

Ion	Exp%	Act%
45.00	100	100
46.00	35.80	38.35
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56319.D
Acq On : 25 Jul 2018 5:13 pm
Operator : ANAJ
Sample : IC1683-6 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 26 07:55:30 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.420	96	1224599	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	846332	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	431455	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.629	65	104360	250.00	ug/L	0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.091	113	328966	49.17	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.34%			
46) 1,2-Dichloroethane-d4	9.000	65	433000	50.75	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.50%			
57) Toluene-d8	11.152	98	1178592	51.09	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 102.18%			
79) 4-Bromofluorobenzene	13.353	174	346477	48.85	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.70%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.245	85	478777	70.72	ug/L	99
3) Chloromethane	2.525	50	638582	105.32	ug/L	99
4) 1,3-Butadiene	2.635	39	365929	89.53	ug/L	92
5) Vinyl Chloride	2.654	62	563354	95.52	ug/L	99
6) Bromomethane	3.099	94	269900	78.00	ug/L	98
7) Chloroethane	3.263	64	120640	74.48	ug/L	99
8) Trichlorofluoromethane	3.507	101	603719	76.20	ug/L	98
9) Ethyl Ether	3.928	59	499406	82.13	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.226	67	593249	72.55	ug/L	100
11) 1,1-Dichloroethene	4.214	61	810388	74.47	ug/L	99
12) Freon 113	4.312	101	437798	66.60	ug/L	98
13) Carbon Disulfide	4.263	76	1336507	67.19	ug/L	97
14) Iodomethane	4.428	142	694313	66.20	ug/L	99
15) Allyl chloride	4.927	41	742762	101.01	ug/L	98
16) Methylene Chloride	5.098	49	775679	76.96	ug/L	99
17) Acetone	5.159	43	724826	418.16	ug/L	99
18) Methyl acetate	5.372	43	1778172	412.37	ug/L	100
19) trans-1,2-Dichloroethene	5.354	61	814355	76.42	ug/L	100
20) Hexane	5.488	56	575133	80.47	ug/L	97
21) Methyl Tert Butyl Ether	5.555	73	1031337	71.06	ug/L	93
22) Acetonitrile	5.872	41	524607	963.28	ug/L	98
23) Di-isopropyl ether	6.183	45	1842203	88.94	ug/L	99
24) Chloroprene	6.305	53	894794	84.19	ug/L	99
25) 1,1-Dichloroethane	6.336	63	955250	75.61	ug/L	99
26) Acrylonitrile	6.391	53	1081784	402.45	ug/L	99
27) ETBE	6.799	59	1527729	76.45	ug/L	99
28) Vinyl acetate	6.769	43	5972626	485.03	ug/L	82
29) cis-1,2-Dichloroethene	7.262	96	474654	72.60	ug/L	97
30) 2,2-Dichloropropane	7.457	77	461854	69.51	ug/L	97
31) Bromochloromethane	7.610	128	234260	71.10	ug/L	97
32) Cyclohexane	7.646	56	1066819	81.31	ug/L	98
33) Chloroform	7.768	83	804052	71.06	ug/L	99
34) Ethyl acetate	8.000	43	2508134	465.20	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56319.D
Acq On : 25 Jul 2018 5:13 pm
Operator : ANAJ
Sample : IC1683-6 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 26 07:55:30 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.031	42	312046	87.84	ug/L		97
37) Carbon Tetrachloride	8.018	117	513266	66.64	ug/L		99
38) 1,1,1-Trichloroethane	8.128	97	687462	70.40	ug/L		99
39) 2-Butanone	8.305	43	1099000	441.64	ug/L		100
40) 1,1-Dichloropropene	8.360	75	612051	71.45	ug/L		100
41) tert-Butyl formate	8.579	59	2186678	694.91	ug/L	#	59
42) Propionitrile	8.793	54	792266	1028.75	ug/L	#	1
43) Methacrylonitrile	8.841	41	2903377	882.81	ug/L		100
44) Benzene	8.793	78	1730232	72.92	ug/L		98
45) TAME	9.030	73	1038671	73.83	ug/L		92
47) 1,2-Dichloroethane	9.097	62	746020	72.19	ug/L		100
48) Trichloroethene	9.652	95	466943	69.26	ug/L		99
49) Methylcyclohexane	9.652	83	765287	76.59	ug/L		98
50) Dibromomethane	10.146	93	295867	70.59	ug/L		99
51) 1,2-Dichloropropane	10.250	63	574917	77.35	ug/L		98
52) Bromodichloromethane	10.335	83	594004	76.41	ug/L		99
53) Methyl methacrylate	10.512	41	427905	88.49	ug/L		99
54) 2-Chloroethyl vinyl ether	10.914	63	1820584	398.95	ug/L		99
55) cis-1,3-Dichloropropene	10.975	75	736071	71.67	ug/L		99
58) Toluene	11.201	91	1838665	72.53	ug/L		99
59) 2-Nitropropane	11.384	41	524282	409.61	ug/L		100
60) 4-Methyl-2-pentanone	11.524	43	2434277	453.08	ug/L		99
61) trans-1,3-Dichloropropene	11.926	75	35835	10.44	ug/L		94
62) Tetrachloroethene	11.554	166	455454	54.62	ug/L		99
63) Ethyl methacrylate	11.694	69	557630	73.07	ug/L		98
64) 1,1,2-Trichloroethane	11.701	83	348360	69.86	ug/L		97
65) Dibromochloromethane	11.859	129	450988	65.95	ug/L		99
66) 1,3-Dichloropropane	11.926	76	702765	73.15	ug/L		99
67) 1,2-Dibromoethane	12.054	107	402856	70.62	ug/L		100
68) 2-hexanone	12.207	43	1991904	431.79	ug/L		86
69) 1-Chlorohexane	12.438	91	639739	75.79	ug/L		97
70) Ethylbenzene	12.481	91	2127699	71.25	ug/L		100
71) Chlorobenzene	12.469	112	1167793	68.50	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.517	131	392553	70.76	ug/L		99
73) m,p-Xylene	12.591	91	3263546	149.15	ug/L		100
74) o-Xylene	12.914	91	1691717	74.87	ug/L		100
75) Styrene	12.950	104	1239350	69.89	ug/L		100
76) Bromoform	12.987	173	272167	62.63	ug/L		99
77) Isopropylbenzene	13.133	105	1871091	70.38	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.377	53	206019	83.96	ug/L		98
81) n-Propylbenzene	13.432	91	2463023	77.60	ug/L		100
82) Bromobenzene	13.438	156	480641	71.61	ug/L		100
83) 1,1,2,2-Tetrachloroethane	13.475	83	524113	70.95	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	1604360	77.73	ug/L		99
85) 2-Chlorotoluene	13.670	91	1520360	72.06	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.596	53	188173	80.85	ug/L	#	71
87) 1,2,3-Trichloropropane	13.578	110	143737	69.39	ug/L		99
88) Cyclohexanone	13.621	55	122017	485.94	ug/L		99
89) 4-Chlorotoluene	13.670	91	1520360	76.18	ug/L		100
90) tert-Butylbenzene	13.785	91	987701	77.52	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56319.D
Acq On : 25 Jul 2018 5:13 pm
Operator : ANAJ
Sample : IC1683-6 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 26 07:55:30 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

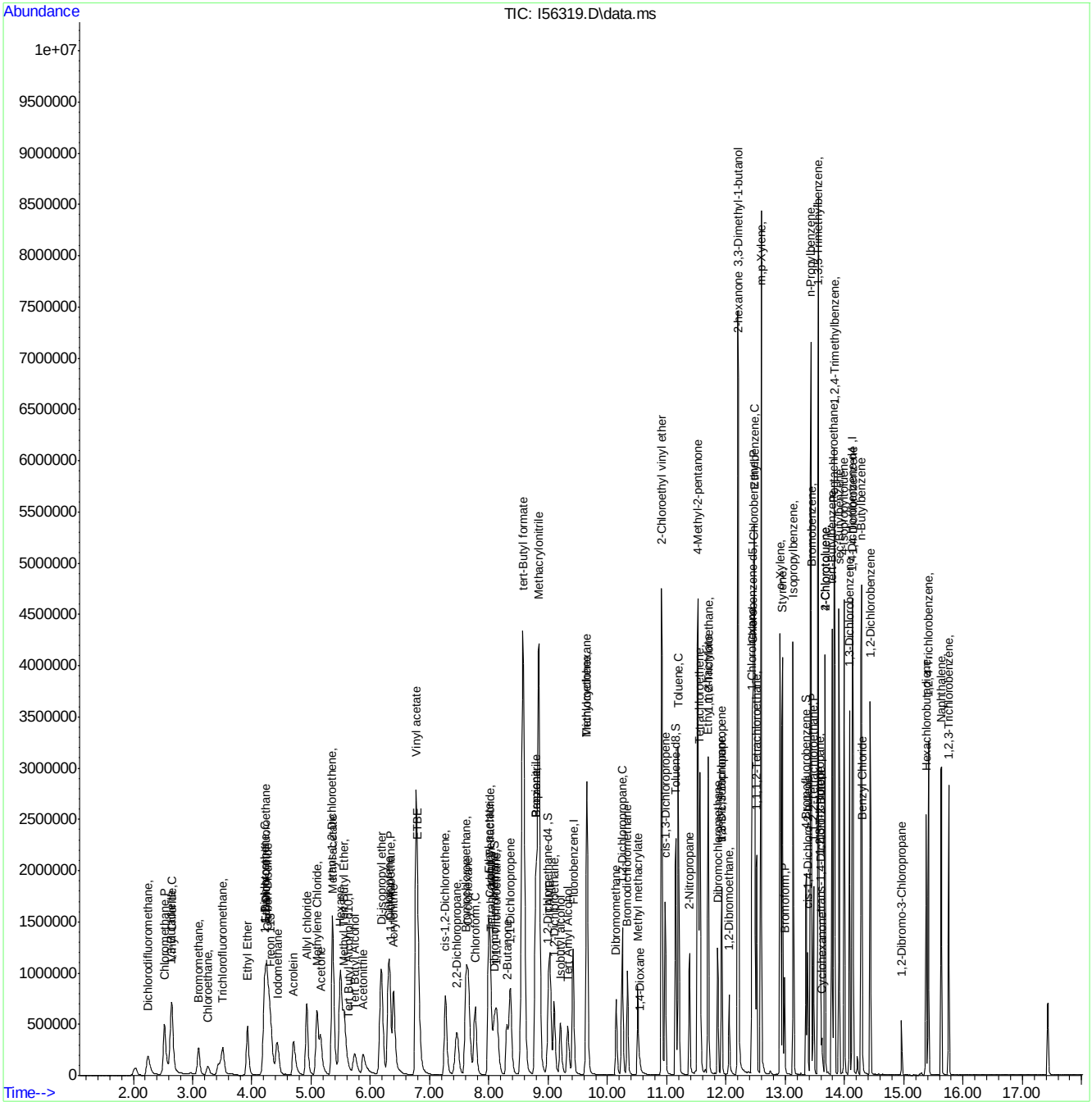
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	1661547	77.53	ug/L		95
93) Pentachloroethane	13.822	167	296615	75.14	ug/L		90
94) sec-Butylbenzene	13.907	105	2010682	77.45	ug/L		100
95) 4-Isopropyltoluene	13.993	119	1669243	78.16	ug/L		100
96) 1,3-Dichlorobenzene	14.084	146	889902	71.90	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	929666	69.98	ug/L		100
98) n-Butylbenzene	14.285	92	972263	80.98	ug/L		89
99) Benzyl Chloride	14.298	126	136916	68.59	ug/L	#	14
100) 1,2-Dichlorobenzene	14.432	146	866226	70.36	ug/L		99
101) 1,2-Dibromo-3-Chloropr...	14.962	75	90286	66.16	ug/L		98
102) Hexachlorobutadiene	15.377	225	293701	71.16	ug/L		98
103) 1,2,4-Trichlorobenzene	15.413	180	603152	71.47	ug/L		99
104) Naphthalene	15.633	128	1489773	69.90	ug/L		99
105) 1,2,3-Trichlorobenzene	15.761	180	553877	67.45	ug/L		98
107) Ethanol	4.226	45	105813	1729.38	ug/L		84
108) Acrolein	4.702	56	597961	504.01	ug/L		99
109) Tert Butyl Alcohol	5.732	59	462996	677.17	ug/L		91
110) Isobutyl alcohol	9.207	43	413139	1909.61	ug/L		99
111) Tert Amyl Alcohol	9.329	59	321485	793.08	ug/L		87
112) 1,4-Dioxane	10.542	88	92069	1467.19	ug/L		98
113) 3,3-Dimethyl-1-butanol	12.200	57	2553858	4384.89	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56319.D
Acq On : 25 Jul 2018 5:13 pm
Operator : ANAJ
Sample : IC1683-6 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 26 07:55:30 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56320.D
Acq On : 25 Jul 2018 5:36 pm
Operator : ANAJ
Sample : IC1683-7 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 26 07:55:44 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1232467	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	858751	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	436199	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.641	65	108370	250.00	ug/L	0.03
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	331321	49.21	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.42%			
46) 1,2-Dichloroethane-d4	9.000	65	436917	50.88	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.76%			
57) Toluene-d8	11.152	98	1187898	50.75	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 101.50%			
79) 4-Bromofluorobenzene	13.353	174	351289	48.99	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.98%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	707171	103.00	ug/L	97
3) Chloromethane	2.532	50	908453	148.88	ug/L	100
4) 1,3-Butadiene	2.648	39	552419	137.16	ug/L	93
5) Vinyl Chloride	2.666	62	843597	142.12	ug/L	100
6) Bromomethane	3.111	94	375809	107.91	ug/L	99
7) Chloroethane	3.263	64	169374	Below Cal		98
8) Trichlorofluoromethane	3.507	101	802507	100.64	ug/L	99
9) Ethyl Ether	3.934	59	734158	119.96	ug/L	98
10) 1,2-Dichlorotrifluoroe...	4.245	67	867100	105.36	ug/L	99
11) 1,1-Dichloroethene	4.227	61	1196010	109.21	ug/L	99
12) Freon 113	4.318	101	642357	97.10	ug/L	99
13) Carbon Disulfide	4.269	76	1995351	95.40	ug/L	98
14) Iodomethane	4.434	142	1029666	97.55	ug/L	99
15) Allyl chloride	4.928	41	1089264	147.19	ug/L	99
16) Methylene Chloride	5.104	49	1122934	110.70	ug/L	99
17) Acetone	5.171	43	1059505	653.63	ug/L	100
18) Methyl acetate	5.379	43	2628095	656.91	ug/L	99
19) trans-1,2-Dichloroethene	5.360	61	1200134	111.90	ug/L	99
20) Hexane	5.495	56	823054	114.43	ug/L	97
21) Methyl Tert Butyl Ether	5.562	73	1543794	105.68	ug/L	88
22) Acetonitrile	5.879	41	760844	2031.60	ug/L	97
23) Di-isopropyl ether	6.190	45	2693986	129.23	ug/L	99
24) Chloroprene	6.305	53	1298270	125.52	ug/L	99
25) 1,1-Dichloroethane	6.342	63	1400311	110.13	ug/L	99
26) Acrylonitrile	6.397	53	1608693	599.88	ug/L	99
27) ETBE	6.805	59	2259030	112.33	ug/L	99
28) Vinyl acetate	6.775	43	8609915	606.07	ug/L	82
29) cis-1,2-Dichloroethene	7.269	96	706773	107.42	ug/L	98
30) 2,2-Dichloropropane	7.464	77	701077	91.18	ug/L	99
31) Bromochloromethane	7.610	128	344761	103.97	ug/L	97
32) Cyclohexane	7.653	56	1566277	118.62	ug/L	98
33) Chloroform	7.769	83	1179958	103.62	ug/L	98
34) Ethyl acetate	8.006	43	3663144	741.04	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56320.D
Acq On : 25 Jul 2018 5:36 pm
Operator : ANAJ
Sample : IC1683-7 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 26 07:55:44 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.037	42	450535	134.38	ug/L		95
37) Carbon Tetrachloride	8.025	117	764304	98.60	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	1021781	103.97	ug/L		98
39) 2-Butanone	8.305	43	1624568	697.10	ug/L		100
40) 1,1-Dichloropropene	8.360	75	896617	101.90	ug/L		99
41) tert-Butyl formate	8.585	59	3518374	921.93	ug/L	#	51
42) Propionitrile	8.799	54	1145494	1477.92	ug/L	#	1
43) Methacrylonitrile	8.848	41	4101548	1239.16	ug/L		100
44) Benzene	8.799	78	2529606	105.92	ug/L		99
45) TAME	9.030	73	1558344	110.07	ug/L		89
47) 1,2-Dichloroethane	9.104	62	1079954	103.83	ug/L		100
48) Trichloroethene	9.658	95	679644	100.17	ug/L		100
49) Methylcyclohexane	9.652	83	1129016	112.27	ug/L		100
50) Dibromomethane	10.146	93	433432	102.75	ug/L		98
51) 1,2-Dichloropropane	10.250	63	833327	111.40	ug/L		99
52) Bromodichloromethane	10.341	83	872487	111.52	ug/L		99
53) Methyl methacrylate	10.512	41	628034	132.38	ug/L		98
54) 2-Chloroethyl vinyl ether	10.920	63	2574820	646.50	ug/L		97
55) cis-1,3-Dichloropropene	10.975	75	1091557	100.76	ug/L		100
58) Toluene	11.201	91	2687927	104.49	ug/L		99
59) 2-Nitropropane	11.384	41	781511	572.43	ug/L		99
60) 4-Methyl-2-pentanone	11.524	43	3451137	633.05	ug/L		98
61) trans-1,3-Dichloropropene	11.926	75	53831	14.30	ug/L		98
62) Tetrachloroethene	11.554	166	665687	85.38	ug/L		99
63) Ethyl methacrylate	11.695	69	826075	103.37	ug/L		95
64) 1,1,2-Trichloroethane	11.701	83	506205	100.05	ug/L		98
65) Dibromochloromethane	11.859	129	667147	92.25	ug/L		98
66) 1,3-Dichloropropane	11.926	76	1026474	105.30	ug/L		99
67) 1,2-Dibromoethane	12.054	107	598015	103.31	ug/L		99
68) 2-hexanone	12.207	43	2739987	585.37	ug/L	#	75
69) 1-Chlorohexane	12.444	91	968975	113.13	ug/L		87
70) Ethylbenzene	12.481	91	3042980	100.43	ug/L		100
71) Chlorobenzene	12.469	112	1702800	98.44	ug/L		98
72) 1,1,1,2-Tetrachloroethane	12.518	131	582940	103.56	ug/L		99
73) m,p-Xylene	12.591	91	4678317	210.71	ug/L		99
74) o-Xylene	12.914	91	2481112	108.22	ug/L		99
75) Styrene	12.950	104	1823224	98.88	ug/L		99
76) Bromoform	12.987	173	409499	87.29	ug/L		98
77) Isopropylbenzene	13.133	105	2718592	98.41	ug/L		100
80) cis-1,4-Dichloro-2-butene	13.377	53	299940	113.46	ug/L		98
81) n-Propylbenzene	13.432	91	3550764	110.65	ug/L		100
82) Bromobenzene	13.438	156	697657	102.82	ug/L		100
83) 1,1,2,2-Tetrachloroethane	13.475	83	764362	102.35	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	2313858	110.88	ug/L		99
85) 2-Chlorotoluene	13.670	91	2215879	103.88	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.597	53	277072	110.92	ug/L	#	72
87) 1,2,3-Trichloropropane	13.578	110	208803	99.70	ug/L		99
88) Cyclohexanone	13.621	55	171147	674.19	ug/L		98
89) 4-Chlorotoluene	13.670	91	2215879	109.82	ug/L		100
90) tert-Butylbenzene	13.786	91	1439893	111.78	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56320.D
Acq On : 25 Jul 2018 5:36 pm
Operator : ANAJ
Sample : IC1683-7 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 26 07:55:44 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

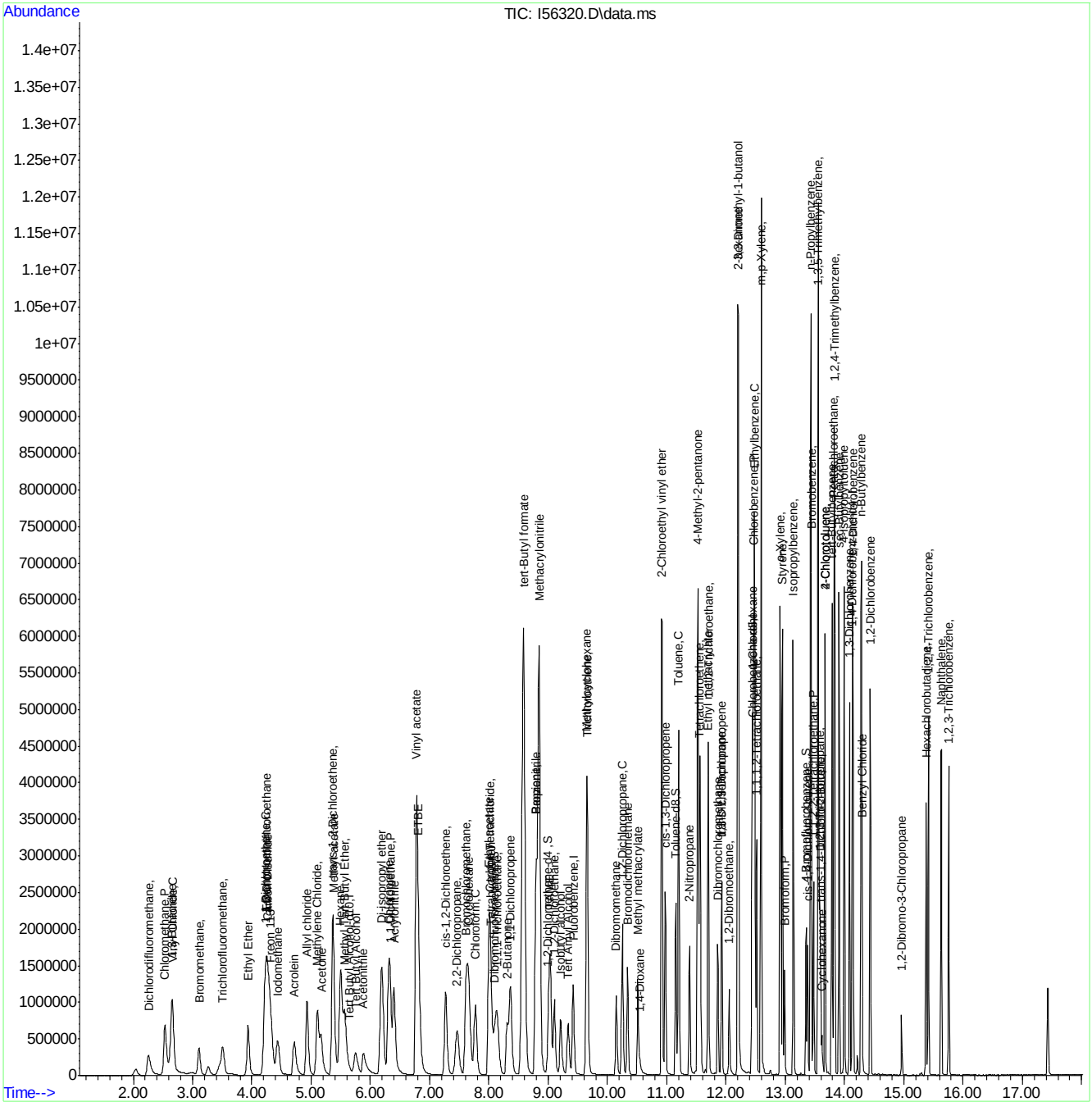
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	2418470	111.63	ug/L		95
93) Pentachloroethane	13.822	167	436498	110.27	ug/L		91
94) sec-Butylbenzene	13.908	105	2934202	111.79	ug/L		100
95) 4-Isopropyltoluene	13.993	119	2452650	113.59	ug/L		99
96) 1,3-Dichlorobenzene	14.084	146	1304168	104.22	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	1357681	101.09	ug/L		99
98) n-Butylbenzene	14.286	92	1437223	118.41	ug/L		86
99) Benzyl Chloride	14.298	126	214134	88.88	ug/L	#	11
100) 1,2-Dichlorobenzene	14.432	146	1268430	101.90	ug/L		99
101) 1,2-Dibromo-3-Chloropr...	14.962	75	135864	94.00	ug/L		97
102) Hexachlorobutadiene	15.377	225	444555	106.54	ug/L		97
103) 1,2,4-Trichlorobenzene	15.413	180	900091	105.49	ug/L		99
104) Naphthalene	15.633	128	2206265	102.39	ug/L		99
105) 1,2,3-Trichlorobenzene	15.761	180	827018	99.62	ug/L		99
107) Ethanol	4.251	45	157460	2478.27	ug/L		76
108) Acrolein	4.714	56	865143	702.23	ug/L		99
109) Tert Butyl Alcohol	5.751	59	702491	989.44	ug/L		87
110) Isobutyl alcohol	9.207	43	616018	2741.99	ug/L		98
111) Tert Amyl Alcohol	9.335	59	502512	1193.79	ug/L		82
112) 1,4-Dioxane	10.542	88	135779	2111.55	ug/L		96
113) 3,3-Dimethyl-1-butanol	12.201	57	3645623	6027.80	ug/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56320.D
Acq On : 25 Jul 2018 5:36 pm
Operator : ANAJ
Sample : IC1683-7 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 26 07:55:44 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56322.D
Acq On : 25 Jul 2018 6:24 pm
Operator : ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 26 08:16:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1242489	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	877903	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	445362	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.617	65	107505	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	327577	49.94	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.88%			
46) 1,2-Dichloroethane-d4	8.994	65	438822	49.47	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 98.94%			
57) Toluene-d8	11.152	98	1207197	49.83	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.66%			
79) 4-Bromofluorobenzene	13.353	174	355689	50.57	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.14%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.251	85	294585	41.63	ug/L	98
3) Chloromethane	2.526	50	348861	35.91	ug/L	99
4) 1,3-Butadiene	2.635	39	178528	34.07	ug/L	100
5) Vinyl Chloride	2.660	62	317837	38.90	ug/L	100
6) Bromomethane	3.099	94	170621	39.88	ug/L	99
7) Chloroethane	3.257	64	76077	32.09	ug/L	96
8) Trichlorofluoromethane	3.507	101	386725	41.20	ug/L	100
9) Ethyl Ether	3.922	59	295338	40.80	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.233	67	351269	40.41	ug/L	98
11) 1,1-Dichloroethene	4.214	61	487365	41.93	ug/L	99
12) Freon 113	4.312	101	234919	36.19	ug/L	98
13) Carbon Disulfide	4.257	76	812538	44.10	ug/L	100
14) Iodomethane	4.422	142	406797	40.86	ug/L	99
15) Allyl chloride	4.922	41	400834	40.11	ug/L	99
16) Methylene Chloride	5.098	49	476113	41.56	ug/L	99
17) Acetone	5.159	43	417475	202.38	ug/L	99
18) Methyl acetate	5.367	43	1054675	206.88	ug/L	100
19) trans-1,2-Dichloroethene	5.354	61	473951	41.38	ug/L	100
20) Hexane	5.495	56	337981	38.47	ug/L	97
21) Methyl Tert Butyl Ether	5.549	73	618137	43.39	ug/L	98
22) Acetonitrile	5.885	41	313270	441.17	ug/L	97
23) Di-isopropyl ether	6.177	45	1092178	42.67	ug/L	99
24) Chloroprene	6.305	53	481281	40.86	ug/L	98
25) 1,1-Dichloroethane	6.336	63	580119	42.05	ug/L	98
26) Acrylonitrile	6.391	53	621391	205.47	ug/L	100
27) ETBE	6.799	59	924736	44.80	ug/L	99
28) Vinyl acetate	6.769	43	3241476	194.77	ug/L	100
29) cis-1,2-Dichloroethene	7.263	96	277497	42.02	ug/L	100
30) 2,2-Dichloropropane	7.452	77	257056	43.81	ug/L	98
31) Bromochloromethane	7.610	128	134427	41.76	ug/L	94
32) Cyclohexane	7.647	56	628227	41.07	ug/L	99
33) Chloroform	7.762	83	471687	39.71	ug/L	99
34) Ethyl acetate	8.000	43	1453732	202.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56322.D
Acq On : 25 Jul 2018 6:24 pm
Operator : ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 26 08:16:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) Tetrahydrofuran	8.031	42	185588	43.00	ug/L	97
37) Carbon Tetrachloride	8.018	117	275699	38.57	ug/L	99
38) 1,1,1-Trichloroethane	8.128	97	384959	40.27	ug/L	99
39) 2-Butanone	8.305	43	658339	209.89	ug/L	100
40) 1,1-Dichloropropene	8.360	75	355841	42.03	ug/L	98
41) tert-Butyl formate	8.573	59	757194	296.14	ug/L	96
42) Propionitrile	8.793	54	463846	427.02	ug/L	95
43) Methacrylonitrile	8.835	41	1750209	411.39	ug/L	100
44) Benzene	8.793	78	1023642	40.46	ug/L	99
45) TAME	9.024	73	604203	43.82	ug/L	98
47) 1,2-Dichloroethane	9.104	62	438151	40.09	ug/L	99
48) Trichloroethene	9.658	95	271719	40.67	ug/L	98
49) Methylcyclohexane	9.652	83	457891	41.88	ug/L	99
50) Dibromomethane	10.146	93	173646	42.03	ug/L	99
51) 1,2-Dichloropropane	10.250	63	339735	42.02	ug/L	99
52) Bromodichloromethane	10.335	83	343984	42.88	ug/L	99
53) Methyl methacrylate	10.512	41	234100	39.89	ug/L	99
54) 2-Chloroethyl vinyl ether	10.914	63	1125015	235.89	ug/L	100
55) cis-1,3-Dichloropropene	10.975	75	405251	39.54	ug/L	99
58) Toluene	11.201	91	1090858	40.23	ug/L	100
59) 2-Nitropropane	11.384	41	264269	178.79	ug/L	100
60) 4-Methyl-2-pentanone	11.524	43	1525686	210.48	ug/L	99
61) trans-1,3-Dichloropropene	11.926	75	22728	42.73	ug/L	96
62) Tetrachloroethene	11.554	166	273646	39.15	ug/L	98
63) Ethyl methacrylate	11.701	69	326019	41.23	ug/L	99
64) 1,1,2-Trichloroethane	11.701	83	213172	41.90	ug/L	99
65) Dibromochloromethane	11.859	129	263760	43.72	ug/L	100
66) 1,3-Dichloropropane	11.926	76	412281	40.29	ug/L	99
67) 1,2-Dibromoethane	12.054	107	239989	42.81	ug/L	100
68) 2-hexanone	12.207	43	1254491	208.79	ug/L	95
69) 1-Chlorohexane	12.438	91	385550	41.44	ug/L	98
70) Ethylbenzene	12.481	91	1257384	40.54	ug/L	99
71) Chlorobenzene	12.469	112	700795	39.72	ug/L	99
72) 1,1,1,2-Tetrachloroethane	12.518	131	224787	41.33	ug/L	99
73) m,p-Xylene	12.591	91	1968051	83.31	ug/L	100
74) o-Xylene	12.914	91	1012204	42.73	ug/L	99
75) Styrene	12.950	104	742335	44.59	ug/L	99
76) Bromoform	12.987	173	156265	40.60	ug/L	99
77) Isopropylbenzene	13.133	105	1167078	44.71	ug/L	100
80) cis-1,4-Dichloro-2-butene	13.377	53	108376	39.56	ug/L	96
81) n-Propylbenzene	13.432	91	1477044	41.43	ug/L	100
82) Bromobenzene	13.438	156	288838	41.81	ug/L	98
83) 1,1,2,2-Tetrachloroethane	13.475	83	332841	42.77	ug/L	99
84) 1,3,5-Trimethylbenzene	13.554	105	971531	43.24	ug/L	100
85) 2-Chlorotoluene	13.670	91	909011	41.96	ug/L	100
86) trans-1,4-Dichloro-2-B...	13.597	53	101595	40.03	ug/L	100
87) 1,2,3-Trichloropropane	13.578	110	88474	42.21	ug/L	98
88) Cyclohexanone	13.621	55	57595	172.45	ug/L	98
89) 4-Chlorotoluene	13.670	91	909011	41.96	ug/L	99
90) tert-Butylbenzene	13.786	91	581012	41.78	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56322.D
Acq On : 25 Jul 2018 6:24 pm
Operator : ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 26 08:16:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

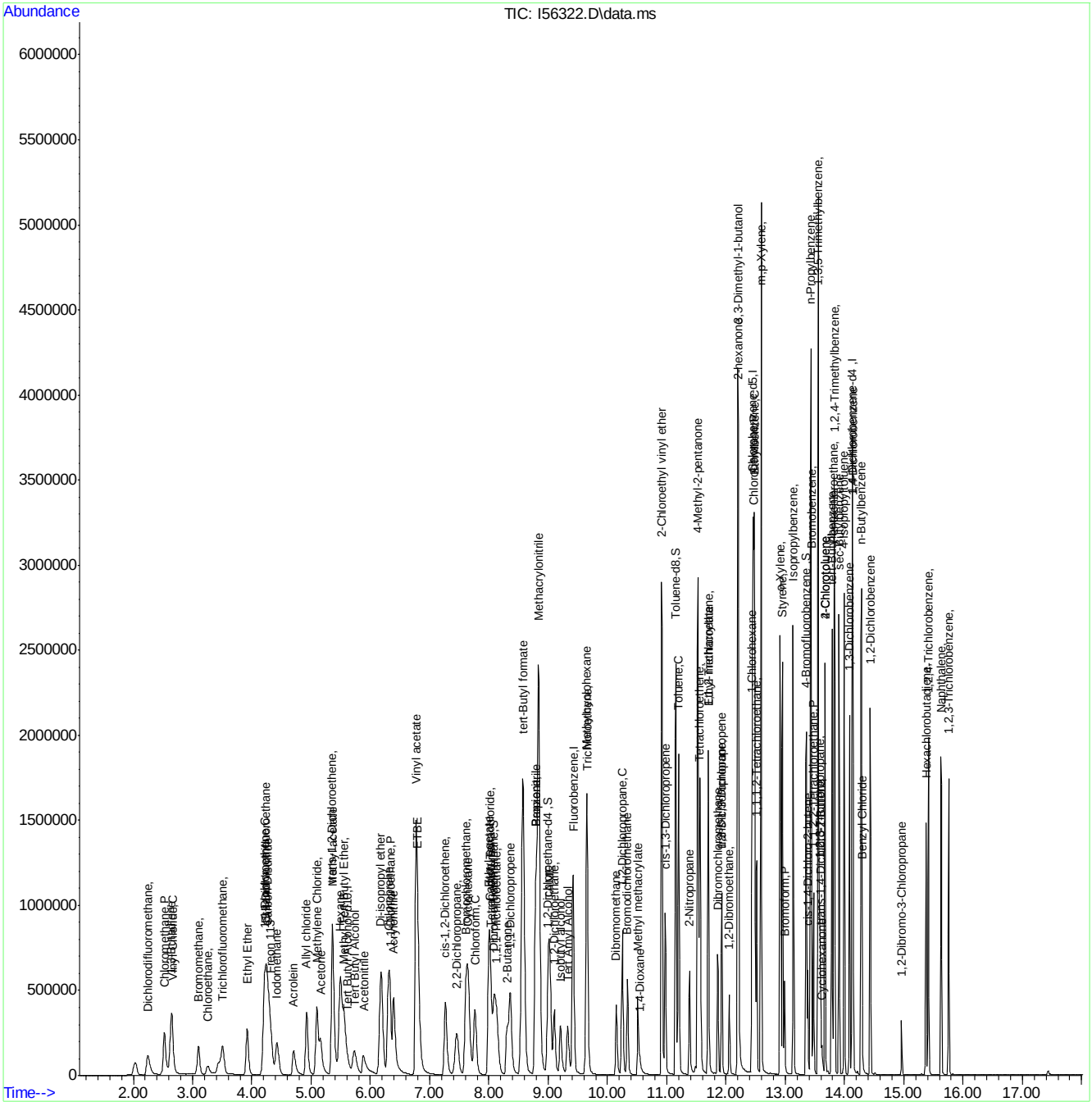
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	970686	41.77	ug/L	100
93) Pentachloroethane	13.822	167	151026	39.86	ug/L	98
94) sec-Butylbenzene	13.908	105	1207326	42.09	ug/L	99
95) 4-Isopropyltoluene	13.993	119	1012141	43.53	ug/L	99
96) 1,3-Dichlorobenzene	14.084	146	542908	42.33	ug/L	100
97) 1,4-Dichlorobenzene	14.139	146	558805	40.03	ug/L	98
98) n-Butylbenzene	14.286	92	584452	43.65	ug/L	98
99) Benzyl Chloride	14.298	126	66339	39.16	ug/L	97
100) 1,2-Dichlorobenzene	14.432	146	516357	41.34	ug/L	99
101) 1,2-Dibromo-3-Chloropr...	14.962	75	51874	40.58	ug/L	85
102) Hexachlorobutadiene	15.377	225	175673	42.34	ug/L	98
103) 1,2,4-Trichlorobenzene	15.413	180	363080	43.80	ug/L	99
104) Naphthalene	15.627	128	901875	41.94	ug/L	100
105) 1,2,3-Trichlorobenzene	15.755	180	333802	42.94	ug/L	95
107) Ethanol	4.227	45	65250	819.00	ug/L	92
108) Acrolein	4.702	56	266623	151.69	ug/L	99
109) Tert Butyl Alcohol	5.732	59	316687	459.63	ug/L	98
110) Isobutyl alcohol	9.207	43	240694	845.07	ug/L	99
111) Tert Amyl Alcohol	9.329	59	191455	416.24	ug/L	98
112) 1,4-Dioxane	10.548	88	56767	823.33	ug/L	97
113) 3,3-Dimethyl-1-butanol	12.201	57	1495112	2039.66	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56322.D
Acq On : 25 Jul 2018 6:24 pm
Operator : ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 26 08:16:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56356.D
Acq On : 27 Jul 2018 8:49 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 27 09:16:46 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1141426	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	807815	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	414777	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.616	65	92605	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.085	113	304141	50.47	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.94%			
46) 1,2-Dichloroethane-d4	9.000	65	408571	50.14	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 100.28%			
57) Toluene-d8	11.152	98	1100606	49.37	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.74%			
79) 4-Bromofluorobenzene	13.353	174	328270	50.11	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.22%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.251	85	247252	38.04	ug/L	100
3) Chloromethane	2.532	50	334030	37.43	ug/L	99
4) 1,3-Butadiene	2.641	39	179901	37.38	ug/L	99
5) Vinyl Chloride	2.666	62	295258	39.33	ug/L	99
6) Bromomethane	3.111	94	146542	37.29	ug/L	99
7) Chloroethane	3.269	64	76999	36.52	ug/L	95
8) Trichlorofluoromethane	3.513	101	332777	38.59	ug/L	100
9) Ethyl Ether	3.922	59	268605	40.39	ug/L	98
10) 1,2-Dichlorotrifluoroe...	4.239	67	327337	40.99	ug/L	99
11) 1,1-Dichloroethene	4.220	61	437737	41.00	ug/L	99
12) Freon 113	4.312	101	242637	40.69	ug/L	98
13) Carbon Disulfide	4.269	76	708970	41.89	ug/L	98
14) Iodomethane	4.428	142	366461	40.07	ug/L	100
15) Allyl chloride	4.928	41	379463	41.33	ug/L	98
16) Methylene Chloride	5.098	49	434373	41.27	ug/L	99
17) Acetone	5.159	43	412243	217.54	ug/L	98
18) Methyl acetate	5.373	43	958368	204.69	ug/L	99
19) trans-1,2-Dichloroethene	5.354	61	435435	41.38	ug/L	99
20) Hexane	5.495	56	322301	39.94	ug/L	99
21) Methyl Tert Butyl Ether	5.555	73	533886	40.80	ug/L	95
22) Acetonitrile	5.885	41	296497	454.52	ug/L	99
23) Di-isopropyl ether	6.183	45	982385	41.78	ug/L	99
24) Chloroprene	6.305	53	444893	41.11	ug/L	98
25) 1,1-Dichloroethane	6.336	63	510852	40.30	ug/L	100
26) Acrylonitrile	6.391	53	569700	205.08	ug/L	100
27) ETBE	6.799	59	830624	43.81	ug/L	99
28) Vinyl acetate	6.775	43	3150263	205.70	ug/L	100
29) cis-1,2-Dichloroethene	7.262	96	247541	40.80	ug/L	98
30) 2,2-Dichloropropane	7.458	77	242059	44.91	ug/L	100
31) Bromochloromethane	7.610	128	123596	41.80	ug/L	99
32) Cyclohexane	7.647	56	587310	41.80	ug/L	97
33) Chloroform	7.768	83	423122	38.78	ug/L	95
34) Ethyl acetate	8.000	43	1344336	203.31	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56356.D
Acq On : 27 Jul 2018 8:49 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 27 09:16:46 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.031	42	171405	43.23	ug/L		95
37) Carbon Tetrachloride	8.018	117	272582	41.51	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	363691	41.41	ug/L		99
39) 2-Butanone	8.305	43	590041	204.93	ug/L		98
40) 1,1-Dichloropropene	8.360	75	321138	41.29	ug/L		98
41) tert-Butyl formate	8.573	59	1209775	469.64	ug/L		91
42) Propionitrile	8.793	54	435766	436.69	ug/L		98
43) Methacrylonitrile	8.835	41	1645794	421.09	ug/L		99
44) Benzene	8.793	78	917721	39.49	ug/L		98
45) TAME	9.030	73	543037	42.87	ug/L		99
47) 1,2-Dichloroethane	9.104	62	397344	39.58	ug/L		99
48) Trichloroethene	9.658	95	244755	39.88	ug/L		99
49) Methylcyclohexane	9.652	83	409928	40.81	ug/L		99
50) Dibromomethane	10.146	93	157380	41.47	ug/L		97
51) 1,2-Dichloropropane	10.250	63	303283	40.83	ug/L		98
52) Bromodichloromethane	10.341	83	307266	41.69	ug/L		99
53) Methyl methacrylate	10.512	41	216974	40.22	ug/L		98
54) 2-Chloroethyl vinyl ether	10.914	63	978934	223.43	ug/L		99
55) cis-1,3-Dichloropropene	10.975	75	382597	40.58	ug/L		100
58) Toluene	11.201	91	984196	39.45	ug/L		100
59) 2-Nitropropane	11.384	41	274654	200.79	ug/L		99
60) 4-Methyl-2-pentanone	11.524	43	1402599	210.29	ug/L		99
61) trans-1,3-Dichloropropene	11.926	75	20714	42.32	ug/L	#	87
62) Tetrachloroethene	11.554	166	250720	38.99	ug/L		99
63) Ethyl methacrylate	11.695	69	283494	39.06	ug/L		89
64) 1,1,2-Trichloroethane	11.701	83	191114	40.82	ug/L		98
65) Dibromochloromethane	11.859	129	236993	42.69	ug/L		100
66) 1,3-Dichloropropane	11.926	76	381623	40.53	ug/L		99
67) 1,2-Dibromoethane	12.054	107	216471	41.97	ug/L		99
68) 2-hexanone	12.207	43	1169548	211.54	ug/L		91
69) 1-Chlorohexane	12.438	91	338272	39.51	ug/L		98
70) Ethylbenzene	12.481	91	1143318	40.06	ug/L		99
71) Chlorobenzene	12.469	112	634704	39.10	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.518	131	205580	41.08	ug/L		98
73) m,p-Xylene	12.591	91	1763126	81.11	ug/L		99
74) o-Xylene	12.914	91	900083	41.29	ug/L		100
75) Styrene	12.950	104	650816	42.49	ug/L		100
76) Bromoform	12.987	173	142322	40.21	ug/L		99
77) Isopropylbenzene	13.133	105	997328	41.52	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.377	53	109594	42.95	ug/L		96
81) n-Propylbenzene	13.426	91	1352802	40.74	ug/L		96
82) Bromobenzene	13.438	156	259813	40.38	ug/L		99
83) 1,1,2,2-Tetrachloroethane	13.475	83	289613	39.96	ug/L		97
84) 1,3,5-Trimethylbenzene	13.554	105	865165	41.34	ug/L		99
85) 2-Chlorotoluene	13.670	91	813166	40.31	ug/L		99
86) trans-1,4-Dichloro-2-B...	13.591	53	104003	44.00	ug/L	#	75
87) 1,2,3-Trichloropropane	13.578	110	79116	40.52	ug/L		98
88) Cyclohexanone	13.621	55	71525	229.95	ug/L		99
89) 4-Chlorotoluene	13.670	91	813166	40.31	ug/L		99
90) tert-Butylbenzene	13.786	91	527311	40.71	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56356.D
Acq On : 27 Jul 2018 8:49 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 27 09:16:46 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

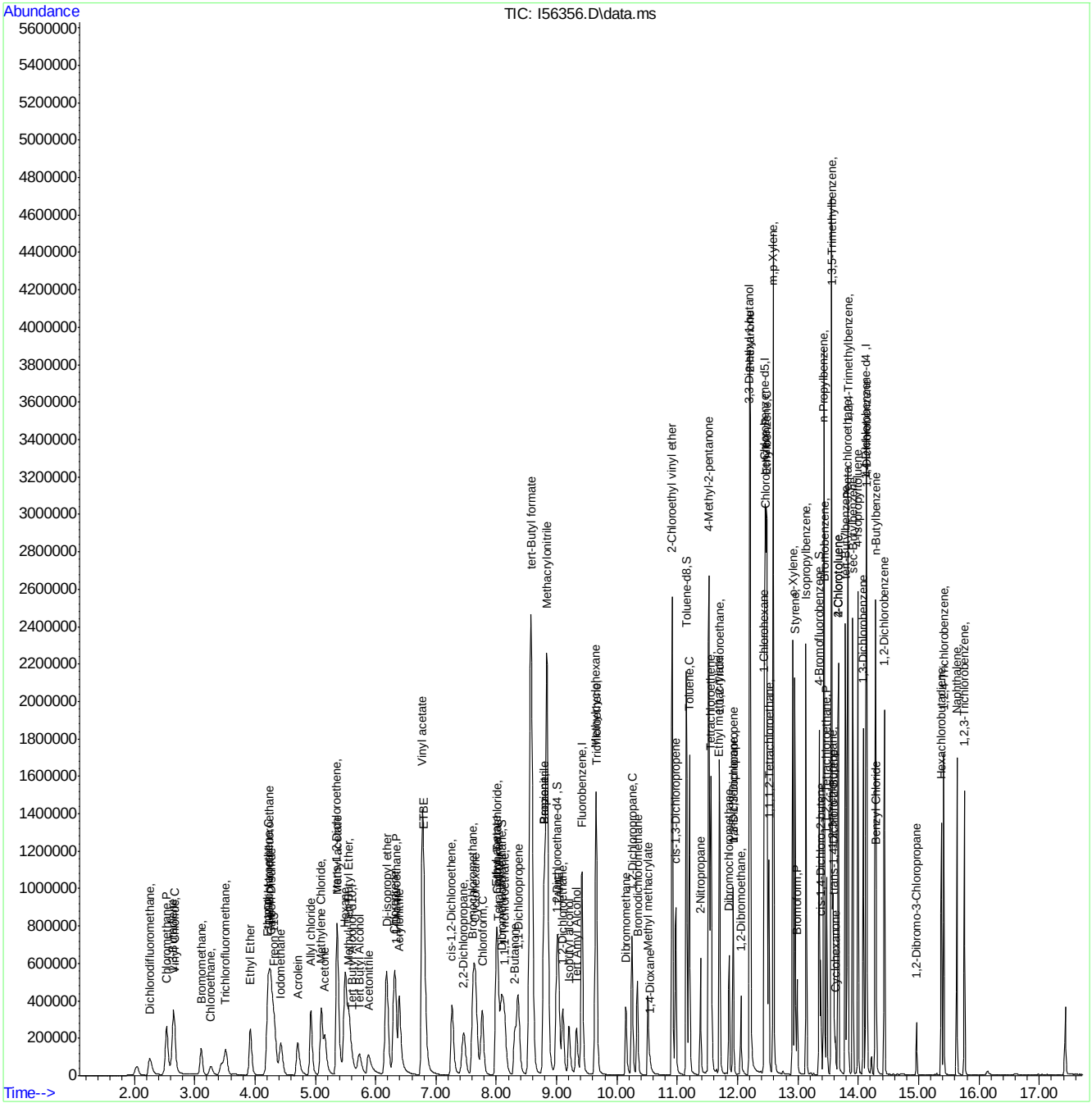
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	894495	41.33	ug/L		100
93) Pentachloroethane	13.822	167	143807	40.65	ug/L		98
94) sec-Butylbenzene	13.908	105	1091655	40.86	ug/L		99
95) 4-Isopropyltoluene	13.993	119	899259	41.52	ug/L		100
96) 1,3-Dichlorobenzene	14.084	146	477828	40.00	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	502027	38.61	ug/L		99
98) n-Butylbenzene	14.285	92	525049	42.11	ug/L		98
99) Benzyl Chloride	14.298	126	65750	41.24	ug/L	#	91
100) 1,2-Dichlorobenzene	14.432	146	464188	39.90	ug/L		99
101) 1,2-Dibromo-3-Chloropr...	14.962	75	47022	39.55	ug/L		82
102) Hexachlorobutadiene	15.377	225	154495	39.98	ug/L		99
103) 1,2,4-Trichlorobenzene	15.413	180	319448	41.38	ug/L		99
104) Naphthalene	15.633	128	796034	39.82	ug/L		100
105) 1,2,3-Trichlorobenzene	15.761	180	297595	41.10	ug/L		100
107) Ethanol	4.214	45	58605	854.53	ug/L		93
108) Acrolein	4.708	56	319211	211.56	ug/L		99
109) Tert Butyl Alcohol	5.732	59	241341	406.63	ug/L		95
110) Isobutyl alcohol	9.207	43	213711	871.06	ug/L		100
111) Tert Amyl Alcohol	9.329	59	164819	416.00	ug/L		99
112) 1,4-Dioxane	10.548	88	49132	827.32	ug/L		96
113) 3,3-Dimethyl-1-butanol	12.194	57	1395605	2210.25	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56356.D
Acq On : 27 Jul 2018 8:49 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 27 09:16:46 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56376.D
Acq On : 27 Jul 2018 8:08 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 30 06:51:43 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1141769	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	805903	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	413011	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.623	65	94281	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	306404	50.83	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.66%			
46) 1,2-Dichloroethane-d4	9.000	65	414865	50.90	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.80%			
57) Toluene-d8	11.152	98	1099861	49.46	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.92%			
79) 4-Bromofluorobenzene	13.353	174	322175	49.39	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.78%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	237394	36.51	ug/L	97
3) Chloromethane	2.532	50	314868	35.27	ug/L	99
4) 1,3-Butadiene	2.641	39	174159	36.17	ug/L	98
5) Vinyl Chloride	2.660	62	284685	37.91	ug/L	98
6) Bromomethane	3.111	94	139549	35.50	ug/L	98
7) Chloroethane	3.269	64	74577	34.95	ug/L	95
8) Trichlorofluoromethane	3.507	101	350110	40.58	ug/L	96
9) Ethyl Ether	3.928	59	262777	39.50	ug/L	97
10) 1,2-Dichlorotrifluoroe...	4.239	67	316928	39.67	ug/L	98
11) 1,1-Dichloroethene	4.220	61	419819	39.31	ug/L	99
12) Freon 113	4.324	101	231824	38.87	ug/L	99
13) Carbon Disulfide	4.269	76	681988	40.28	ug/L	98
14) Iodomethane	4.428	142	354236	38.72	ug/L	98
15) Allyl chloride	4.928	41	374718	40.80	ug/L	97
16) Methylene Chloride	5.104	49	439867	41.78	ug/L	97
17) Acetone	5.165	43	402155	212.15	ug/L	99
18) Methyl acetate	5.373	43	969856	207.02	ug/L	99
19) trans-1,2-Dichloroethene	5.360	61	430439	40.89	ug/L	99
20) Hexane	5.501	56	312921	38.76	ug/L	98
21) Methyl Tert Butyl Ether	5.556	73	522486	39.91	ug/L	91
22) Acetonitrile	5.885	41	300375	460.33	ug/L	98
23) Di-isopropyl ether	6.183	45	982083	41.75	ug/L	99
24) Chloroprene	6.305	53	452199	41.77	ug/L	97
25) 1,1-Dichloroethane	6.336	63	513149	40.47	ug/L	98
26) Acrylonitrile	6.397	53	581322	208.99	ug/L	99
27) ETBE	6.799	59	817519	43.10	ug/L	99
28) Vinyl acetate	6.775	43	3190146	208.16	ug/L	99
29) cis-1,2-Dichloroethene	7.269	96	247682	40.81	ug/L	96
30) 2,2-Dichloropropane	7.464	77	220753	40.94	ug/L	99
31) Bromochloromethane	7.610	128	122603	41.45	ug/L	96
32) Cyclohexane	7.653	56	569898	40.55	ug/L	99
33) Chloroform	7.769	83	422863	38.74	ug/L	97
34) Ethyl acetate	8.000	43	1377493	208.18	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56376.D
Acq On : 27 Jul 2018 8:08 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 30 06:51:43 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) Tetrahydrofuran	8.037	42	174884	44.09	ug/L	96
37) Carbon Tetrachloride	8.025	117	250285	38.10	ug/L	99
38) 1,1,1-Trichloroethane	8.134	97	351314	39.99	ug/L	97
39) 2-Butanone	8.305	43	594109	206.24	ug/L	98
40) 1,1-Dichloropropene	8.366	75	315443	40.54	ug/L	98
41) tert-Butyl formate	8.579	59	1176515	459.06	ug/L	91
42) Propionitrile	8.793	54	442986	443.79	ug/L	99
43) Methacrylonitrile	8.841	41	1677368	429.04	ug/L	99
44) Benzene	8.799	78	919404	39.55	ug/L	97
45) TAME	9.030	73	529591	41.80	ug/L	96
47) 1,2-Dichloroethane	9.104	62	402663	40.10	ug/L	99
48) Trichloroethene	9.658	95	247410	40.30	ug/L	98
49) Methylcyclohexane	9.652	83	394213	39.24	ug/L	98
50) Dibromomethane	10.146	93	155124	40.86	ug/L	98
51) 1,2-Dichloropropane	10.250	63	305540	41.12	ug/L	97
52) Bromodichloromethane	10.341	83	297997	40.42	ug/L	99
53) Methyl methacrylate	10.512	41	215918	40.03	ug/L	97
54) 2-Chloroethyl vinyl ether	10.914	63	979035	223.39	ug/L	98
55) cis-1,3-Dichloropropene	10.975	75	366672	38.96	ug/L	98
58) Toluene	11.201	91	975655	39.20	ug/L	99
59) 2-Nitropropane	11.384	41	245924	181.13	ug/L	99
60) 4-Methyl-2-pentanone	11.524	43	1421538	213.63	ug/L	98
61) trans-1,3-Dichloropropene	11.926	75	21128	43.27	ug/L	91
62) Tetrachloroethene	11.554	166	258816	40.34	ug/L	99
63) Ethyl methacrylate	11.701	69	281181	38.85	ug/L	97
64) 1,1,2-Trichloroethane	11.701	83	191115	40.92	ug/L	98
65) Dibromochloromethane	11.859	129	225857	40.78	ug/L	100
66) 1,3-Dichloropropane	11.926	76	379410	40.39	ug/L	97
67) 1,2-Dibromoethane	12.054	107	213932	41.57	ug/L	100
68) 2-hexanone	12.207	43	1197491	217.11	ug/L	95
69) 1-Chlorohexane	12.438	91	340116	39.82	ug/L	96
70) Ethylbenzene	12.481	91	1118767	39.30	ug/L	99
71) Chlorobenzene	12.469	112	626577	38.69	ug/L	99
72) 1,1,1,2-Tetrachloroethane	12.518	131	197011	39.46	ug/L	98
73) m,p-Xylene	12.591	91	1747729	80.59	ug/L	100
74) o-Xylene	12.914	91	895503	41.18	ug/L	99
75) Styrene	12.950	104	648048	42.41	ug/L	99
76) Bromoform	12.987	173	132154	37.58	ug/L	99
77) Isopropylbenzene	13.133	105	986191	41.15	ug/L	100
80) cis-1,4-Dichloro-2-butene	13.377	53	105159	41.39	ug/L	95
81) n-Propylbenzene	13.432	91	1335117	40.38	ug/L	100
82) Bromobenzene	13.438	156	255515	39.88	ug/L	98
83) 1,1,2,2-Tetrachloroethane	13.475	83	287600	39.85	ug/L	98
84) 1,3,5-Trimethylbenzene	13.554	105	854181	40.99	ug/L	99
85) 2-Chlorotoluene	13.670	91	809644	40.30	ug/L	100
86) trans-1,4-Dichloro-2-B...	13.597	53	101224	43.01	ug/L	95
87) 1,2,3-Trichloropropane	13.578	110	79943	41.12	ug/L	100
88) Cyclohexanone	13.621	55	67098	216.64	ug/L	98
89) 4-Chlorotoluene	13.670	91	809644	40.30	ug/L	100
90) tert-Butylbenzene	13.786	91	522884	40.55	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56376.D
Acq On : 27 Jul 2018 8:08 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 30 06:51:43 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

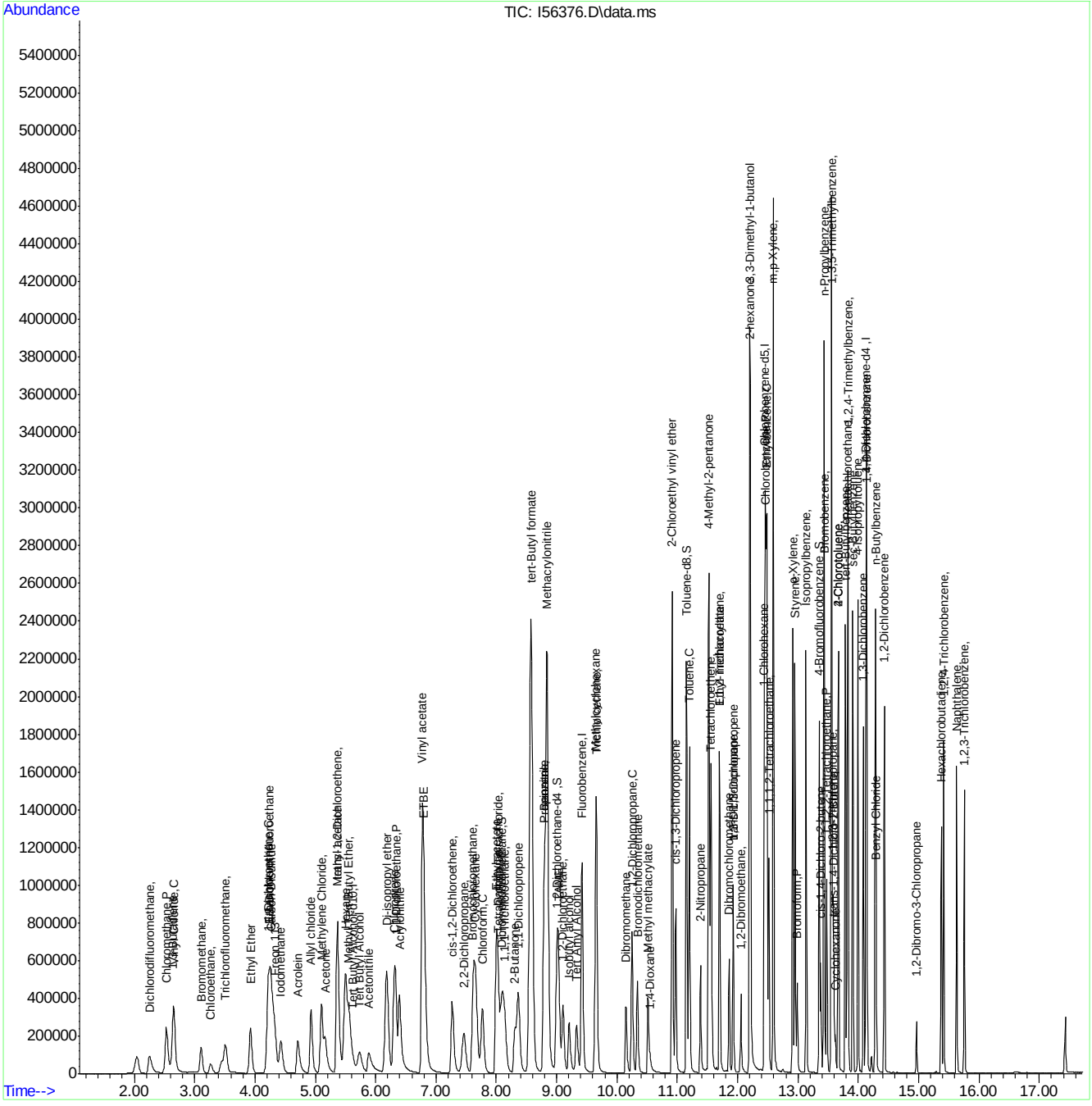
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	884491	41.04	ug/L		100
93) Pentachloroethane	13.822	167	129128	37.08	ug/L		97
94) sec-Butylbenzene	13.908	105	1071664	40.28	ug/L		99
95) 4-Isopropyltoluene	13.993	119	878960	40.76	ug/L		100
96) 1,3-Dichlorobenzene	14.084	146	474618	39.90	ug/L		100
97) 1,4-Dichlorobenzene	14.139	146	500256	38.64	ug/L		99
98) n-Butylbenzene	14.286	92	510740	41.14	ug/L		98
99) Benzyl Chloride	14.298	126	57533	37.01	ug/L	#	94
100) 1,2-Dichlorobenzene	14.432	146	460590	39.76	ug/L		99
101) 1,2-Dibromo-3-Chloropr...	14.962	75	44449	37.65	ug/L		84
102) Hexachlorobutadiene	15.377	225	150633	39.15	ug/L		99
103) 1,2,4-Trichlorobenzene	15.413	180	312755	40.68	ug/L		99
104) Naphthalene	15.633	128	788390	39.61	ug/L		99
105) 1,2,3-Trichlorobenzene	15.761	180	291340	40.41	ug/L		100
107) Ethanol	4.239	45	55755	797.66	ug/L		87
108) Acrolein	4.708	56	310363	201.92	ug/L		99
109) Tert Butyl Alcohol	5.732	59	237185	392.53	ug/L		95
110) Isobutyl alcohol	9.207	43	216339	866.10	ug/L		99
111) Tert Amyl Alcohol	9.329	59	165880	411.49	ug/L		96
112) 1,4-Dioxane	10.548	88	48313	798.59	ug/L		95
113) 3,3-Dimethyl-1-butanol	12.201	57	1435008	2232.25	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56376.D
Acq On : 27 Jul 2018 8:08 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 30 06:51:43 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration



SGS-ORLANDO ANALYSIS LOG

MSVOA16-I-ANALYSIS LOG

DATE:	7/25/2018
COLUMN TYPE:	RTXVMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA4-B
PURGE PRESSURE:	6.7psi
PURGE VOLUME:	5mL
ANALYST:	ANAJ

METHODS:*	8260
METHOD FILE:	I-July2518.M
CALIB. DATE:	7/252018
EM VOLTAGE:	1624V
BFB RESPONSE	2063466
RUN ID	***VI1683***

BFB: V23957
ICAL/CC: V23908, V23907, V23864
V23865,V23860,V23859,V23874,V23909
ISTD/SURR: V23957
ICV/QC: V23905,V23863, V23828
V23924, V23872, V23921, V23852,
V23853, V23910

PH LOT: 1/12pH:230814
0/3pH:200416
KI PAPER LOT: 06517
SAMPLE ID VERIFIED BY:
ANAJ
DATE VERIFIED: 07/25/2018

Data File	Sample ID	DIL.	VIAL #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONAL, PEAK #	PH	CL ?	RR	COMMENTS
I56313	BFB	N/A	N/A	w	1	8260		N/A	N/A		✓ Passed (AF)
I56314	IC1683-1	N/A	N/A	w	1	8260	7SP,61MP,97MP,107MP,112MP	N/A	N/A		✓ Passed 10mL(IC2)-->50mL
I56315	IC1683-2	N/A	N/A	w	2	8260	7SP , 107PII	N/A	N/A		✓ Passed 5uL-->100mL
I56316	IC1683-3	N/A	N/A	w	3	8260		N/A	N/A		✓ Passed 5uL-->50mL
I56317	IC1683-4	N/A	N/A	w	4	8260	35MP, 42MP	N/A	N/A		✓ Passed 12.5uL-->50mL
I56318	ICC1683-5	N/A	N/A	w	5	8260		N/A	N/A		✓ Passed 20uL-->50mL
I56319	IC1683-6	N/A	N/A	w	6	8260		N/A	N/A		✓ Passed 35uL-->50mL
I56320	IC1683-7	N/A	N/A	w	7	8260		N/A	N/A		✓ Passed 50uL-->50mL
I56321	Blank	N/A	N/A	w	8	8260		N/A	N/A		✓
I56322	ICV1683-5	N/A	N/A	w	9	8260		N/A	N/A		✓ Passed 25uL-->50mL
I56323	BS	N/A	N/A	w	10	8260		N/A	N/A		✓ Passed 12.5uL-->40mL
I56324	MB	N/A	N/A	w	11	8260		N/A	N/A		✓ Hexachlorobutadiene

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

Manual Integration Rational SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument

Analyst's Signature:

SGS -ORLANDO

MSVOA16-I-ANALYSIS LOG

DATE:	7/27/2018
COLUMN TYPE:	RTXVMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA4-B
PURGE PRESSURE:	6.7psi
PURGE VOLUME:	5mL
ANALYST:	ANAJ

METHODS:*	8260
METHOD FILE:	I-July2518.M
CALIB. DATE:	7/252018
EM VOLTAGE:	1624V
BFB RESPONSE	2032885
RUN ID	***VI1685***

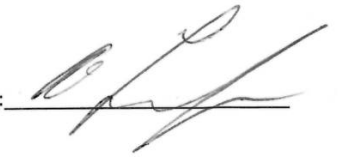
BFB:	V23957
ICAL/CC:	V23908, V23907, V23864
	V23865,V23860,V23859,V23874,V23909
ISTD/SURR:	V23957
ICV/QC:	V23905,V23863, V23828
	V23924, V23872, V23921, V23852,
	V23853, V23910

PH LOT: 1/12pH:230814
0/3pH:200416
KI PAPER LOT: 06517
SAMPLE ID VERIFIED BY:
ANAJ
DATE VERIFIED: 07/30/2018

Data File	Sample ID	DIL.	VIAL #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONAL, PEAK #	PH	CL ?	RR	COMMENTS
I56355	BFB	N/A	N/A	w	1	8260		N/A	N/A		✓ Passed (AF)
I56356	CC1683-5	N/A	N/A	w	1	8260		N/A	N/A		✓ Passed 20uL-->50mL
I56357	BS	N/A	N/A	w	2	8260		N/A	N/A		✓ Passed 12.5uL-->40mL
I56358	MB	N/A	N/A	w	3	8260		N/A	N/A		✓ Hexachlorobutadiene
I56359	FA55914-1	1x	2	w	1	8260		1	N		✓ ND
I56360	FA55914-2	1x	1	w	2	8260		1	N		✓ ND
I56361	FA55914-3	1x	1	w	3	8260		1	N		✓ ND
I56362	FA55914-4	1x	1	w	4	8260		1	N		✓ ND
I56363	FA55914-5	1x	1	w	5	8260		1	N		✓
I56364	FA55914-7	1x	1	w	6	8260		1	N		✓
I56365	FA55914-9	1x	1	w	7	8260		1	N		✓
I56366	FA55914-10	1x	1	w	8	8260		1	N		✓ ND
I56367	FA55941-5	1x	1	w	9	8260		1	N		✓ ND
I56368	FA55941-1	1x	1	w	10	8260		1	N		✓ ND
I56369	FA55941-2	1x	1	w	11	8260		1	N		✓ ND
I56370	FA55941-5ms	1x	2	w	12	8260	107PII	1	N		✓ Passed 12.5uL-->40mL
I56371	FA55941-5msd	1x	3	w	13	8260	107PII	1	N		✓ Passed 12.5uL-->40mL
I56372	FA56019-9,5x	5x	3	w	14	8260		1	N	**10x**	✓ 10mL-->50mL,E!combine
I56373	FA56019-10	1x	2	w	15	8260		1	N	**1x**	✓ ND
I56374	FA55941-3	1x	1	w	16	8260		1	N		✓ ND
I56375	FA55941-4	1x	1	w	17	8260		1	N		✓ ND
I56376	FA55941-6	1x	1	w	18	8260		1	N		✓ ND
I56377	ECC1683-5	N/A	N/A	w	19	8260		N/A	N/A		✓ Passed 20uL-->50mL

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

Manual Integration Rational SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument

Analyst's Signature: 

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71008-MB	BB060342.D	1	07/24/18	WH	07/23/18	OP71008	GBB1754

The QC reported here applies to the following samples: **Method:** SW846 8330A

FA55914-2, FA55914-9

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	0.20	0.080	ug/l	
121-82-4	RDX	ND	0.20	0.080	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	0.20	0.080	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.080	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
98-95-3	Nitrobenzene	ND	0.20	0.097	ug/l	
88-72-2	o-Nitrotoluene	ND	0.20	0.080	ug/l	
99-08-1	m-Nitrotoluene	ND	0.20	0.080	ug/l	
99-99-0	p-Nitrotoluene	ND	0.20	0.080	ug/l	
479-45-8	Tetryl	ND	0.20	0.080	ug/l	
99-35-4	1,3,5-Trinitrobenzene	ND	0.20	0.099	ug/l	
118-96-7	2,4,6-Trinitrotoluene	ND	0.20	0.080	ug/l	
78-11-5	PETN	ND	2.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
610-39-9	3,4-Dinitrotoluene	87%	70-136%

Blank Spike Summary

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71008-BS	BB060343.D	1	07/24/18	WH	07/23/18	OP71008	GBB1754

The QC reported here applies to the following samples: **Method:** SW846 8330A

FA55914-2, FA55914-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
2691-41-0	HMX	5	4.4	88	77-144
121-82-4	RDX	5	4.9	98	77-125
99-65-0	1,3-Dinitrobenzene	5	4.7	94	79-122
606-20-2	2,6-Dinitrotoluene	5	5.1	102	81-131
121-14-2	2,4-Dinitrotoluene	5	4.6	92	80-123
35572-78-2	2-amino-4,6-Dinitrotoluene	5	4.3	86	81-120
19406-51-0	4-amino-2,6-Dinitrotoluene	5	5.1	102	79-119
98-95-3	Nitrobenzene	5	4.6	92	78-130
88-72-2	o-Nitrotoluene	5	5.1	102	76-131
99-08-1	m-Nitrotoluene	5	4.9	98	78-122
99-99-0	p-Nitrotoluene	5	4.7	94	79-124
479-45-8	Tetryl	5	5.2	104	65-124
99-35-4	1,3,5-Trinitrobenzene	5	4.8	96	79-128
118-96-7	2,4,6-Trinitrotoluene	5	5.4	108	72-112
78-11-5	PETN	25	27.3	109	73-145

CAS No.	Surrogate Recoveries	BSP	Limits
610-39-9	3,4-Dinitrotoluene	91%	70-136%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71008-MS	BB060355.D	1	07/24/18	WH	07/23/18	OP71008	GBB1754
OP71008-MSD	BB060356.D	1	07/24/18	WH	07/23/18	OP71008	GBB1754
FA55941-5	BB060348.D	1	07/24/18	WH	07/23/18	OP71008	GBB1754

The QC reported here applies to the following samples: **Method:** SW846 8330A

FA55914-2, FA55914-9

CAS No.	Compound	FA55941-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
2691-41-0	HMX	0.19	U	9.62	8.3	86	9.62	8.2	85	1	77-144/21
121-82-4	RDX	0.19	U	9.62	9.2	96	9.62	9.2	96	0	77-125/19
99-65-0	1,3-Dinitrobenzene	0.19	U	9.62	9.0	94	9.62	8.9	93	1	79-122/17
606-20-2	2,6-Dinitrotoluene	0.19	U	9.62	9.8	102	9.62	9.5	99	3	81-131/17
121-14-2	2,4-Dinitrotoluene	0.19	U	9.62	8.7	90	9.62	8.9	93	2	80-123/19
35572-78-2	2-amino-4,6-Dinitrotoluene	0.19	U	9.62	8.0	83	9.62	8.2	85	2	81-120/19
19406-51-0	4-amino-2,6-Dinitrotoluene	0.19	U	9.62	9.3	97	9.62	9.5	99	2	79-119/20
98-95-3	Nitrobenzene	0.19	U	9.62	8.7	90	9.62	8.7	90	0	78-130/19
88-72-2	o-Nitrotoluene	0.19	U	9.62	9.7	101	9.62	9.7	101	0	76-131/20
99-08-1	m-Nitrotoluene	0.19	U	9.62	9.6	100	9.62	9.0	94	6	78-122/18
99-99-0	p-Nitrotoluene	0.19	U	9.62	9.2	96	9.62	8.8	92	4	79-124/18
479-45-8	Tetryl	0.19	U	9.62	7.9	82	9.62	8.0	83	1	65-124/20
99-35-4	1,3,5-Trinitrobenzene	0.19	U	9.62	9.3	97	9.62	9.0	94	3	79-128/16
118-96-7	2,4,6-Trinitrotoluene	0.19	U	9.62	10.6	110	9.62	9.9	103	7	72-112/16
78-11-5	PETN	1.9	U	48.1	50.5	105	48.1	51.7	108	2	73-145/18

CAS No.	Surrogate Recoveries	MS	MSD	FA55941-5	Limits
610-39-9	3,4-Dinitrotoluene	89%	89%	87%	70-136%

* = Outside of Control Limits.

Surrogate Recovery Summary

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Method: SW846 8330A **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
FA55914-2	BB060357.D	88
FA55914-9	BB060358.D	94
OP71008-BS	BB060343.D	91
OP71008-MB	BB060342.D	87
OP71008-MS	BB060355.D	89
OP71008-MSD	BB060356.D	89

Surrogate Compounds	Recovery Limits
S1 = 3,4-Dinitrotoluene	70-136%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Check Std:	GBB1754-CC1748	**Injection Date:**	07/24/18
Lab File ID:	BB060341.D	**Injection Time:**	12:57
Instrument ID:	GCBB	**Method:**	SW846 8330A

	S1 [a] **RT**
Check Std	10.78

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
OP71008-MB	BB060342.D	07/24/18	13:47	10.76
OP71008-BS	BB060343.D	07/24/18	14:17	10.77
ZZZZZZ	BB060344.D	07/24/18	14:47	10.76
ZZZZZZ	BB060345.D	07/24/18	15:17	10.76
ZZZZZZ	BB060346.D	07/24/18	15:47	10.77
ZZZZZZ	BB060347.D	07/24/18	16:17	10.80
FA55941-5	BB060348.D	07/24/18	16:47	10.75
ZZZZZZ	BB060349.D	07/24/18	17:17	10.79
ZZZZZZ	BB060350.D	07/24/18	17:47	10.80
ZZZZZZ	BB060351.D	07/24/18	18:17	10.80

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Check Std:	GBB1754-CC1748	**Injection Date:**	07/24/18
Lab File ID:	BB060352.D	**Injection Time:**	18:47
Instrument ID:	GCBB	**Method:**	SW846 8330A

	S1 [a] RT	S1 [b] RT
Check Std	10.78	10.78

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB060354.D	07/24/18	19:47		10.77
OP71008-MS	BB060355.D	07/24/18	20:17		10.75
OP71008-MSD	BB060356.D	07/24/18	20:47		10.74
FA55914-2	BB060357.D	07/24/18	21:17		10.73
FA55914-9	BB060358.D	07/24/18	21:46		10.72
GBB1754-ECC1748	BB060359.D	07/24/18	22:16	10.74	10.74

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

Initial Calibration Summary

Job Number: FA55914 **Sample:** GBB1748-ICC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060205.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Response Factor Report G1315B

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Initial Calibration

Calibration Files
20 =BB060200.D 50 =BB060201.D 100 =BB060202.D 200 =BB060203.D
500 =BB060204.D 1000=BB060205.D 2000=BB060206.D

	Compound	20	50	100	200	500	1000	2000	Avg	%RSD
1)	TNX	5.295	5.051	4.969	5.069	5.080	5.067	5.053	5.083 E3	1.98
2)	HMX	2.484	2.057	1.890	1.838	1.733	1.747	1.742	1.927 E3	14.06
3)	DNX	3.927	3.622	2.937	2.775	2.576	2.600	2.628	3.009 E3	18.09
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 2600.86703 *A + 0.01241 *A^2									
4)	MNX	3.466	2.711	3.128	2.801	2.713	2.681	2.679	2.883 E3	10.48
5)	RDX	2.297	2.322	1.865	1.972	2.053	1.965	1.960	2.062 E3	8.63
6)	1,3,5-Trinitroben	6.046	4.471	3.918	4.301	4.303	4.294	4.257	4.513 E3	15.43
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 4317.79032 *A + -0.03008 *A^2									
7)	1,3-Dinitrobenzen	6.788	5.975	5.491	5.524	5.575	5.535	5.519	5.772 E3	8.29
8)	3,5-Dinitroanilin	6.758	4.775	4.938	4.827	4.725	4.629	4.667	5.046 E3	15.10
	---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000									
	Response Ratio = 0.00000 + 4672.73046 *A + -0.00479 *A^2									
9)	Nitrobenzene	4.849	3.909	3.358	3.652	3.505	3.385	3.399	3.722 E3	14.33
10)	Nitroglycerin								0.000	-1.00
11)	Tetryl	2.648	3.342	2.989	2.741	2.671	2.570	2.549	2.787 E3	10.23
12)	2,4,6-Trinitrotol	5.074	3.801	3.556	3.503	3.527	3.401	3.371	3.748 E3	16.05
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 3493.30846 *A + -0.06229 *A^2									
13)	2-Amino-4,6-Dinit	4.336	4.347	3.690	3.820	3.721	3.651	3.655	3.889 E3	8.09
14)	4-Amino-2,6-Dinit	2.789	3.023	2.450	2.614	2.701	2.556	2.541	2.668 E3	7.20
15)S	3,4-Dinitrotoluen	3.656	3.489	2.435	2.599	2.653	2.562	2.558	2.850 E3	17.55
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998									
	Response Ratio = 0.00000 + 2611.53715 *A + -0.02783 *A^2									
16)	2,4-Dinitrotoluen	6.845	5.928	4.990	5.145	5.249	5.046	5.030	5.462 E3	12.63
17)	2,6-Dinitrotoluen	5.453	3.245	3.017	2.989	3.142	3.109	3.067	3.432 E3	26.09
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 3142.71234 *A + -0.03778 *A^2									
18)	o-Nitrotoluene	1.847	2.623	2.737	2.326	2.401	2.354	2.351	2.377 E3	11.83
19)	p-Nitrotoluene	3.980	4.501	3.946	3.740	3.750	3.781	3.805	3.929 E3	6.85
20)	m-Nitrotoluene	7.319	5.252	4.193	3.746	3.633	3.465	3.561	4.453 E3	31.58
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997									
	Response Ratio = 0.00000 + 3528.47663 *A + 0.01265 *A^2									
21)	PETN								0.000	-1.00

Signal #2

1)	TNX	8.181	7.928	7.721	7.945	7.868	7.812	7.724	7.883 E3	2.01
2)	HMX	5.227	7.103	5.019	5.432	4.864	4.810	4.875	5.333 E3	15.22

8.6.1

8

Initial Calibration Summary

Job Number: FA55914 **Sample:** GBB1748-ICC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060205.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

```
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9997
               Response Ratio = 0.00000 + 4861.72975 *A + 0.00342 *A^2

 3)  DNX               5.026 5.117 4.322 4.702 4.164 4.210 4.225 4.538 E3   8.96
 4)  MNX               5.295 4.049 4.174 4.122 4.172 4.205 4.149 4.309 E3  10.15
 5)  RDX               4.300 3.451 3.289 3.373 3.179 3.162 3.128 3.412 E3  12.00
 6)  1,3,5-Trinitroben 9.403 8.377 8.009 8.039 8.183 8.184 8.206 8.343 E3   5.79
 7)  1,3-Dinitrobenzen 7.071 4.624 4.056 3.703 3.934 3.857 3.751 4.428 E3  27.22
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
               Response Ratio = 0.00000 + 3961.91891 *A + -0.10522 *A^2

 8)  3,5-Dinitroanilin 1.225 0.822 0.844 0.831 0.799 0.779 0.792 0.870 E4  18.17
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
               Response Ratio = 0.00000 + 7857.34507 *A + 0.02741 *A^2

 9)  Nitrobenzene      5.654 3.892 3.296 3.386 3.370 3.206 3.258 3.723 E3  23.68
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
               Response Ratio = 0.00000 + 3267.05430 *A + -0.00707 *A^2

10)  Nitroglycerin     1.394 1.334 1.256 1.270 1.303 1.288 1.287 1.304 E3   3.56
11)  Tetryl            7.190 3.467 3.958 3.796 4.008 4.001 4.075 4.356 E3  29.07
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
               Response Ratio = 0.00000 + 3934.44421 *A + 0.07034 *A^2

12)  2,4,6-Trinitrotol 6.385 3.801 3.631 3.908 3.988 4.071 4.086 4.267 E3  22.20
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
               Response Ratio = 0.00000 + 3999.71030 *A + 0.04469 *A^2

13)  2-Amino-4,6-Dinit 5.904 4.281 4.606 4.707 5.266 5.325 5.484 5.082 E3  11.19
14)  4-Amino-2,6-Dinit 5.187 3.451 3.951 4.505 5.057 5.059 5.266 4.639 E3  15.11
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
               Response Ratio = 0.00000 + 4833.55467 *A + 0.21739 *A^2

15)S 3,4-Dinitrotoluen 4.178 3.553 3.371 3.694 4.020 4.299 4.527 3.949 E3  10.69
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
               Response Ratio = 0.00000 + 3941.90916 *A + 0.29547 *A^2

16)  2,4-Dinitrotoluen 2.226 2.919 3.150 2.810 3.034 3.053 3.104 2.900 E3  10.98
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
               Response Ratio = 0.00000 + 2989.77647 *A + 0.05753 *A^2

17)  2,6-Dinitrotoluen 5.506 4.092 4.121 3.576 3.819 3.923 4.035 4.153 E3  15.06
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
               Response Ratio = 0.00000 + 3777.35270 *A + 0.12957 *A^2

18)  o-Nitrotoluene          2.638 3.639 3.081 3.407 3.313 3.270 3.225 E3  10.56
19)  p-Nitrotoluene          3.923 3.943 3.298 3.414 3.193 3.228 3.500 E3   9.82
20)  m-Nitrotoluene          3.679 2.948 3.257 3.943 3.889 3.959 3.613 E3  11.59
21)  PETN             1.548 1.393 1.410 1.425 1.427 1.415 1.429 1.435 E3   3.58
-------------------------------------------------------------------------------
(#) = Out of Range

          8330B_0707PLUS.M        Mon Jul 09 11:02:38 2018
```

8.6.1

8

Initial Calibration Verification

Job Number: FA55914 **Sample:** GBB1748-ICV1748
Account: EAENYS EA Engineering **Lab FileID:** BB060207.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On    : 06-Jul-2018, 19:02:56                    Operator: kismetl
Sample    : icv1748-1000                             Inst    : G1315B
Misc      :                                          Multiplr: 1.00
IntFile Signal #1: events.e     IntFile Signal #2: events2.e

Method       : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title        : Explosives by 8330A,8330B,8332
Last Update  : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  15%     Max. Rel. Area : 200%
```

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	888.280	11.2	89	0.00	1.10- 1.70
2	HMX	1000.000	1043.978	-4.4	115	0.00	1.24- 1.84
		Amount	Calc.	%Drift			
3	DNX	1000.000	965.091	3.5	97	0.00	1.49- 2.09
		Amount	Calc.	%Drift			
4	MNX	1000.000	908.873	9.1	98	0.00	2.09- 2.69
5	RDX	1000.000	1088.039	-8.8	114	0.00	2.62- 3.42
		Amount	Calc.	%Drift			
6	1,3,5-Trinitrobenzene	1000.000	1122.936	-12.3	112	0.00	4.42- 5.22
		Amount	Calc.	%Drift			
7	1,3-Dinitrobenzene	1000.000	1067.478	-6.7	111	0.00	5.65- 6.45
		Amount	Calc.	%Drift			
8	3,5-Dinitroaniline	1000.000	933.611	6.6	94	0.00	6.00- 6.80
		Amount	Calc.	%Drift			
9	Nitrobenzene	1000.000	1003.720	-0.4	110	0.00	7.29- 8.09
10	Nitroglycerin		----------NA----------				
11	Tetryl		----------NA----------				
		Amount	Calc.	%Drift			
12	2,4,6-Trinitrotoluene		----------NA----------				
		Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotoluen		----------NA----------				
14	4-Amino-2,6-Dinitrotoluen		----------NA----------				
		Amount	Calc.	%Drift			
15 S	3,4-Dinitrotoluene		----------NA----------				
		Amount	Calc.	%Drift			
16	2,4-Dinitrotoluene	1000.000	1020.089	-2.0	110	-0.02	11.68-12.48
		Amount	Calc.	%Drift			
17	2,6-Dinitrotoluene		----------NA----------				
		Amount	Calc.	%Drift			

Initial Calibration Verification

Job Number: FA55914 **Sample:** GBB1748-ICV1748
Account: EAENYS EA Engineering **Lab FileID:** BB060207.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

18	o-Nitrotoluene	1000.000	1120.494	-12.0	113	-0.02	15.43-16.30
19	p-Nitrotoluene	1000.000	1066.427	-6.6	111	-0.02	15.91-16.91
		Amount	Calc.	%Drift			
20	m-Nitrotoluene			NA			
		Amount	Calc.	%Drift			
21	PETN			NA			

***** Signal #2 *****

1	TNX	1000.000	881.147	11.9	89	0.00	1.10- 1.70
		Amount	Calc.	%Drift			
2	HMX	1000.000	1137.187	-13.7	115	0.00	1.24- 1.84
		Amount	Calc.	%Drift			
3	DNX	1000.000	889.408	11.1	96	0.00	1.49- 2.09
4	MNX	1000.000	939.824	6.0	96	0.00	2.09- 2.69
5	RDX	1000.000	1056.691	-5.7	114	0.00	2.62- 3.42
6	1,3,5-Trinitrobenzene	1000.000	1101.772	-10.2	112	0.00	4.42- 5.22
		Amount	Calc.	%Drift			
7	1,3-Dinitrobenzene	1000.000	1117.069	-11.7	111	0.00	5.65- 6.45
8	3,5-Dinitroaniline	1000.000	945.674	5.4	96	0.00	6.00- 6.80
9	Nitrobenzene	1000.000	1112.210	-11.2	113	-0.01	7.29- 8.09
		Amount	Calc.	%Drift			
10	Nitroglycerin	5000.000	4813.802	3.7	97	0.00	8.53- 9.53
		Amount	Calc.	%Drift			
11	Tetryl			NA			
12	2,4,6-Trinitrotoluene			NA			
		Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotoluen			NA			
		Amount	Calc.	%Drift			
14	4-Amino-2,6-Dinitrotoluen			NA			
15 S	3,4-Dinitrotoluene			NA			
16	2,4-Dinitrotoluene	1000.000	1133.416	-13.3	113	-0.02	11.68-12.48
17	2,6-Dinitrotoluene			NA			
		Amount	Calc.	%Drift			
18	o-Nitrotoluene	1000.000	1116.301	-11.6	109	-0.01	15.30-16.30
19	p-Nitrotoluene	1000.000	1019.236	-1.9	112	-0.02	15.91-16.91
20	m-Nitrotoluene			NA			
21	PETN	5000.000	5002.949	-0.1	101	0.00	18.30-19.50

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB060205.D 8330B_0707PLUS.M Mon Jul 09 11:17:48 2018

Initial Calibration Verification

Job Number: FA55914 **Sample:** GBB1748-ICV1748
Account: EAENYS EA Engineering **Lab FileID:** BB060208.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1A.ch
Acq On : 06-Jul-2018, 19:32:55 Operator: kismetl
Sample : icv1748-1000 spk Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX		----------NA----------				
2	HMX		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
3	DNX		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
4	MNX		----------NA----------				
5	RDX		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
6	1,3,5-Trinitrobenzene		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
7	1,3-Dinitrobenzene		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
8	3,5-Dinitroaniline		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
9	Nitrobenzene		----------NA----------				
10	Nitroglycerin		----------NA----------				
11	Tetryl	1000.000	982.234	1.8	107	0.00	9.15- 9.95
	----------	Amount	Calc.	%Drift	----------		
12	2,4,6-Trinitrotoluene	1000.000	1000.138	-0.0	101	0.00	9.63-10.43
	----------	Amount	Calc.	%Drift	----------		
13	2-Amino-4,6-Dinitrotol	1000.000	913.856	8.6	97	0.00	10.03-10.83
14	4-Amino-2,6-Dinitrotol	1000.000	994.624	0.5	104	0.00	10.52-11.32
	----------	Amount	Calc.	%Drift	----------		
15 S	3,4-Dinitrotoluene		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
16	2,4-Dinitrotoluene		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
17	2,6-Dinitrotoluene	1000.000	958.888	4.1	96	-0.02	12.12-12.92
	----------	Amount	Calc.	%Drift	----------		

Initial Calibration Verification

Job Number: FA55914 **Sample:** GBB1748-ICV1748
Account: EAENYS EA Engineering **Lab FileID:** BB060208.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

18	o-Nitrotoluene		----------NA----------				
19	p-Nitrotoluene		----------NA----------				
		Amount	Calc.	%Drift			
20	m-Nitrotoluene	1000.000	956.540	4.3	98	0.00	16.88-17.88
		Amount	Calc.	%Drift			
21	PETN		----------NA----------				
*****	Signal #2 *****						
1	TNX		----------NA----------				
		Amount	Calc.	%Drift			
2	HMX		----------NA----------				
		Amount	Calc.	%Drift			
3	DNX		----------NA----------				
4	MNX		----------NA----------				
5	RDX		----------NA----------				
6	1,3,5-Trinitrobenzene		----------NA----------				
		Amount	Calc.	%Drift			
7	1,3-Dinitrobenzene		----------NA----------				
8	3,5-Dinitroaniline		----------NA----------				
9	Nitrobenzene		----------NA----------				
		Amount	Calc.	%Drift			
10	Nitroglycerin		----------NA----------				
		Amount	Calc.	%Drift			
11	Tetryl	1000.000	1095.709	-9.6	110	0.00	9.15- 9.95
12	2,4,6-Trinitrotoluene	1000.000	1053.616	-5.4	105	0.00	9.63-10.43
		Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotol	1000.000	1033.000	-3.3	99	0.00	10.04-10.84
		Amount	Calc.	%Drift			
14	4-Amino-2,6-Dinitrotol	1000.000	1058.821	-5.9	106	0.00	10.53-11.33
15 S	3,4-Dinitrotoluene		----------NA----------				
16	2,4-Dinitrotoluene		----------NA----------				
17	2,6-Dinitrotoluene	1000.000	1024.395	-2.4	102	0.00	12.13-12.93
		Amount	Calc.	%Drift			
18	o-Nitrotoluene		----------NA----------				
19	p-Nitrotoluene		----------NA----------				
20	m-Nitrotoluene	1000.000	1002.550	-0.3	93	0.00	16.88-17.88
21	PETN		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB060205.D 8330B_0707PLUS.M Mon Jul 09 11:16:37 2018

8.6.3

8

Continuing Calibration Summary

Job Number: FA55914 **Sample:** GBB1754-CC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060341.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1A.ch
Acq On : 24-Jul-2018, 12:57:10 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	960.319	4.0	96	0.00	0.98- 1.58
2	HMX	1000.000	890.253	11.0	98	0.00	1.11- 1.71
	----------	Amount	Calc.	%Drift	----------		
3	DNX	1000.000	944.348	5.6	95	0.00	1.34- 1.94
	----------	Amount	Calc.	%Drift	----------		
4	MNX	1000.000	907.491	9.3	98	0.00	1.90- 2.50
5	RDX	1000.000	956.597	4.3	100	0.00	2.39- 3.19
	----------	Amount	Calc.	%Drift	----------		
6	1,3,5-Trinitrobenzene	1000.000	986.871	1.3	99	0.02	4.15- 4.95
	----------	Amount	Calc.	%Drift	----------		
7	1,3-Dinitrobenzene	1000.000	932.790	6.7	97	0.00	5.33- 6.13
	----------	Amount	Calc.	%Drift	----------		
8	3,5-Dinitroaniline	1000.000	983.267	1.7	99	0.00	5.63- 6.43
	----------	Amount	Calc.	%Drift	----------		
9	Nitrobenzene	1000.000	887.332	11.3	98	0.00	6.86- 7.66
10	Nitroglycerin	----------NA----------					
11	Tetryl	1000.000	849.565	15.0#	92	0.00	8.70- 9.50
	----------	Amount	Calc.	%Drift	----------		
12	2,4,6-Trinitrotoluene	1000.000	963.911	3.6	97	0.00	9.18- 9.98
	----------	Amount	Calc.	%Drift	----------		
13	2-Amino-4,6-Dinitrotol	1000.000	933.911	6.6	99	0.00	9.37-10.17
14	4-Amino-2,6-Dinitrotol	1000.000	993.861	0.6	104	0.00	9.84-10.64
	----------	Amount	Calc.	%Drift	----------		
15 S	3,4-Dinitrotoluene	1000.000	958.440	4.2	97	0.00	10.38-11.18
	----------	Amount	Calc.	%Drift	----------		
16	2,4-Dinitrotoluene	1000.000	920.747	7.9	100	0.00	11.05-11.85
	----------	Amount	Calc.	%Drift	----------		
17	2,6-Dinitrotoluene	1000.000	991.293	0.9	99	0.00	11.48-12.28
	----------	Amount	Calc.	%Drift	----------		

Continuing Calibration Summary

Job Number: FA55914 **Sample:** GBB1754-CC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060341.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

18	o-Nitrotoluene	1000.000	955.729	4.4	97	0.00	14.72-15.60
19	p-Nitrotoluene	1000.000	929.653	7.0	97	0.00	15.20-16.20
		Amount	Calc.	%Drift			
20	m-Nitrotoluene	1000.000	965.078	3.5	99	0.00	16.18-17.18
		Amount	Calc.	%Drift			
21	PETN		----------NA----------				
*****	Signal #2 *****						
1	TNX	1000.000	951.681	4.8	96	0.00	0.98- 1.58
		Amount	Calc.	%Drift			
2	HMX	1000.000	968.803	3.1	98	0.00	1.11- 1.71
		Amount	Calc.	%Drift			
3	DNX	1000.000	871.074	12.9	94	0.00	1.34- 1.94
4	MNX	1000.000	948.521	5.1	97	0.00	1.90- 2.50
5	RDX	1000.000	916.228	8.4	99	0.00	2.39- 3.19
6	1,3,5-Trinitrobenzene	1000.000	984.246	1.6	100	0.00	4.17- 4.97
		Amount	Calc.	%Drift			
7	1,3-Dinitrobenzene	1000.000	961.393	3.9	96	0.00	5.33- 6.13
8	3,5-Dinitroaniline	1000.000	984.138	1.6	100	0.00	5.63- 6.43
9	Nitrobenzene	1000.000	992.060	0.8	101	0.00	6.86- 7.66
		Amount	Calc.	%Drift			
10	Nitroglycerin	5000.000	4789.376	4.2	97	0.00	8.18- 9.18
		Amount	Calc.	%Drift			
11	Tetryl	1000.000	958.424	4.2	96	0.00	8.70- 9.50
12	2,4,6-Trinitrotoluene	1000.000	916.522	8.3	91	0.00	9.18- 9.98
		Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotol	1000.000	1130.780	-13.1	108	0.00	9.38-10.18
		Amount	Calc.	%Drift			
14	4-Amino-2,6-Dinitrotol	1000.000	1033.139	-3.3	103	0.00	9.85-10.65
15 S	3,4-Dinitrotoluene	1000.000	983.923	1.6	97	0.00	10.37-11.17
16	2,4-Dinitrotoluene	1000.000	1003.802	-0.4	100	0.00	11.05-11.85
17	2,6-Dinitrotoluene	1000.000	966.094	3.4	96	0.00	11.48-12.28
		Amount	Calc.	%Drift			
18	o-Nitrotoluene	1000.000	1011.688	-1.2	98	0.00	14.60-15.60
19	p-Nitrotoluene	1000.000	901.434	9.9	99	0.00	15.21-16.21
20	m-Nitrotoluene	1000.000	1065.038	-6.5	99	0.00	16.18-17.18
21	PETN	5000.000	4780.845	4.4	97	0.00	18.14-19.34

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB060205.D 8330B_0707PLUS.M Thu Jul 26 16:01:31 2018

Continuing Calibration Summary

Job Number: FA55914 **Sample:** GBB1754-CC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060352.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060352.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060352.D\dad1A.ch
Acq On : 24-Jul-2018, 18:47:13 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	959.528	4.0	96	0.00	0.98- 1.58
2	HMX	1000.000	898.317	10.2	99	0.00	1.11- 1.71
	---------- Amount	Calc.	%Drift	----------			
3	DNX	1000.000	947.733	5.2	95	0.00	1.34- 1.94
	---------- Amount	Calc.	%Drift	----------			
4	MNX	1000.000	907.579	9.2	98	0.00	1.90- 2.50
5	RDX	1000.000	939.668	6.0	99	0.01	2.39- 3.19
	---------- Amount	Calc.	%Drift	----------			
6	1,3,5-Trinitrobenzene	1000.000	983.233	1.7	98	0.02	4.15- 4.95
	---------- Amount	Calc.	%Drift	----------			
7	1,3-Dinitrobenzene	1000.000	921.887	7.8	96	0.00	5.33- 6.13
	---------- Amount	Calc.	%Drift	----------			
8	3,5-Dinitroaniline	1000.000	984.677	1.5	99	0.00	5.63- 6.43
	---------- Amount	Calc.	%Drift	----------			
9	Nitrobenzene	1000.000	891.106	10.9	98	0.00	6.86- 7.66
10	Nitroglycerin	----------NA----------					
11	Tetryl	1000.000	850.923	14.9	92	0.00	8.70- 9.50
	---------- Amount	Calc.	%Drift	----------			
12	2,4,6-Trinitrotoluene	1000.000	946.934	5.3	96	0.00	9.18- 9.98
	---------- Amount	Calc.	%Drift	----------			
13	2-Amino-4,6-Dinitrotol	1000.000	922.666	7.7	98	-0.01	9.37-10.17
14	4-Amino-2,6-Dinitrotol	1000.000	1012.048	-1.2	106	0.01	9.84-10.64
	---------- Amount	Calc.	%Drift	----------			
15 S	3,4-Dinitrotoluene	1000.000	935.436	6.5	94	0.00	10.38-11.18
	---------- Amount	Calc.	%Drift	----------			
16	2,4-Dinitrotoluene	1000.000	897.118	10.3	97	0.00	11.05-11.85
	---------- Amount	Calc.	%Drift	----------			
17	2,6-Dinitrotoluene	1000.000	966.580	3.3	97	0.00	11.48-12.28
	---------- Amount	Calc.	%Drift	----------			

Continuing Calibration Summary

Job Number: FA55914 **Sample:** GBB1754-CC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060352.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

18	o-Nitrotoluene	1000.000	994.805	0.5	100	0.00	14.72-15.60
19	p-Nitrotoluene	1000.000	955.489	4.5	99	0.00	15.20-16.20
		Amount	Calc.	%Drift			
20	m-Nitrotoluene	1000.000	980.213	2.0	100	0.00	16.18-17.18
		Amount	Calc.	%Drift			
21	PETN		----------NA----------				
*****	Signal #2 *****						
1	TNX	1000.000	959.927	4.0	97	0.00	0.98- 1.58
		Amount	Calc.	%Drift			
2	HMX	1000.000	994.172	0.6	101	0.00	1.11- 1.71
		Amount	Calc.	%Drift			
3	DNX	1000.000	890.252	11.0	96	0.00	1.34- 1.94
4	MNX	1000.000	941.083	5.9	96	0.00	1.90- 2.50
5	RDX	1000.000	905.750	9.4	98	0.01	2.39- 3.19
6	1,3,5-Trinitrobenzene	1000.000	982.582	1.7	100	0.00	4.17- 4.97
		Amount	Calc.	%Drift			
7	1,3-Dinitrobenzene	1000.000	951.313	4.9	95	0.00	5.33- 6.13
8	3,5-Dinitroaniline	1000.000	1001.058	-0.1	101	0.00	5.63- 6.43
9	Nitrobenzene	1000.000	967.175	3.3	98	0.00	6.86- 7.66
		Amount	Calc.	%Drift			
10	Nitroglycerin	5000.000	4706.718	5.9	95	0.00	8.18- 9.18
		Amount	Calc.	%Drift			
11	Tetryl	1000.000	952.021	4.8	95	0.00	8.70- 9.50
12	2,4,6-Trinitrotoluene	1000.000	924.267	7.6	92	0.06	9.18- 9.98
		Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotol	1000.000	1085.446	-8.5	104	0.00	9.38-10.18
		Amount	Calc.	%Drift			
14	4-Amino-2,6-Dinitrotol	1000.000	1041.744	-4.2	104	0.00	9.85-10.65
15 S	3,4-Dinitrotoluene	1000.000	982.378	1.8	97	0.00	10.37-11.17
16	2,4-Dinitrotoluene	1000.000	991.588	0.8	99	0.00	11.05-11.85
17	2,6-Dinitrotoluene	1000.000	969.987	3.0	97	0.00	11.48-12.28
		Amount	Calc.	%Drift			
18	o-Nitrotoluene	1000.000	960.838	3.9	94	0.00	14.60-15.60
19	p-Nitrotoluene	1000.000	906.543	9.3	99	0.00	15.21-16.21
20	m-Nitrotoluene	1000.000	1032.327	-3.2	96	0.00	16.18-17.18
21	PETN	5000.000	4724.808	5.5	96	0.00	18.14-19.34

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB060205.D 8330B_0707PLUS.M Thu Jul 26 16:01:32 2018

8.6.5

Continuing Calibration Summary

Job Number: FA55914 **Sample:** GBB1754-ECC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060359.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060359.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060359.D\dad1A.ch
Acq On : 24-Jul-2018, 22:16:59 Operator: williamh
Sample : ecc1748-1000 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	951.351	4.9	95	0.00	0.98- 1.58
2	HMX	1000.000	881.588	11.8	97	0.00	1.11- 1.71
	----------	Amount	Calc.	%Drift	----------		
3	DNX	1000.000	935.357	6.5	94	0.00	1.34- 1.94
	----------	Amount	Calc.	%Drift	----------		
4	MNX	1000.000	895.247	10.5	96	0.00	1.90- 2.50
5	RDX	1000.000	923.223	7.7	97	0.00	2.39- 3.19
	----------	Amount	Calc.	%Drift	----------		
6	1,3,5-Trinitrobenzene	1000.000	953.045	4.7	95	0.00	4.15- 4.95
	----------	Amount	Calc.	%Drift	----------		
7	1,3-Dinitrobenzene	1000.000	919.696	8.0	96	0.00	5.33- 6.13
	----------	Amount	Calc.	%Drift	----------		
8	3,5-Dinitroaniline	1000.000	982.406	1.8	99	0.00	5.63- 6.43
	----------	Amount	Calc.	%Drift	----------		
9	Nitrobenzene	1000.000	893.547	10.6	98	-0.01	6.86- 7.66
10	Nitroglycerin	----------NA----------					
11	Tetryl	1000.000	829.181	17.1#	90	-0.02	8.70- 9.50
	----------	Amount	Calc.	%Drift	----------		
12	2,4,6-Trinitrotoluene	1000.000	958.623	4.1	97	-0.03	9.18- 9.98
	----------	Amount	Calc.	%Drift	----------		
13	2-Amino-4,6-Dinitrotol	1000.000	907.318	9.3	97	-0.03	9.37-10.17
14	4-Amino-2,6-Dinitrotol	1000.000	999.676	0.0	104	-0.02	9.84-10.64
	----------	Amount	Calc.	%Drift	----------		
15 S	3,4-Dinitrotoluene	1000.000	954.864	4.5	96	-0.03	10.38-11.18
	----------	Amount	Calc.	%Drift	----------		
16	2,4-Dinitrotoluene	1000.000	902.960	9.7	98	-0.03	11.05-11.85
	----------	Amount	Calc.	%Drift	----------		
17	2,6-Dinitrotoluene	1000.000	990.125	1.0	99	-0.04	11.48-12.28
	----------	Amount	Calc.	%Drift	----------		

Continuing Calibration Summary

Job Number: FA55914 **Sample:** GBB1754-ECC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060359.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

18	o-Nitrotoluene	1000.000	972.859	2.7	98	-0.02	14.72-15.60
19	p-Nitrotoluene	1000.000	956.082	4.4	99	-0.03	15.20-16.20
		Amount	Calc.	%Drift			
20	m-Nitrotoluene	1000.000	974.035	2.6	100	-0.03	16.18-17.18
		Amount	Calc.	%Drift			
21	PETN		----------NA----------				
*****	Signal #2 *****						
1	TNX	1000.000	942.322	5.8	95	0.00	0.98- 1.58
		Amount	Calc.	%Drift			
2	HMX	1000.000	962.659	3.7	97	0.00	1.11- 1.71
		Amount	Calc.	%Drift			
3	DNX	1000.000	860.951	13.9	93	0.00	1.34- 1.94
4	MNX	1000.000	936.252	6.4	96	0.00	1.90- 2.50
5	RDX	1000.000	906.201	9.4	98	0.00	2.39- 3.19
6	1,3,5-Trinitrobenzene	1000.000	978.948	2.1	100	0.00	4.17- 4.97
		Amount	Calc.	%Drift			
7	1,3-Dinitrobenzene	1000.000	930.650	6.9	93	-0.01	5.33- 6.13
8	3,5-Dinitroaniline	1000.000	989.539	1.0	100	0.00	5.63- 6.43
9	Nitrobenzene	1000.000	969.376	3.1	99	-0.01	6.86- 7.66
		Amount	Calc.	%Drift			
10	Nitroglycerin	5000.000	4689.528	6.2	95	-0.02	8.18- 9.18
		Amount	Calc.	%Drift			
11	Tetryl	1000.000	947.219	5.3	95	-0.02	8.70- 9.50
12	2,4,6-Trinitrotoluene	1000.000	929.979	7.0	92	-0.02	9.18- 9.98
		Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotol	1000.000	1093.008	-9.3	104	-0.03	9.38-10.18
		Amount	Calc.	%Drift			
14	4-Amino-2,6-Dinitrotol	1000.000	1036.624	-3.7	104	-0.02	9.85-10.65
15 S	3,4-Dinitrotoluene	1000.000	977.576	2.2	96	-0.03	10.37-11.17
16	2,4-Dinitrotoluene	1000.000	994.783	0.5	99	-0.04	11.05-11.85
17	2,6-Dinitrotoluene	1000.000	947.668	5.2	94	-0.03	11.48-12.28
		Amount	Calc.	%Drift			
18	o-Nitrotoluene	1000.000	921.867	7.8	90	-0.02	14.60-15.60
19	p-Nitrotoluene	1000.000	910.191	9.0	100	-0.03	15.21-16.21
20	m-Nitrotoluene	1000.000	1071.543	-7.2	100	-0.03	16.18-17.18
21	PETN	5000.000	4736.427	5.3	96	-0.03	18.14-19.34

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB060205.D 8330B_0707PLUS.M Thu Jul 26 16:01:33 2018

GC/LC Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060357.D\dad1B.ch Vial: 86
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060357.D\dad1A.ch
Acq On : 24-Jul-2018, 21:17:01 Operator: williamh
Sample : FA55914-2 Inst : G1315B
Misc : OP71008,gbb1754,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:28 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.73	10.73	1147999	1977438	441.666	484.080
	Spiked Amount 500.000	Range 70 - 136		Recovery =		88.33%	96.82%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

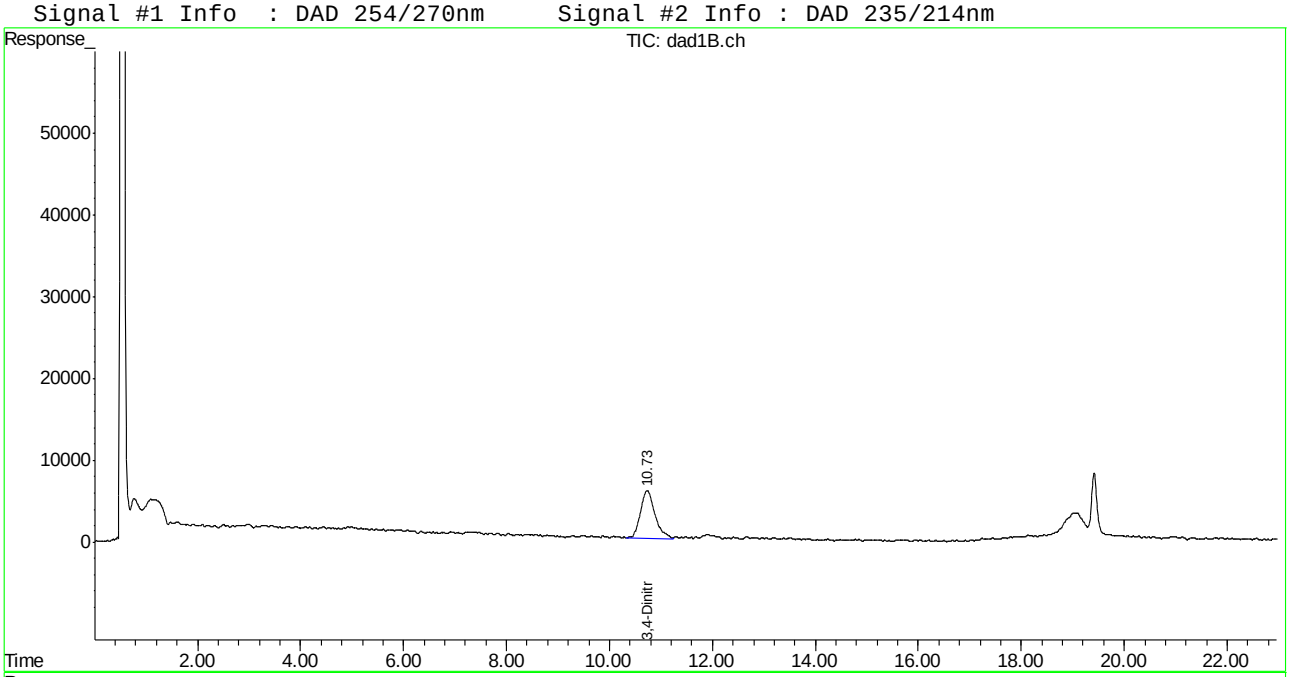
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060357.D 8330B_0707PLUS.M Thu Jul 26 16:02:29 2018 Page 1

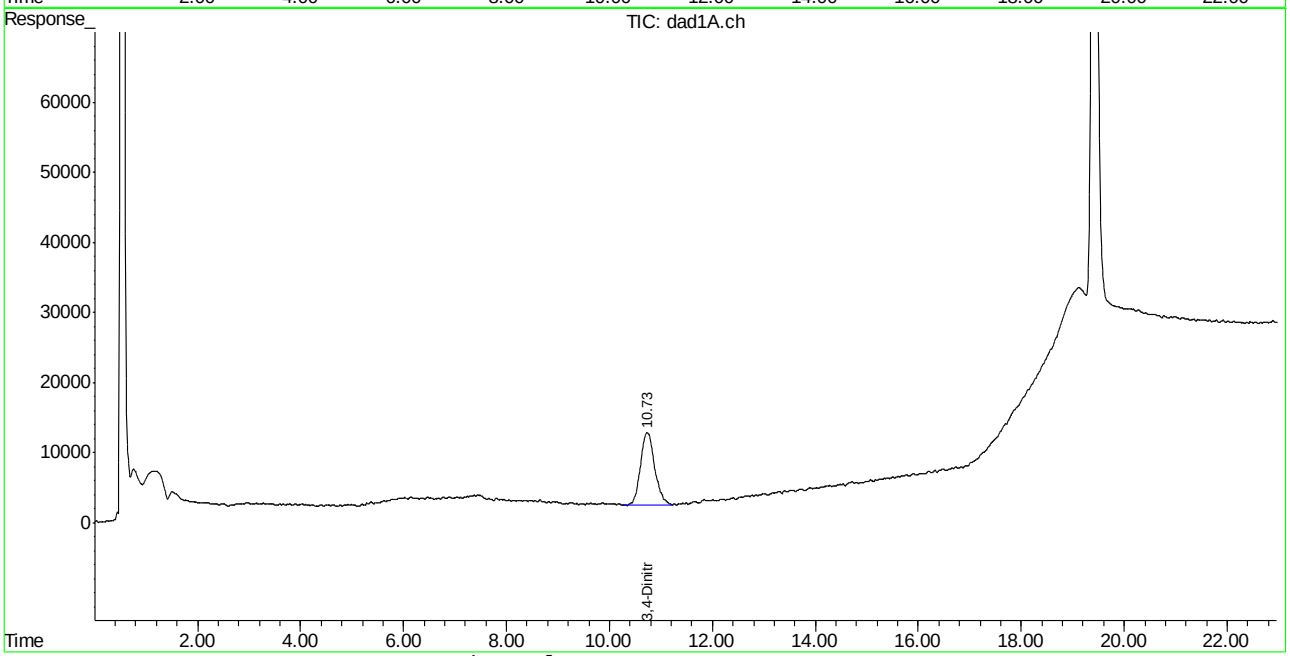
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060357.D\dad1B.ch Vial: 86
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060357.D\dad1A.ch
Acq On : 24-Jul-2018, 21:17:01 Operator: williamh
Sample : FA55914-2 Inst : G1315B
Misc : OP71008,gbb1754,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 16:00 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060358.D\dad1B.ch Vial: 87
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060358.D\dad1A.ch
Acq On : 24-Jul-2018, 21:46:59 Operator: williamh
Sample : FA55914-9 Inst : G1315B
Misc : OP71008,gbb1754,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:29 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.72	10.74	1223690	1961543	470.934	480.320
	Spiked Amount 500.000	Range 70 - 136		Recovery =		94.19%	96.06%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

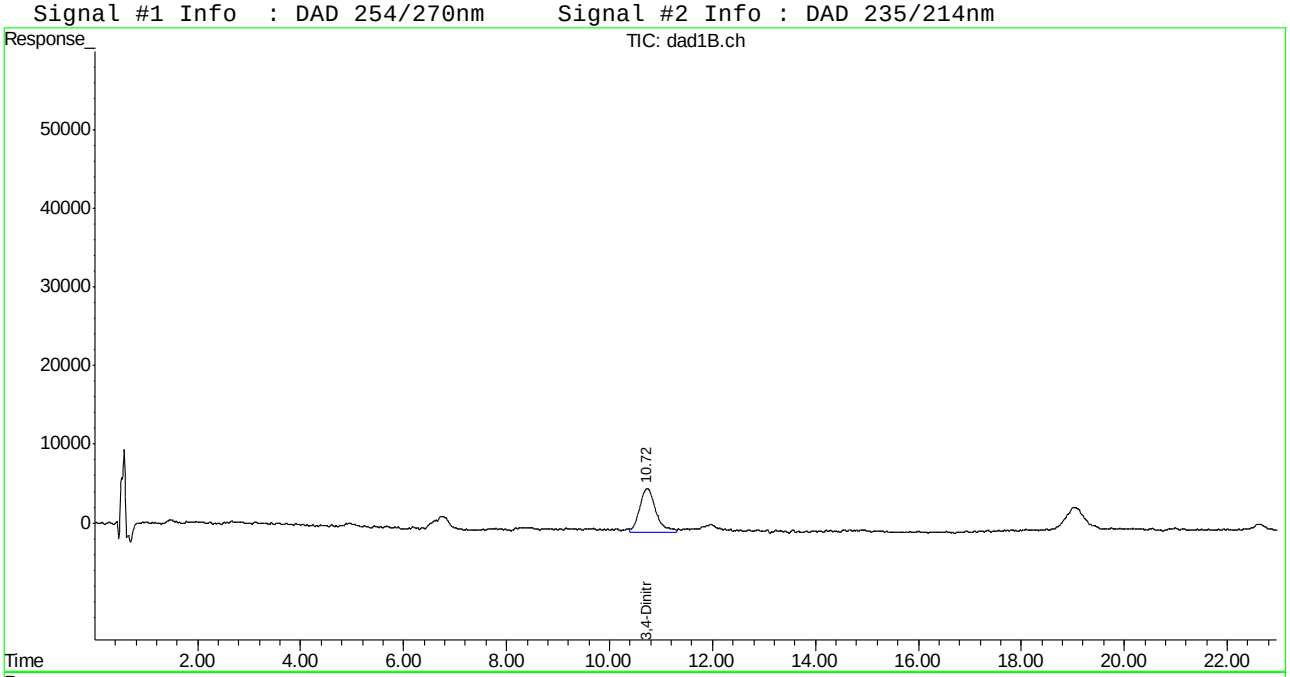
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060358.D 8330B_0707PLUS.M Thu Jul 26 16:02:30 2018 Page 1

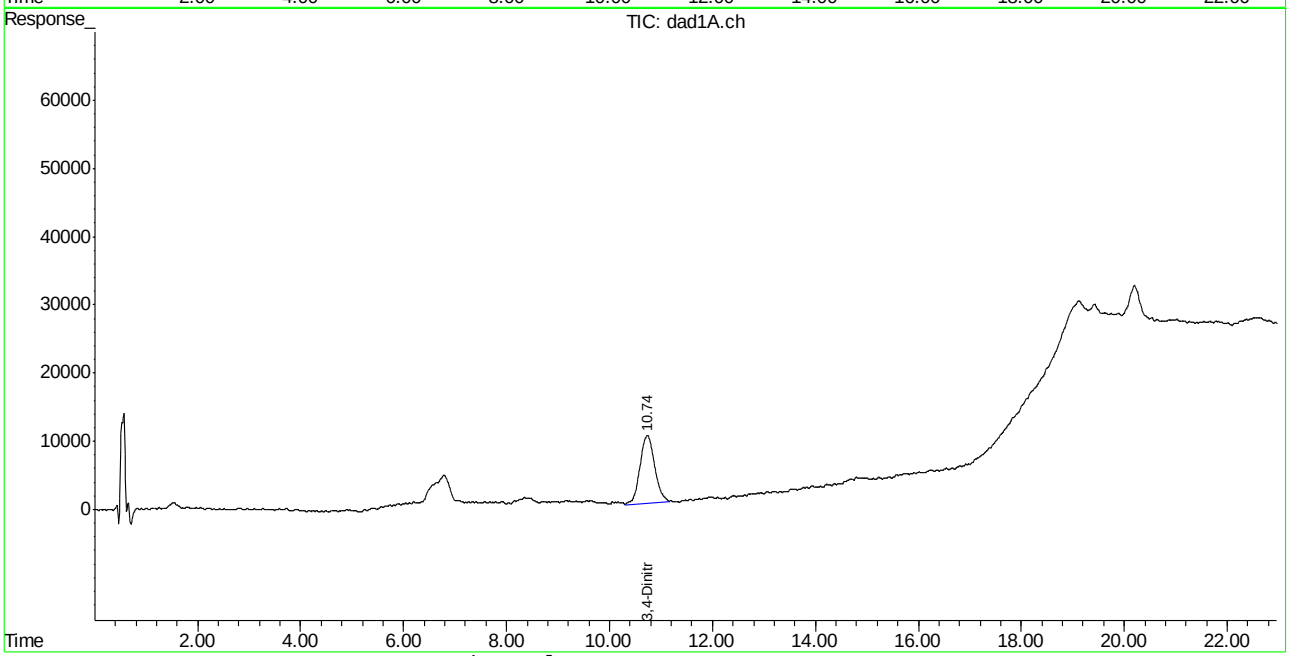
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060358.D\dad1B.ch Vial: 87
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060358.D\dad1A.ch
Acq On : 24-Jul-2018, 21:46:59 Operator: williamh
Sample : FA55914-9 Inst : G1315B
Misc : OP71008,gbb1754,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 16:00 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060342.D\dad1B.ch Vial: 73
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060342.D\dad1A.ch
Acq On : 24-Jul-2018, 13:47:22 Operator: williamh
Sample : op71008-mb Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:13 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.76	10.76	1130654	1906615	434.962	467.310
	Spiked Amount 500.000	Range 70 - 136		Recovery =		86.99%	93.46%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	0.00	0.00	0	0	N.D.	N.D.
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D.	N.D.
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D.	N.D.
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	0.00	0.00	0	0	N.D. d	N.D.

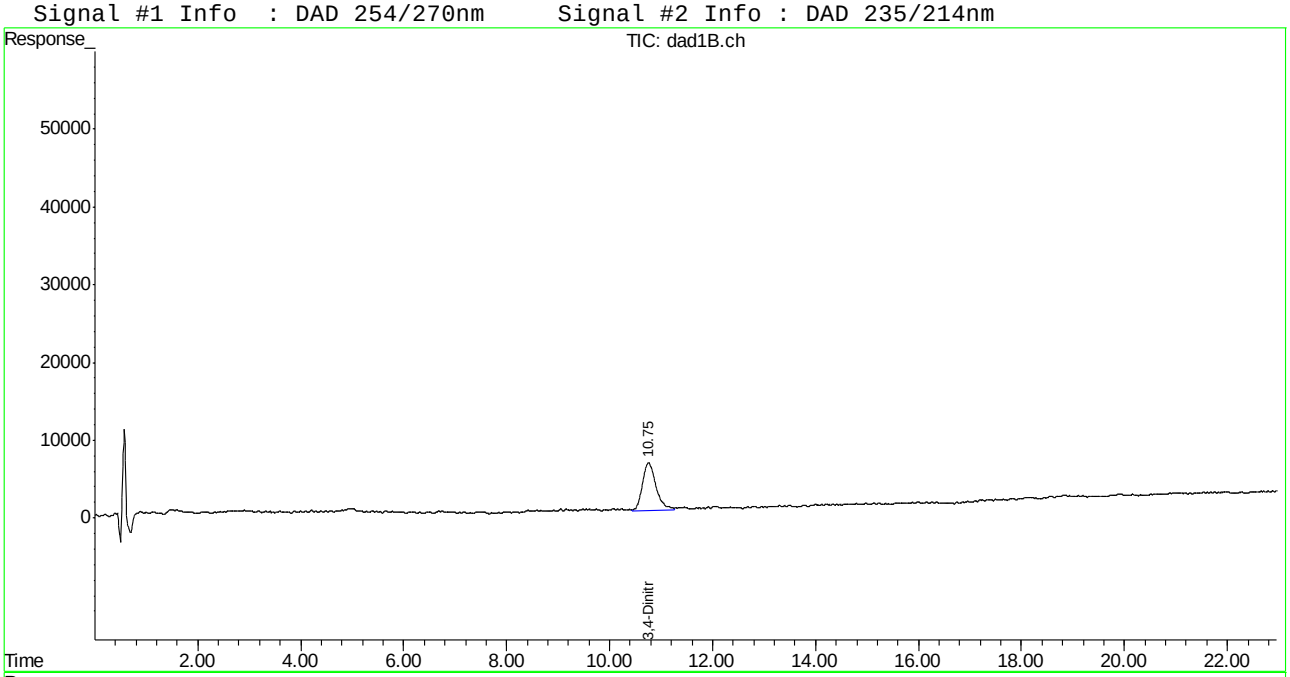
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060342.D 8330B_0707PLUS.M Thu Jul 26 16:02:14 2018 Page 1

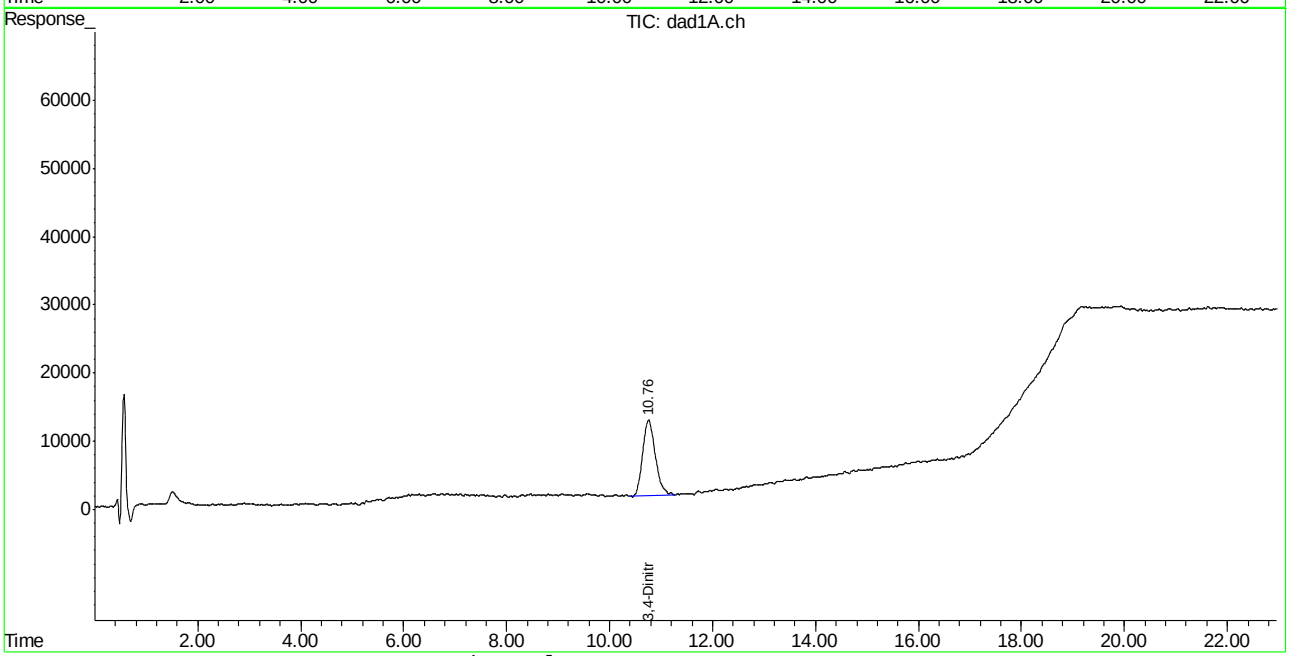
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060342.D\dad1B.ch Vial: 73
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060342.D\dad1A.ch
Acq On : 24-Jul-2018, 13:47:22 Operator: williamh
Sample : op71008-mb Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 15:34 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/27/18 15:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060343.D\dad1B.ch Vial: 74
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060343.D\dad1A.ch
Acq On : 24-Jul-2018, 14:17:23 Operator: williamh
Sample : op71008-BS Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:14 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.77	10.76	1181802	1836563	454.735	450.683
	Spiked Amount 500.000	Range 70 - 136		Recovery =		90.95%	90.14%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.42	1.42	848516	2325516	440.289	478.170
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.79	2.79	1020241	1546252	494.777	453.211
6)	1,3,5-Trinitrobe	4.56	4.56	2048431	4085047	475.995	489.644
7)	1,3-Dinitrobenze	5.73	5.73	2709618	1845140	469.405	471.626
8)	3,5-Dinitroanili	6.02	6.02	2241768	3791632	479.992	481.749
9)	Nitrobenzene	7.25	7.26	1701958	1649228	457.211	505.358
10)	Nitroglycerin	0.00	8.68	0	3401170	N.D. d	2607.282
11)	Tetryl	9.10	9.10	1454068	2299216	521.692	578.400
12)	2,4,6-Trinitroto	9.57	9.60	1859410	2241501	537.428m	556.950
13)	2-Amino-4,6-Dini	9.70	9.75	1687792	2797064	434.031m	550.393
14)	4-Amino-2,6-Dini	10.23	10.23	1348378	2555396	505.470	516.672
16)	2,4-Dinitrotolue	11.43	11.44	2510313	1446121	459.614	479.269
17)	2,6-Dinitrotolue	11.88	11.88	1588243	1852829	508.481	482.523
18)	o-Nitrotoluene	15.08	15.10	1212503	1577946	510.101	489.347m
19)	p-Nitrotoluene	15.69	15.69	1844951	1558909	469.586	445.430
20)	m-Nitrotoluene	16.66	16.66	1726176	1913316	488.358	529.607
21)	PETN	0.00	18.73	0	3917955	N.D.	2729.675m#

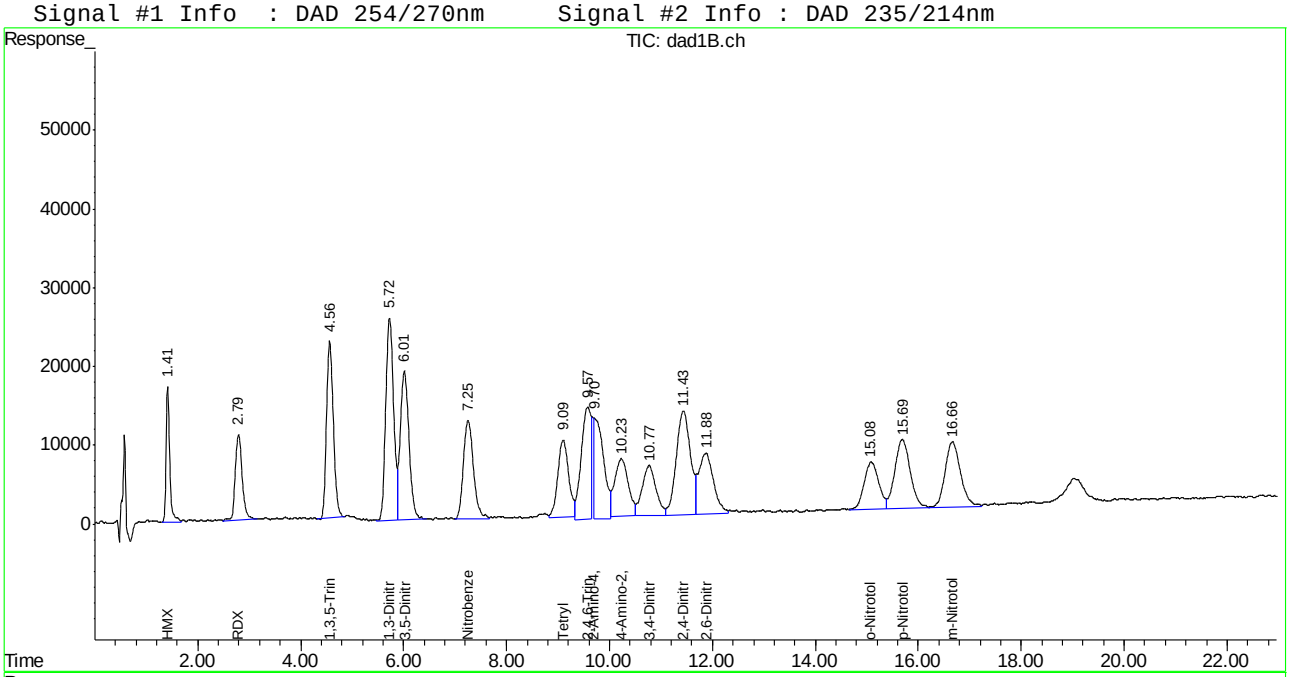
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060343.D 8330B_0707PLUS.M Thu Jul 26 16:02:15 2018 Page 1

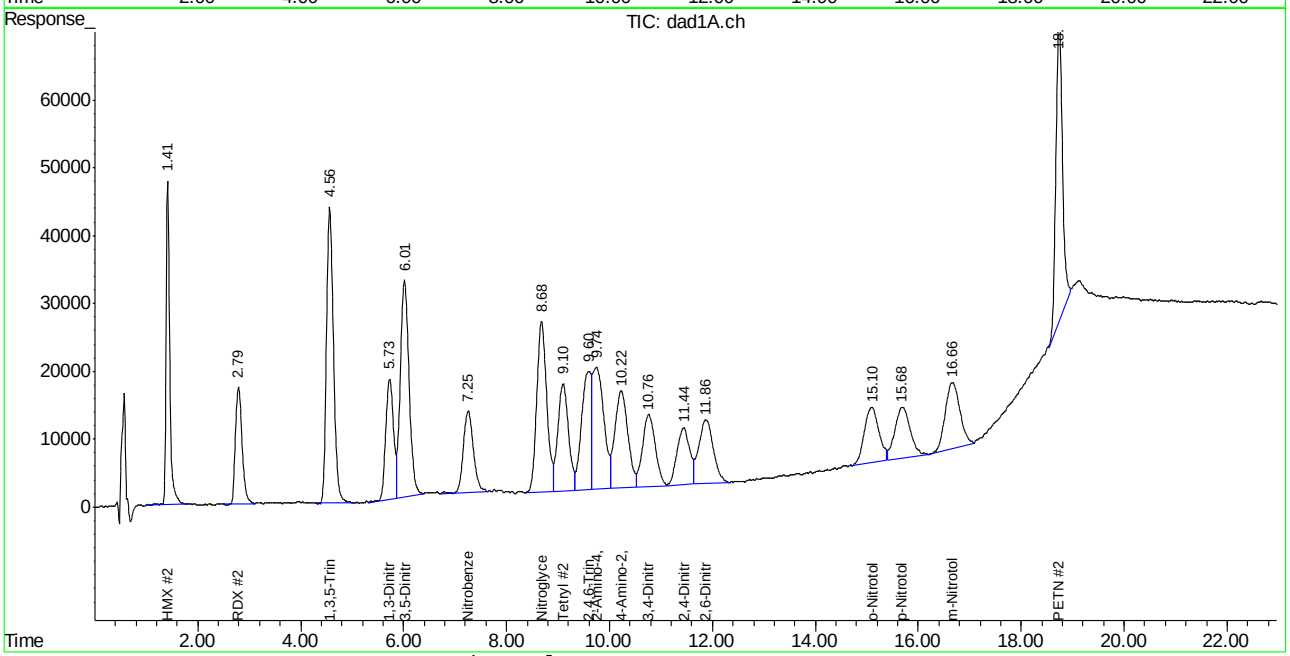
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060343.D\dad1B.ch Vial: 74
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060343.D\dad1A.ch
Acq On : 24-Jul-2018, 14:17:23 Operator: williamh
Sample : op71008-BS Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 15:35 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

Sample Number: OP71008-BS
Lab FileID: BB060343.D
Injection Time: 07/24/18 14:17

Method: SW846 8330A
Analyst approved: 07/26/18 17:05 Mike Eger
Supervisor approved: 07/27/18 15:26 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
2,4,6-Trinitrotoluene	118-96-7	1	9.57	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	9.70	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.10	Poor instrument integration
PETN	78-11-5	2	18.73	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/27/18 15:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060355.D\dad1B.ch Vial: 84
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060355.D\dad1A.ch
Acq On : 24-Jul-2018, 20:17:05 Operator: williamh
Sample : op71008-MS Inst : G1315B
Misc : OP71008,gbb1754,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:26 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.75	10.74	1153828	1800754	443.919	442.168
	Spiked Amount 500.000	Range 70 - 136		Recovery =		88.78%	88.43%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.42	1.42	828970	2286305	430.147	470.110
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.79	2.79	990472	1516812	480.340	444.582
6)	1,3,5-Trinitrobe	4.55	4.55	2089180	3967157	485.496	475.514
7)	1,3-Dinitrobenze	5.72	5.72	2704514	1727713	468.521	441.251
8)	3,5-Dinitroanili	6.01	6.01	2166388	3717076	463.844	472.292
9)	Nitrobenzene	7.25	7.24	1682012	1668289	451.853	511.206
10)	Nitroglycerin	0.00	8.67	0	3516467	N.D. d	2695.666
11)	Tetryl	9.07	9.07	1146187	1835753	411.230	462.756
12)	2,4,6-Trinitroto	9.55	9.59	1914069	2309135	553.385m	573.649
13)	2-Amino-4,6-Dini	9.67	9.73	1619833	2639142	416.554m	519.318
14)	4-Amino-2,6-Dini	10.20	10.21	1291470	2492201	484.137	504.172
16)	2,4-Dinitrotolue	11.42	11.41	2476273	1394534	453.382	462.321
17)	2,6-Dinitrotolue	11.84	11.85	1589995	1807435	509.045	470.887
18)	o-Nitrotoluene	15.08	15.07	1197055	1644591	503.602	510.015
19)	p-Nitrotoluene	15.67	15.68	1871605	1565956	476.370	447.444
20)	m-Nitrotoluene	16.65	16.65	1761681	1874443	498.384	518.847
21)	PETN	0.00	18.72	0	3766608	N.D. d	2624.230m

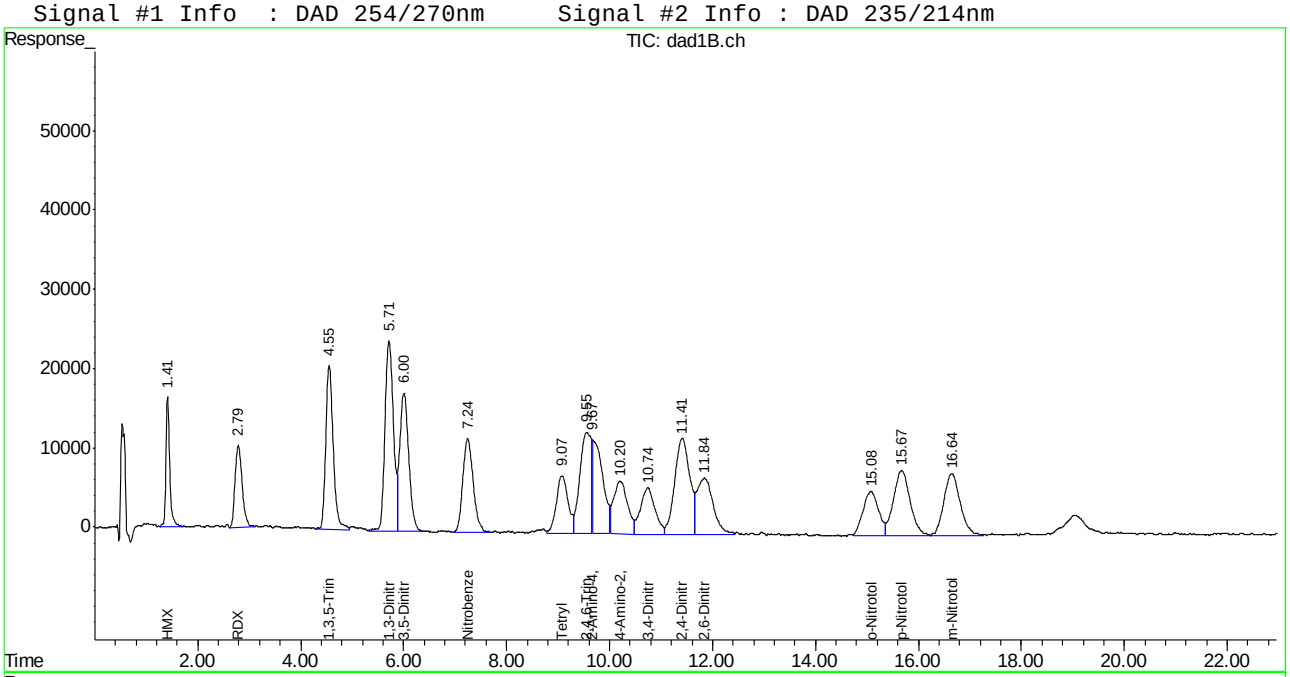
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060355.D 8330B_0707PLUS.M Thu Jul 26 16:02:27 2018 Page 1

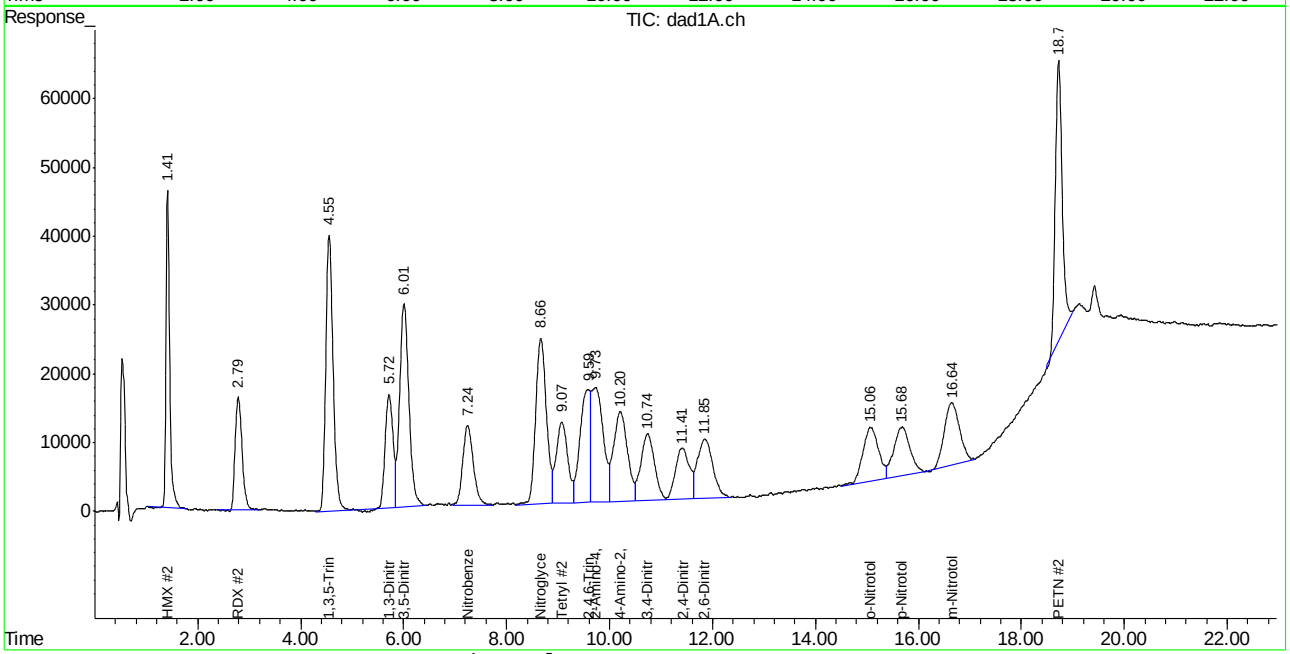
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060355.D\dad1B.ch Vial: 84
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060355.D\dad1A.ch
Acq On : 24-Jul-2018, 20:17:05 Operator: williamh
Sample : op71008-MS Inst : G1315B
Misc : OP71008,gbb1754,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 15:58 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

Sample Number:	OP71008-MS	**Method:**	SW846 8330A
Lab FileID:	BB060355.D	**Analyst approved:**	07/26/18 17:05 Mike Eger
Injection Time:	07/24/18 20:17	**Supervisor approved:**	07/27/18 15:26 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
2,4,6-Trinitrotoluene	118-96-7	1	9.55	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	9.67	Poor instrument integration
PETN	78-11-5	2	18.72	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/27/18 15:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060356.D\dad1B.ch Vial: 85
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060356.D\dad1A.ch
Acq On : 24-Jul-2018, 20:47:03 Operator: williamh
Sample : op71008-MSD Inst : G1315B
Misc : OP71008,gbb1754,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:27 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.74	10.74	1153460	1858393	443.777	455.868
	Spiked Amount 500.000	Range 70 - 136		Recovery =		88.76%	91.17%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.41	1.41	824937	2366634	428.054	486.622
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.79	2.79	986637	1549972	478.480	454.302
6)	1,3,5-Trinitrobe	4.55	4.55	2018265	4007677	468.962	480.370
7)	1,3-Dinitrobenze	5.72	5.72	2679756	1856571	464.232	474.585
8)	3,5-Dinitroanili	6.01	6.01	2204766	3970848	472.065	504.480
9)	Nitrobenzene	7.25	7.24	1686097	1607853	452.951	492.667m
10)	Nitroglycerin	0.00	8.67	0	3579479	N.D. d	2743.970
11)	Tetryl	9.08	9.08	1161485	1852124	416.719	466.849
12)	2,4,6-Trinitroto	9.57	9.59	1787762	2244021	516.525m	557.572
13)	2-Amino-4,6-Dini	9.67	9.71	1666707	2714383	428.609m	534.123
14)	4-Amino-2,6-Dini	10.22	10.21	1323401	2516102	496.107	508.901
16)	2,4-Dinitrotolue	11.41	11.41	2523402	1425095	462.010	472.363
17)	2,6-Dinitrotolue	11.83	11.85	1540190	1885231	493.005	490.824
18)	o-Nitrotoluene	15.08	15.06	1197483	1592859	503.782	493.972m
19)	p-Nitrotoluene	15.67	15.68	1801045	1589947	458.411	454.299
20)	m-Nitrotoluene	16.65	16.65	1660899	1902702	469.921	526.669
21)	PETN	0.00	18.72	0	3855961	N.D. d	2686.483m

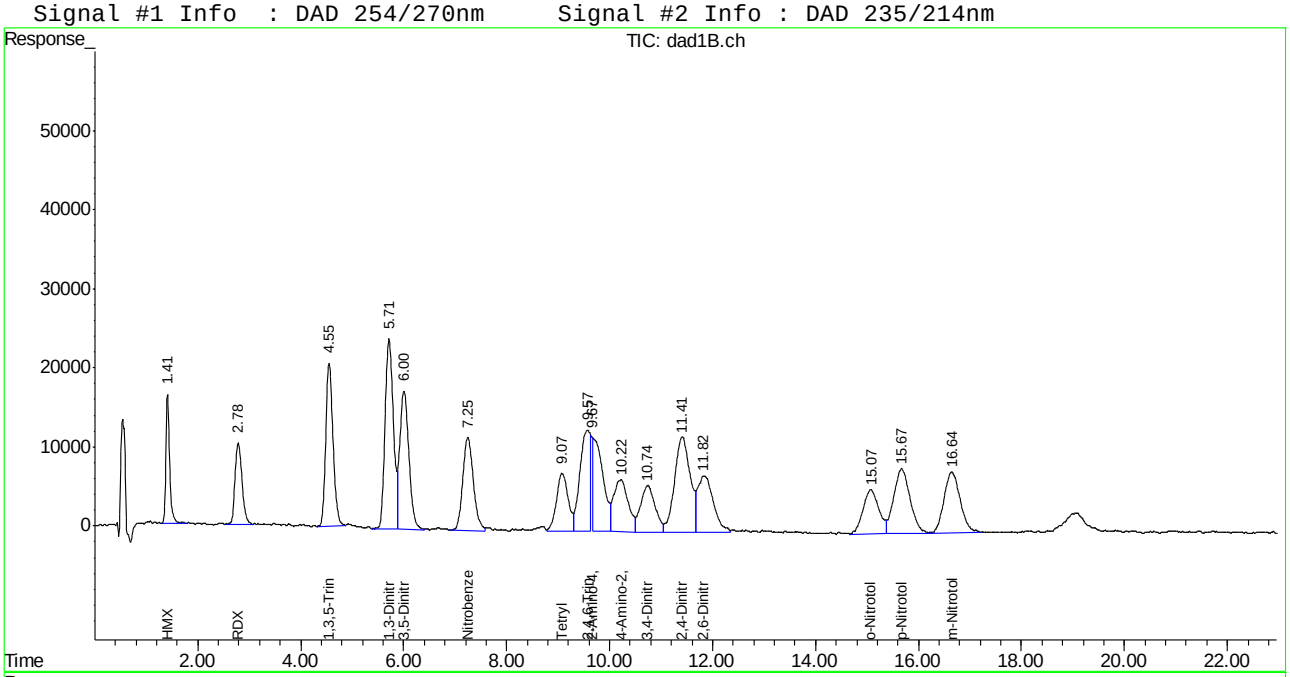
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060356.D 8330B_0707PLUS.M Thu Jul 26 16:02:28 2018 Page 1

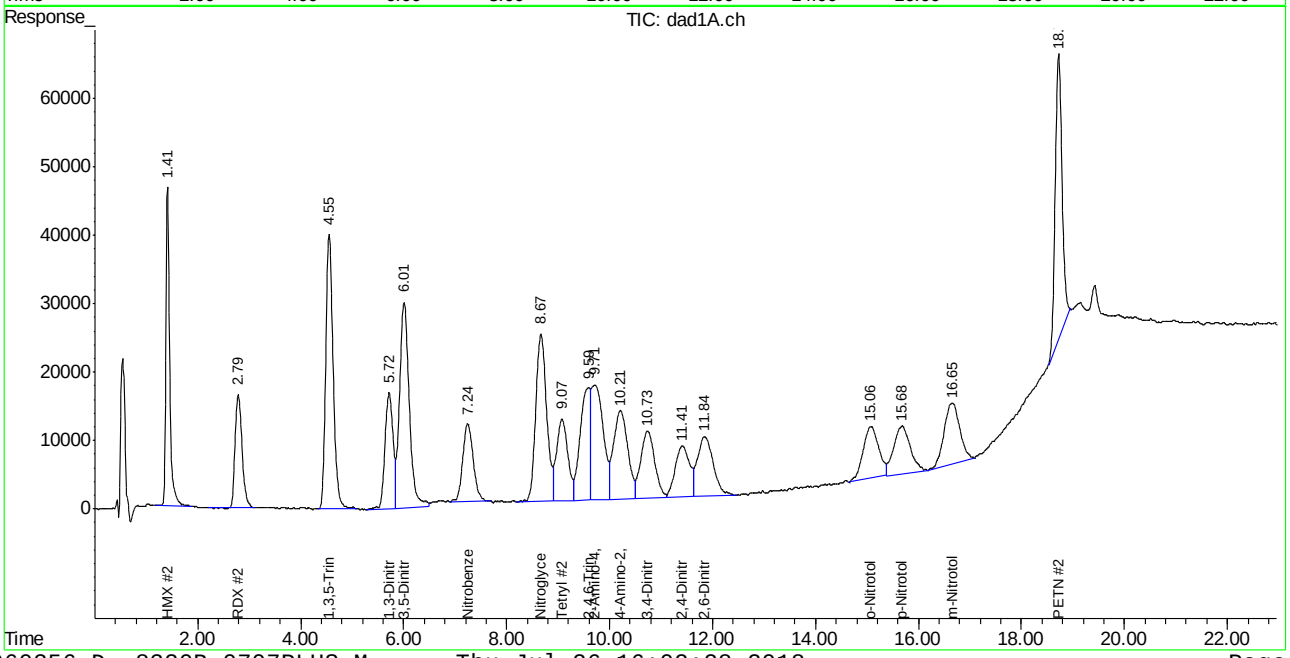
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060356.D\dad1B.ch Vial: 85
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060356.D\dad1A.ch
Acq On : 24-Jul-2018, 20:47:03 Operator: williamh
Sample : op71008-MSD Inst : G1315B
Misc : OP71008,gbb1754,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 16:00 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

Sample Number:	OP71008-MSD	**Method:**	SW846 8330A
Lab FileID:	BB060356.D	**Analyst approved:**	07/26/18 17:05 Mike Eger
Injection Time:	07/24/18 20:47	**Supervisor approved:**	07/27/18 15:26 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Nitrobenzene	98-95-3	2	7.24	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.57	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	9.67	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.06	Poor instrument integration
PETN	78-11-5	2	18.72	Poor instrument integration

Manual Integrations APPROVED
(compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:27 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.44	11.44	73123	83553	29.384	19.865m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		5.88%#	3.97%#
	Target Compounds						
1)	TNX	1.40	1.40	105908	163610	21.638	21.435
2)	HMX	1.55	1.55	49679	104548	27.483	21.128
3)	DNX	1.80	1.79	78544	100526	25.540	19.827m
4)	MNX	2.40	2.40	69325	105898	22.185	22.460m
5)	RDX	3.03	3.04	45945	86009	23.641m	26.376m
6)	1,3,5-Trinitrobe	4.84	4.83	120926	188051	27.751m	22.941m
7)	1,3-Dinitrobenze	6.07	6.06	135770	141420	23.292m	36.692m#
8)	3,5-Dinitroanili	6.42	6.42	135157	245029	28.906	31.343
9)	Nitrobenzene	7.73	7.69	96978	113083	25.916m	35.981m
10)	Nitroglycerin	0.00	9.04	0	139364	N.D. d	109.066m
11)	Tetryl	9.50	9.54	52961	143805	17.896m	34.742m#
12)	2,4,6-Trinitroto	10.07	10.03	101487	127709	25.910m	29.865m
13)	2-Amino-4,6-Dini	10.45	10.46	86714	118088	23.221m	21.088m
14)	4-Amino-2,6-Dini	10.99	11.01	55774	103732	21.156m	19.461m
16)	2,4-Dinitrotolue	12.09	12.09	136897	44517	26.386m	14.109m#
17)	2,6-Dinitrotolue	12.55	12.56	109062	110117	37.119m	29.843m
18)	o-Nitrotoluene	15.86	0.00	36949	0	14.299	N.D. #
19)	p-Nitrotoluene	16.44	0.00	79601	0	19.919	N.D. #
20)	m-Nitrotoluene	17.44	0.00	146388	0	42.953	N.D. #
21)	PETN	0.00	18.93	0	154833	N.D. d	117.496m

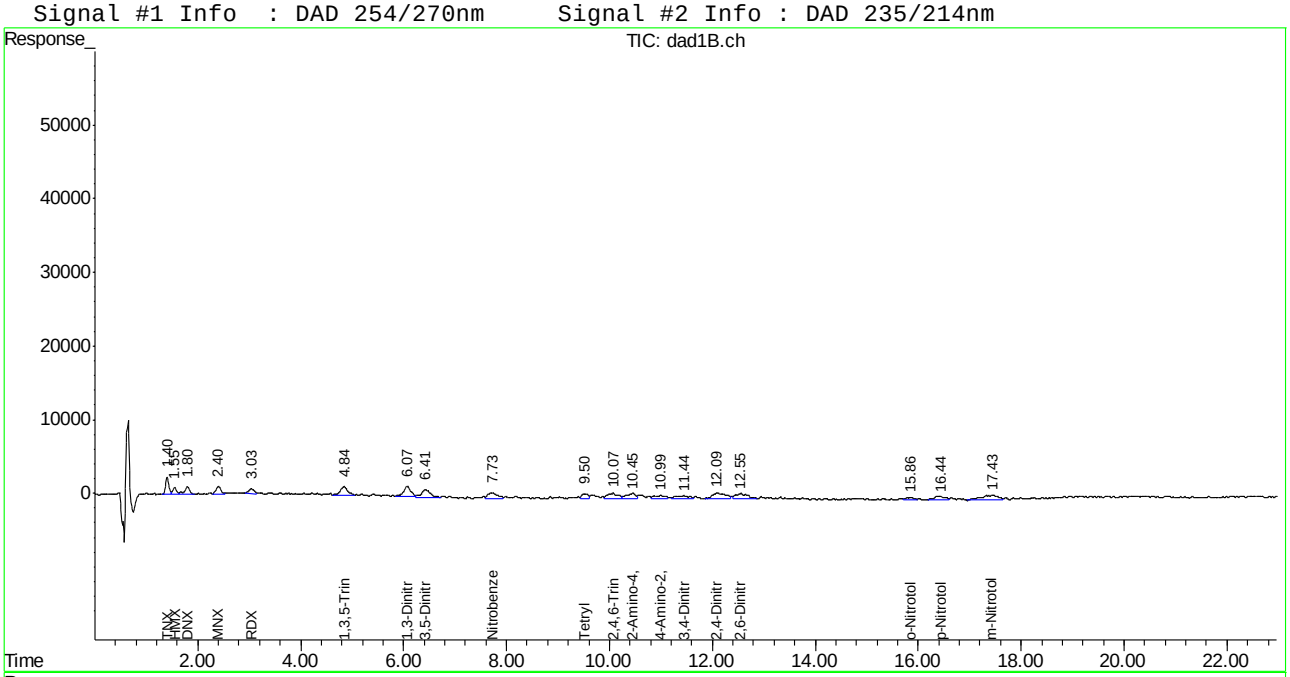
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060200.D 8330B_0707PLUS.M Mon Jul 09 10:55:16 2018 Page 1

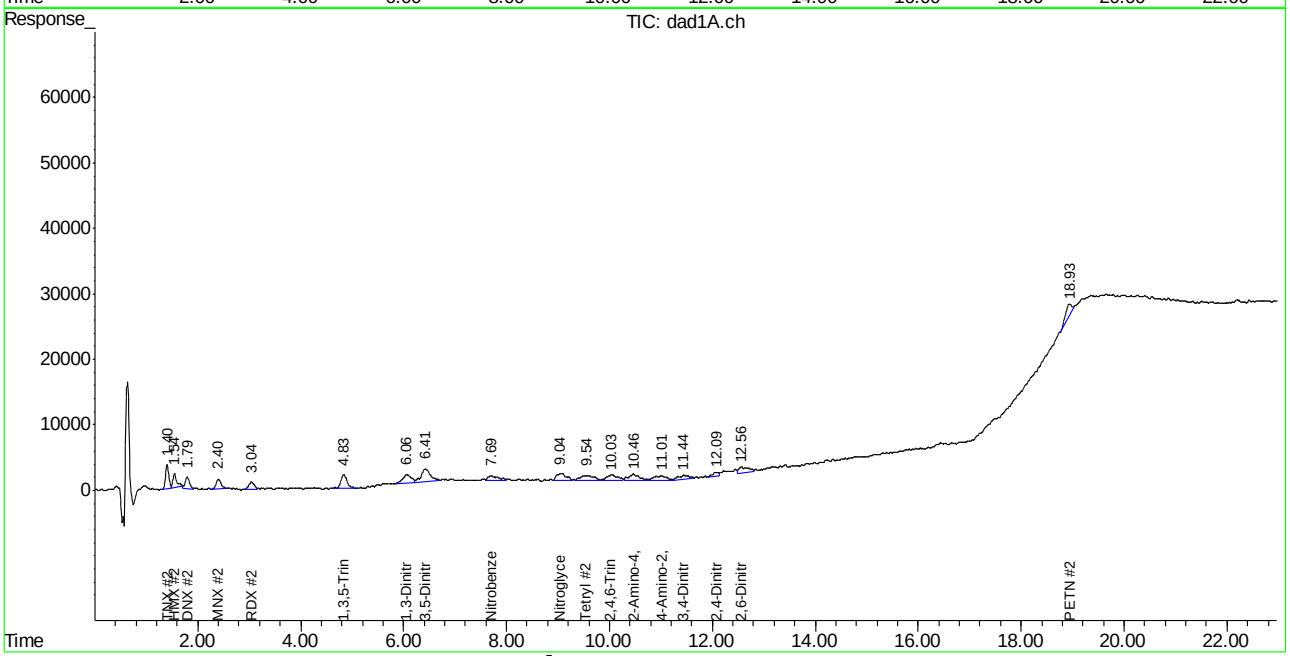
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:05 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

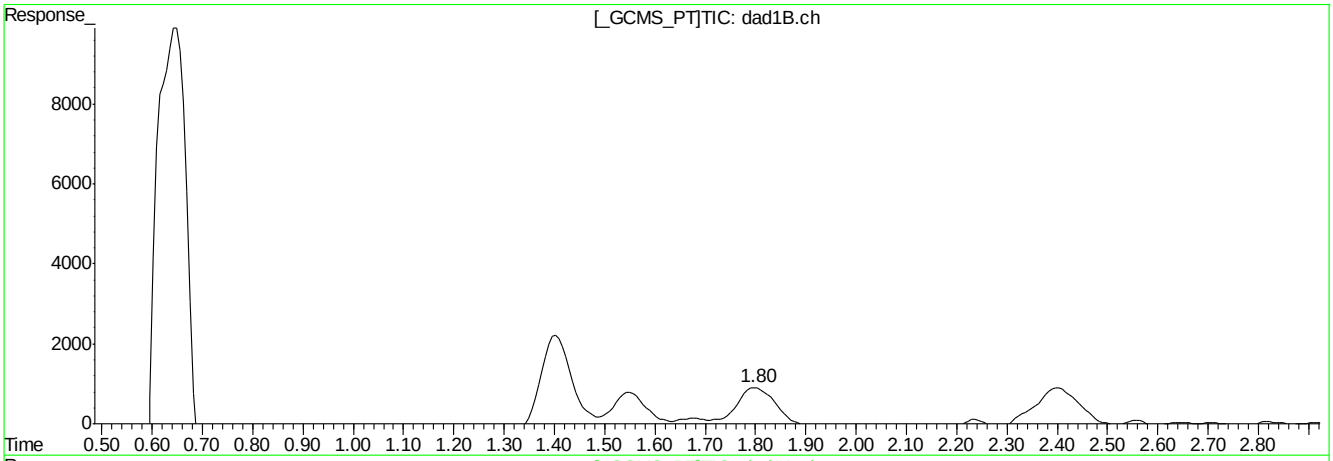
Sample Number: GBB1748-IC1748
Lab FileID: BB060200.D
Injection Time: 07/06/18 15:33
Method: SW846 8330A
Analyst approved: 07/09/18 11:23 William Hustedde
Supervisor approved: 07/09/18 16:15 Mike Eger

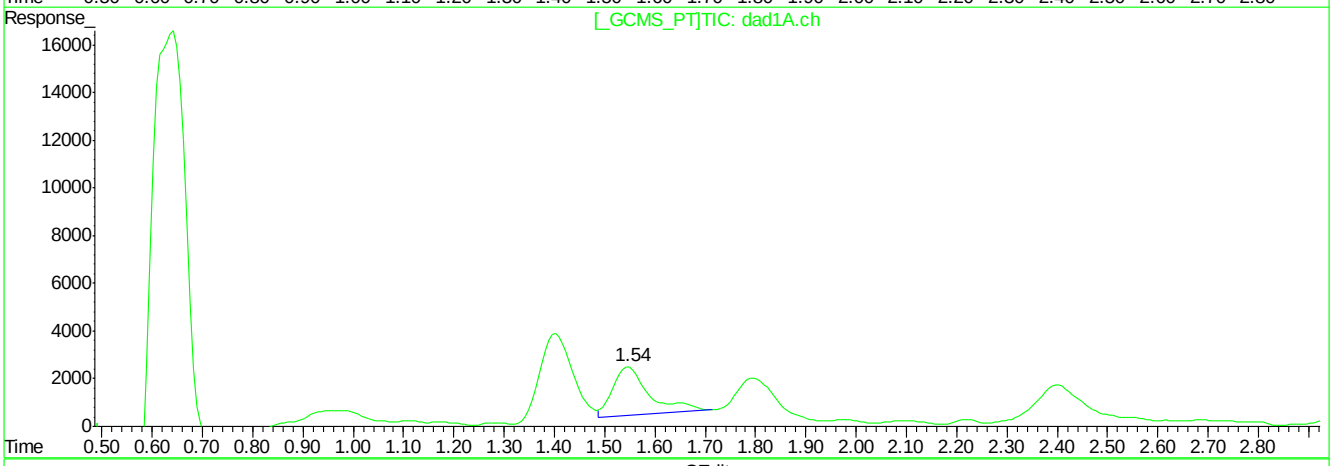
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		2	1.79	Poor instrument integration
MNX		2	2.40	Poor instrument integration
RDX	121-82-4	1	3.03	Poor instrument integration
RDX	121-82-4	2	3.04	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.83	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.84	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.06	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	6.07	Poor instrument integration
Nitrobenzene	98-95-3	2	7.69	Poor instrument integration
Nitrobenzene	98-95-3	1	7.73	Poor instrument integration
Nitroglycerine	55-63-0	2	9.04	Poor instrument integration
Tetryl	479-45-8	1	9.50	Poor instrument integration
Tetryl	479-45-8	2	9.54	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	10.03	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	10.07	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.45	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.46	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.99	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	11.01	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	11.44	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	12.09	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	12.09	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.55	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	12.56	Poor instrument integration
PETN	78-11-5	2	18.93	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.80min 25.540ppb

response 78544

(3) DNX #2

1.55min 20.620ppb

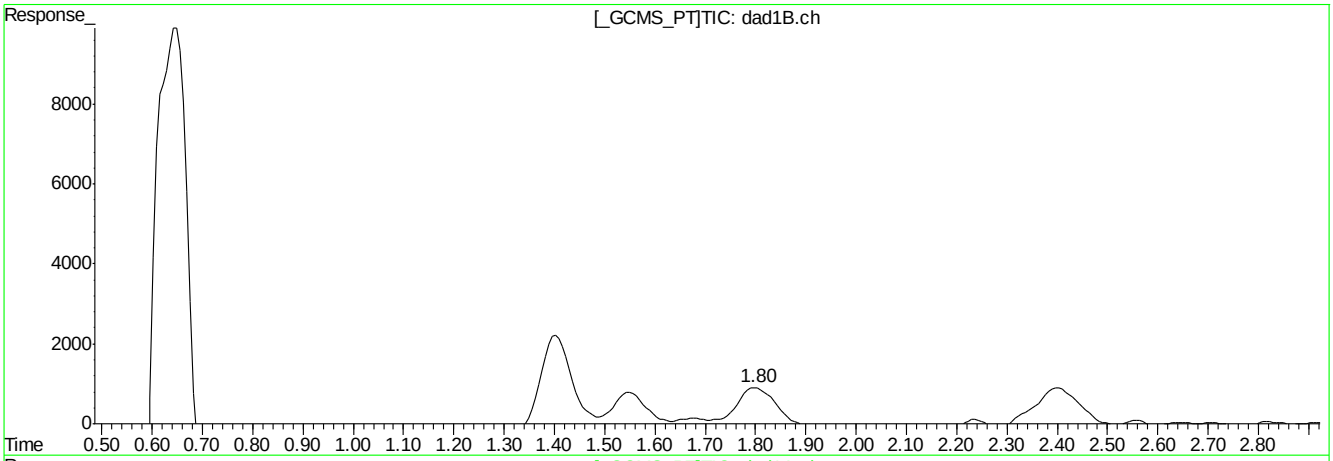
response 104548

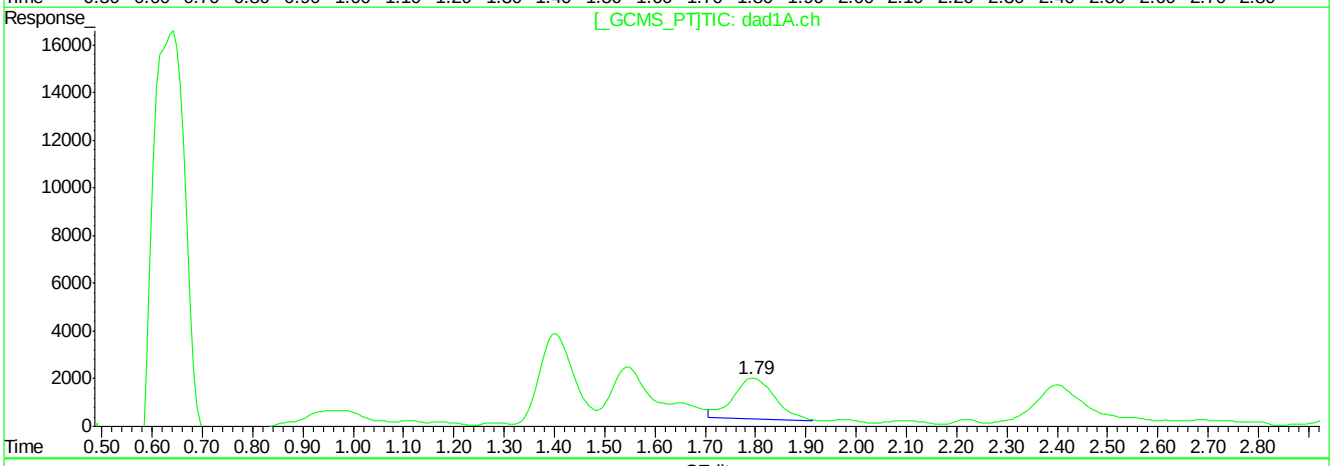
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:39:58 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.80min 25.540ppb

response 78544

(3) DNX #2

1.79min 19.827ppb m

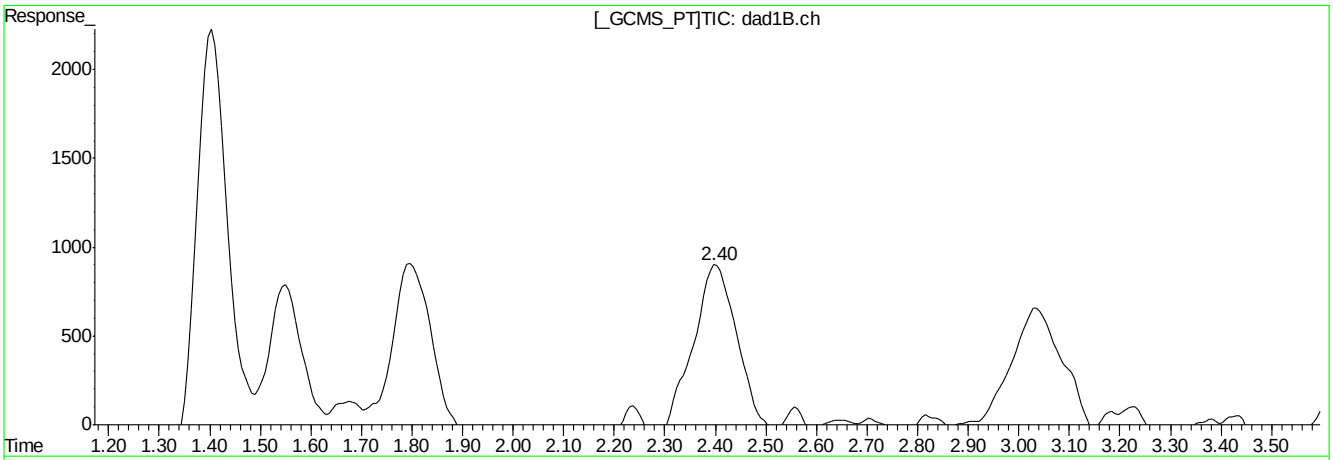
response 100526

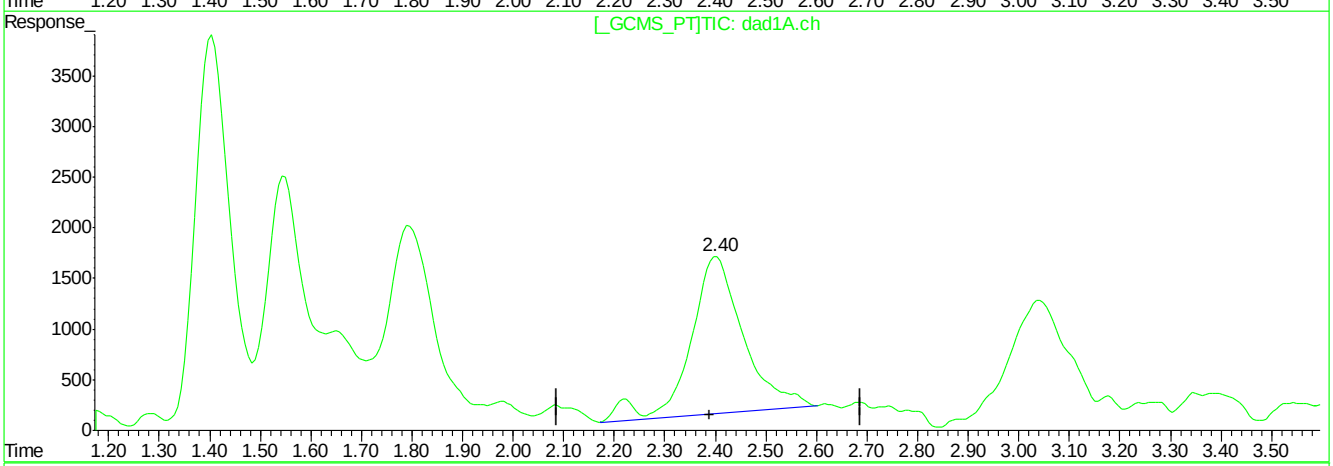
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:40:09 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.40min 22.185ppb

response 69325

(4) MNX #2

2.40min 24.066ppb

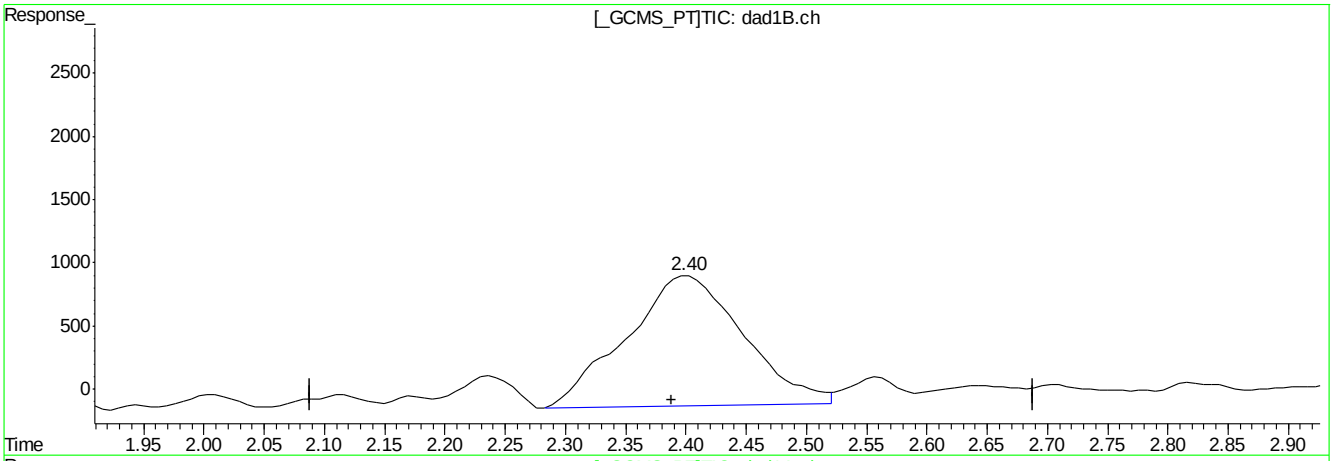
response 113473

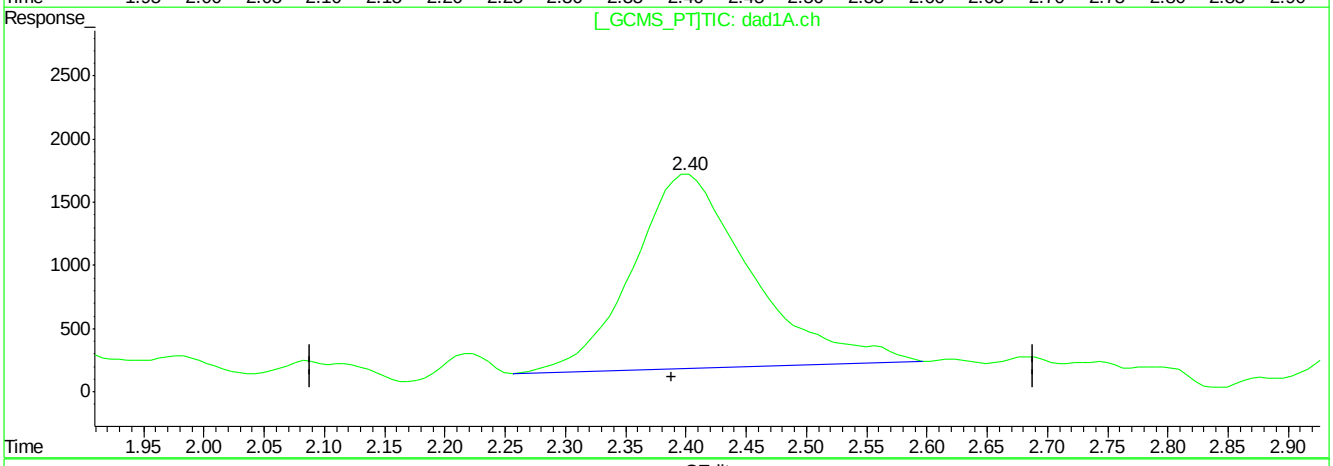
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:40:18 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.40min 22.185ppb

response 69325

(4) MNX #2

2.40min 22.460ppb m

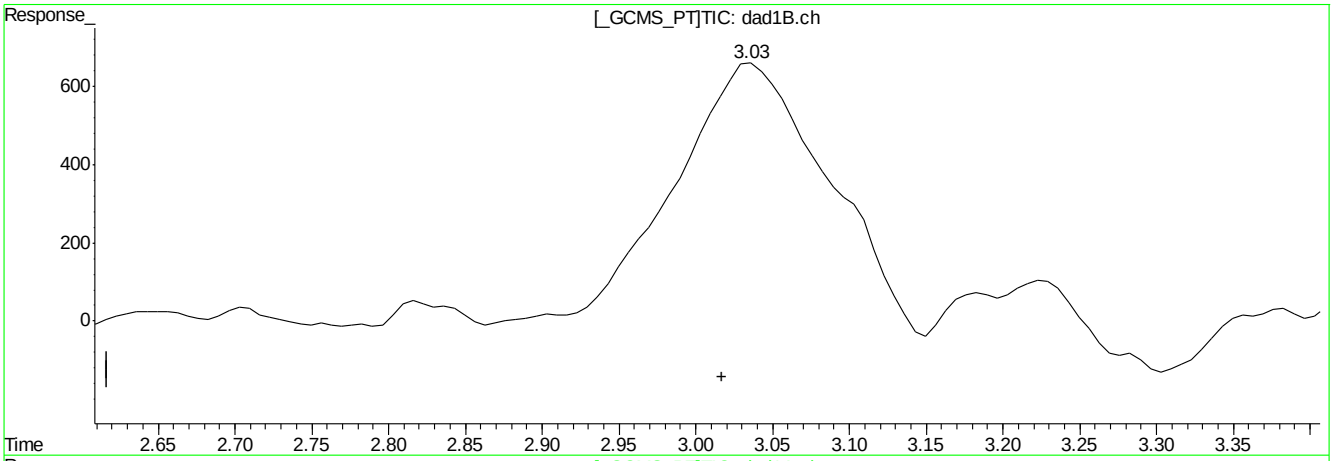
response 105898

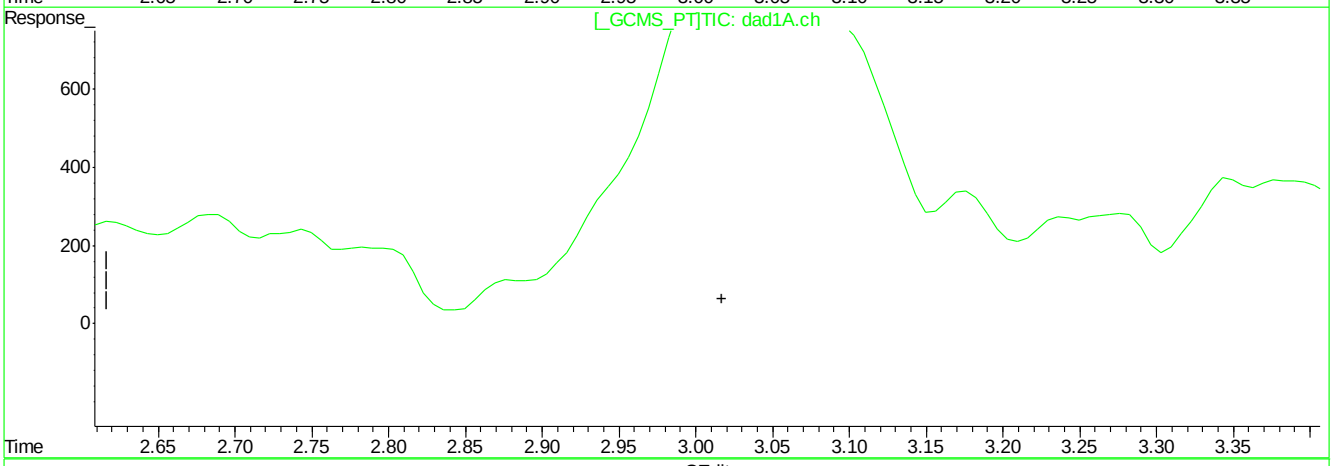
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:40:26 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.04min 35.814ppb

response 69624

(5) RDX #2

0.00min 0.000ppb

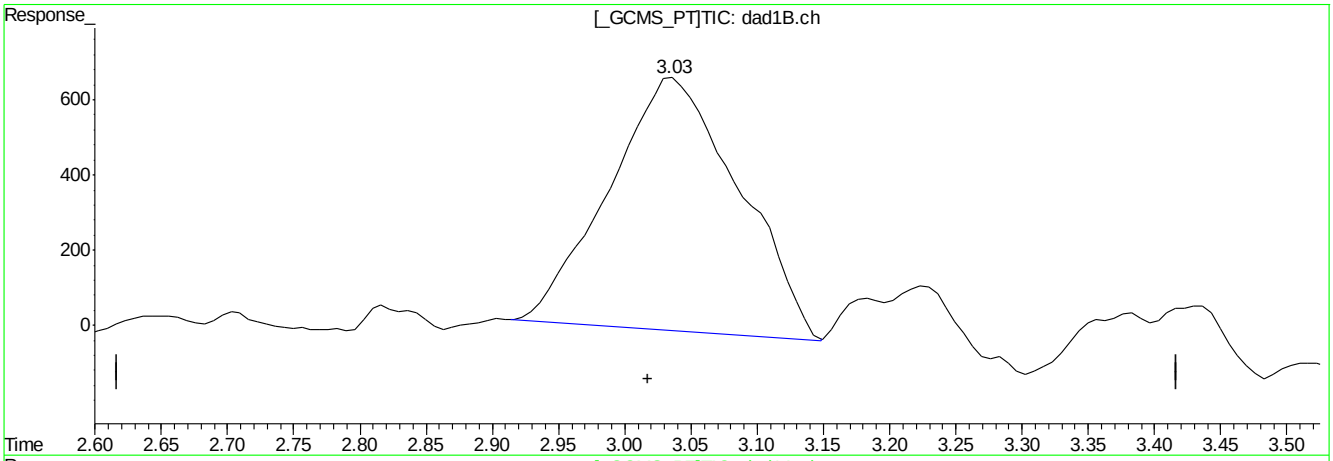
response 0

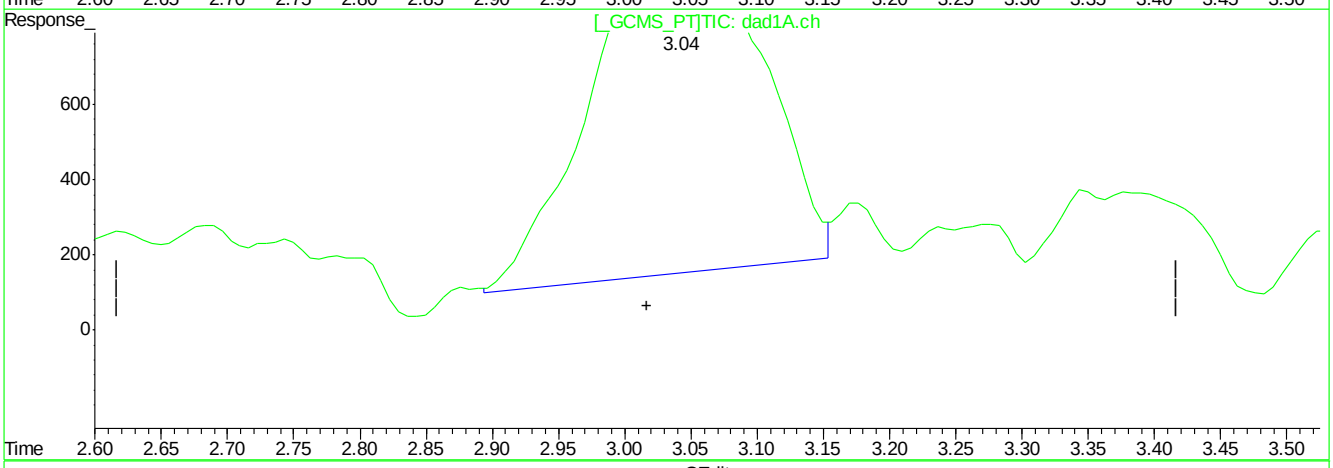
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:40:33 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.03min 23.641ppb m

response 45945

(5) RDX #2

3.04min 26.376ppb m

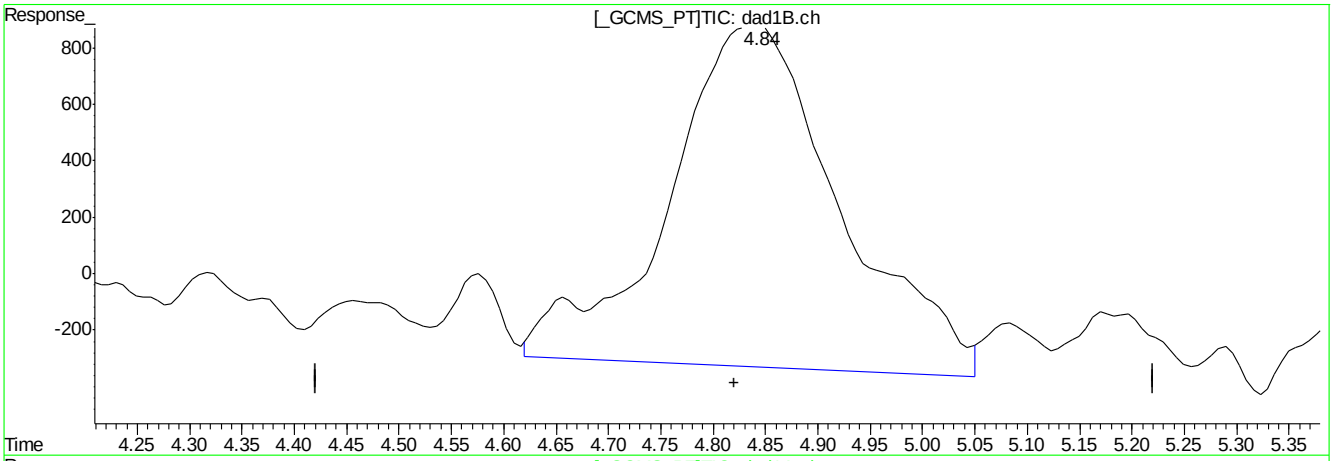
response 86009

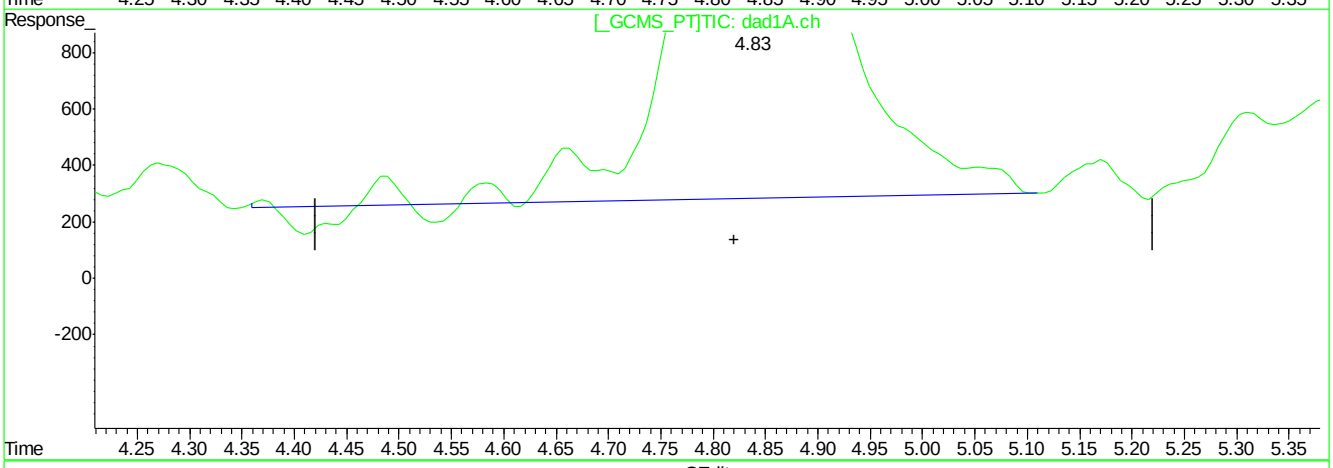
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:40:53 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.84min 31.656ppb

response 137939

(6) 1,3,5-Trinitrobenzene #2

4.84min 22.571ppb

response 185021

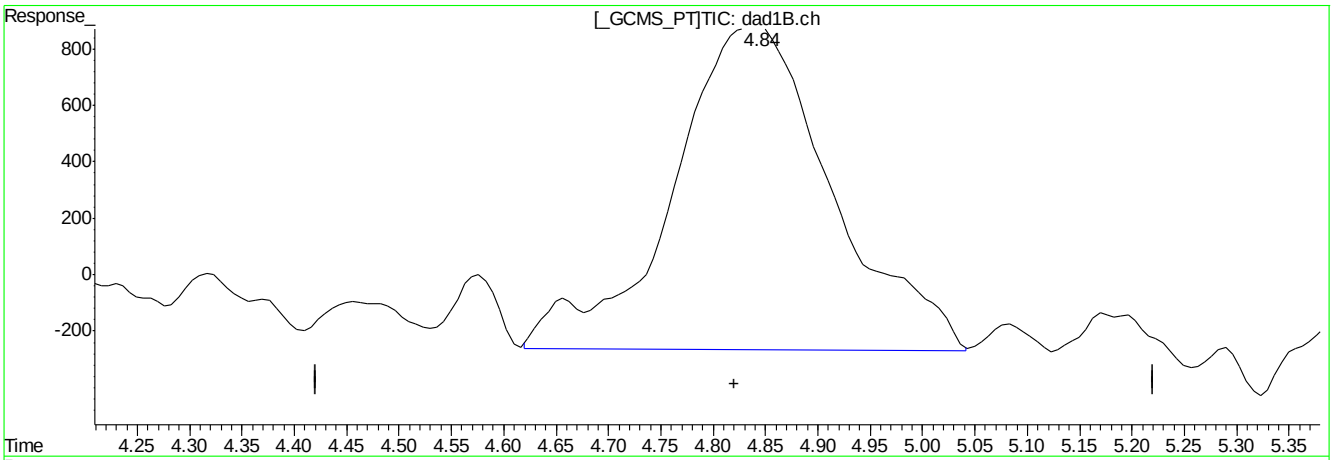
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:40:59 2018

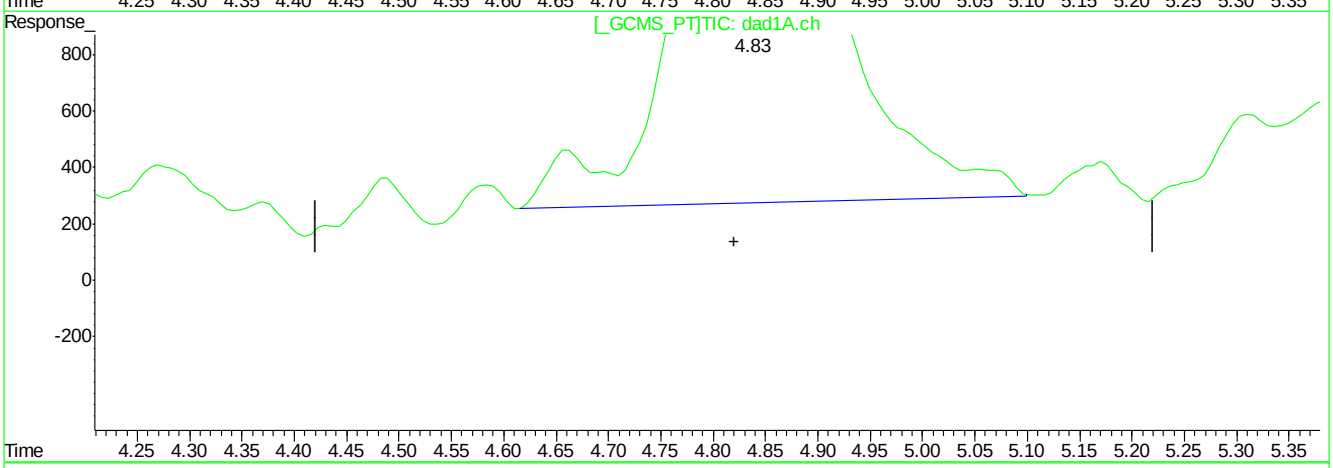
BB060200.D edits: 1,3,5-Trinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.84min 27.751ppb m

response 120926

(6) 1,3,5-Trinitrobenzene #2

4.83min 22.941ppb m

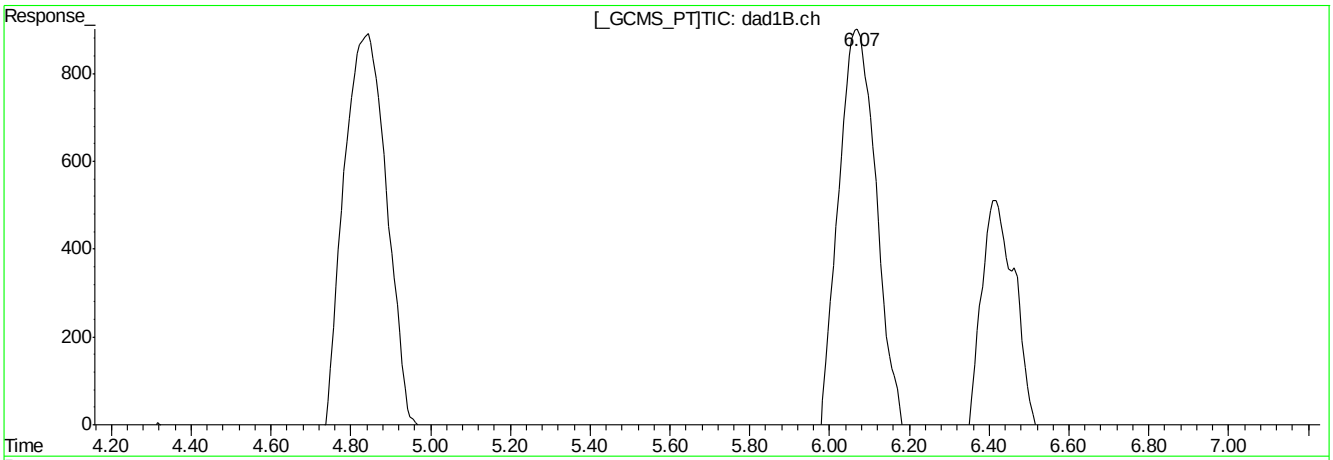
response 188051

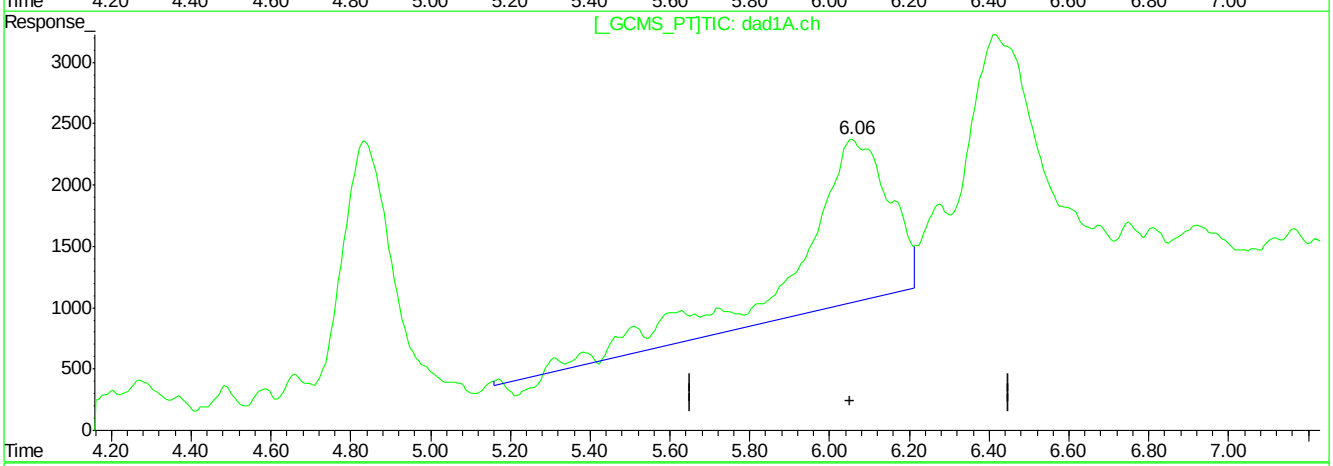
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:41:09 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.07min 26.459ppb

response 154231

(7) 1,3-Dinitrobenzene #2

6.06min 53.131ppb

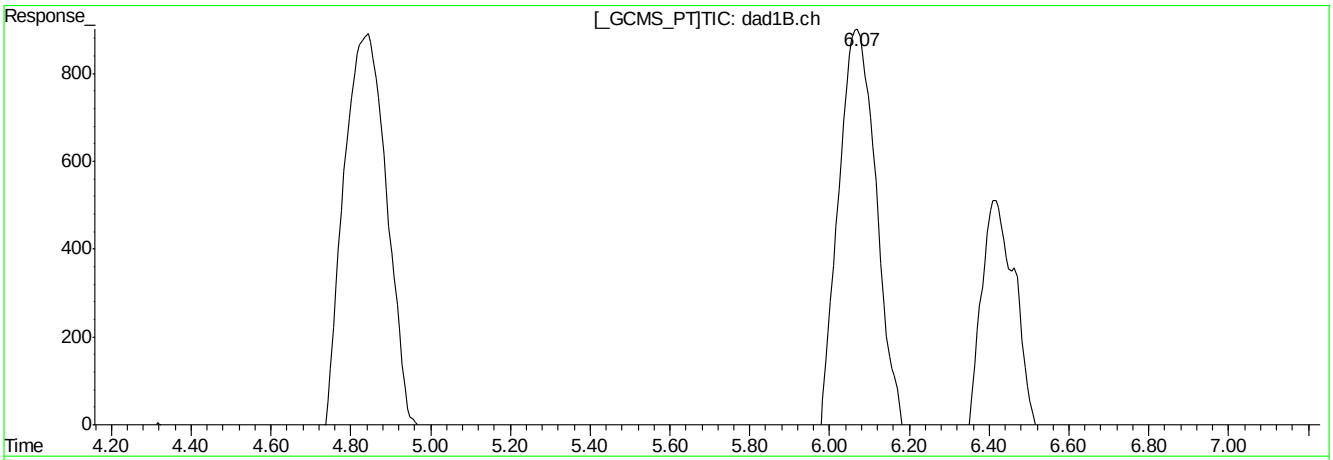
response 204736

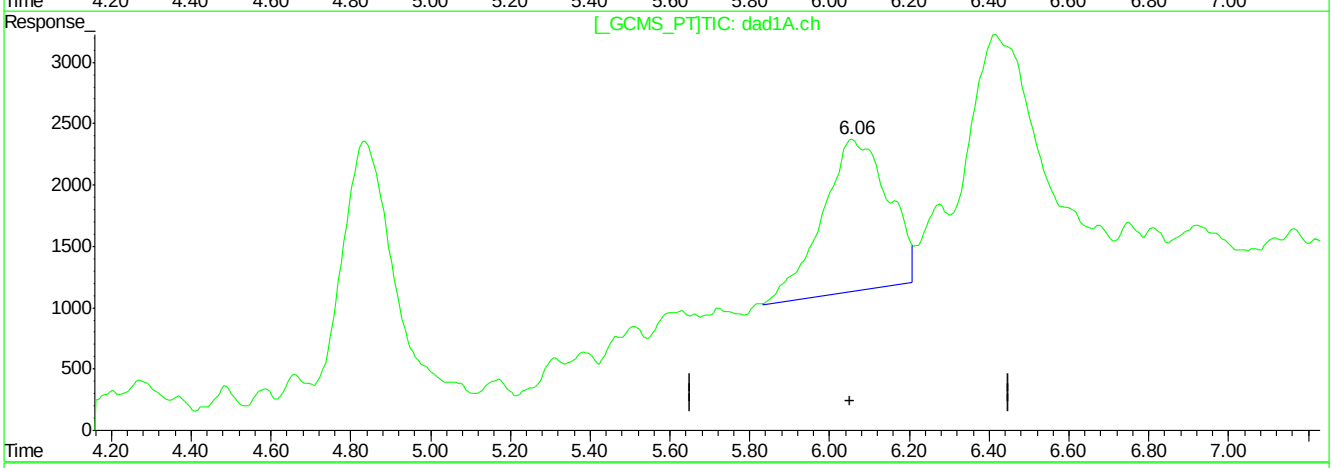
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:41:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.07min 26.459ppb

response 154231

(7) 1,3-Dinitrobenzene #2

6.06min 36.692ppb m

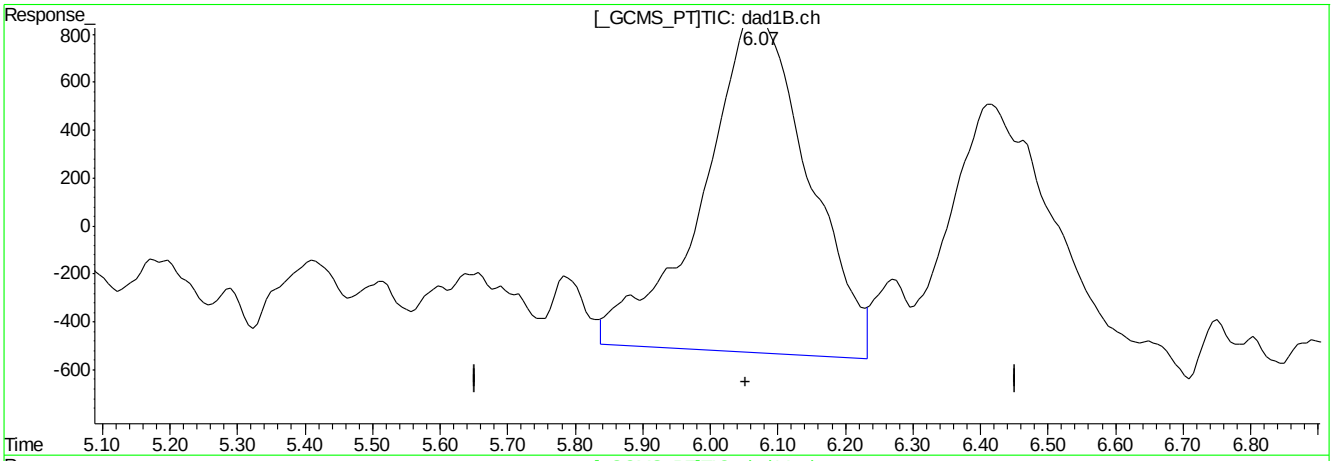
response 141420

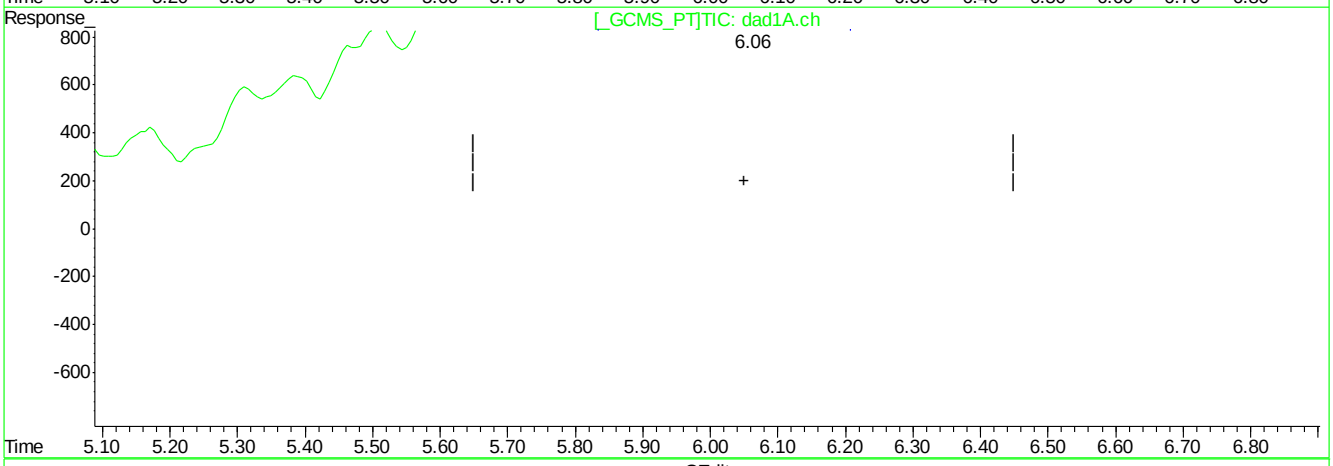
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:41:43 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.07min 26.459ppb

response 154231

(7) 1,3-Dinitrobenzene #2

6.06min 36.692ppb m

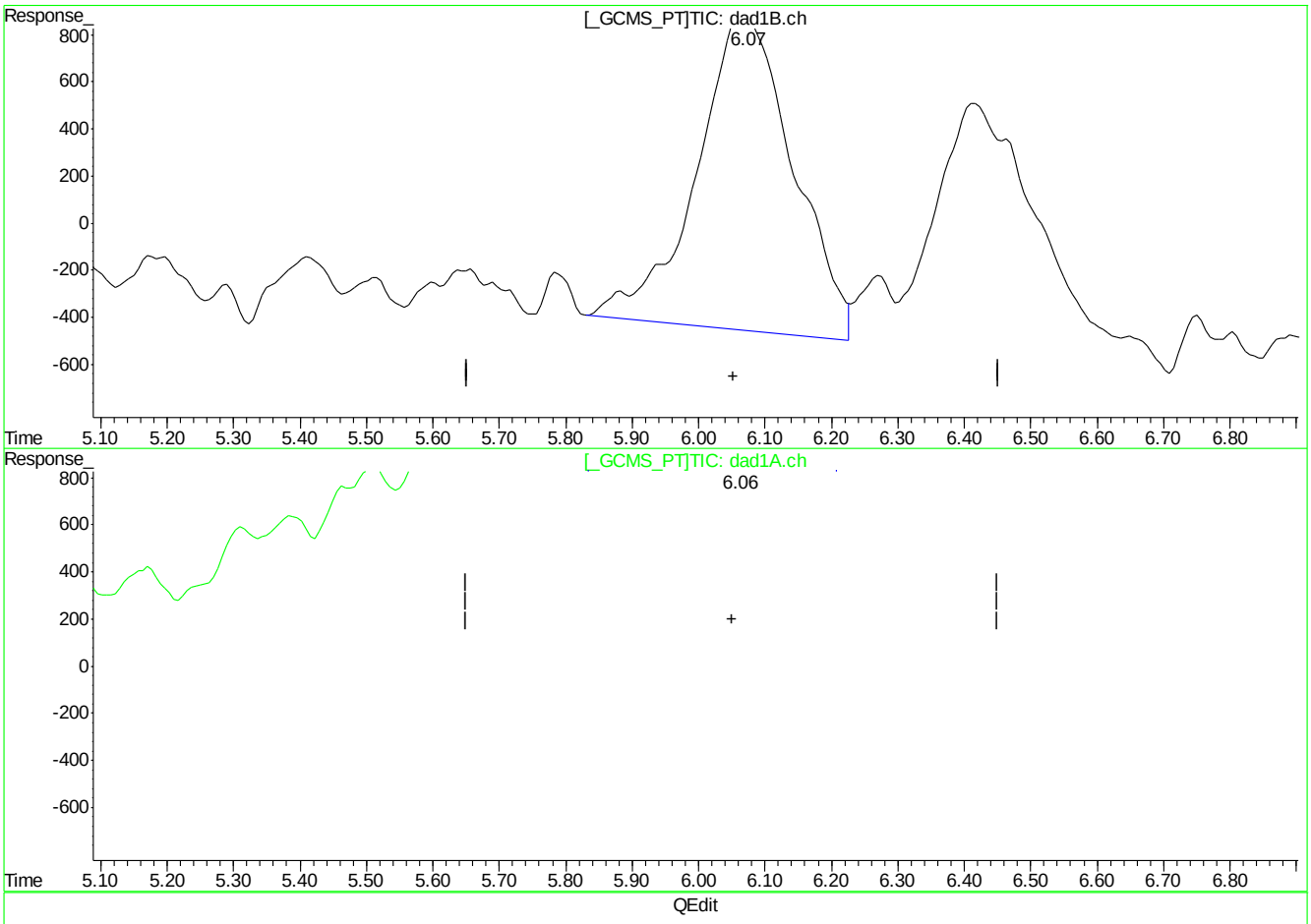
response 141420

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:41:46 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

6.07min 23.292ppb m

response 135770

(7) 1,3-Dinitrobenzene #2

6.06min 36.692ppb m

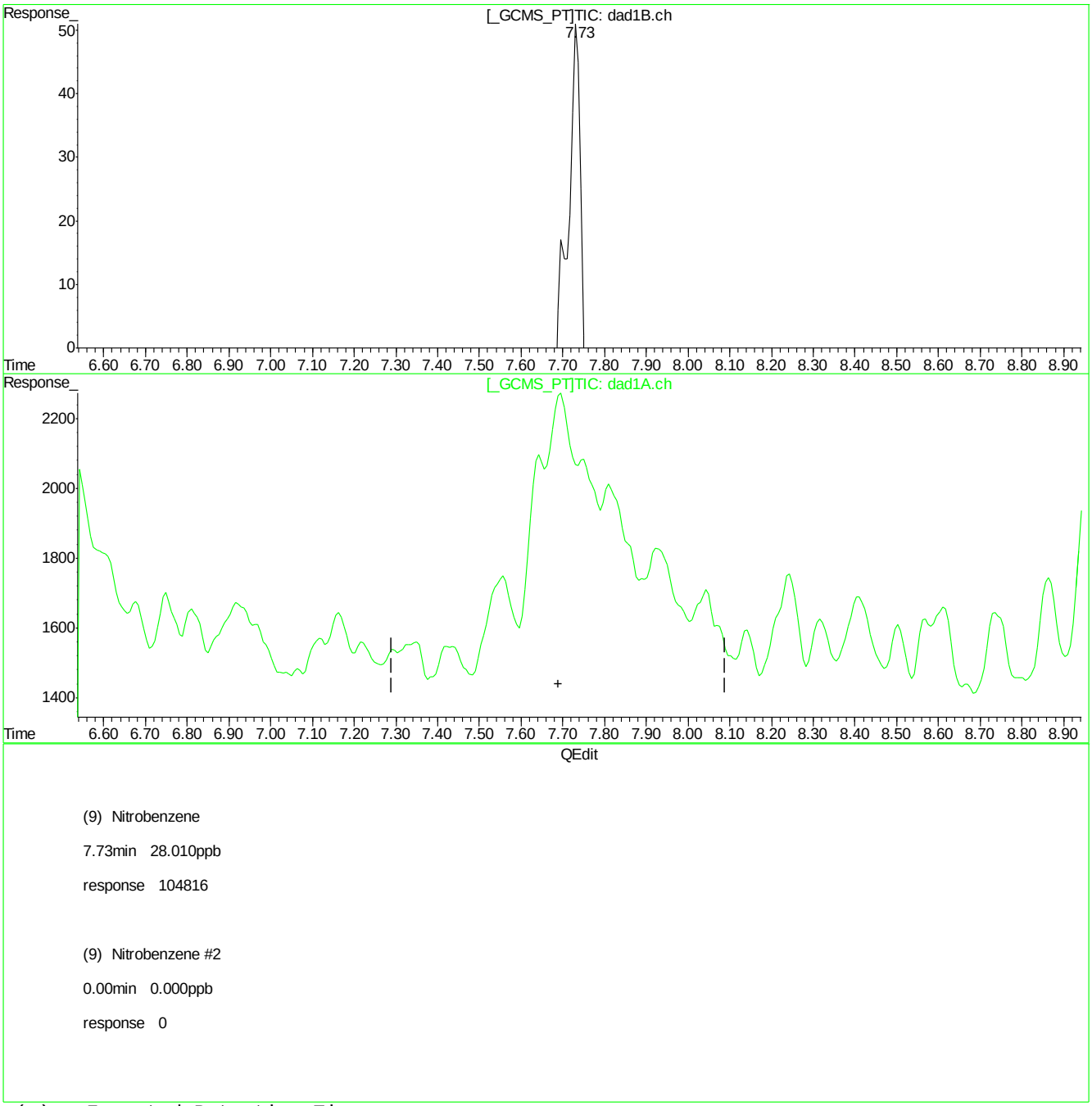
response 141420

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:41:54 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(9) Nitrobenzene

7.73min 28.010ppb

response 104816

(9) Nitrobenzene #2

0.00min 0.000ppb

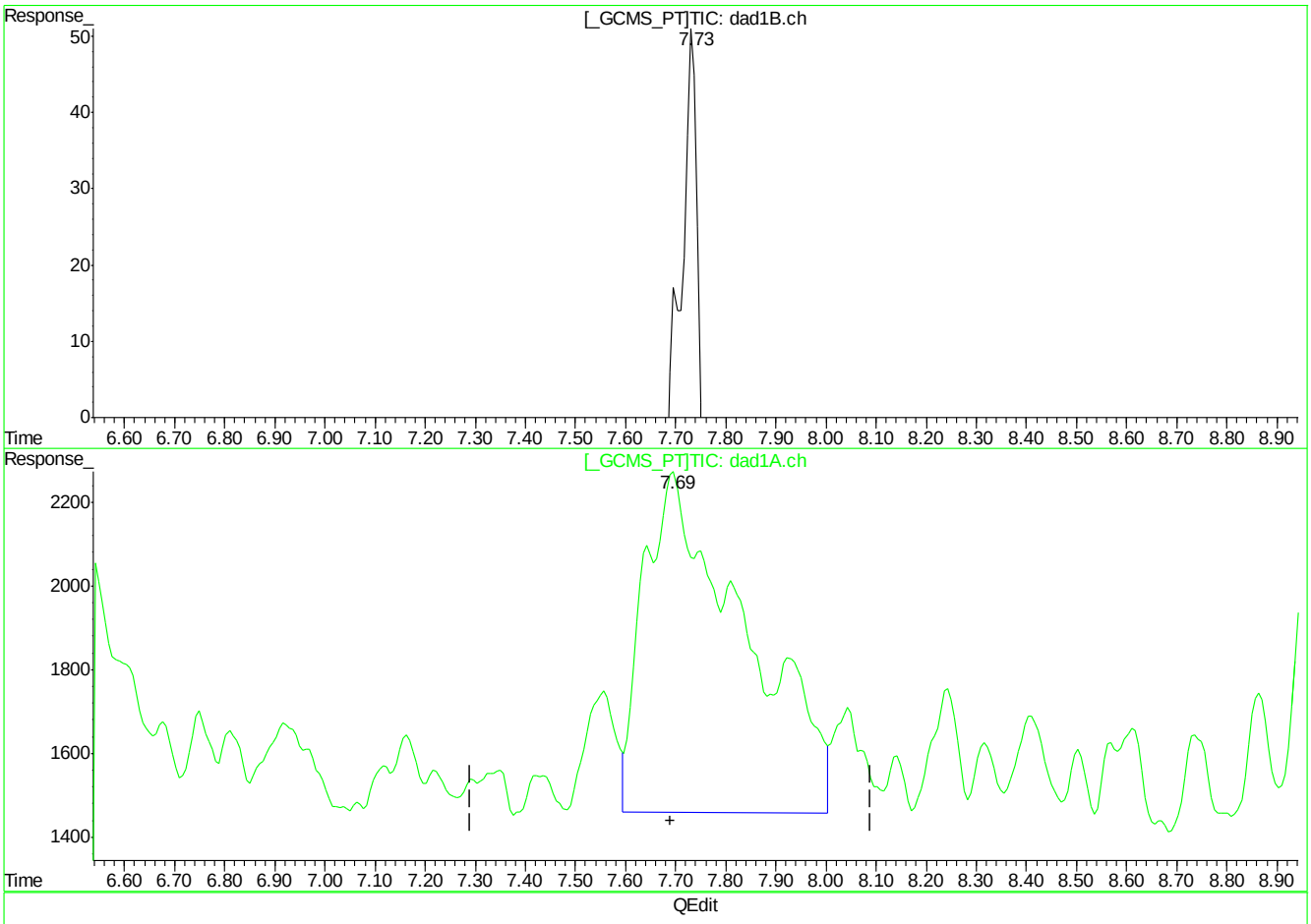
response 0

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:05 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(9) Nitrobenzene

7.73min 28.010ppb

response 104816

(9) Nitrobenzene #2

7.69min 35.981ppb m

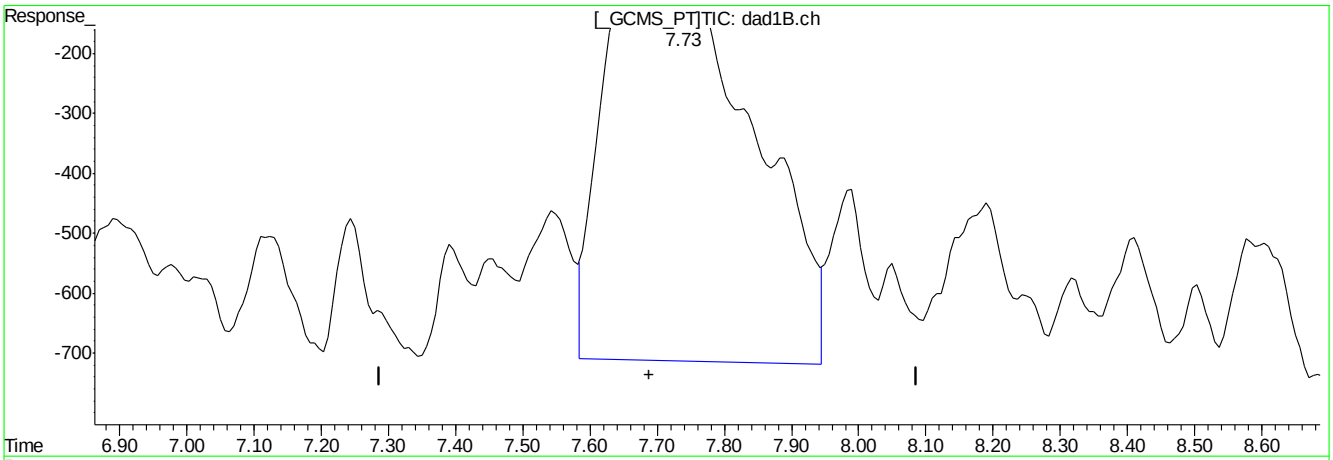
response 113083

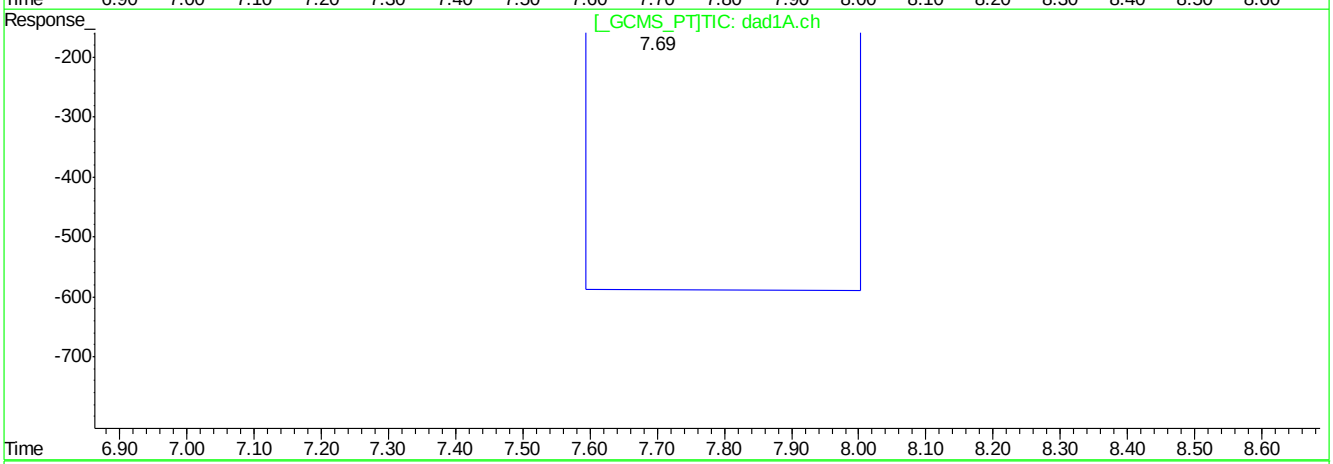
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:13 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.73min 28.010ppb

response 104816

(9) Nitrobenzene #2

7.69min 35.981ppb m

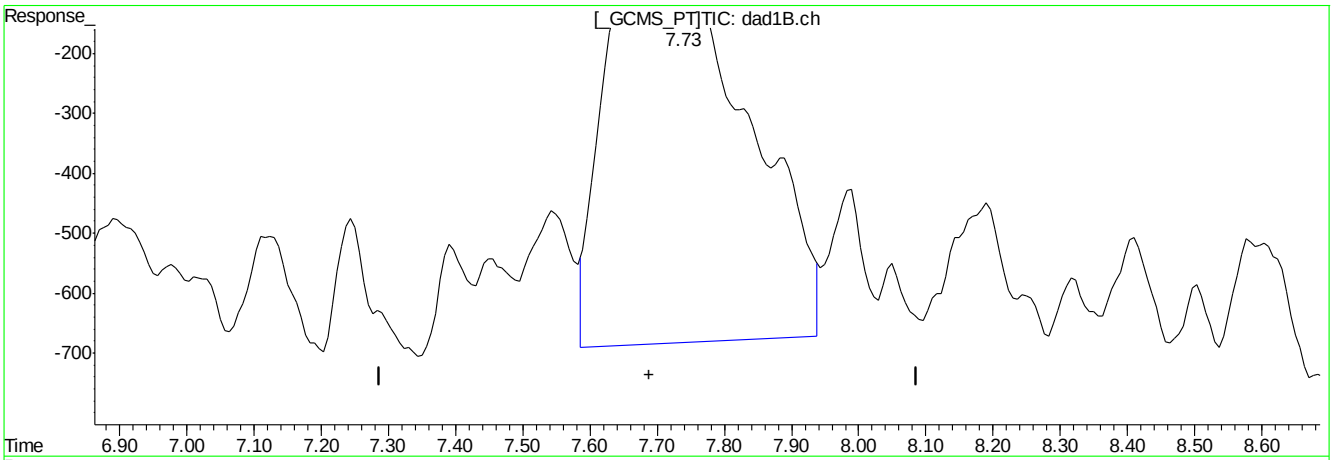
response 113083

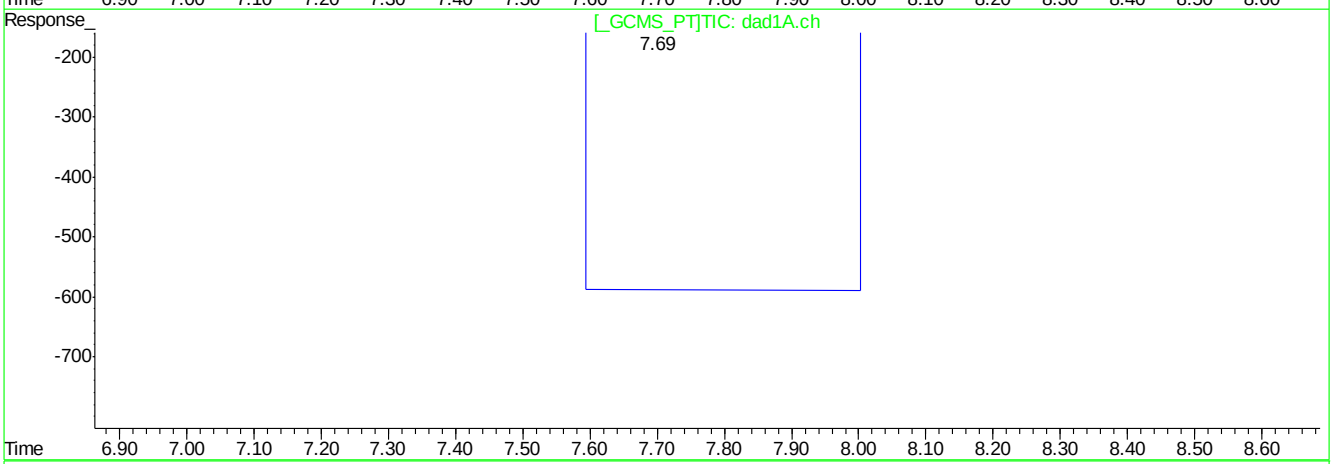
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:19 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.73min 25.916ppb m

response 96978

(9) Nitrobenzene #2

7.69min 35.981ppb m

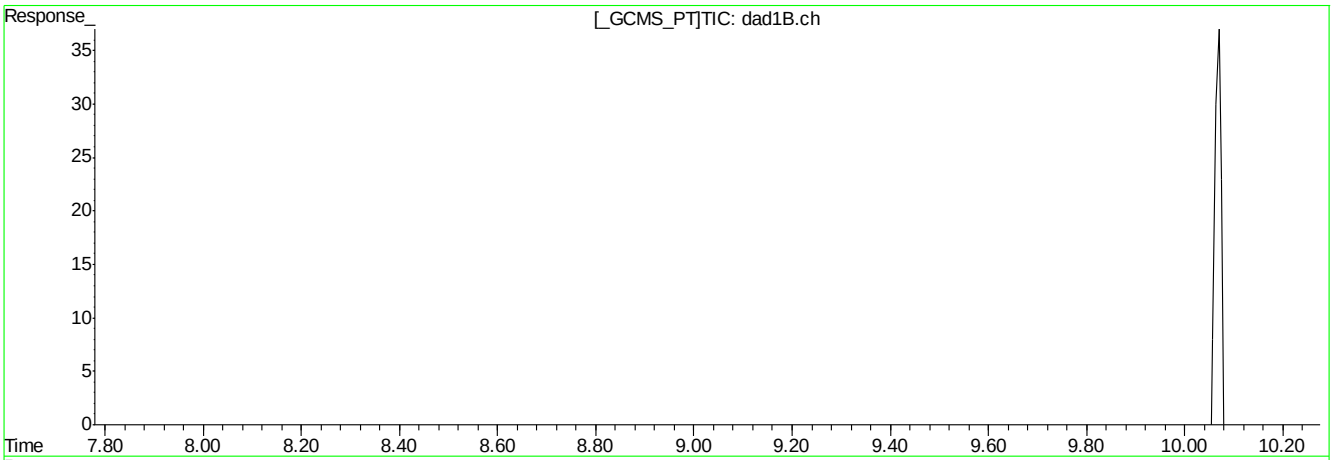
response 113083

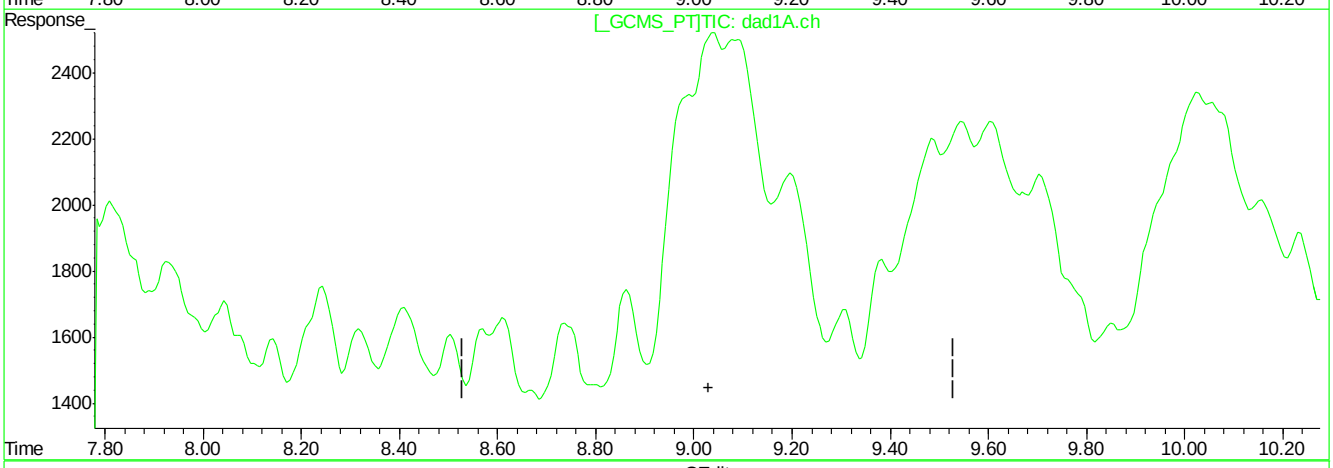
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:24 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

9.02min 0.000ppb

response 21201

(10) Nitroglycerin #2

0.00min 0.000ppb

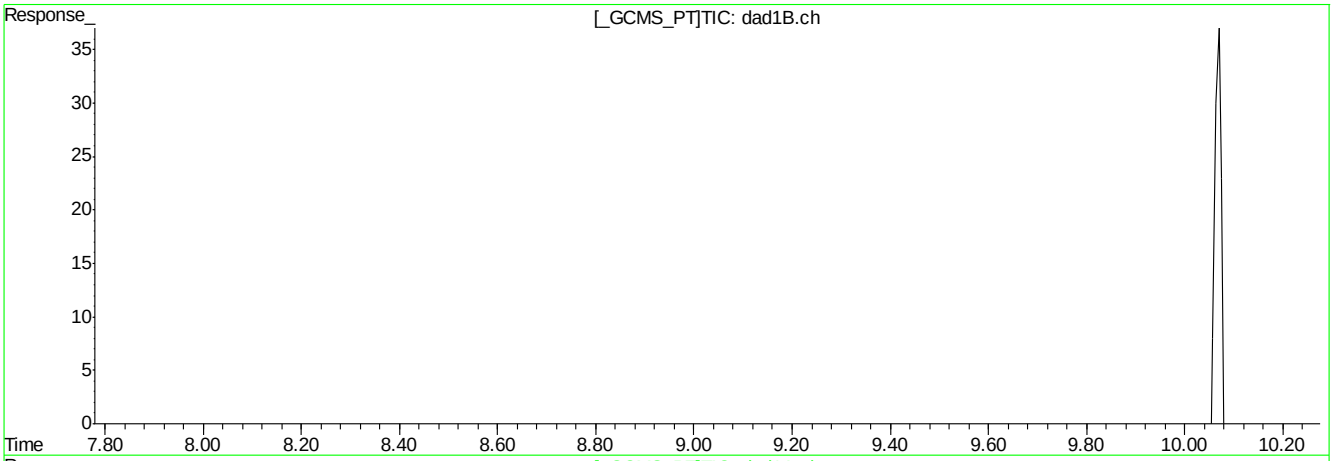
response 0

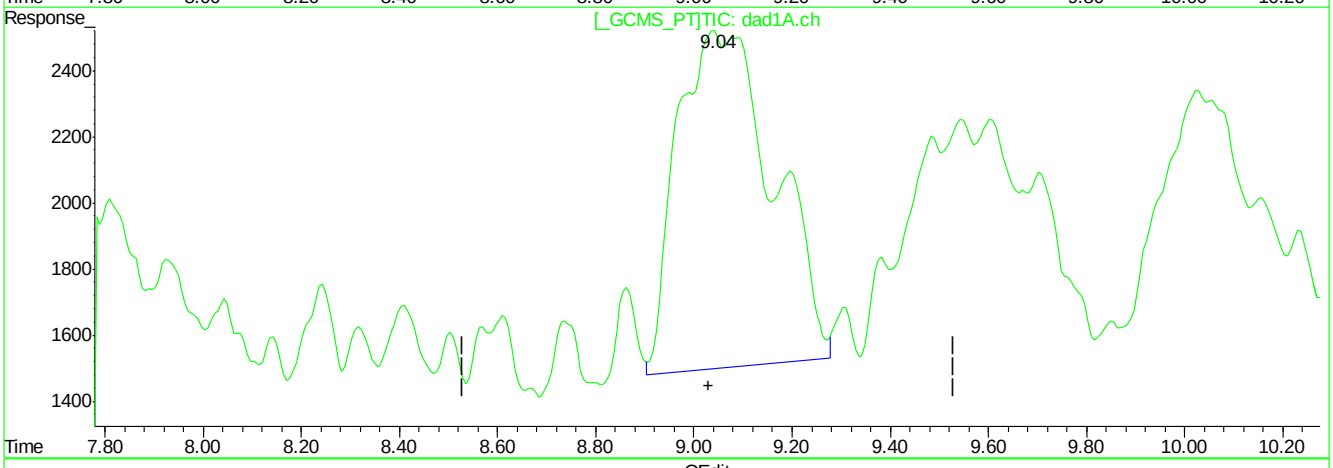
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:29 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

9.02min 0.000ppb

response 21201

(10) Nitroglycerin #2

9.04min 109.066ppb m

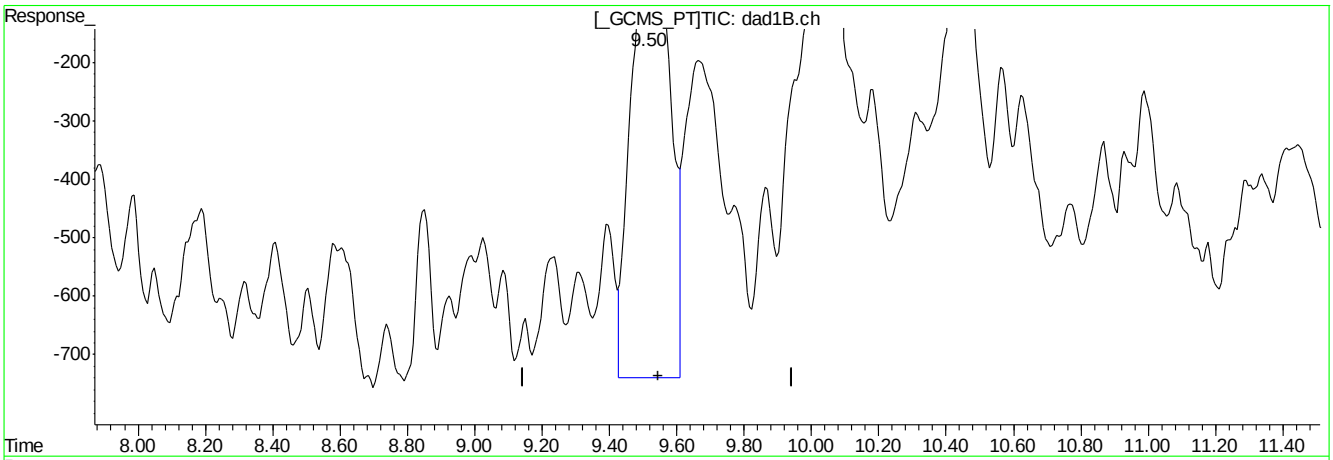
response 139364

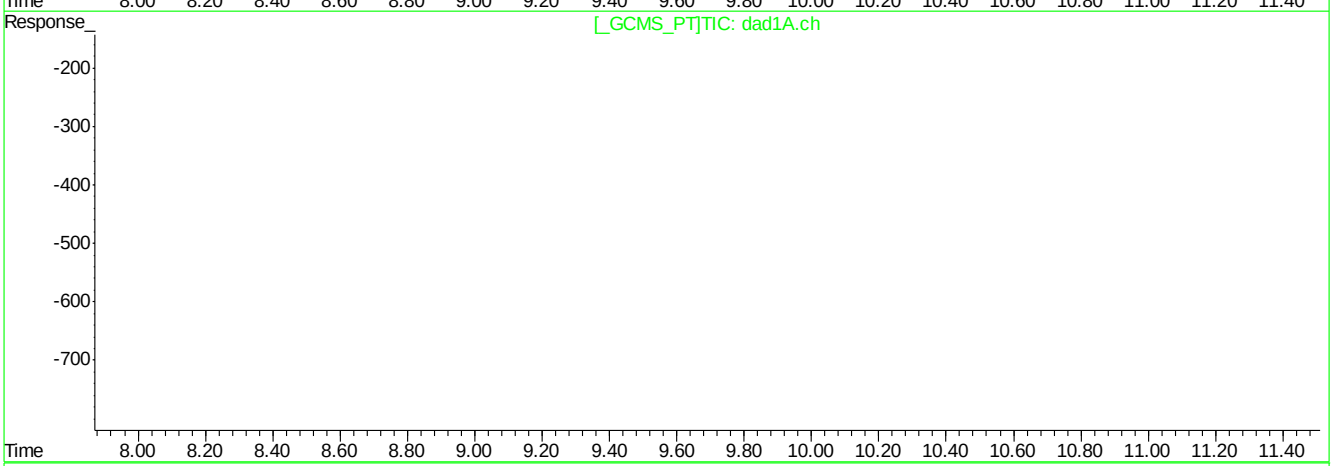
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:34 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.51min 18.826ppb

response 55716

(11) Tetryl #2

0.00min 0.000ppb

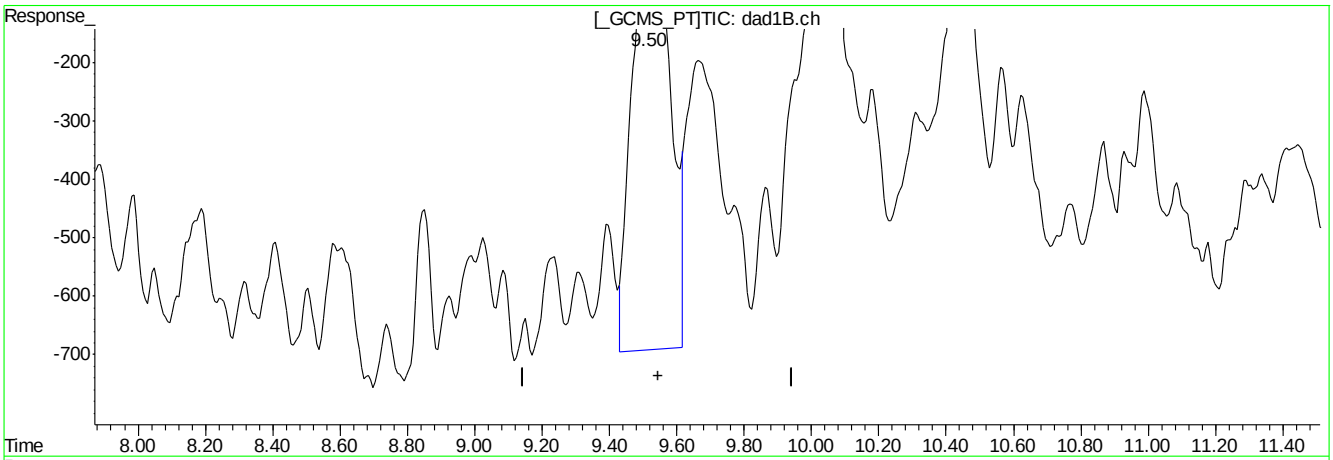
response 0

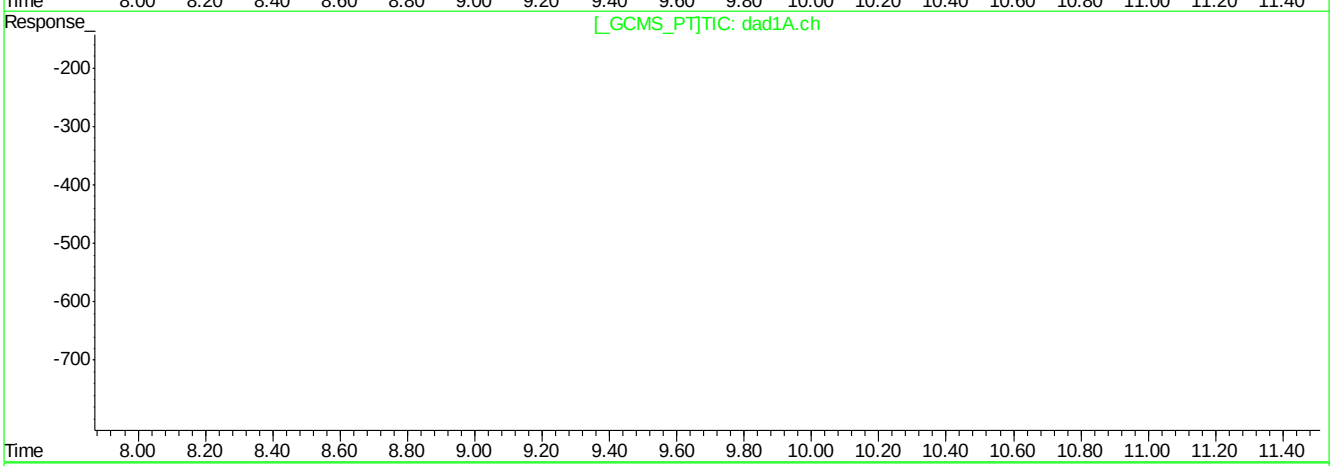
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:53 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.50min 17.896ppb m

response 52961

(11) Tetryl #2

0.00min 0.000ppb

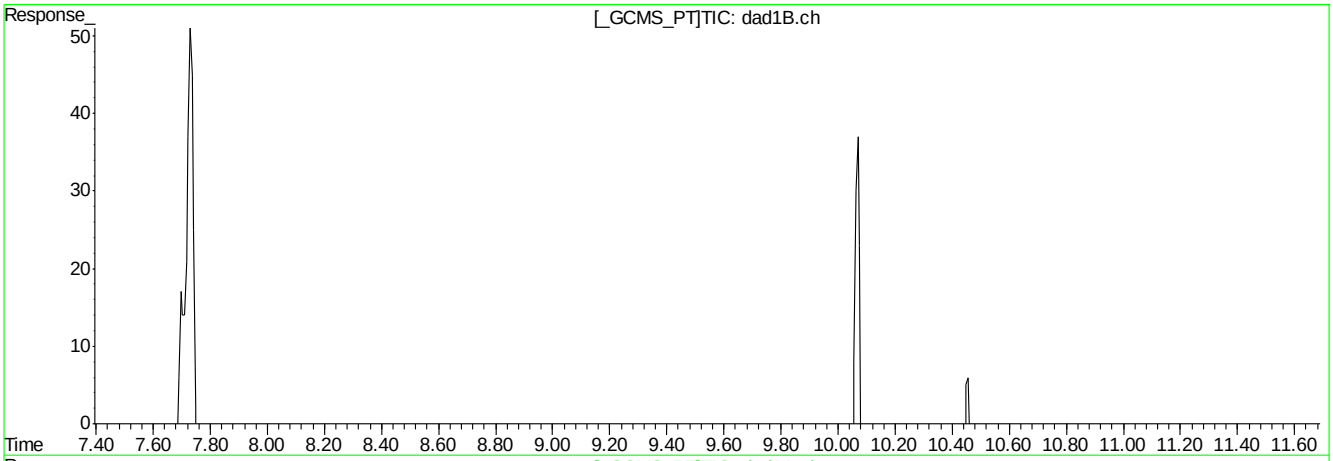
response 0

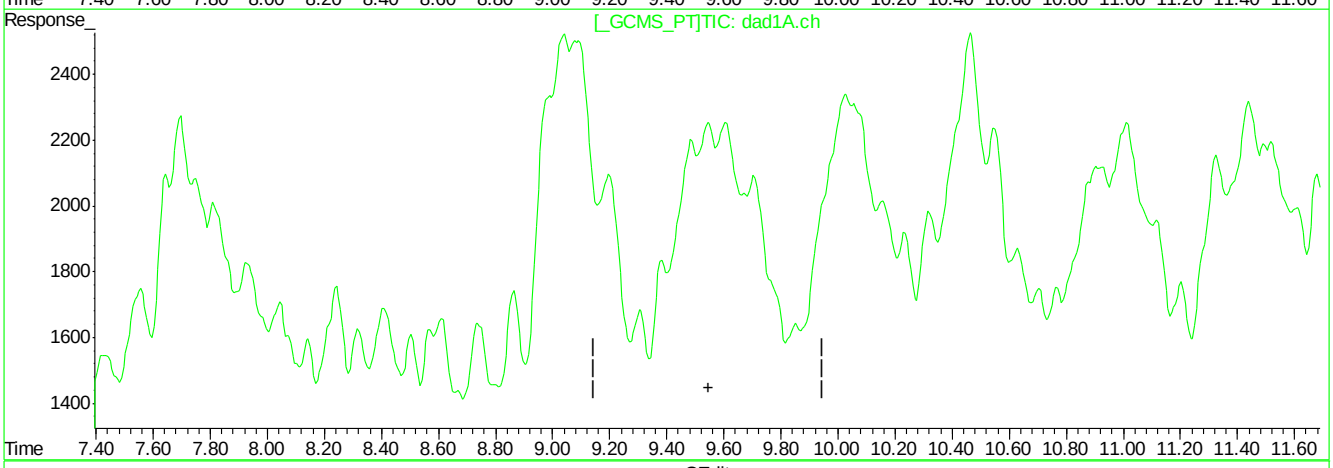
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:43:11 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.50min 17.896ppb m

response 52961

(11) Tetryl #2

0.00min 0.000ppb

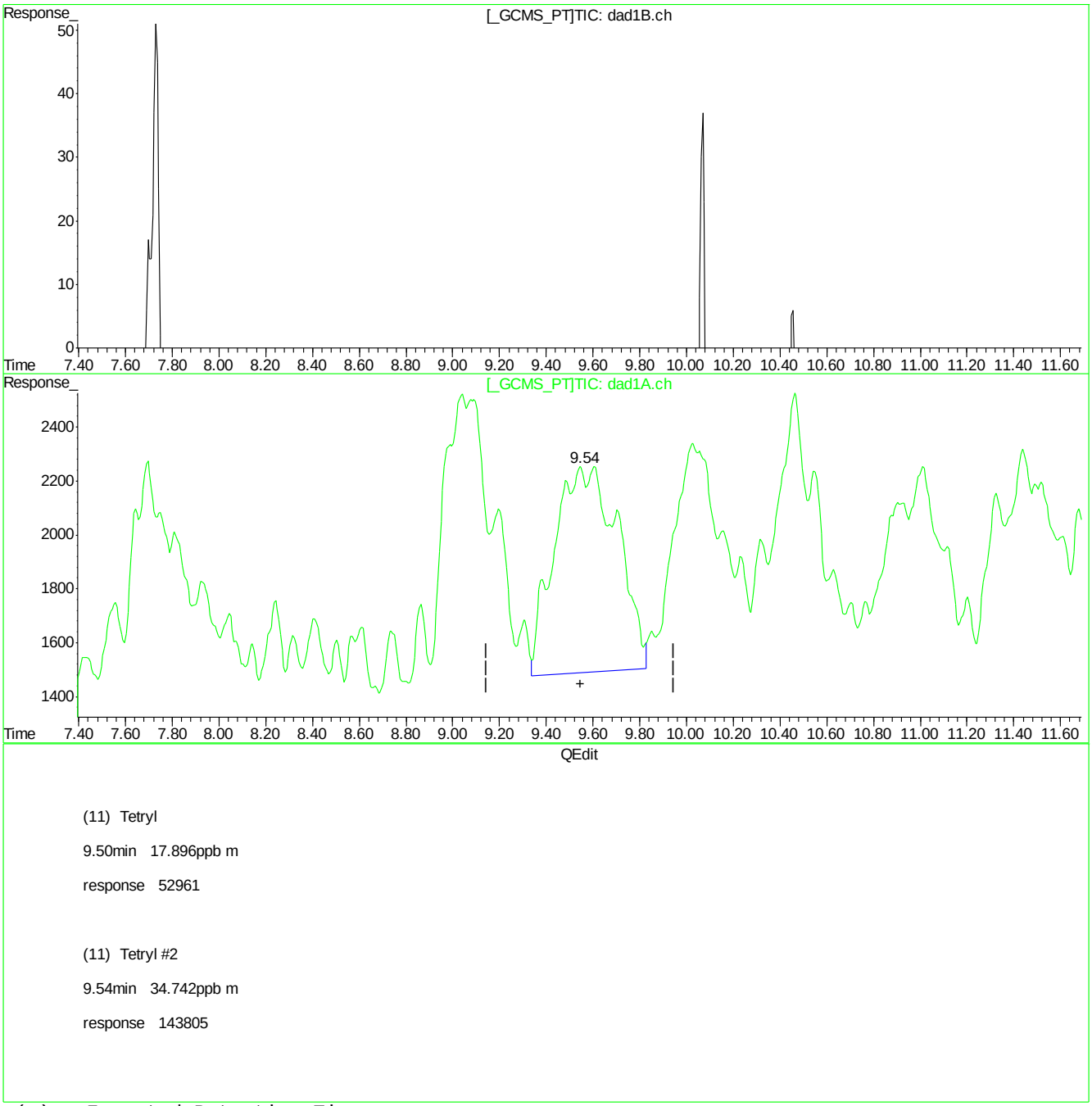
response 0

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:43:17 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(11) Tetryl

9.50min 17.896ppb m

response 52961

(11) Tetryl #2

9.54min 34.742ppb m

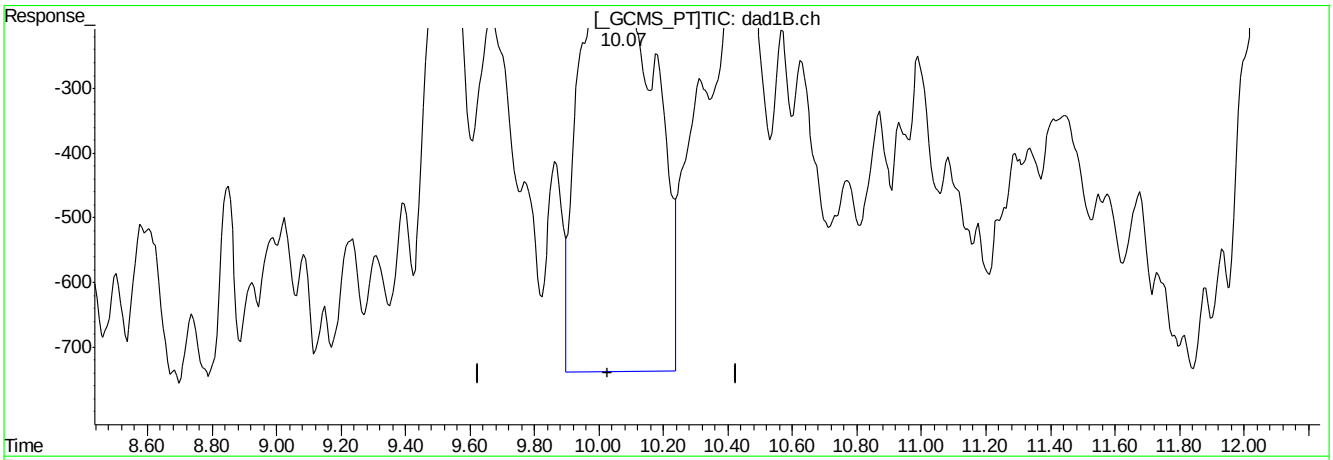
response 143805

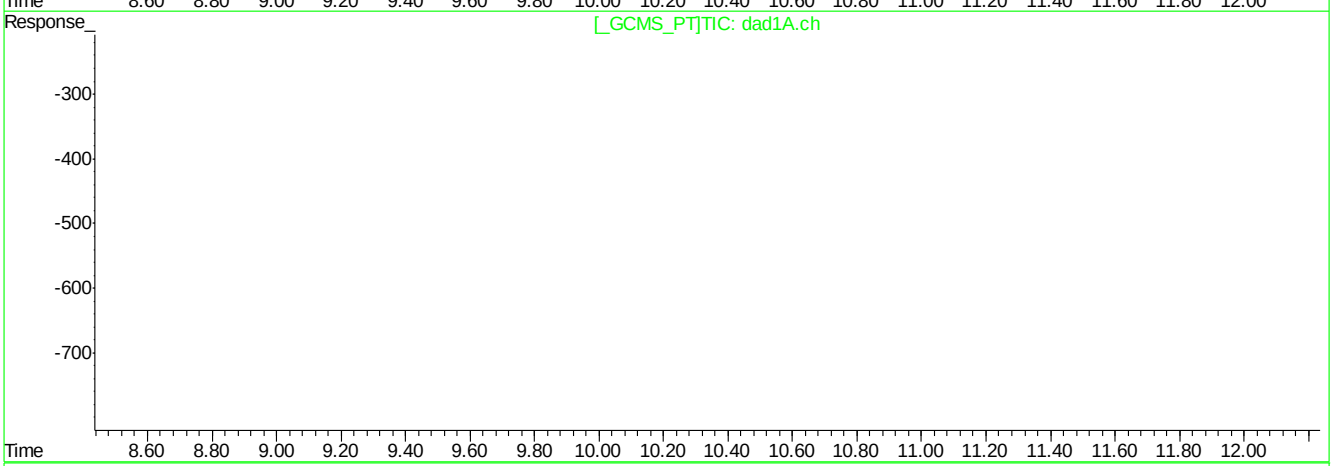
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:43:35 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.07min 26.985ppb

response 105697

(12) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb

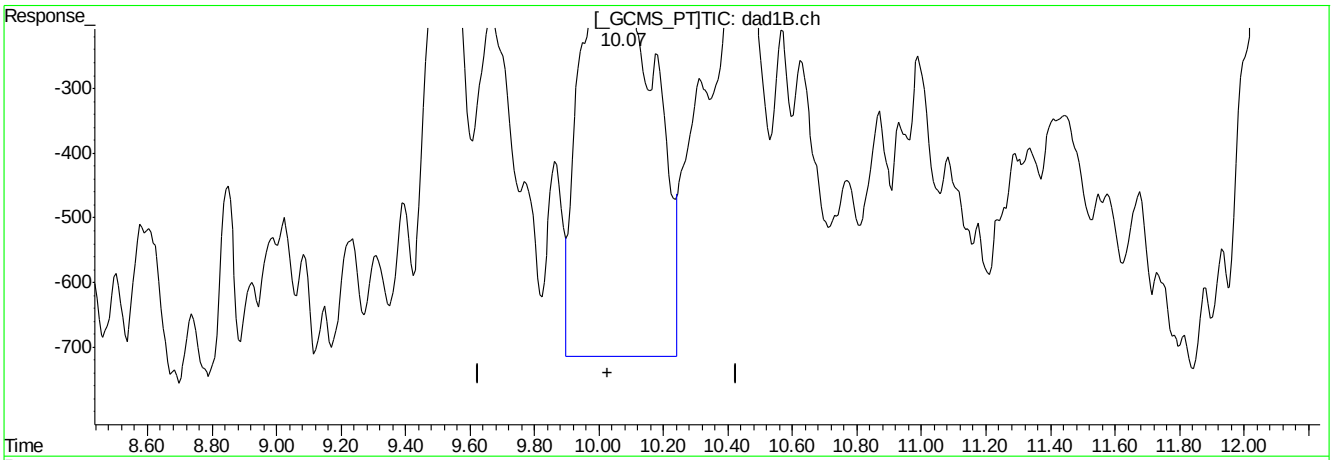
response 0

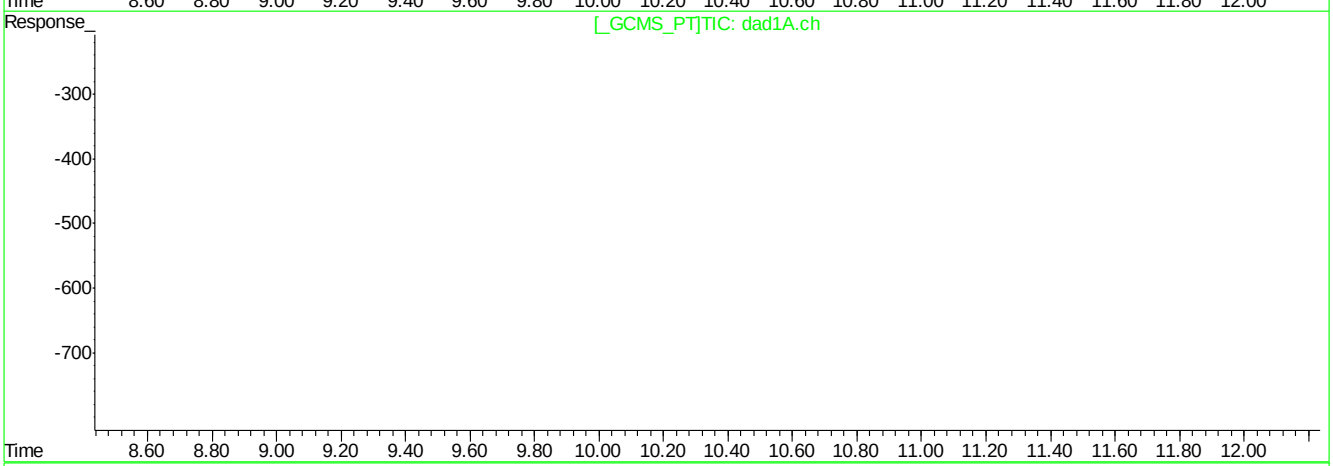
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:44:16 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.07min 25.910ppb m

response 101487

(12) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb

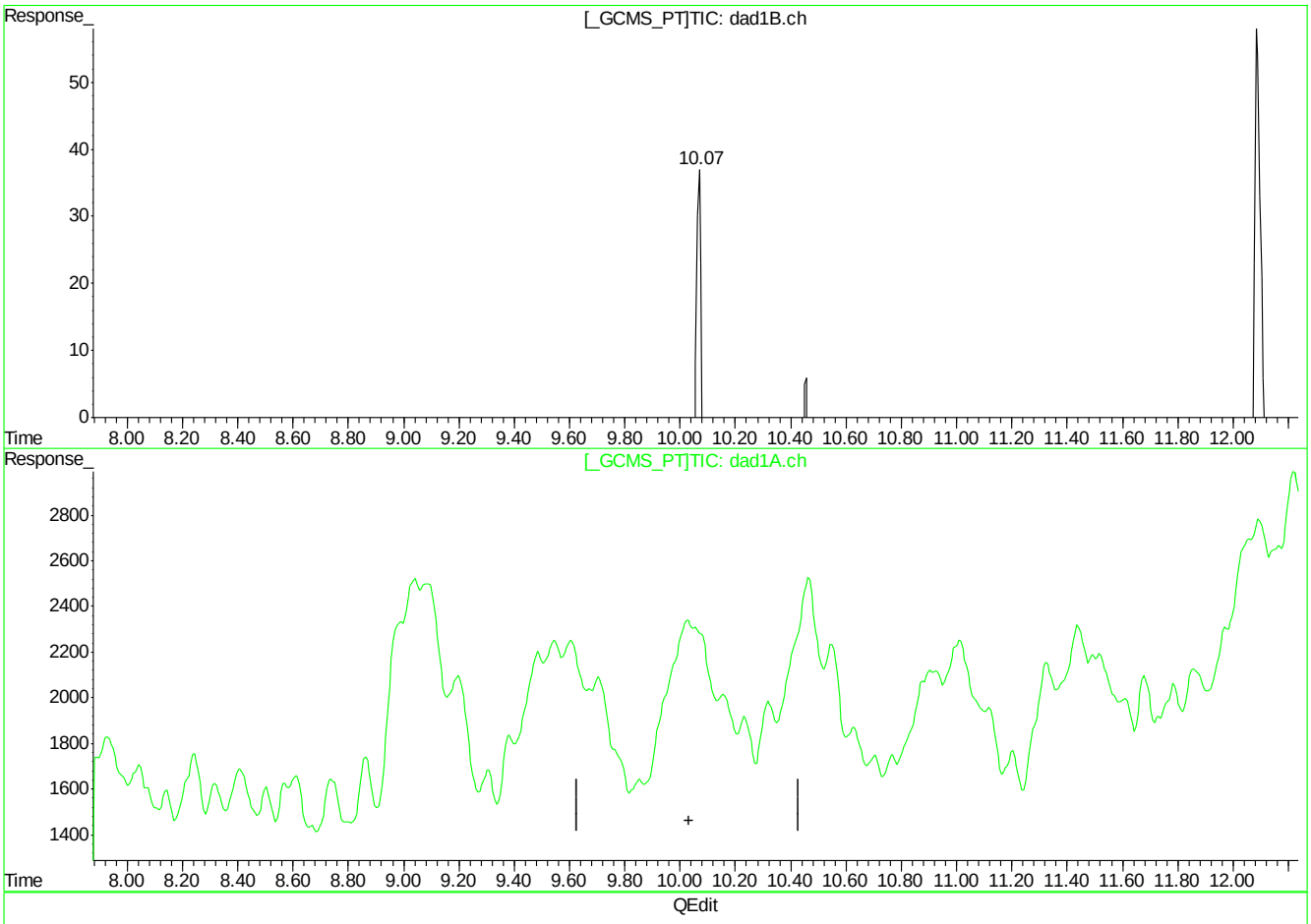
response 0

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:44:28 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

10.07min 25.910ppb m

response 101487

(12) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb

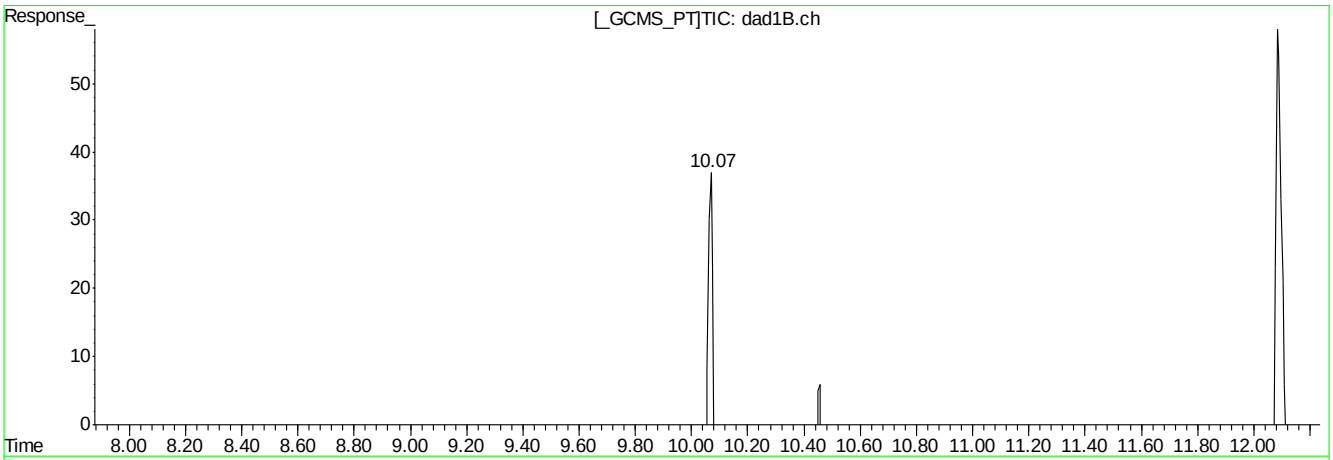
response 0

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:44:39 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

10.07min 25.910ppb m

response 101487

(12) 2,4,6-Trinitrotoluene #2

10.03min 29.865ppb m

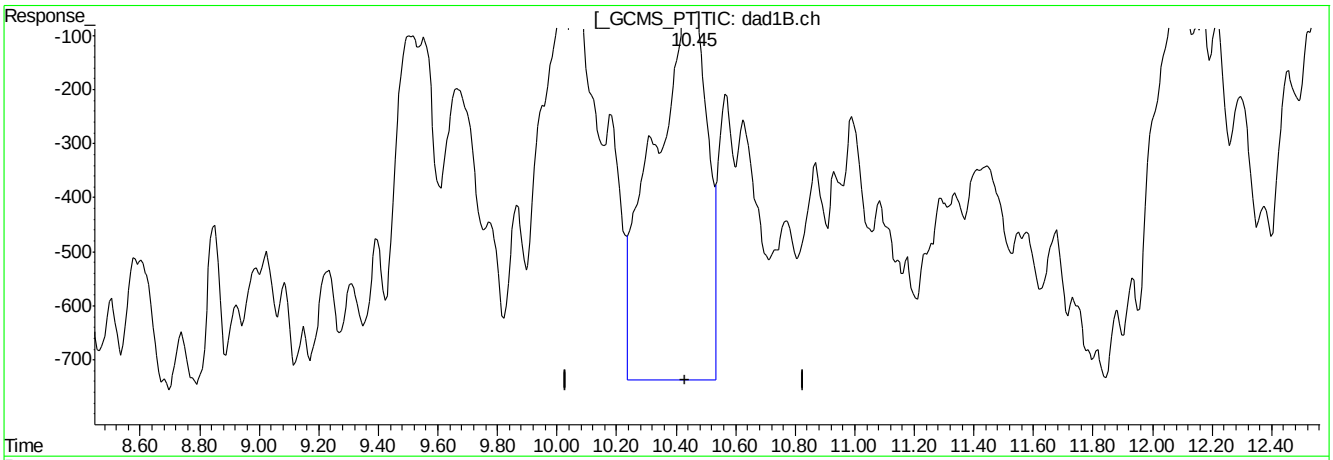
response 127709

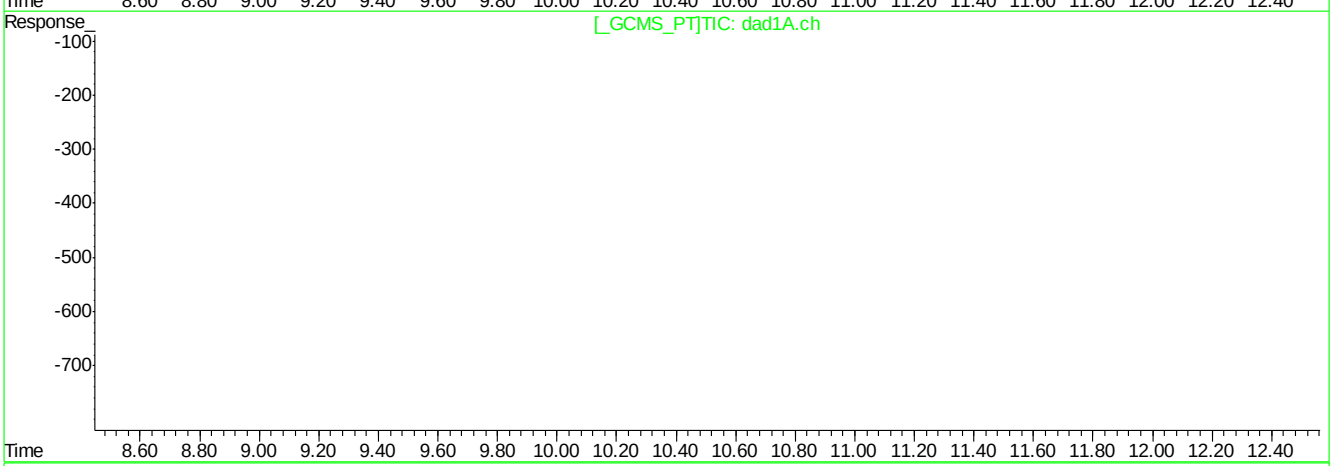
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:45:05 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.45min 23.334ppb

response 87134

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

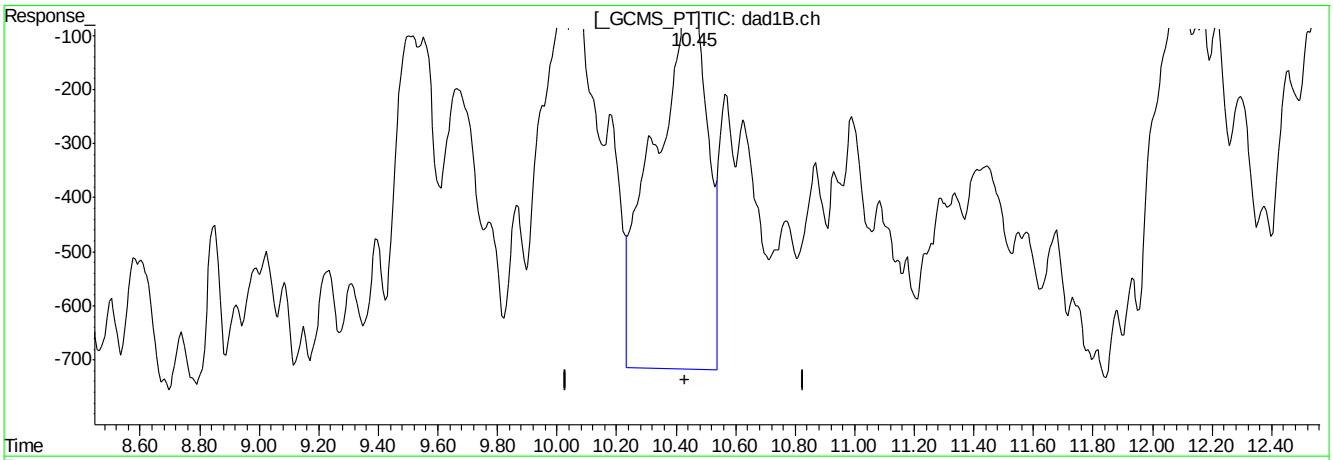
response 0

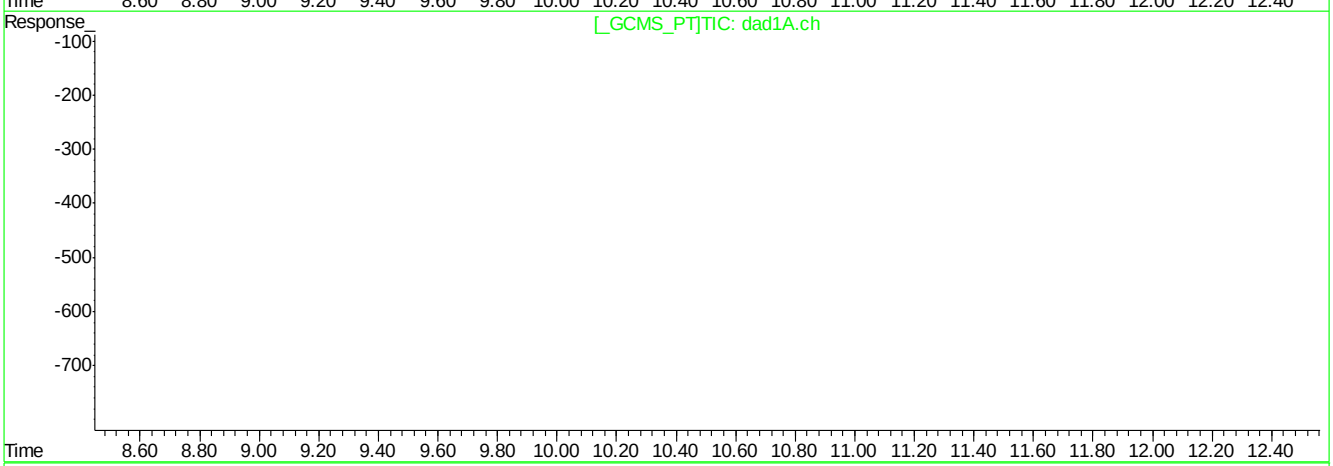
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:45:24 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.45min 23.221ppb m

response 86714

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

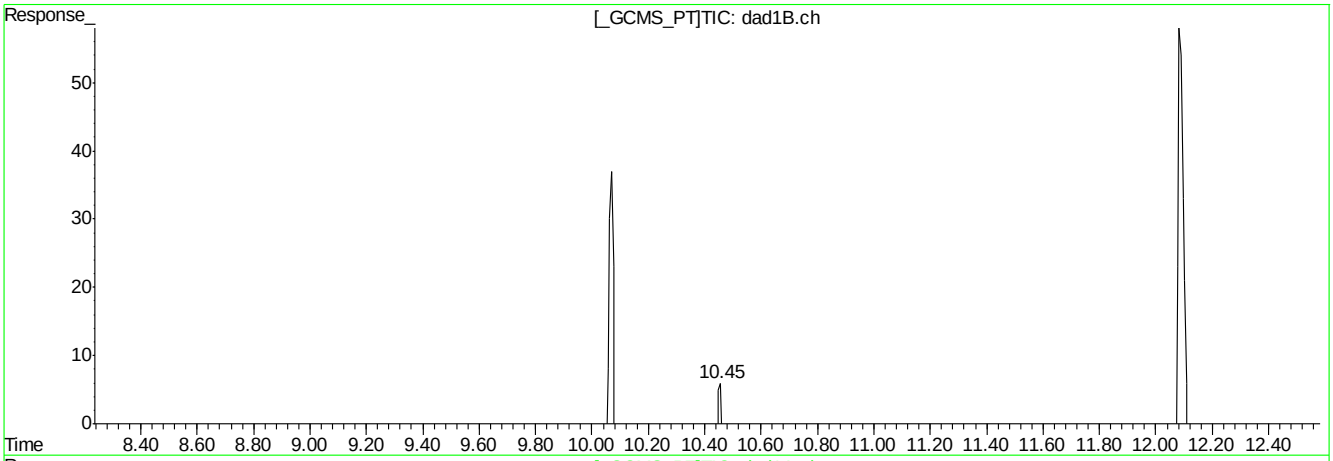
response 0

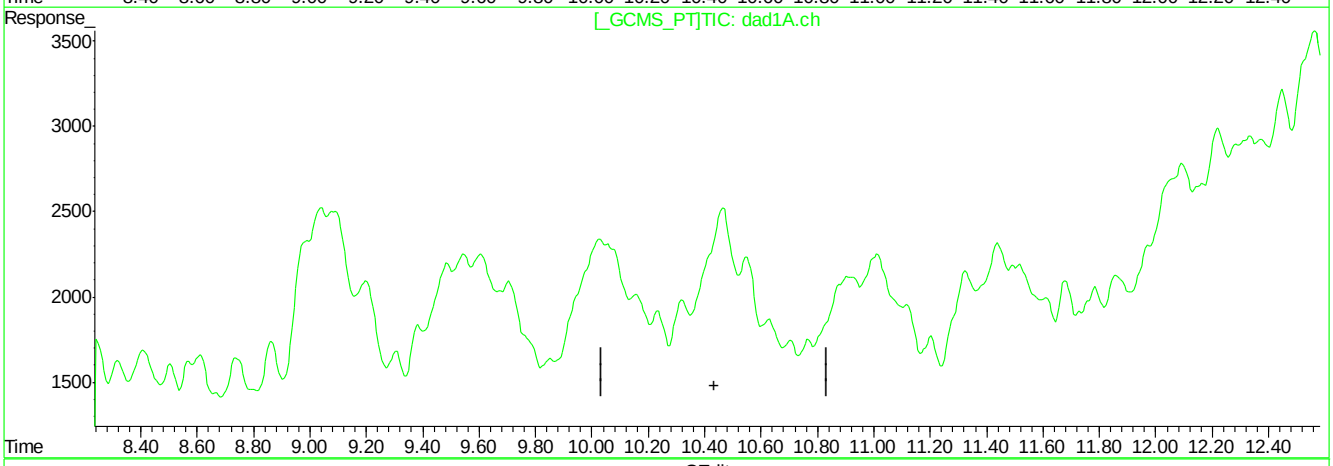
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:45:42 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.45min 23.221ppb m

response 86714

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

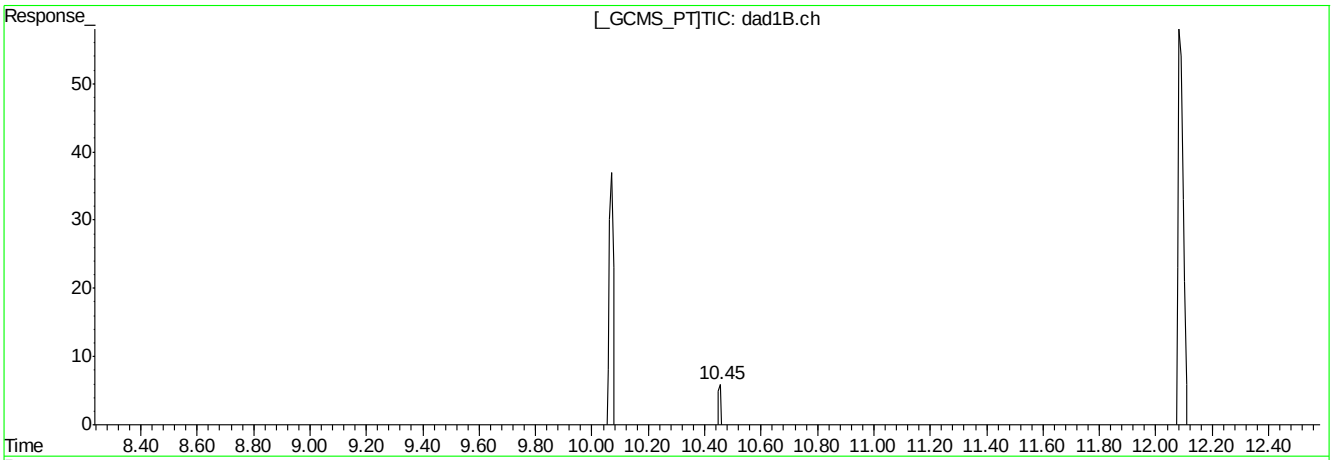
response 0

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:45:50 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.45min 23.221ppb m

response 86714

(13) 2-Amino-4,6-Dinitrotoluene #2

10.46min 21.088ppb m

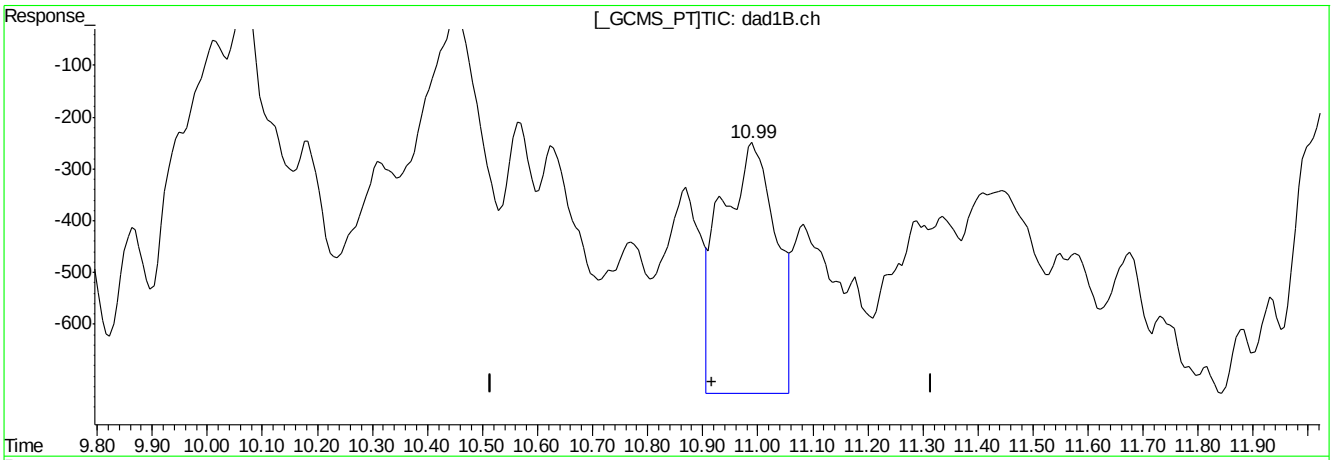
response 118088

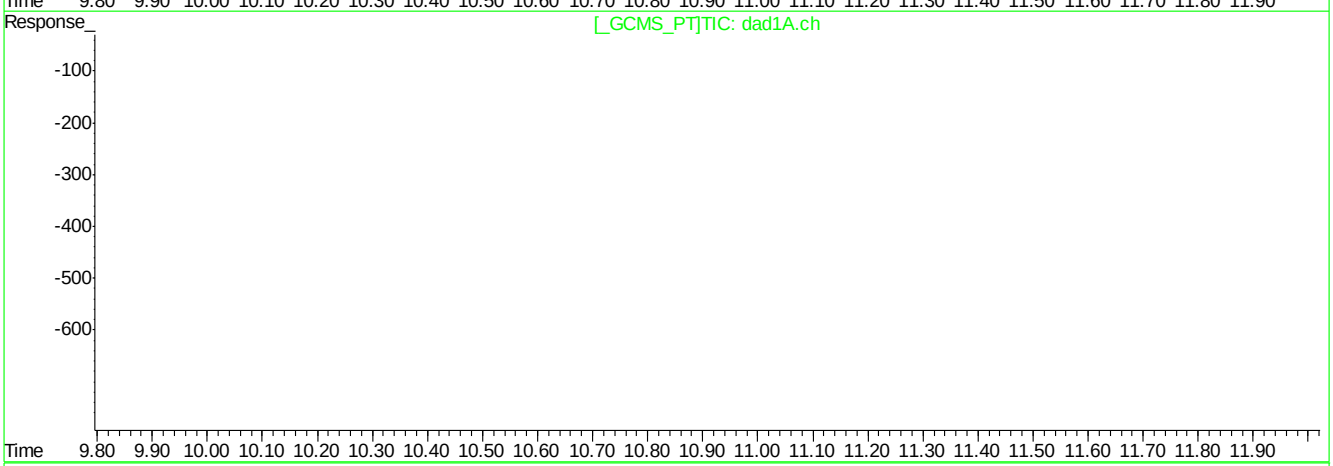
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:45:58 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.99min 12.661ppb

response 33371

(14) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb

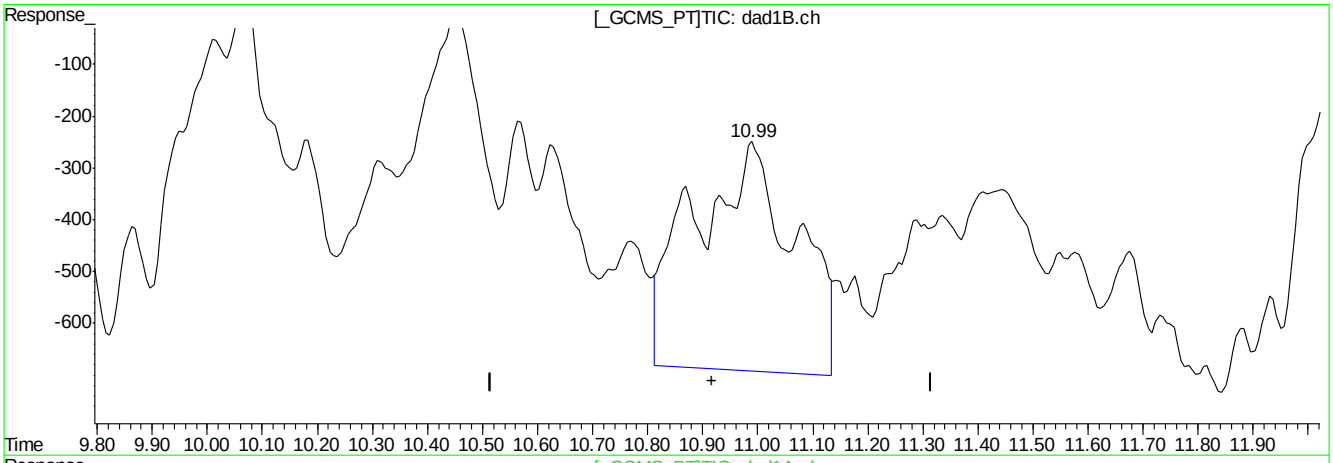
response 0

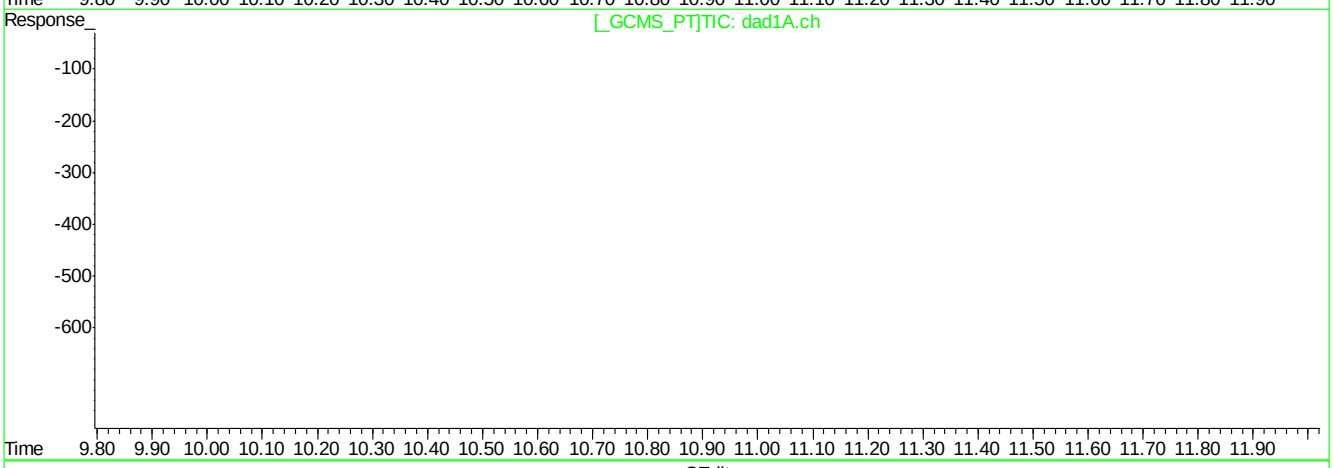
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:46:14 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.99min 21.156ppb m

response 55774

(14) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb

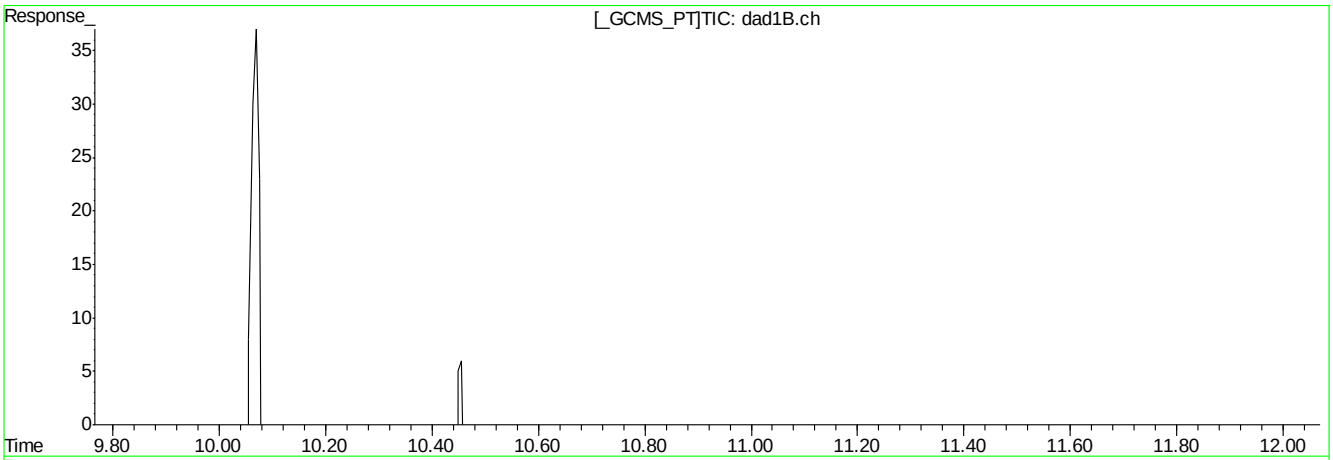
response 0

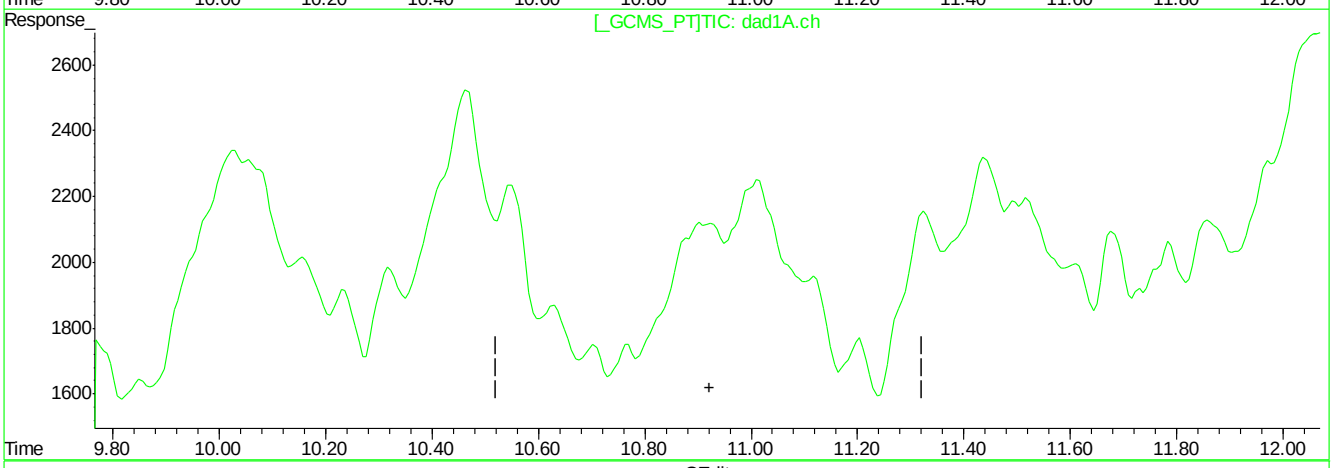
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:46:28 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.99min 21.156ppb m

response 55774

(14) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb

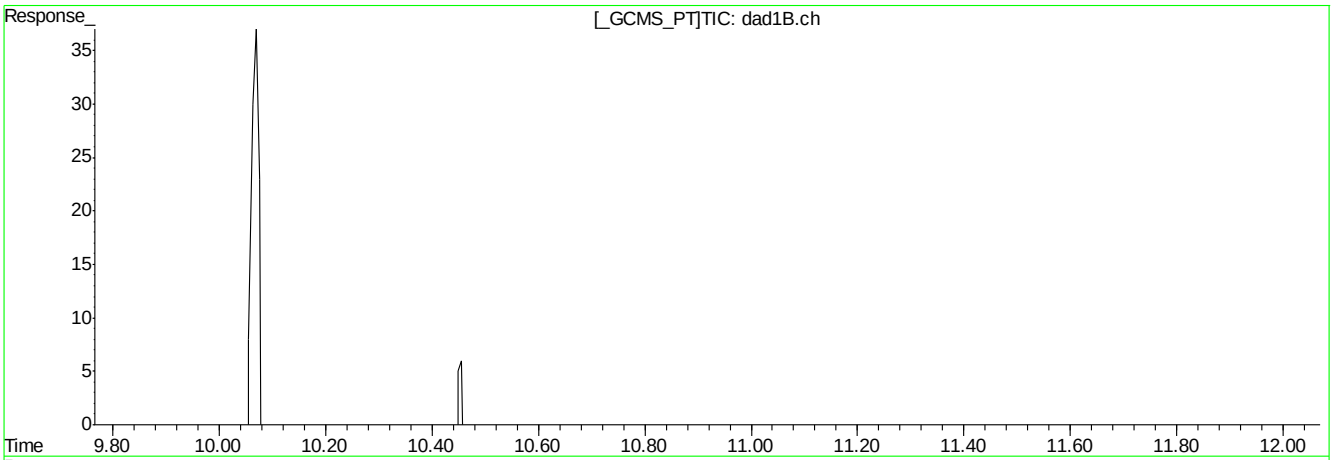
response 0

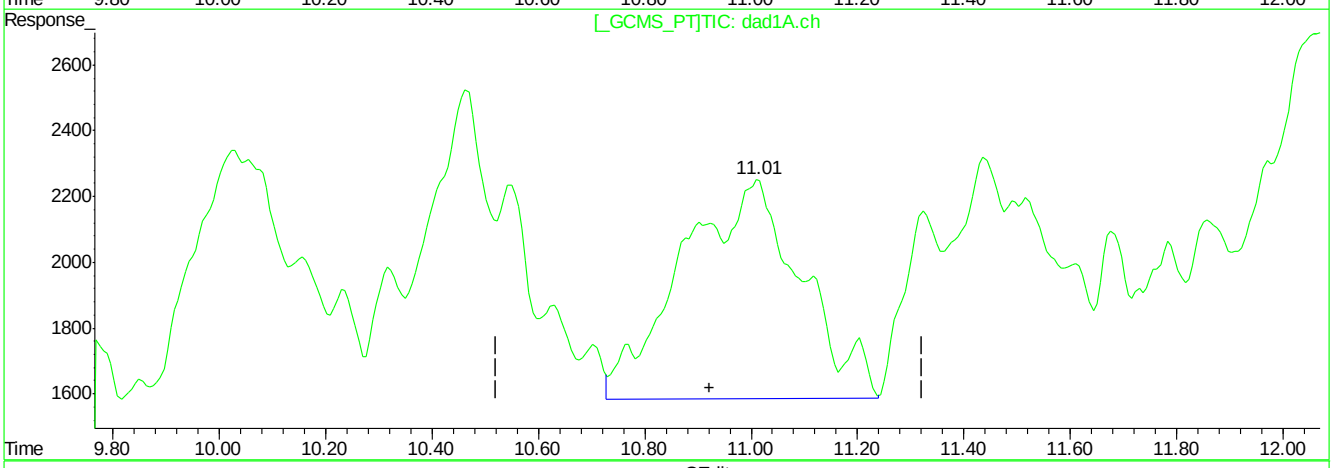
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:46:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.99min 21.156ppb m

response 55774

(14) 4-Amino-2,6-Dinitrotoluene #2

11.01min 19.461ppb m

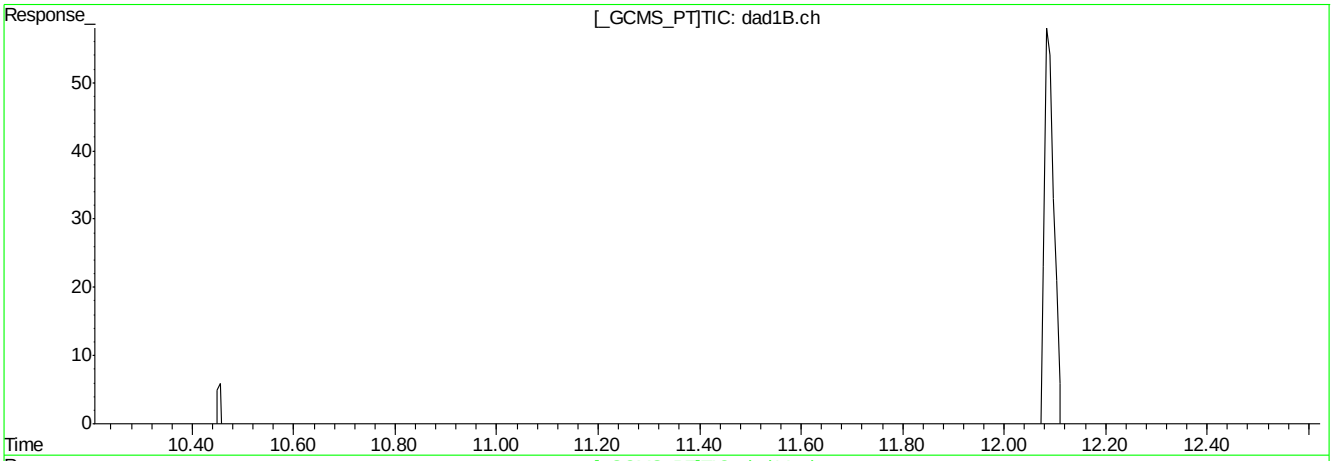
response 103732

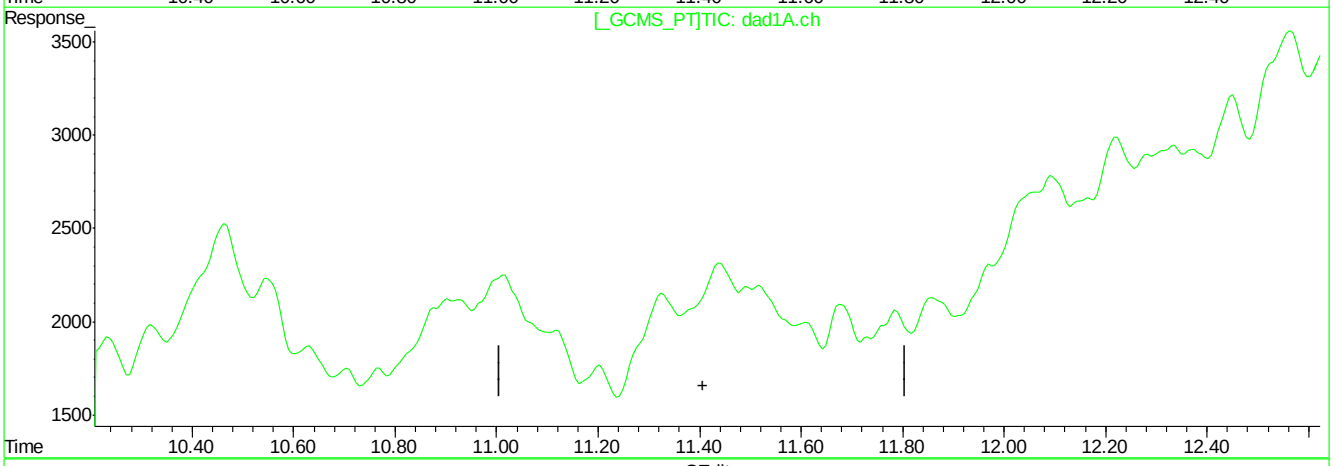
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:46:40 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.44min 29.384ppb

response 73123

(15) 3,4-Dinitrotoluene #2 (S)

0.00min 0.000ppb

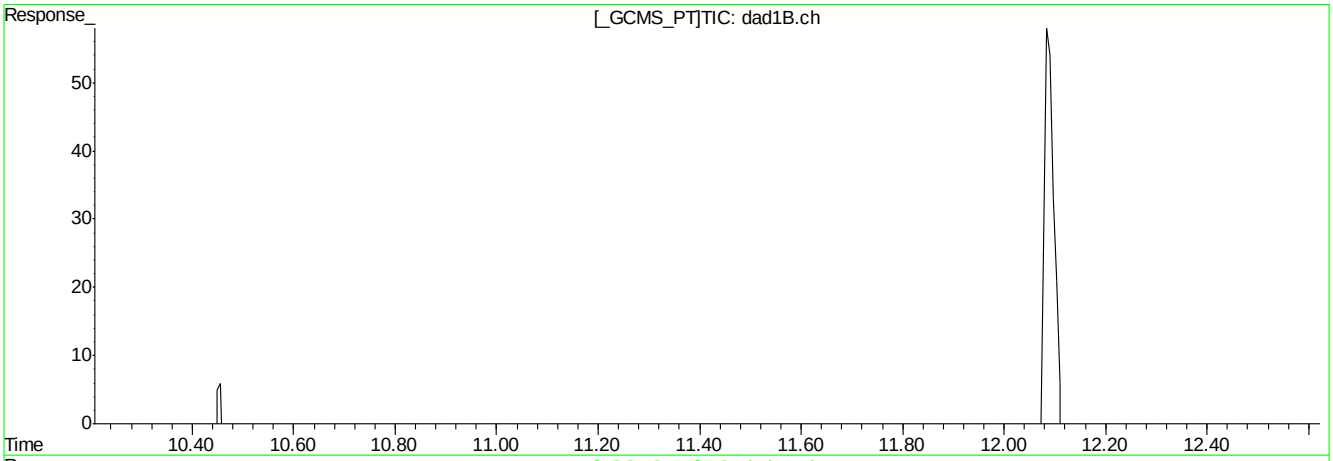
response 0

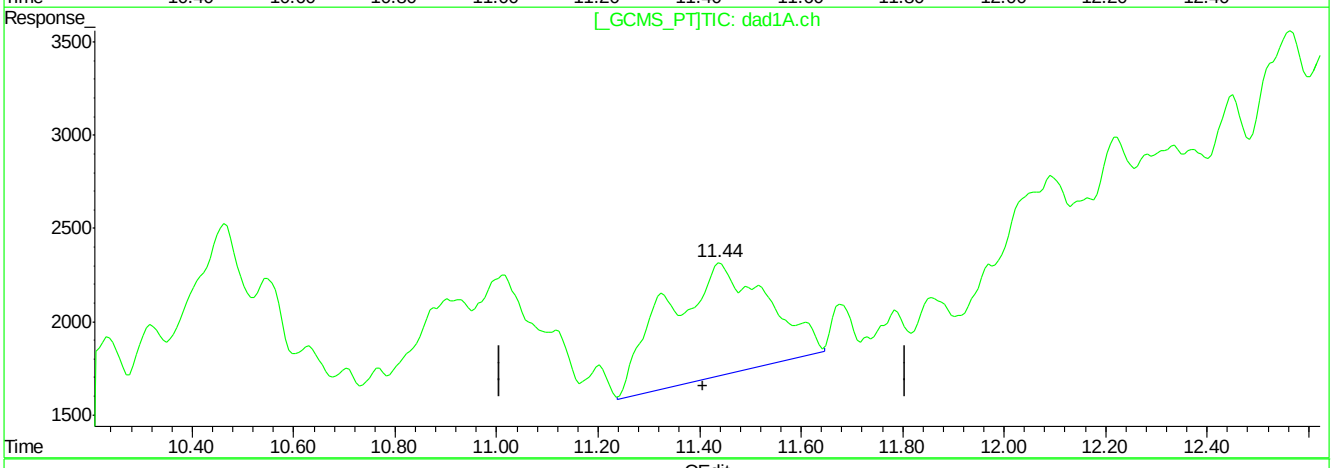
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:46:54 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.44min 29.384ppb

response 73123

(15) 3,4-Dinitrotoluene #2 (S)

11.44min 19.865ppb m

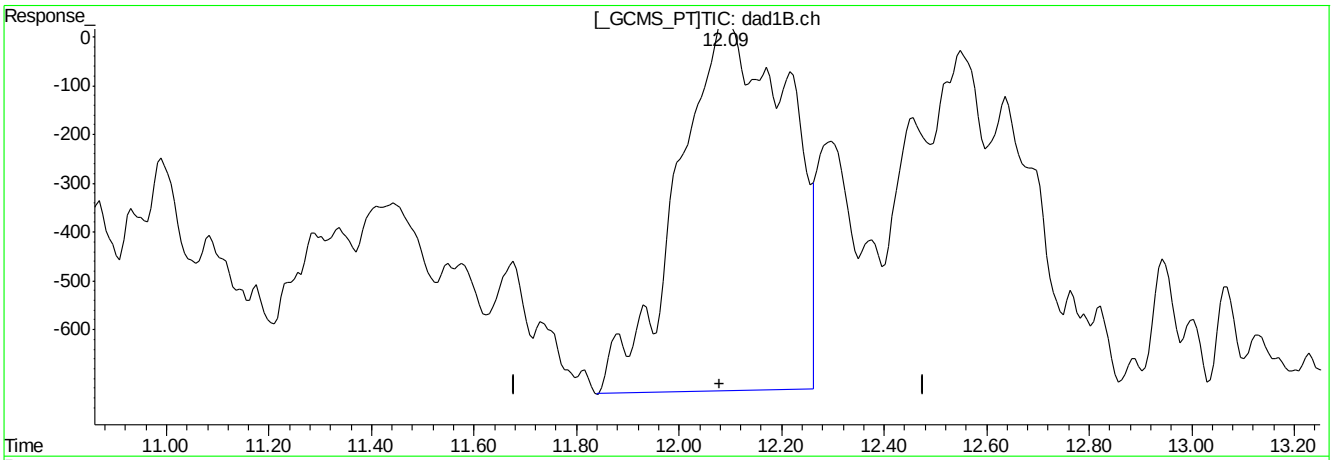
response 83553

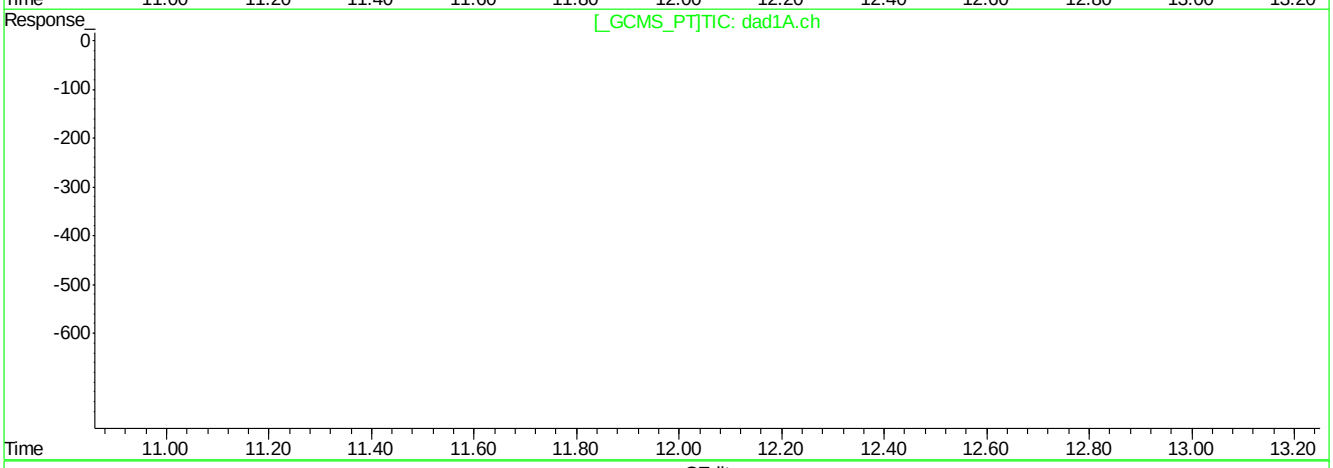
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:46:59 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.09min 21.712ppb

response 112648

(16) 2,4-Dinitrotoluene #2

0.00min 0.000ppb

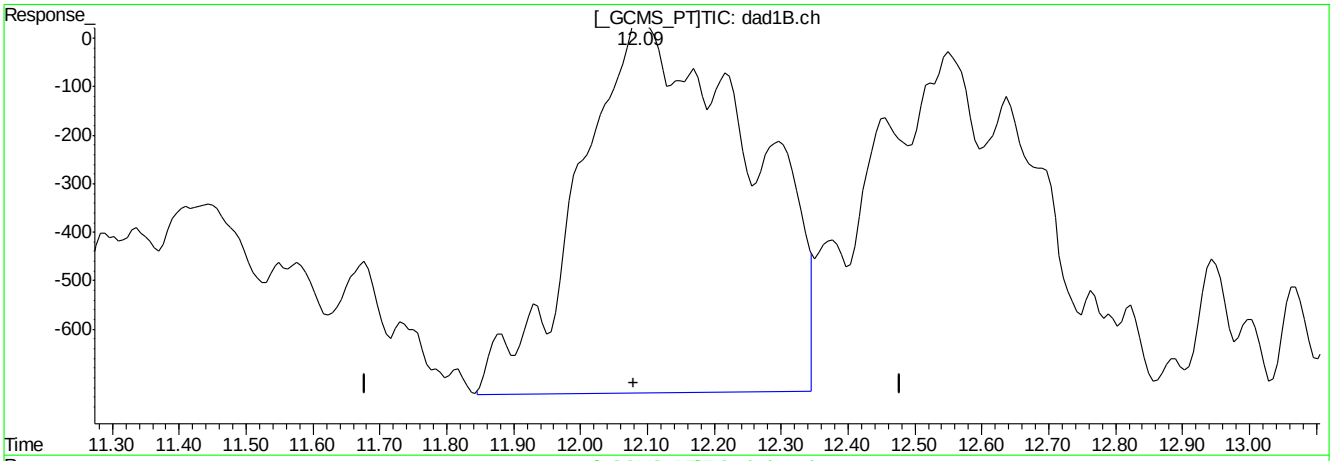
response 0

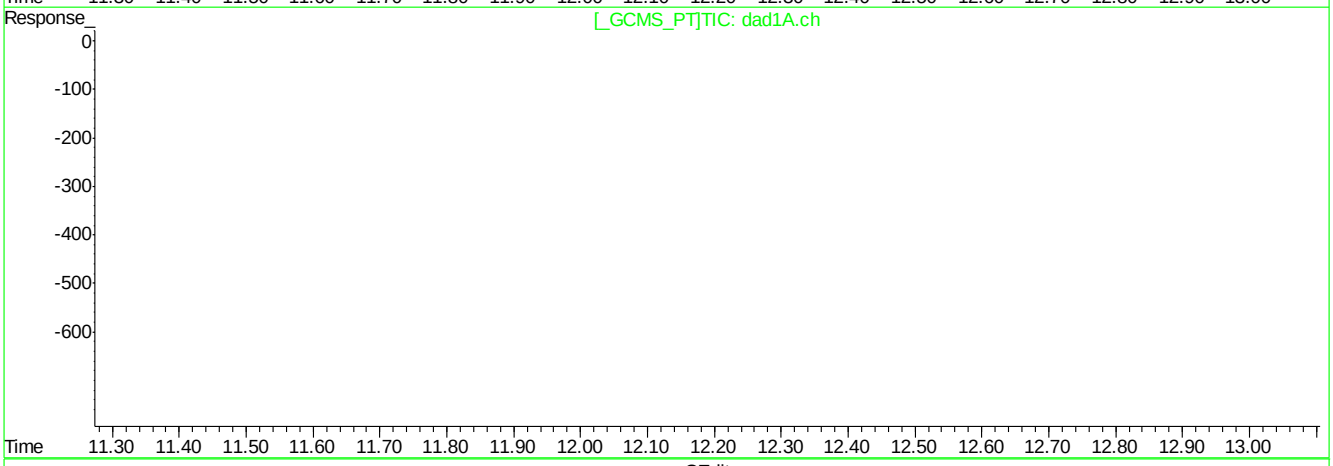
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:47:07 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.09min 26.386ppb m

response 136897

(16) 2,4-Dinitrotoluene #2

0.00min 0.000ppb

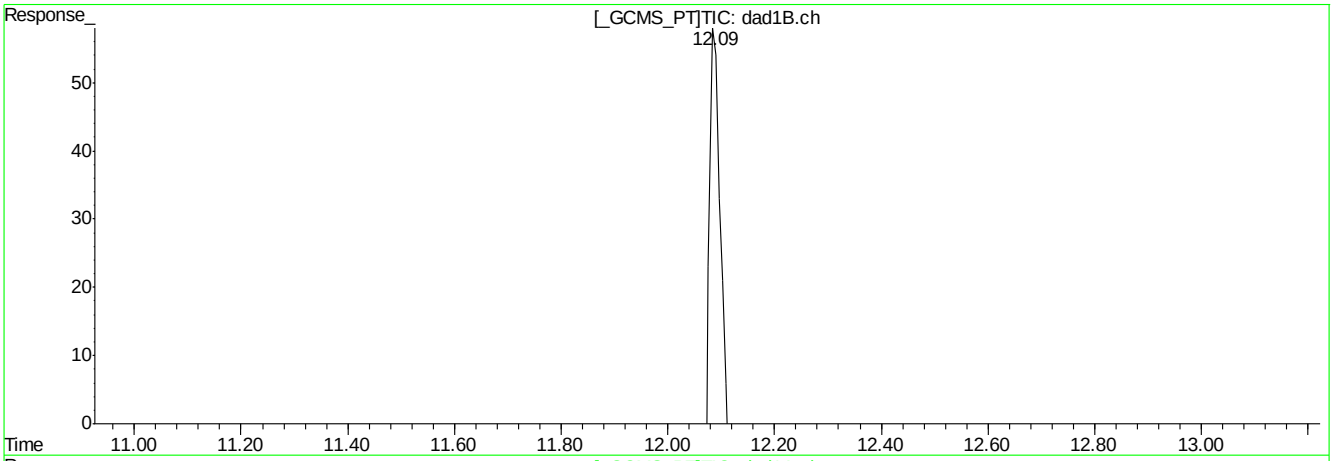
response 0

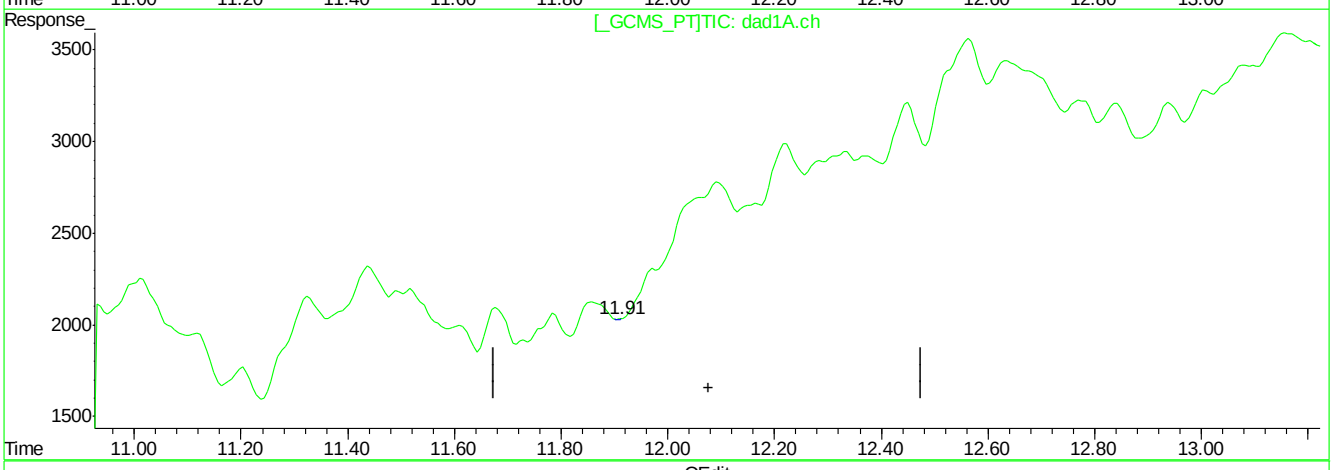
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:47:24 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.09min 26.386ppb m

response 136897

(16) 2,4-Dinitrotoluene #2

11.91min 0.010ppb m

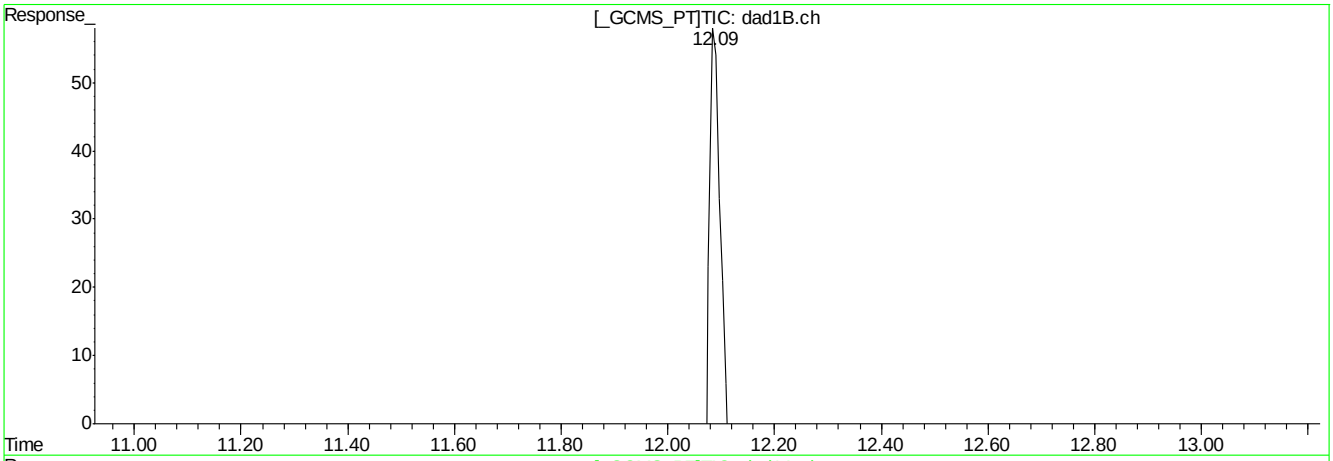
response 31

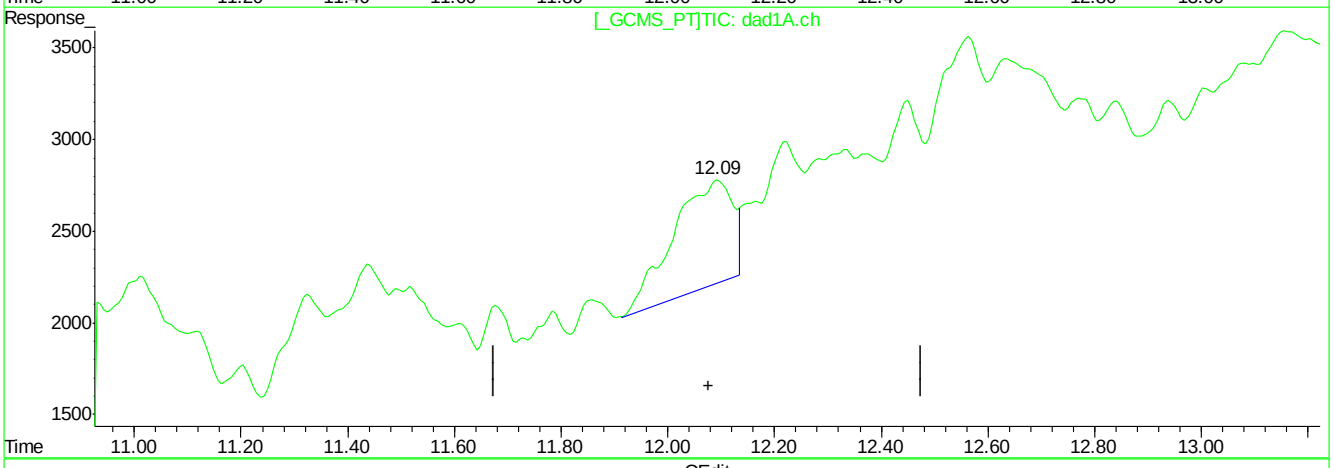
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:47:40 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.09min 26.386ppb m

response 136897

(16) 2,4-Dinitrotoluene #2

12.09min 14.109ppb m

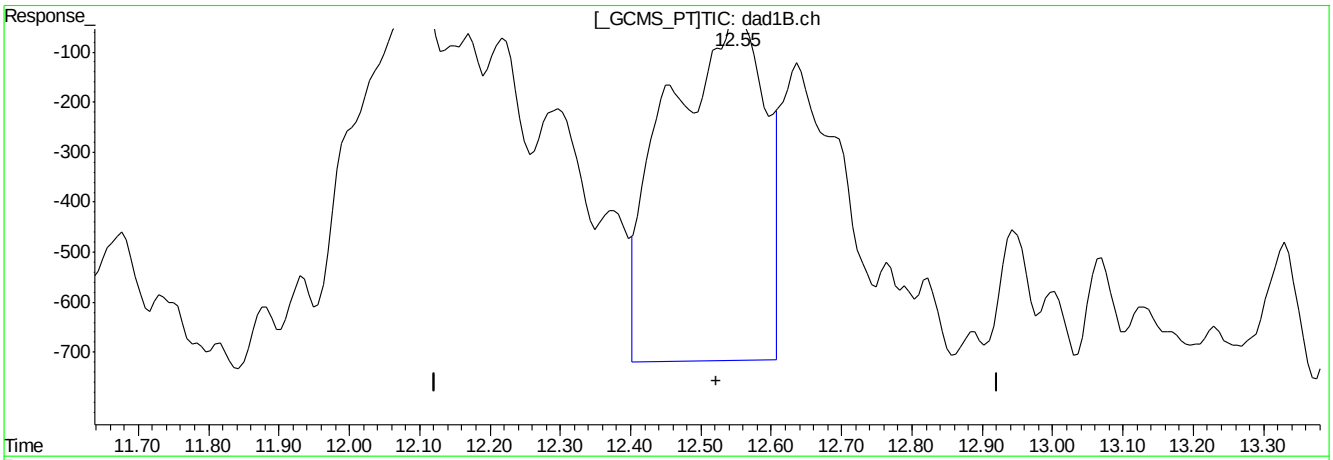
response 44517

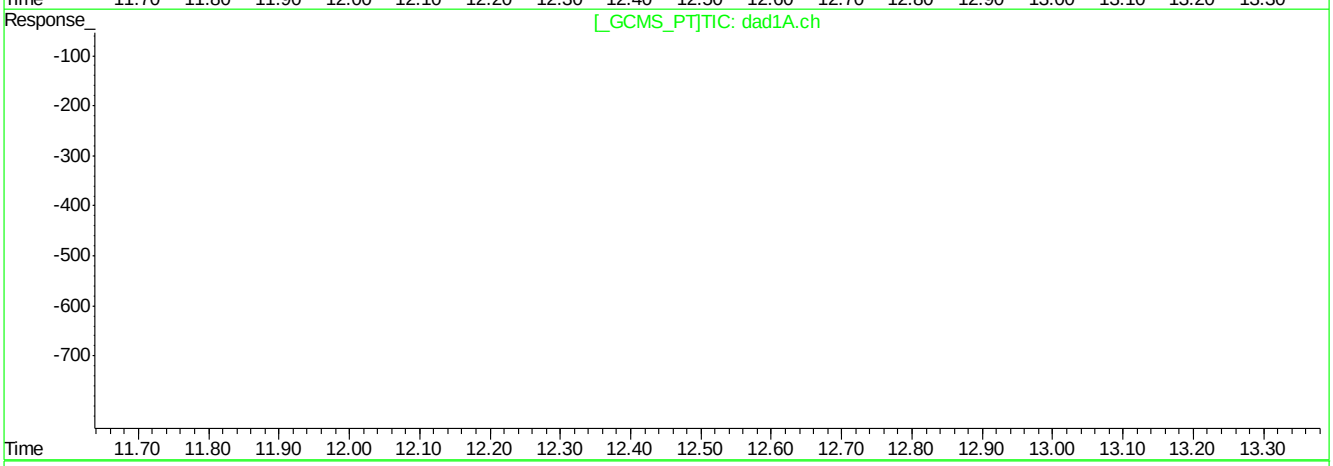
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:47:51 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 22.343ppb

response 65628

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

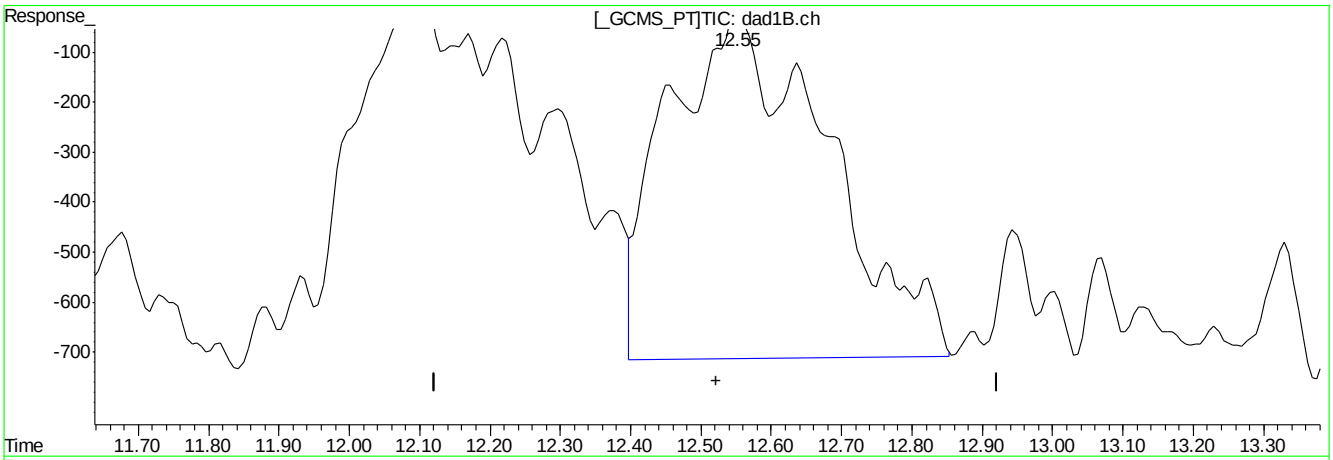
response 0

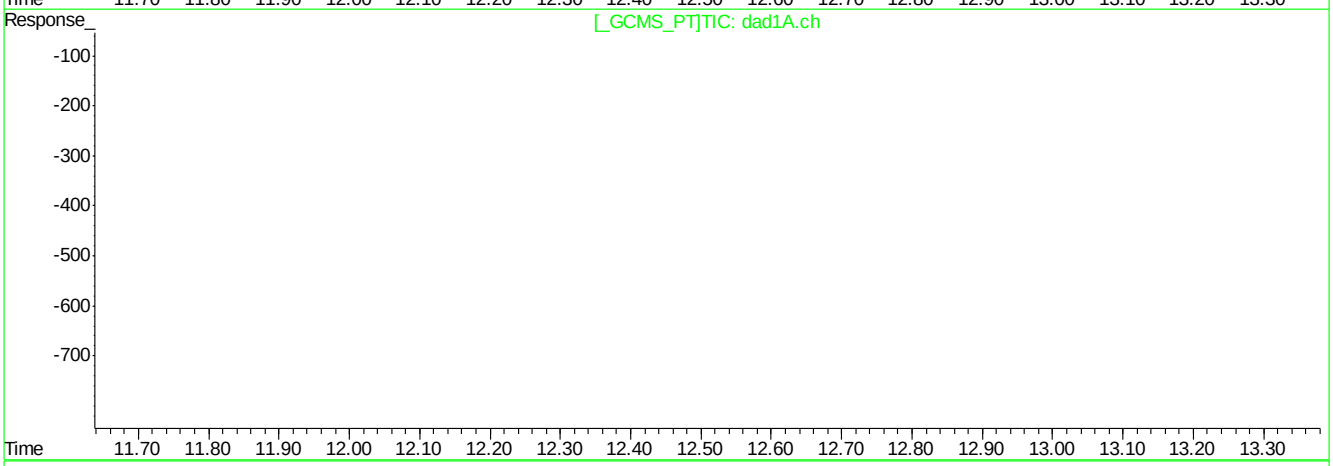
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:47:59 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 37.119ppb m

response 109062

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

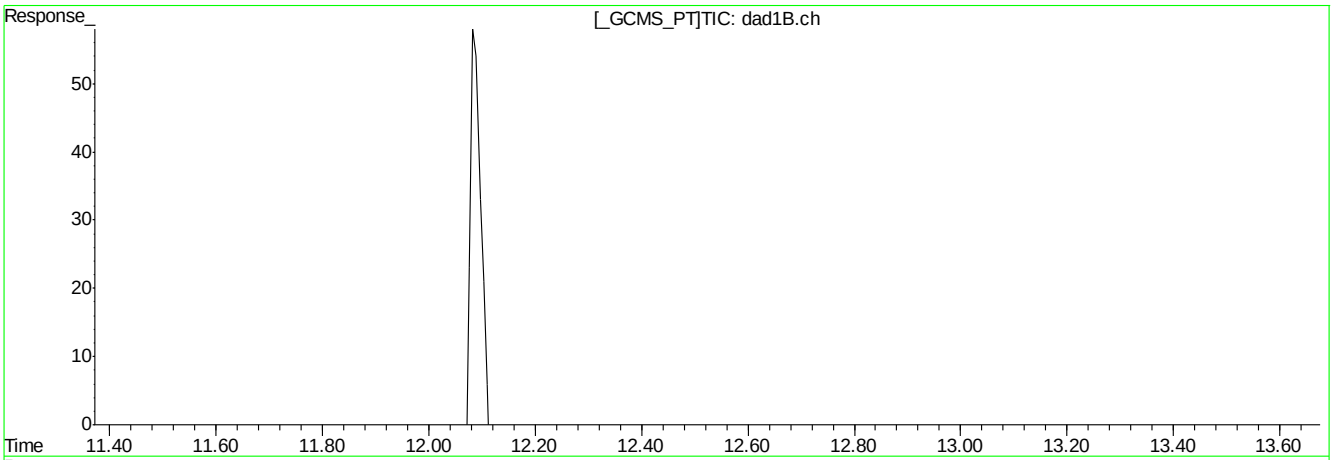
response 0

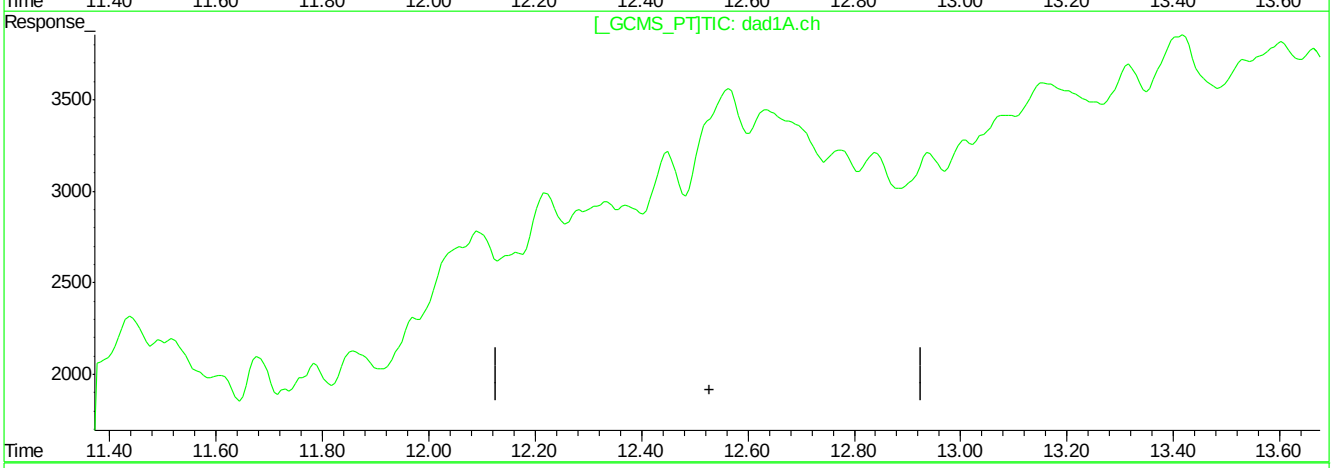
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:48:06 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 37.119ppb m

response 109062

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

response 0

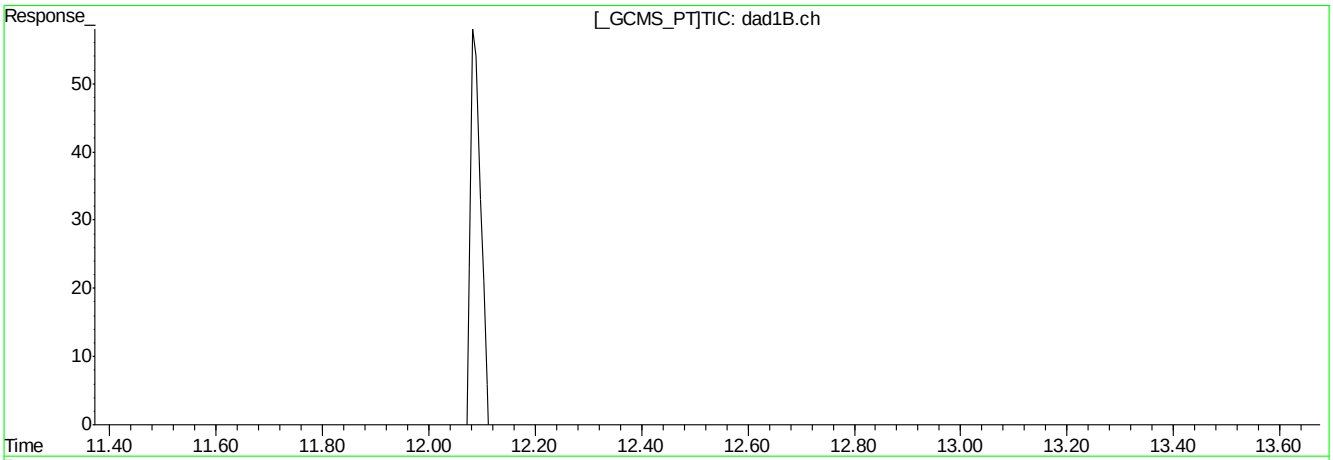
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:48:10 2018

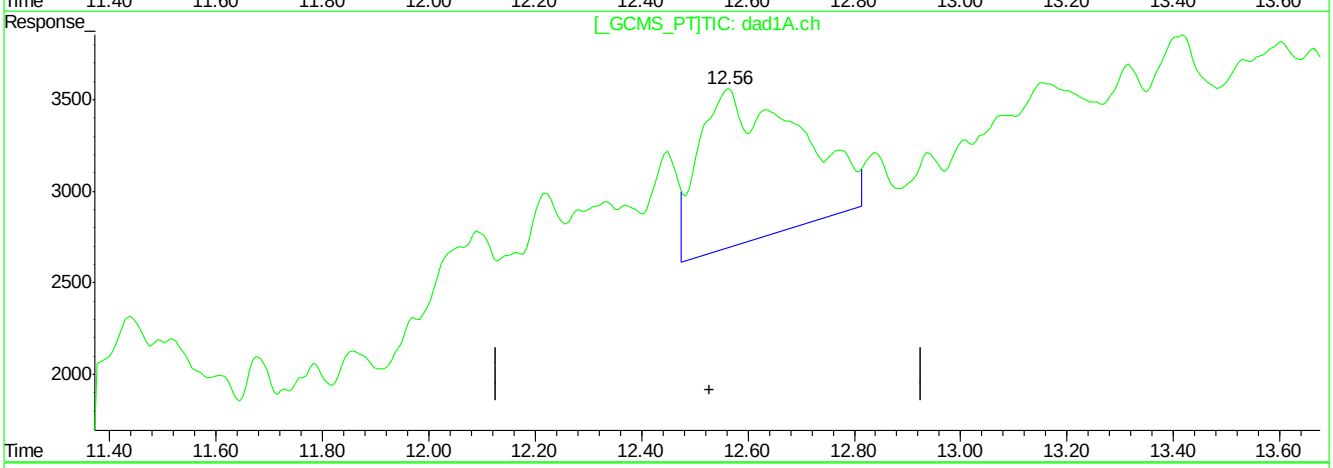
BB060200.D edits: 2,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 37.119ppb m

response 109062

(17) 2,6-Dinitrotoluene #2

12.56min 29.843ppb m

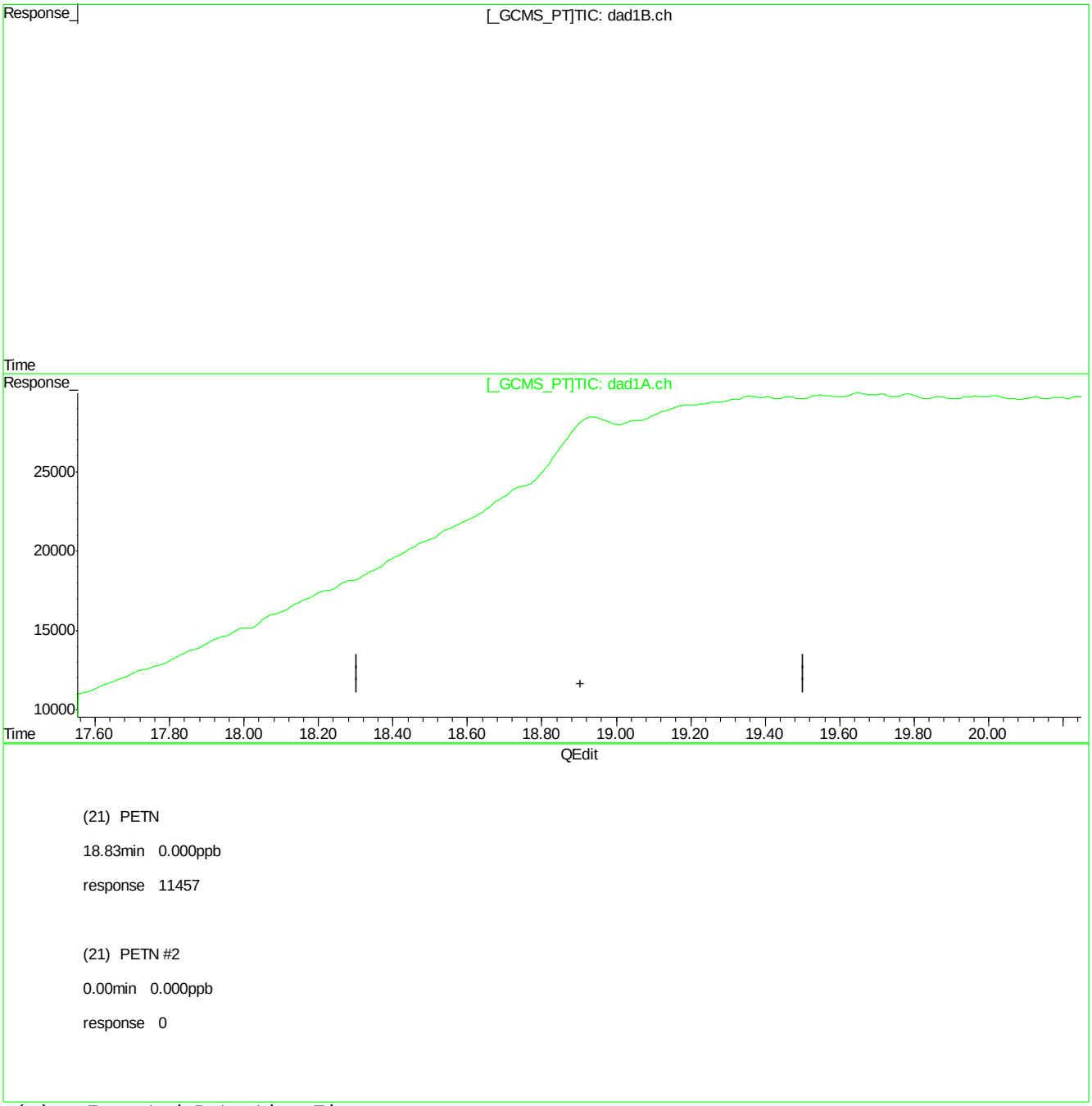
response 110117

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:48:19 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration

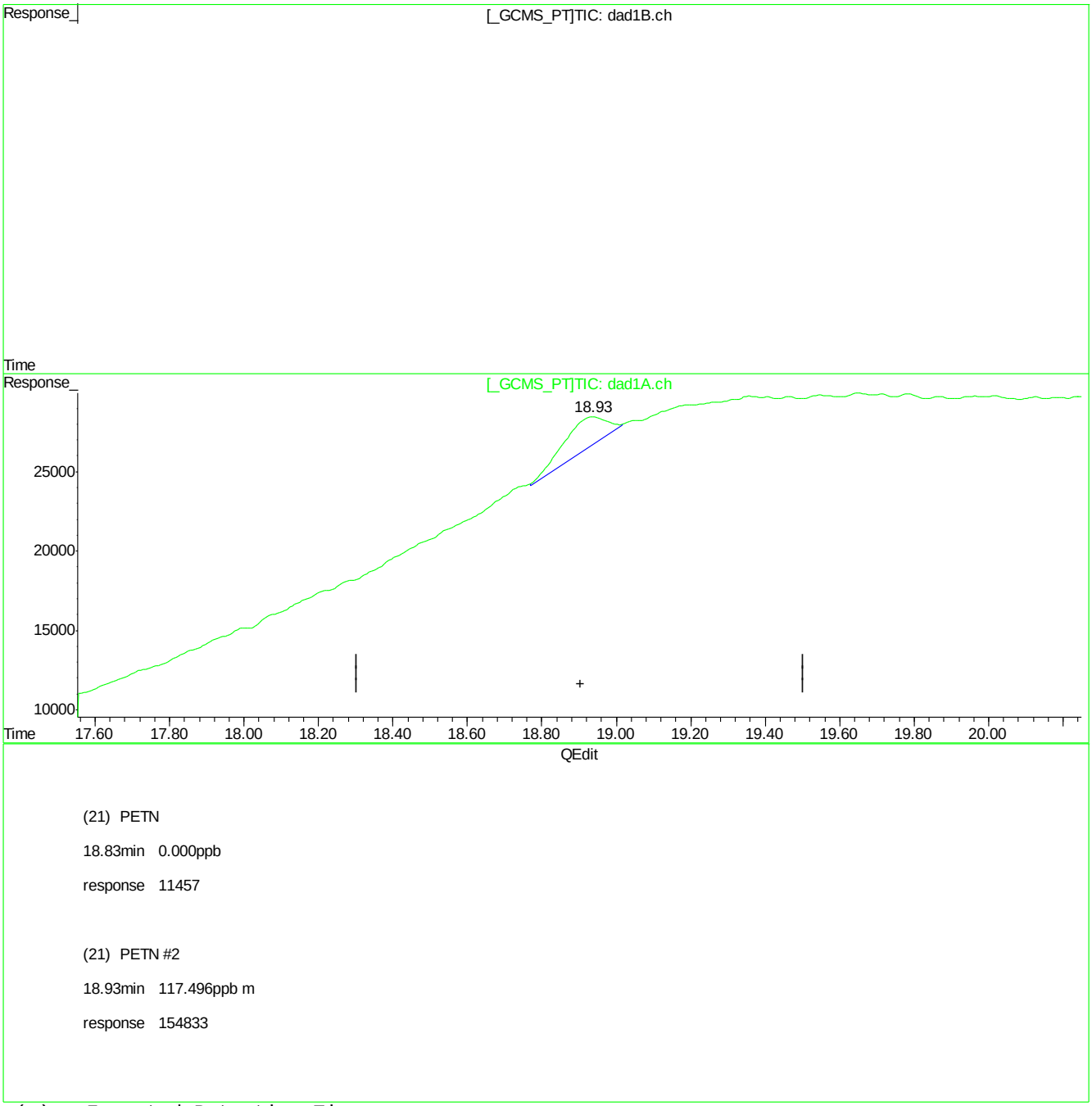


(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:48:36 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(21) PETN

18.83min 0.000ppb

response 11457

(21) PETN #2

18.93min 117.496ppb m

response 154833

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:48:41 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:28 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.40	11.46	174462	177673	70.107m	42.241m
Spiked Amount	500.000	Range	70 - 136	Recovery	=	14.02%#	8.45%#
	Target Compounds						
1)	TNX	1.40	1.40	252540	396416	51.598	51.934
2)	HMX	1.55	1.55	102831	355134	56.888	71.768
3)	DNX	1.80	1.80	181106	255850	58.889	50.462
4)	MNX	2.40	2.40	135560	202448	43.381m	42.937m
5)	RDX	3.03	3.03	116121	172551	59.698m	52.915
6)	1,3,5-Trinitrobe	4.82	4.83	223552	418867	51.303m	51.098m
7)	1,3-Dinitrobenze	6.08	6.08	298753	231193	51.253	60.002m
8)	3,5-Dinitroanili	6.42	6.42	238749	410785	51.061	52.545
9)	Nitrobenzene	7.71	7.74	195457	194582	52.232m	61.874m
10)	Nitroglycerin	0.00	9.07	0	333501	N.D. d	260.996
11)	Tetryl	9.53	9.56	167113	173340	56.468m	41.877m
12)	2,4,6-Trinitroto	10.06	10.07	190062	190046	48.523m	44.442m
13)	2-Amino-4,6-Dini	10.44	10.46	217365	214056	58.208m	38.227m
14)	4-Amino-2,6-Dini	10.93	10.92	151170	172539	57.302m	32.370m#
16)	2,4-Dinitrotolue	12.09	12.13	296379	145969	57.126m	46.262m
17)	2,6-Dinitrotolue	12.55	12.55	162232	204595	55.194m	55.448m
18)	o-Nitrotoluene	15.79	15.79	131134	131880	50.748m	39.593m
19)	p-Nitrotoluene	16.45	16.45	225031	196142	56.312	61.939m
20)	m-Nitrotoluene	17.39	17.61	262604	183968	76.996	52.216m
21)	PETN	0.00	18.91	0	348156	N.D. d	264.200m

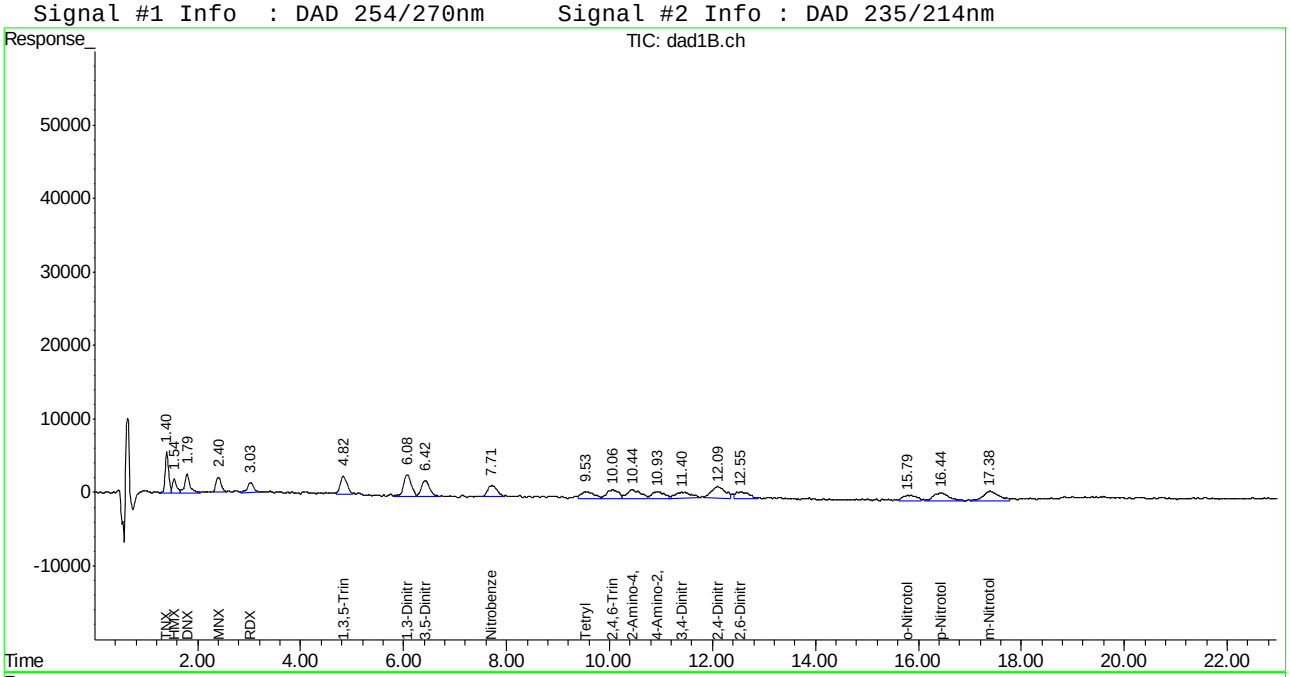
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060201.D 8330B_0707PLUS.M Mon Jul 09 11:20:49 2018 Page 1

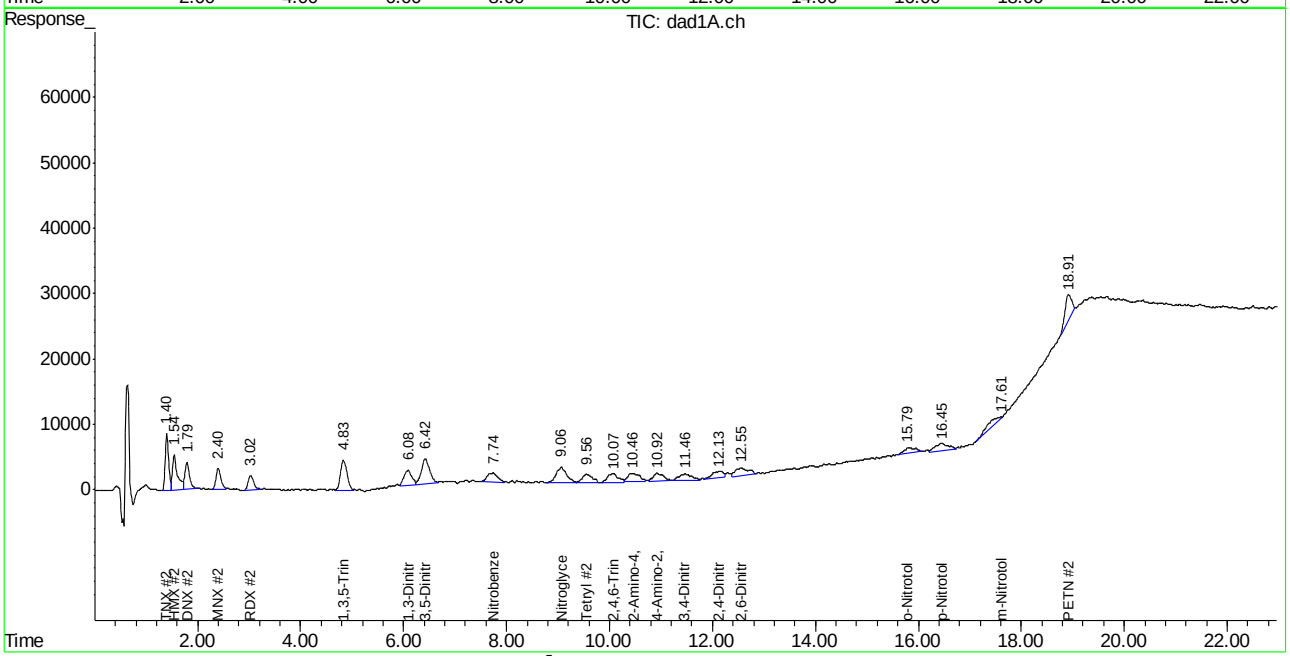
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:06 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

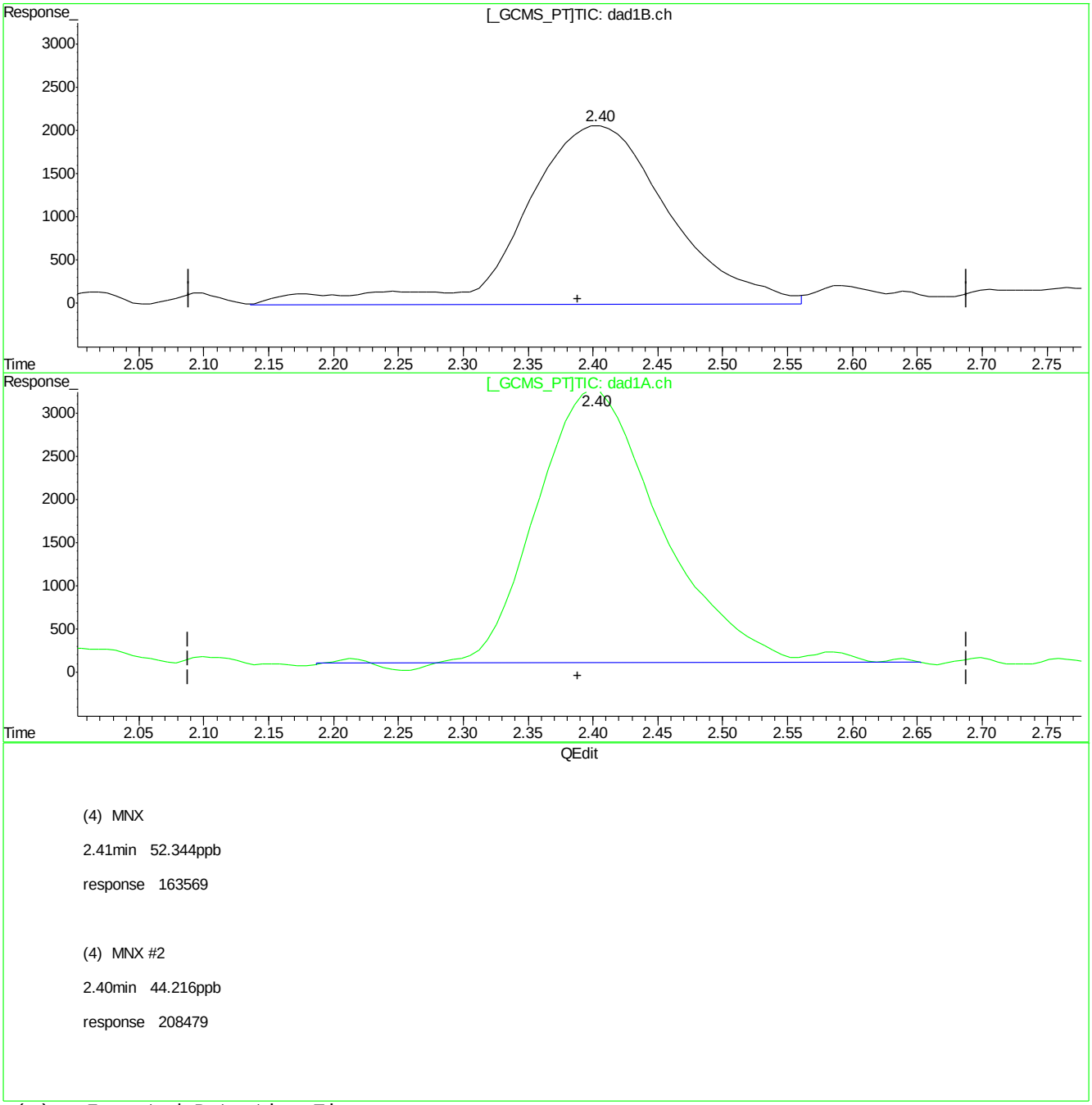
Sample Number: GBB1748-IC1748 **Method:** SW846 8330A
Lab FileID: BB060201.D **Analyst approved:** 07/09/18 11:23 William Hustedde
Injection Time: 07/06/18 16:03 **Supervisor approved:** 07/09/18 16:15 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
MNX		1	2.40	Poor instrument integration
MNX		2	2.40	Poor instrument integration
RDX	121-82-4	1	3.03	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.82	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.83	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.08	Poor instrument integration
Nitrobenzene	98-95-3	1	7.71	Poor instrument integration
Nitrobenzene	98-95-3	2	7.74	Poor instrument integration
Tetryl	479-45-8	1	9.53	Poor instrument integration
Tetryl	479-45-8	2	9.56	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	10.06	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	10.07	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.44	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.46	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	10.92	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.93	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.40	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	11.46	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	12.09	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	12.13	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.55	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	12.55	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.79	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.79	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.45	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.61	Poor instrument integration
PETN	78-11-5	2	18.91	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(4) MNX

2.41min 52.344ppb

response 163569

(4) MNX #2

2.40min 44.216ppb

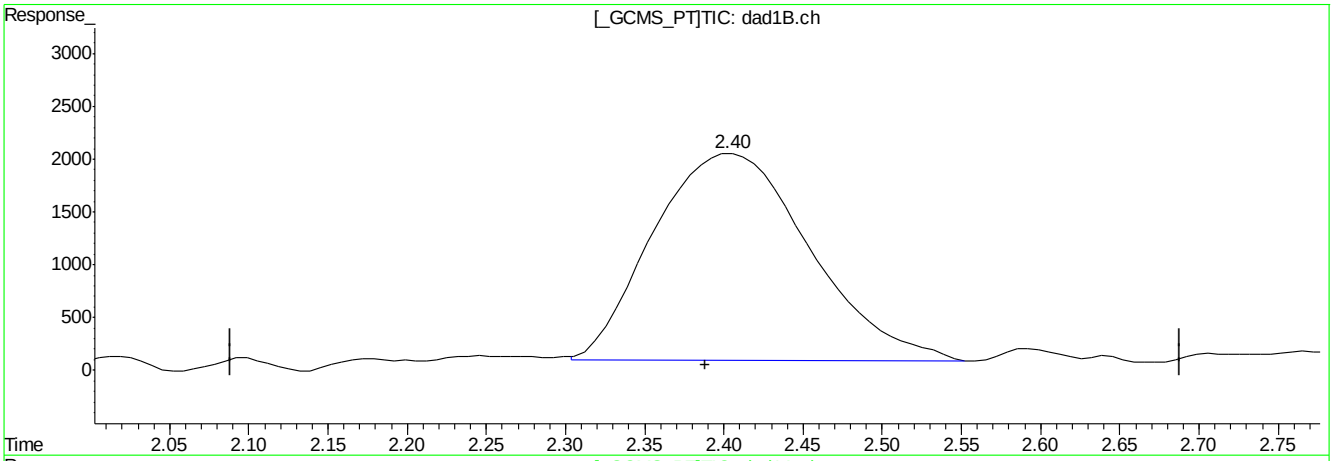
response 208479

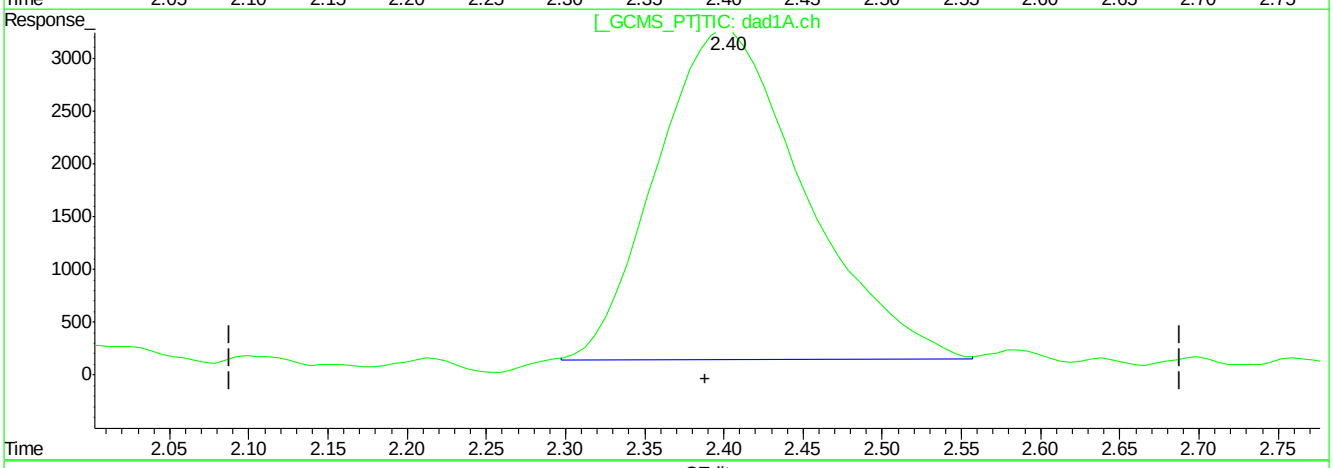
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:24:44 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.40min 43.381ppb m

response 135560

(4) MNX #2

2.40min 42.937ppb m

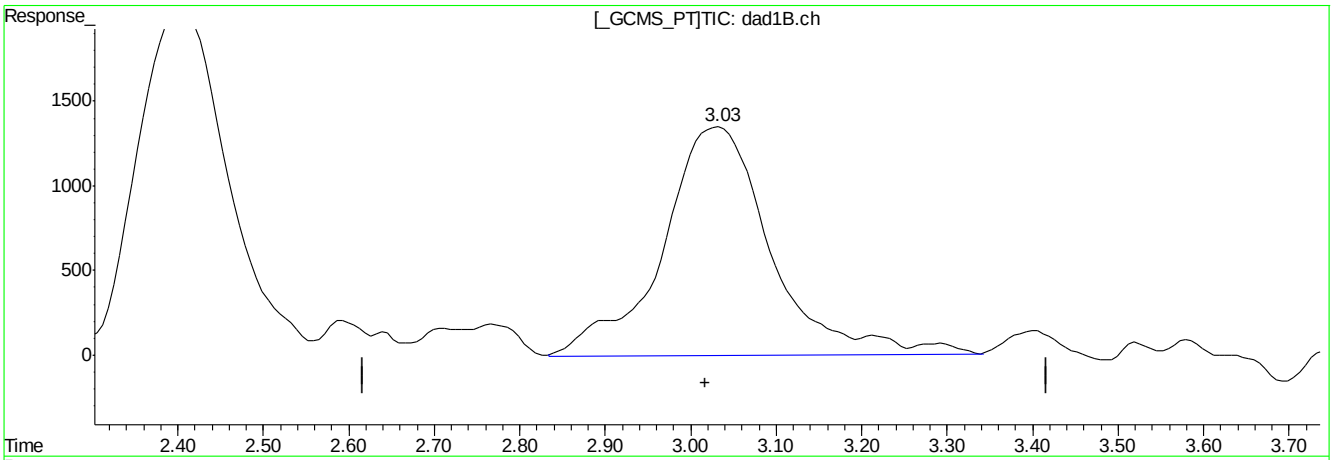
response 202448

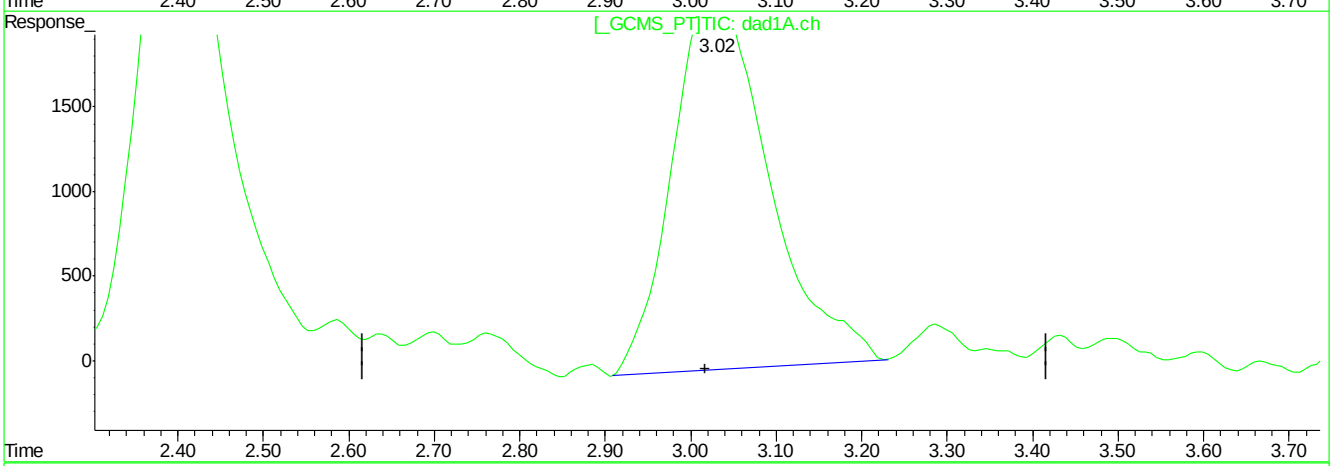
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:24:51 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.03min 61.540ppb

response 119710

(5) RDX #2

3.03min 52.915ppb

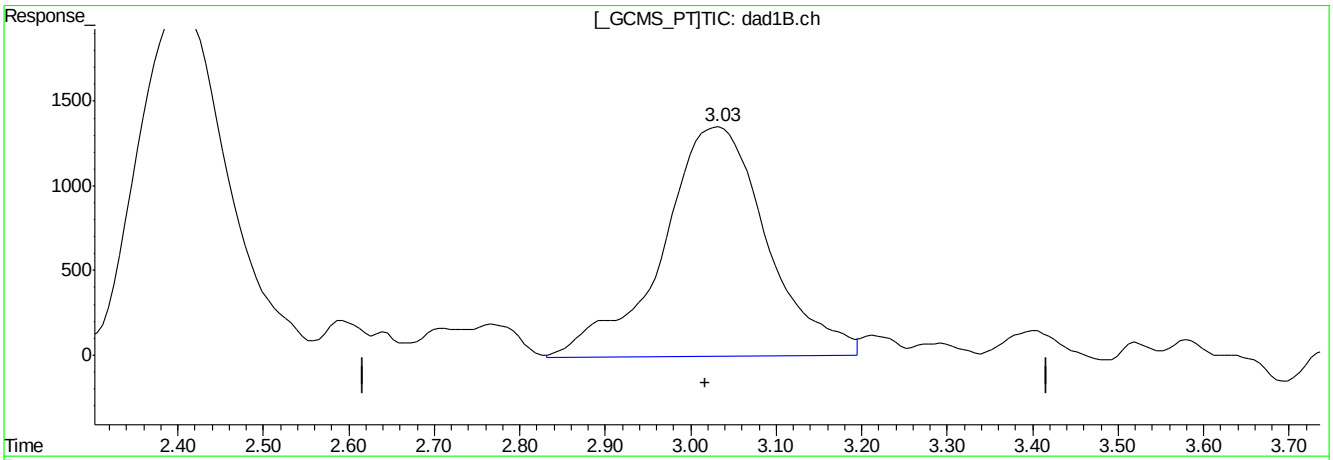
response 172551

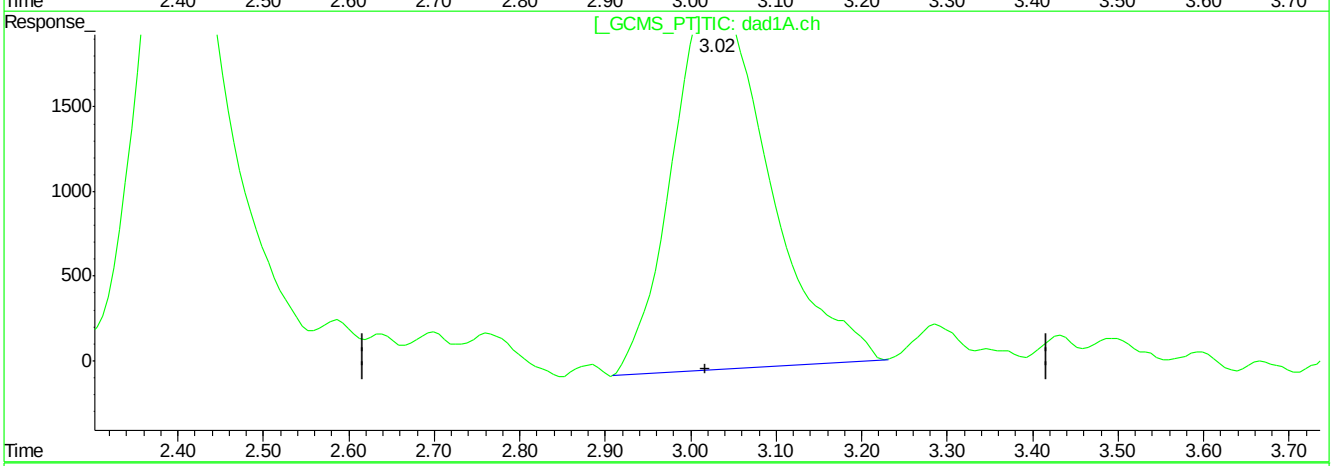
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:24:58 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.03min 59.698ppb m

response 116121

(5) RDX #2

3.03min 52.915ppb

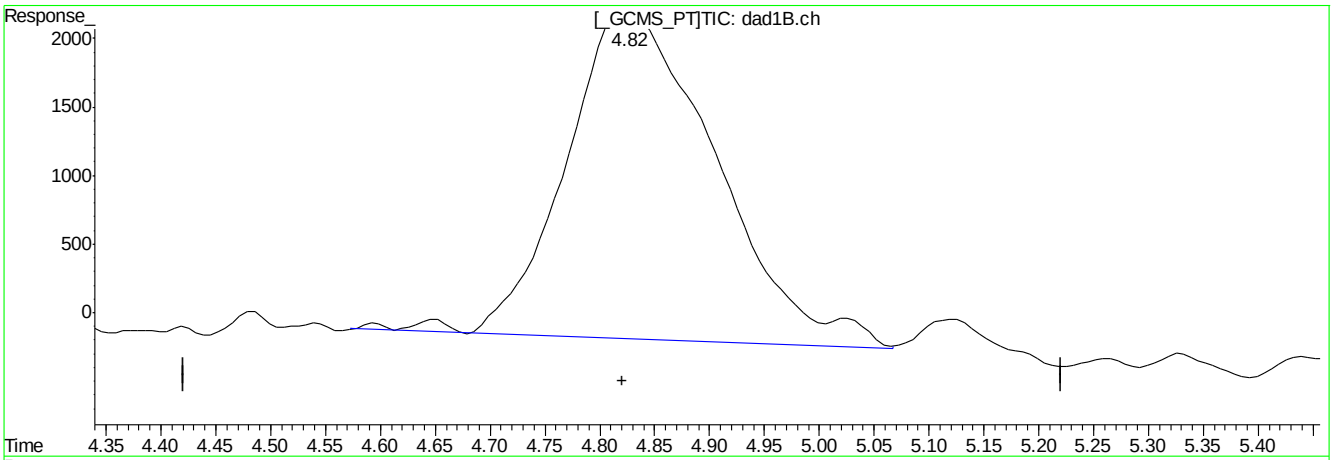
response 172551

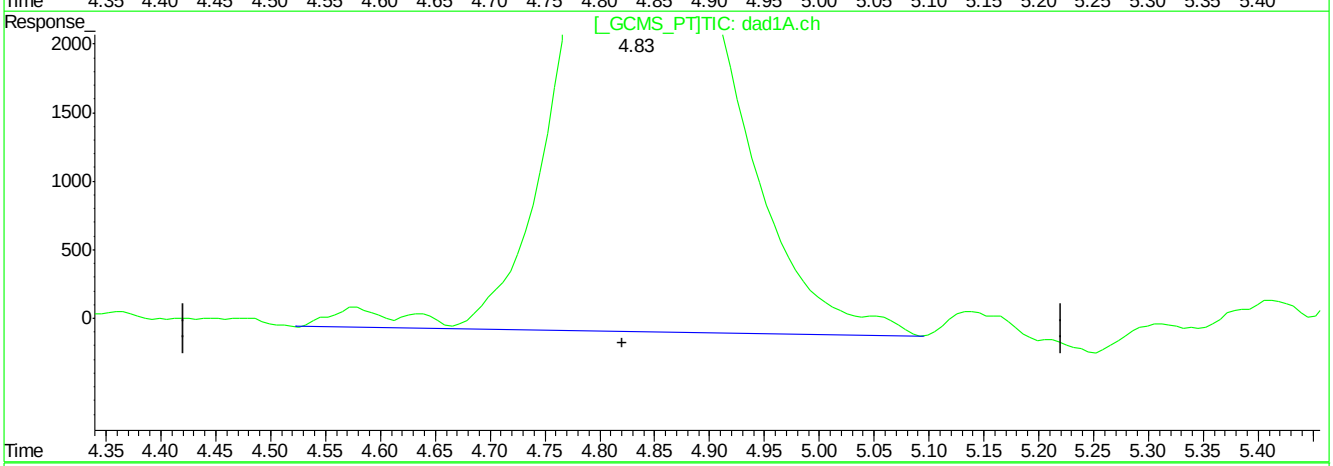
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:05 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.83min 52.479ppb

response 228678

(6) 1,3,5-Trinitrobenzene #2

4.83min 52.151ppb

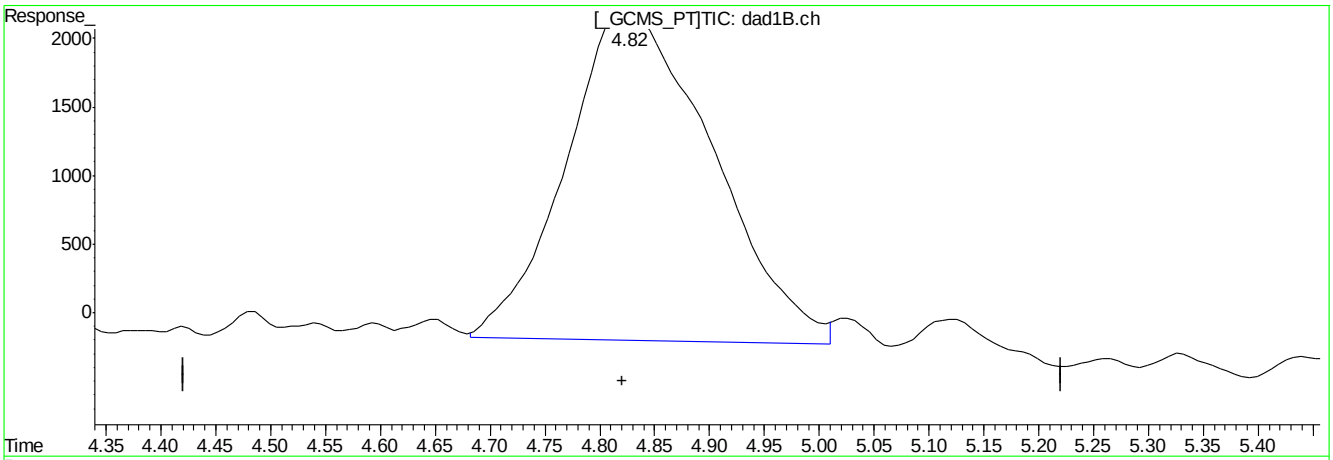
response 427502

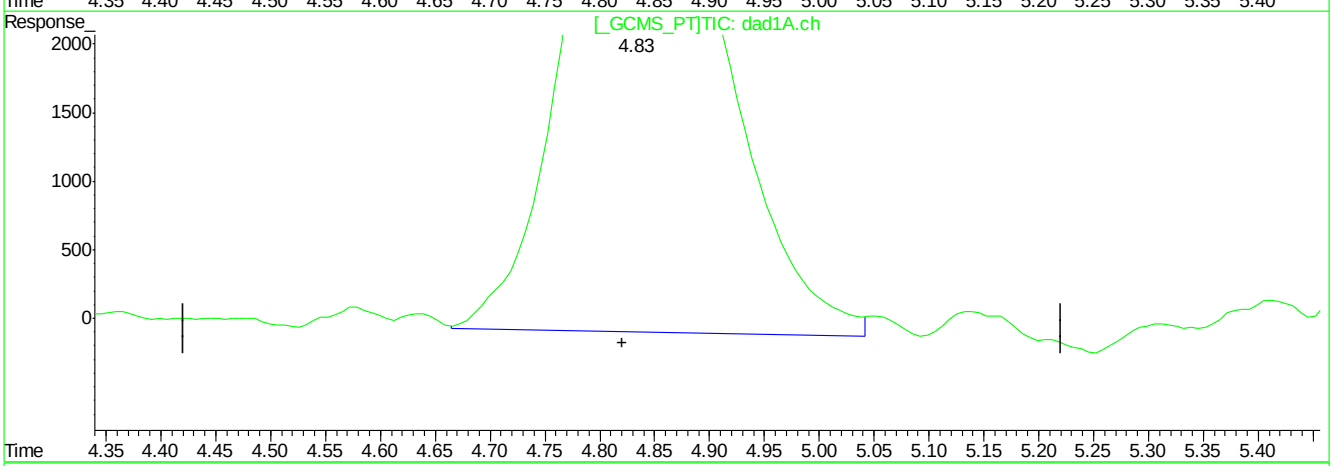
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:10 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.82min 51.303ppb m

response 223552

(6) 1,3,5-Trinitrobenzene #2

4.83min 51.098ppb m

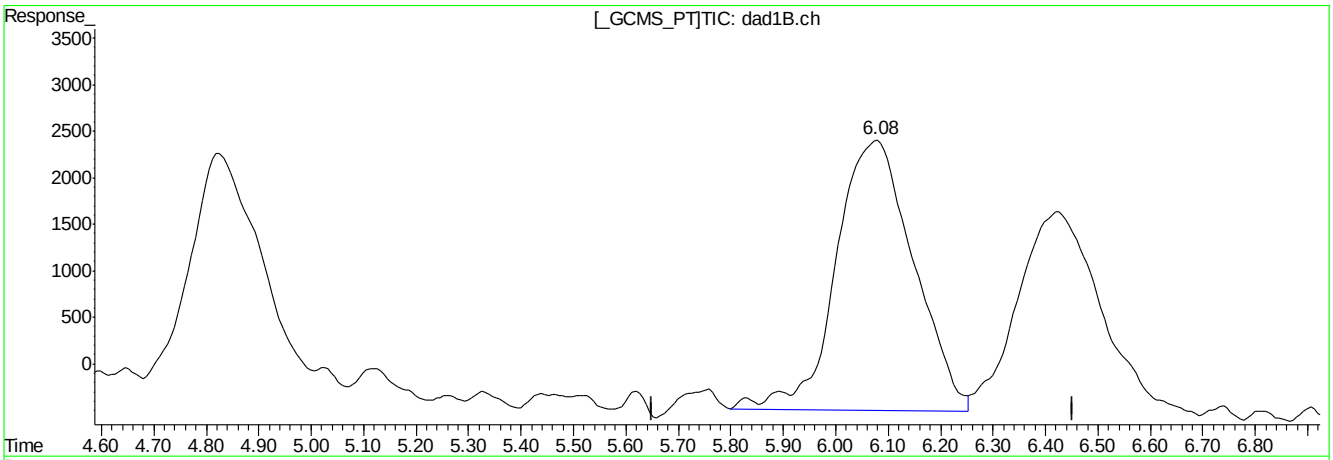
response 418867

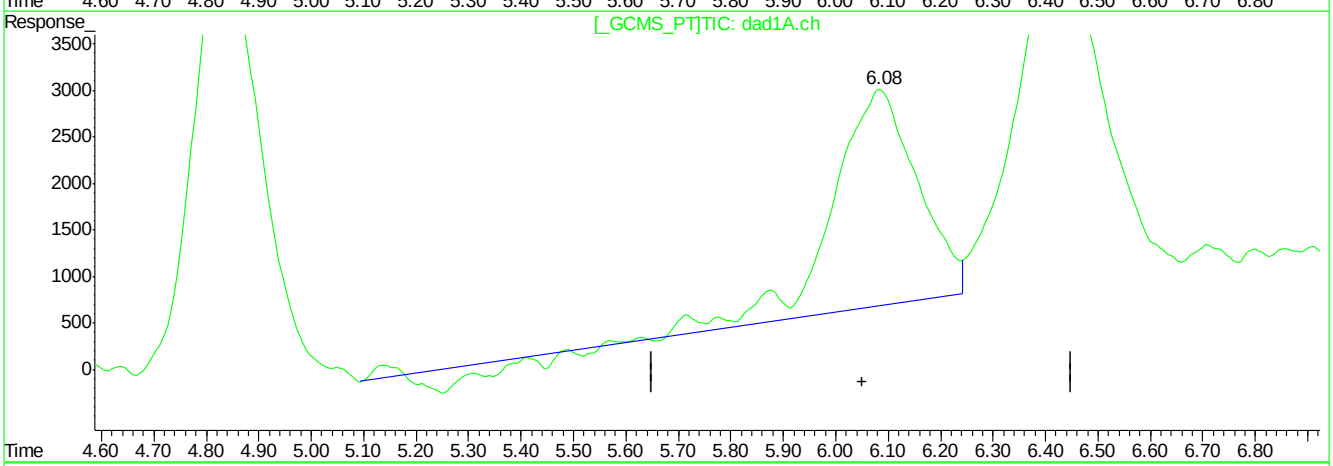
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:17 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.08min 51.253ppb

response 298753

(7) 1,3-Dinitrobenzene #2

6.09min 64.575ppb

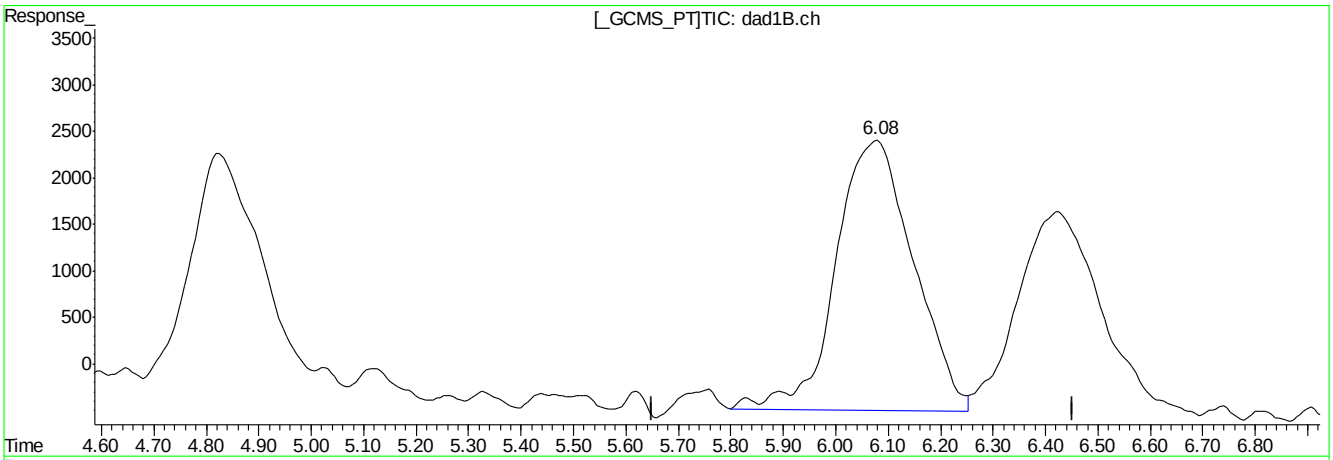
response 248799

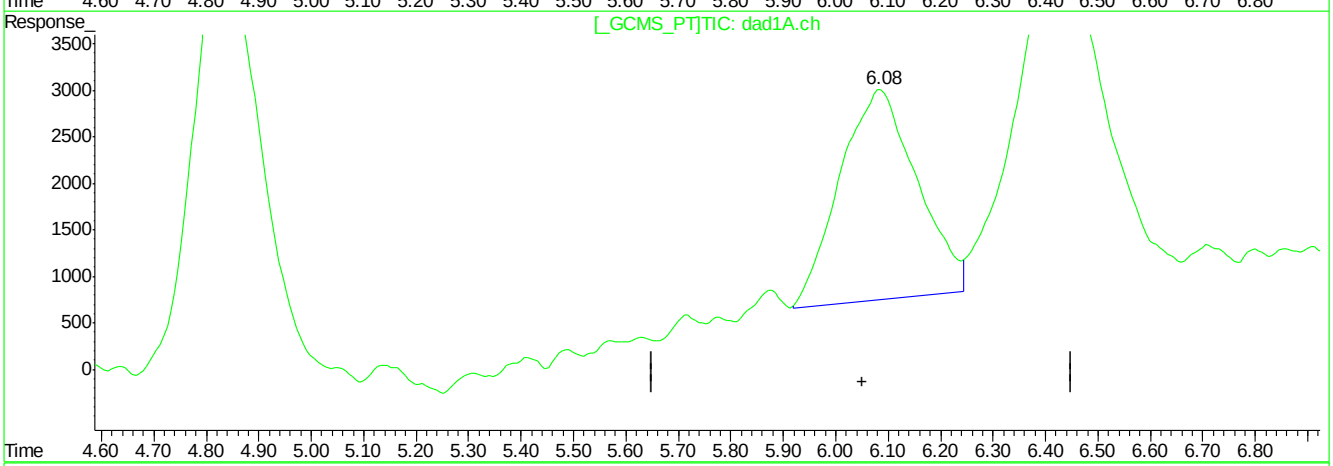
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.08min 51.253ppb

response 298753

(7) 1,3-Dinitrobenzene #2

6.08min 60.002ppb m

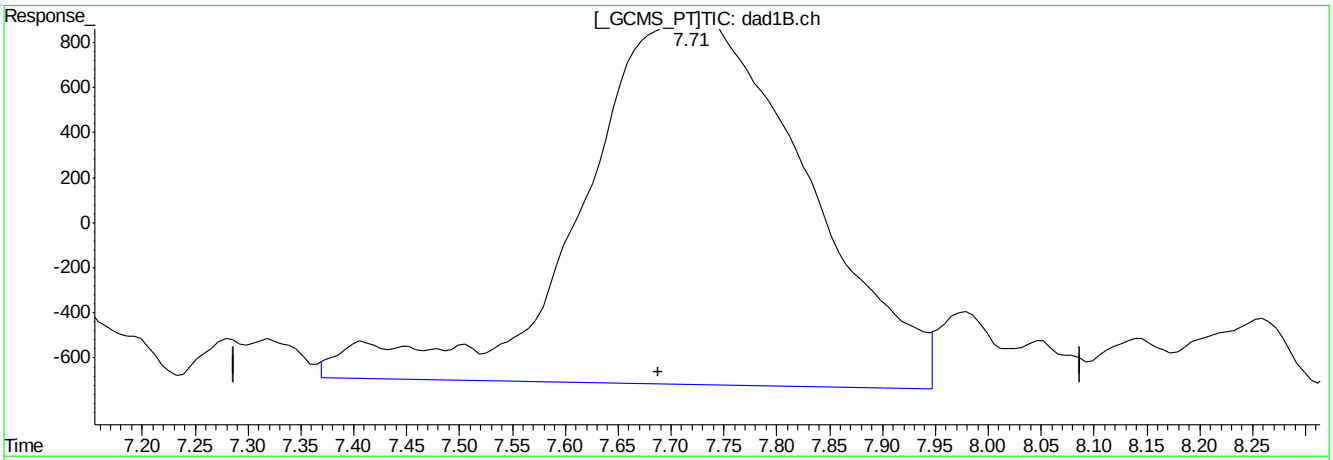
response 231193

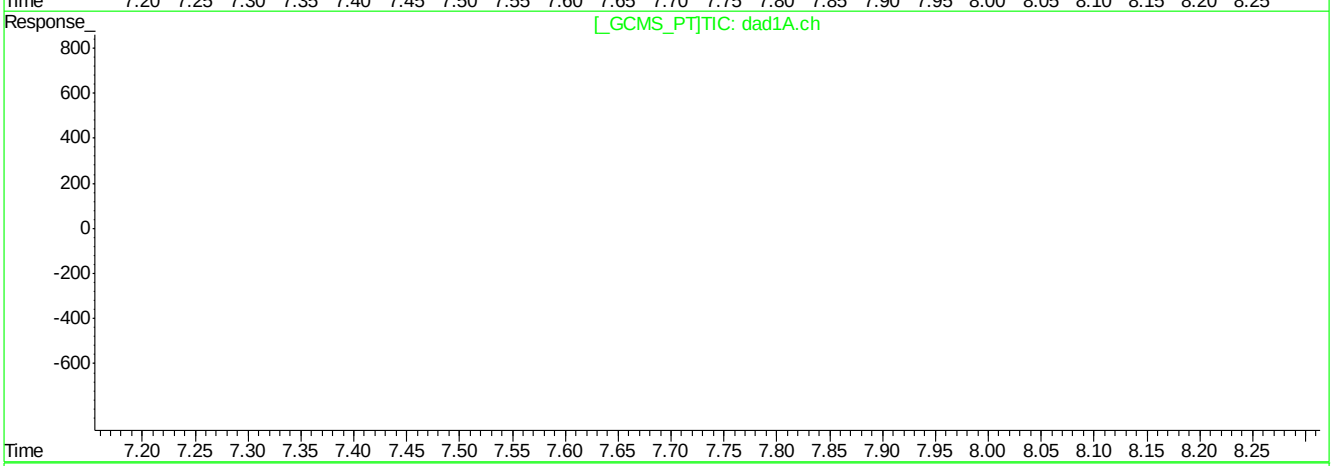
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:38 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.72min 64.155ppb

response 240073

(9) Nitrobenzene #2

0.00min 0.000ppb

response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:47 2018

9.5.2.10

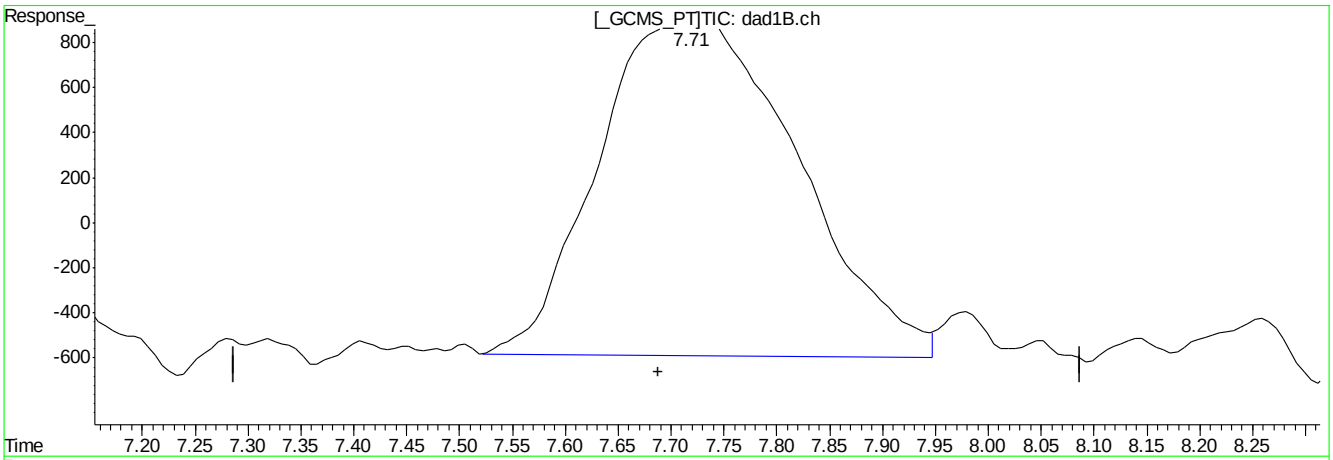
9

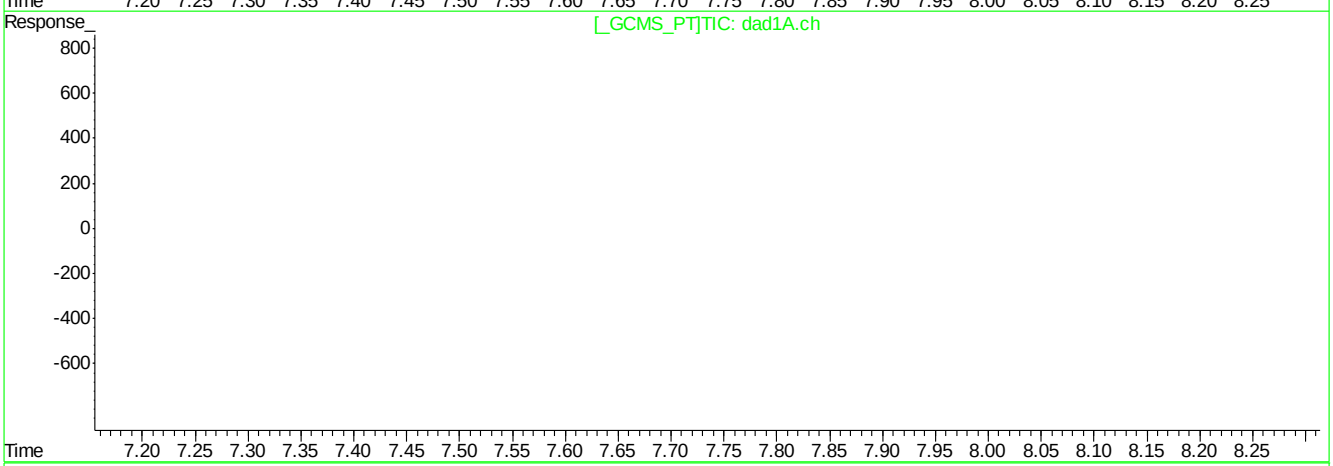
BB060201.D edits: Nitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.71min 52.232ppb m

response 195457

(9) Nitrobenzene #2

0.00min 0.000ppb

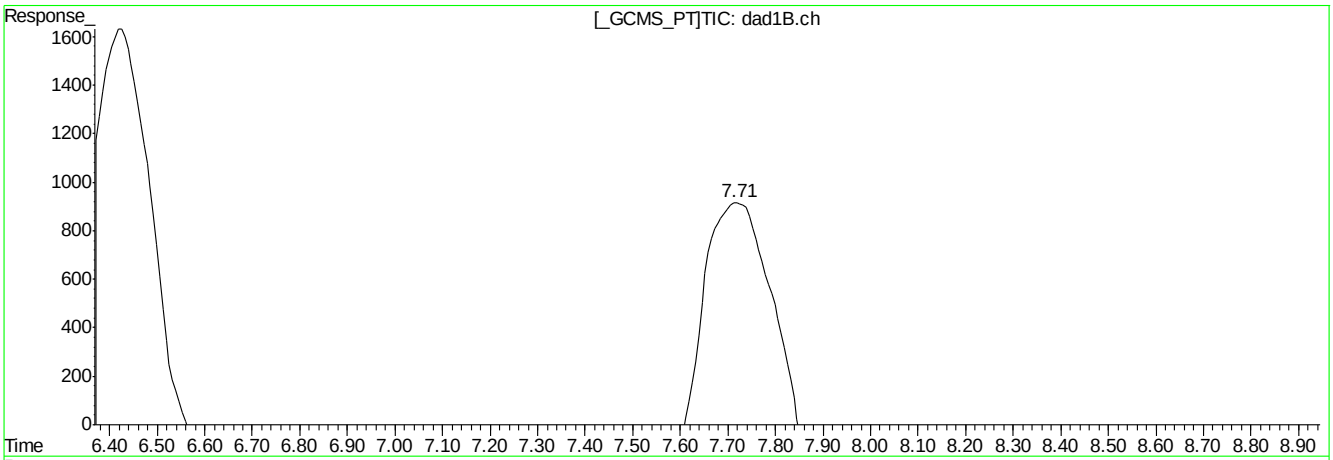
response 0

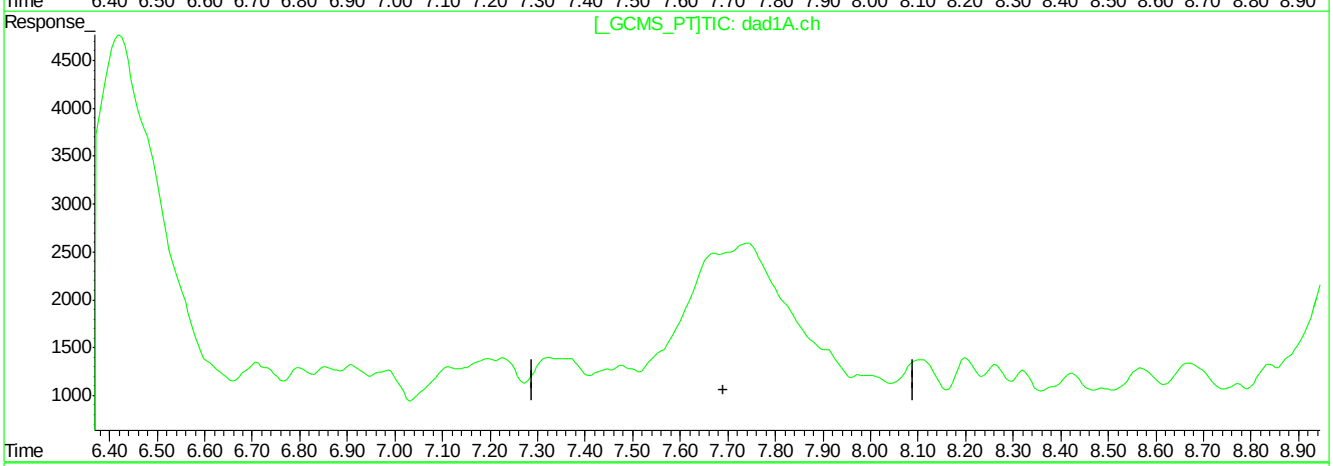
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:55 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.71min 52.232ppb m

response 195457

(9) Nitrobenzene #2

0.00min 0.000ppb

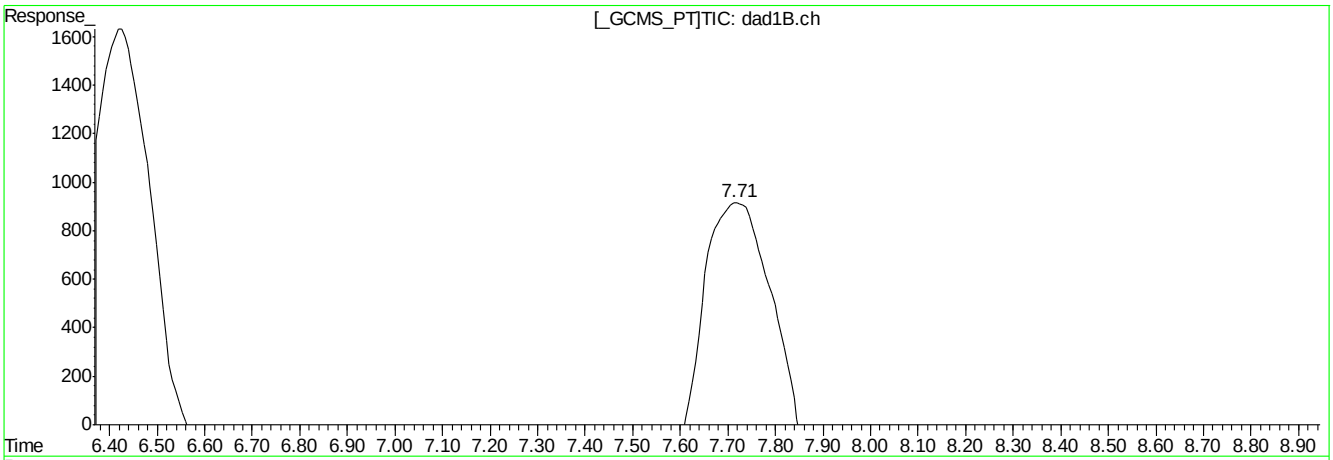
response 0

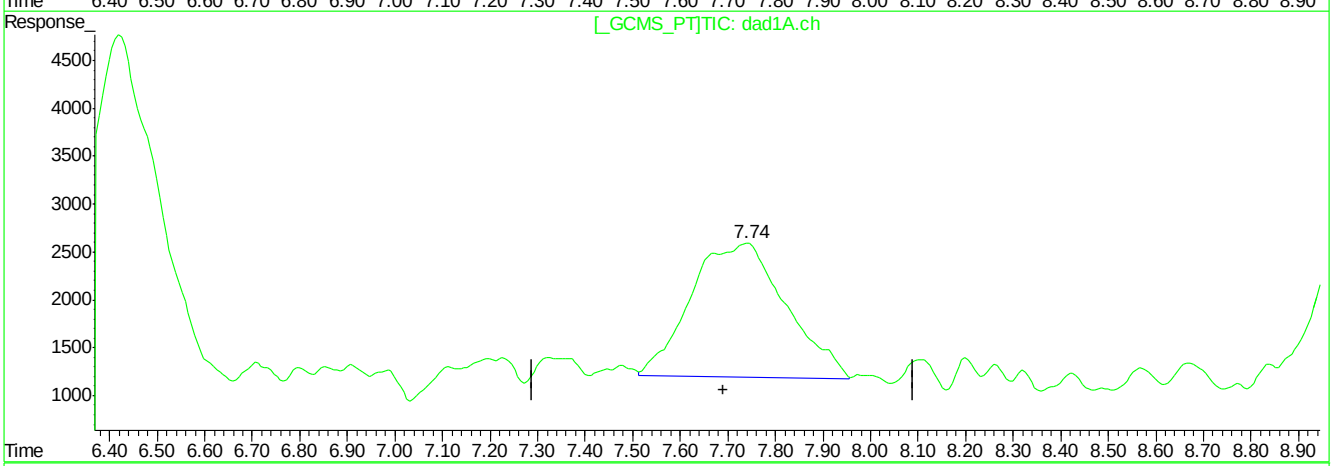
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:26:00 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.71min 52.232ppb m

response 195457

(9) Nitrobenzene #2

7.74min 61.874ppb m

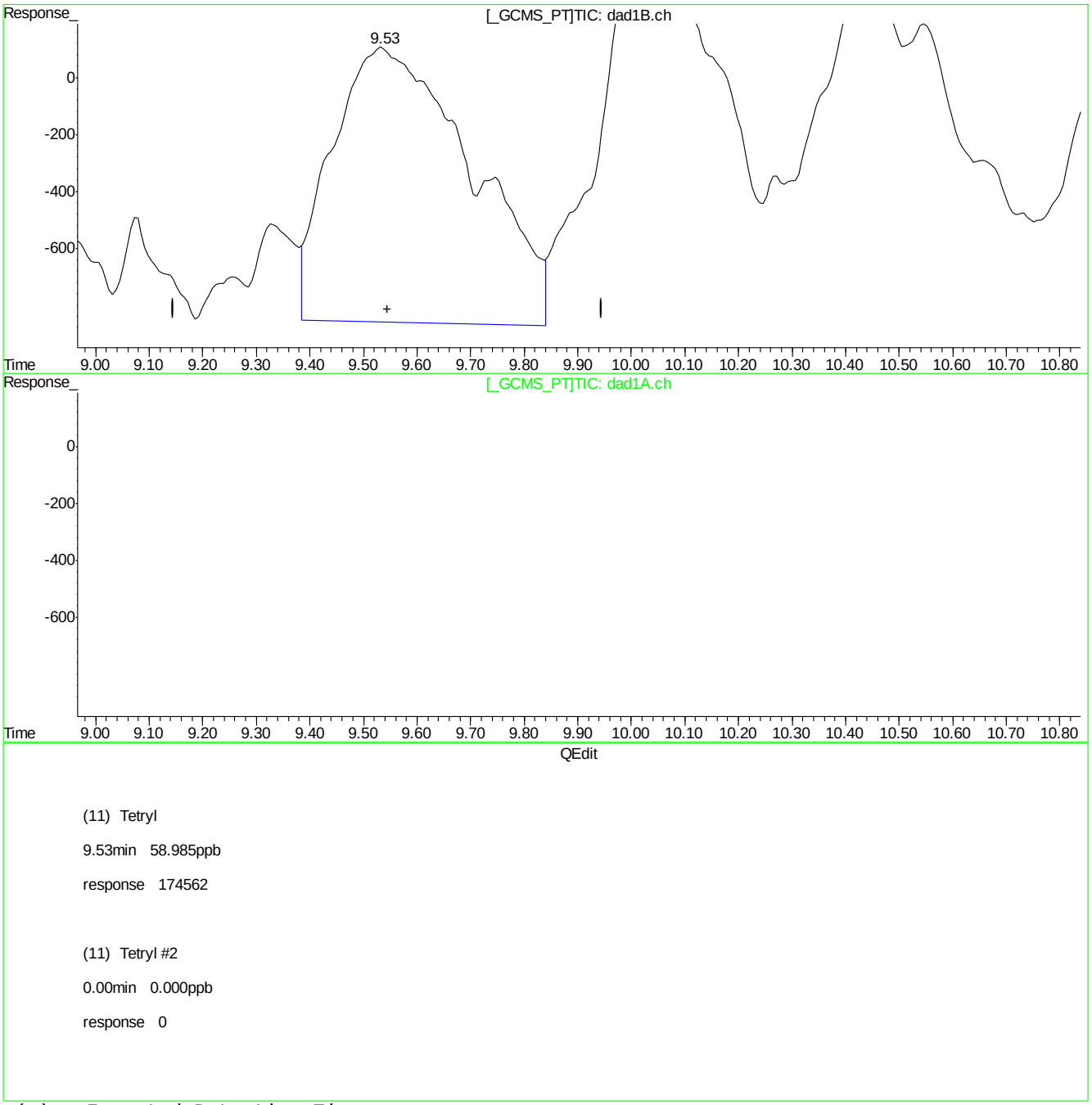
response 194582

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:26:05 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



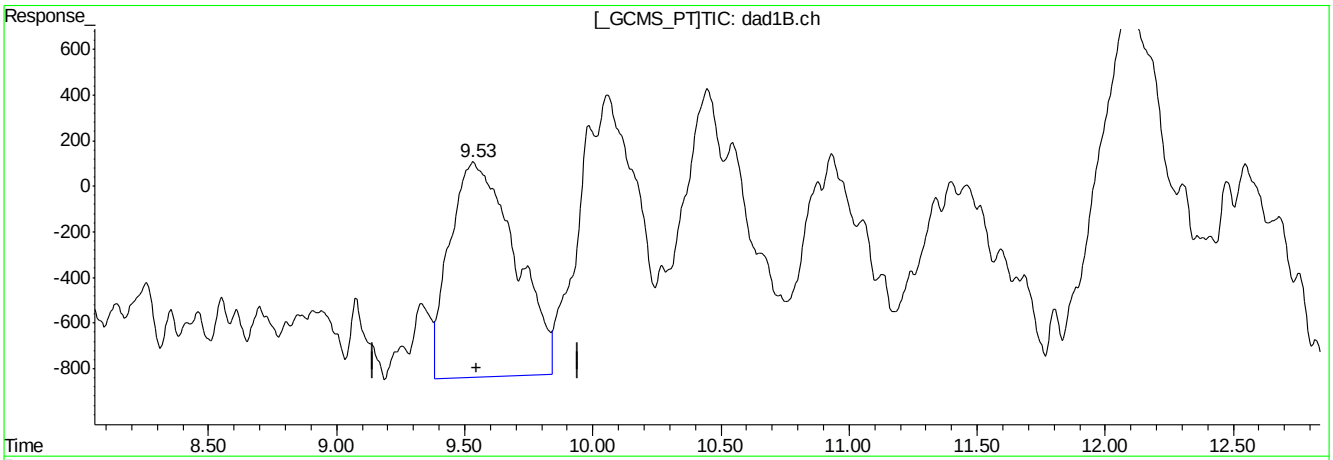
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:26:21 2018

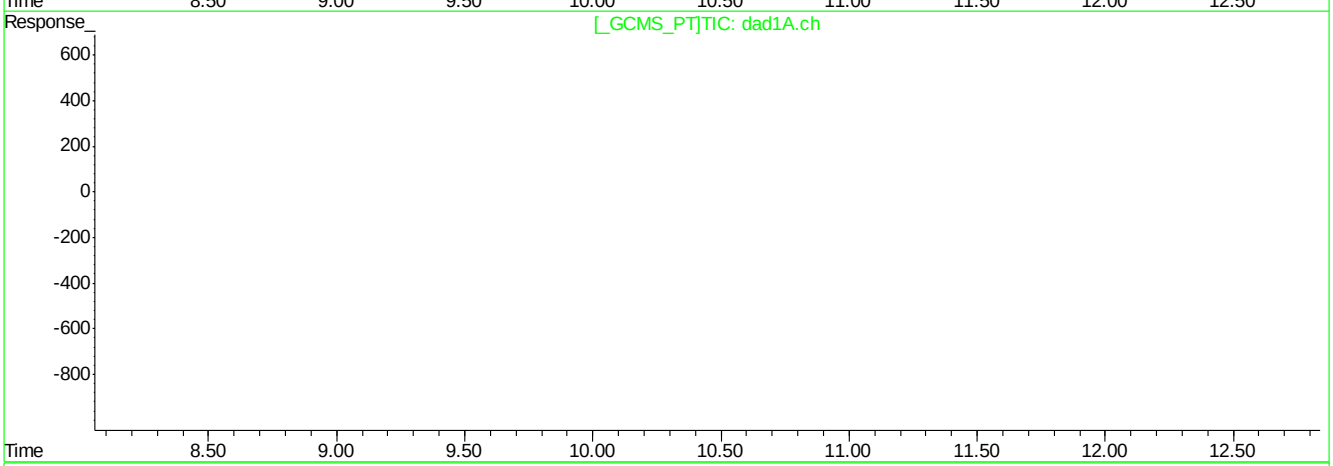
BB060201.D edits: Tetryl

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.53min 56.468ppb m

response 167113

(11) Tetryl #2

0.00min 0.000ppb

response 0

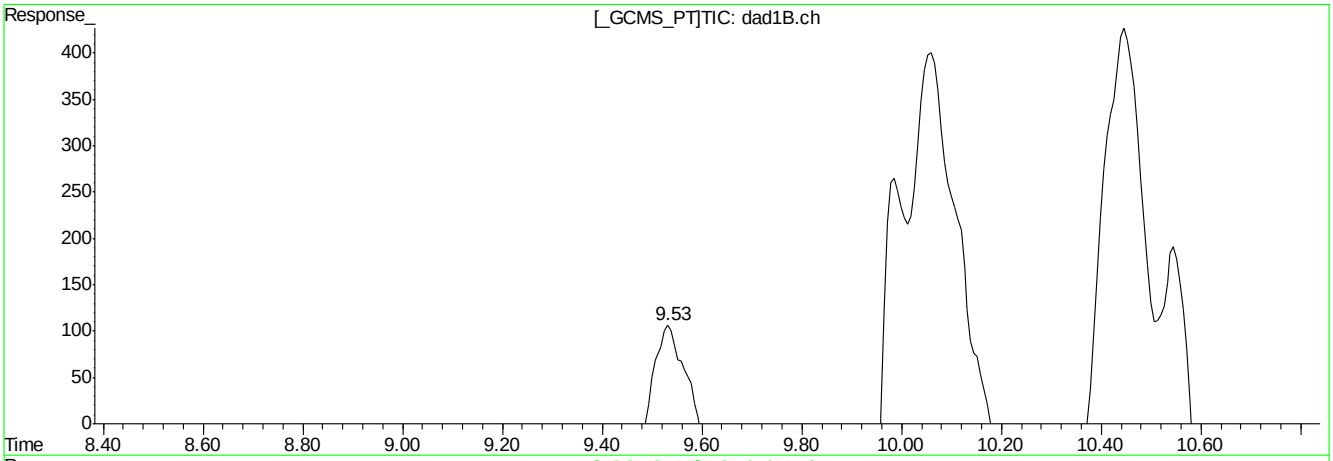
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:26:39 2018

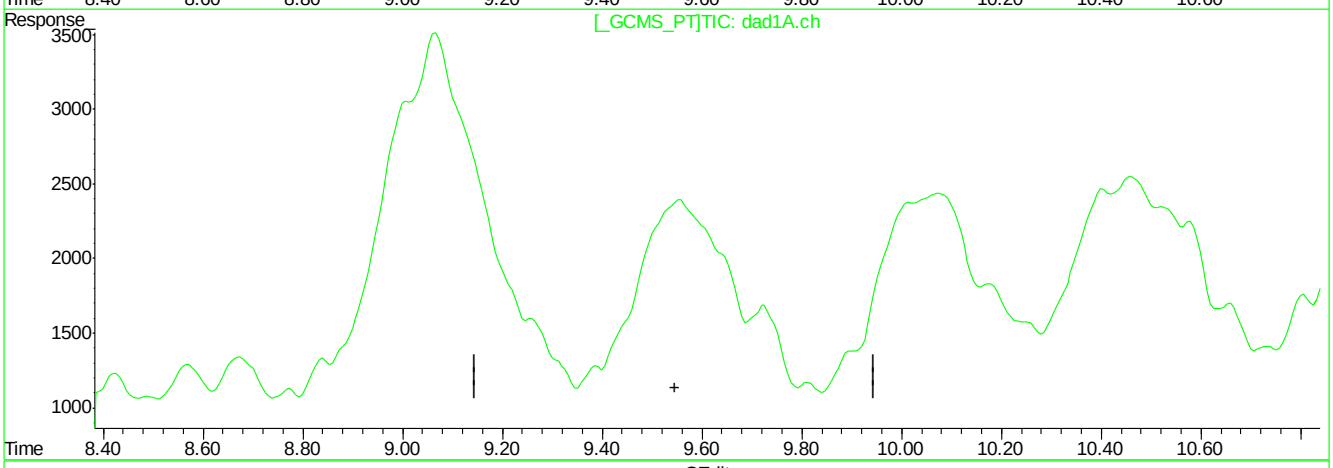
BB060201.D edits: Tetryl

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.53min 56.468ppb m

response 167113

(11) Tetryl #2

0.00min 0.000ppb

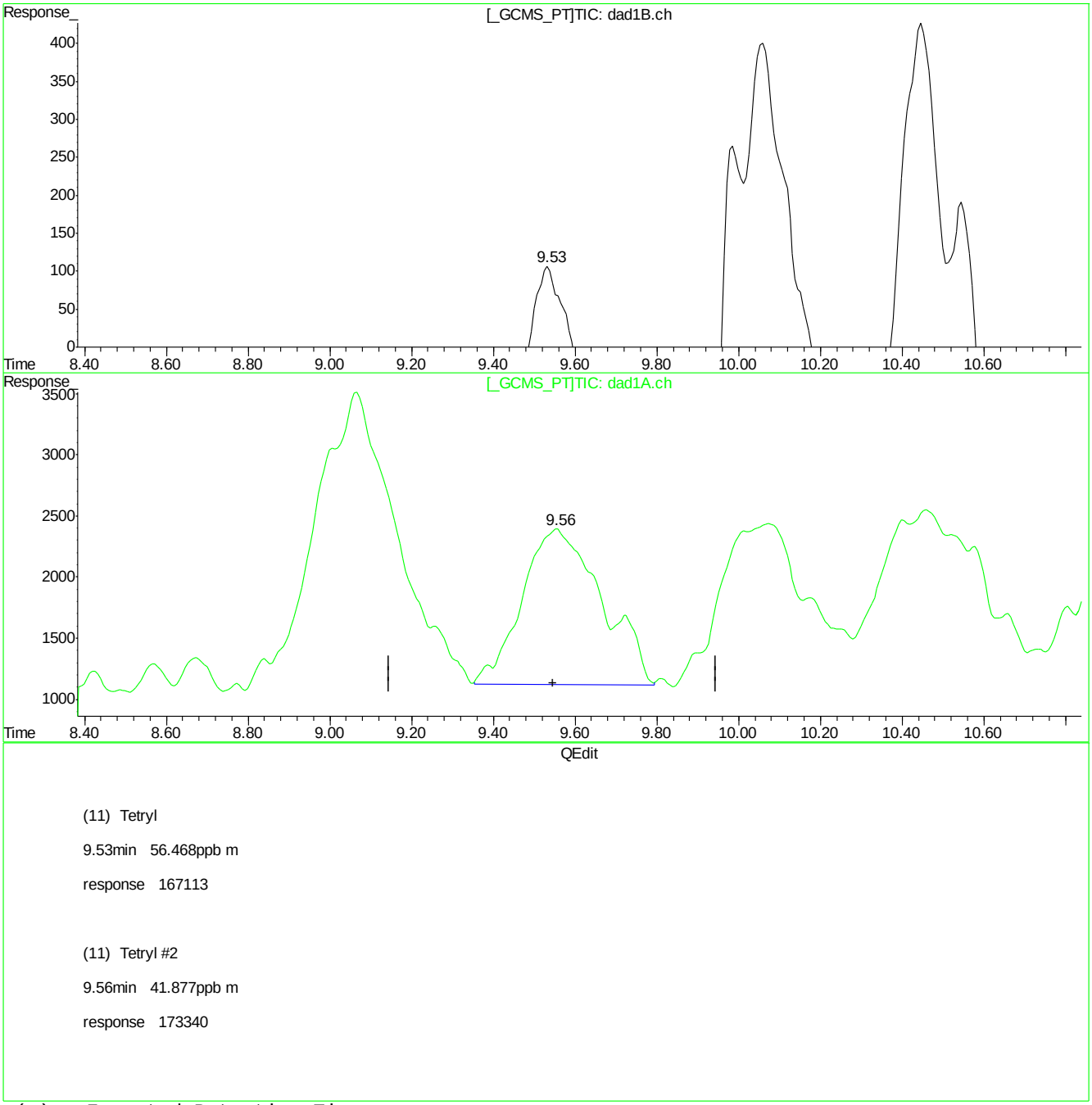
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:26:44 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(11) Tetryl

9.53min 56.468ppb m

response 167113

(11) Tetryl #2

9.56min 41.877ppb m

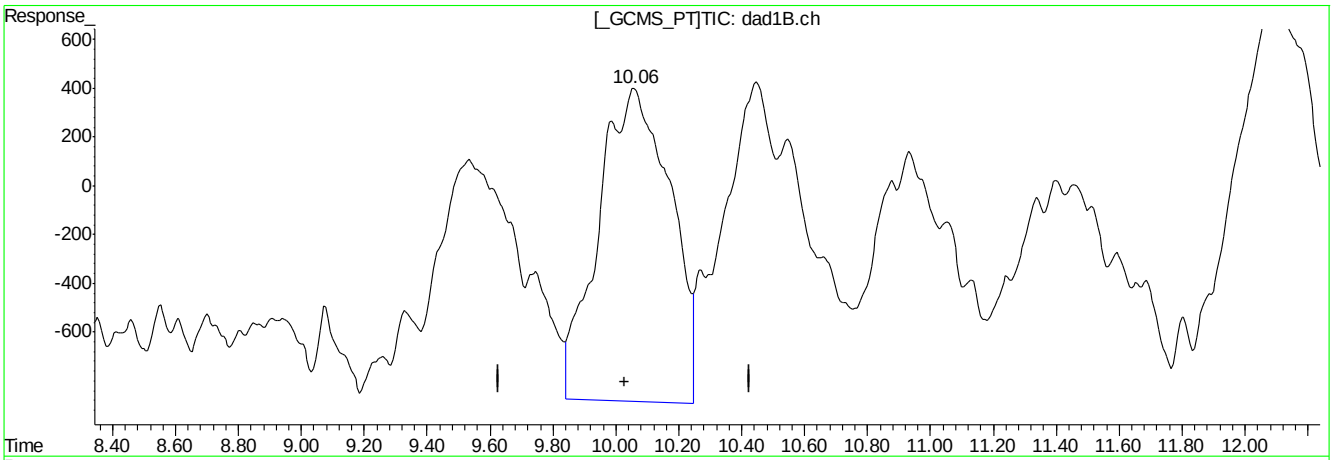
response 173340

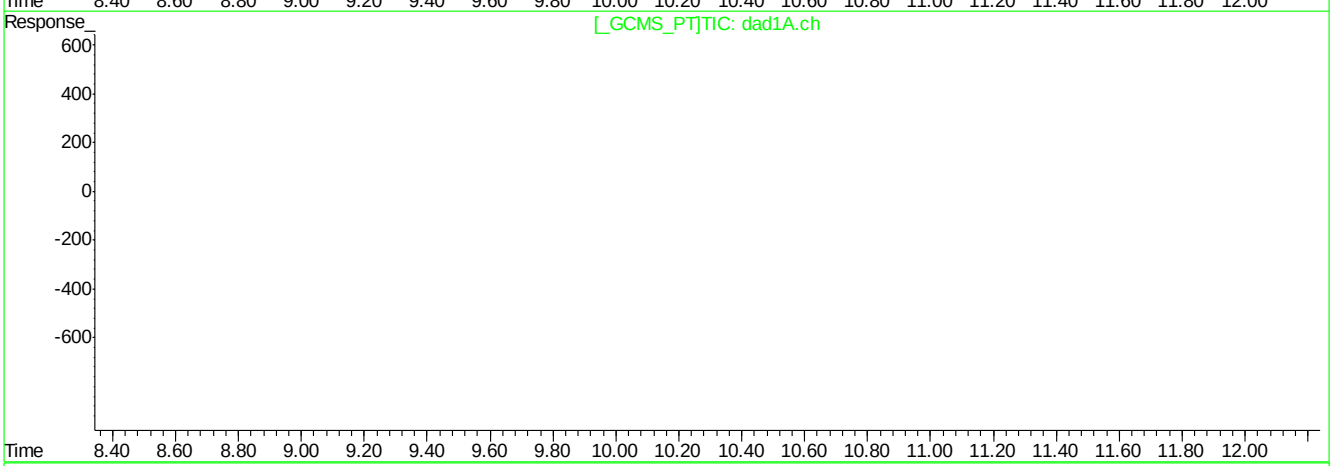
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:26:48 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.06min 51.873ppb

response 203183

(12) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb

response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:27:04 2018

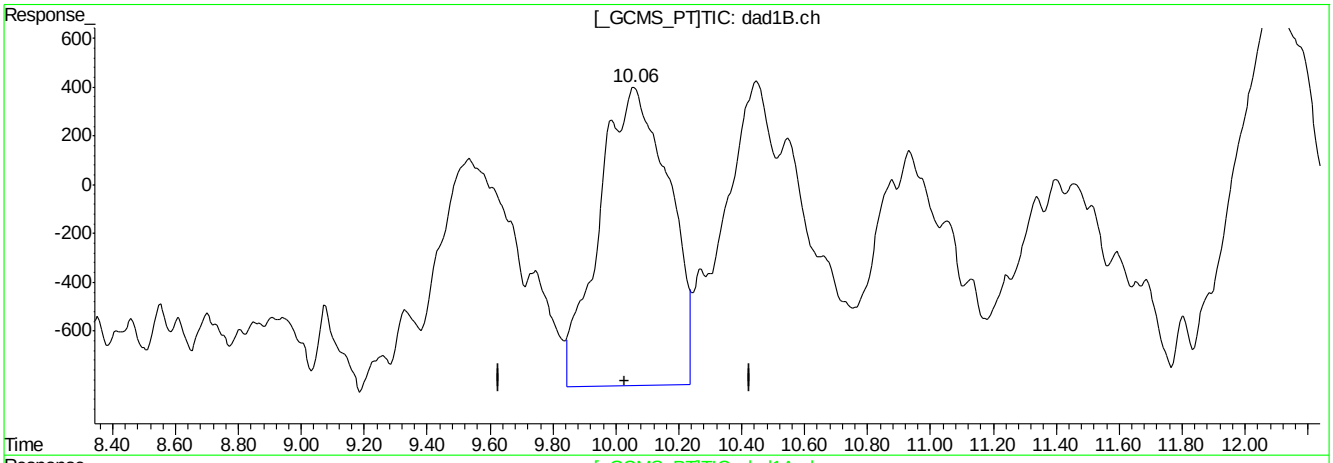
9.5.2.18

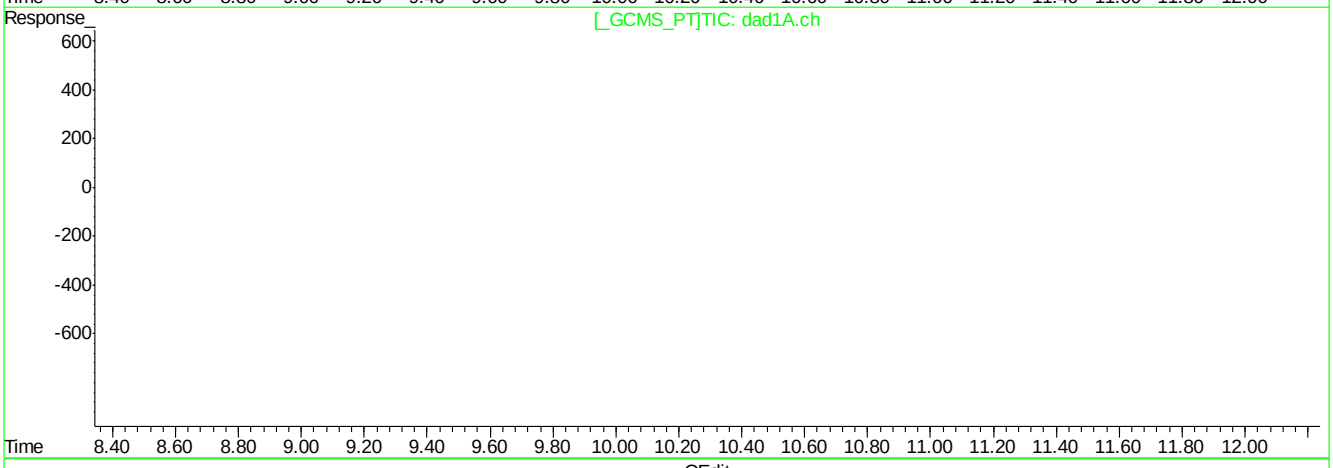
9

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.06min 47.790ppb m

response 187189

(12) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb

response 0

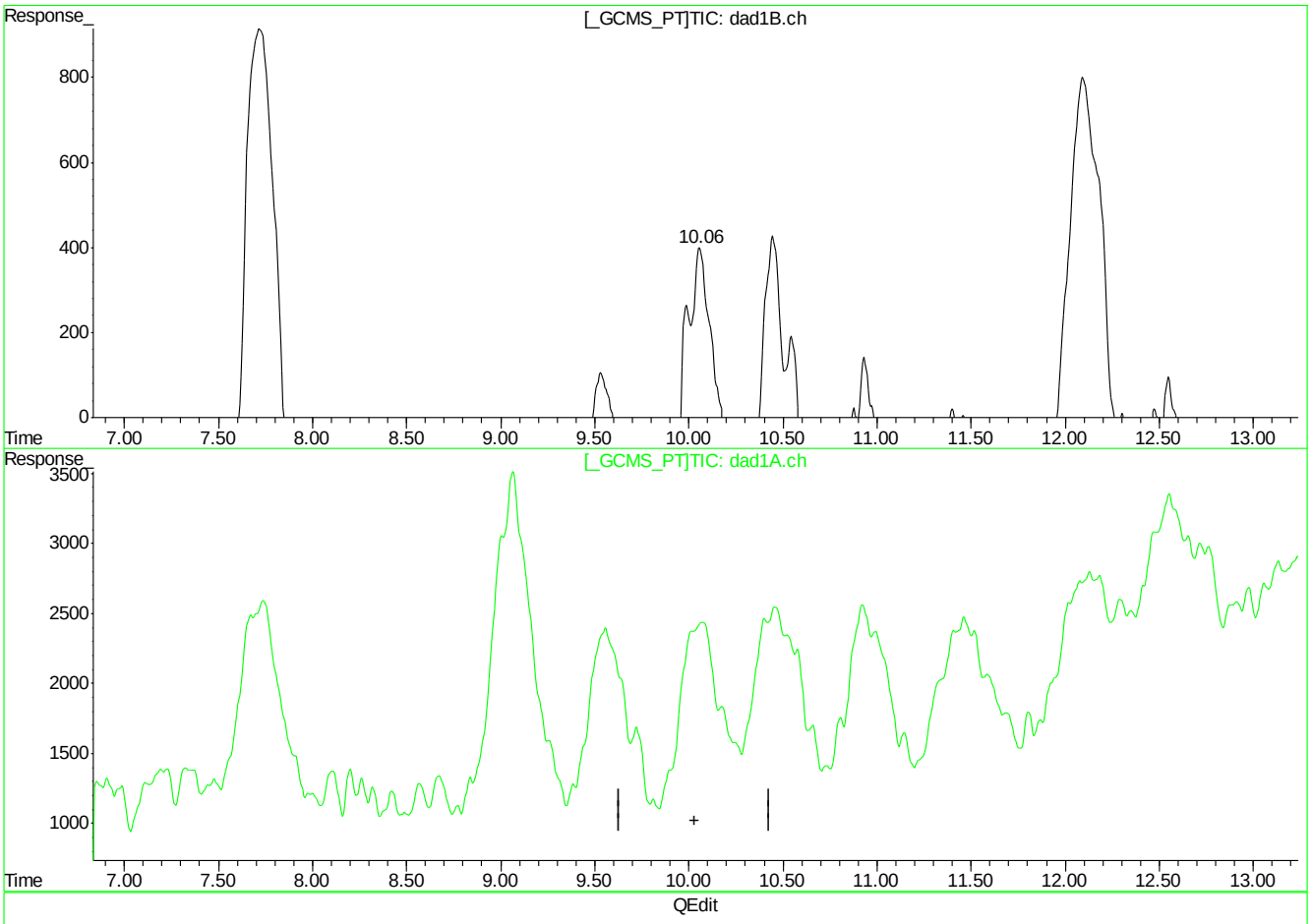
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:27:12 2018

BB060201.D edits: 2,4,6-Trinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

10.06min 48.523ppb m

response 190062

(12) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb

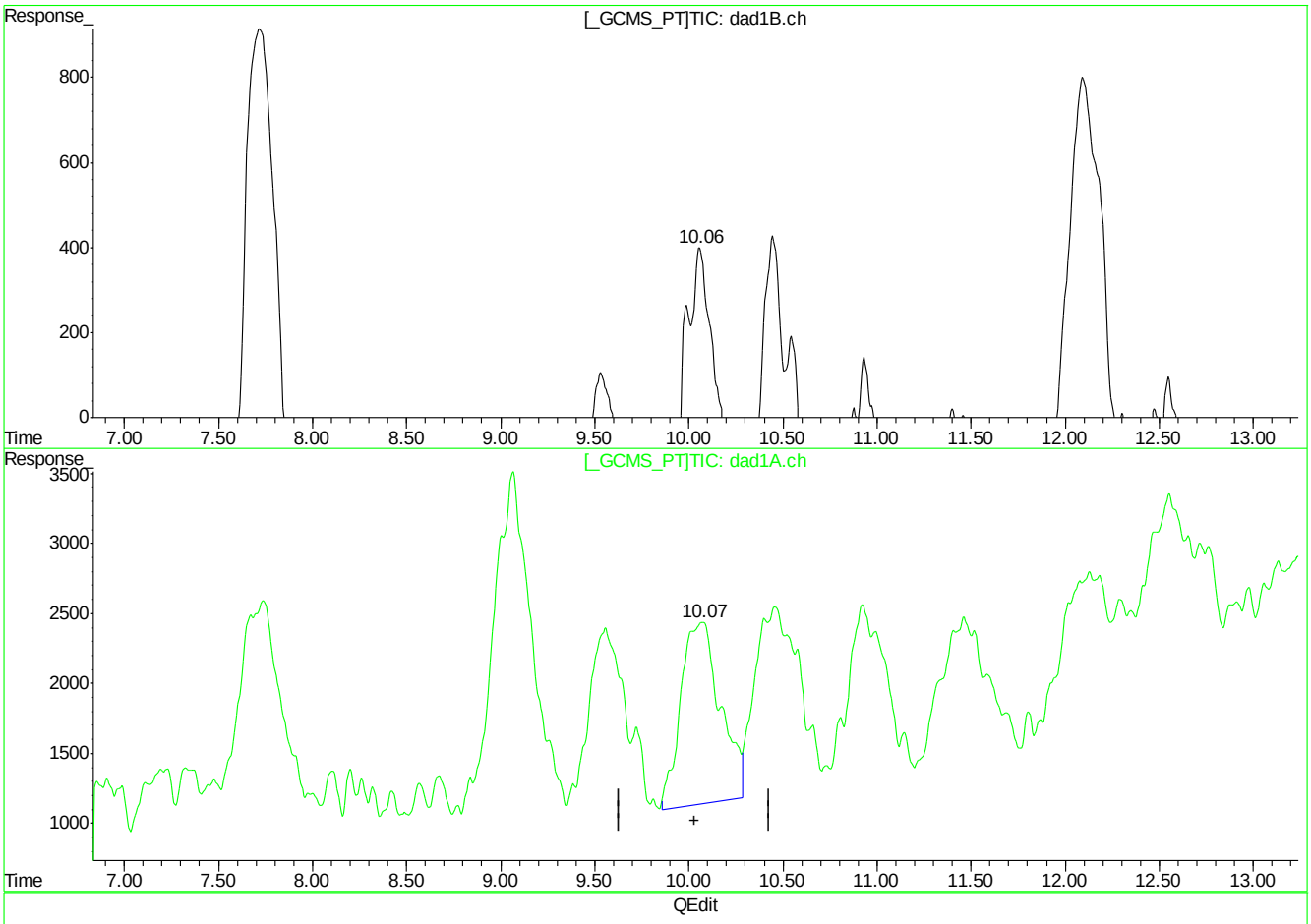
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:27:57 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

10.06min 48.523ppb m

response 190062

(12) 2,4,6-Trinitrotoluene #2

10.07min 44.442ppb m

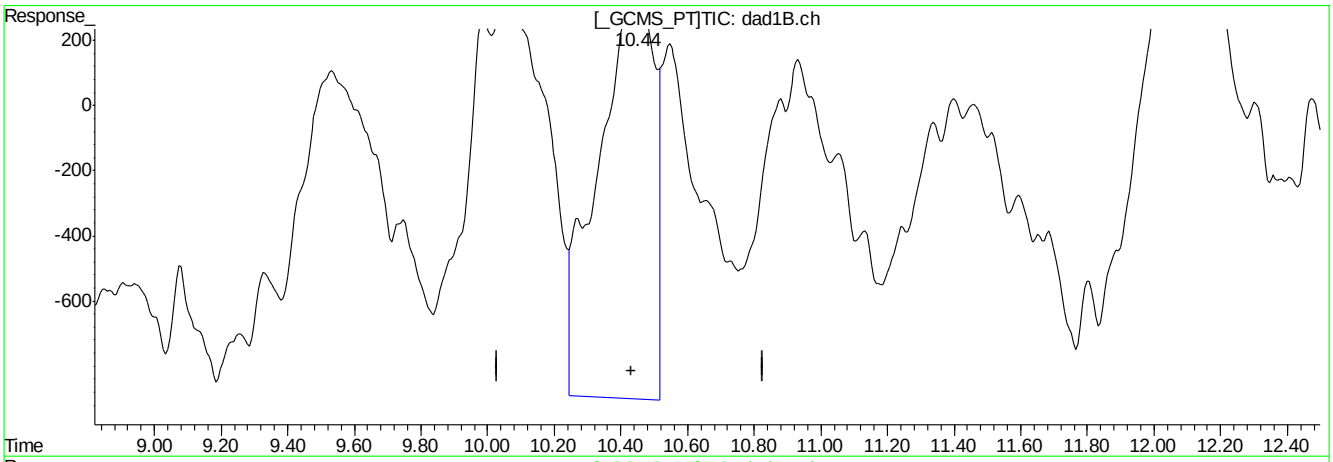
response 190046

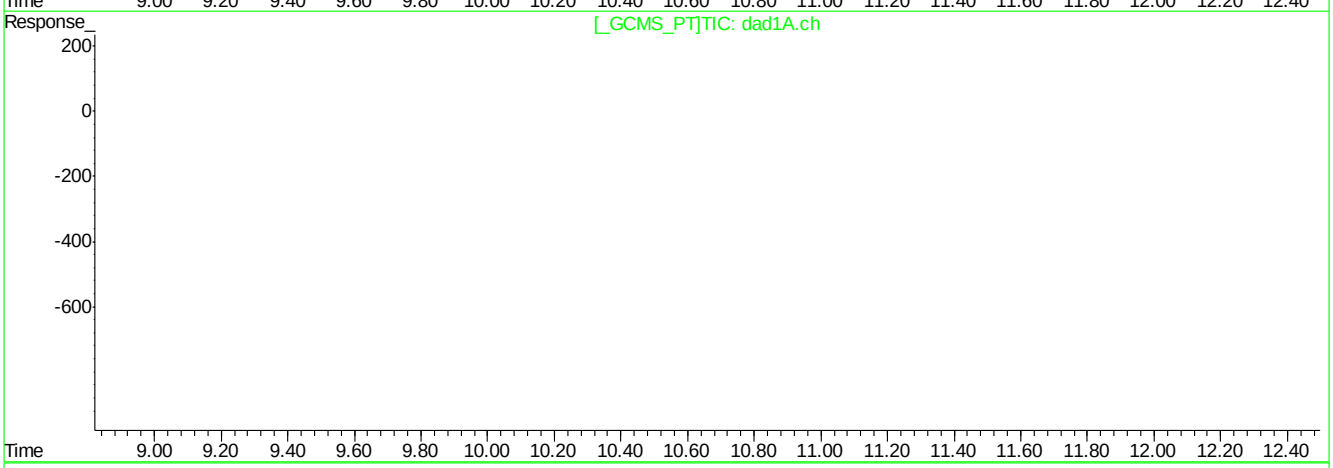
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:28:05 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.45min 39.501ppb

response 147508

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

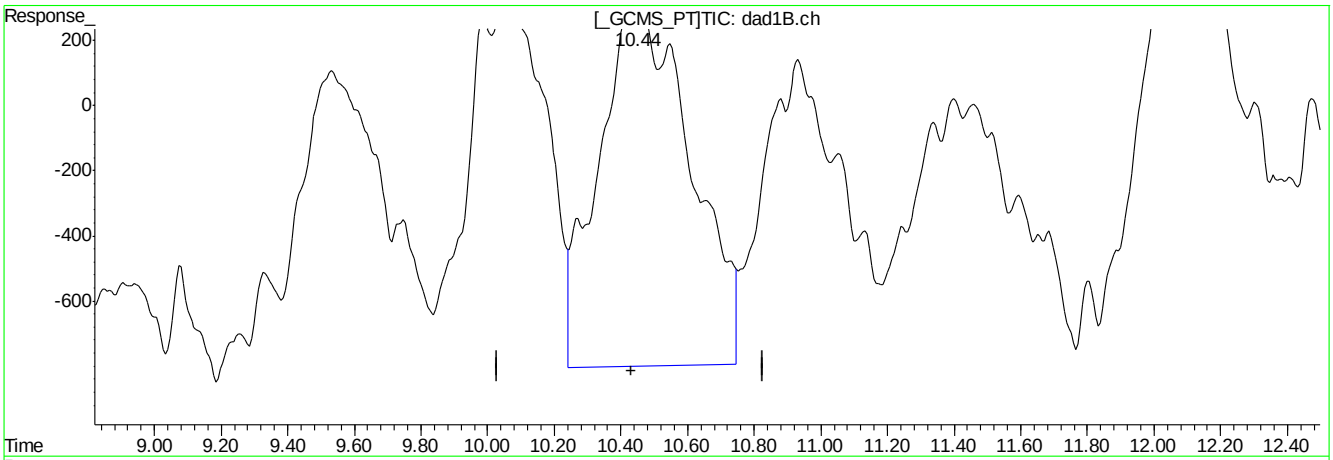
response 0

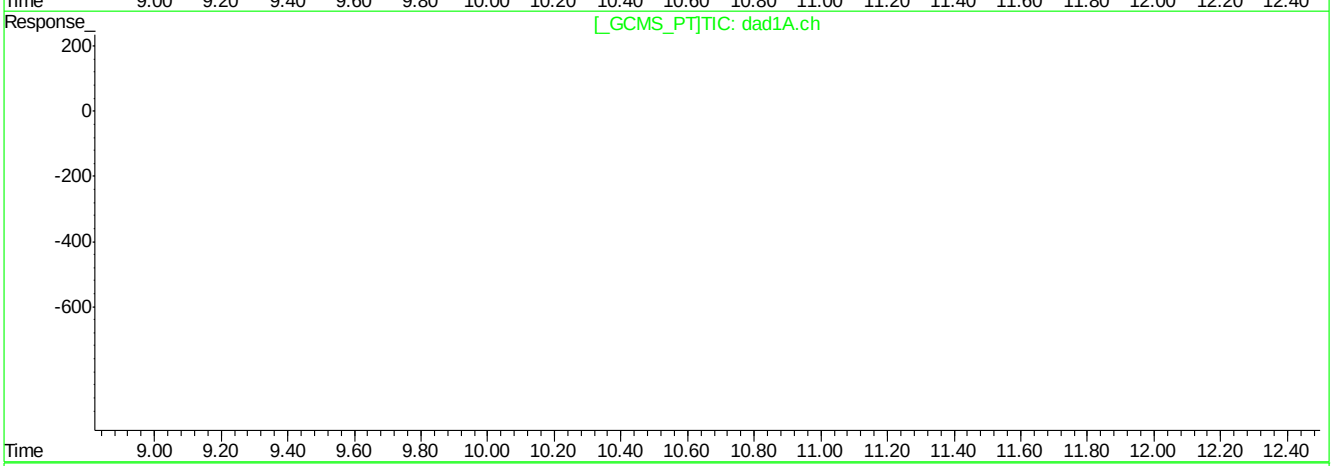
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:28:14 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.44min 58.208ppb m

response 217365

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

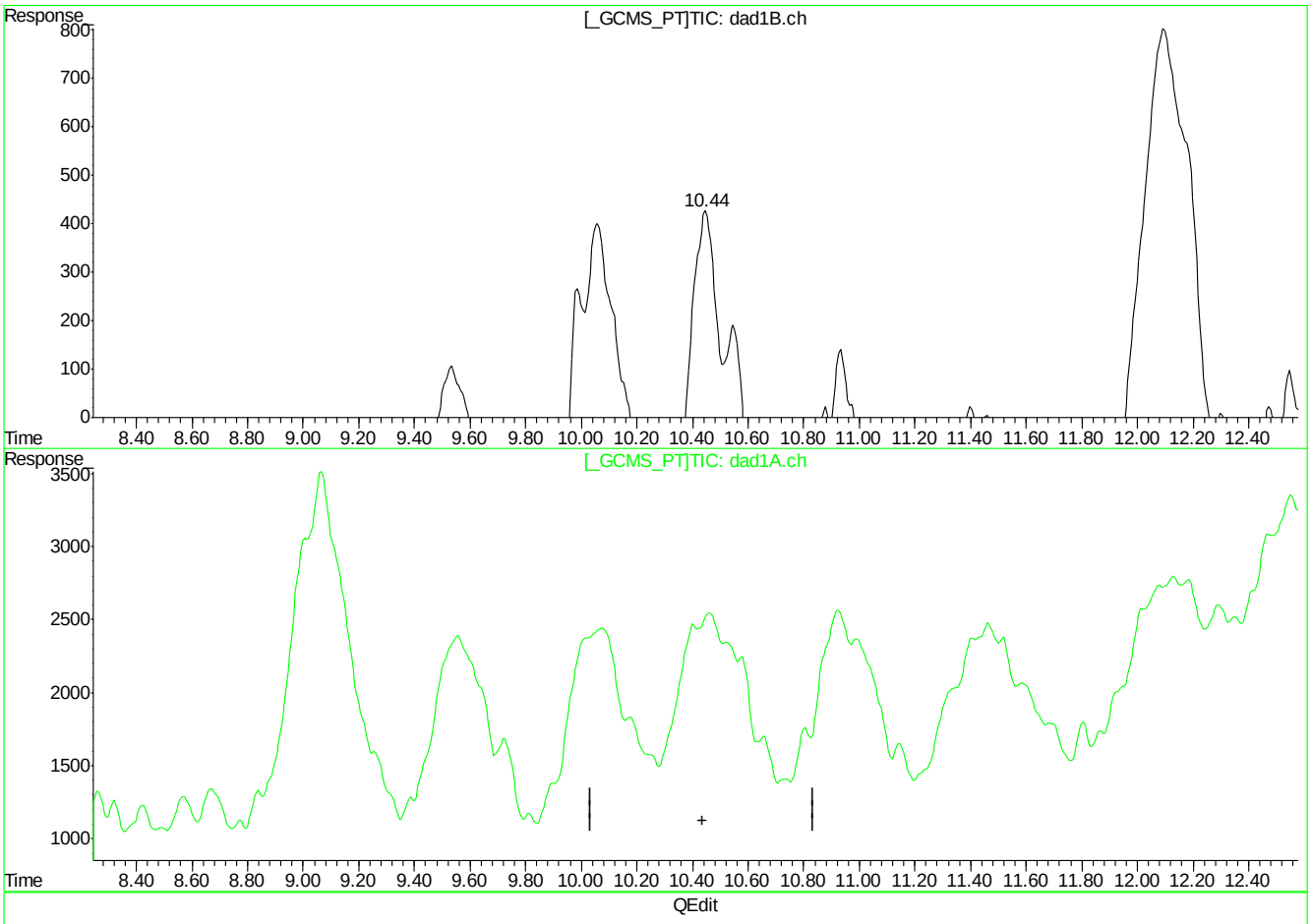
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:28:22 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.44min 58.208ppb m

response 217365

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

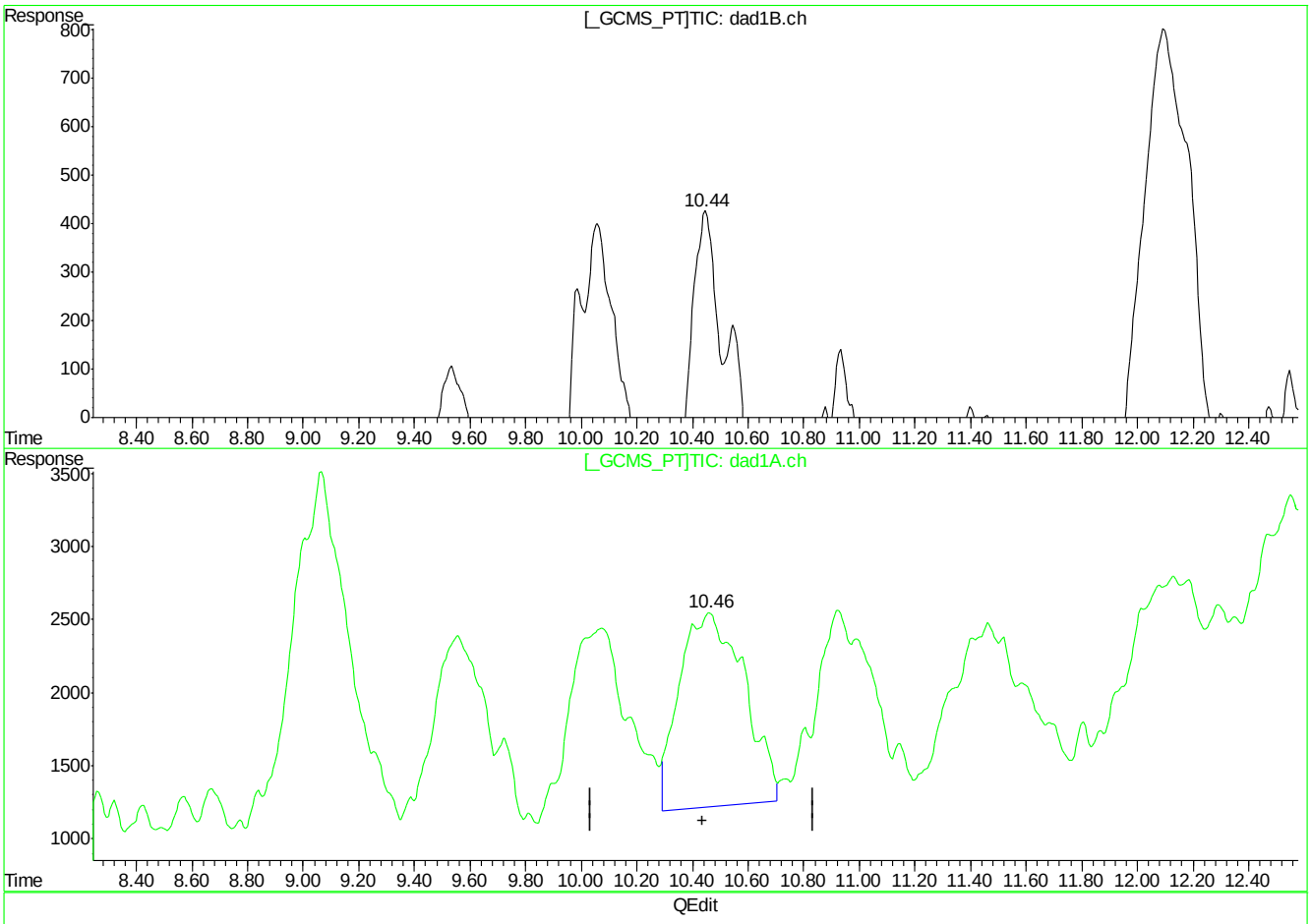
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:28:25 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.44min 58.208ppb m

response 217365

(13) 2-Amino-4,6-Dinitrotoluene #2

10.46min 38.227ppb m

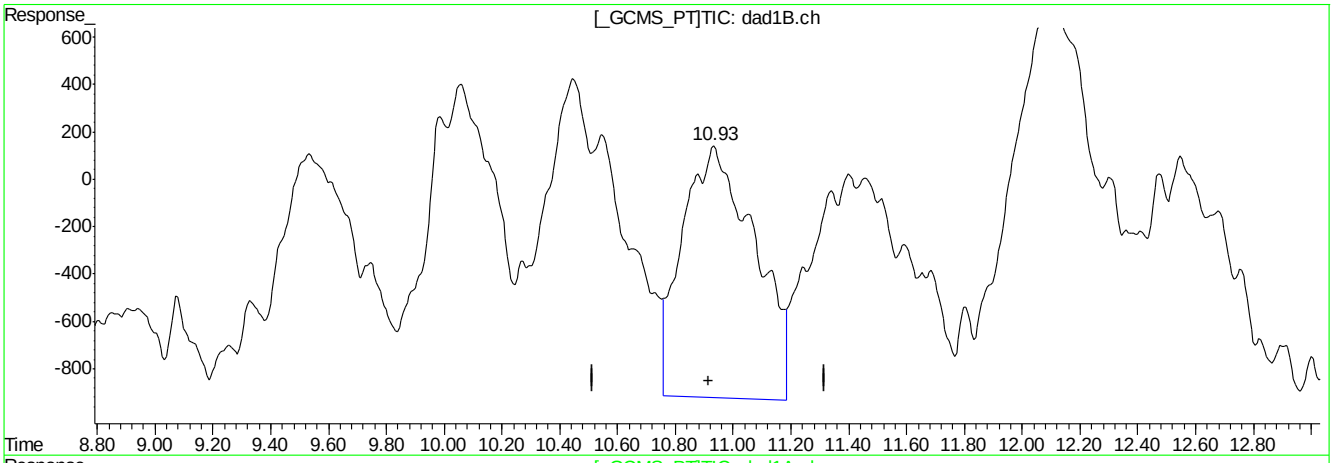
response 214056

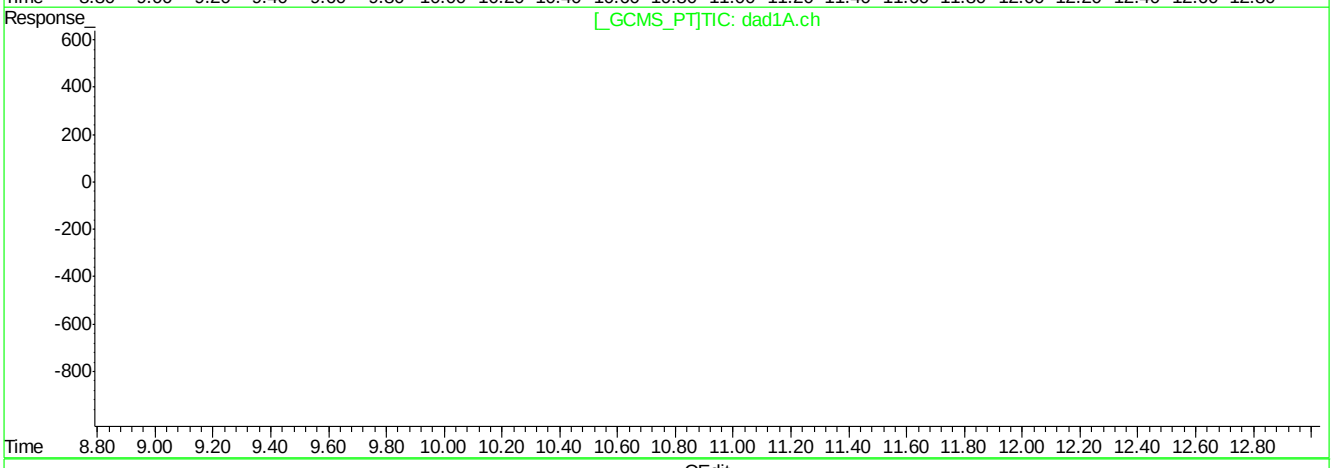
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:28:37 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.93min 70.216ppb

response 185286

(14) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb

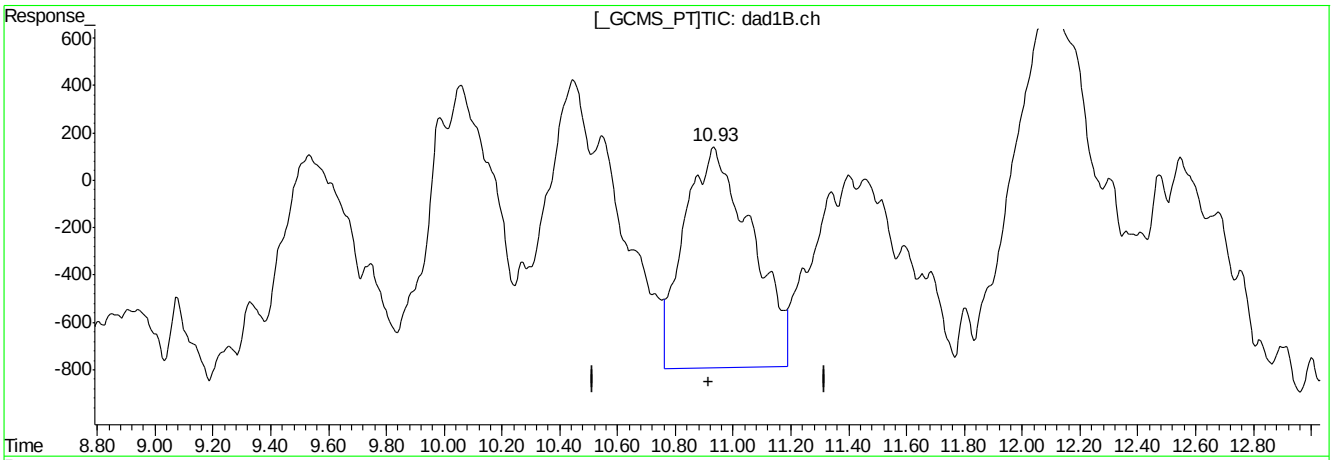
response 0

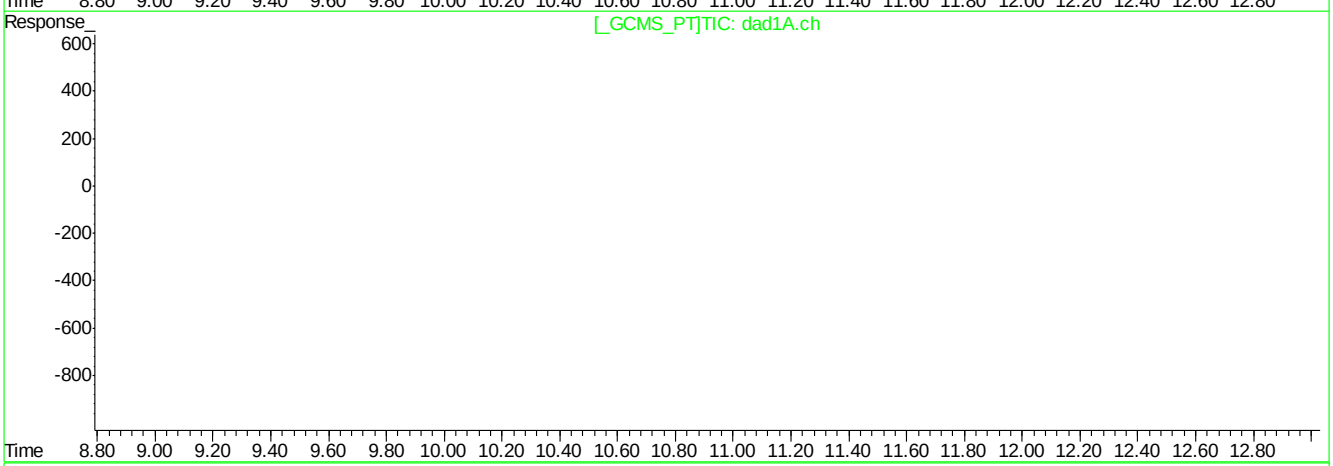
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:29:26 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.93min 57.302ppb m

response 151170

(14) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb

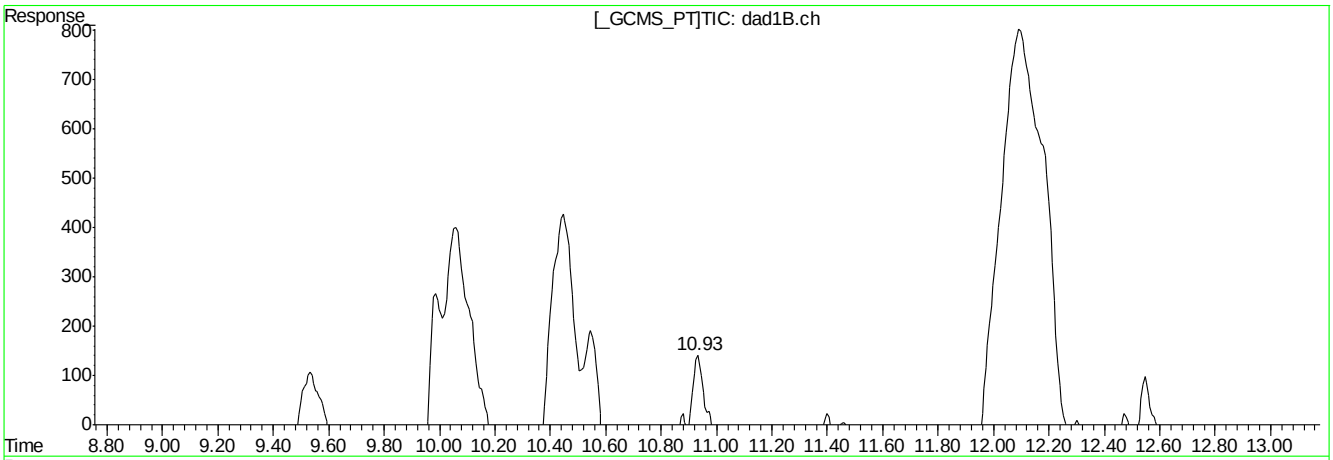
response 0

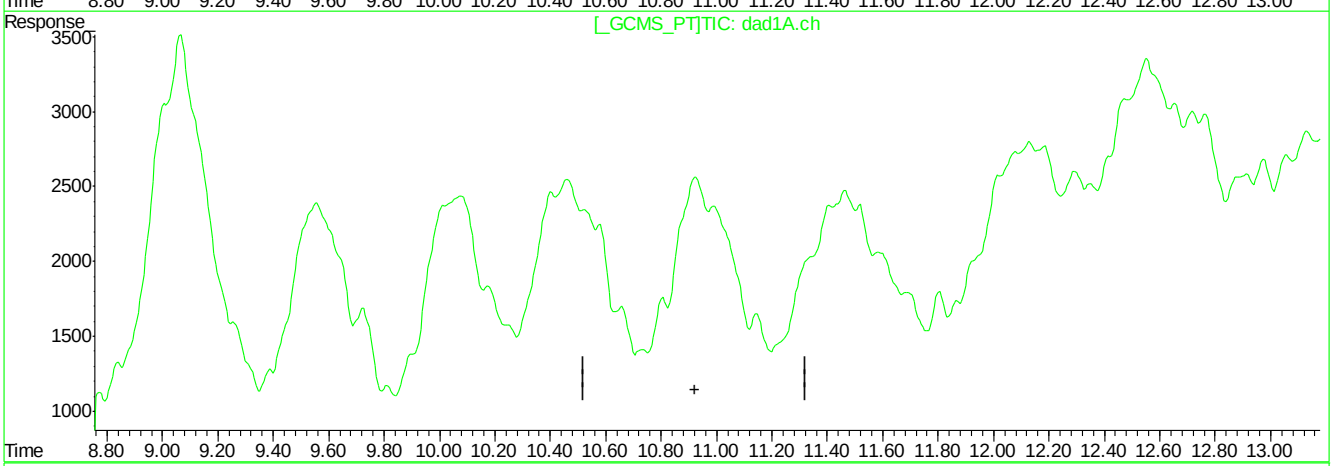
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:29:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.93min 57.302ppb m

response 151170

(14) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb

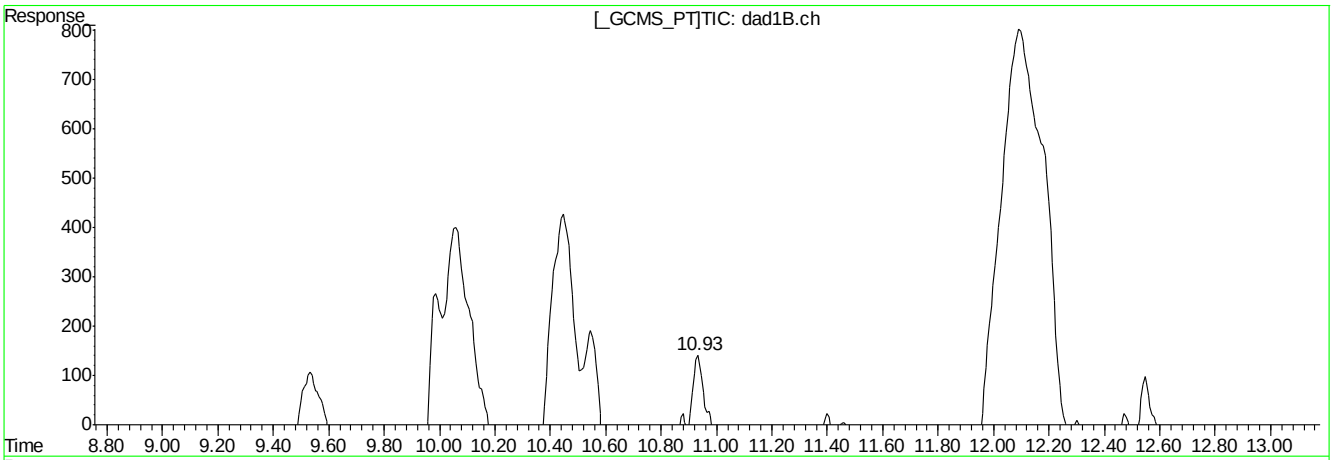
response 0

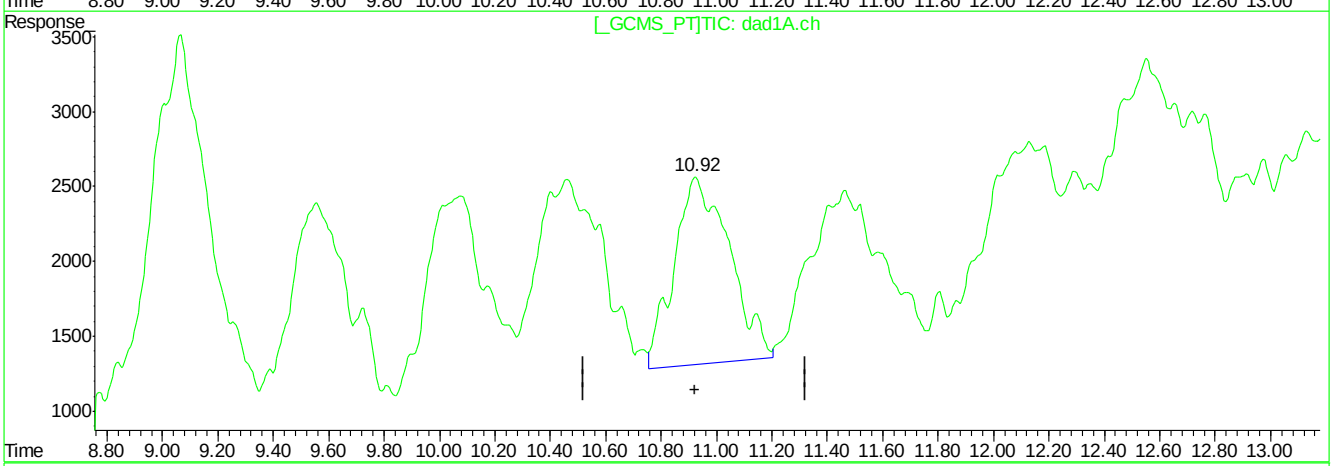
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:29:41 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.93min 57.302ppb m

response 151170

(14) 4-Amino-2,6-Dinitrotoluene #2

10.92min 32.370ppb m

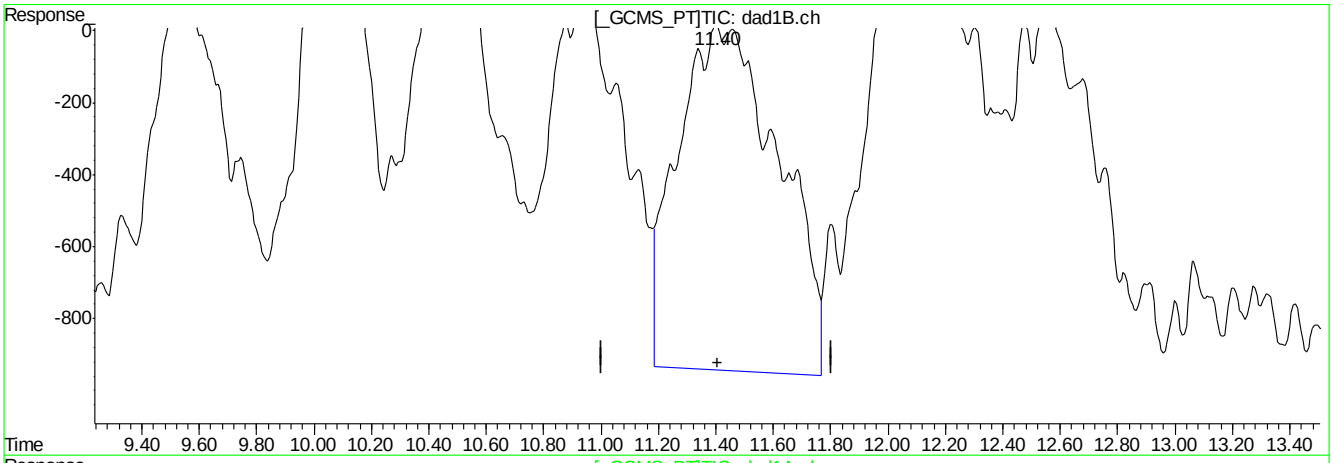
response 172539

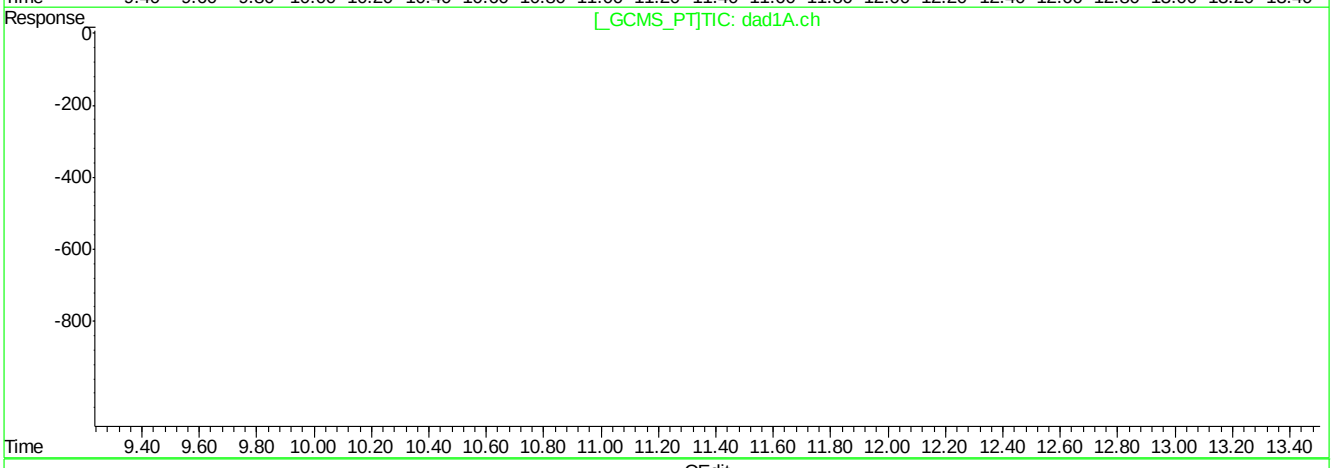
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:29:50 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.40min 94.542ppb

response 235270

(15) 3,4-Dinitrotoluene #2 (S)

0.00min 0.000ppb

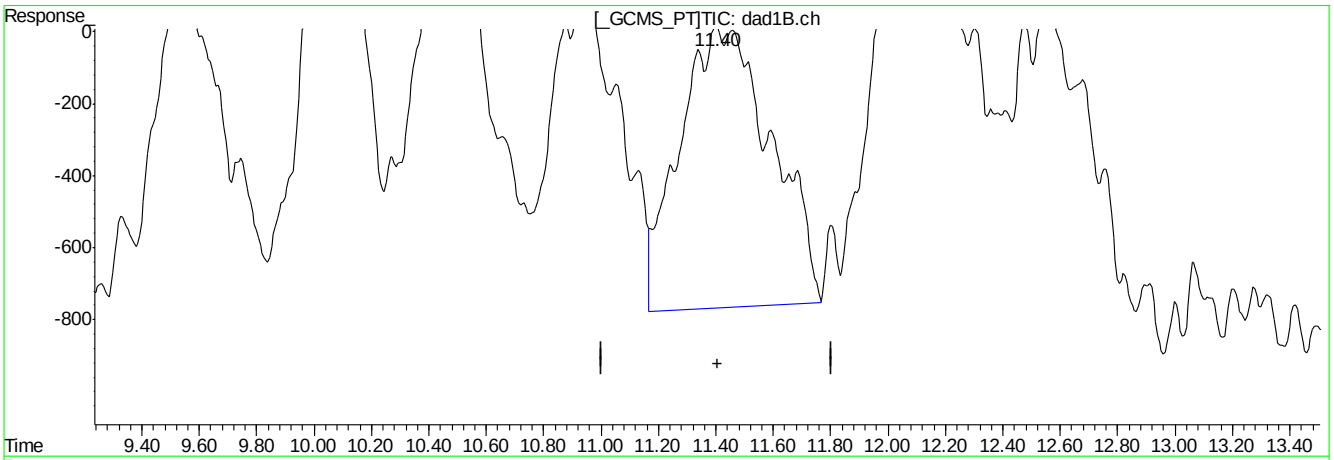
response 0

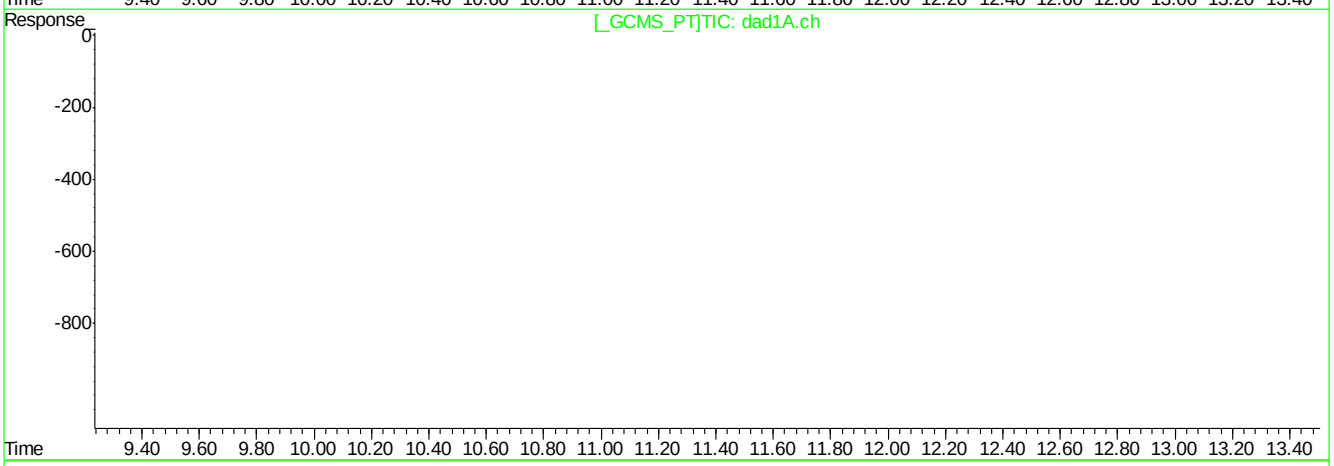
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:30:25 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.40min 70.107ppb m

response 174462

(15) 3,4-Dinitrotoluene #2 (S)

0.00min 0.000ppb

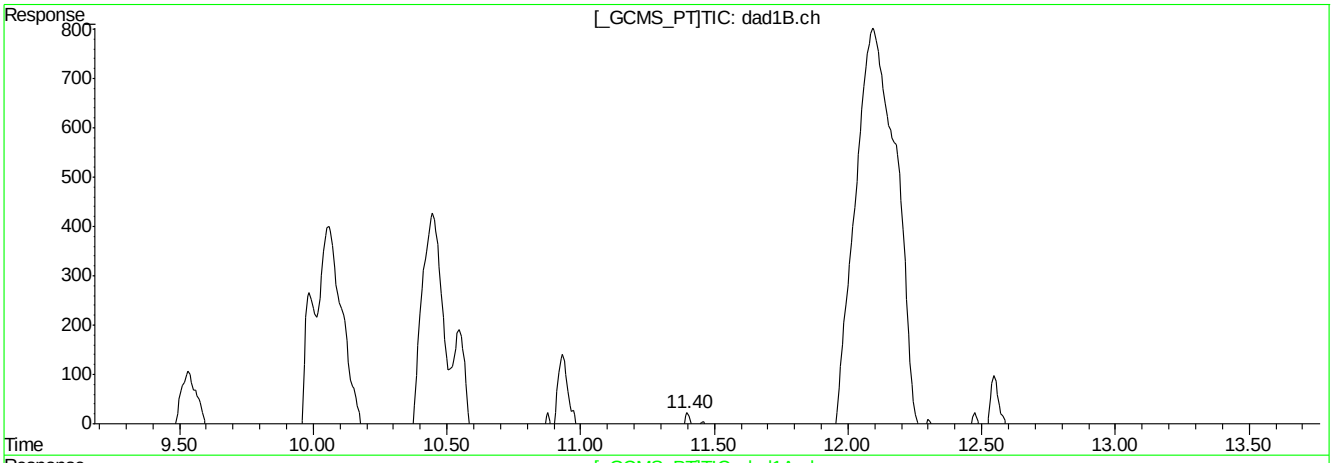
response 0

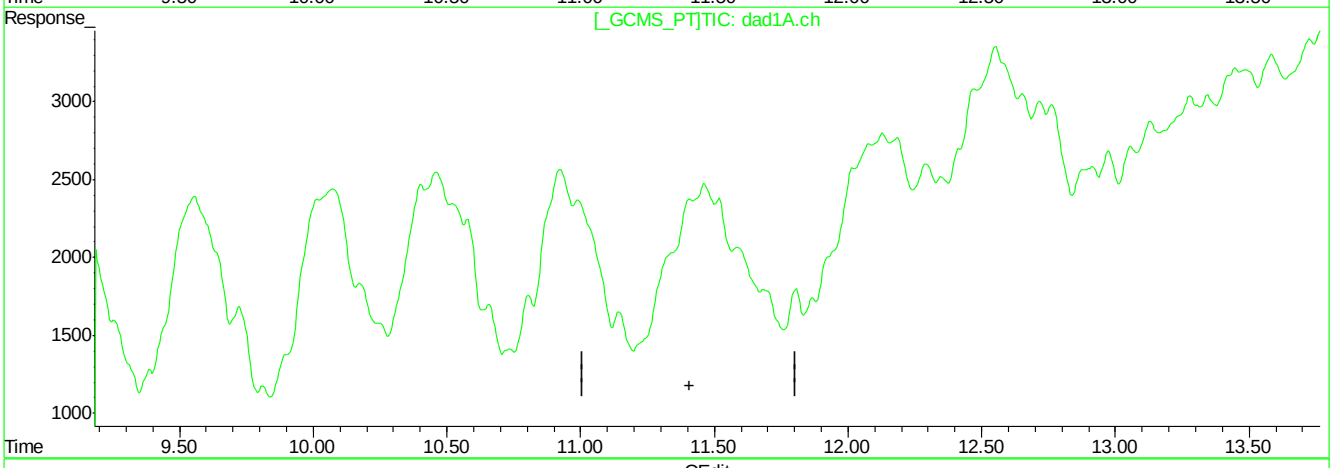
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:30:37 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.40min 70.107ppb m

response 174462

(15) 3,4-Dinitrotoluene #2 (S)

0.00min 0.000ppb

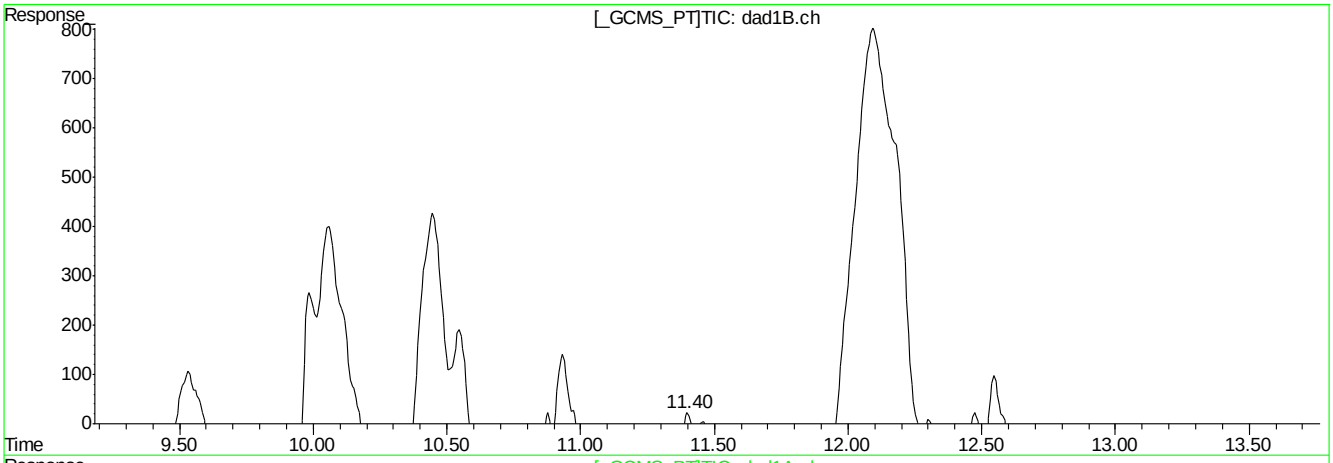
response 0

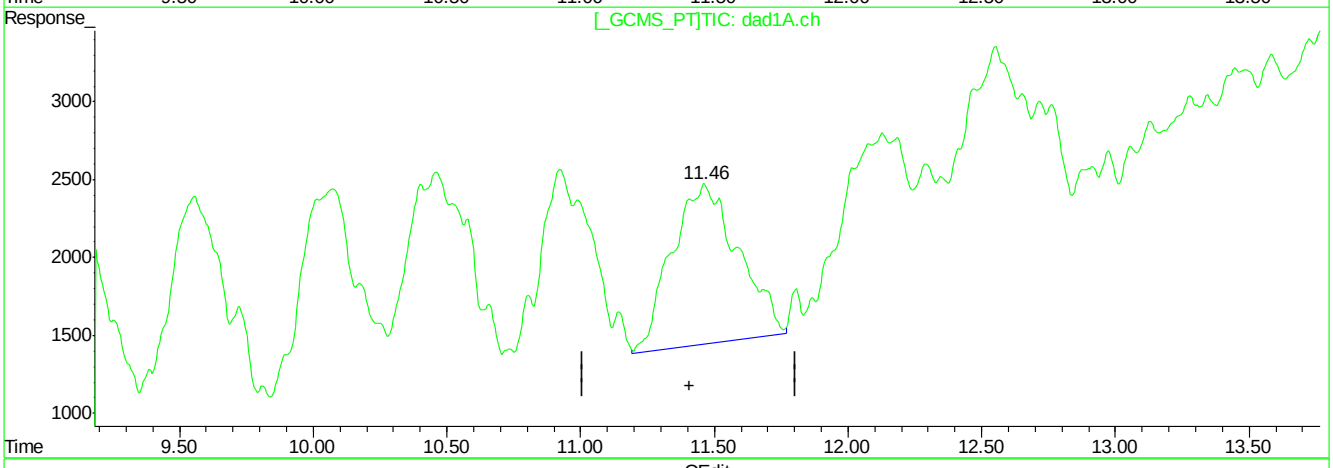
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:30:44 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.40min 70.107ppb m

response 174462

(15) 3,4-Dinitrotoluene #2 (S)

11.46min 42.241ppb m

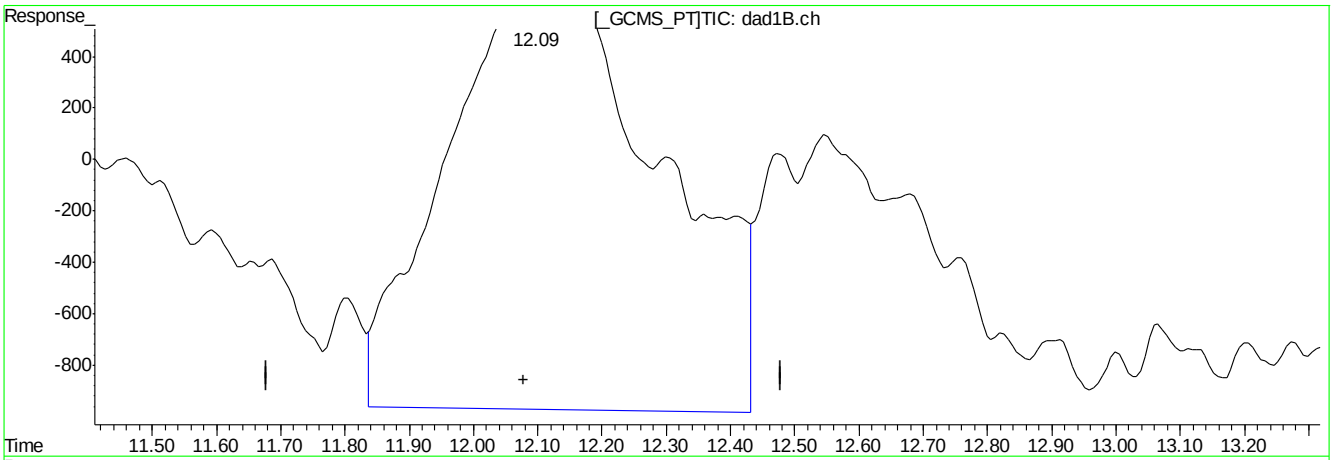
response 177673

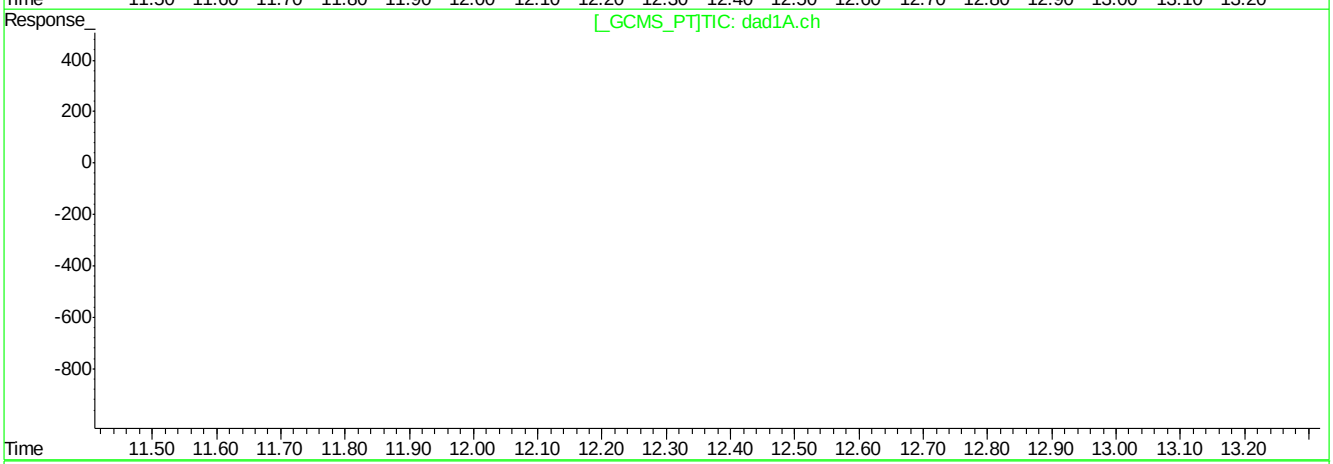
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:30:52 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.10min 74.949ppb

response 388847

(16) 2,4-Dinitrotoluene #2

0.00min 0.000ppb

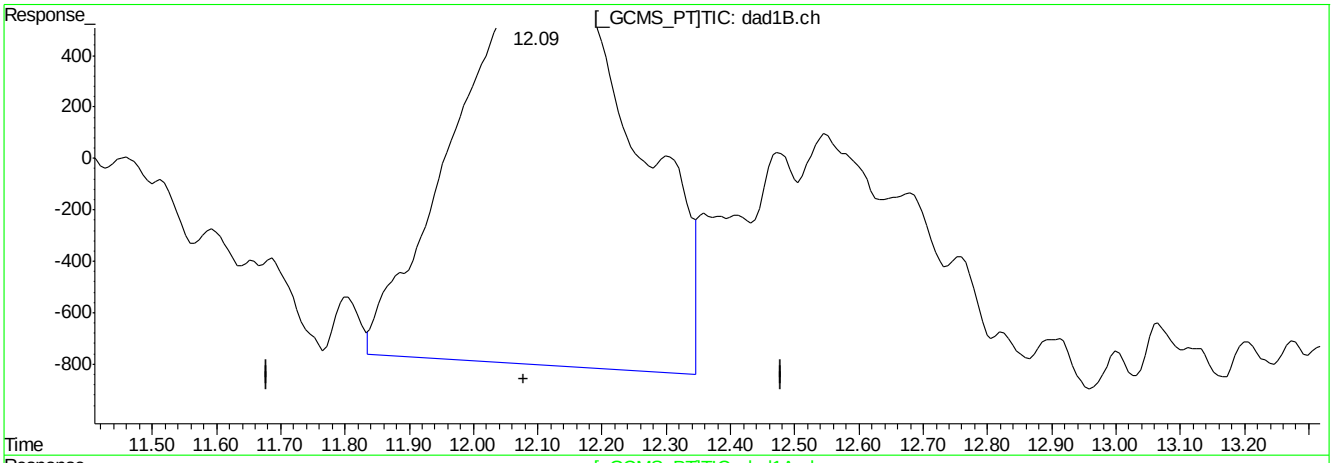
response 0

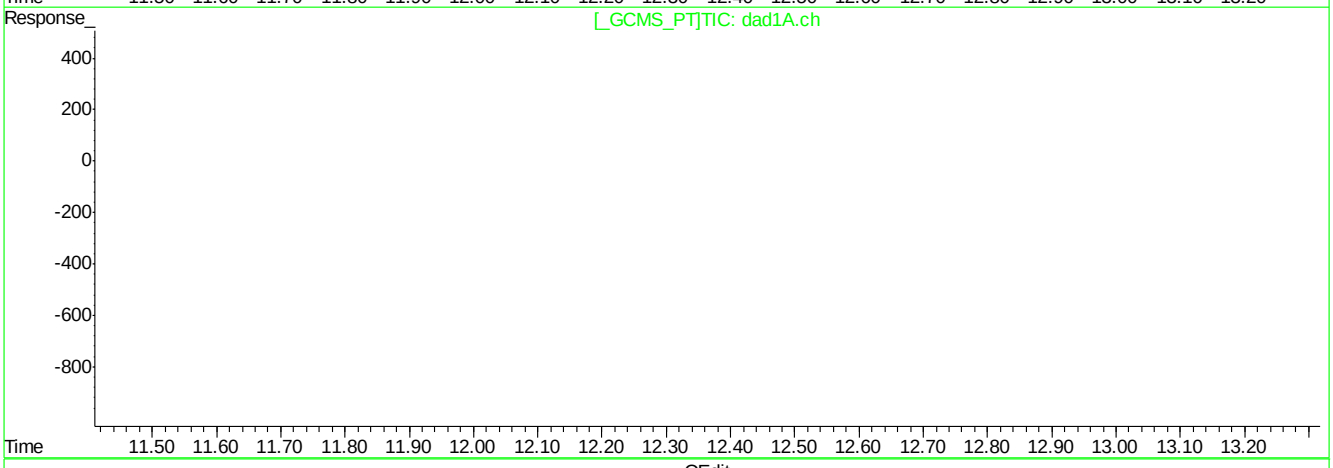
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:02 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.09min 57.126ppb m

response 296379

(16) 2,4-Dinitrotoluene #2

0.00min 0.000ppb

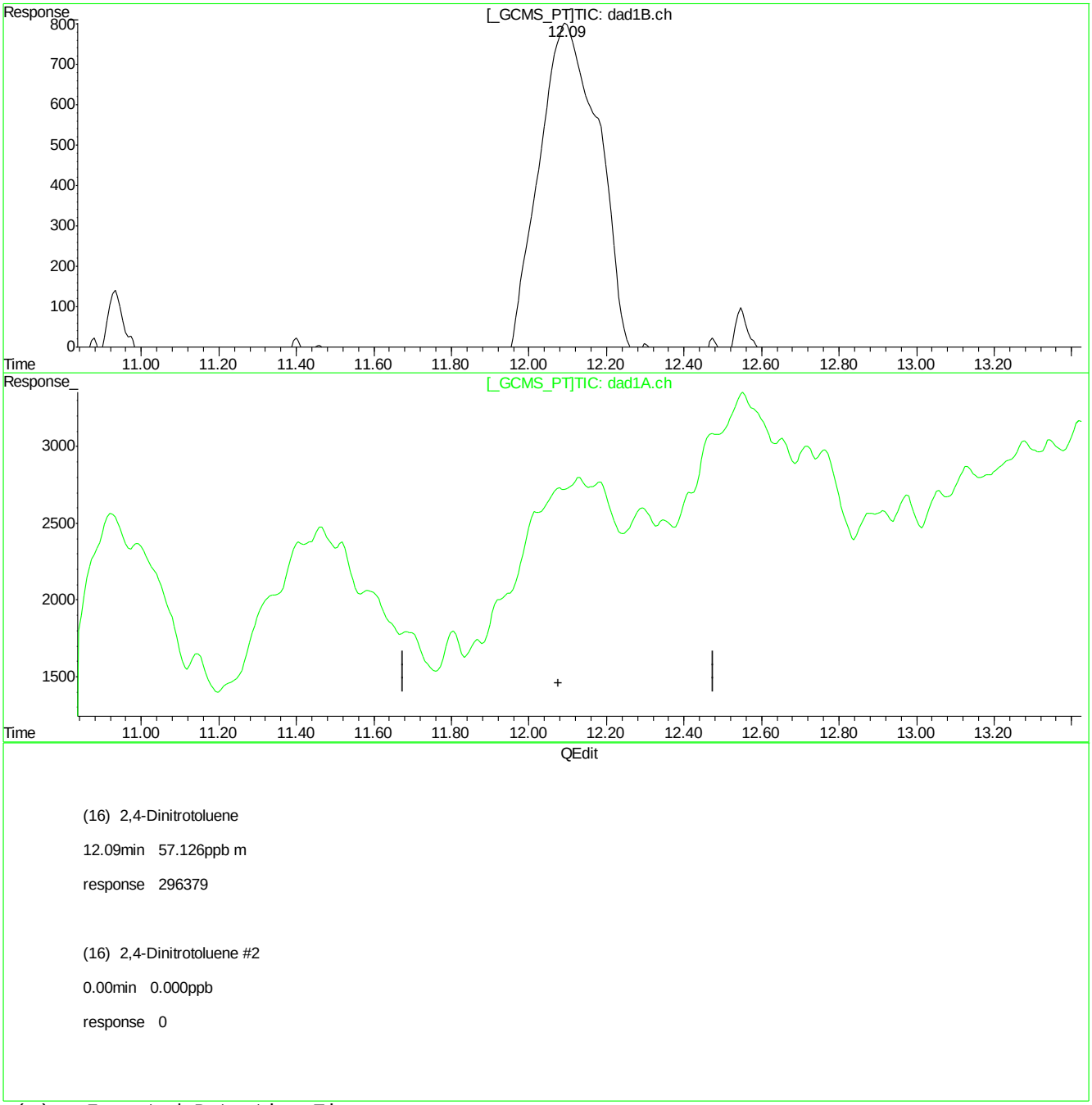
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:11 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(16) 2,4-Dinitrotoluene

12.09min 57.126ppb m

response 296379

(16) 2,4-Dinitrotoluene #2

0.00min 0.000ppb

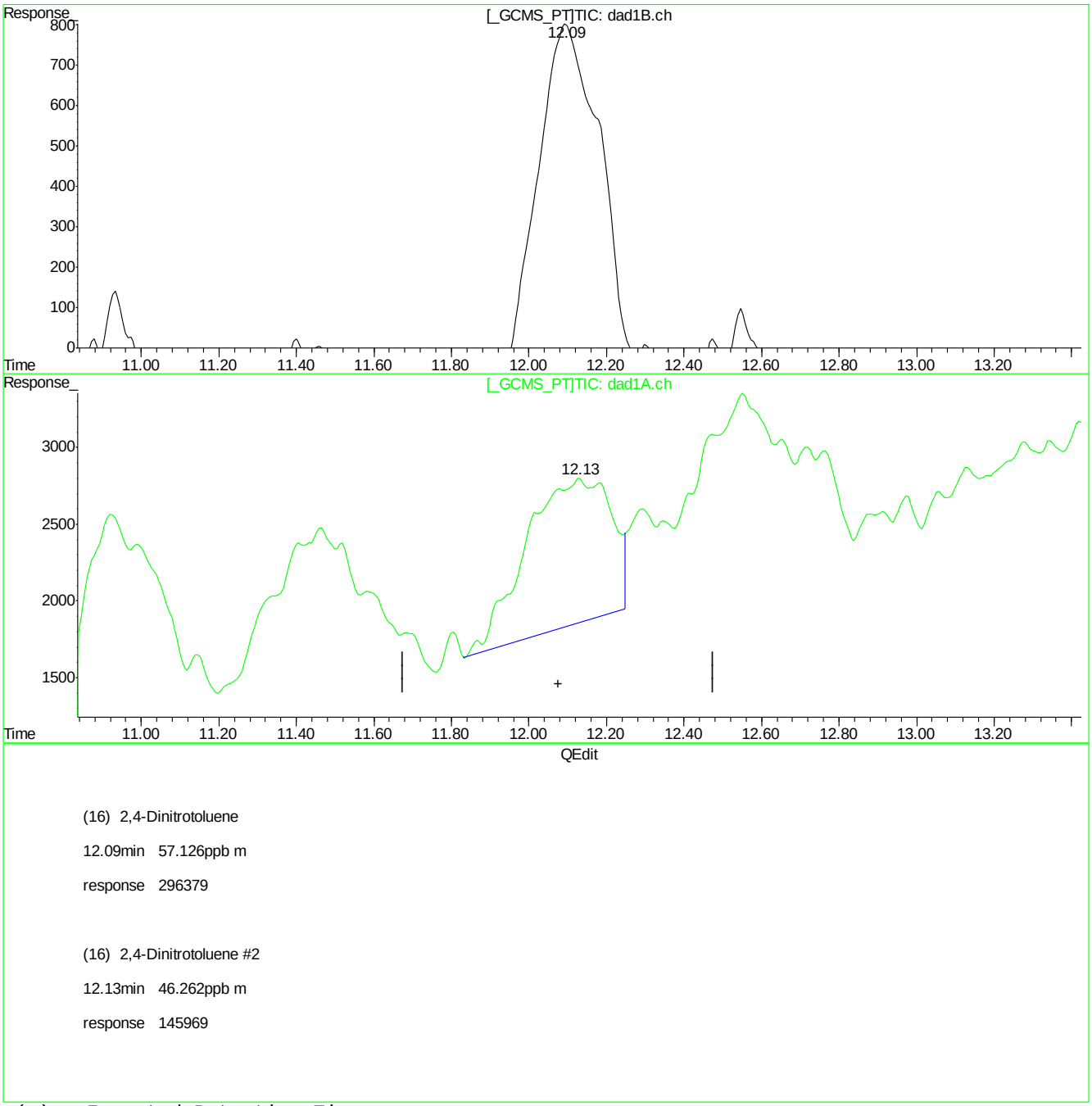
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:15 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(16) 2,4-Dinitrotoluene

12.09min 57.126ppb m

response 296379

(16) 2,4-Dinitrotoluene #2

12.13min 46.262ppb m

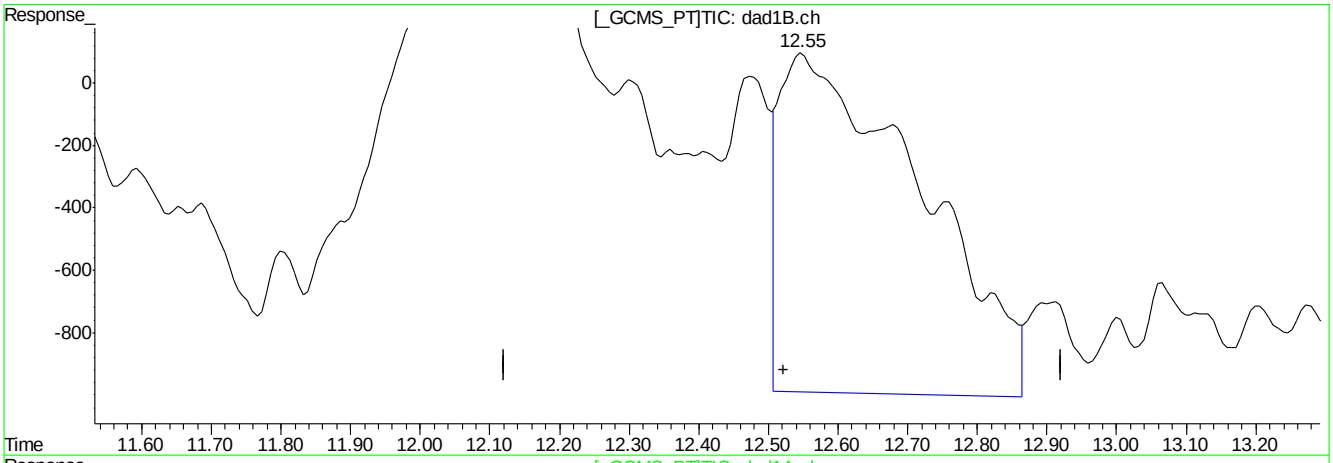
response 145969

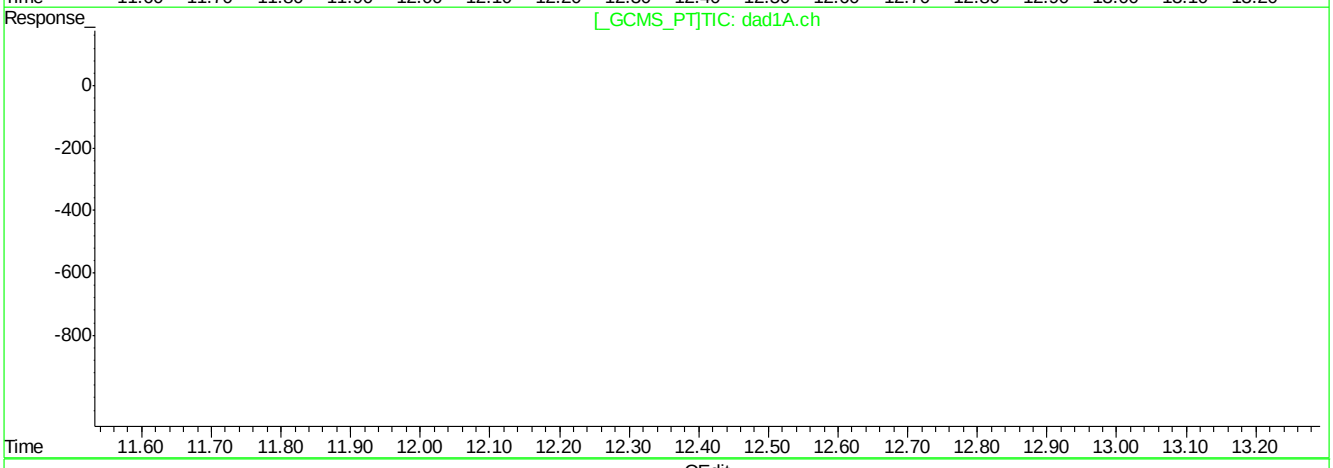
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:26 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 52.561ppb

response 154484

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

response 0

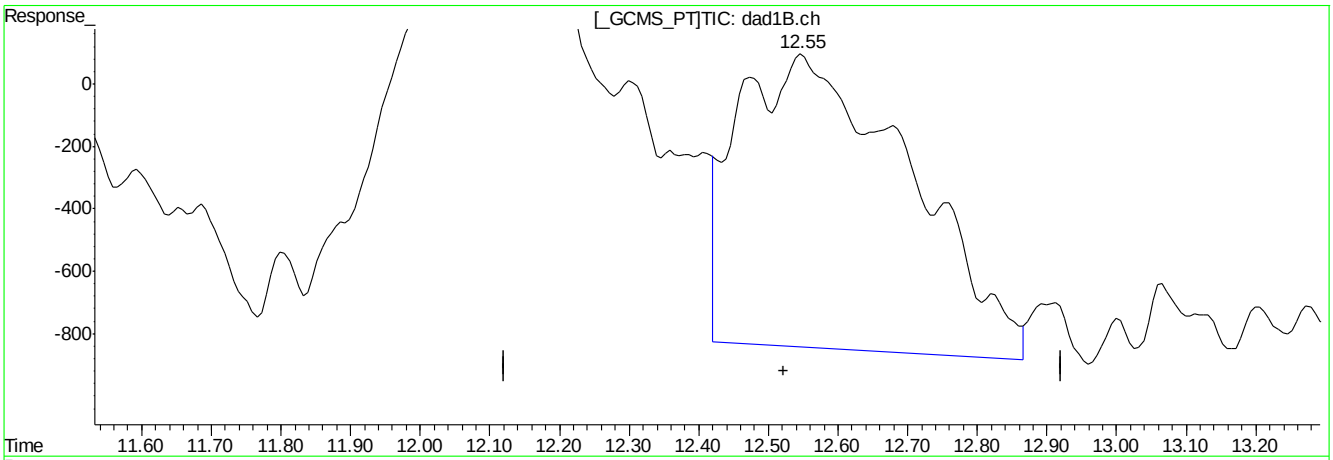
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:34 2018

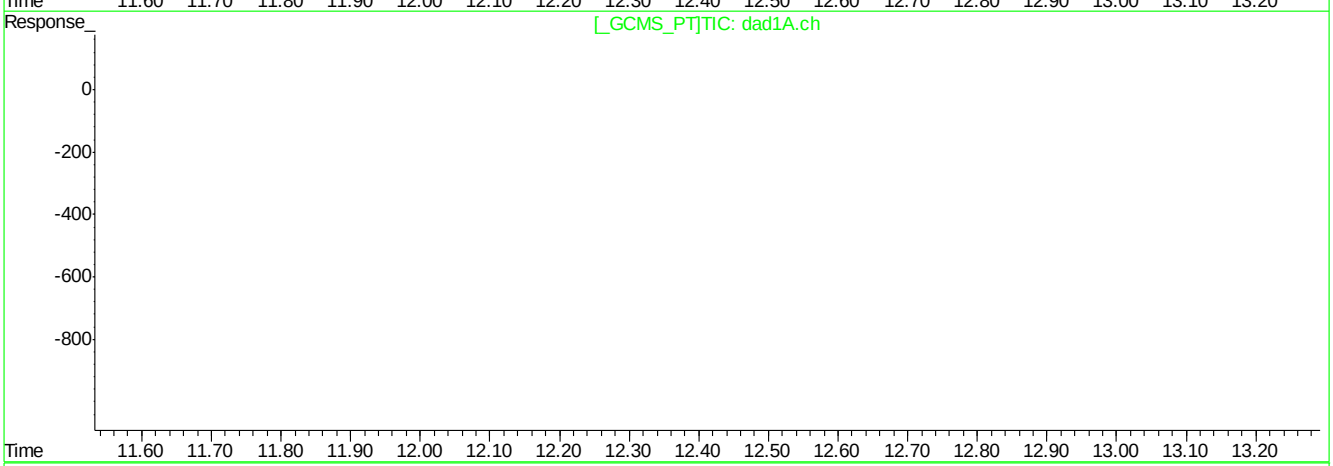
BB060201.D edits: 2,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 55.194ppb m

response 162232

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

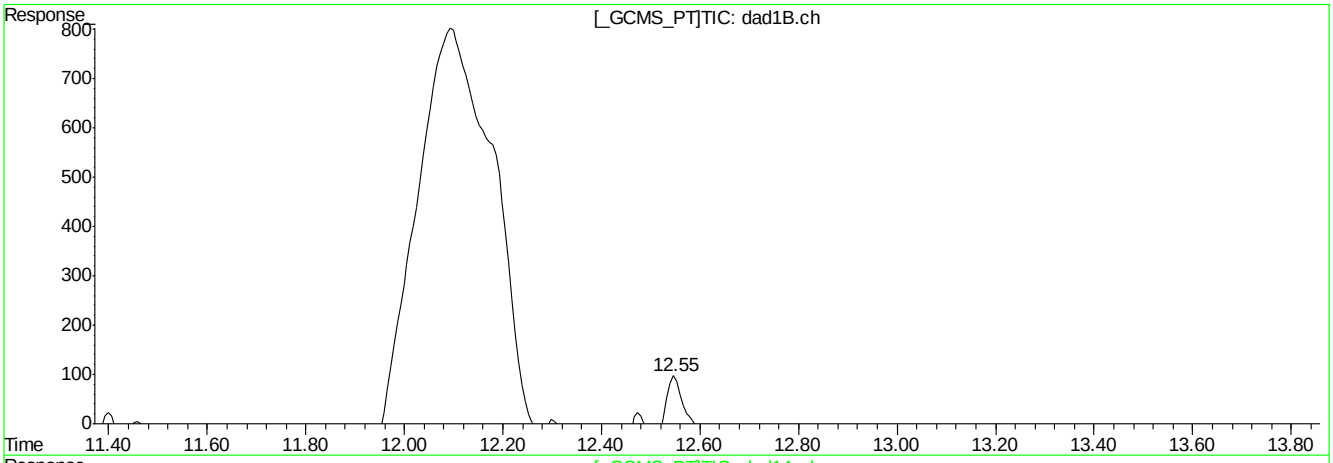
response 0

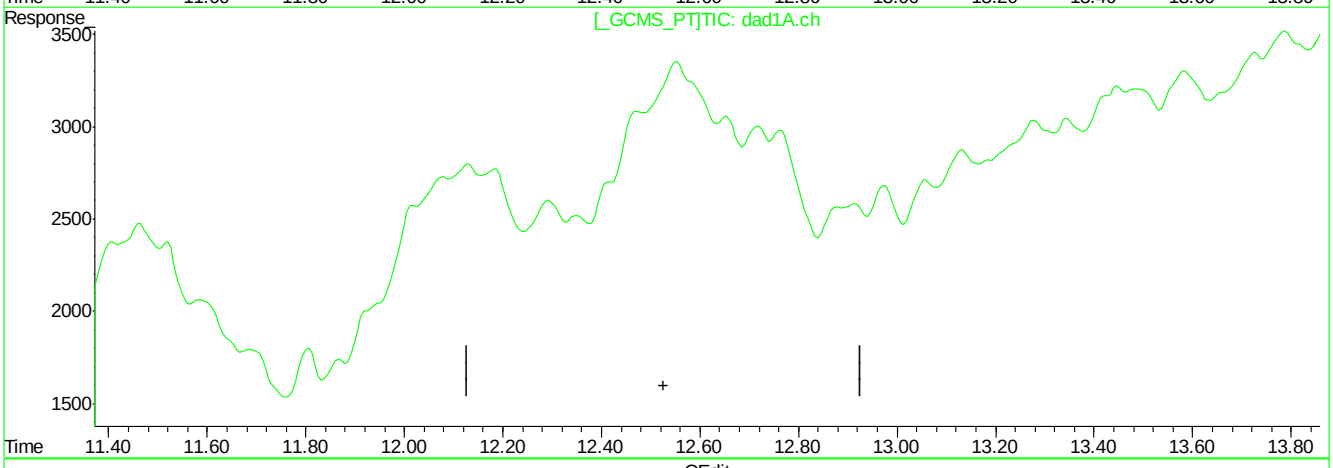
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:40 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 55.194ppb m

response 162232

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

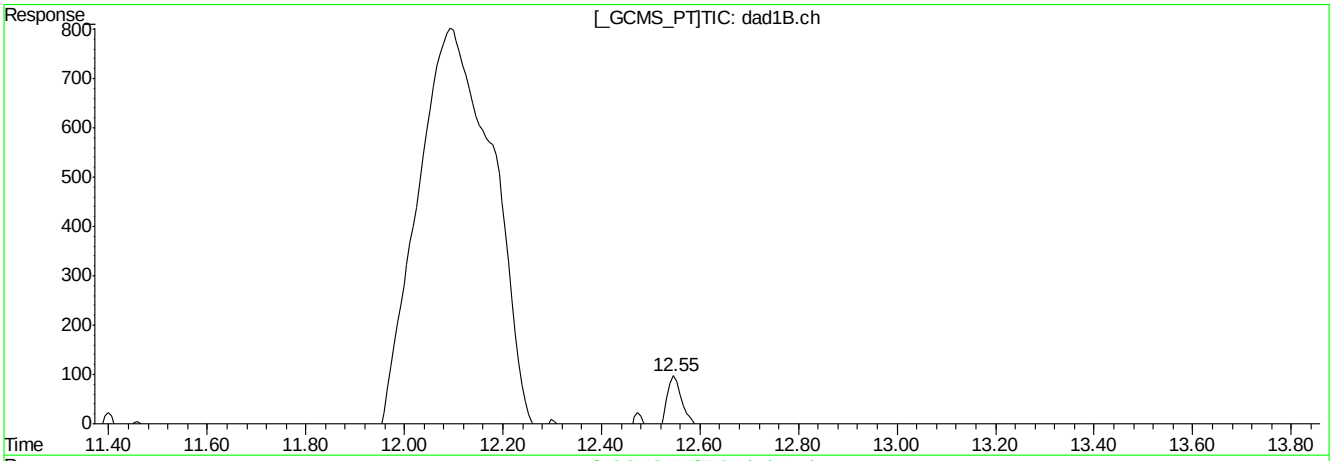
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:45 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(17) 2,6-Dinitrotoluene

12.55min 55.194ppb m

response 162232

(17) 2,6-Dinitrotoluene #2

12.55min 55.448ppb m

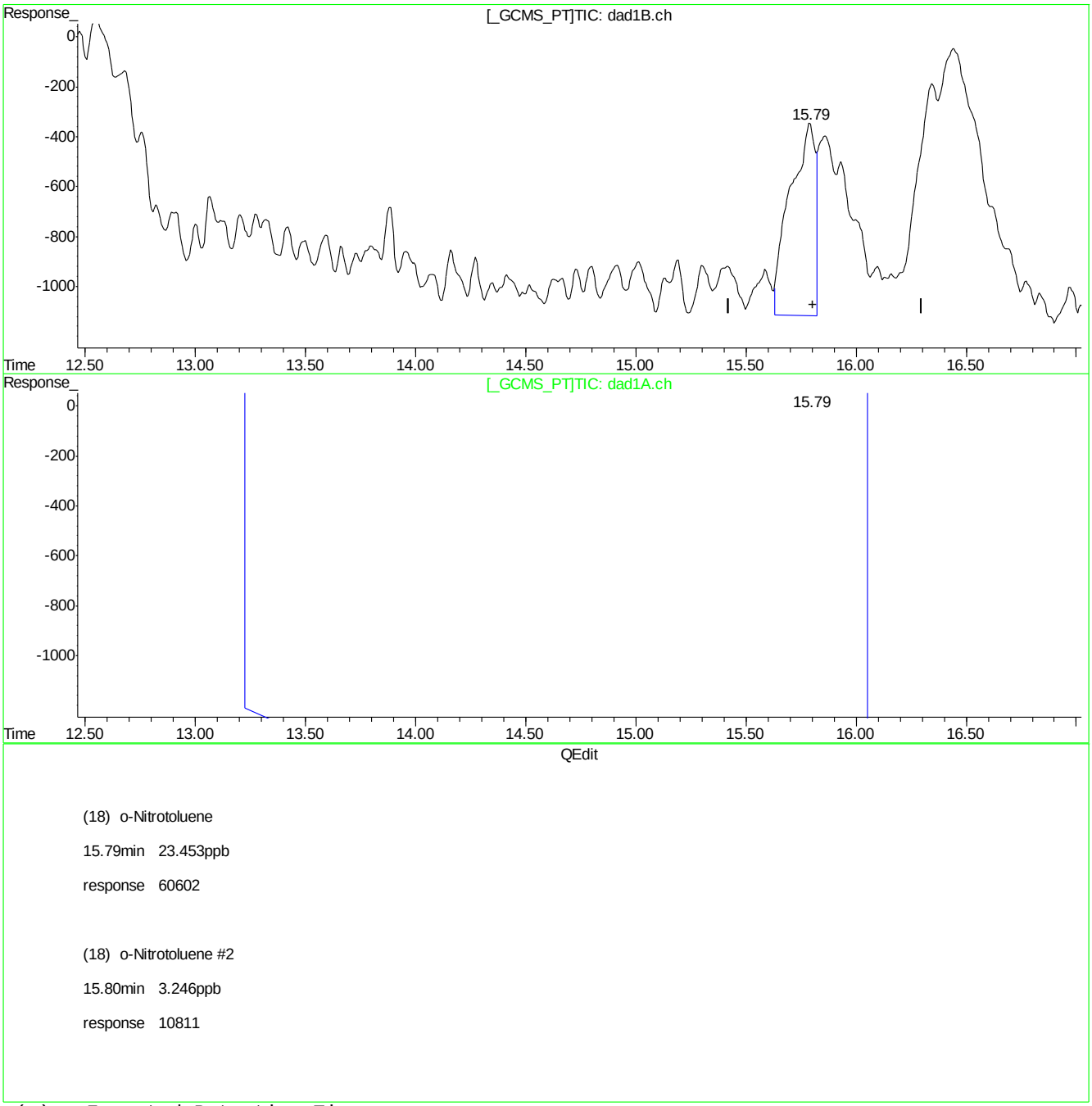
response 204595

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:52 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration

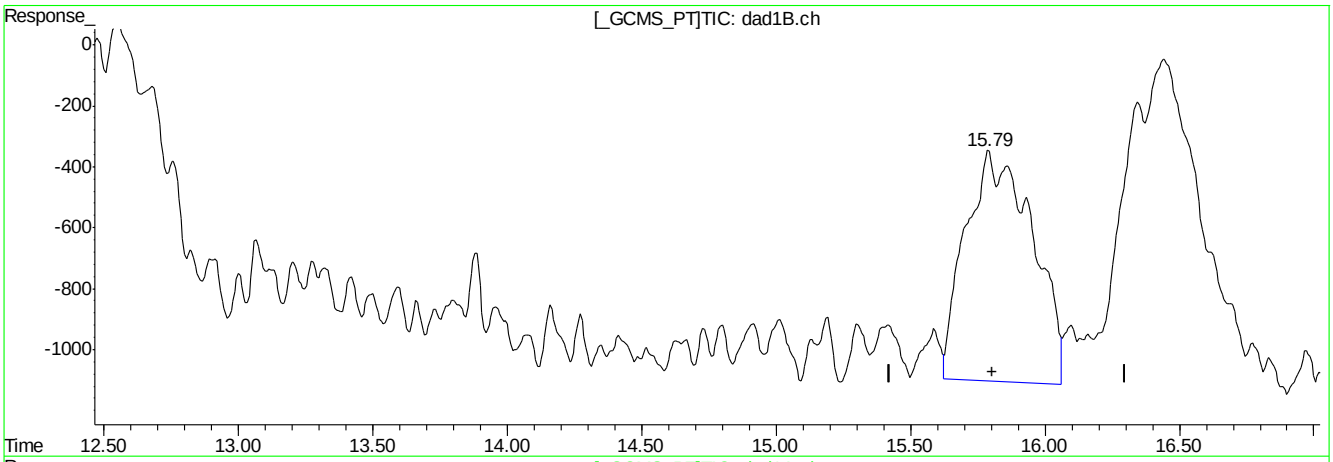


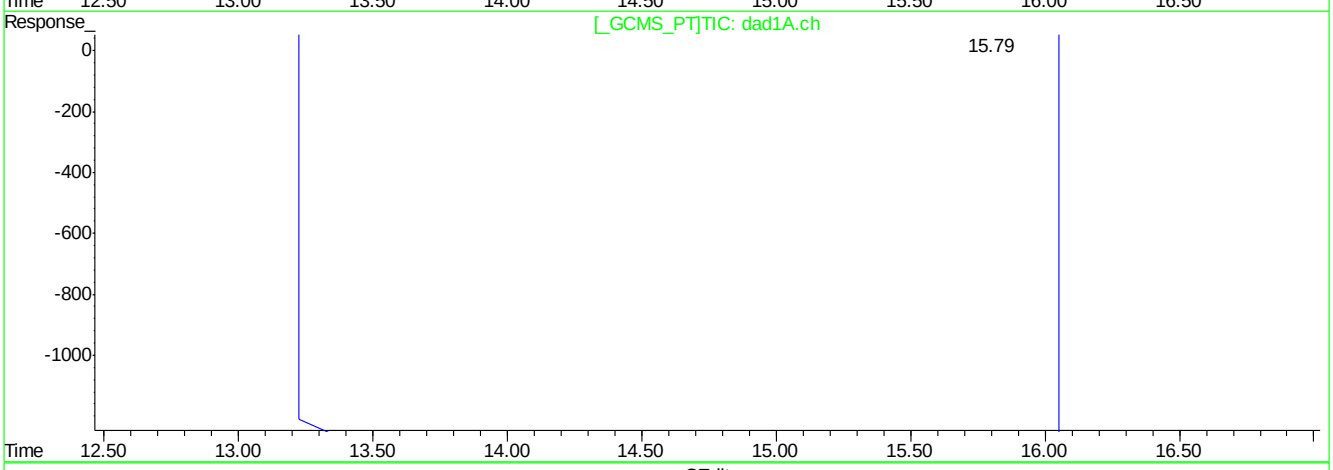
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:32:03 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.79min 50.748ppb m

response 131134

(18) o-Nitrotoluene #2

15.80min 3.246ppb

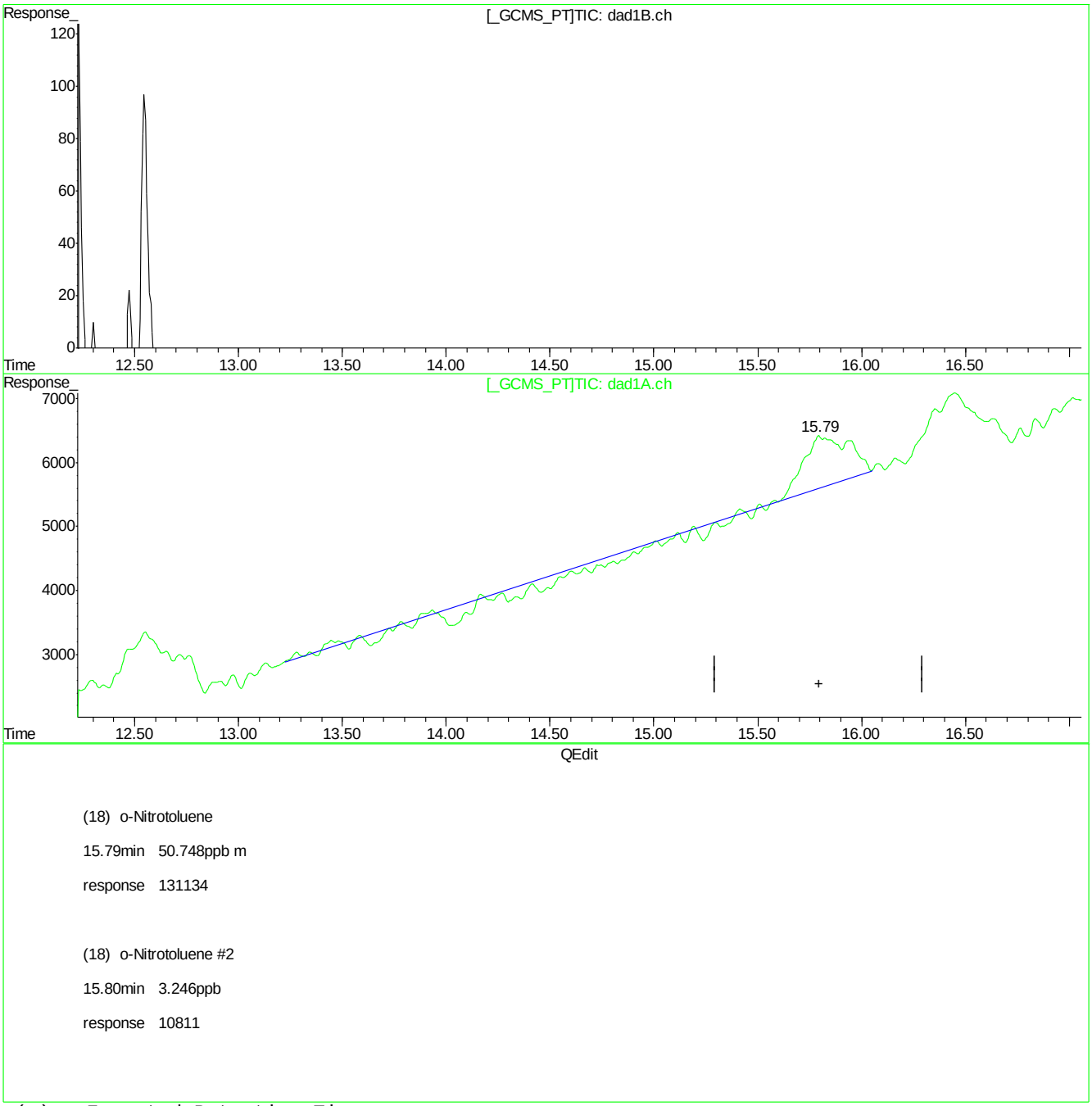
response 10811

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:32:12 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.79min 50.748ppb m

response 131134

(18) o-Nitrotoluene #2

15.80min 3.246ppb

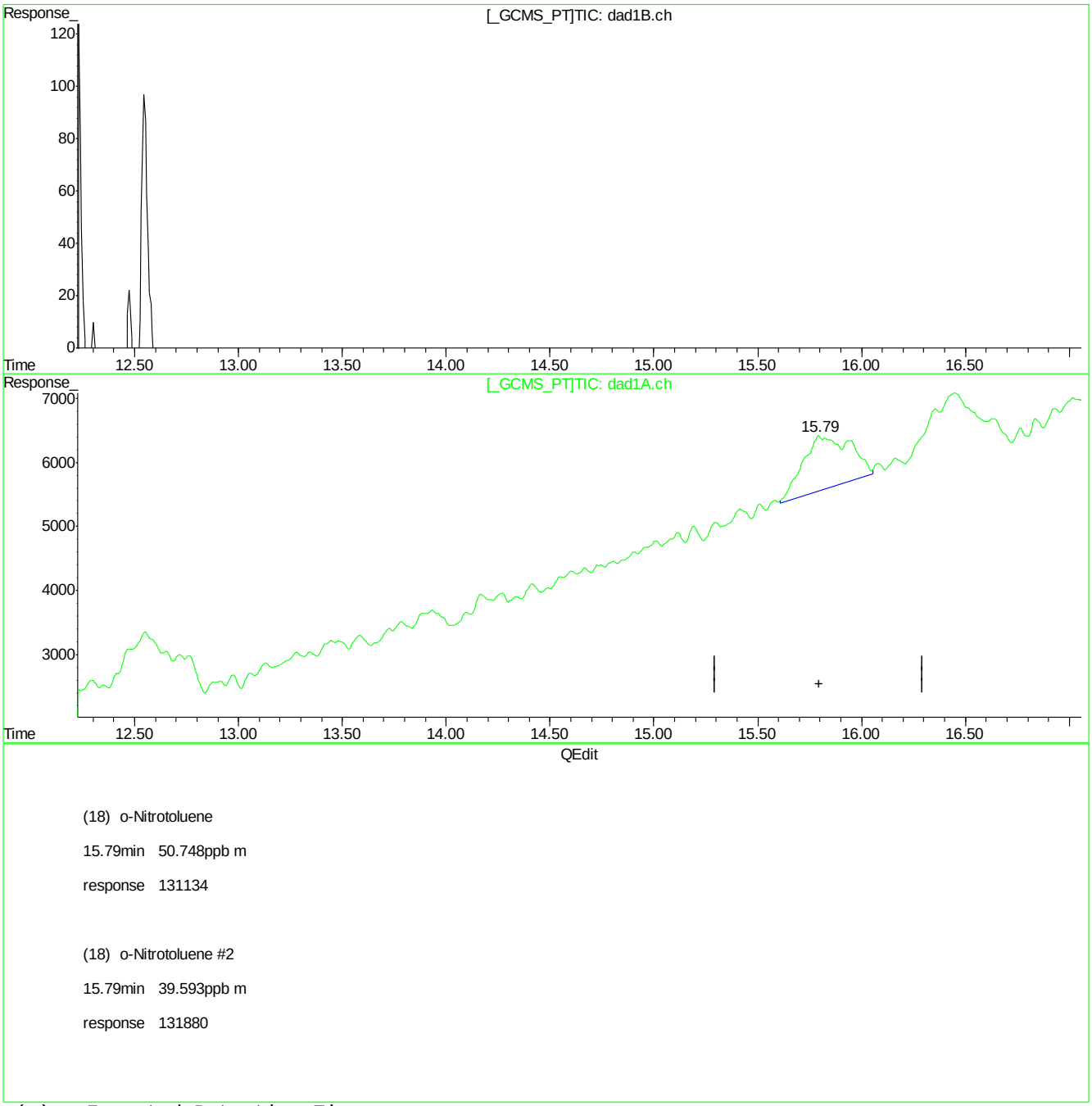
response 10811

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:32:16 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.79min 50.748ppb m

response 131134

(18) o-Nitrotoluene #2

15.79min 39.593ppb m

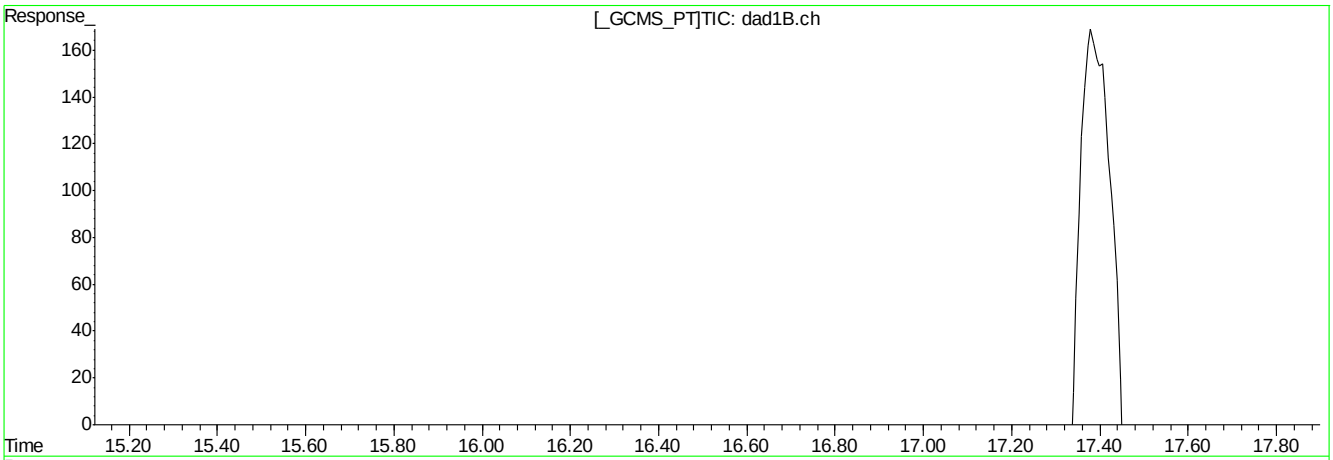
response 131880

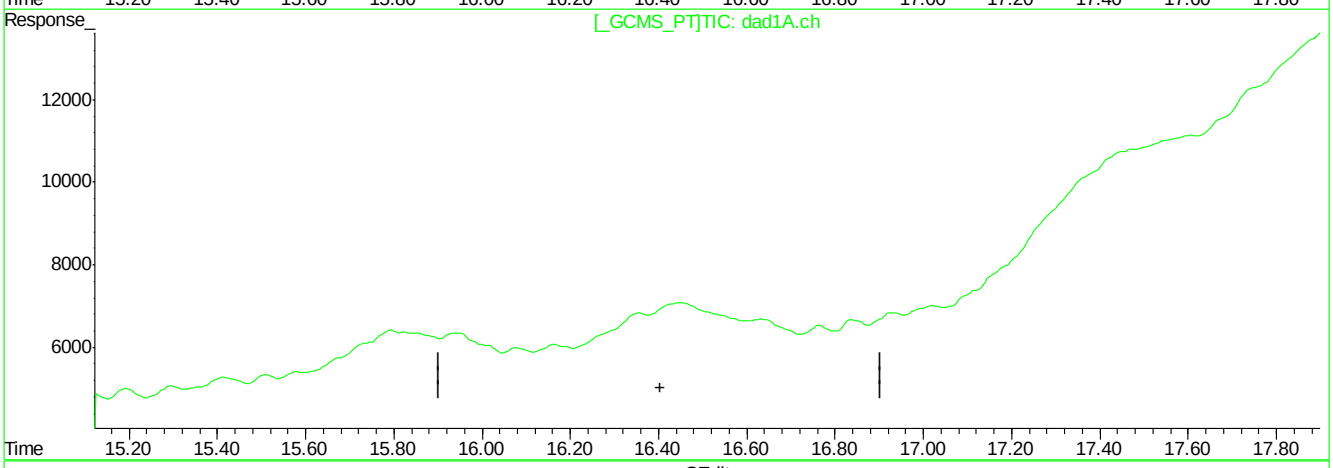
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:32:21 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.45min 56.312ppb

response 225031

(19) p-Nitrotoluene #2

0.00min 0.000ppb

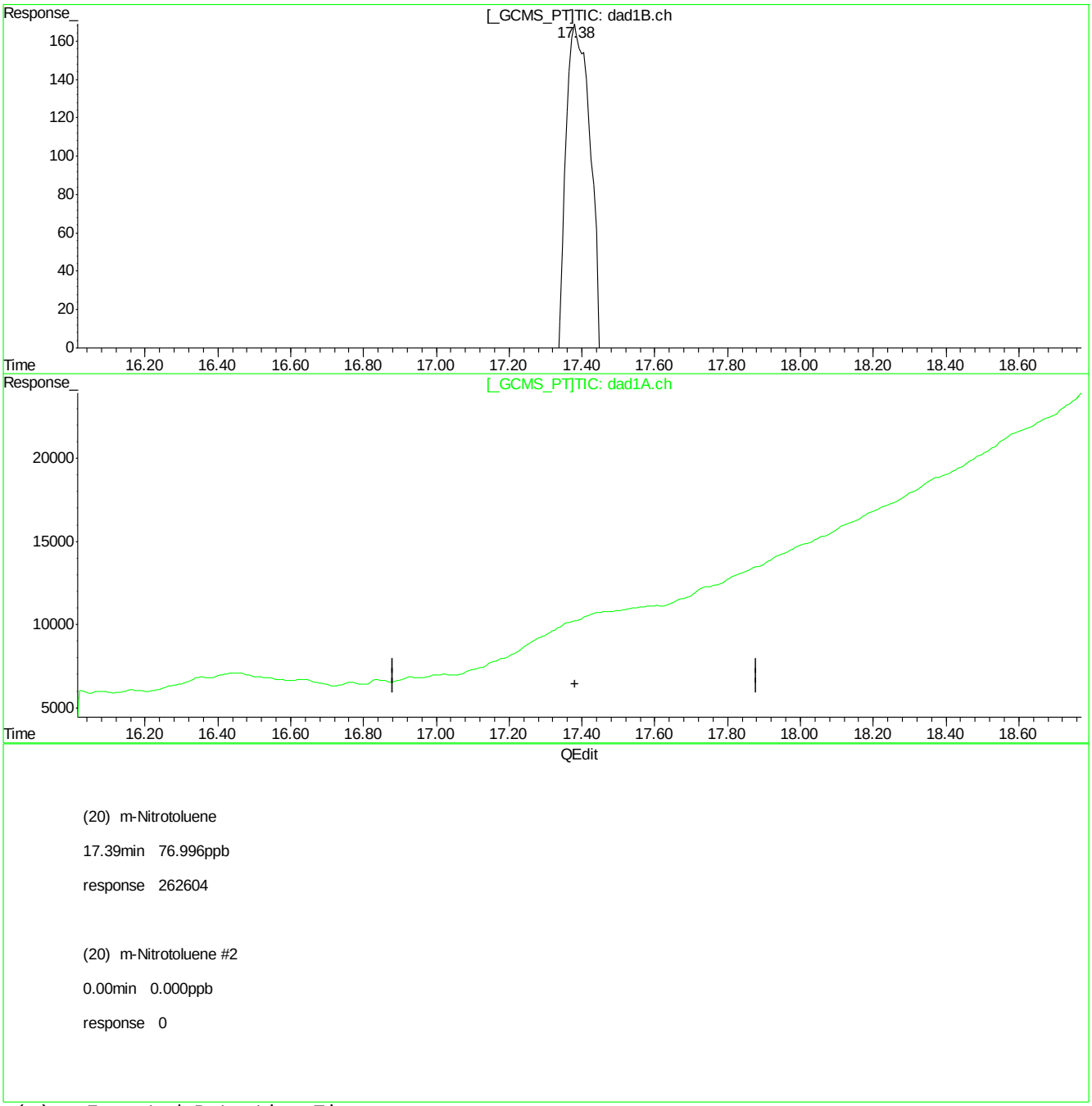
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:32:46 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

17.39min 76.996ppb

response 262604

(20) m-Nitrotoluene #2

0.00min 0.000ppb

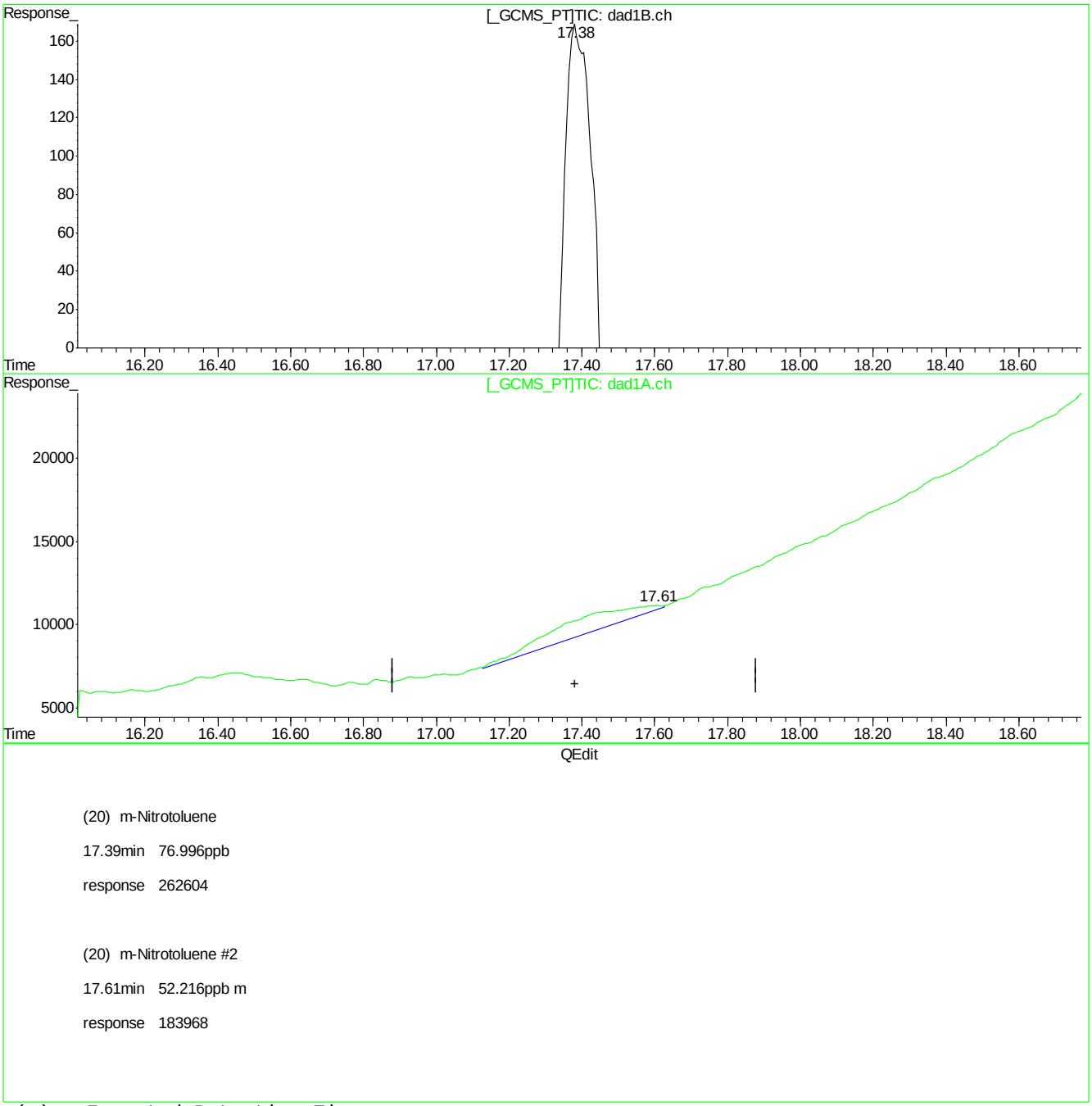
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:33:01 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration

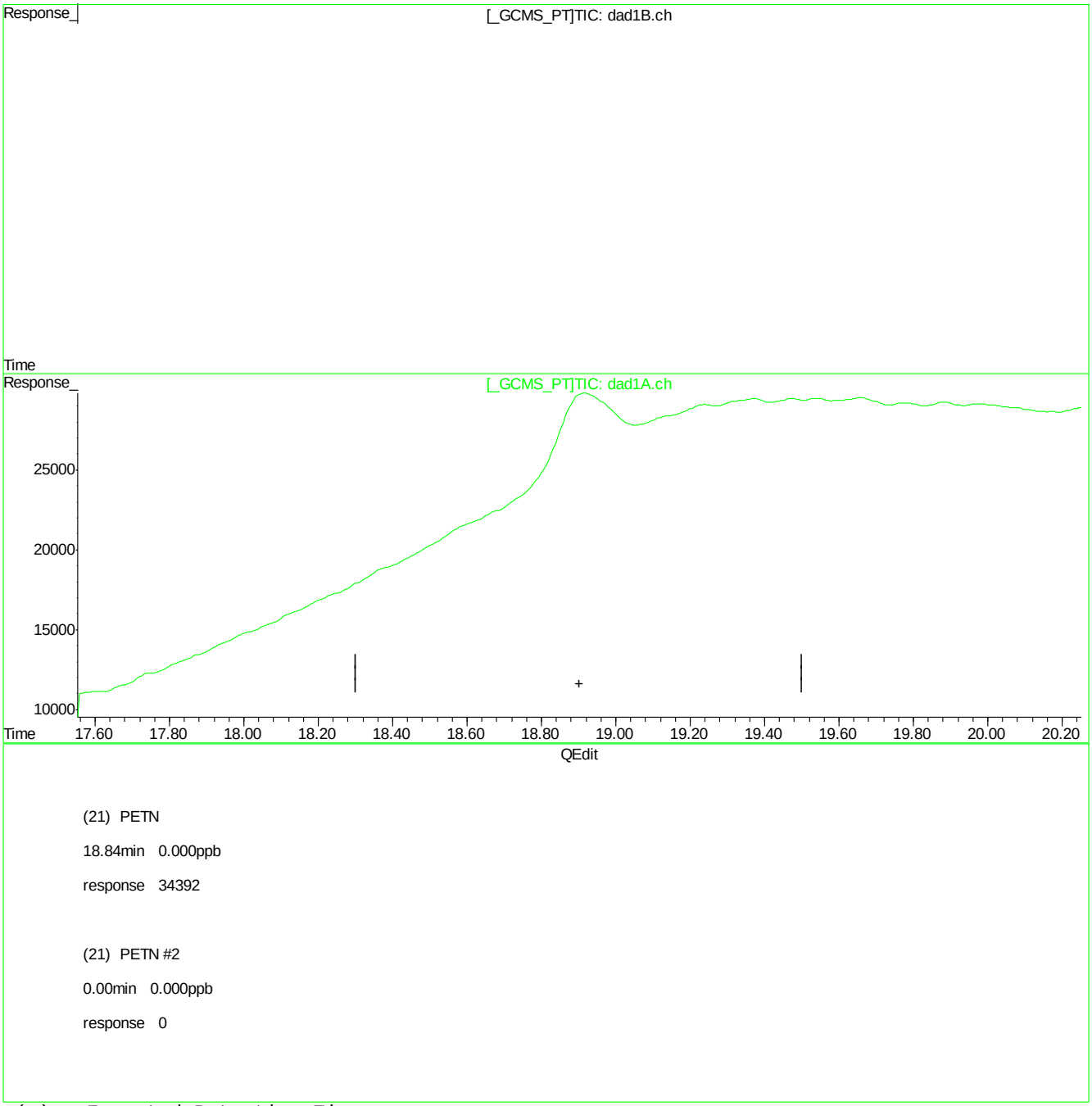


(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:33:09 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration

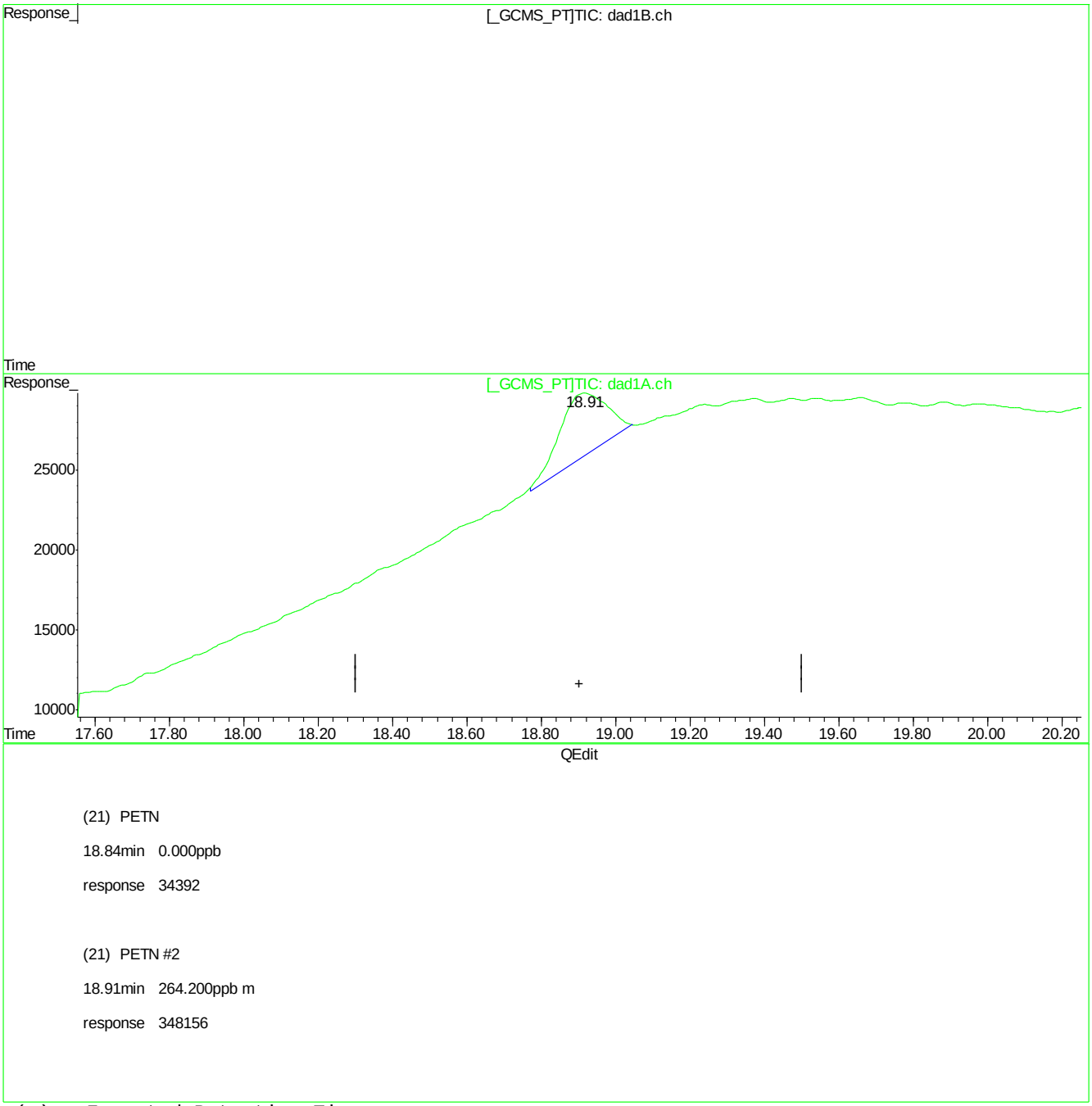


(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:33:14 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(21) PETN

18.84min 0.000ppb

response 34392

(21) PETN #2

18.91min 264.200ppb m

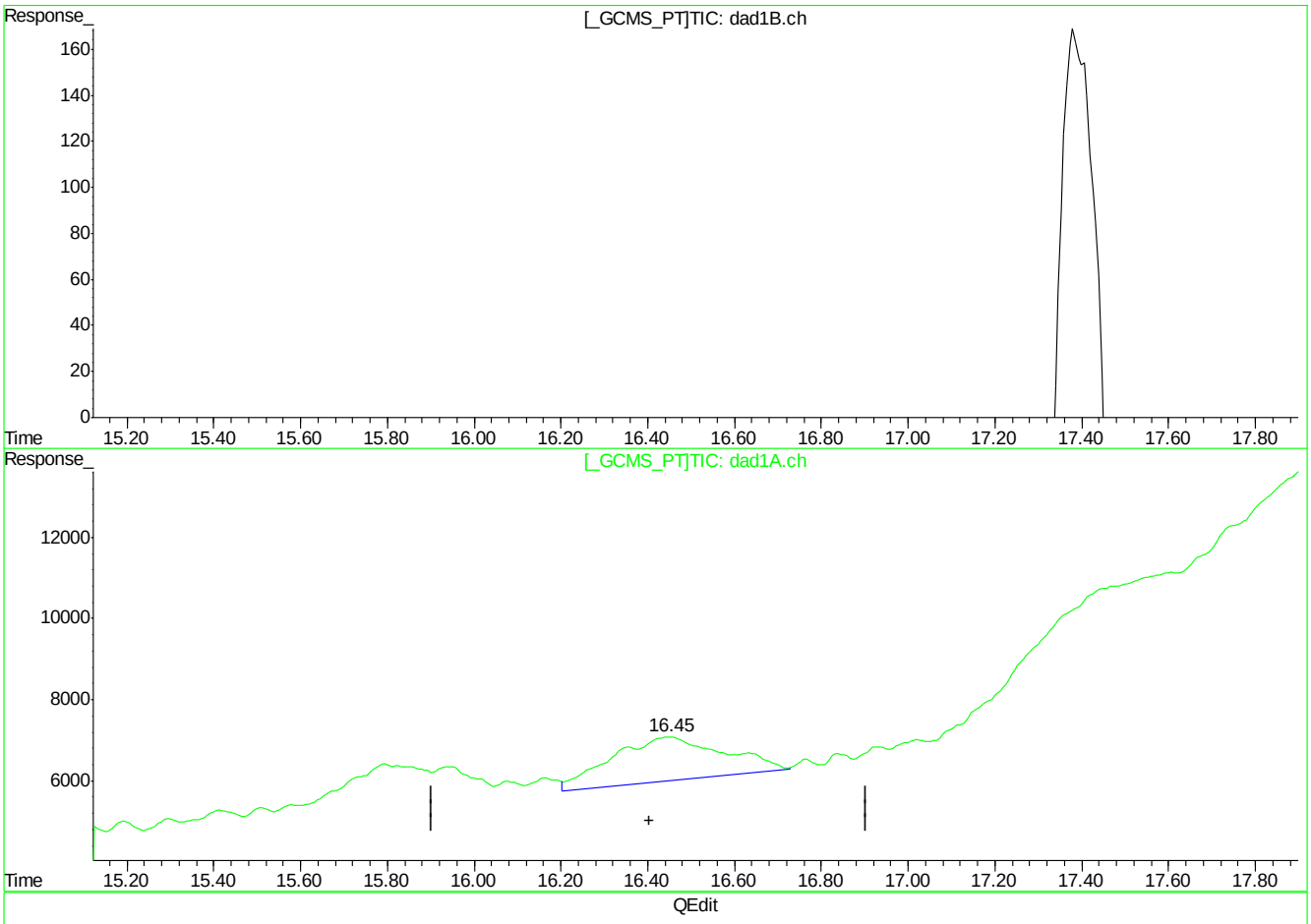
response 348156

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:33:19 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:06 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.45min 56.312ppb

response 225031

(19) p-Nitrotoluene #2

16.45min 61.939ppb m

response 196142

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 14:56:14 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:29 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.45	11.42	243543	337052	97.867m	80.133
	Spiked Amount 500.000	Range 70 - 136		Recovery =		19.57%#	16.03%#
	Target Compounds						
1)	TNX	1.40	1.40	496861	772053	101.516	101.146
2)	HMX	1.55	1.55	188991	501943	104.553	101.435
3)	DNX	1.80	1.80	293719	432193	95.507	85.242
4)	MNX	2.40	2.40	312824	417376	100.107	88.521
5)	RDX	3.03	3.02	186515	328854	95.805m	100.847m
6)	1,3,5-Trinitrobe	4.83	4.83	391758	800907	89.904m	97.704m
7)	1,3-Dinitrobenze	6.07	6.07	549072	405606	94.196m	105.328m
8)	3,5-Dinitroanili	6.42	6.41	493777	843524	105.604	107.898
9)	Nitrobenzene	7.70	7.71	335829	329599	89.744	104.697m
10)	Nitroglycerin	0.00	9.05	0	628213	N.D. d	491.636m
11)	Tetryl	9.58	9.55	298926	395754	101.008m	95.610m
12)	2,4,6-Trinitroto	10.04	10.06	355562	363139	90.775m	84.920m
13)	2-Amino-4,6-Dini	10.42	10.47	369021	460555	98.820m	82.247m
14)	4-Amino-2,6-Dini	10.97	10.96	244977	395056	92.796m	74.116m
16)	2,4-Dinitrotolue	12.08	12.13	499014	315018	96.183m	99.839m
17)	2,6-Dinitrotolue	12.54	12.54	301682	412058	102.534m	111.674
18)	o-Nitrotoluene	15.85	15.83	273711	363866	105.925	109.241m
19)	p-Nitrotoluene	16.42	16.43	394551	394268	98.732	124.506m
20)	m-Nitrotoluene	17.42	17.43	419276	294844	122.811	83.460m
21)	PETN	0.00	18.91	0	704993	N.D. d	534.988m

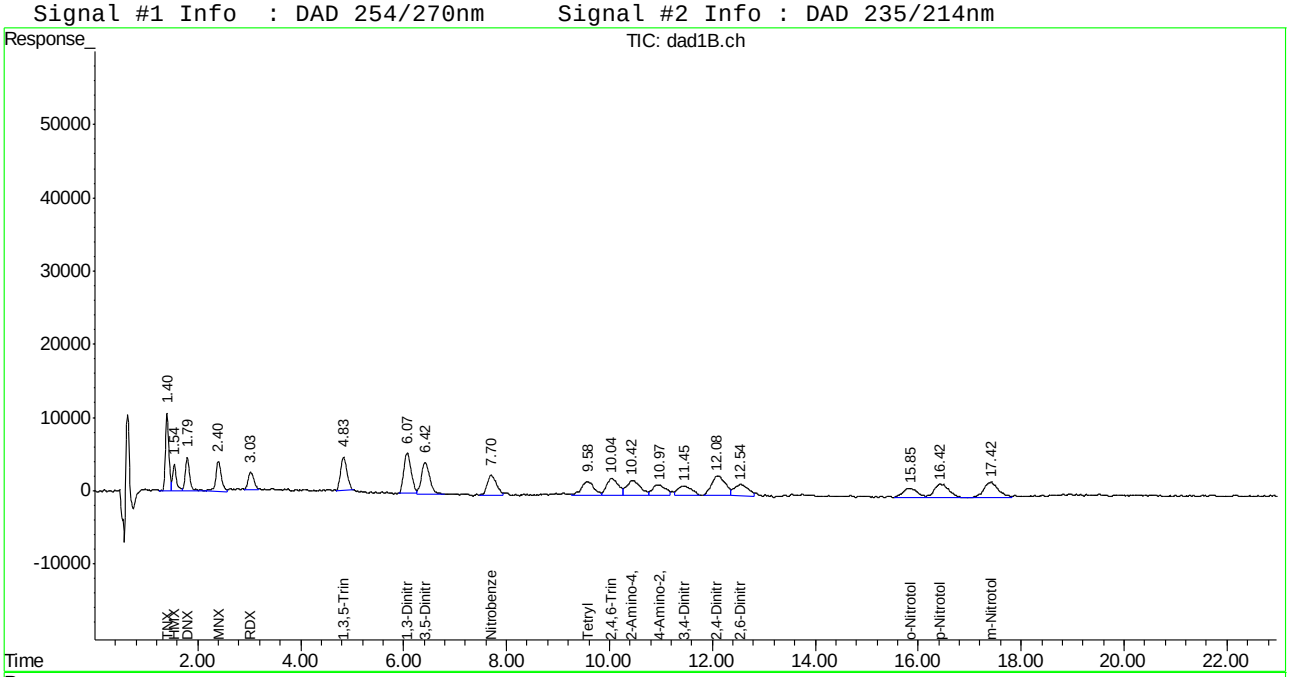
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060202.D 8330B_0707PLUS.M Mon Jul 09 11:20:50 2018 Page 1

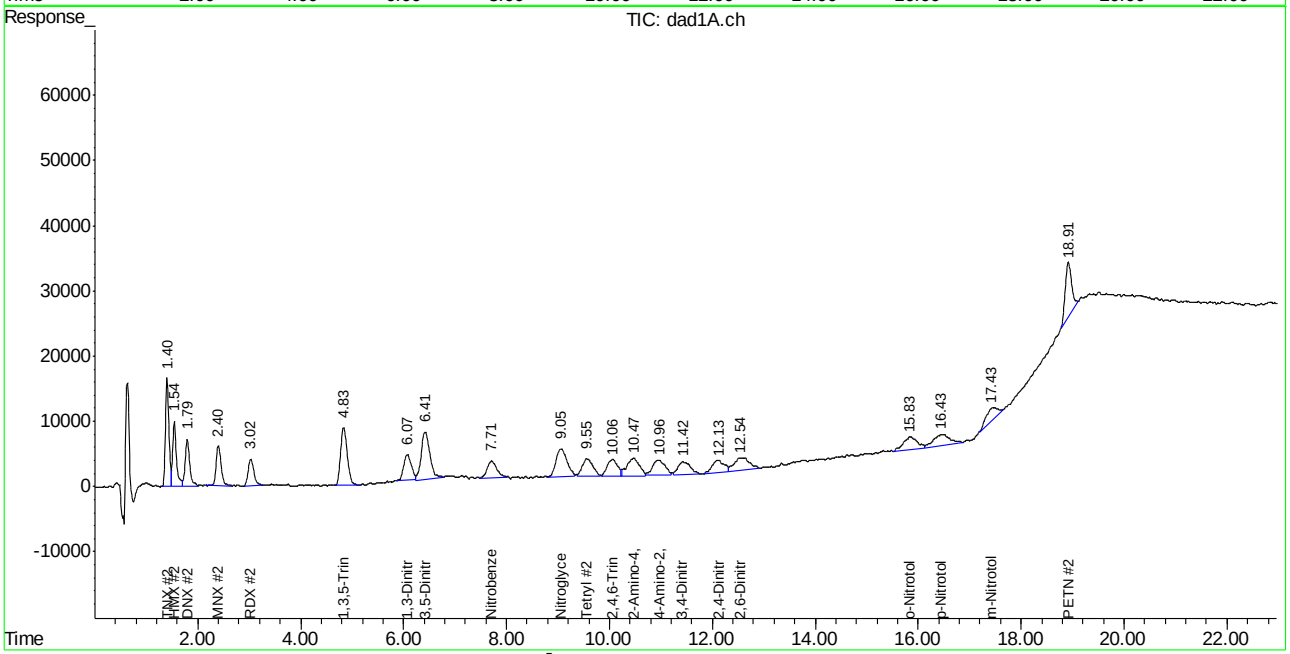
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:06 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

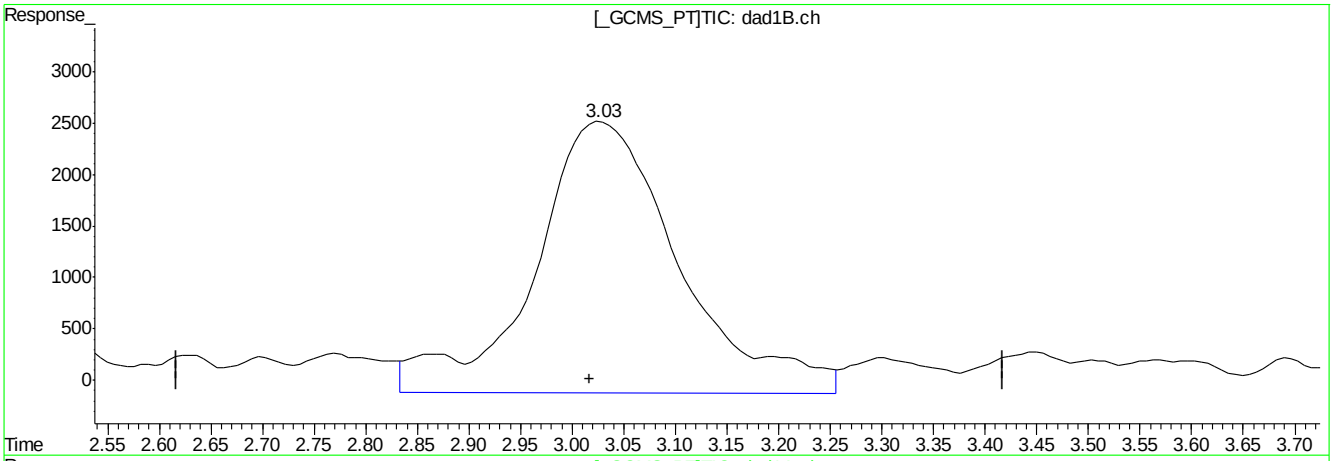
Sample Number: GBB1748-IC1748 **Method:** SW846 8330A
Lab FileID: BB060202.D **Analyst approved:** 07/09/18 11:23 William Hustedde
Injection Time: 07/06/18 16:33 **Supervisor approved:** 07/09/18 16:15 Mike Eger

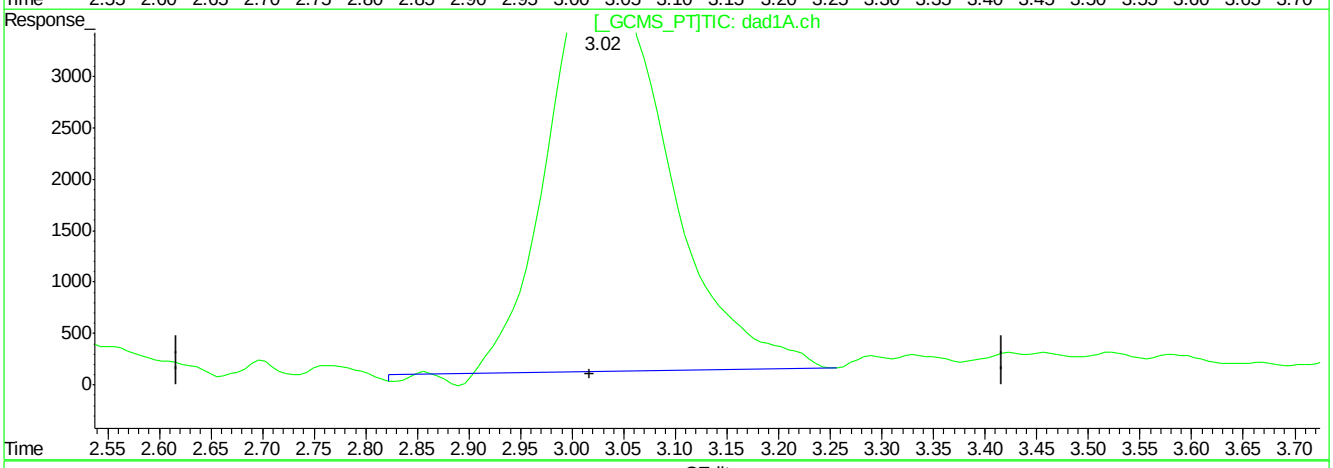
Parameter	CAS	Sig#	R.T. (min.)	Reason
RDX	121-82-4	2	3.02	Poor instrument integration
RDX	121-82-4	1	3.03	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.83	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.83	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	6.07	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.07	Poor instrument integration
Nitrobenzene	98-95-3	2	7.71	Poor instrument integration
Nitroglycerine	55-63-0	2	9.05	Poor instrument integration
Tetryl	479-45-8	2	9.55	Poor instrument integration
Tetryl	479-45-8	1	9.58	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	10.04	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	10.06	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.42	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.47	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	10.96	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.97	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.45	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	12.08	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	12.13	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.54	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.83	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.43	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.43	Poor instrument integration
PETN	78-11-5	2	18.91	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.03min 132.058ppb

response 257315

(5) RDX #2

3.03min 96.549ppb

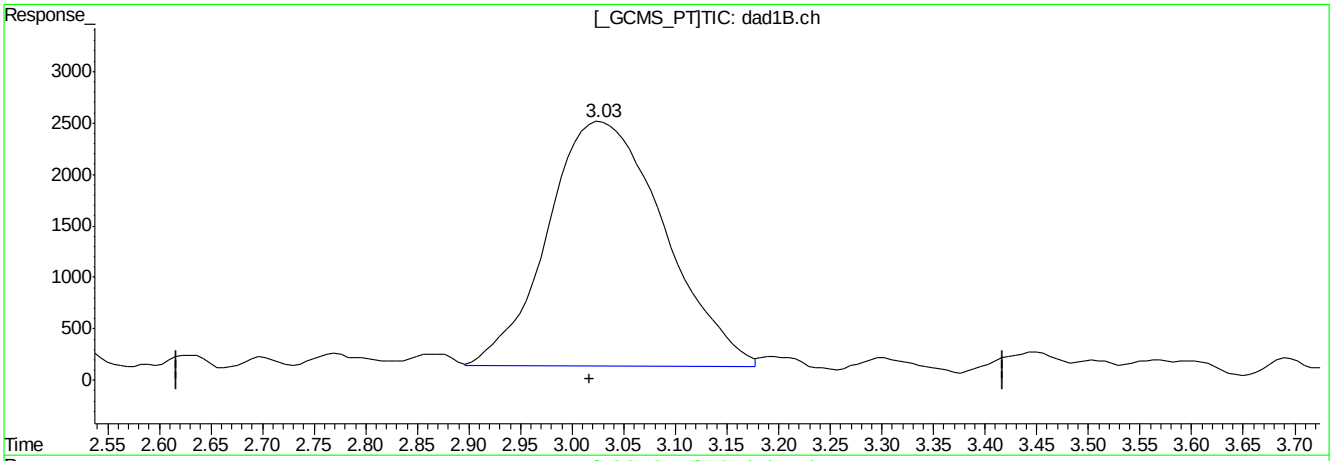
response 314838

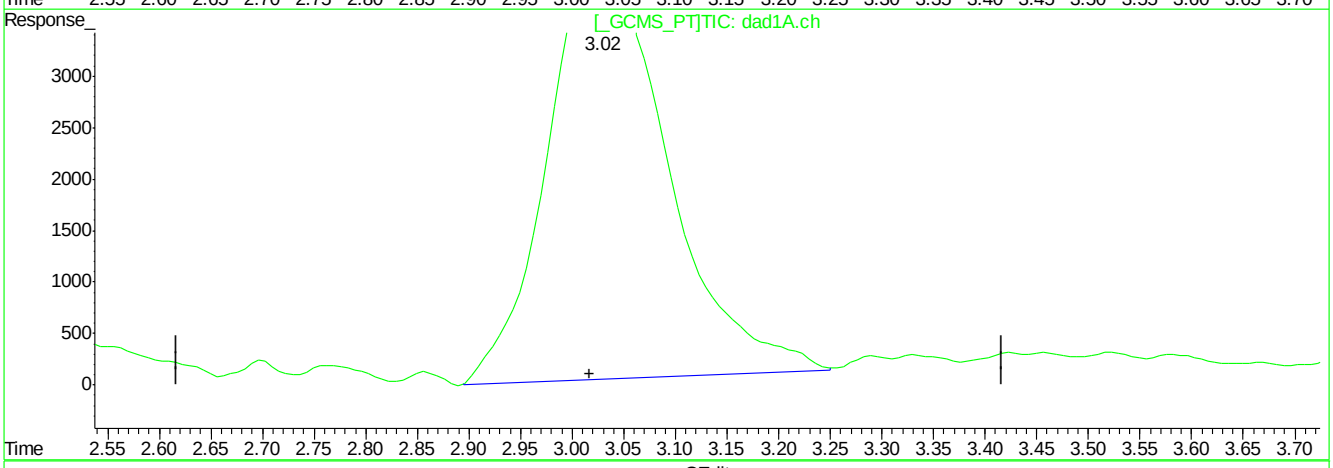
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:49:33 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.03min 95.805ppb m

response 186515

(5) RDX #2

3.02min 100.847ppb m

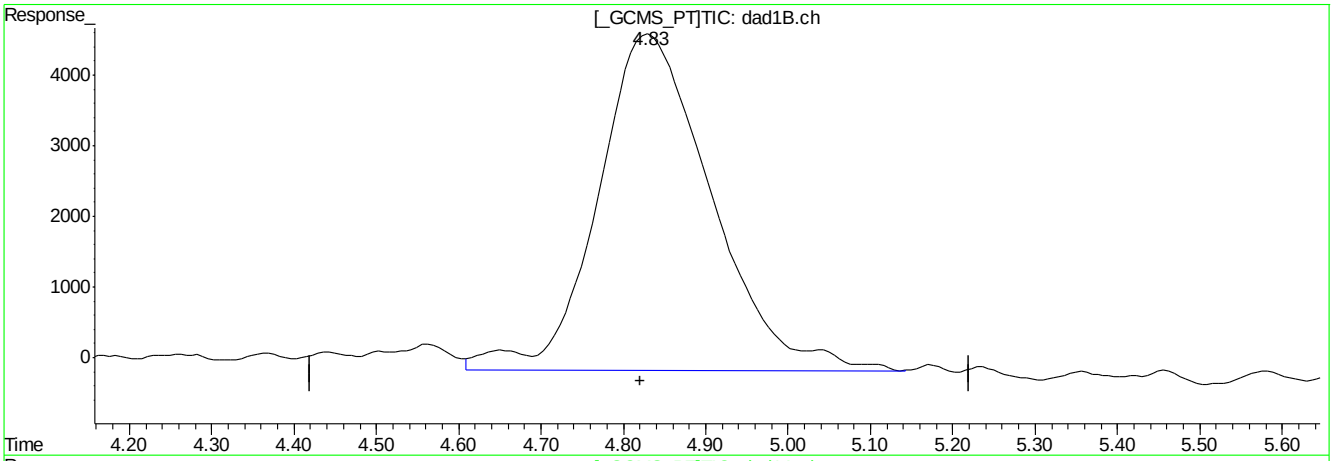
response 328854

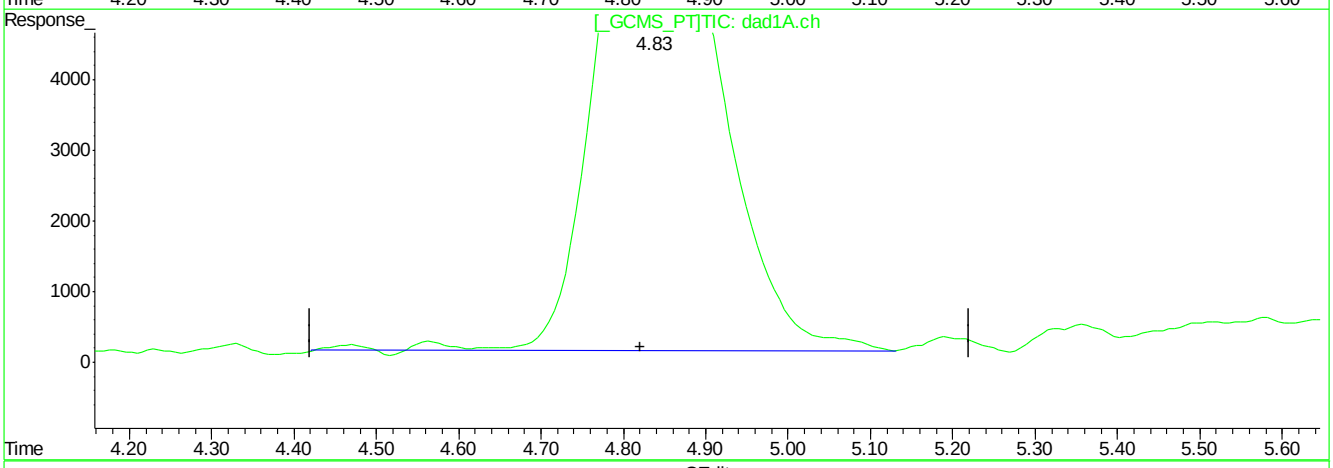
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:49:45 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.83min 104.545ppb

response 455554

(6) 1,3,5-Trinitrobenzene #2

4.83min 98.937ppb

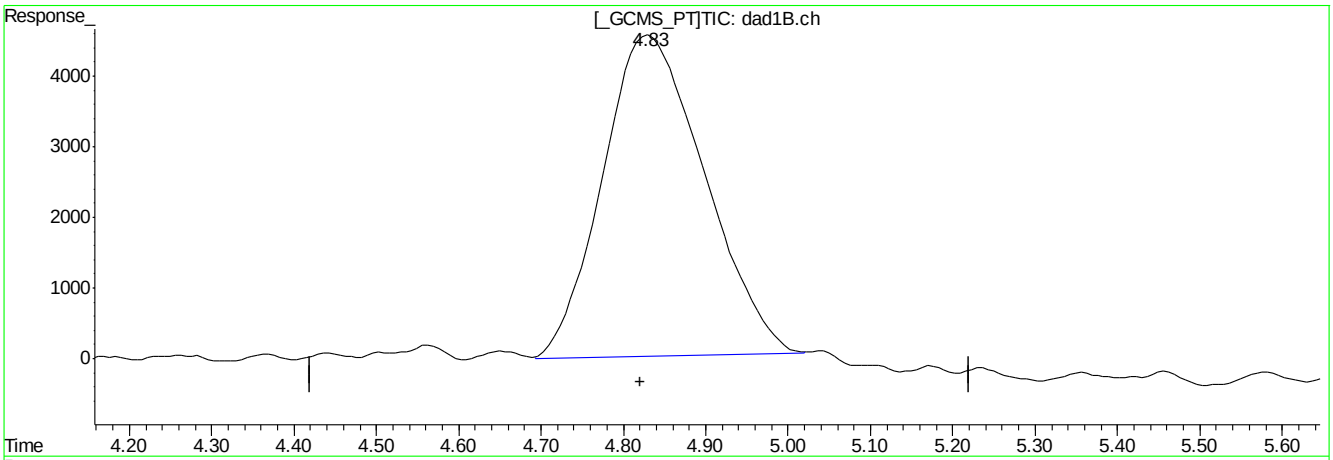
response 811020

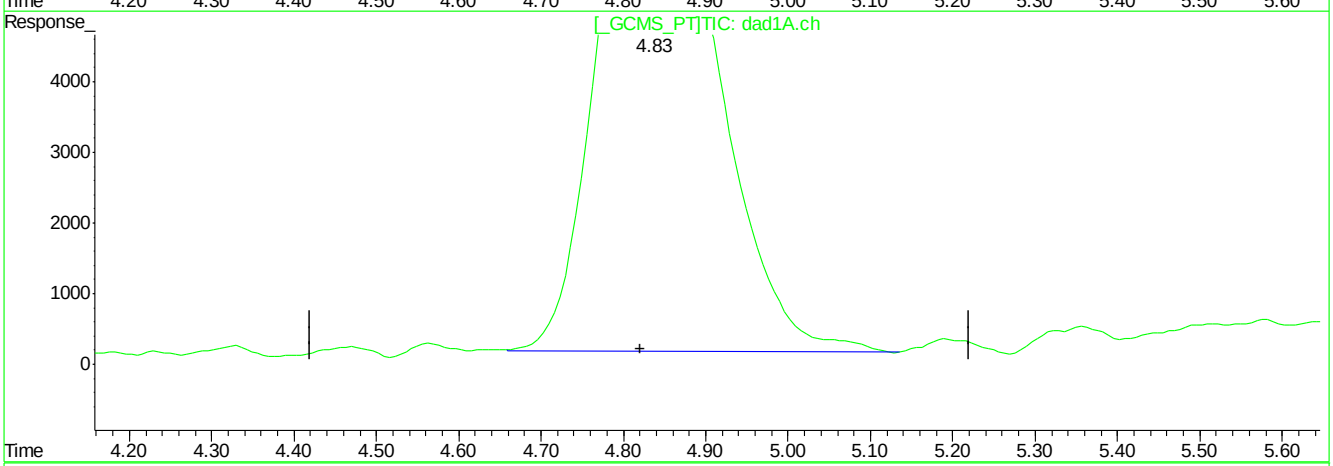
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:49:52 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.83min 89.904ppb m

response 391758

(6) 1,3,5-Trinitrobenzene #2

4.83min 97.704ppb m

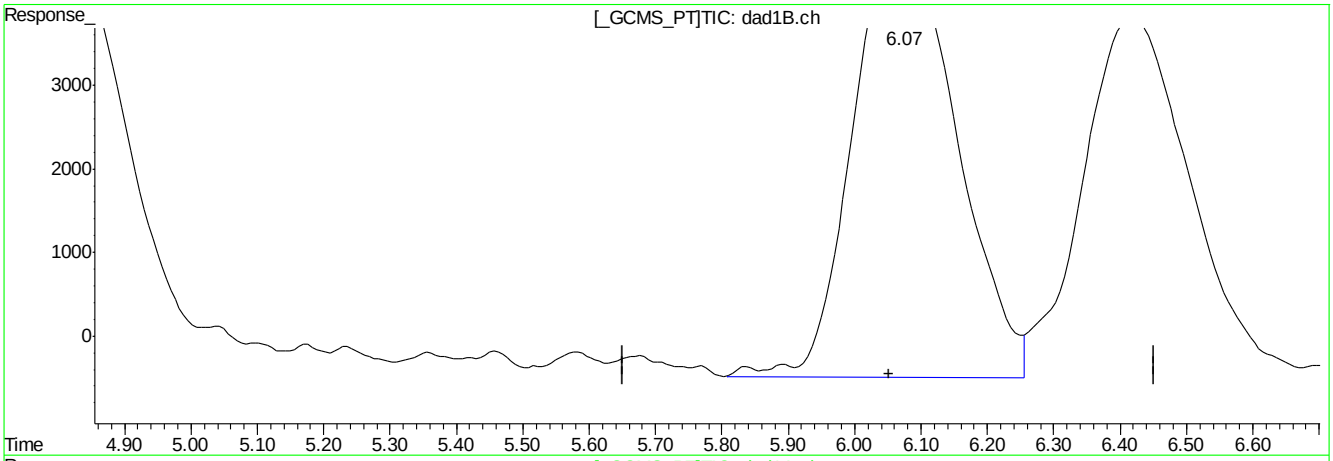
response 800907

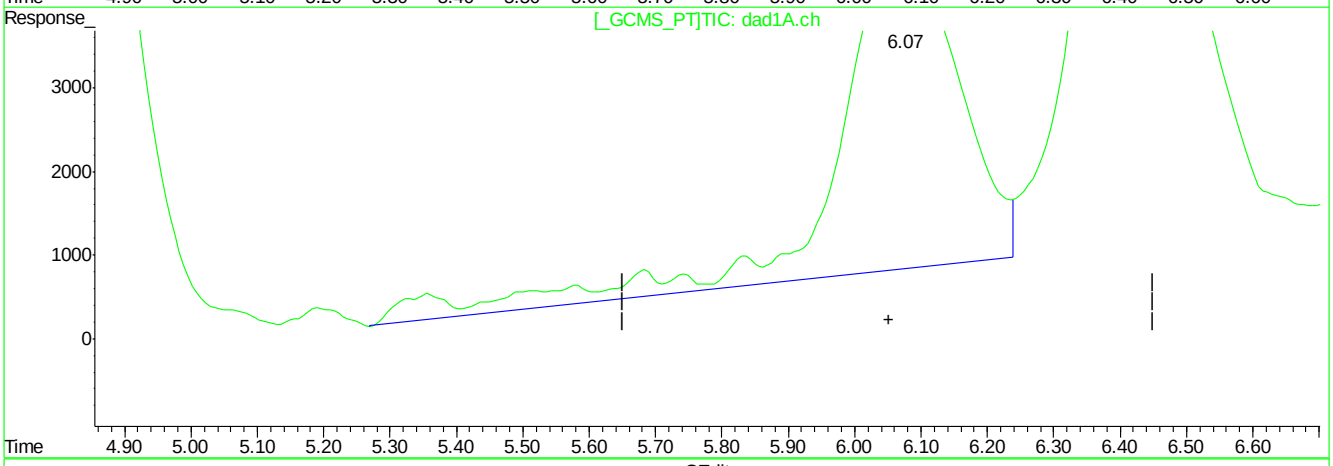
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:49:59 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.07min 98.877ppb

response 576357

(7) 1,3-Dinitrobenzene #2

6.07min 130.908ppb

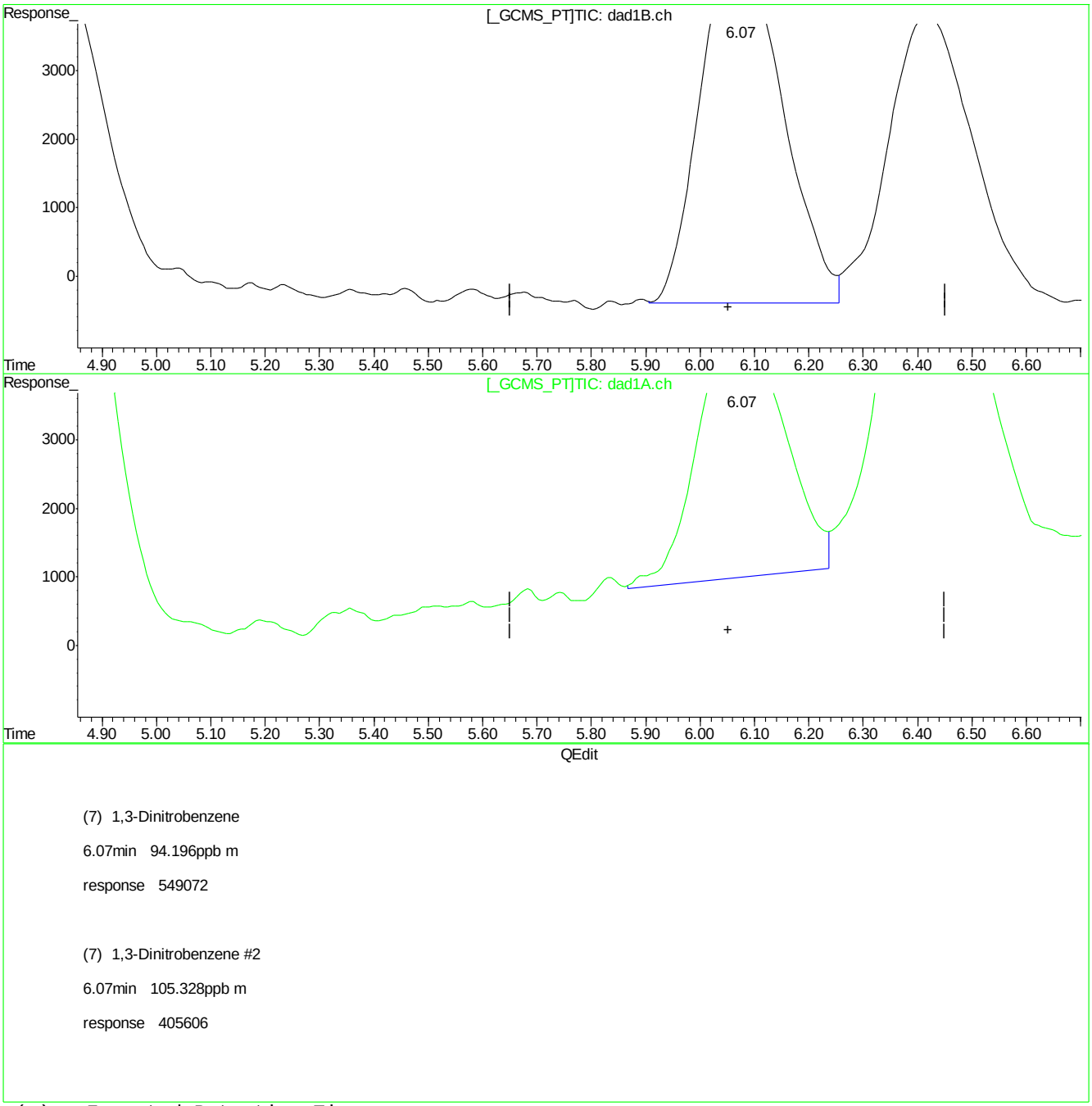
response 503950

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:50:06 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

6.07min 94.196ppb m

response 549072

(7) 1,3-Dinitrobenzene #2

6.07min 105.328ppb m

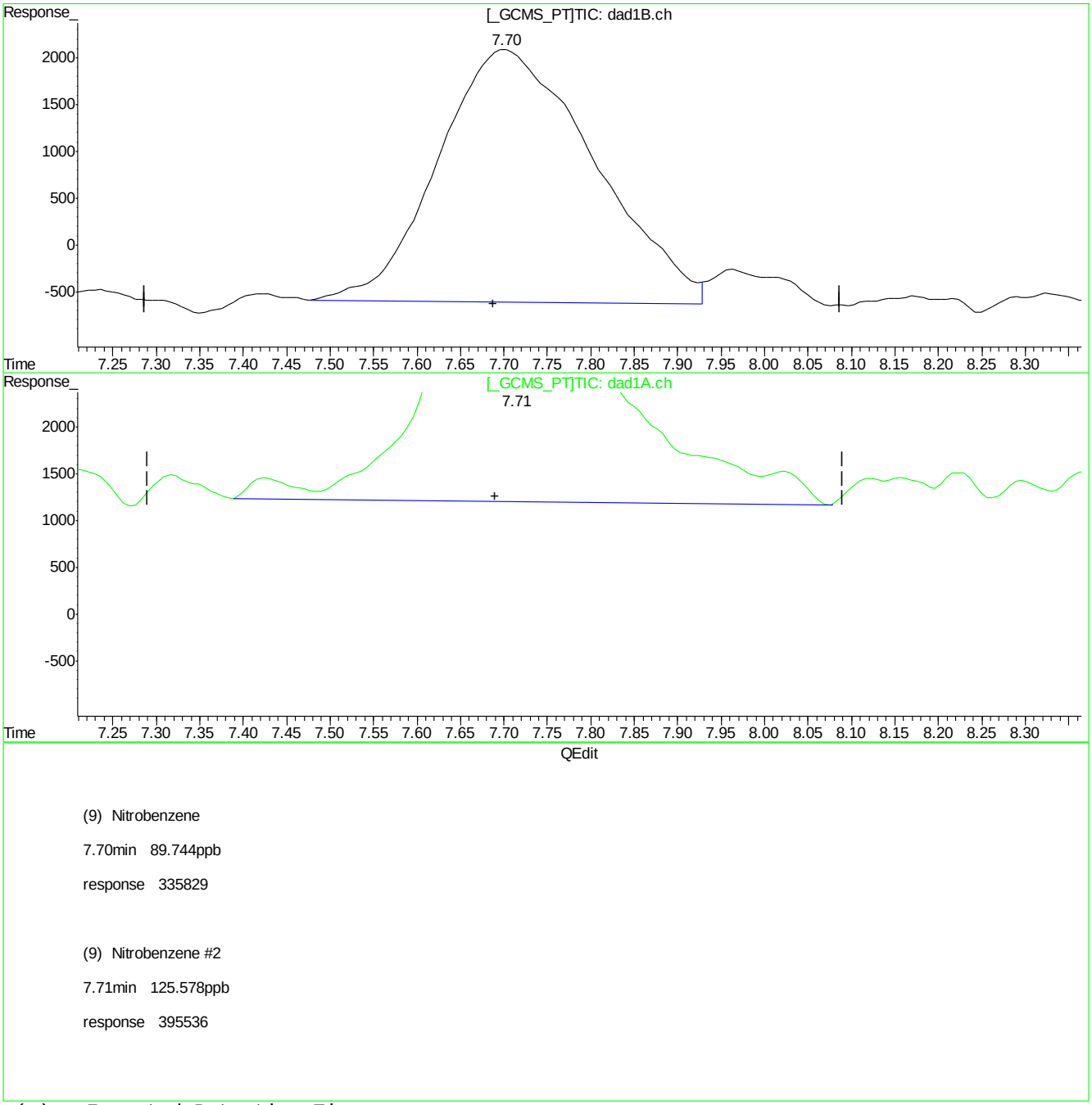
response 405606

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:50:17 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(9) Nitrobenzene

7.70min 89.744ppb

response 335829

(9) Nitrobenzene #2

7.71min 125.578ppb

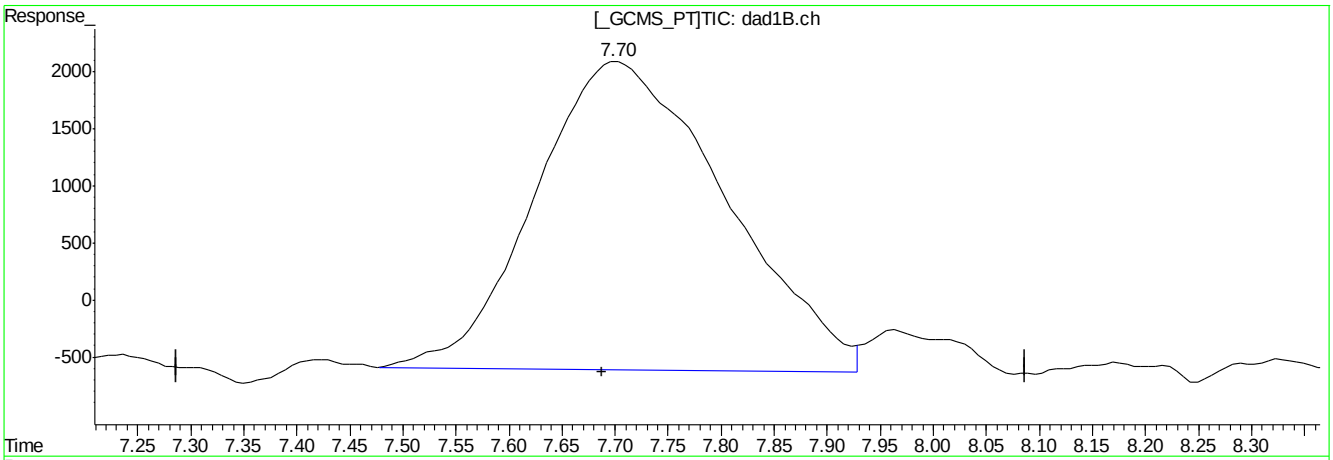
response 395536

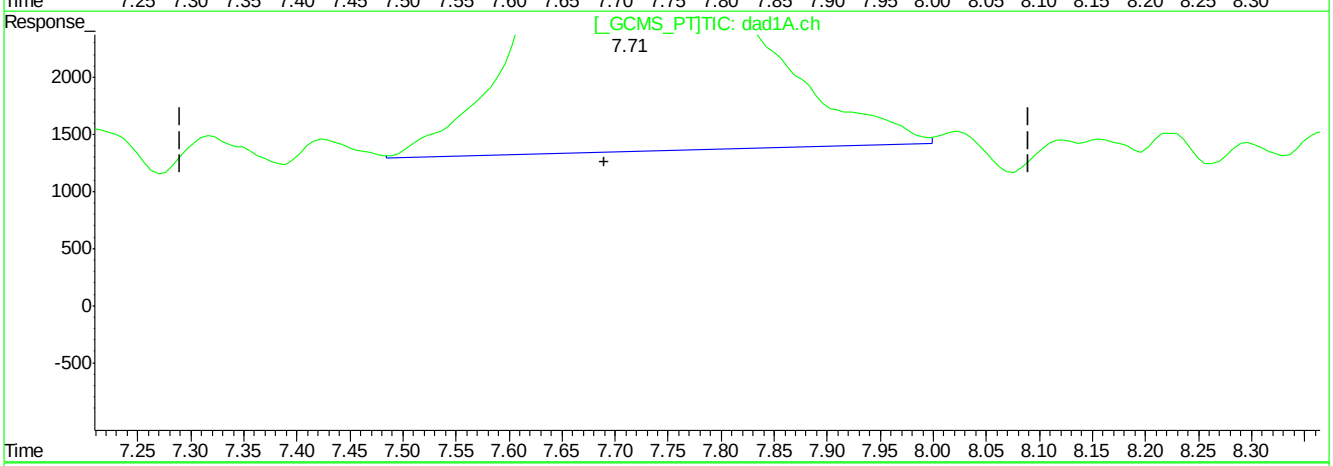
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:50:36 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.70min 89.744ppb

response 335829

(9) Nitrobenzene #2

7.71min 104.697ppb m

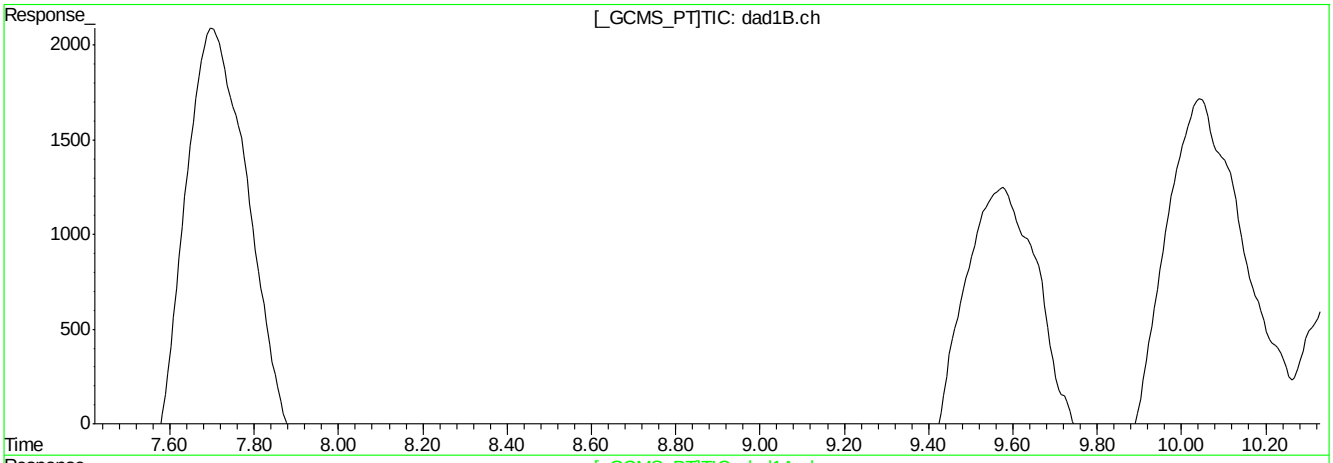
response 329599

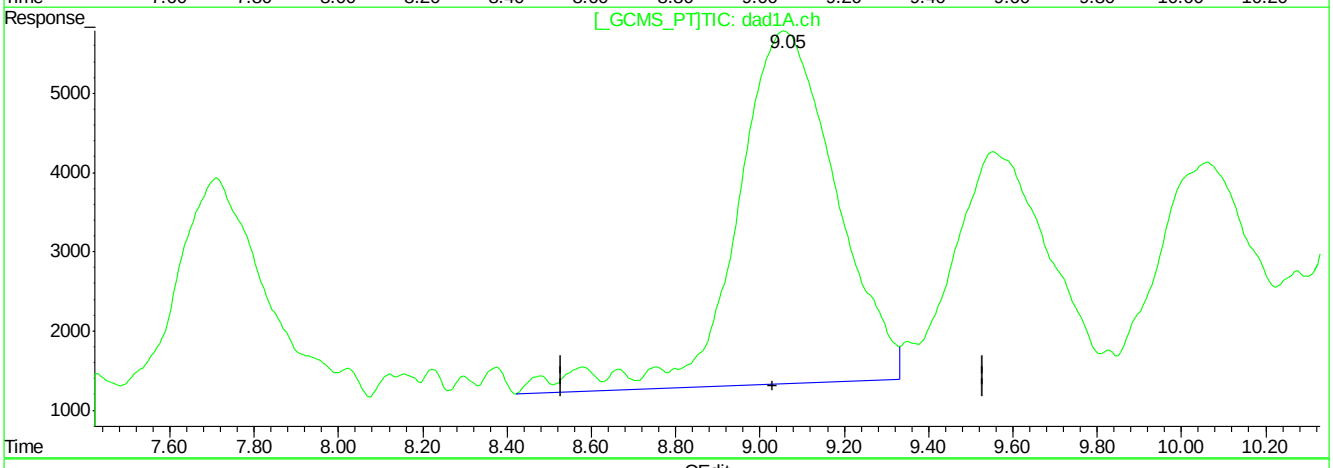
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:50:41 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

8.96min 0.000ppb

response 20984

(10) Nitroglycerin #2

9.06min 574.852ppb

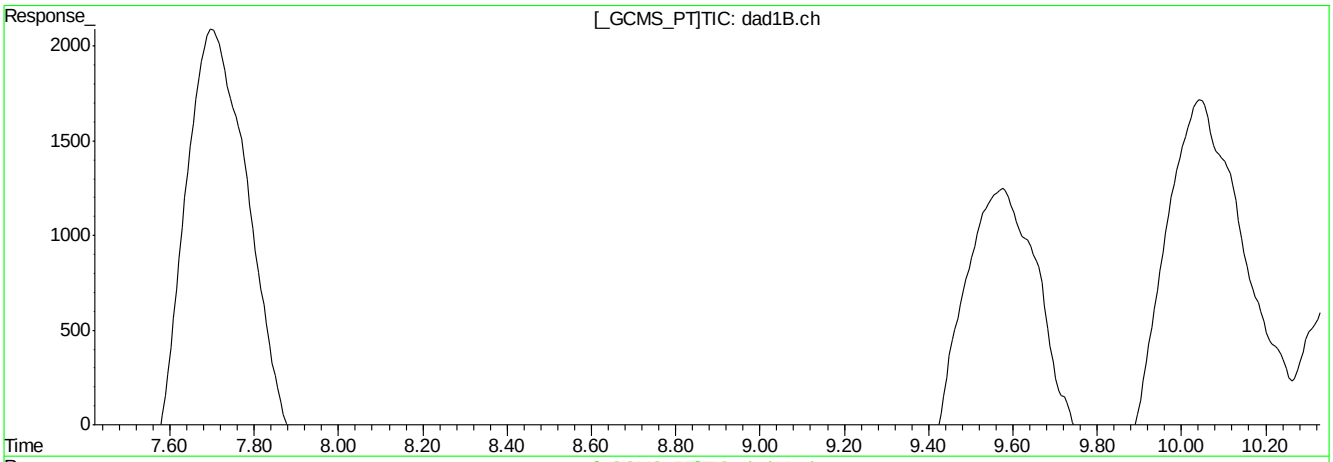
response 734547

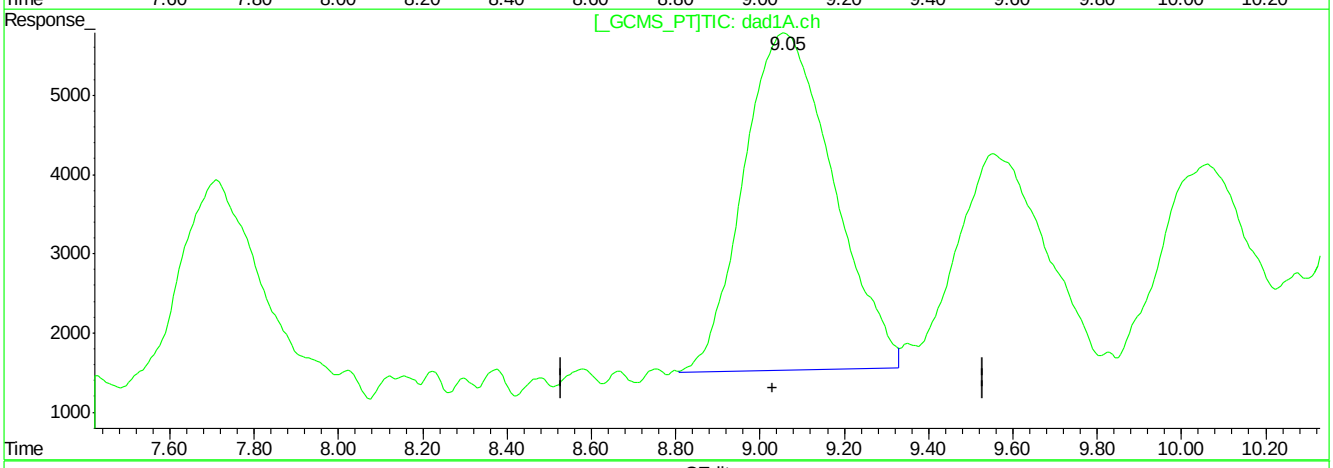
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:50:45 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

8.96min 0.000ppb

response 20984

(10) Nitroglycerin #2

9.05min 491.636ppb m

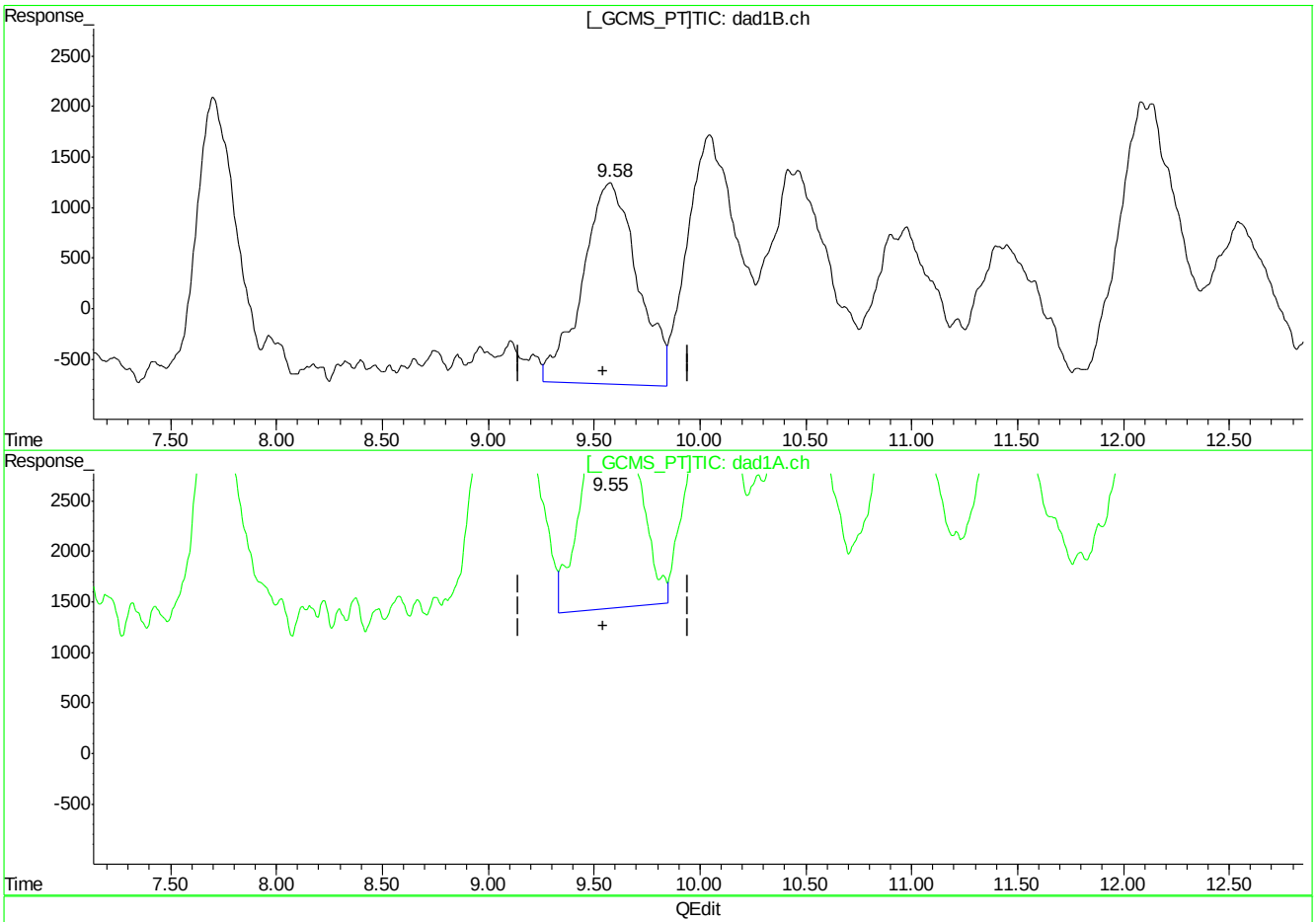
response 628213

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:50:53 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(11) Tetryl

9.57min 121.417ppb

response 359326

(11) Tetryl #2

9.56min 105.620ppb

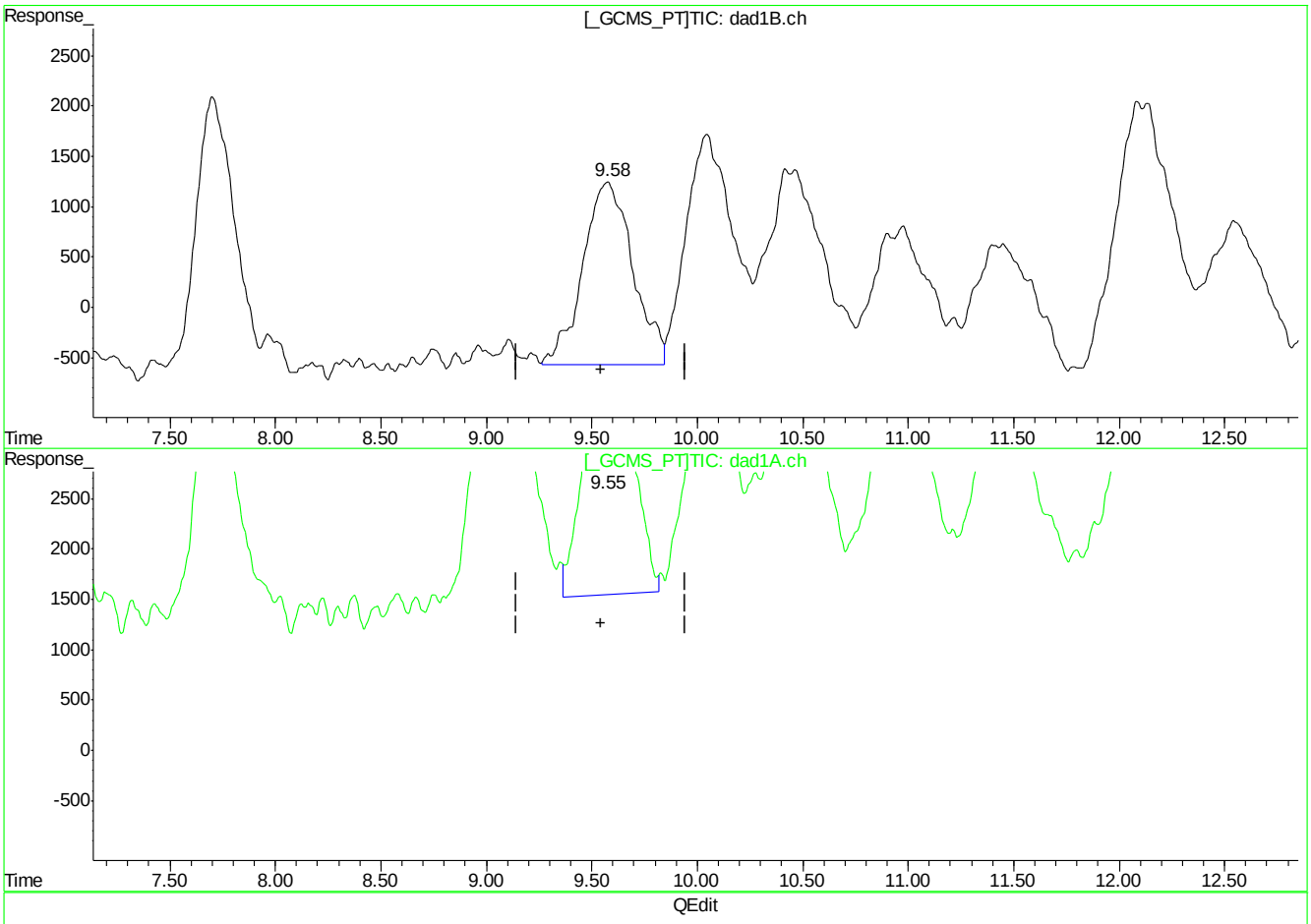
response 437188

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:51:09 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(11) Tetryl

9.58min 101.008ppb m

response 298926

(11) Tetryl #2

9.55min 95.610ppb m

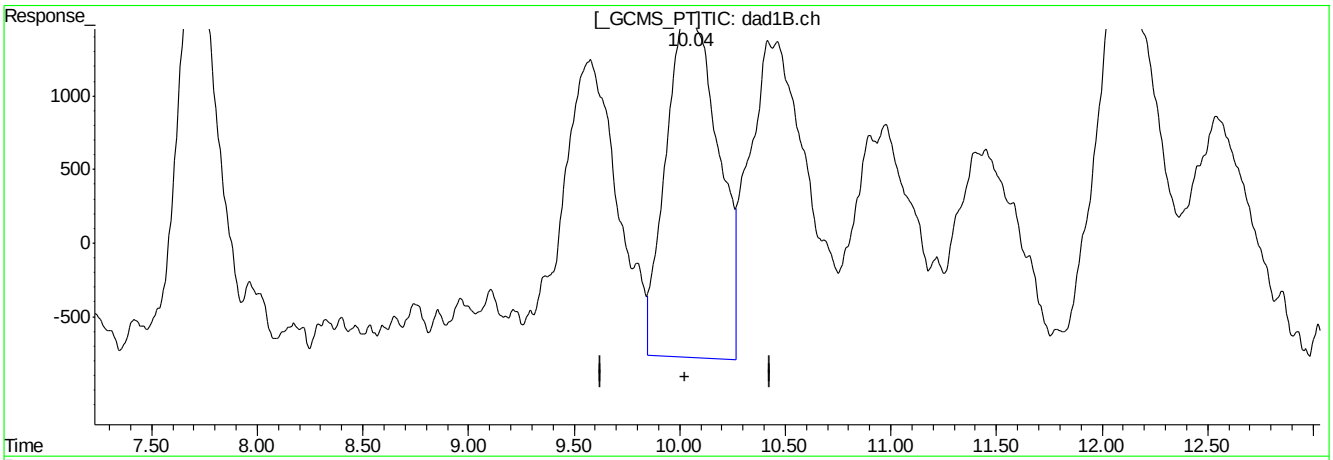
response 395754

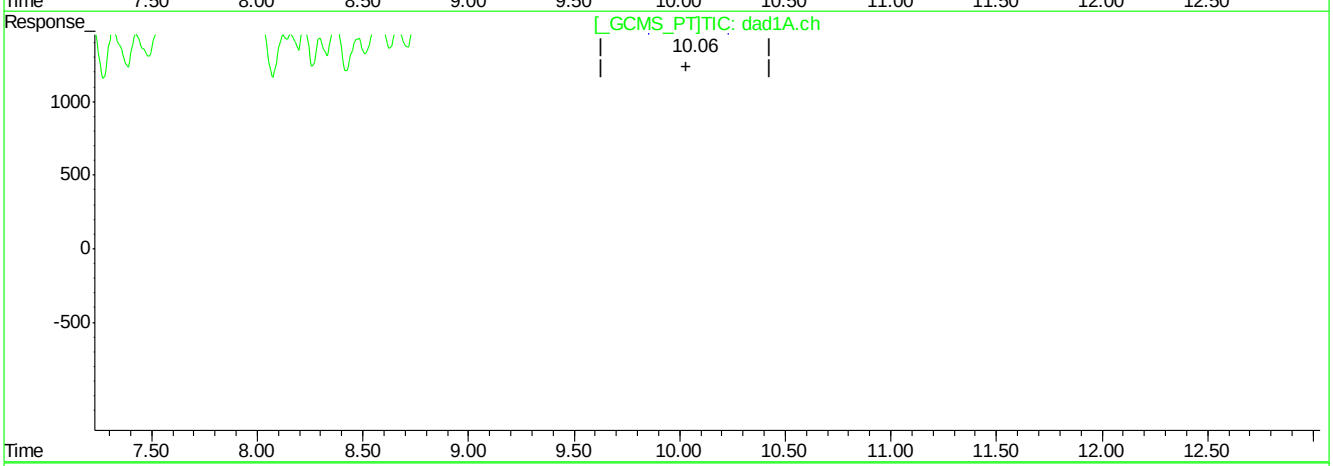
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:51:33 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.05min 103.218ppb

response 404299

(12) 2,4,6-Trinitrotoluene #2

10.06min 87.655ppb

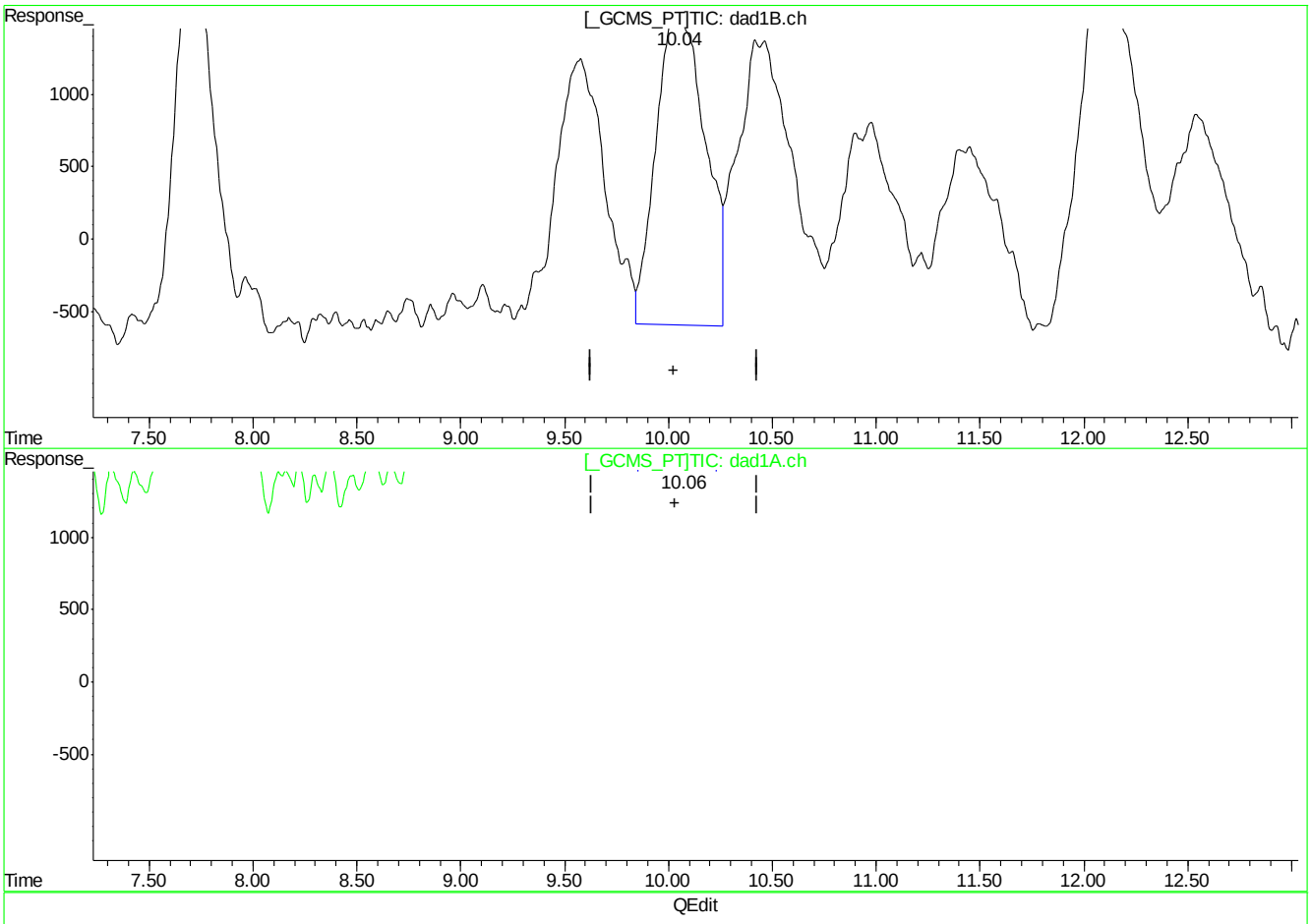
response 374837

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:52:09 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

10.04min 90.775ppb m

response 355562

(12) 2,4,6-Trinitrotoluene #2

10.06min 87.655ppb

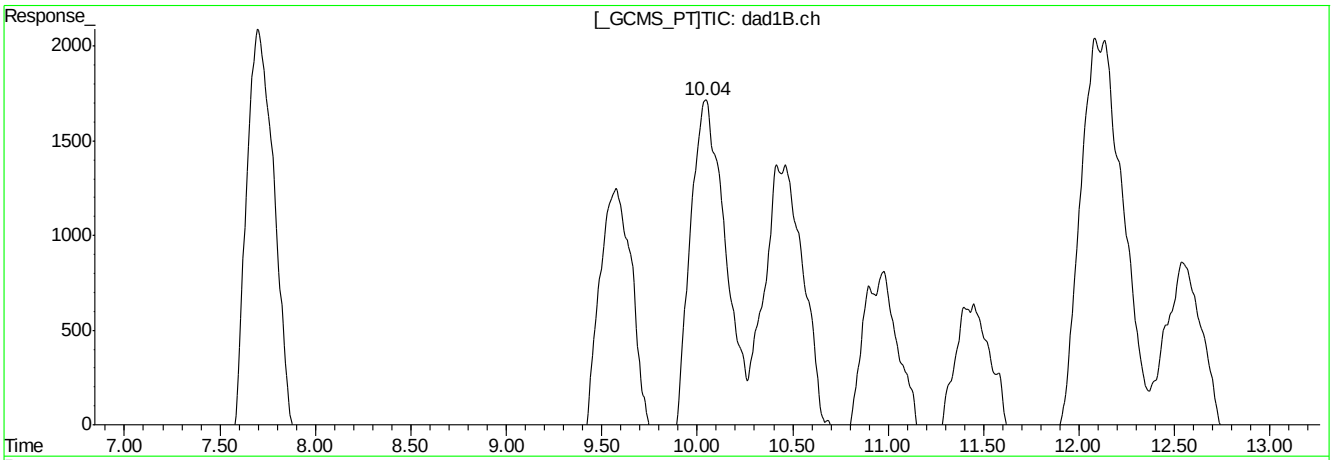
response 374837

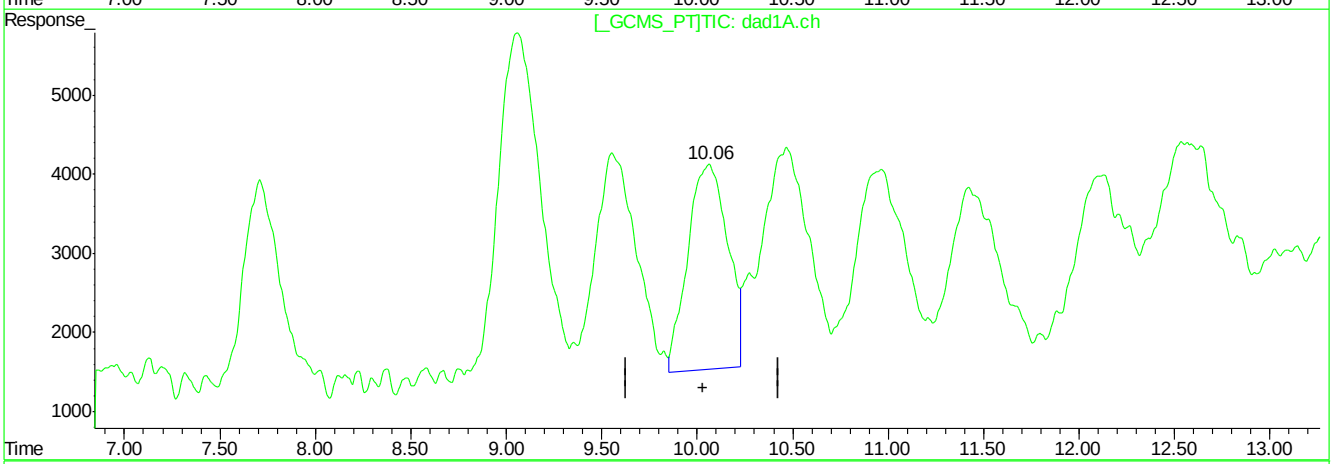
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:52:22 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.04min 90.775ppb m

response 355562

(12) 2,4,6-Trinitrotoluene #2

10.06min 87.655ppb

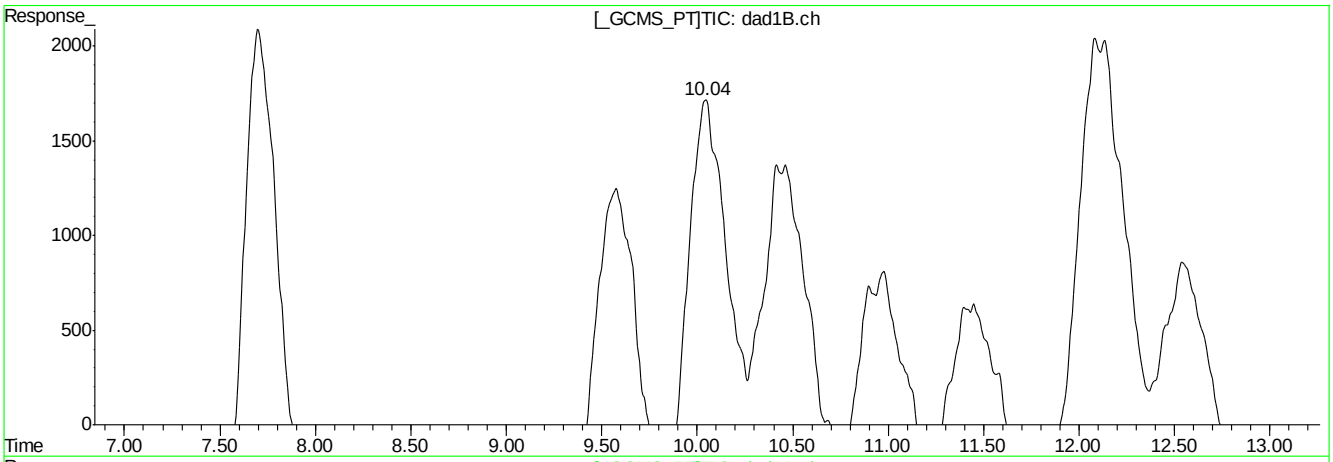
response 374837

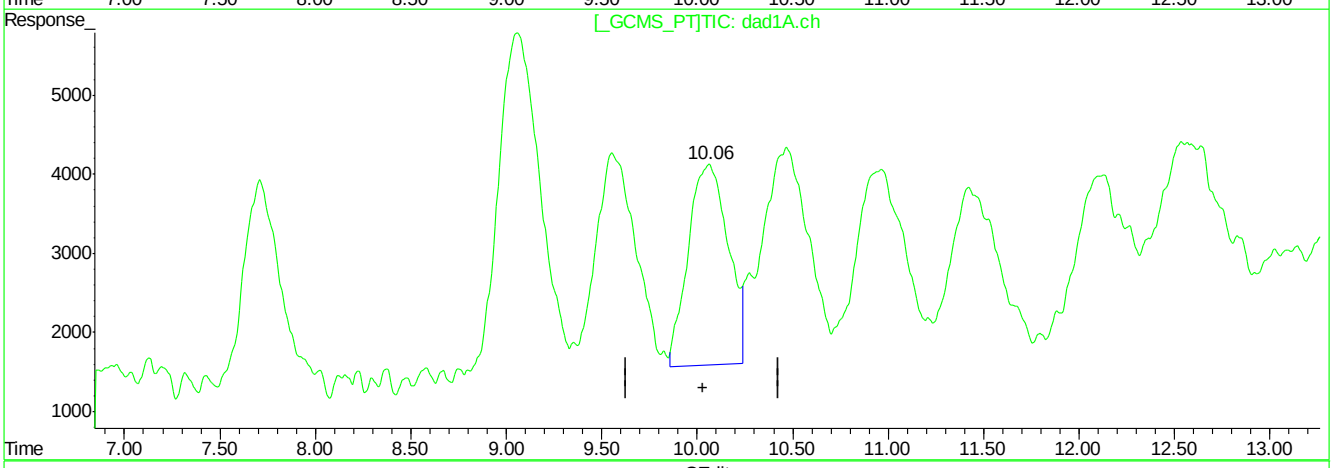
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:52:28 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.04min 90.775ppb m

response 355562

(12) 2,4,6-Trinitrotoluene #2

10.06min 84.920ppb m

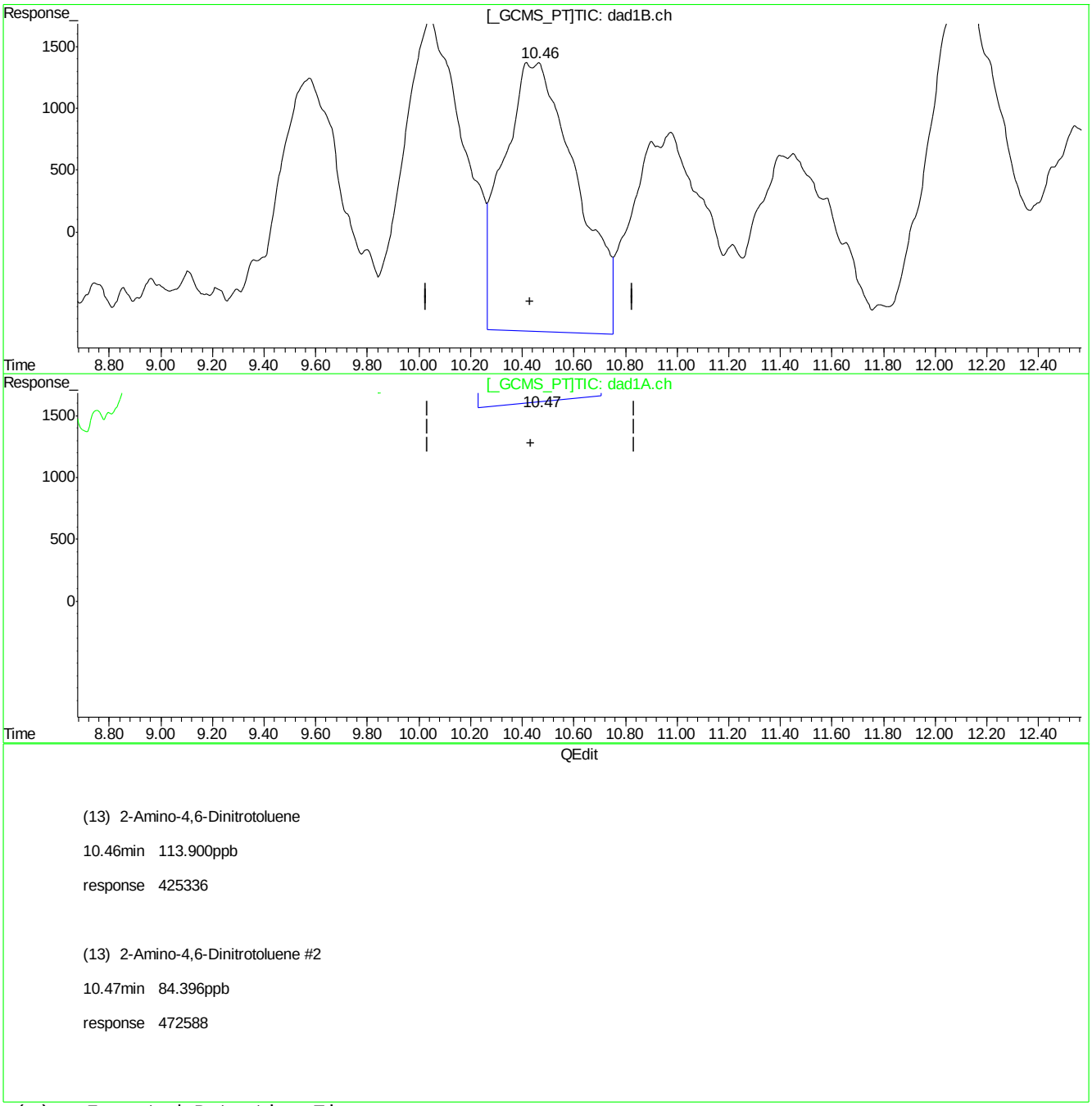
response 363139

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:52:38 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.46min 113.900ppb

response 425336

(13) 2-Amino-4,6-Dinitrotoluene #2

10.47min 84.396ppb

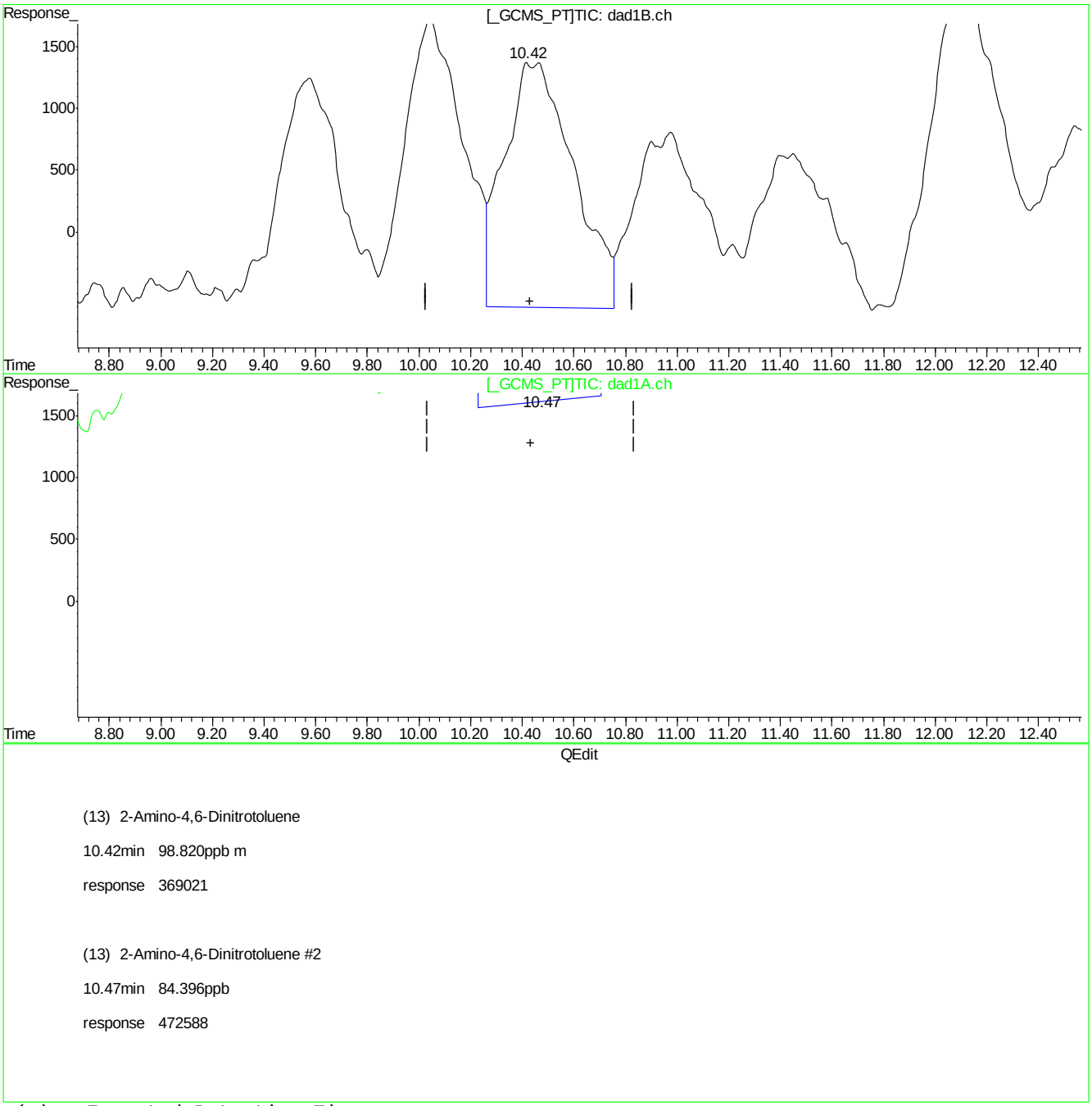
response 472588

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:52:56 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.42min 98.820ppb m

response 369021

(13) 2-Amino-4,6-Dinitrotoluene #2

10.47min 84.396ppb

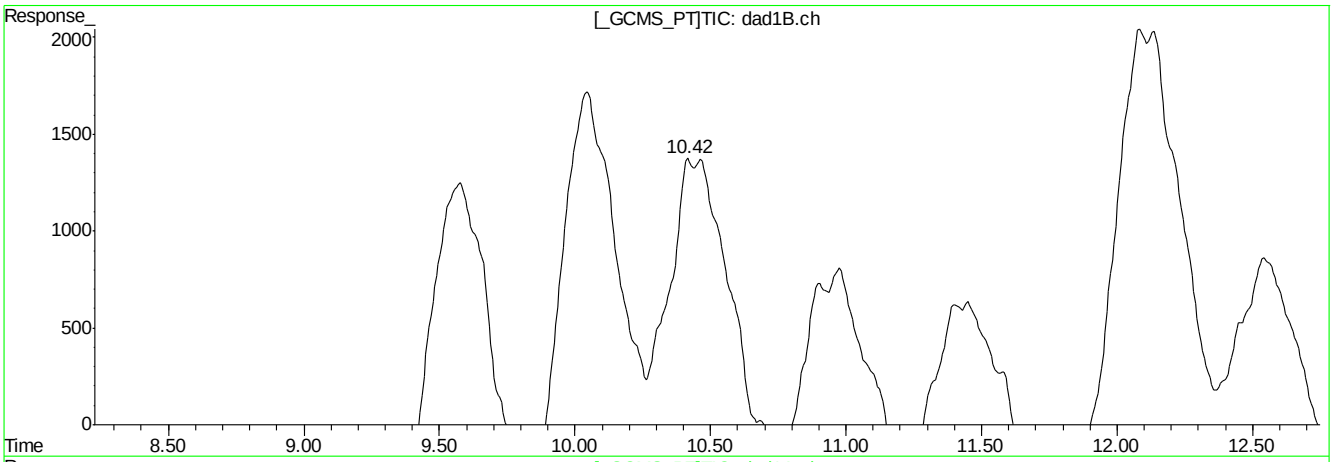
response 472588

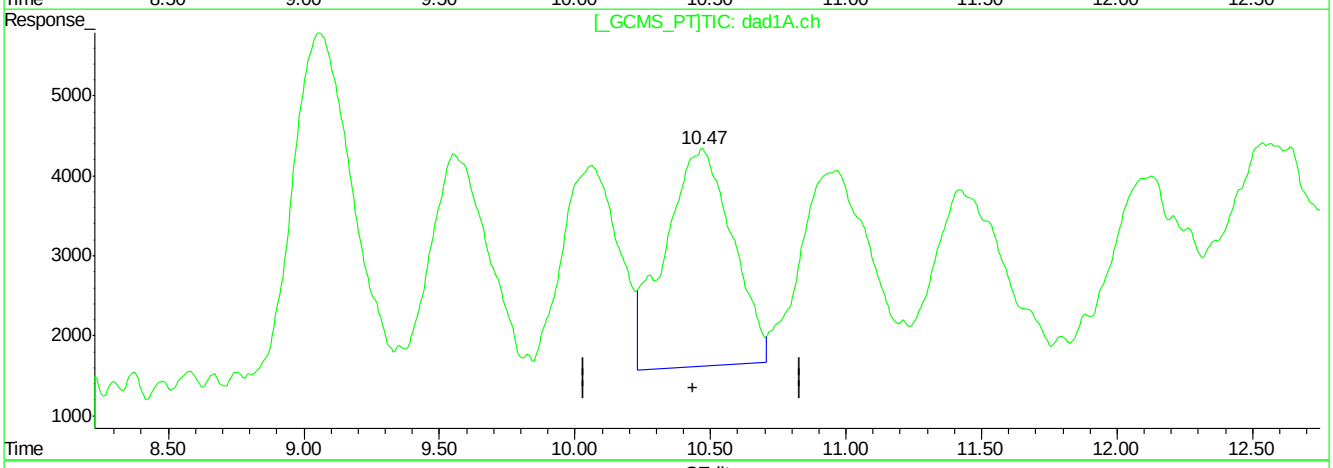
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:09 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.42min 98.820ppb m

response 369021

(13) 2-Amino-4,6-Dinitrotoluene #2

10.47min 84.396ppb

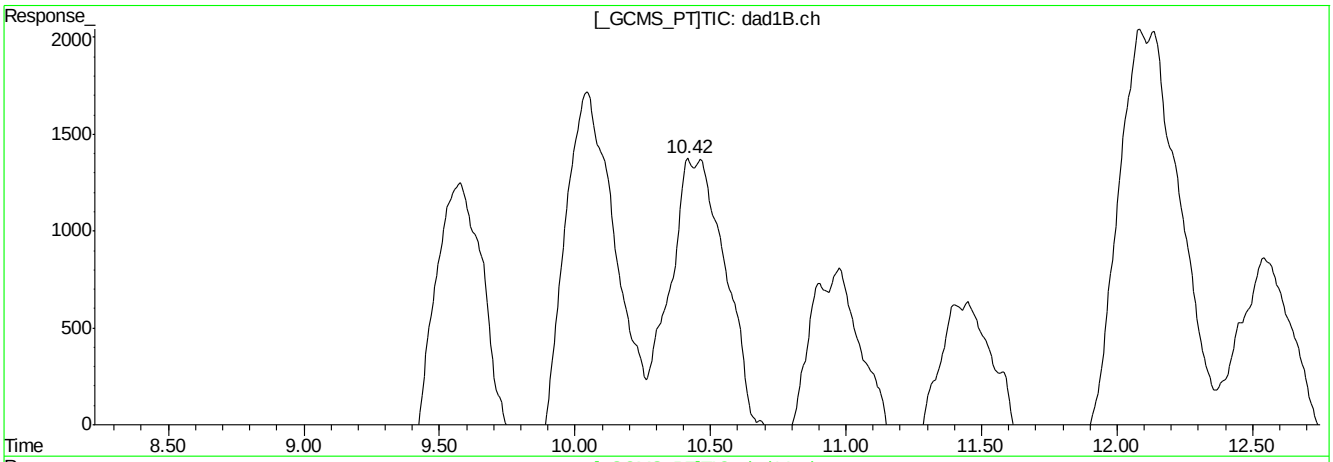
response 472588

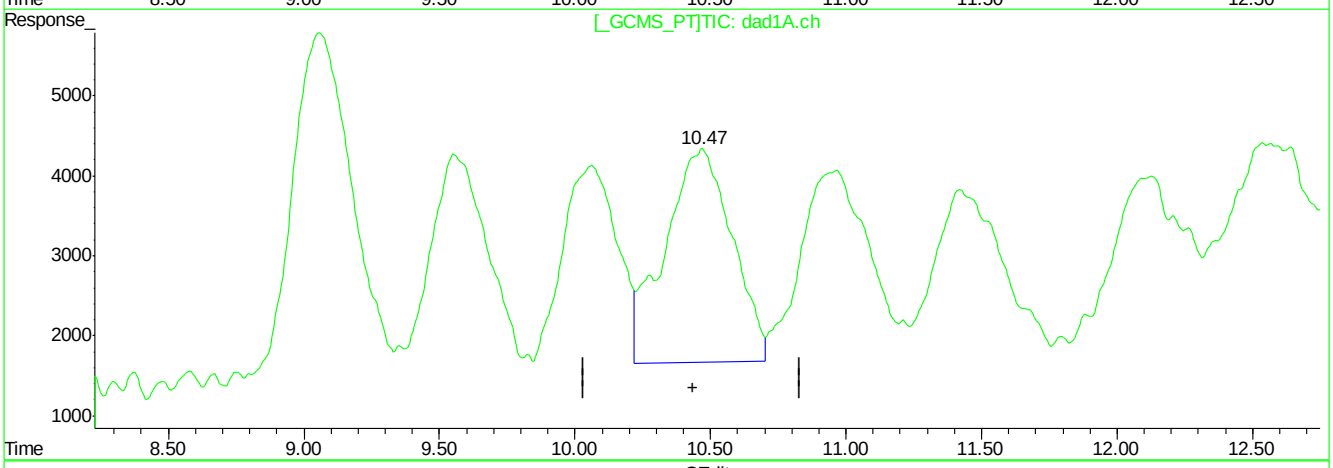
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:13 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.42min 98.820ppb m

response 369021

(13) 2-Amino-4,6-Dinitrotoluene #2

10.47min 82.247ppb m

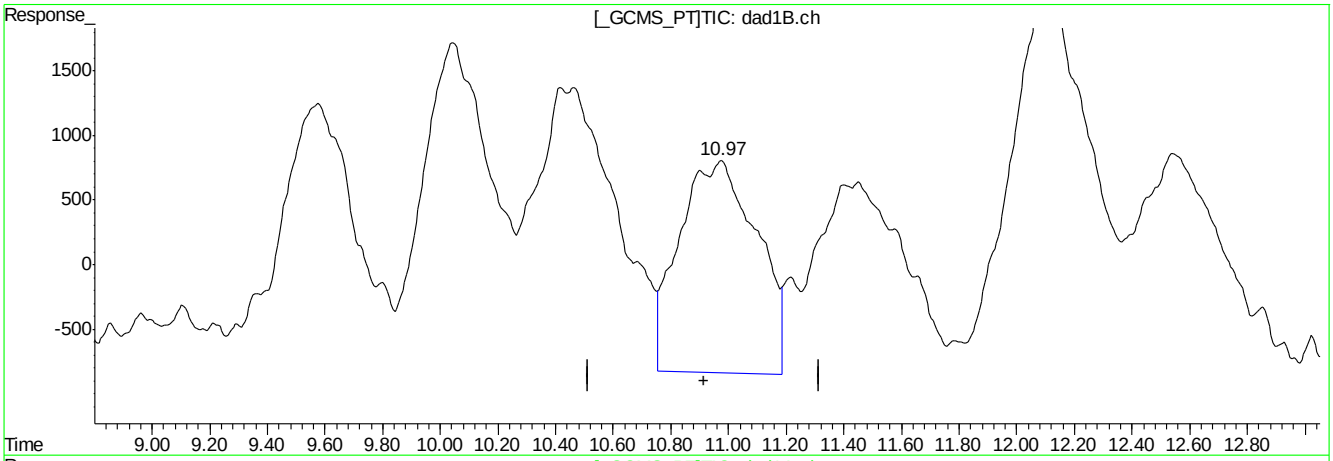
response 460555

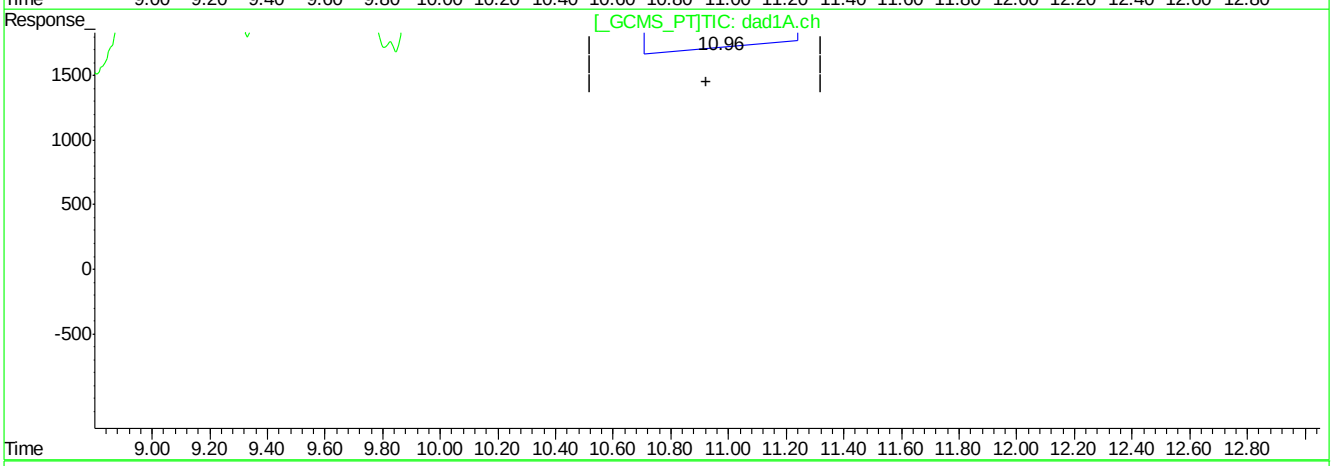
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:23 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.98min 116.814ppb

response 308528

(14) 4-Amino-2,6-Dinitrotoluene #2

10.96min 77.377ppb

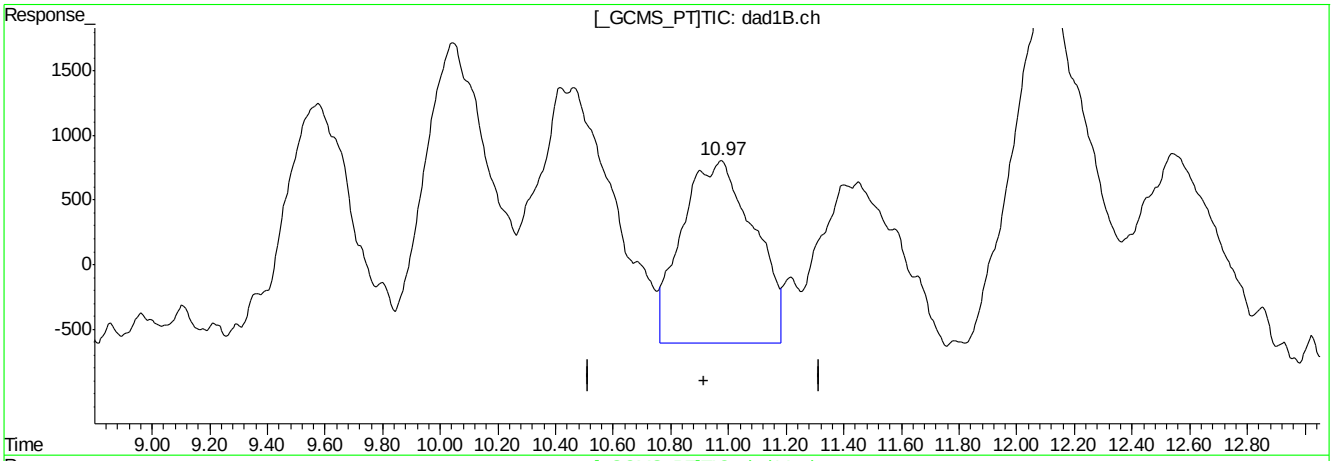
response 412438

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:37 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(14) 4-Amino-2,6-Dinitrotoluene

10.97min 92.796ppb m

response 244977

(14) 4-Amino-2,6-Dinitrotoluene #2

10.96min 77.377ppb

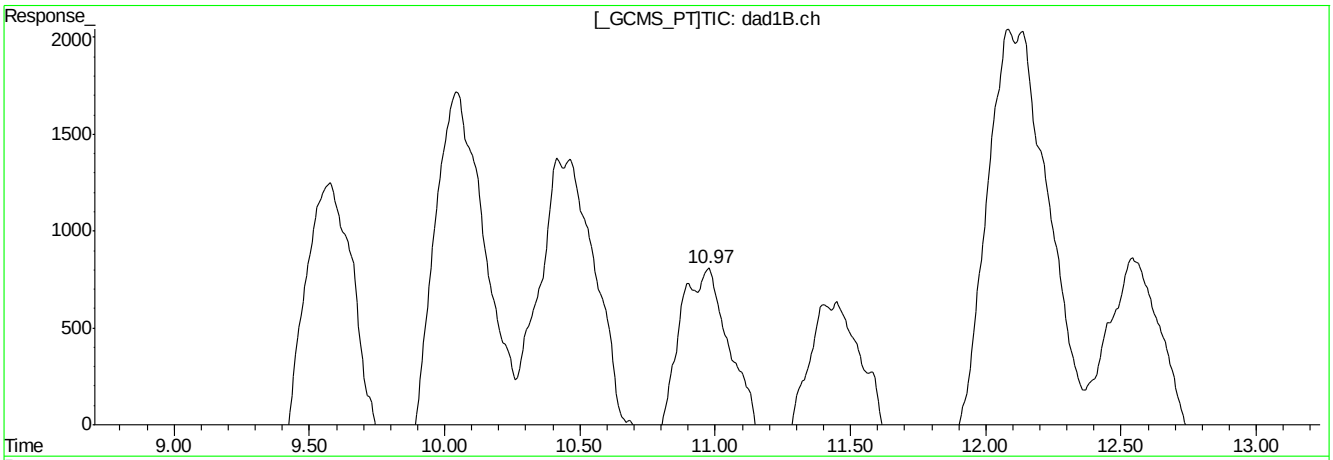
response 412438

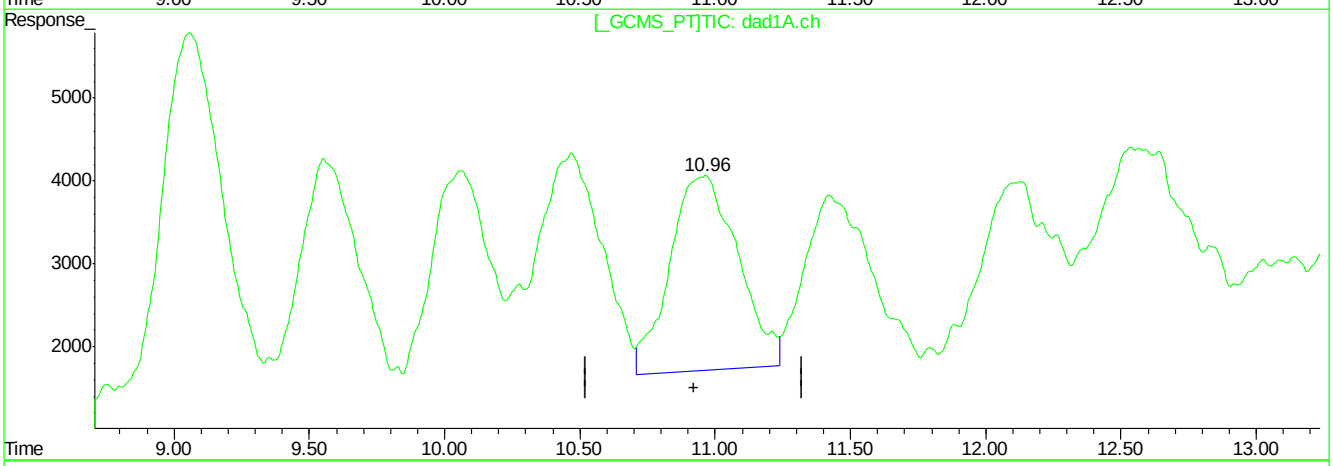
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:46 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.97min 92.796ppb m

response 244977

(14) 4-Amino-2,6-Dinitrotoluene #2

10.96min 77.377ppb

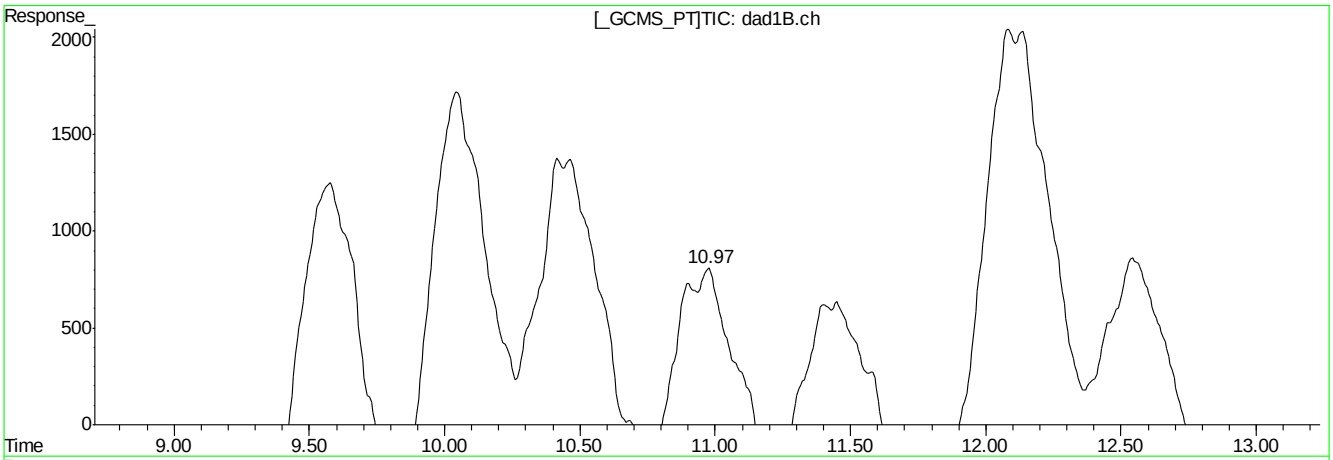
response 412438

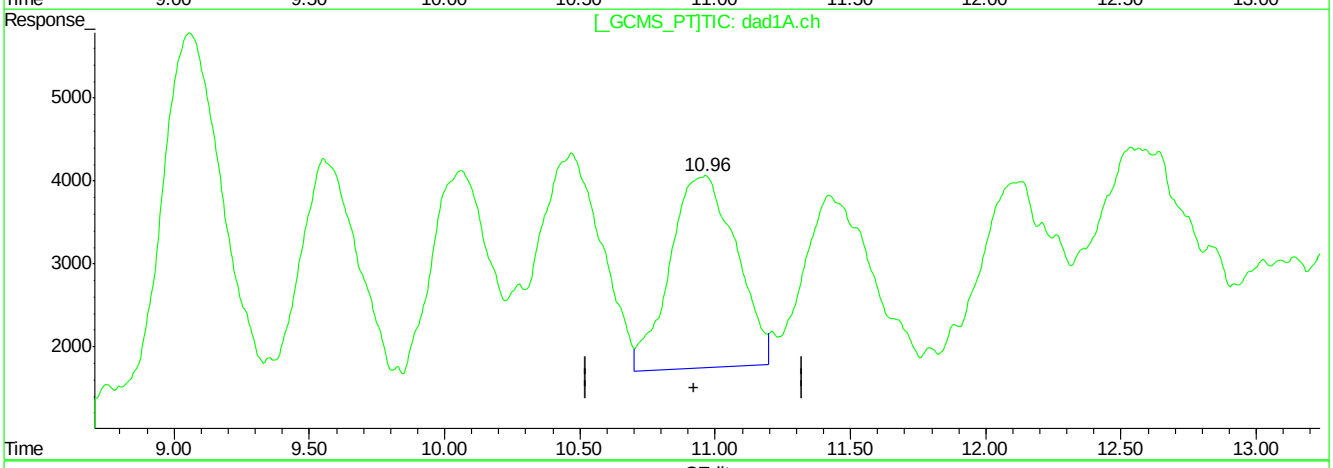
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:49 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.97min 92.796ppb m

response 244977

(14) 4-Amino-2,6-Dinitrotoluene #2

10.96min 74.116ppb m

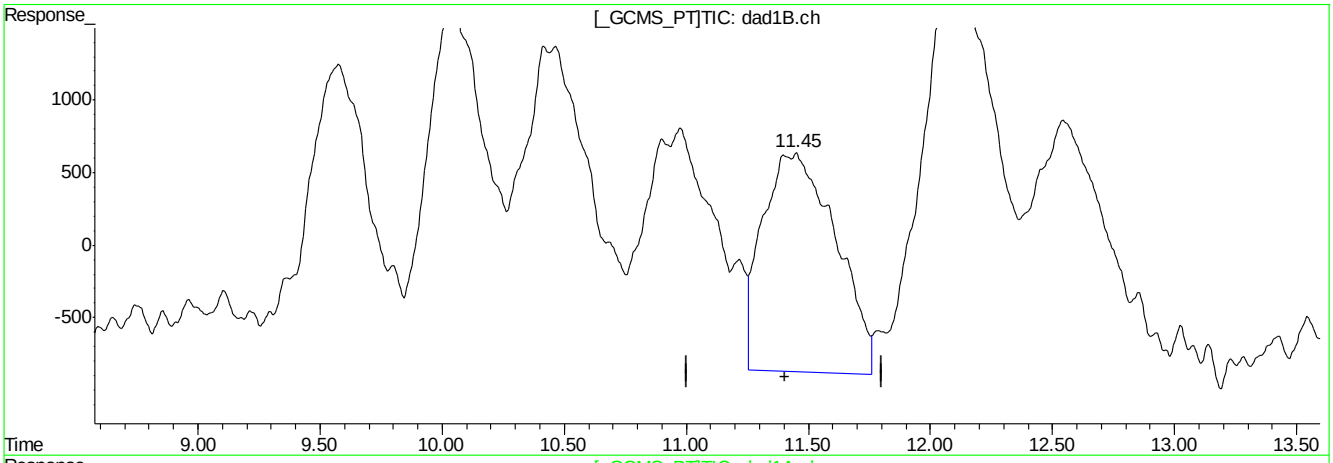
response 395056

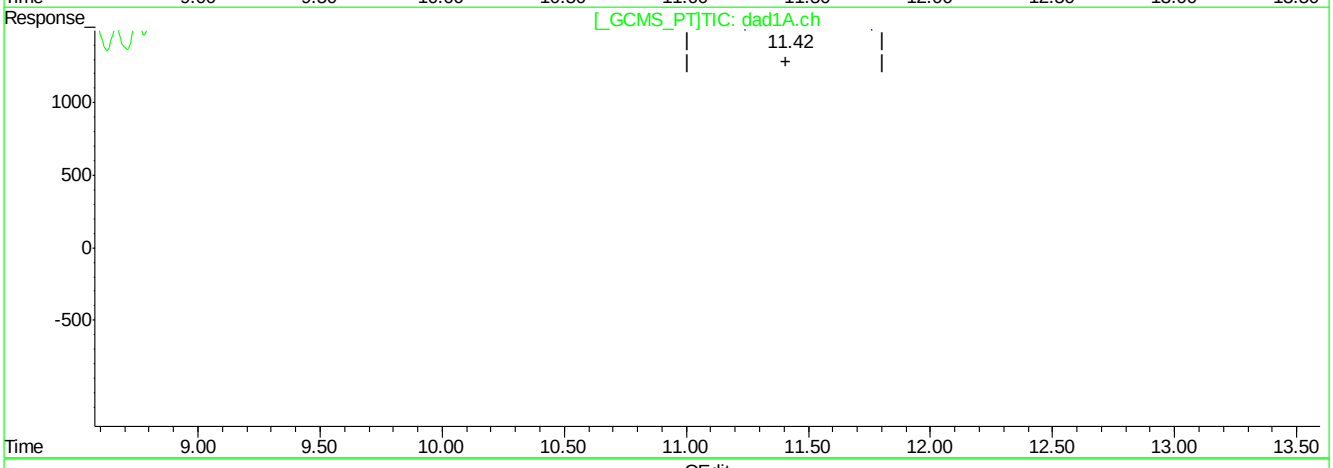
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:58 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.45min 126.683ppb

response 315252

(15) 3,4-Dinitrotoluene #2 (S)

11.42min 80.133ppb

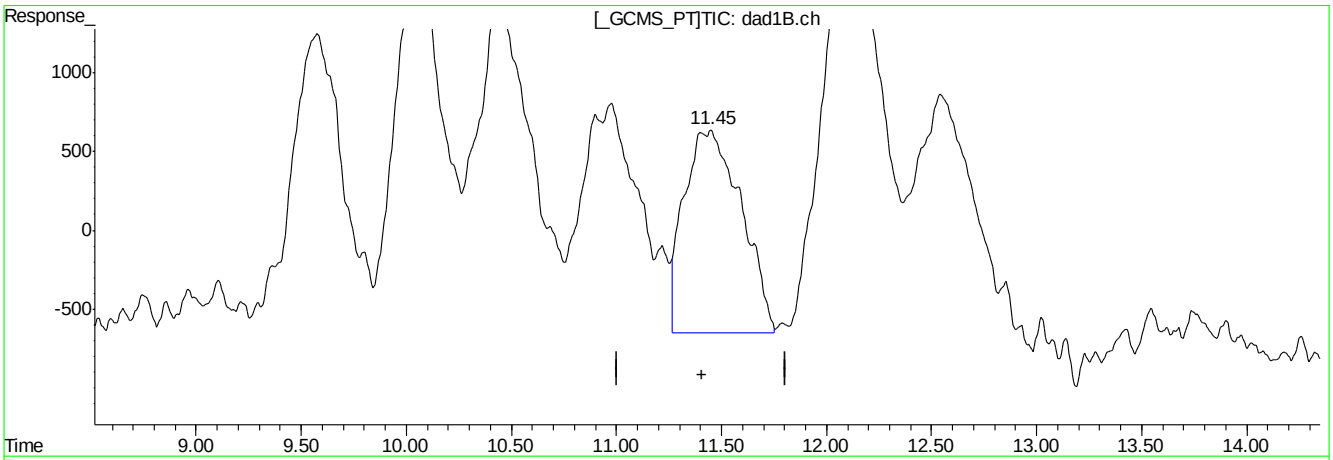
response 337052

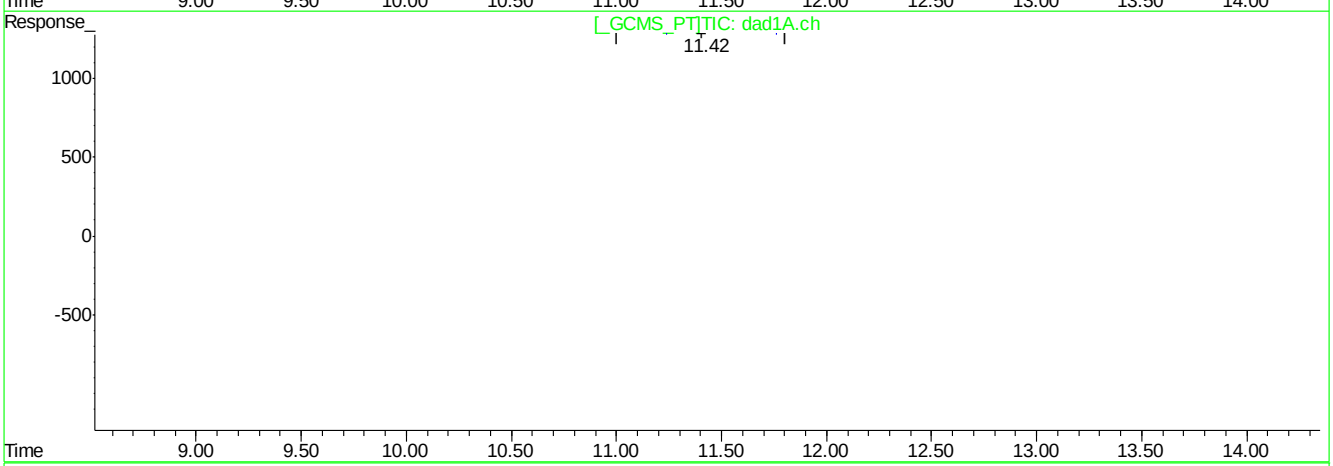
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:54:21 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.45min 97.867ppb m

response 243543

(15) 3,4-Dinitrotoluene #2 (S)

11.42min 80.133ppb

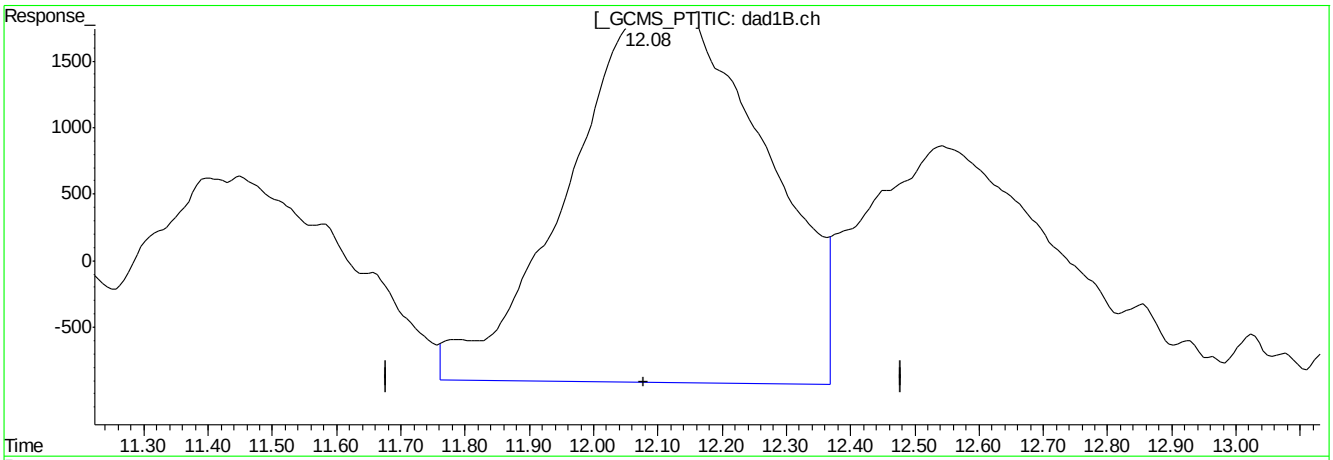
response 337052

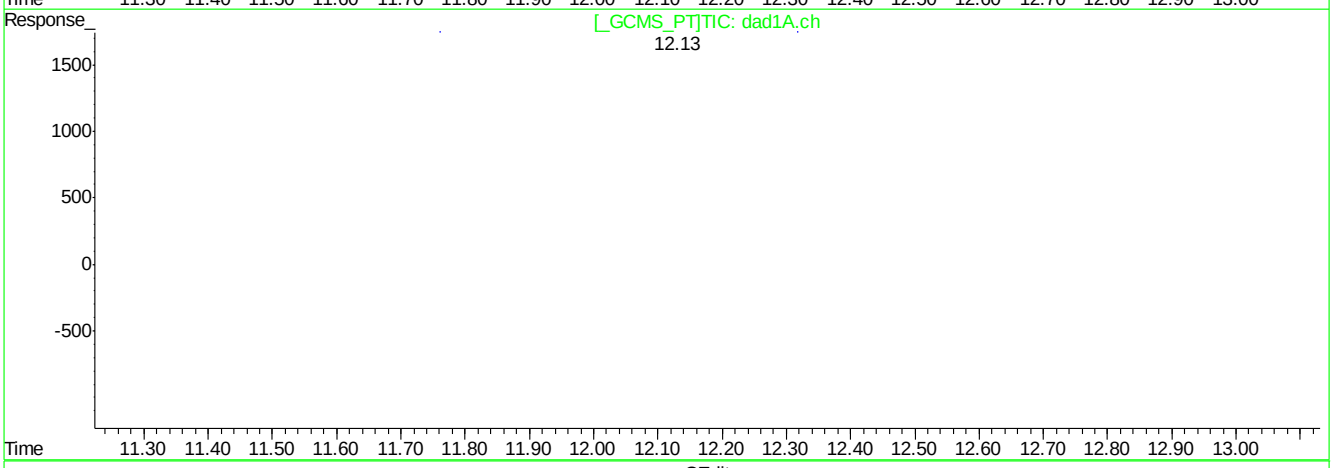
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:54:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.09min 116.004ppb

response 601850

(16) 2,4-Dinitrotoluene #2

12.13min 99.321ppb

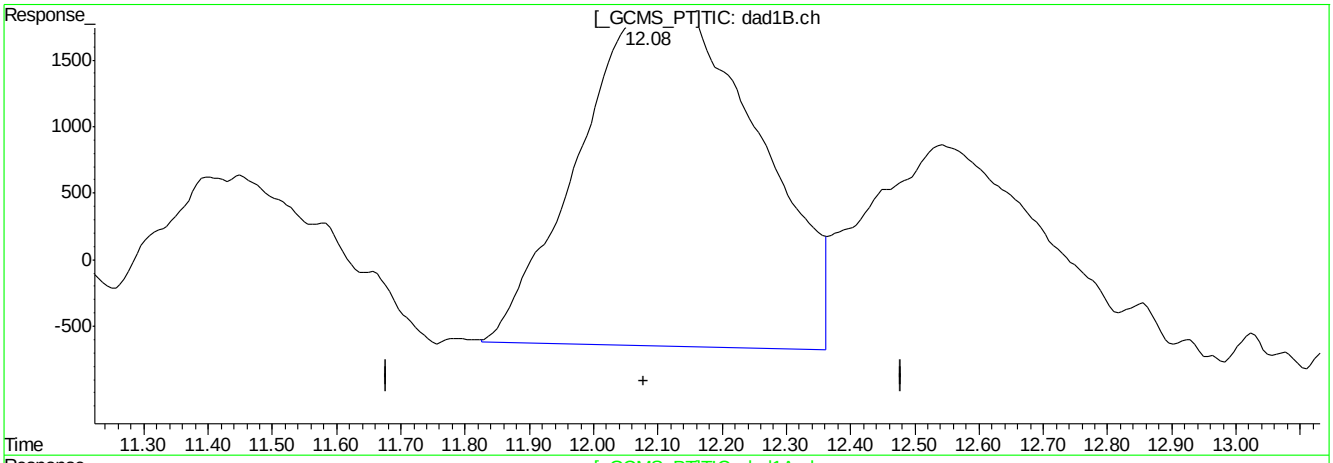
response 313385

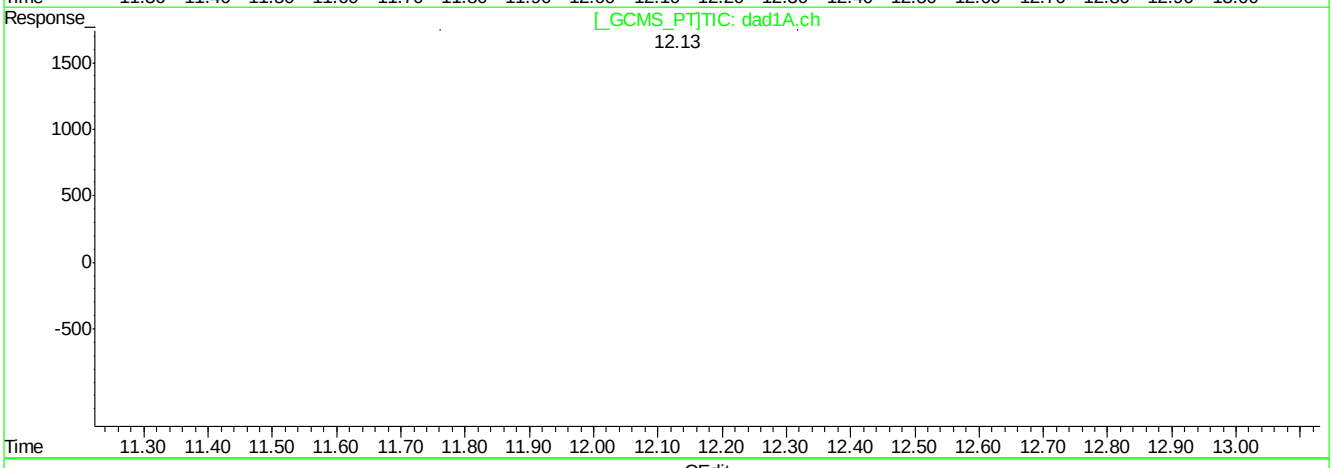
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:54:40 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.08min 96.183ppb m

response 499014

(16) 2,4-Dinitrotoluene #2

12.13min 99.321ppb

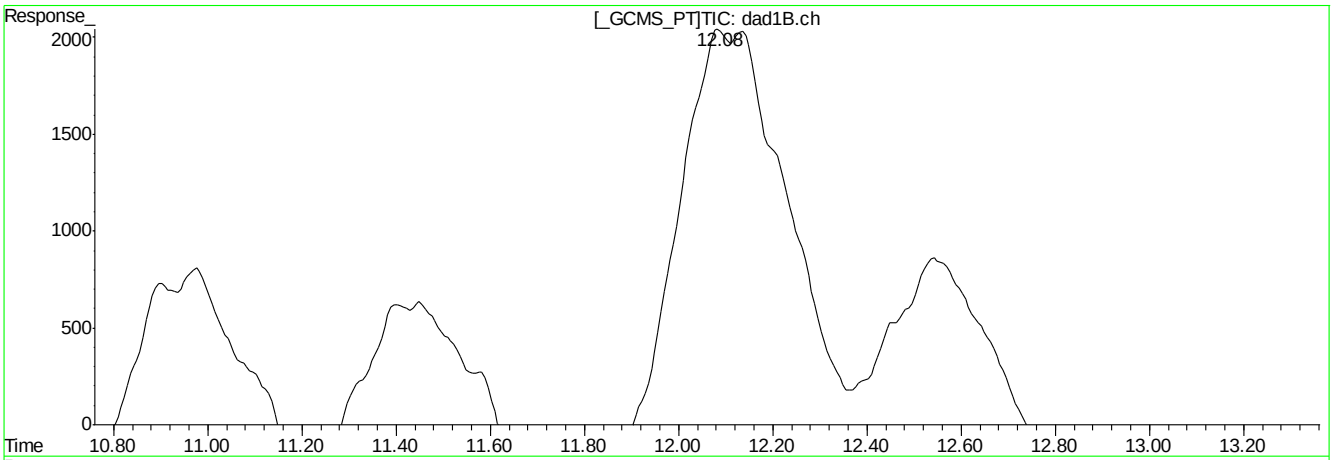
response 313385

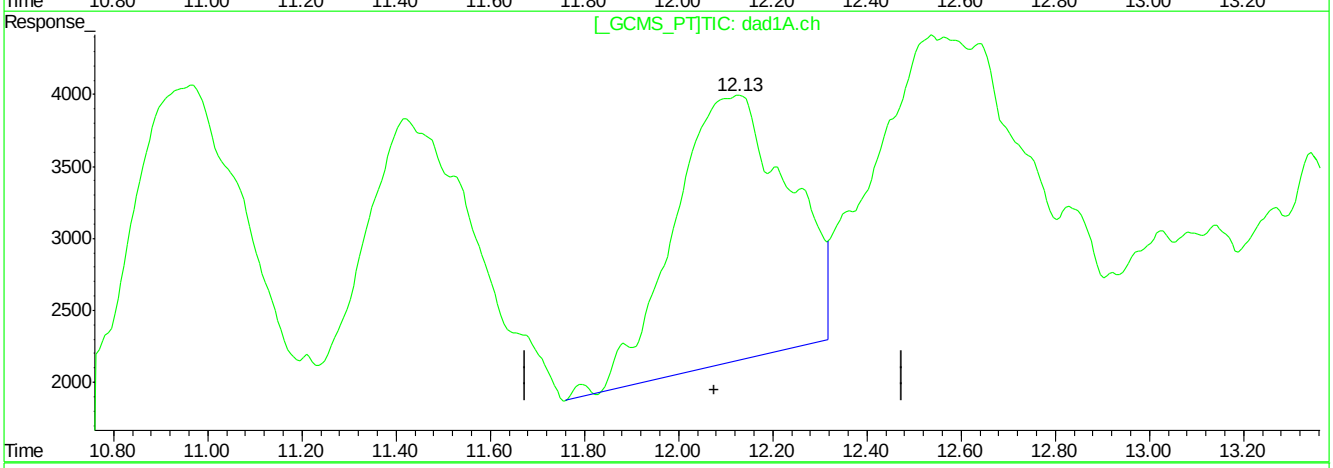
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:54:48 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.08min 96.183ppb m

response 499014

(16) 2,4-Dinitrotoluene #2

12.13min 99.321ppb

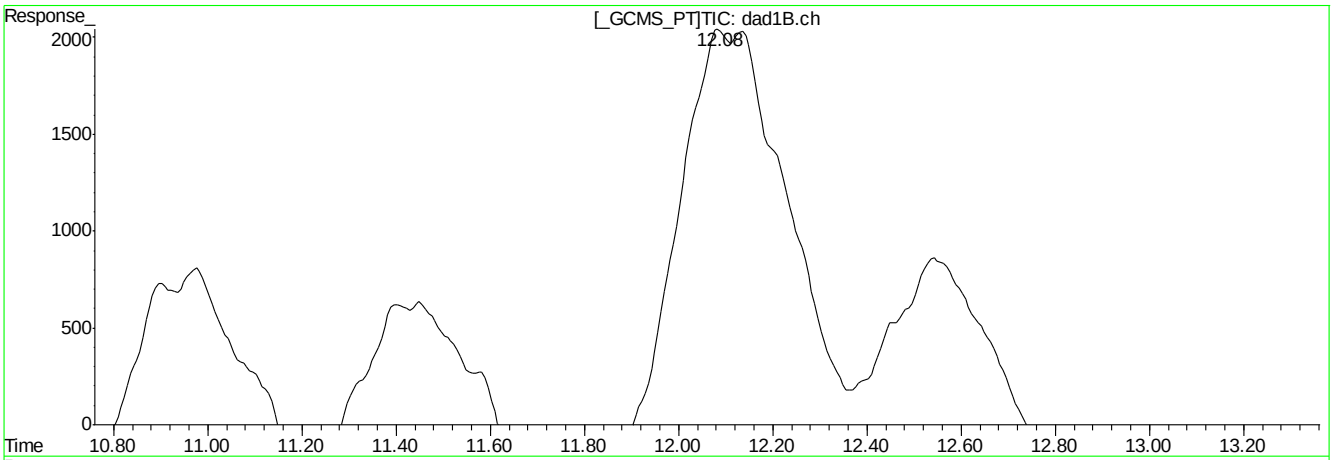
response 313385

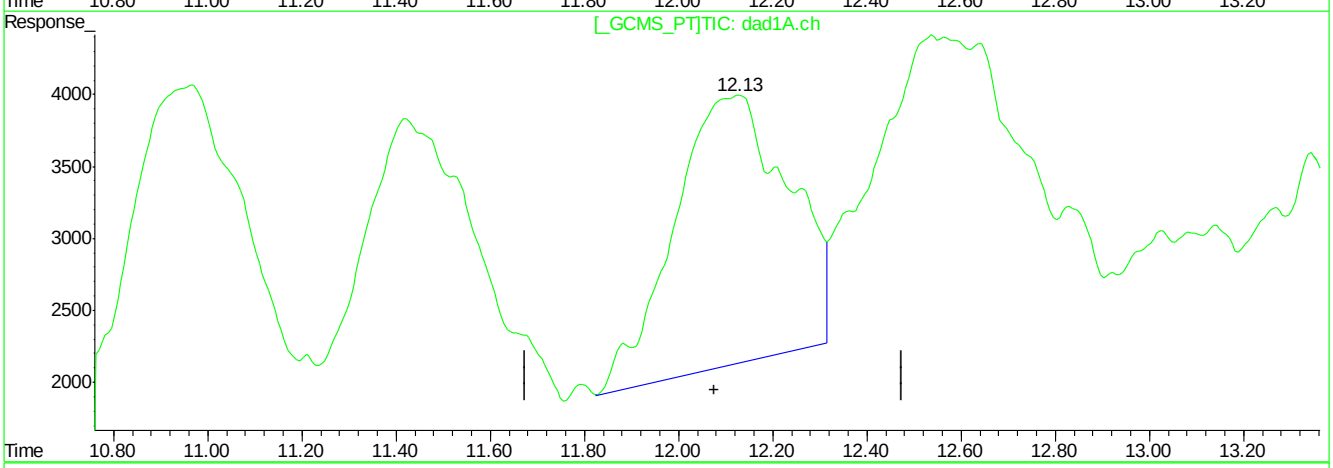
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:54:53 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.08min 96.183ppb m

response 499014

(16) 2,4-Dinitrotoluene #2

12.13min 99.839ppb m

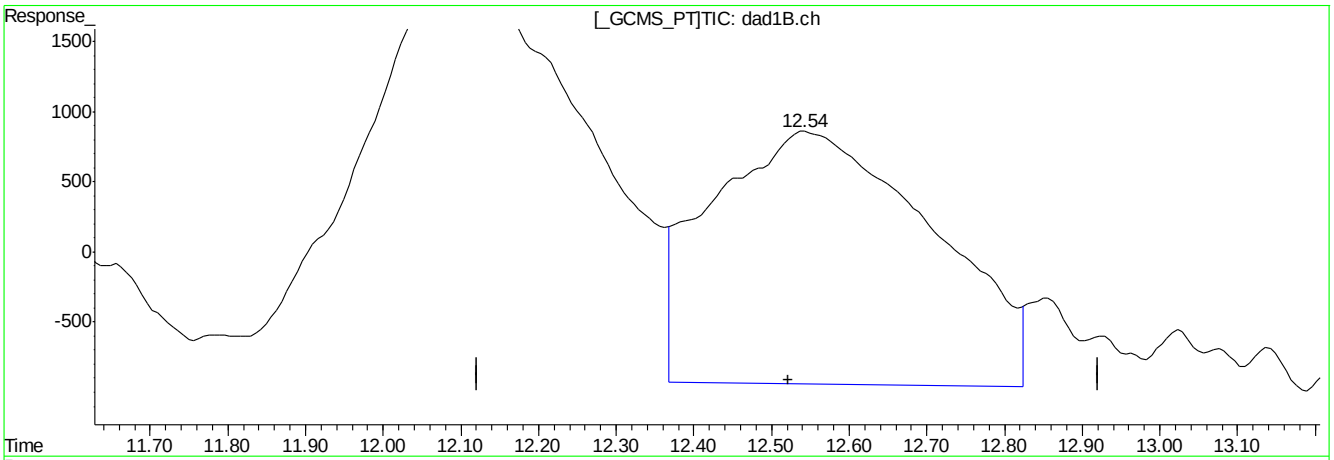
response 315018

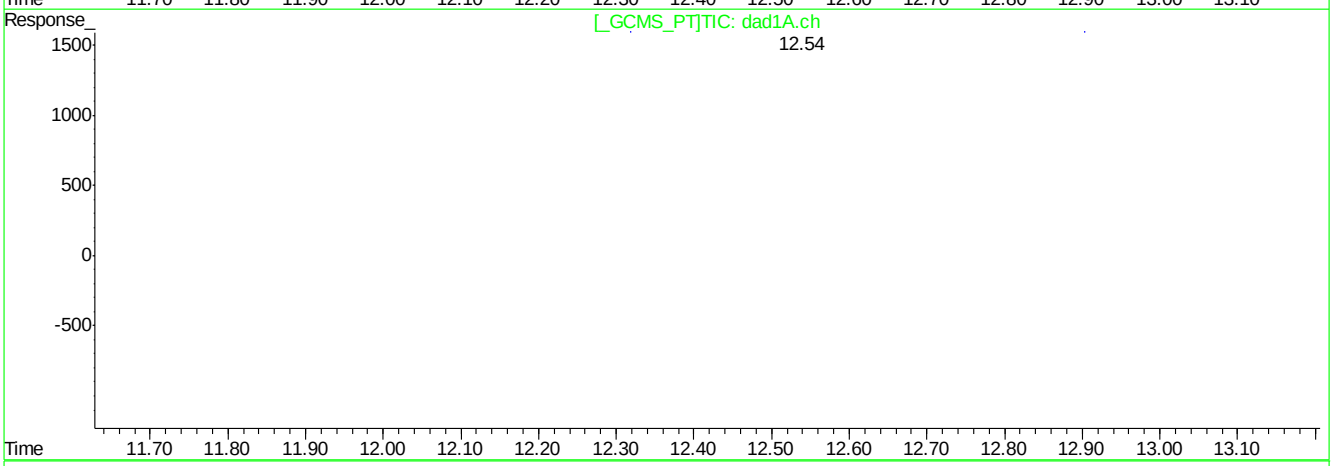
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:04 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 122.083ppb

response 359348

(17) 2,6-Dinitrotoluene #2

12.54min 111.674ppb

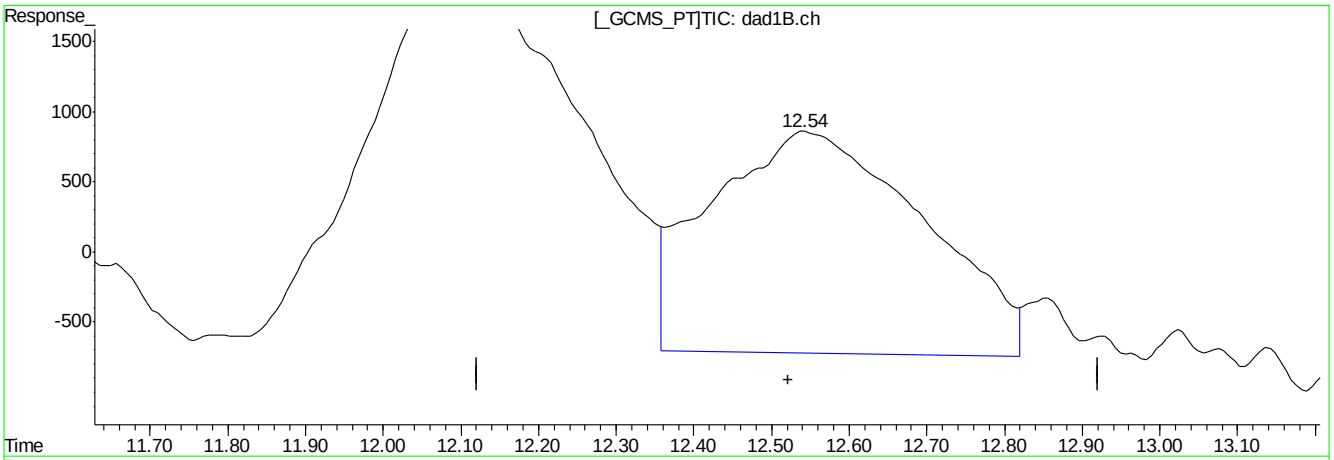
response 412058

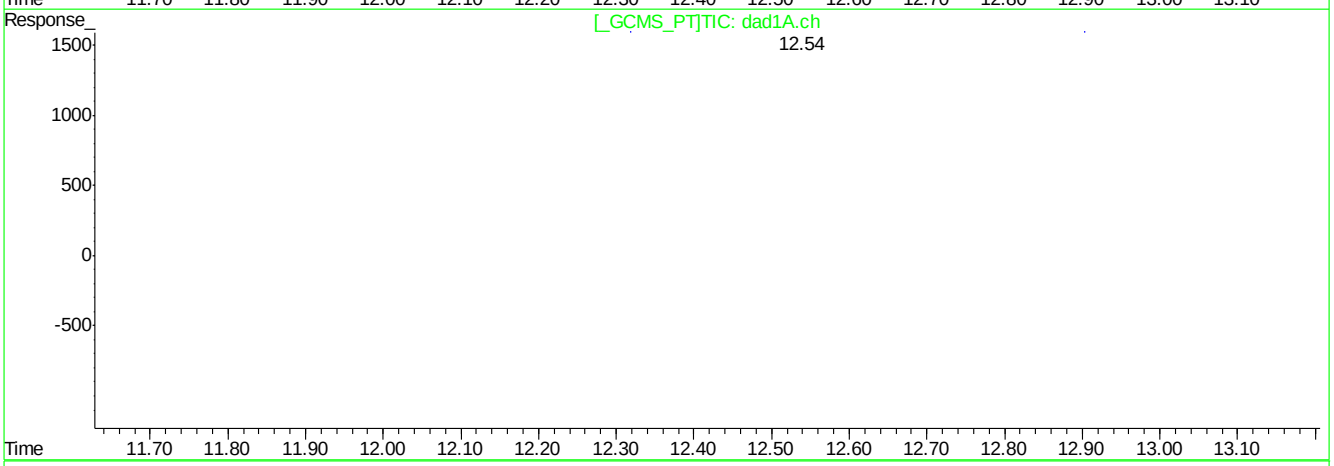
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:13 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.54min 102.534ppb m

response 301682

(17) 2,6-Dinitrotoluene #2

12.54min 111.674ppb

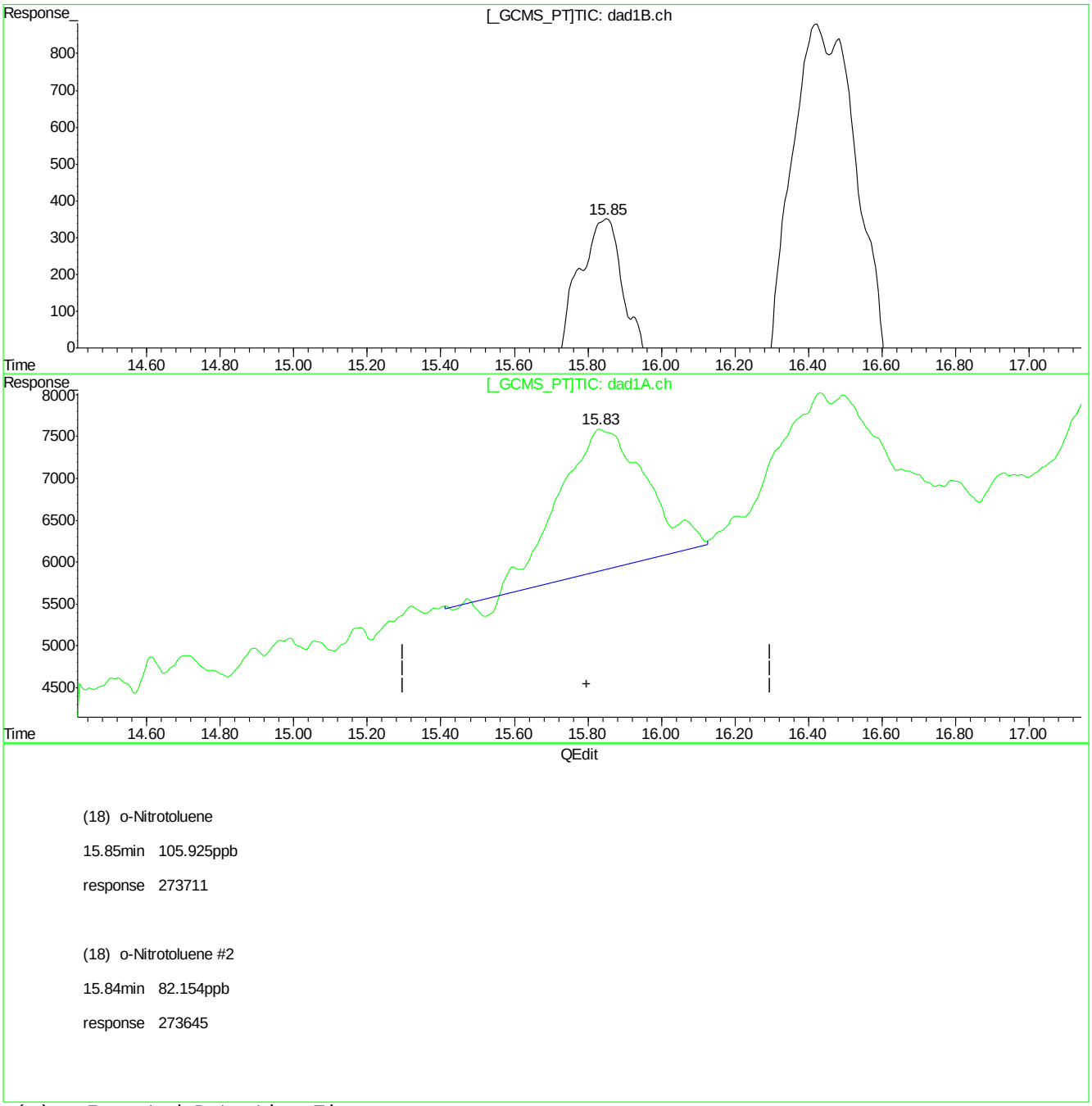
response 412058

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:20 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.85min 105.925ppb

response 273711

(18) o-Nitrotoluene #2

15.84min 82.154ppb

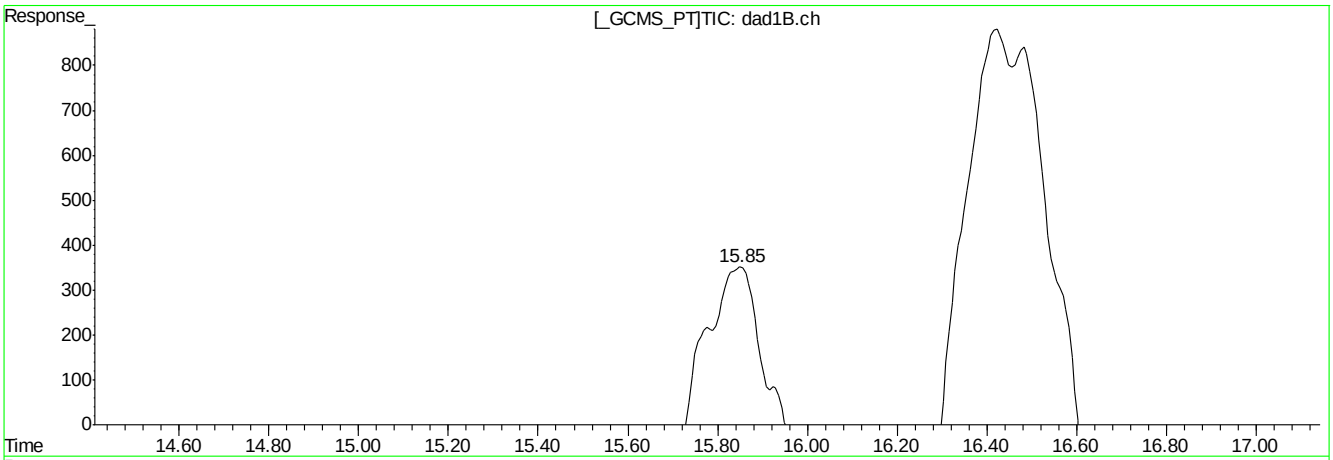
response 273645

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:31 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.85min 105.925ppb

response 273711

(18) o-Nitrotoluene #2

15.83min 109.241ppb m

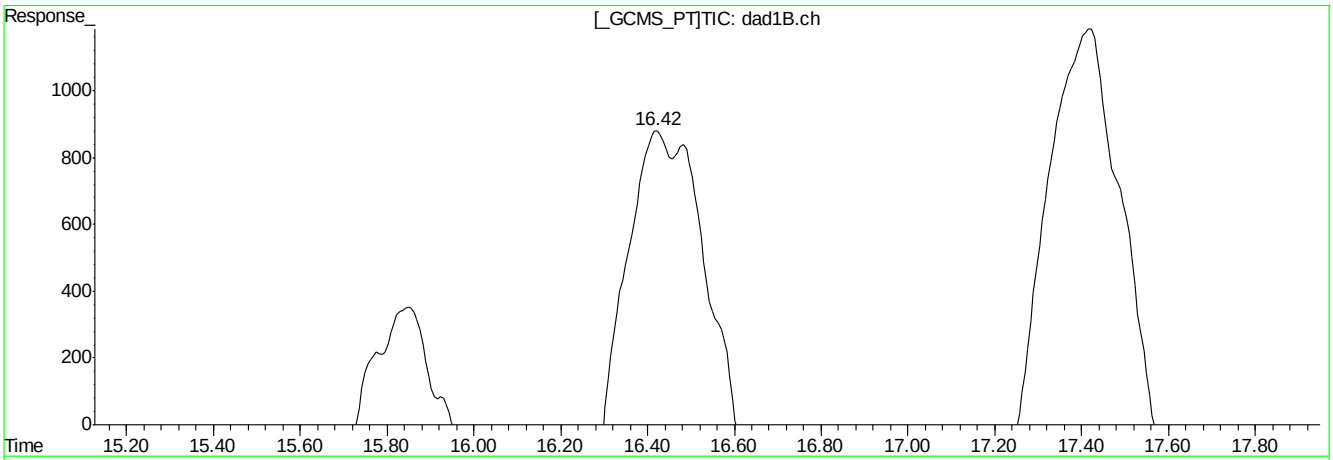
response 363866

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:39 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.42min 98.732ppb

response 394551

(19) p-Nitrotoluene #2

16.44min 47.202ppb

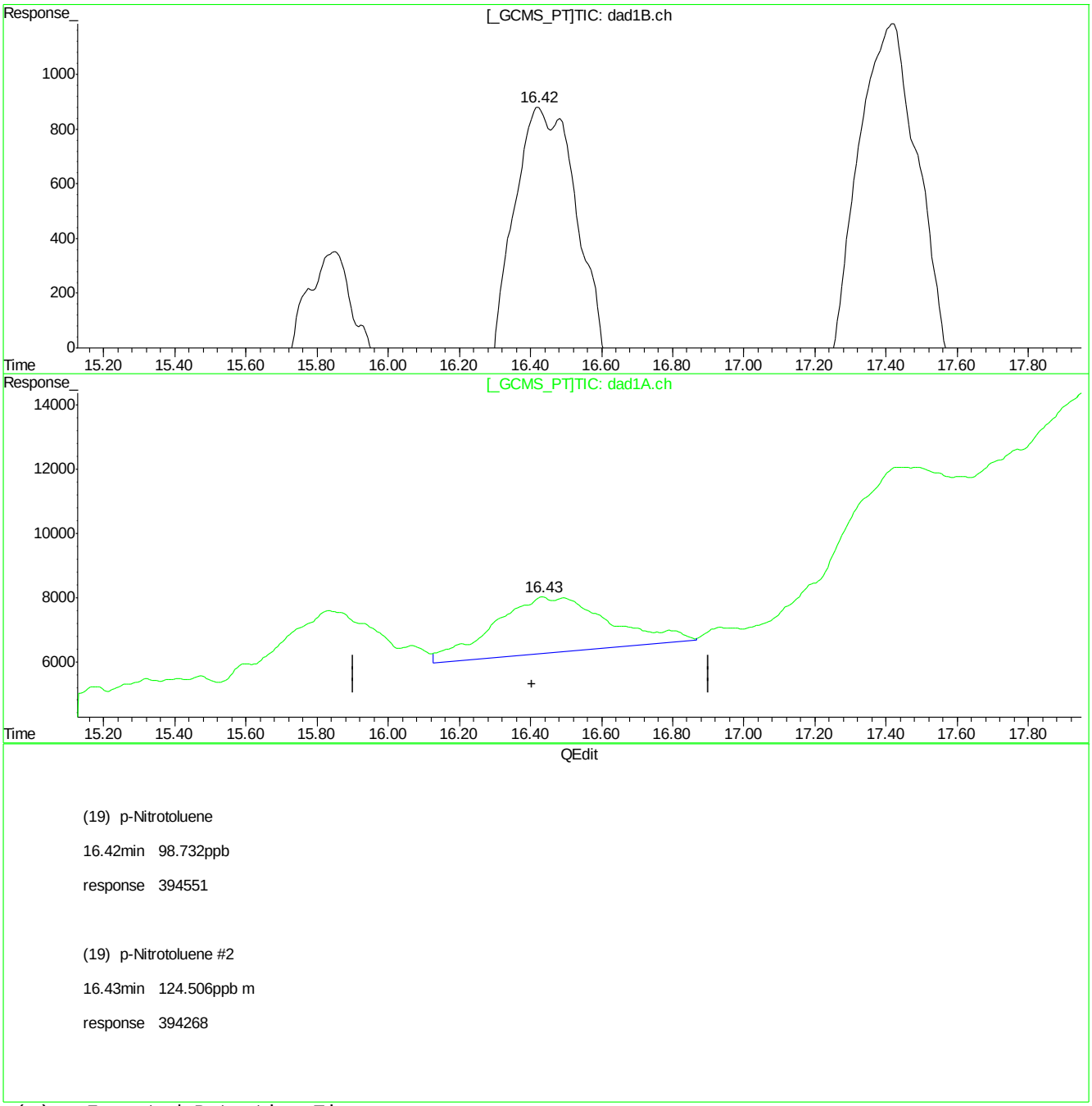
response 149474

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:46 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.42min 98.732ppb

response 394551

(19) p-Nitrotoluene #2

16.43min 124.506ppb m

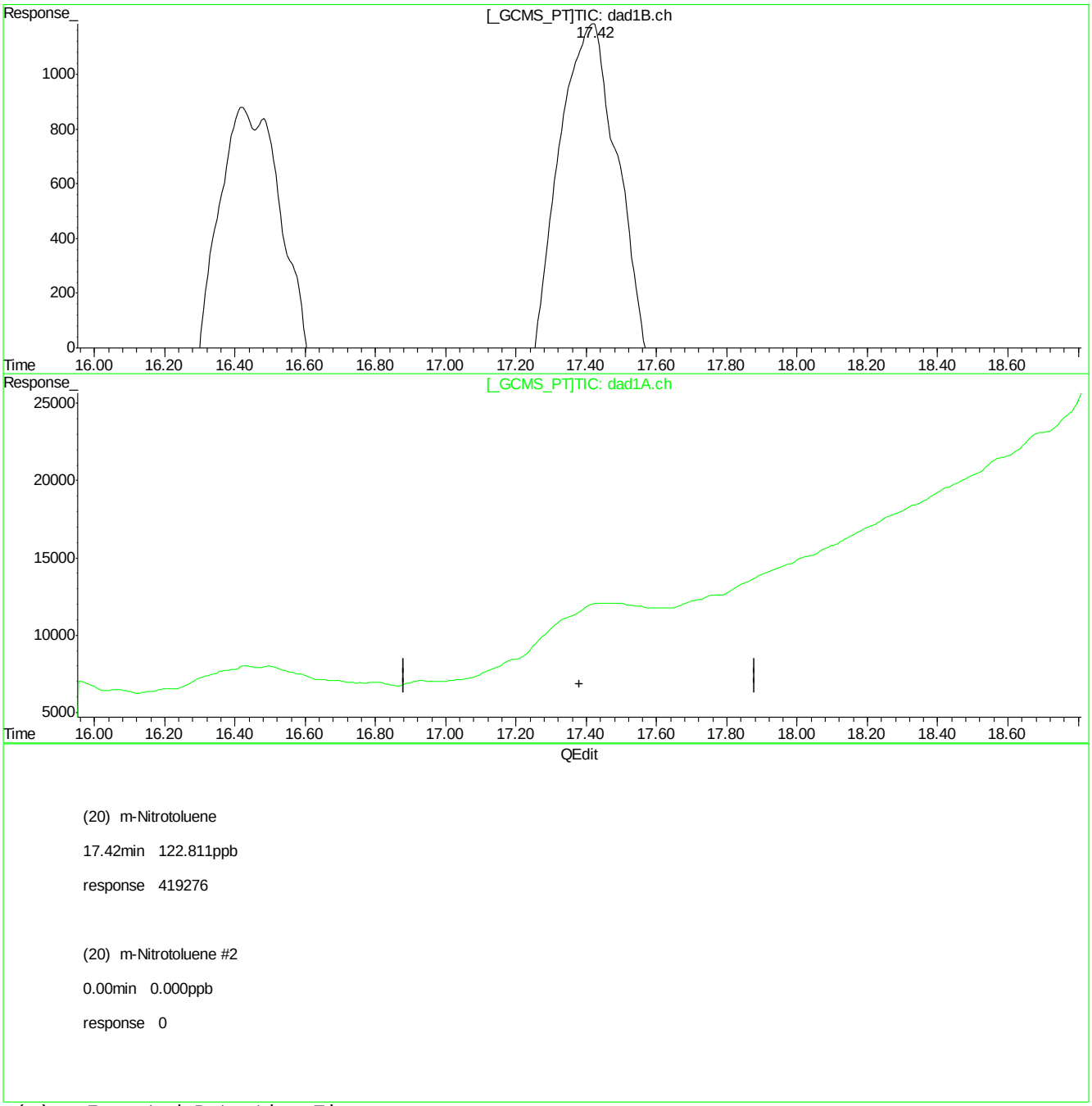
response 394268

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:54 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

17.42min 122.811ppb

response 419276

(20) m-Nitrotoluene #2

0.00min 0.000ppb

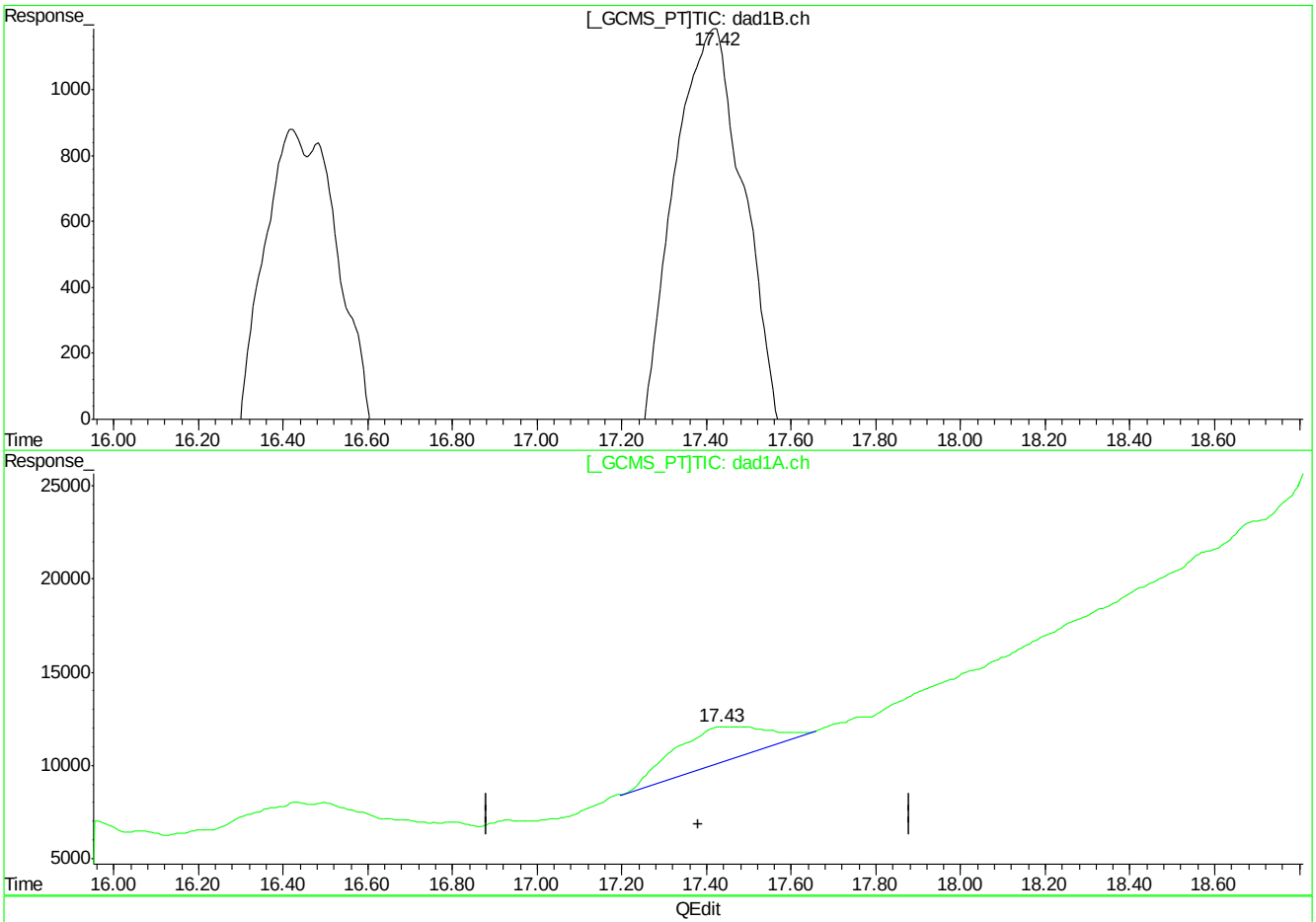
response 0

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:56:03 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

17.42min 122.811ppb

response 419276

(20) m-Nitrotoluene #2

17.43min 83.460ppb m

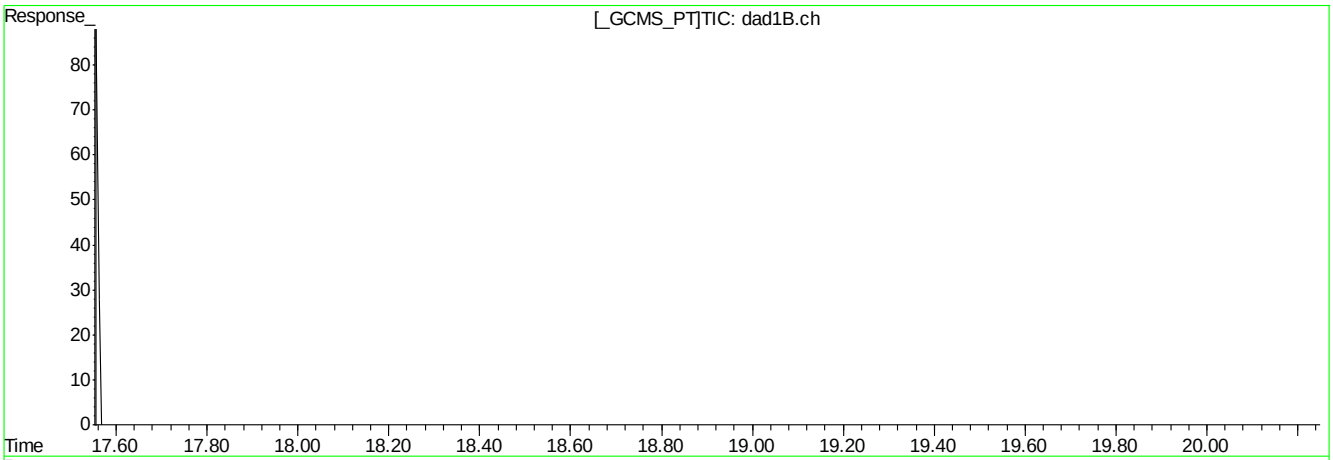
response 294844

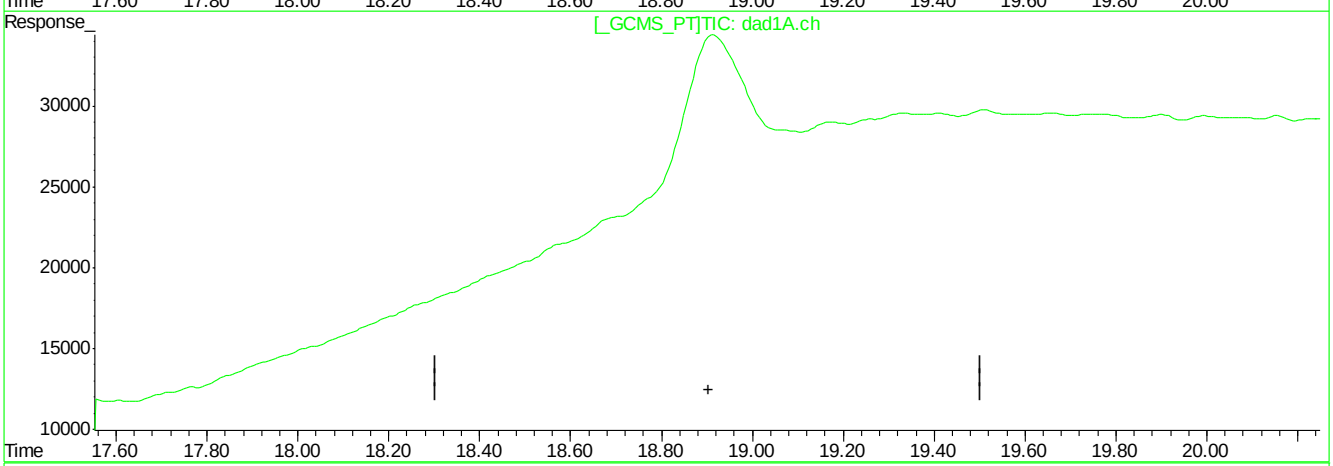
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:56:08 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.96min 0.000ppb

response 22949

(21) PETN #2

0.00min 0.000ppb

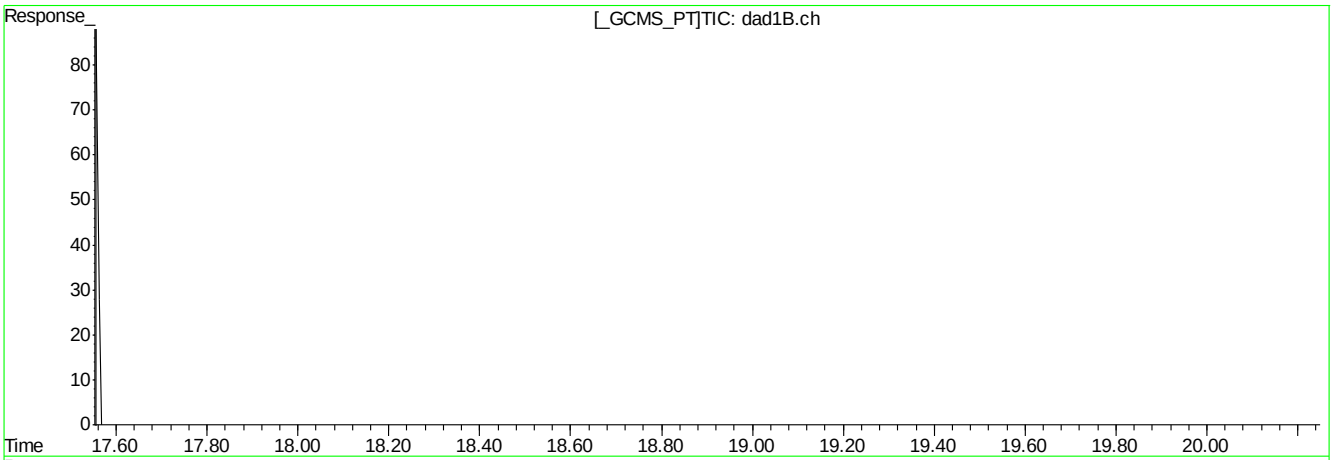
response 0

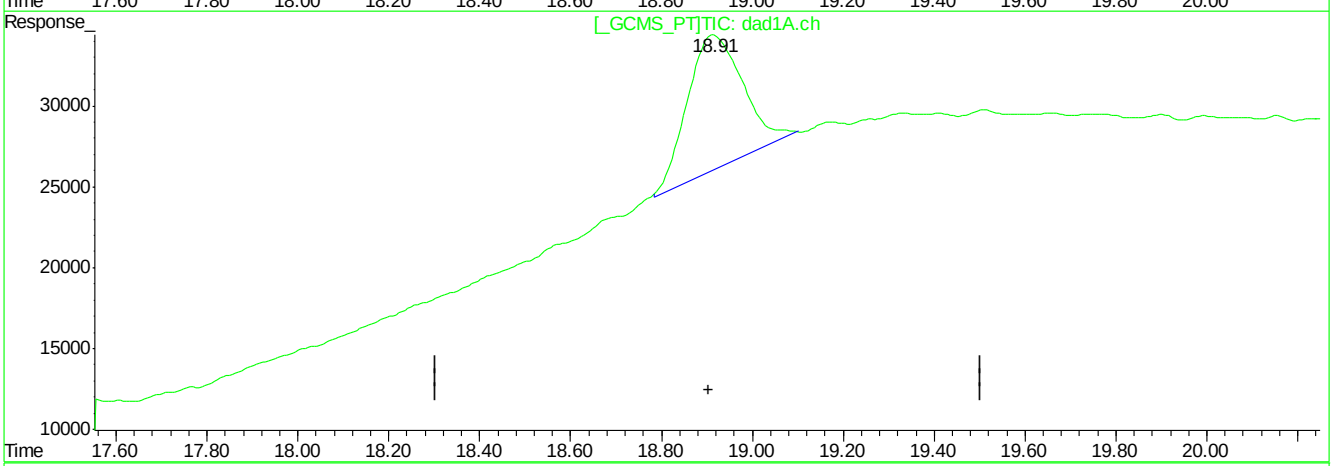
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:56:12 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.96min 0.000ppb

response 22949

(21) PETN #2

18.91min 534.988ppb m

response 704993

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:56:18 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:30 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.44	11.45	519740	738848	208.855	175.659
	Spiked Amount 500.000	Range 70 - 136		Recovery =		41.77%#	35.13%#
	Target Compounds						
1)	TNX	1.40	1.40	1013813	1588935	207.137	208.166
2)	HMX	1.54	1.54	367501	1086351	203.308	219.536
3)	DNX	1.79	1.79	555004	940350	180.467	185.467
4)	MNX	2.40	2.40	560123	824492	179.245	174.866m
5)	RDX	3.02	3.02	394305	674661	202.026m	206.893m
6)	1,3,5-Trinitrobe	4.83	4.83	860101	1607722	197.385	196.128
7)	1,3-Dinitrobenze	6.06	6.06	1104856	740582	189.544m	192.527m
8)	3,5-Dinitroanili	6.42	6.42	965484	1662853	206.488	212.702
9)	Nitrobenzene	7.71	7.71	730467	677197	195.204	214.537
10)	Nitroglycerin	0.00	9.05	0	1269517	N.D. d	993.517
11)	Tetryl	9.58	9.56	548276	759245	185.264	183.425
12)	2,4,6-Trinitroto	10.05	10.04	700562	781607	178.854	182.778
13)	2-Amino-4,6-Dini	10.44	10.45	763996	941355	204.589	168.109
14)	4-Amino-2,6-Dini	10.94	10.96	522801	901049	197.632	169.045
16)	2,4-Dinitrotolue	12.10	12.11	1029064	561998	198.348	178.115
17)	2,6-Dinitrotolue	12.56	12.58	597888	715257	202.775	193.845
18)	o-Nitrotoluene	15.82	15.82	465201	616132	180.031	184.977m
19)	p-Nitrotoluene	16.42	16.42	747964	659517	187.170	208.269
20)	m-Nitrotoluene	17.38	17.42	749218	651487	219.001	182.835m
21)	PETN	0.00	18.91	0	1424589	N.D. d	1081.058m

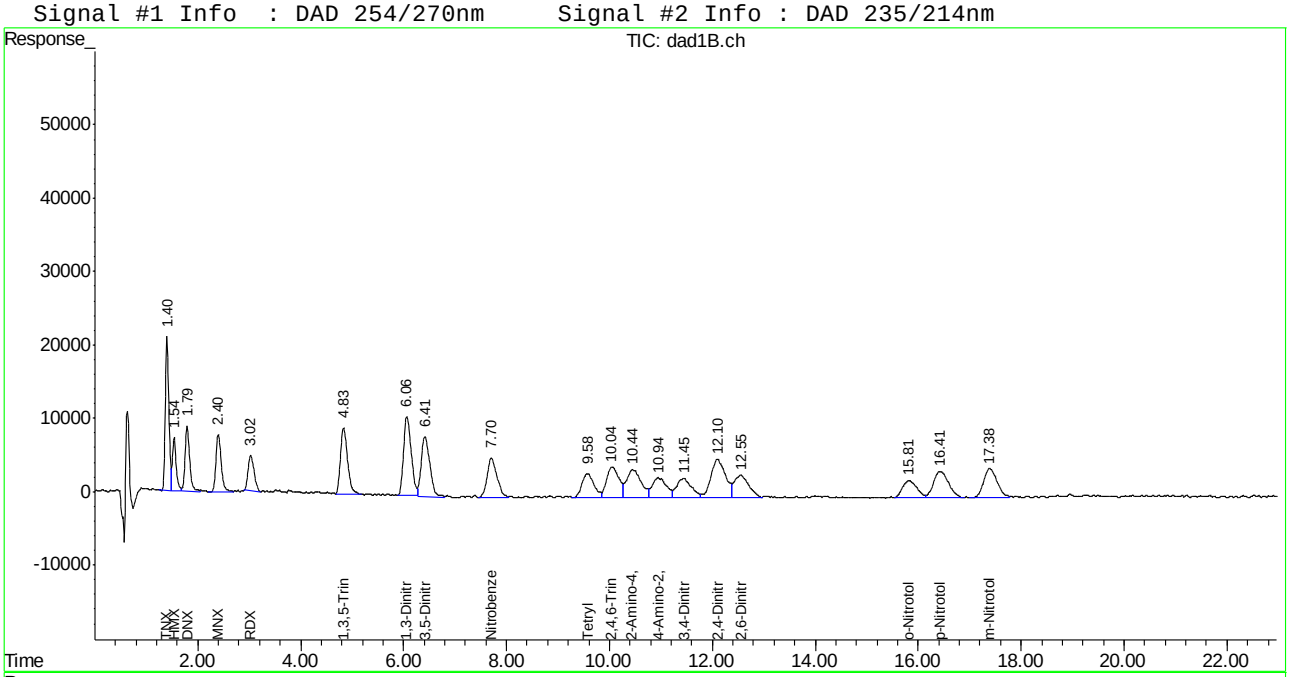
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060203.D 8330B_0707PLUS.M Mon Jul 09 11:20:51 2018 Page 1

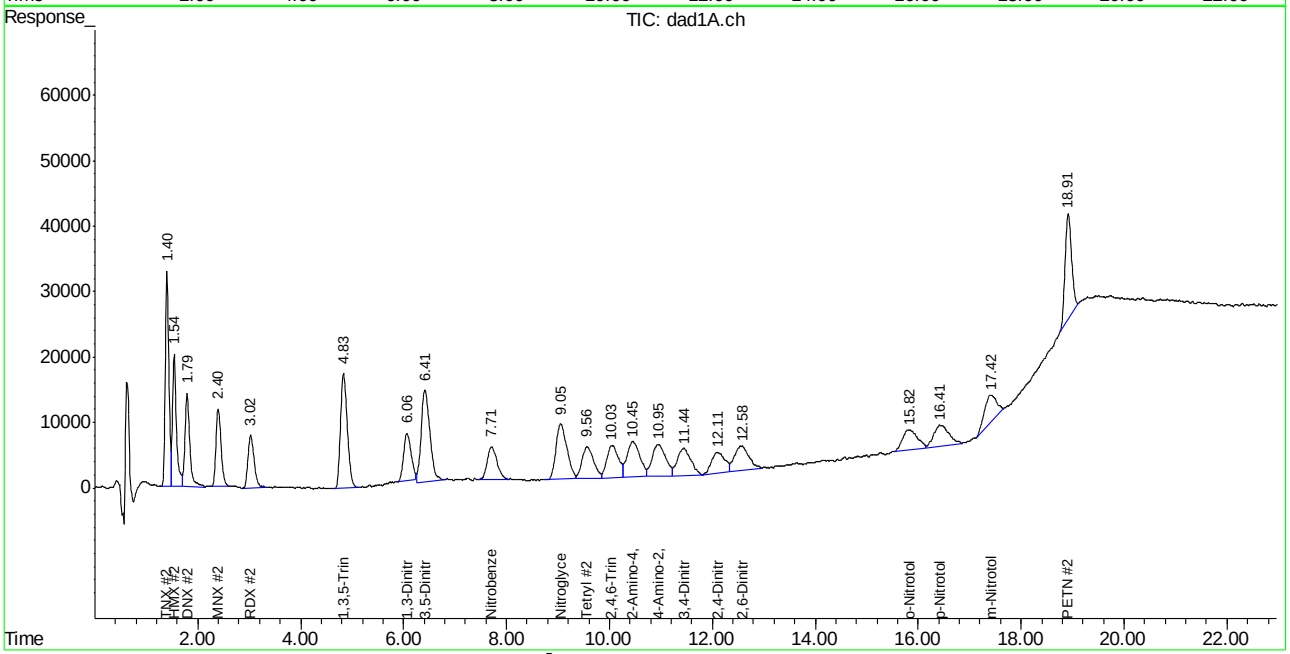
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:06 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

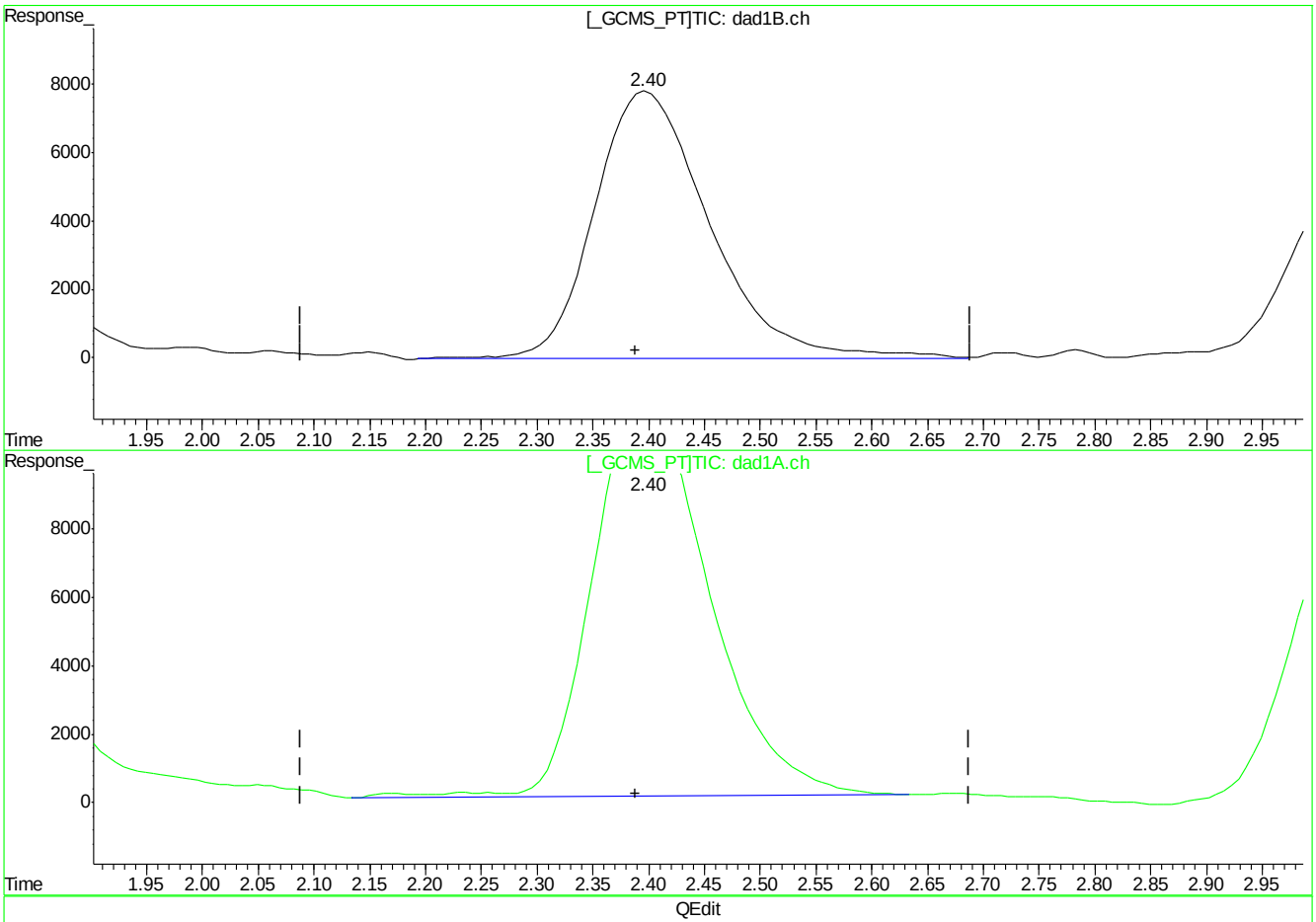
Sample Number: GBB1748-IC1748
Lab FileID: BB060203.D
Injection Time: 07/06/18 17:03
Method: SW846 8330A
Analyst approved: 07/09/18 11:23 William Hustedde
Supervisor approved: 07/09/18 16:15 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
MNX		2	2.40	Poor instrument integration
RDX	121-82-4	1	3.02	Poor instrument integration
RDX	121-82-4	2	3.02	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	6.06	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.06	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.82	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.42	Poor instrument integration
PETN	78-11-5	2	18.91	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(4) MNX

2.40min 179.245ppb

response 560123

(4) MNX #2

2.40min 177.792ppb

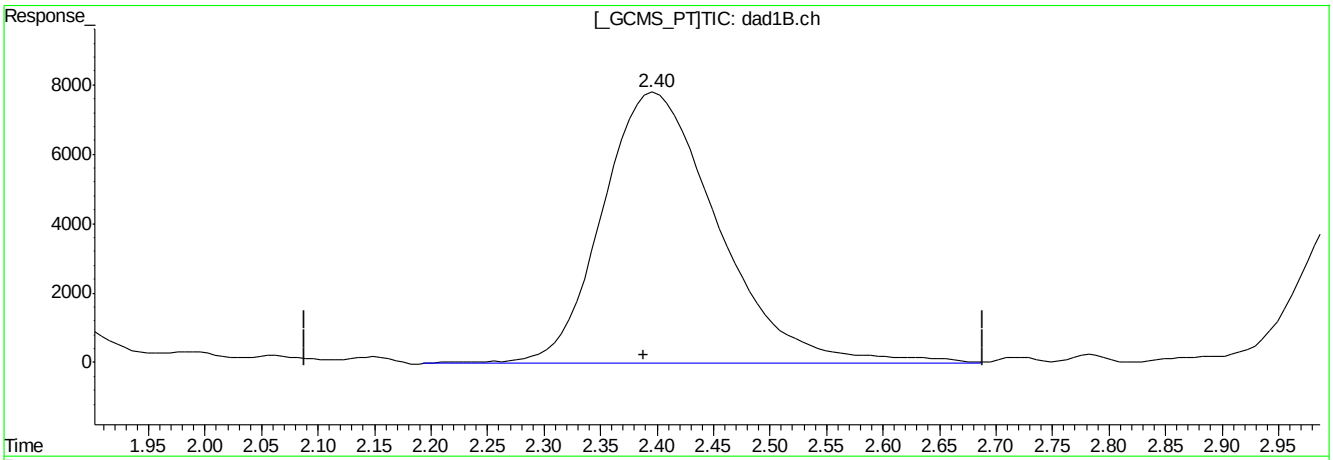
response 838288

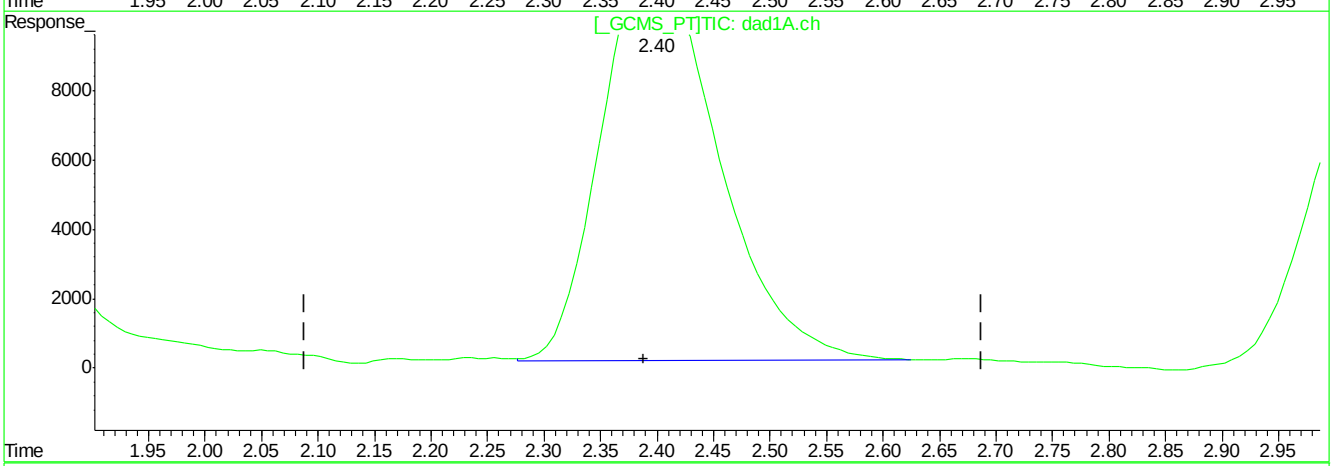
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:56:43 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.40min 179.245ppb

response 560123

(4) MNX #2

2.40min 174.866ppb m

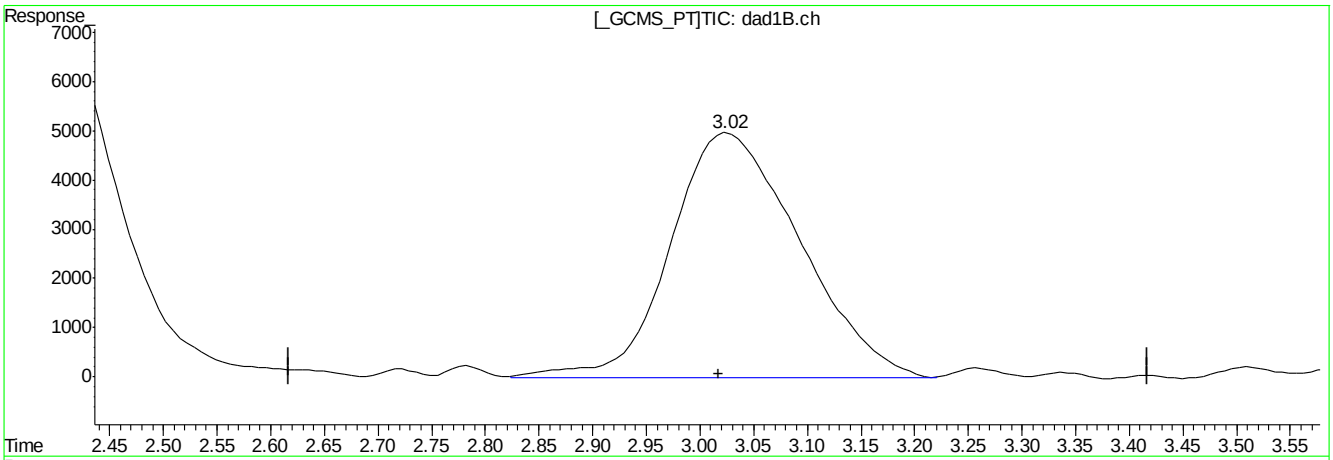
response 824492

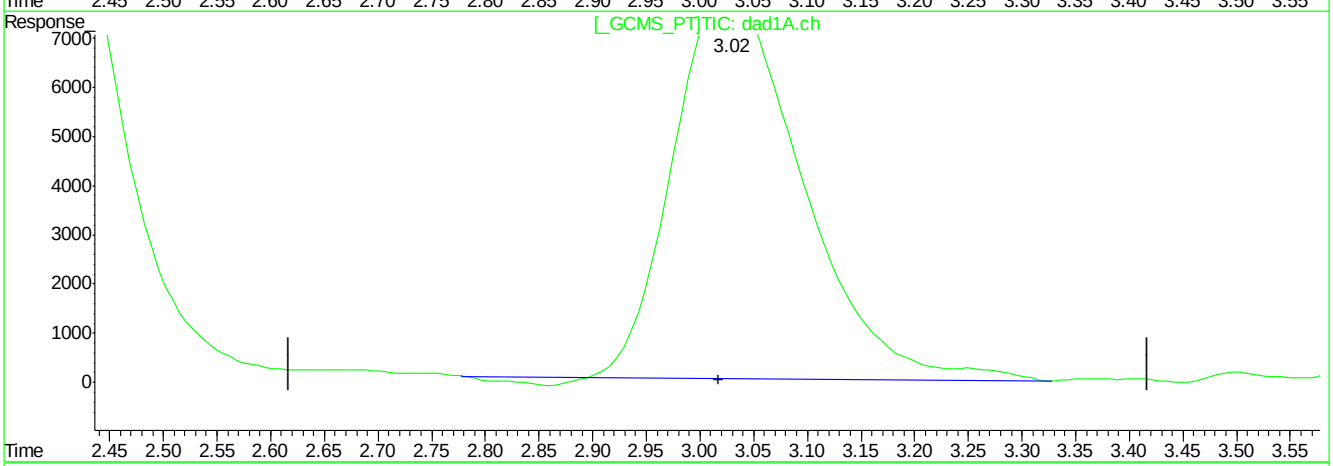
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:56:50 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.03min 212.700ppb

response 415243

(5) RDX #2

3.03min 199.903ppb

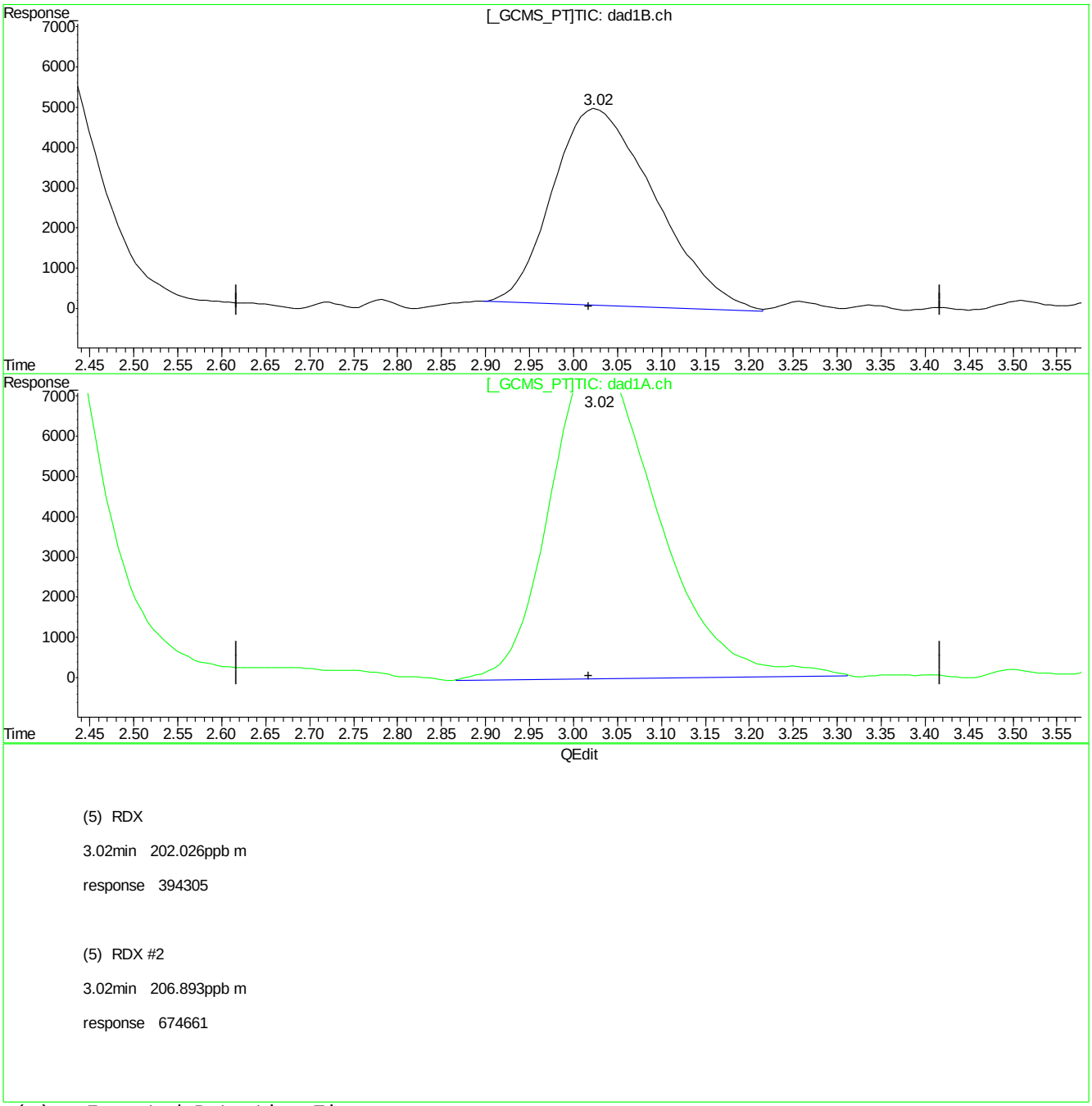
response 651869

(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:56:56 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(5) RDX

3.02min 202.026ppb m

response 394305

(5) RDX #2

3.02min 206.893ppb m

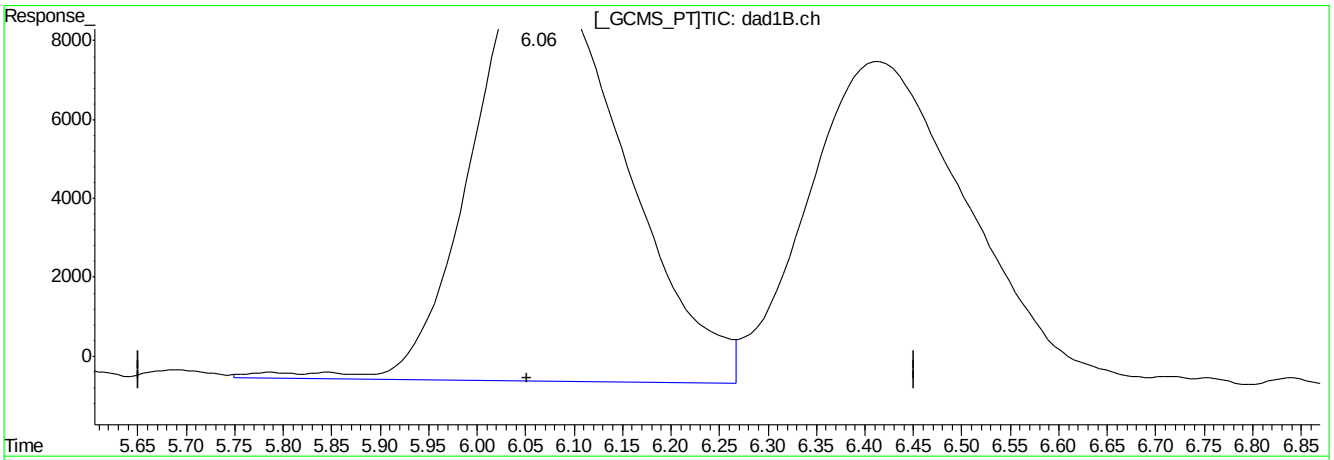
response 674661

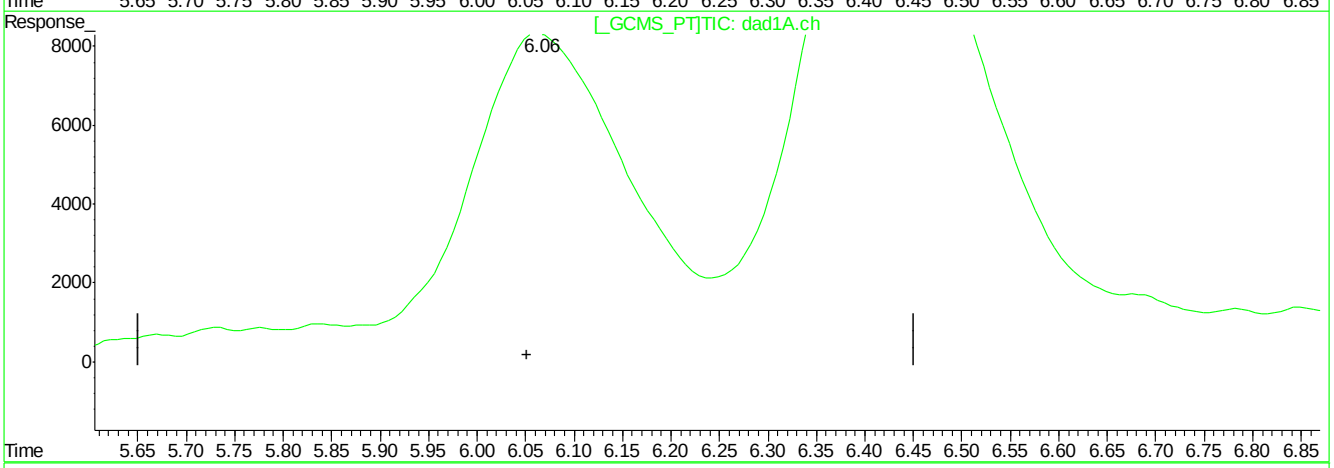
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:57:04 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.06min 195.357ppb

response 1138744

(7) 1,3-Dinitrobenzene #2

6.07min 237.834ppb

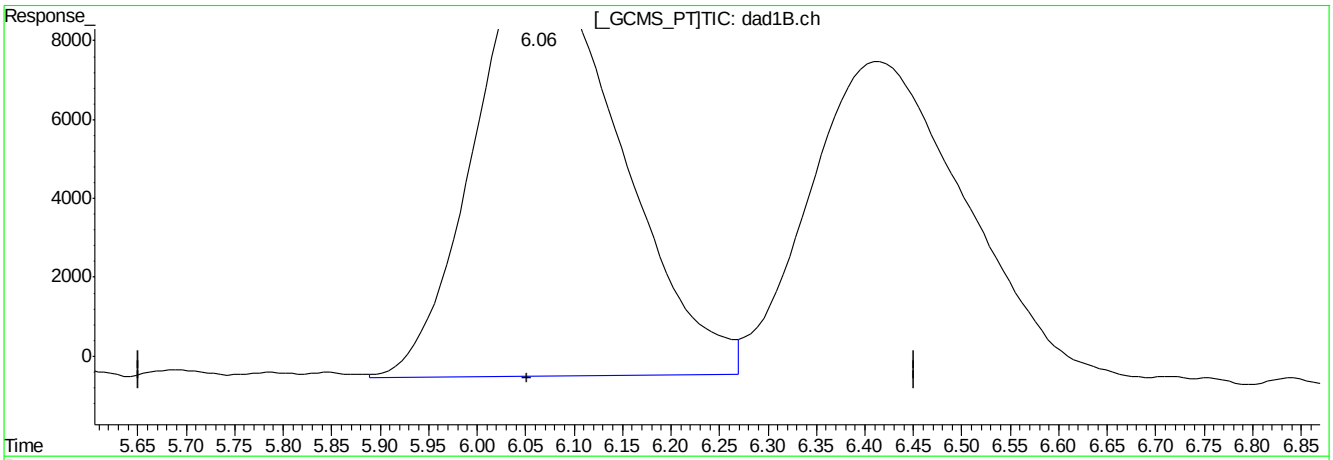
response 914341

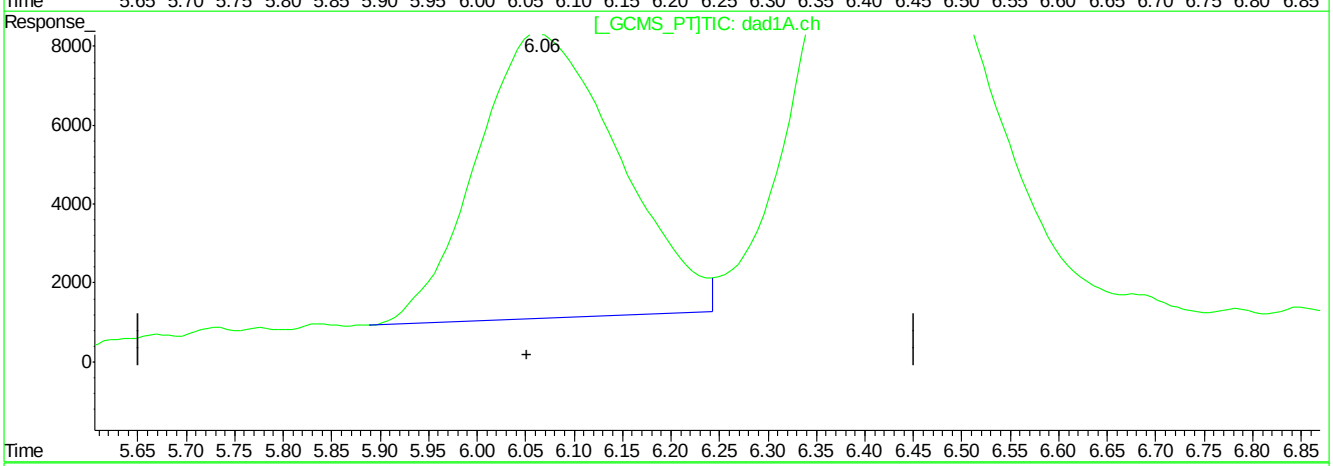
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:57:16 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.06min 189.544ppb m

response 1104856

(7) 1,3-Dinitrobenzene #2

6.06min 192.527ppb m

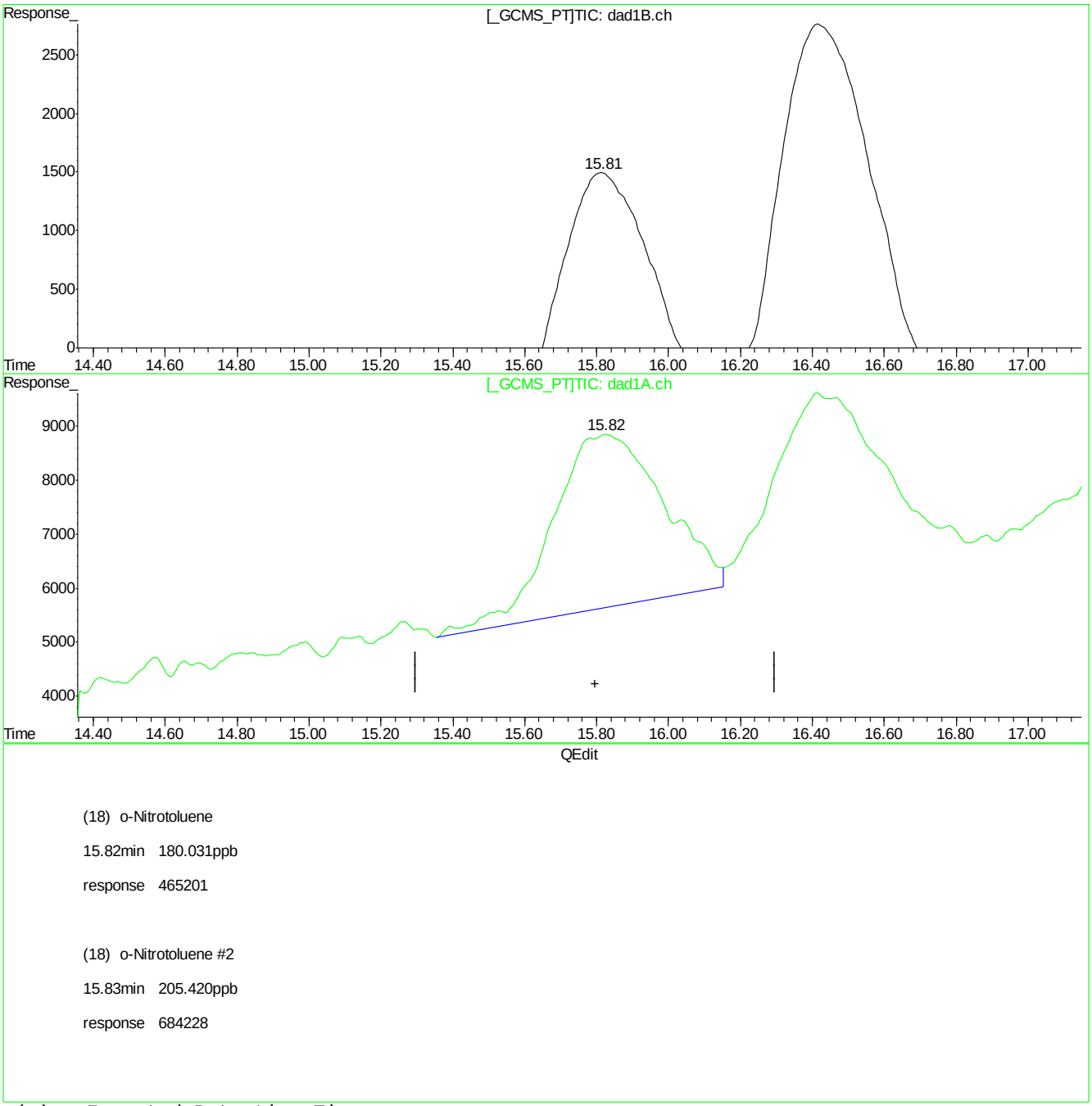
response 740582

(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:57:30 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.82min 180.031ppb

response 465201

(18) o-Nitrotoluene #2

15.83min 205.420ppb

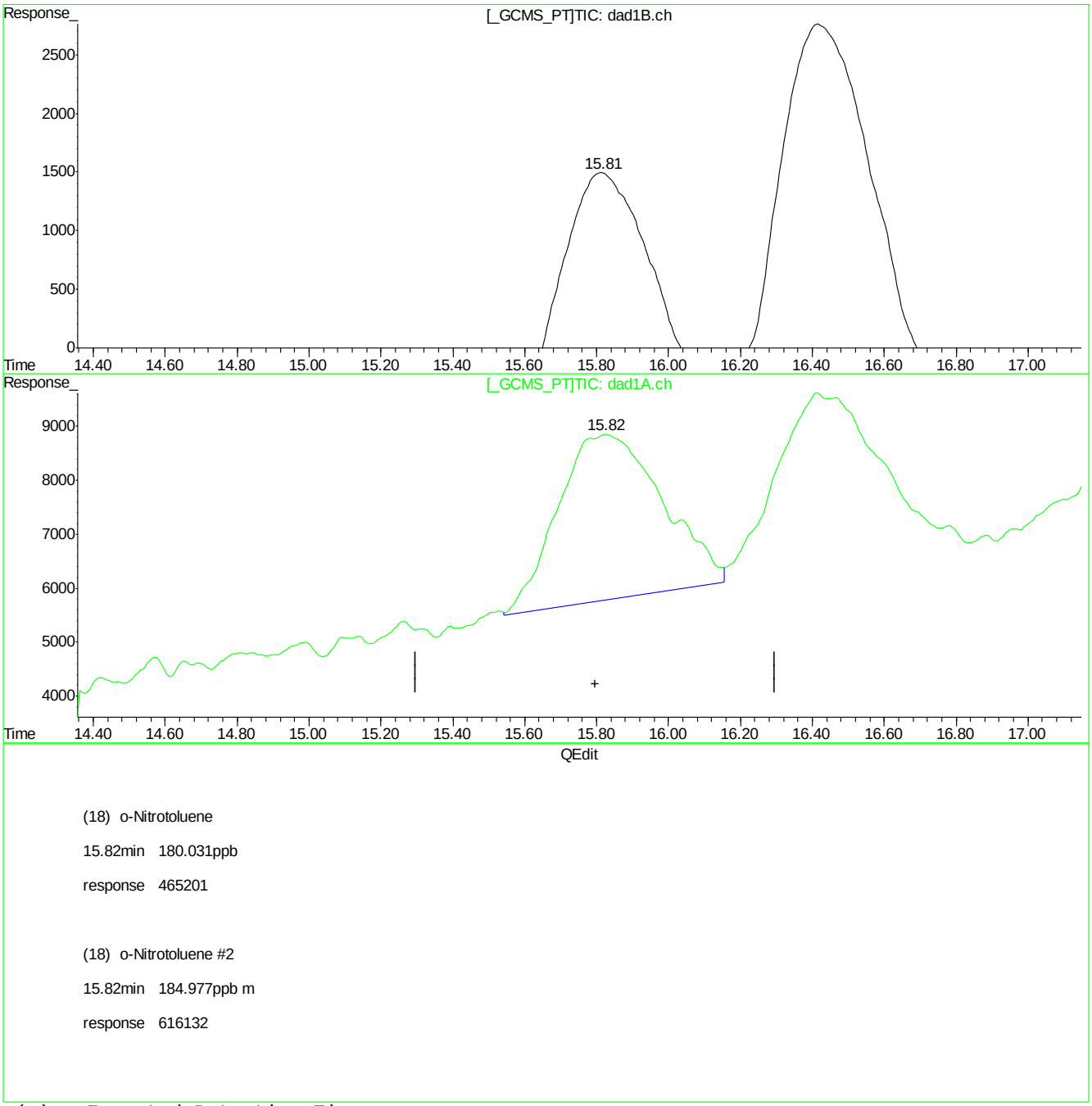
response 684228

(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:58:40 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.82min 180.031ppb

response 465201

(18) o-Nitrotoluene #2

15.82min 184.977ppb m

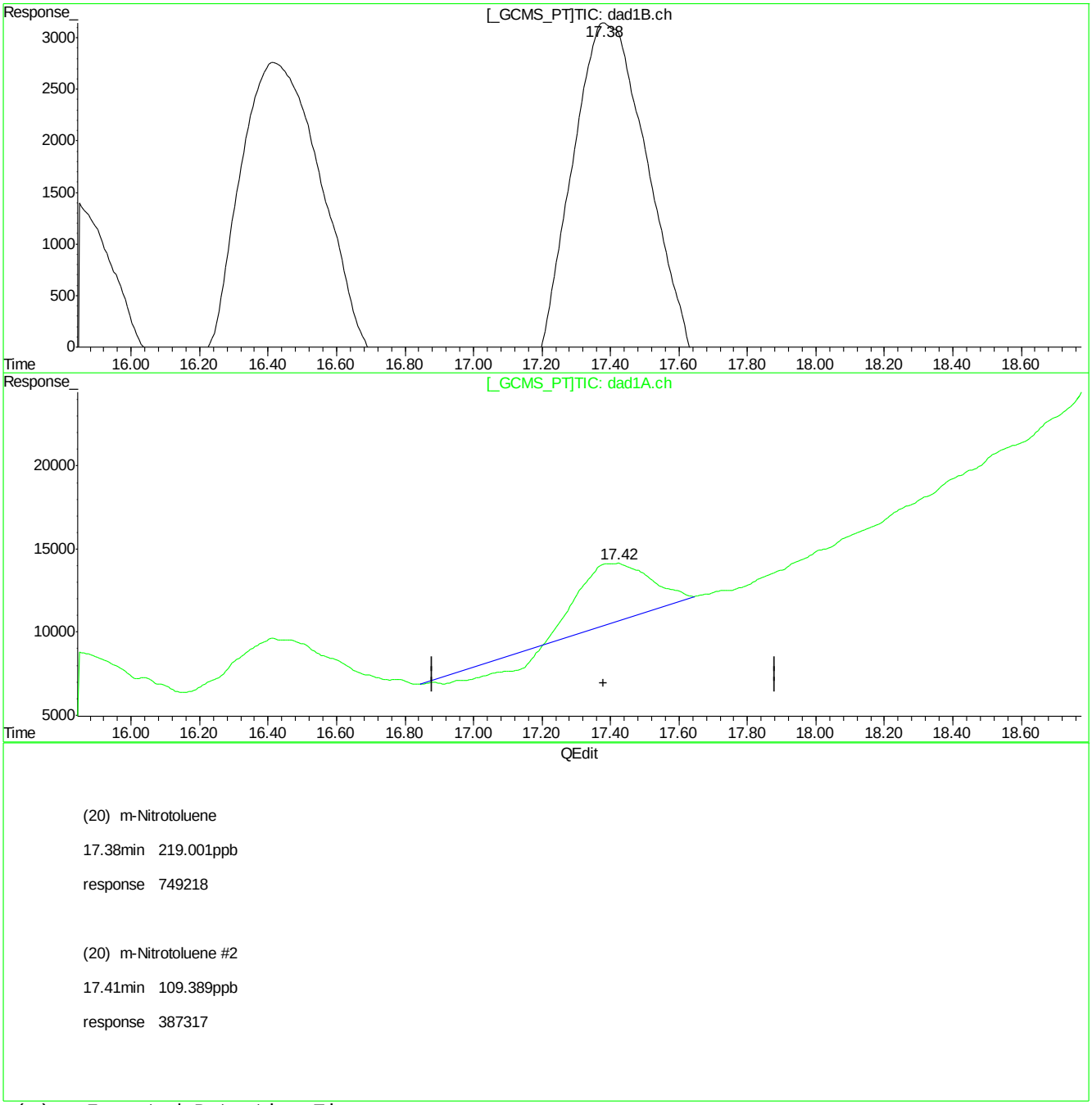
response 616132

(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:58:45 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

17.38min 219.001ppb

response 749218

(20) m-Nitrotoluene #2

17.41min 109.389ppb

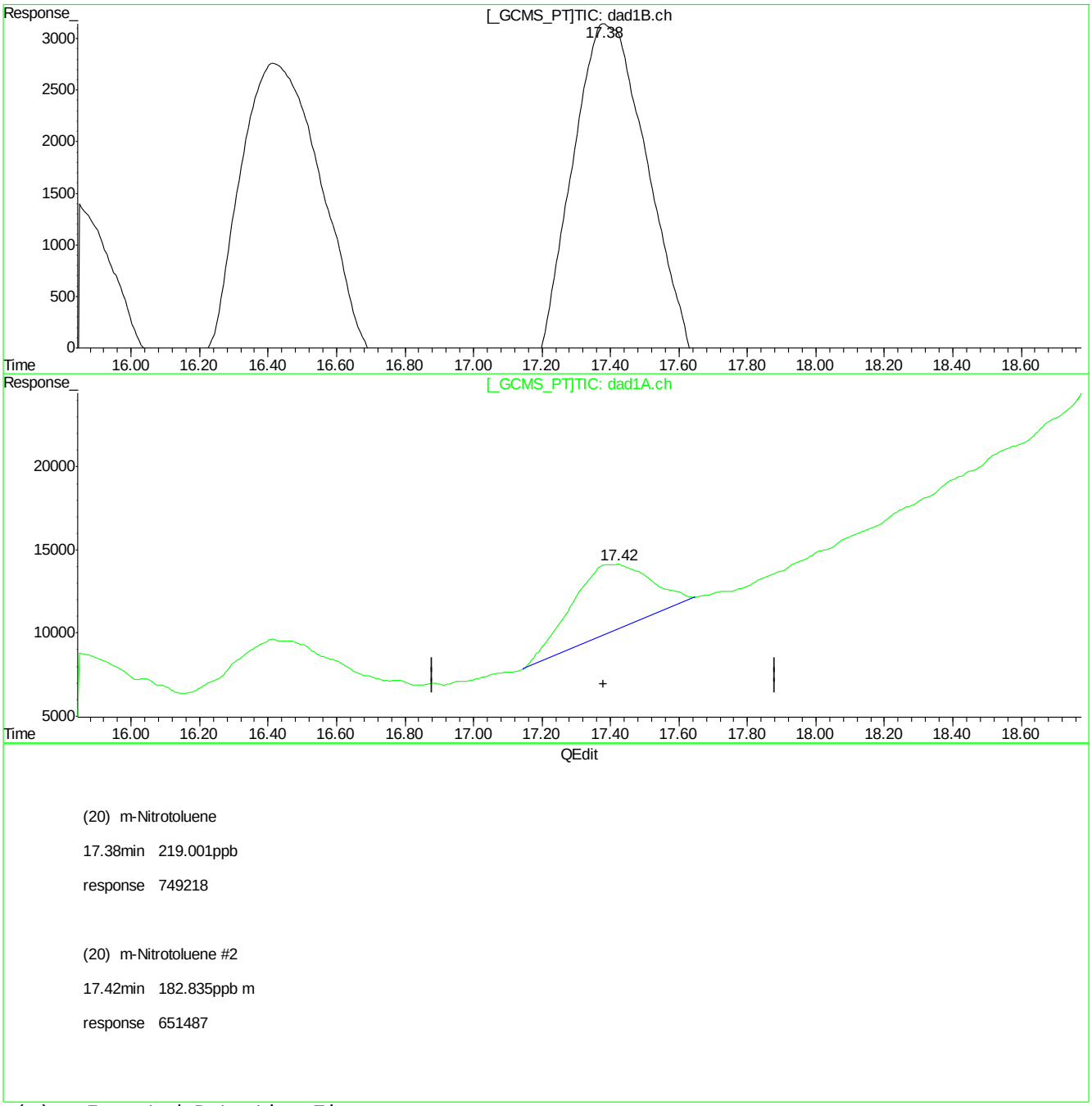
response 387317

(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:58:55 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

17.38min 219.001ppb

response 749218

(20) m-Nitrotoluene #2

17.42min 182.835ppb m

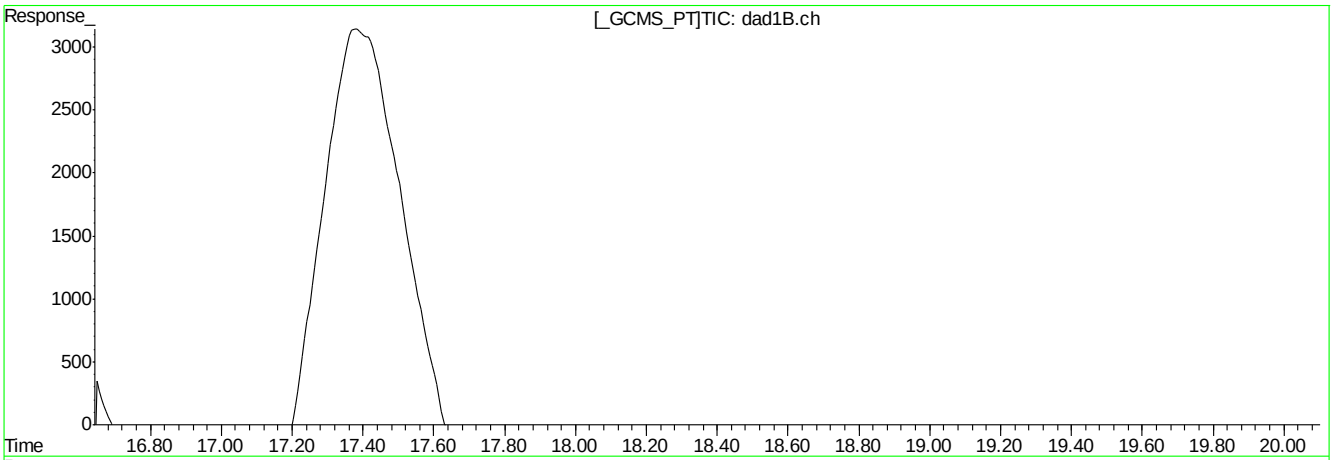
response 651487

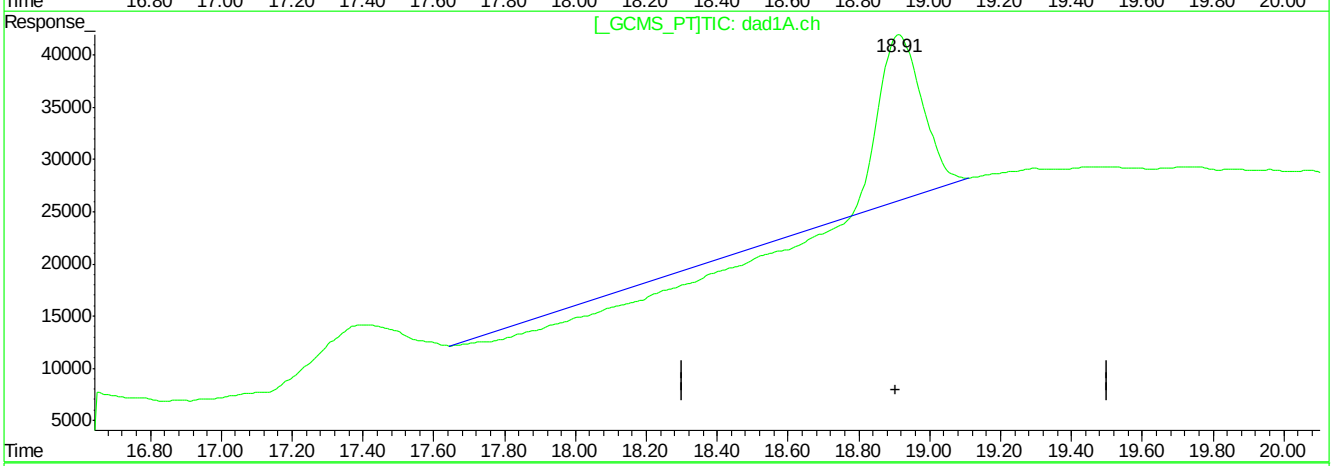
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:58:59 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.95min 0.000ppb

response 45798

(21) PETN #2

18.92min 437.598ppb

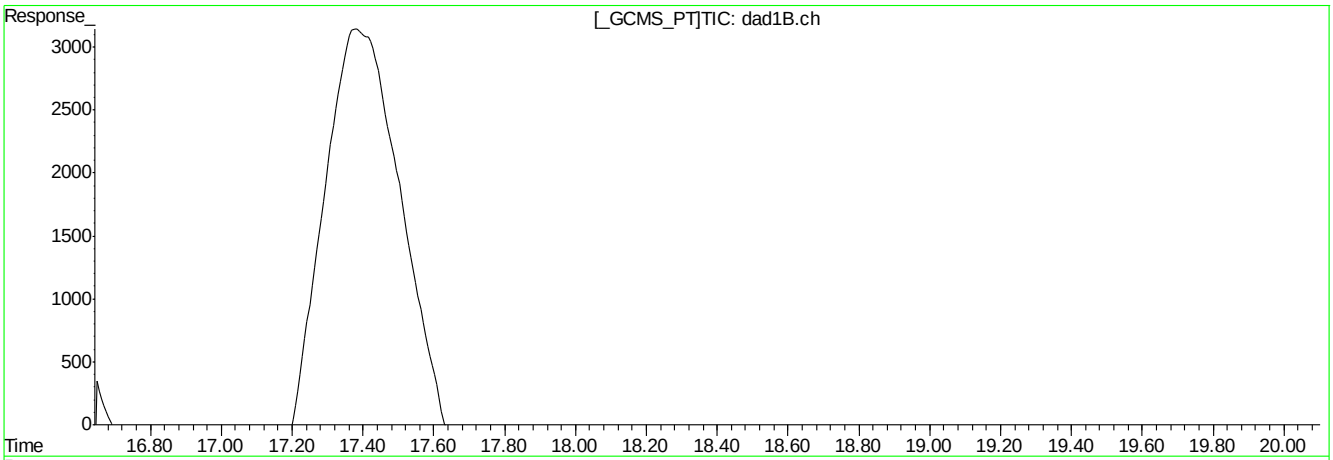
response 576655

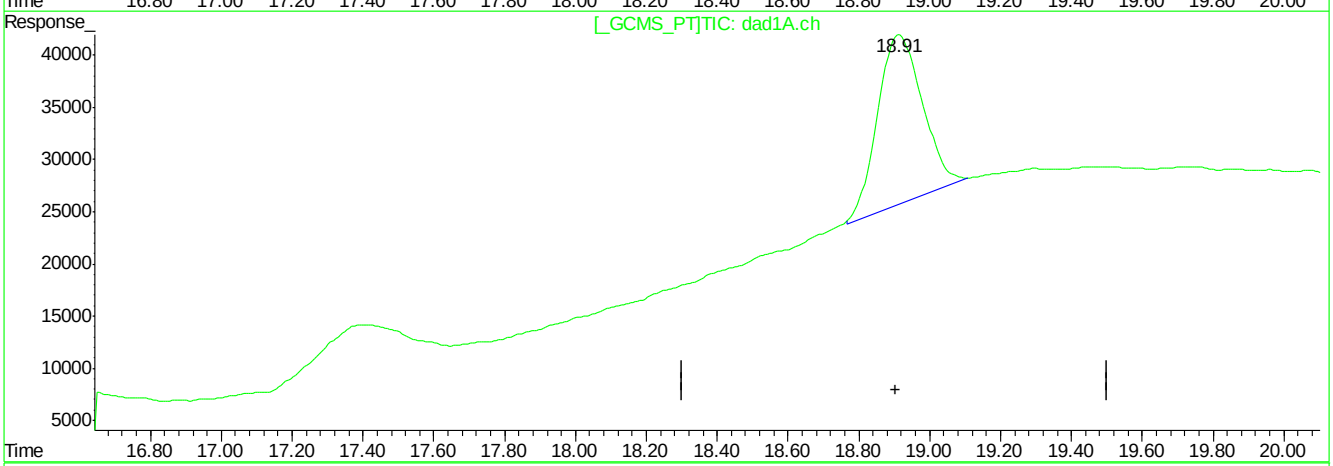
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:59:02 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.95min 0.000ppb

response 45798

(21) PETN #2

18.91min 1081.058ppb m

response 1424589

(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:59:06 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:31 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.43	11.43	1326259	2009879	532.951	477.841
	Spiked Amount 500.000	Range 70 - 136		Recovery =		106.59%	95.57%
	Target Compounds						
1)	TNX	1.40	1.40	2540056	3934187	518.971	515.416
2)	HMX	1.54	1.54	866622	2432057	479.430	491.484
3)	DNX	1.79	1.79	1288131	2082049	418.854	410.646
4)	MNX	2.40	2.40	1356477	2085790	434.086	442.374
5)	RDX	3.03	3.03	1026432	1589435	521.932	487.420
6)	1,3,5-Trinitrobe	4.83	4.83	2151407	4091369	493.726	499.111
7)	1,3-Dinitrobenze	6.06	6.06	2787254	1966959	478.167	513.424
8)	3,5-Dinitroanili	6.41	6.41	2362475	3996217	505.263	511.171
9)	Nitrobenzene	7.70	7.70	1752261	1685137	468.259	529.797
10)	Nitroglycerin	0.00	9.05	0	3257598	N.D. d	2549.377
11)	Tetryl	9.57	9.57	1335519	2004141	451.275	484.179
12)	2,4,6-Trinitroto	10.05	10.04	1763560	1994076	450.239	466.312
13)	2-Amino-4,6-Dini	10.45	10.45	1860707	2633204	498.276	470.243
14)	4-Amino-2,6-Dini	10.94	10.94	1350375	2528291	507.423	474.329
16)	2,4-Dinitrotolue	12.09	12.09	2624271	1517167	505.818	480.837
17)	2,6-Dinitrotolue	12.55	12.55	1570807	1909487	529.079	517.499
18)	o-Nitrotoluene	15.82	15.81	1200374	1703628	464.540	511.467m
19)	p-Nitrotoluene	16.42	16.43	1875115	1707142	469.227	539.097
20)	m-Nitrotoluene	17.40	17.39	1816420	1971467	527.450	536.915m
21)	PETN	0.00	18.91	0	3568025	N.D. d	2707.617m

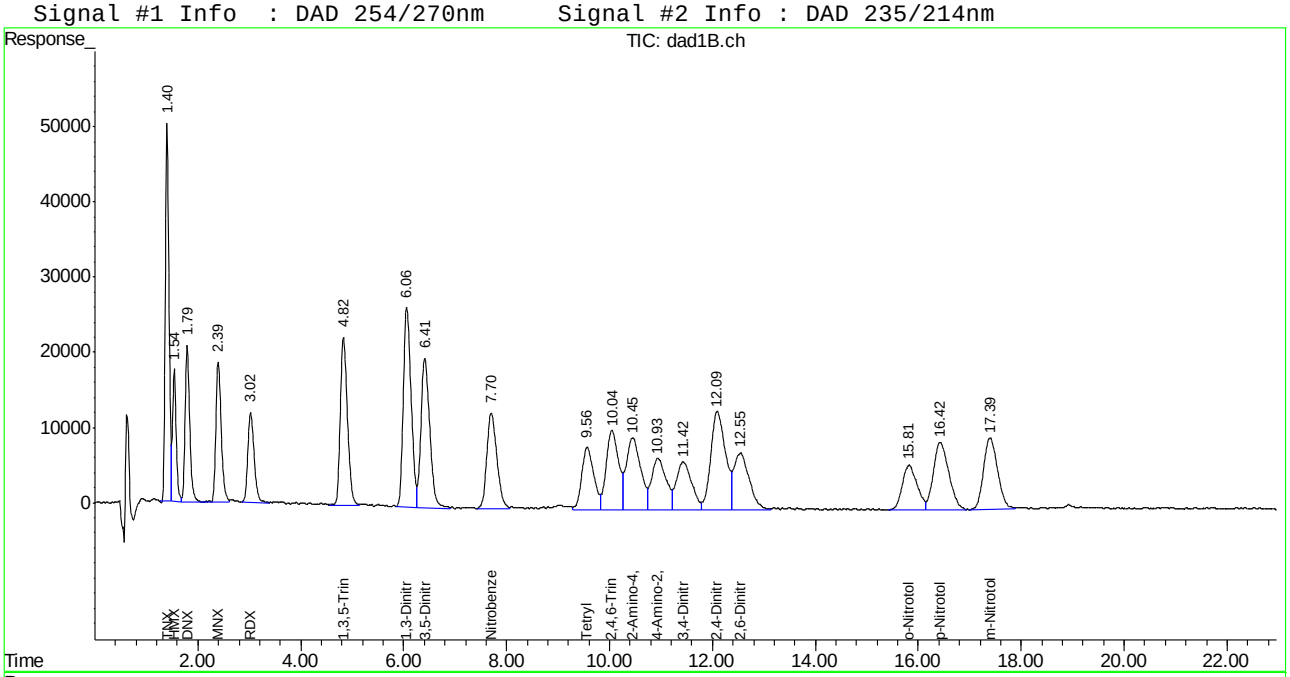
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060204.D 8330B_0707PLUS.M Mon Jul 09 11:20:52 2018 Page 1

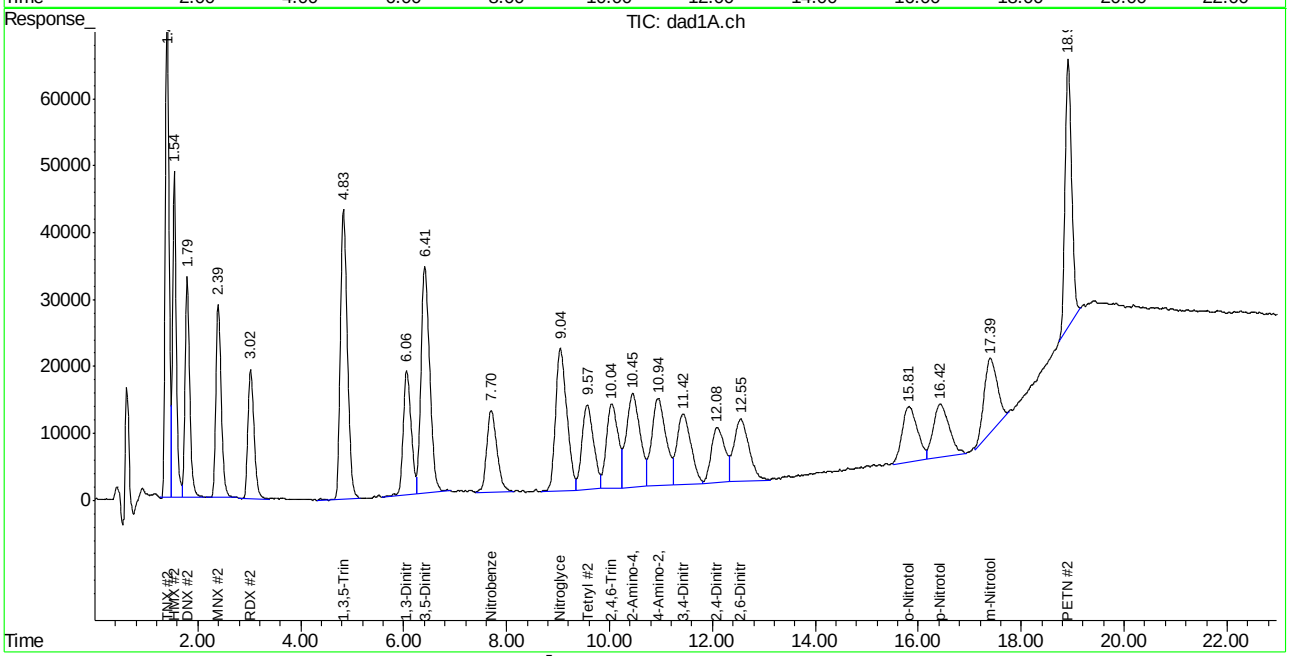
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:06 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

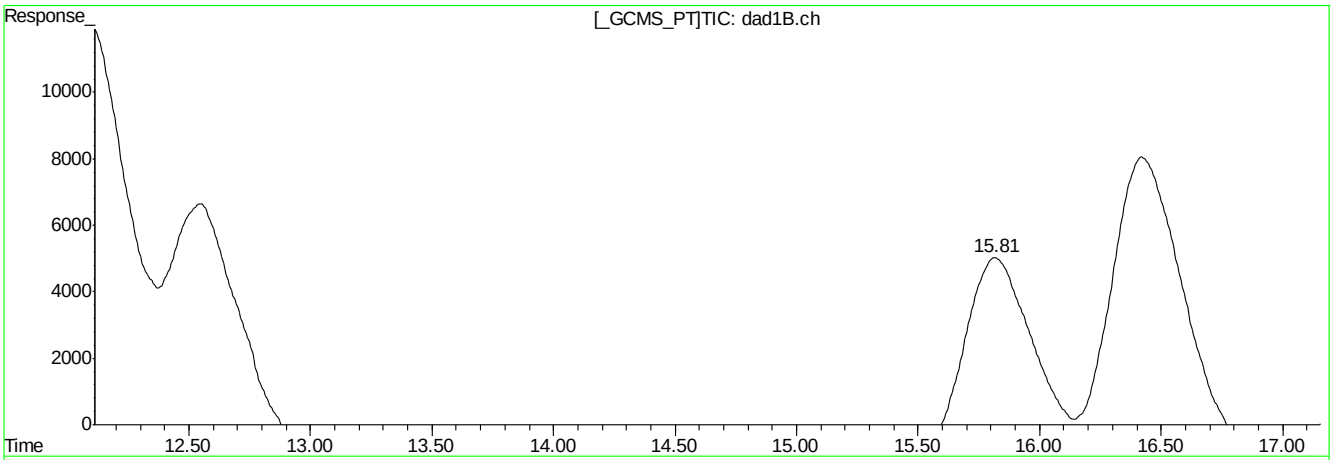
Sample Number: GBB1748-IC1748
Lab FileID: BB060204.D
Injection Time: 07/06/18 17:33
Method: SW846 8330A
Analyst approved: 07/09/18 11:23 William Hustedde
Supervisor approved: 07/09/18 16:15 Mike Eger

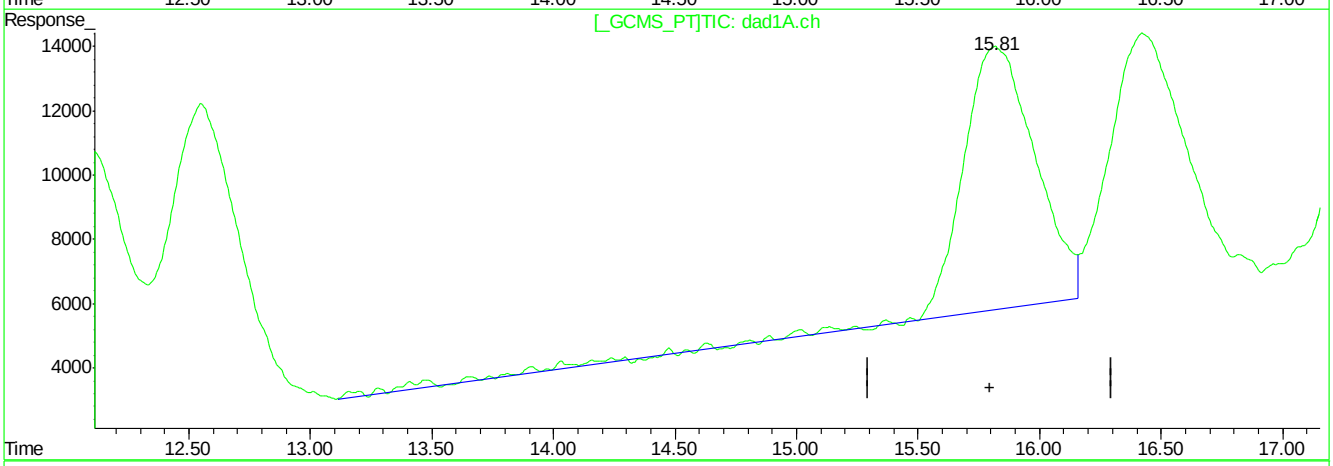
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.81	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.39	Poor instrument integration
PETN	78-11-5	2	18.91	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.82min 464.540ppb

response 1200374

(18) o-Nitrotoluene #2

15.82min 513.742ppb

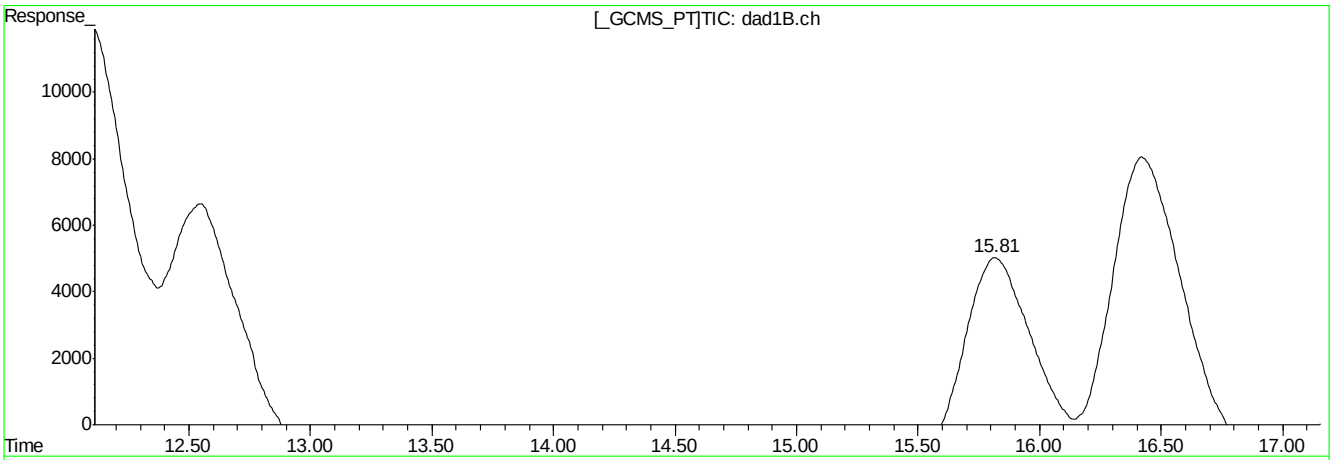
response 1711208

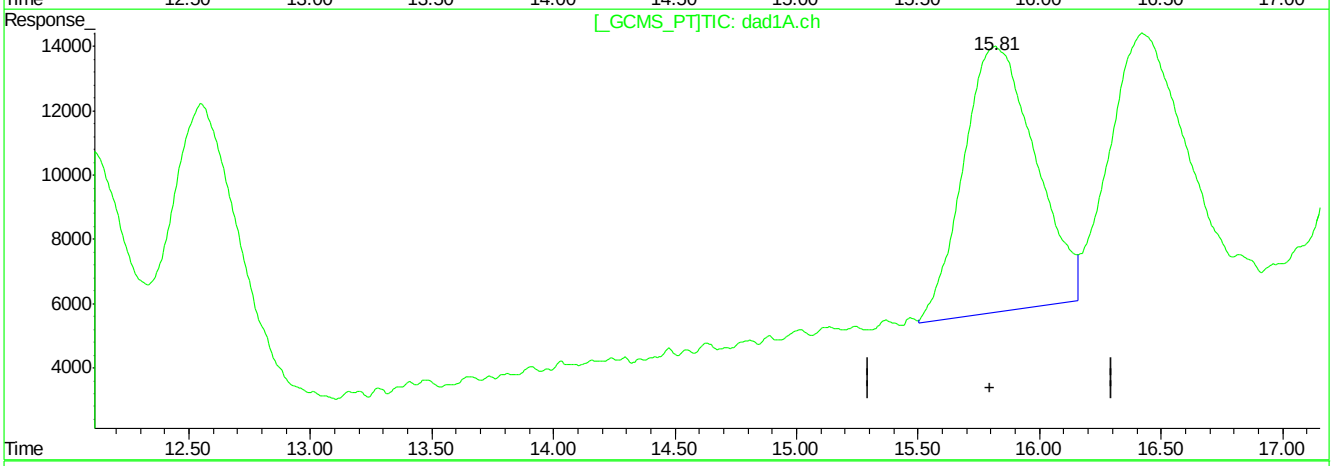
(+) = Expected Retention Time
BB060204.D 8330B_0707PLUS.M Mon Jul 09 10:00:00 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.82min 464.540ppb

response 1200374

(18) o-Nitrotoluene #2

15.81min 511.467ppb m

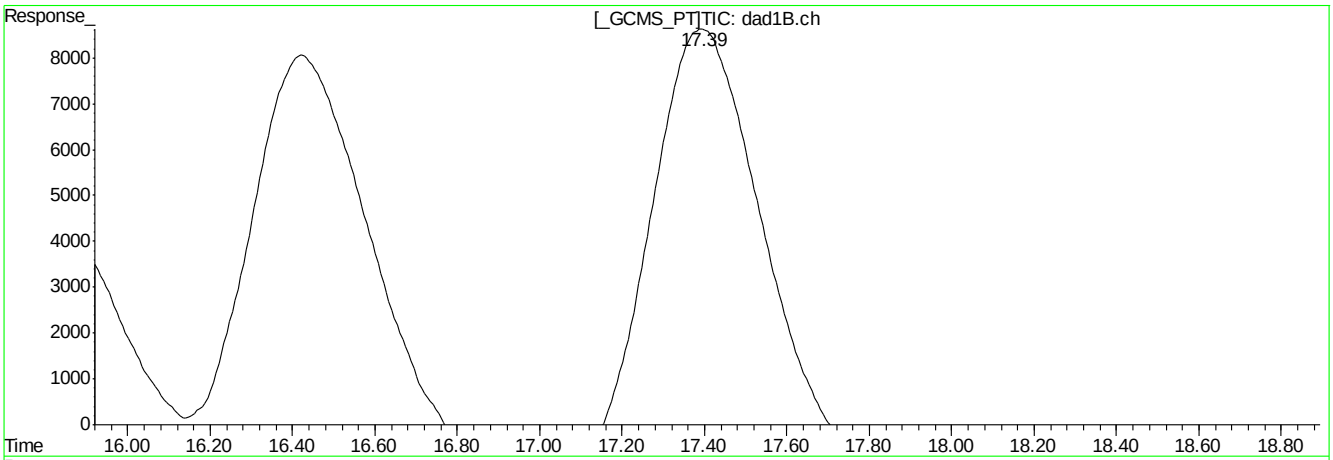
response 1703628

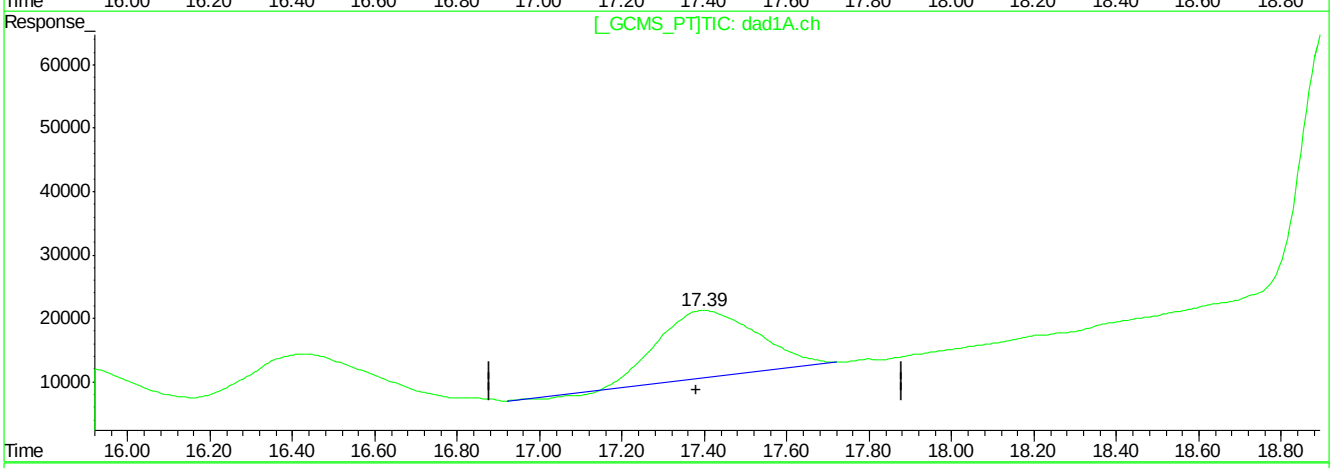
(+) = Expected Retention Time
BB060204.D 8330B_0707PLUS.M Mon Jul 09 10:00:08 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.40min 527.450ppb

response 1816420

(20) m-Nitrotoluene #2

17.40min 477.321ppb

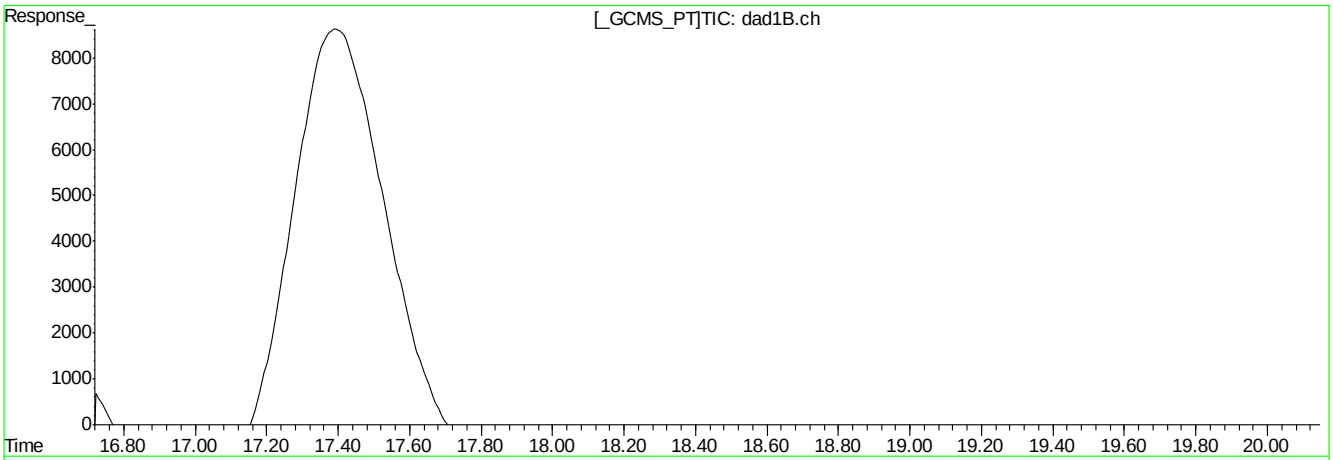
response 1743927

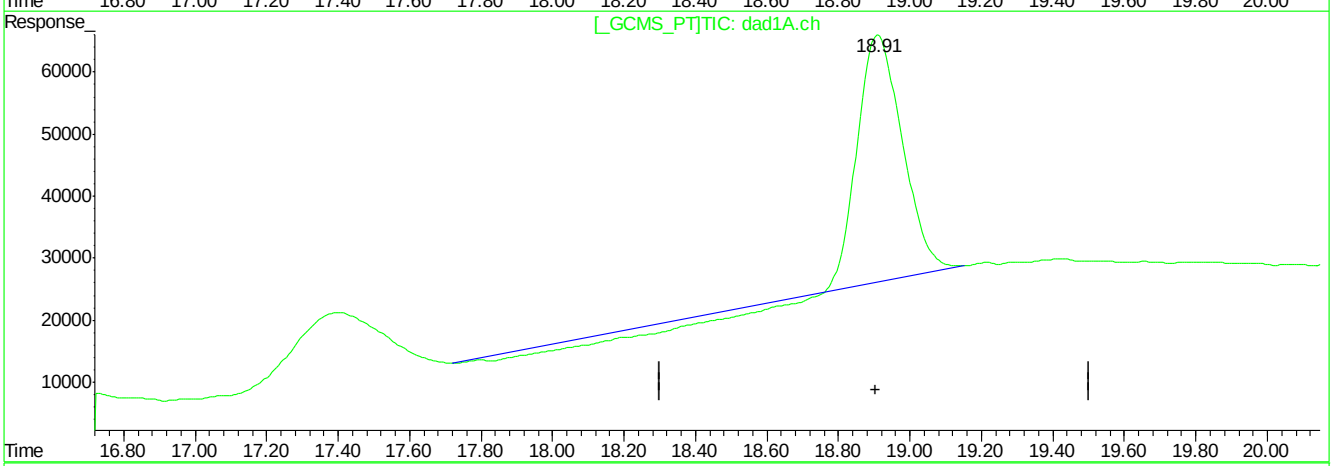
(+) = Expected Retention Time
BB060204.D 8330B_0707PLUS.M Mon Jul 09 10:00:17 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.93min 0.000ppb

response 59501

(21) PETN #2

18.91min 2176.580ppb

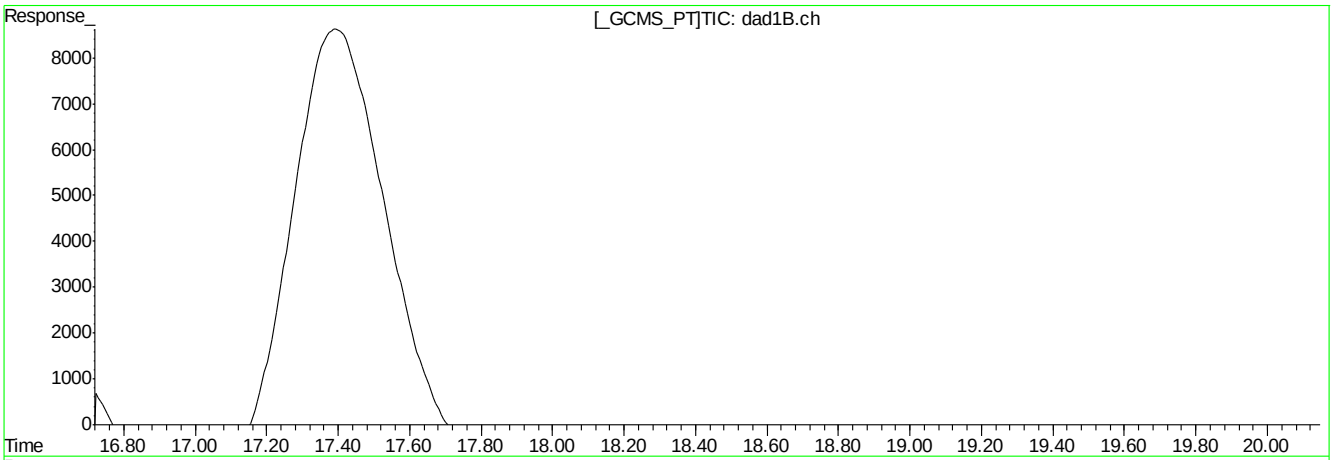
response 2868239

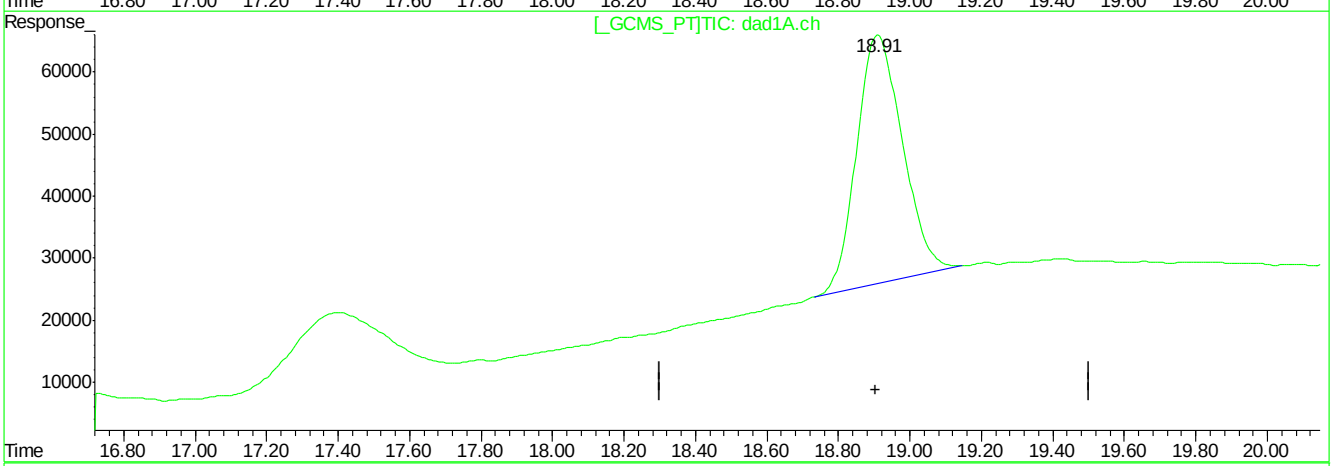
(+) = Expected Retention Time
BB060204.D 8330B_0707PLUS.M Mon Jul 09 10:00:24 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.93min 0.000ppb

response 59501

(21) PETN #2

18.91min 2707.617ppb m

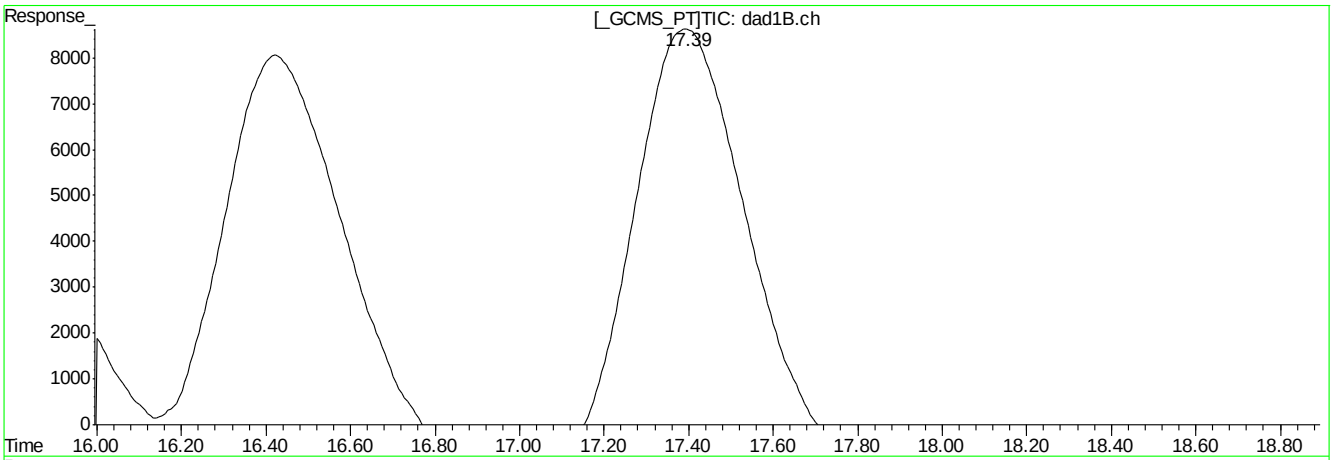
response 3568025

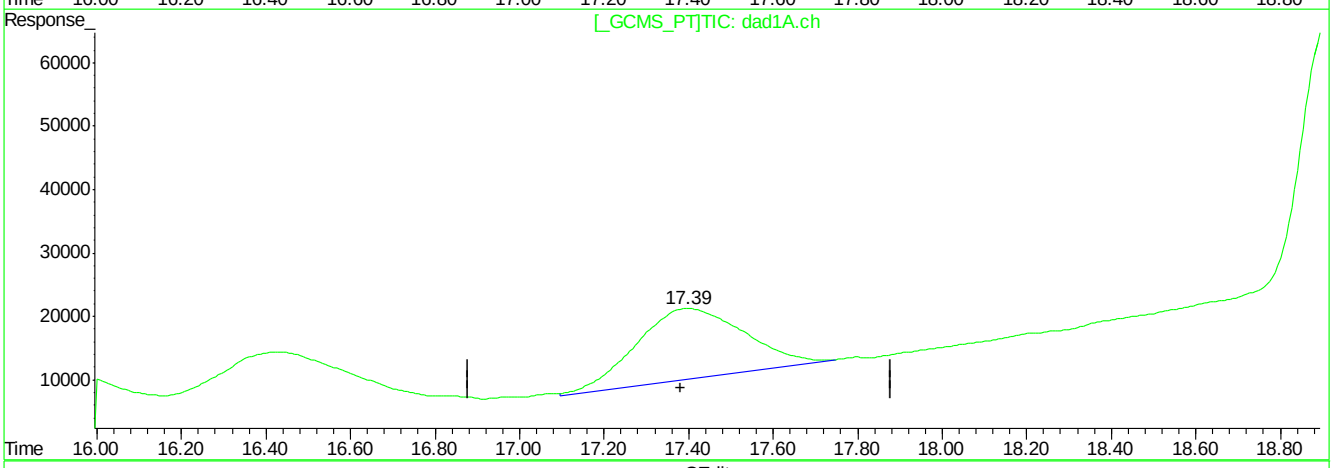
(+) = Expected Retention Time
BB060204.D 8330B_0707PLUS.M Mon Jul 09 10:00:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:06 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.40min 527.450ppb

response 1816420

(20) m-Nitrotoluene #2

17.39min 536.915ppb m

response 1971467

(+) = Expected Retention Time
BB060204.D 8330B_0707PLUS.M Mon Jul 09 14:57:24 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger 07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:32 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.41	11.41	2561824	4298869	1029.457	1022.041
	Spiked Amount 500.000	Range 70 - 136		Recovery =		205.89%#	204.41%#
	Target Compounds						
1)	TNX	1.40	1.40	5066573	7811576	1035.177	1023.390
2)	HMX	1.54	1.54	1747477	4809701	966.733	971.972
3)	DNX	1.79	1.79	2600076	4210229	845.451	830.391
4)	MNX	2.39	2.39	2680610	4205036	857.821	891.844
5)	RDX	3.02	3.02	1965147	3162496	988.379	969.818
6)	1,3,5-Trinitrobe	4.82	4.82	4293926	8184186	985.413	998.399
7)	1,3-Dinitrobenze	6.05	6.05	5535275	3856903	949.604	1013.160
8)	3,5-Dinitroanili	6.40	6.40	4629054	7790581	990.018	996.523
9)	Nitrobenzene	7.69	7.69	3384877	3205789	904.546	996.664
10)	Nitroglycerin	0.00	9.03	0	6440885	N.D. d	5040.599m
11)	Tetryl	9.55	9.55	2569677	4000666	868.300	966.518
12)	2,4,6-Trinitroto	10.03	10.03	3401002	4070531	868.280	951.888
13)	2-Amino-4,6-Dini	10.43	10.44	3651023	5325321	977.702	951.006
14)	4-Amino-2,6-Dini	10.92	10.93	2555519	5058545	952.103	949.027
16)	2,4-Dinitrotolue	12.08	12.08	5046352	3053181	972.665	967.647
17)	2,6-Dinitrotolue	12.52	12.53	3108741	3922811	1036.013	1063.140
18)	o-Nitrotoluene	15.80	15.80	2353681	3312890	910.866	994.603m
19)	p-Nitrotoluene	16.41	16.41	3780874	3193214	946.122	1008.383
20)	m-Nitrotoluene	17.38	17.38	3464883	3888967	996.149m	1018.202m
21)	PETN	0.00	18.90	0	7077497	N.D. d	5370.800m

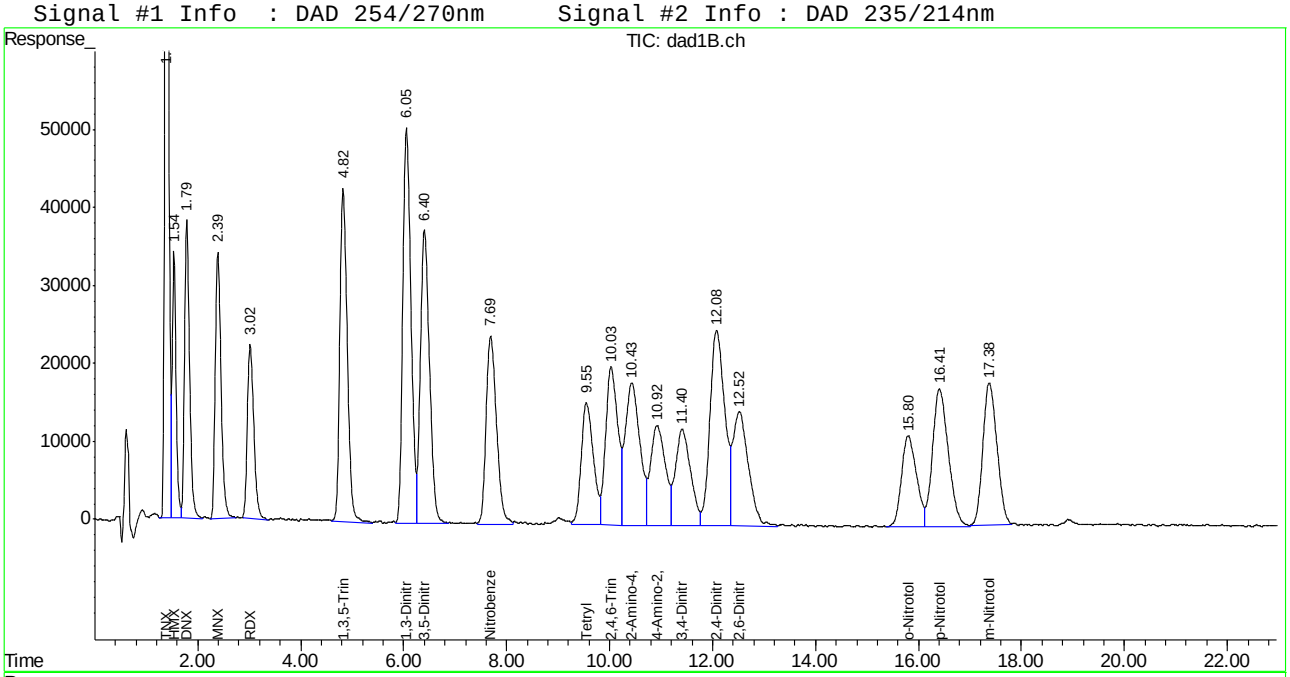
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060205.D 8330B_0707PLUS.M Mon Jul 09 11:20:53 2018 Page 1

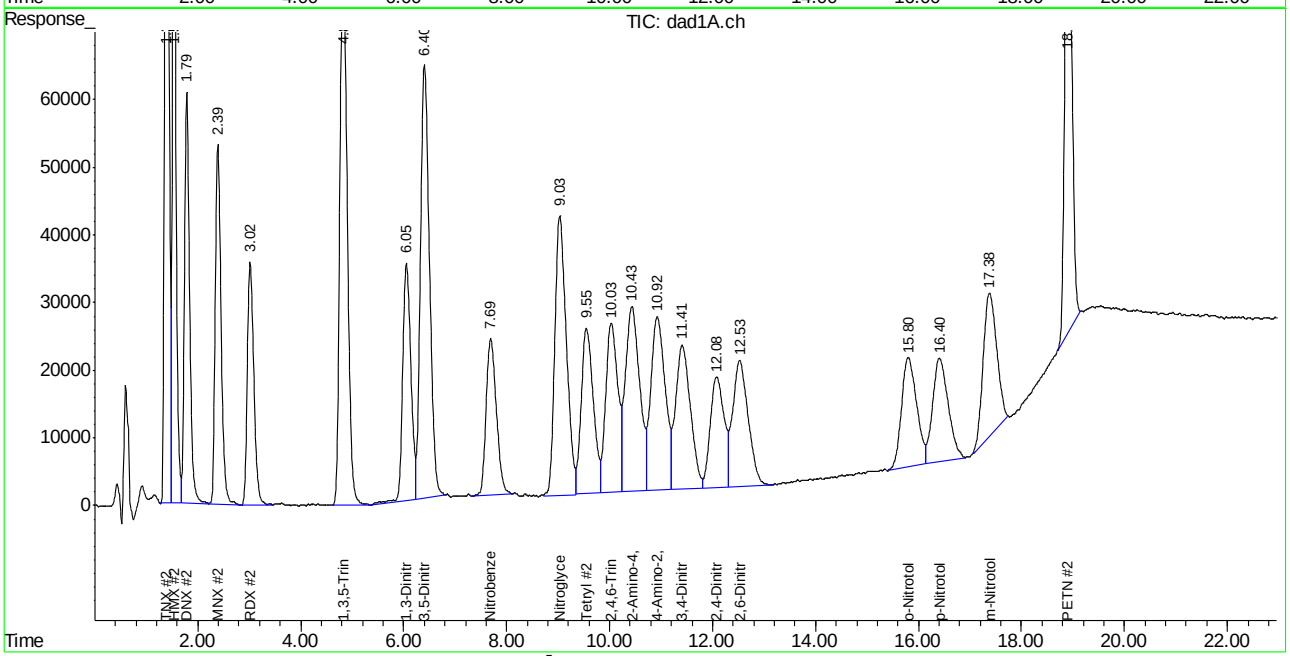
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:05 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

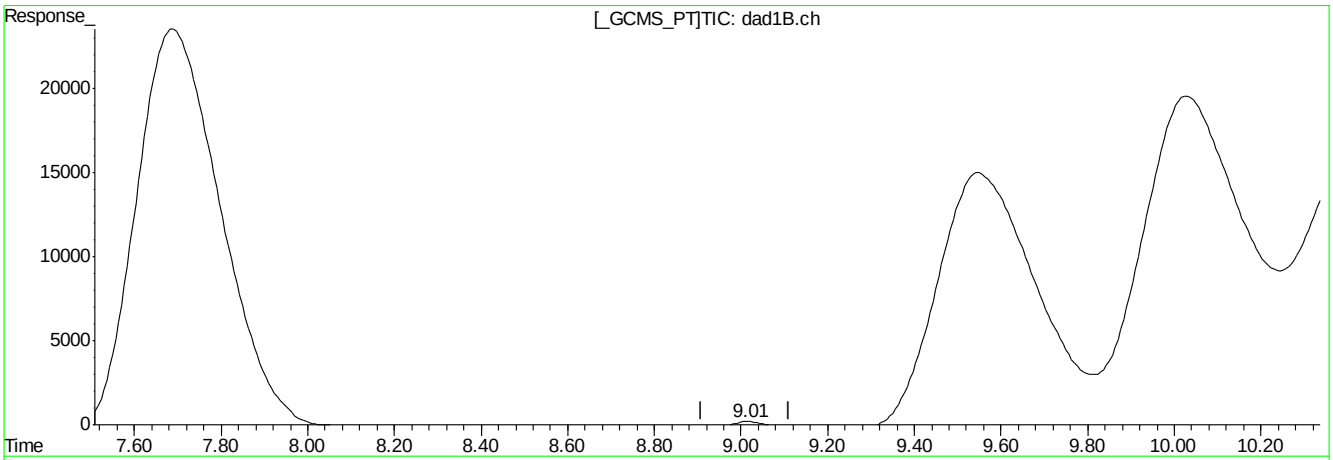
Sample Number: GBB1748-ICC1748 **Method:** SW846 8330A
Lab FileID: BB060205.D **Analyst approved:** 07/09/18 11:23 William Hustedde
Injection Time: 07/06/18 18:03 **Supervisor approved:** 07/09/18 16:15 Mike Eger

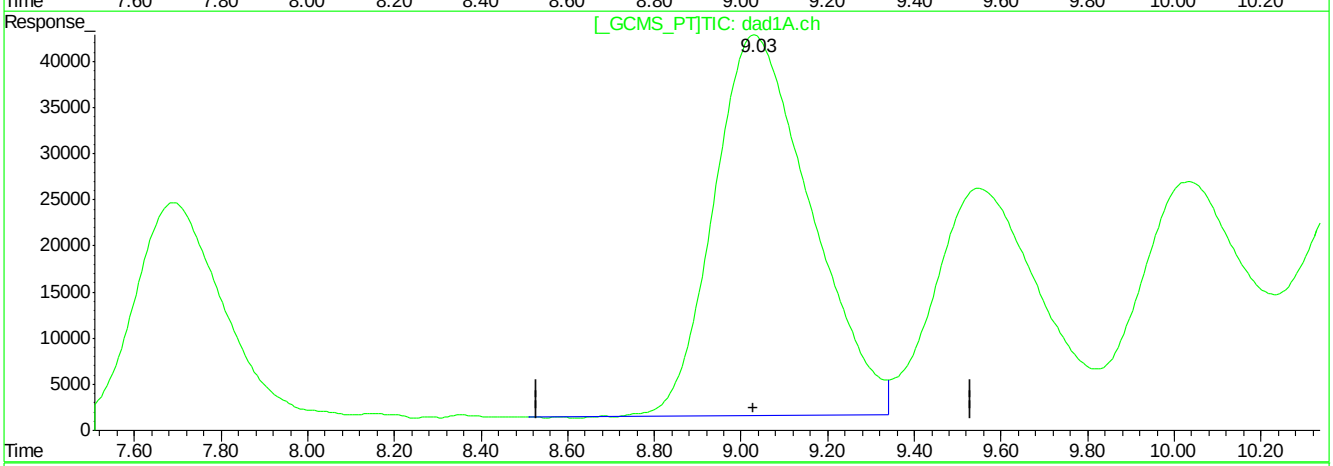
Parameter	CAS	Sig#	R.T. (min.)	Reason
Nitroglycerine	55-63-0	2	9.03	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.80	Poor instrument integration
m-Nitrotoluene	99-08-1	1	17.38	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.38	Poor instrument integration
PETN	78-11-5	2	18.90	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

9.02min 0.000ppb

response 131673

(10) Nitroglycerin #2

9.03min 4994.562ppb

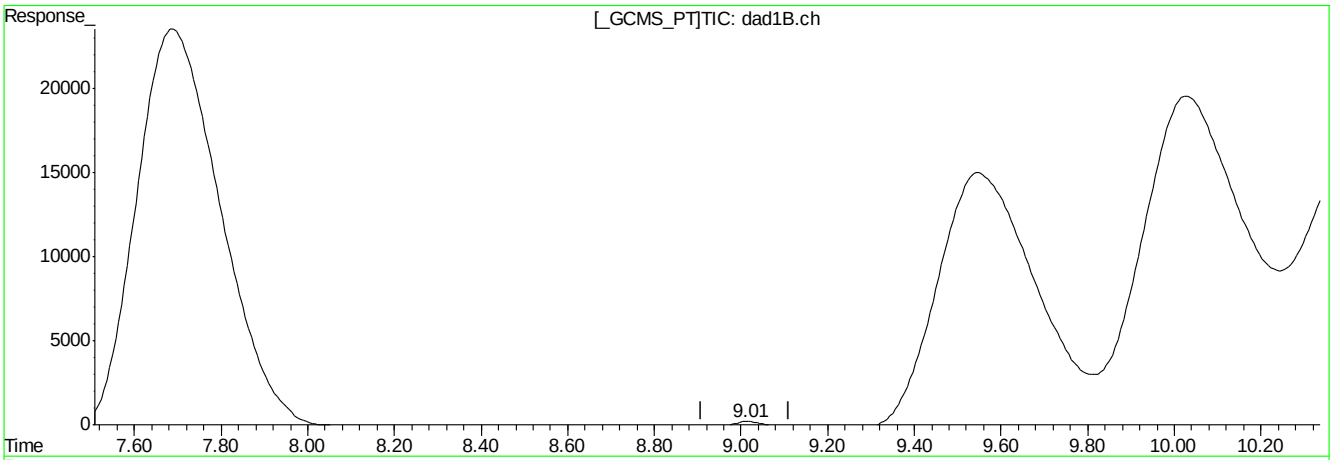
response 6382059

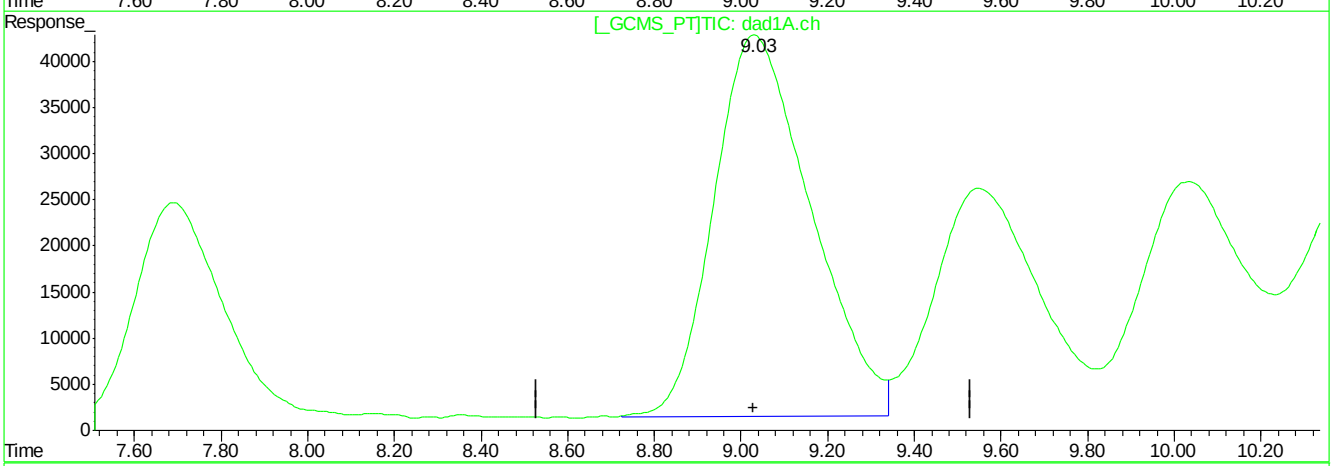
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:00:58 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

9.02min 0.000ppb

response 131673

(10) Nitroglycerin #2

9.03min 5040.599ppb m

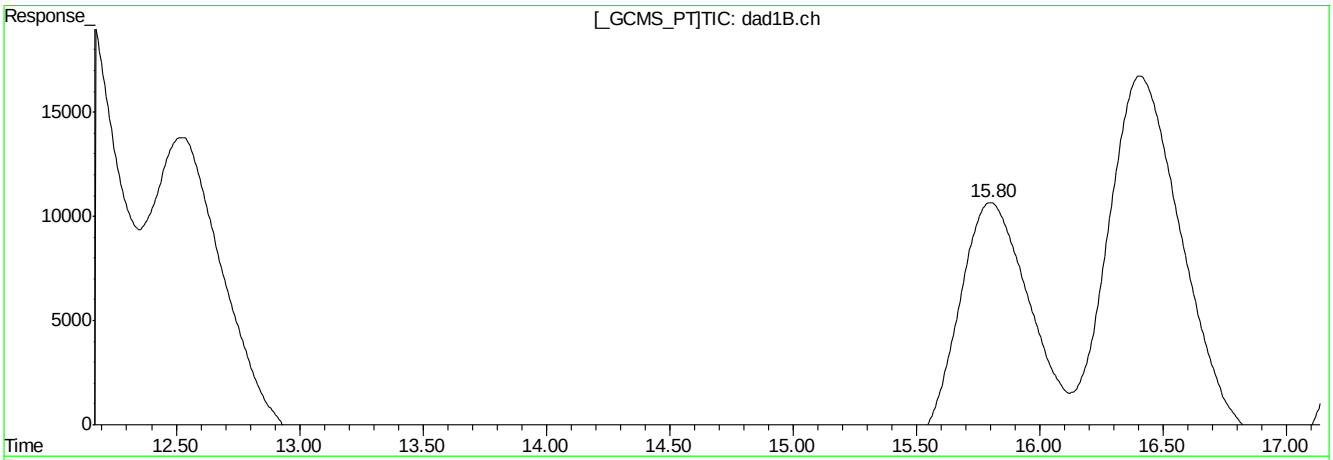
response 6440885

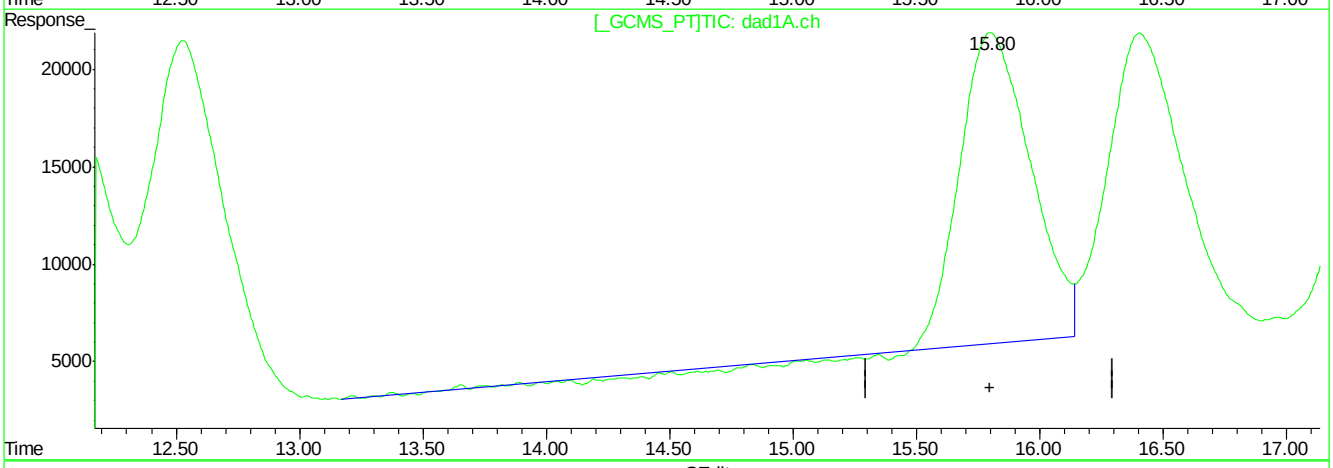
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:01:21 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.80min 910.866ppb

response 2353681

(18) o-Nitrotoluene #2

15.80min 917.908ppb

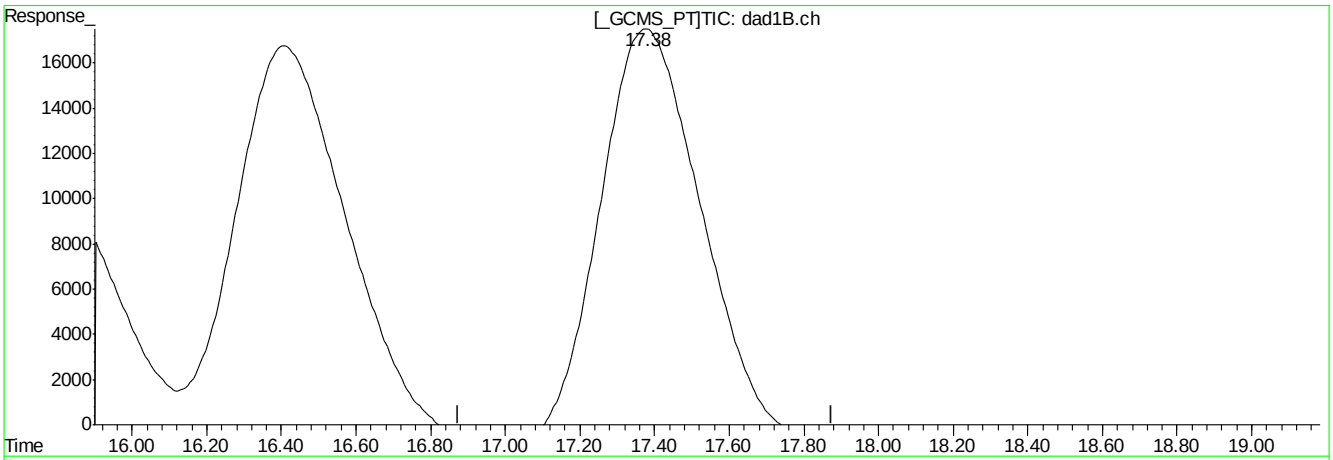
response 3057429

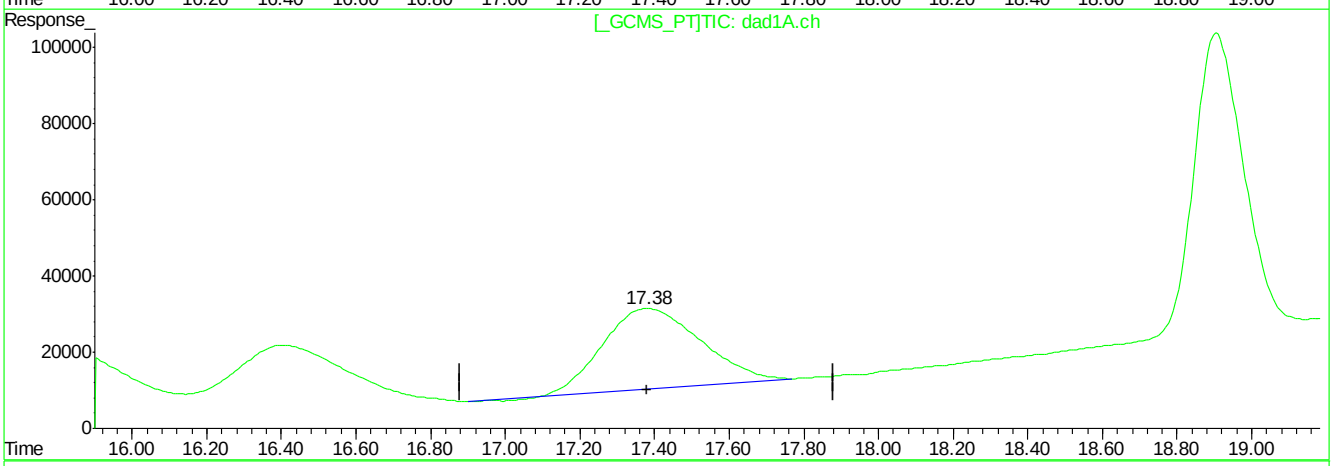
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:01:45 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.38min 996.149ppb m

response 3464883

(20) m-Nitrotoluene #2

17.38min 991.679ppb

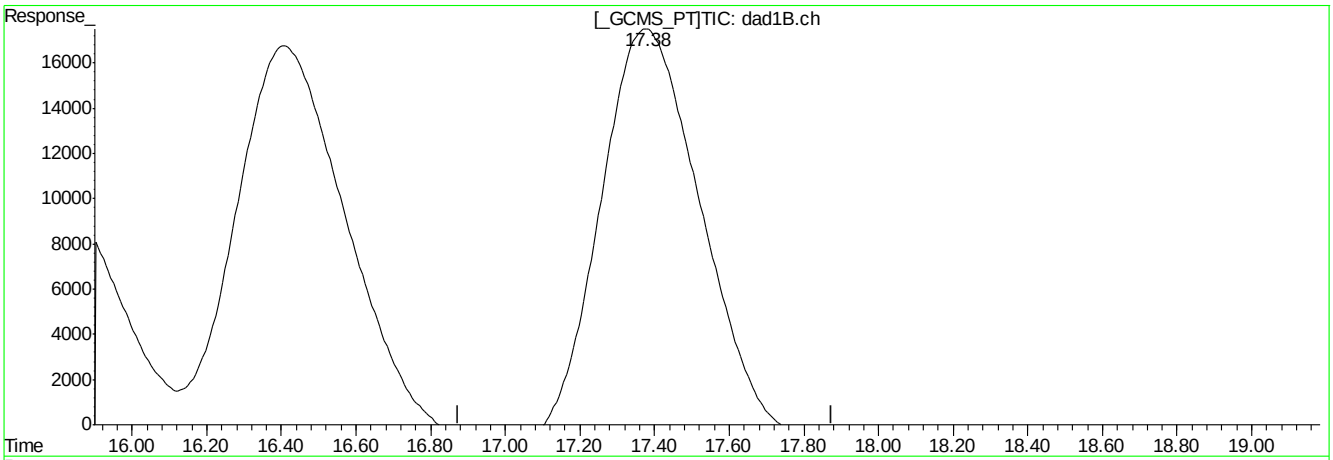
response 3779597

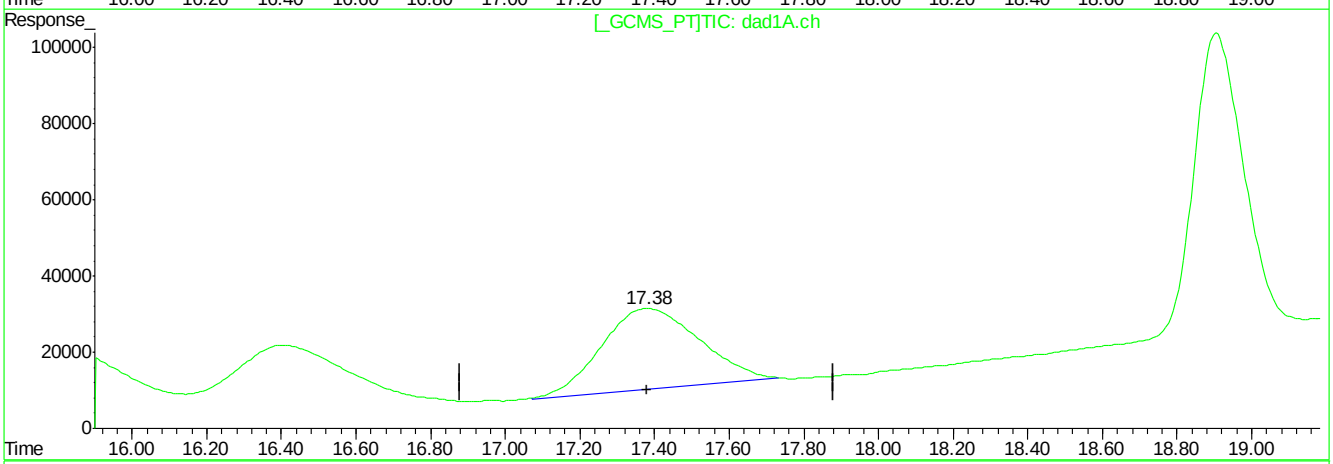
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:03:12 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.38min 996.149ppb m

response 3464883

(20) m-Nitrotoluene #2

17.38min 1018.202ppb m

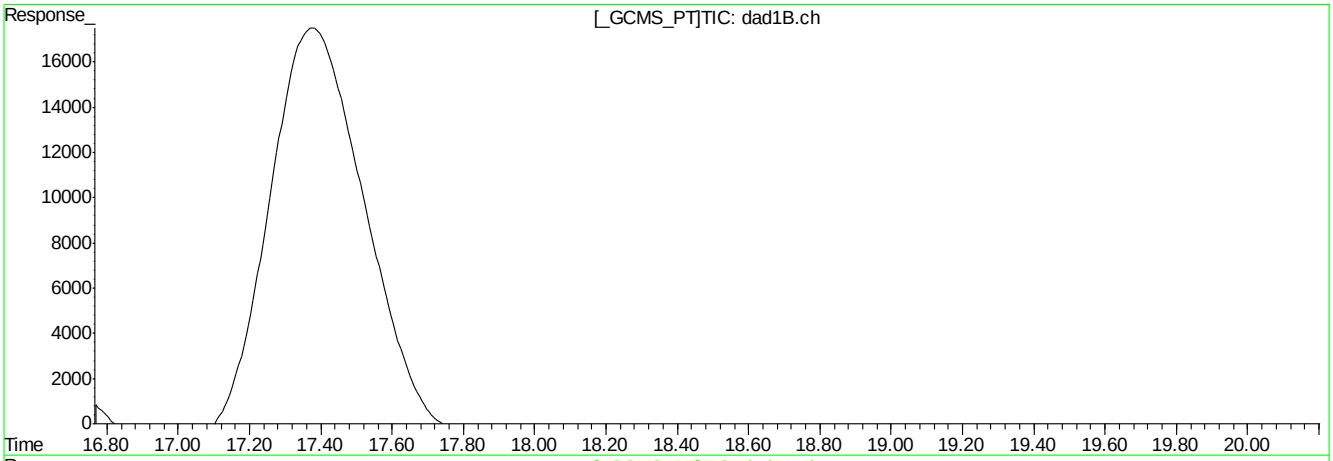
response 3888967

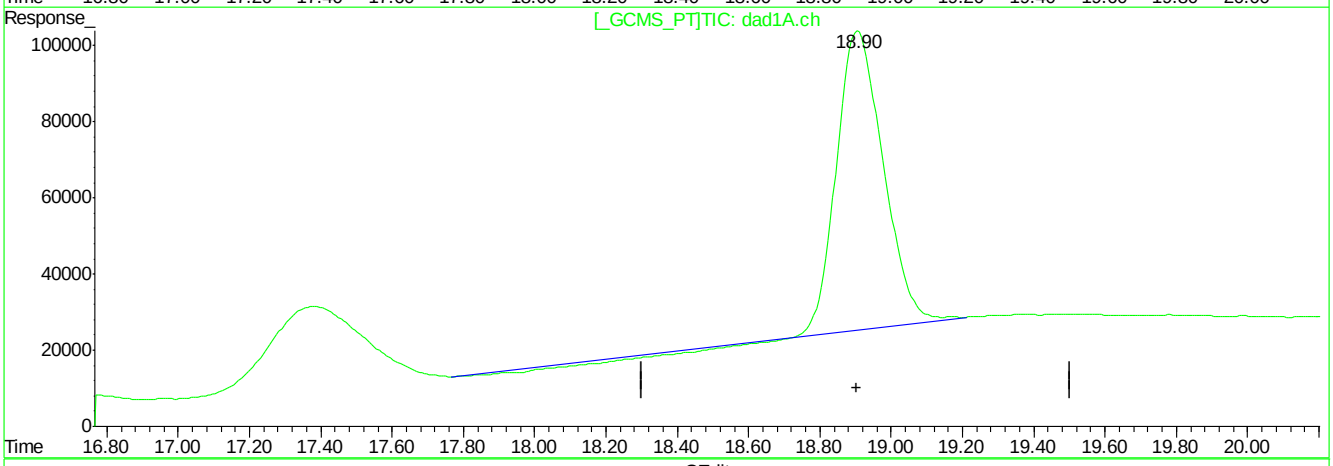
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:03:26 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.91min 0.000ppb

response 134464

(21) PETN #2

18.91min 5130.566ppb

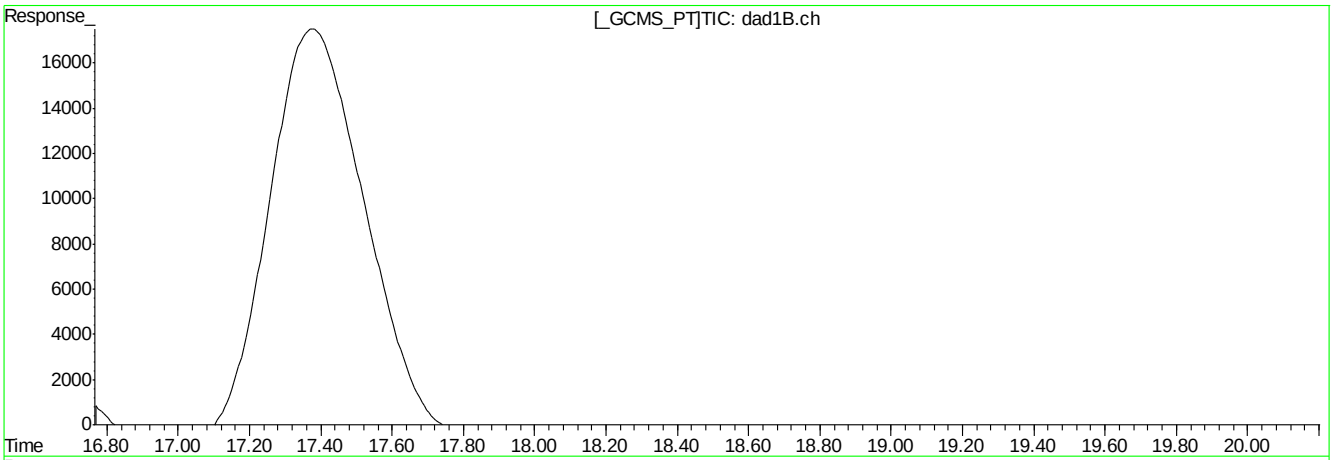
response 6760923

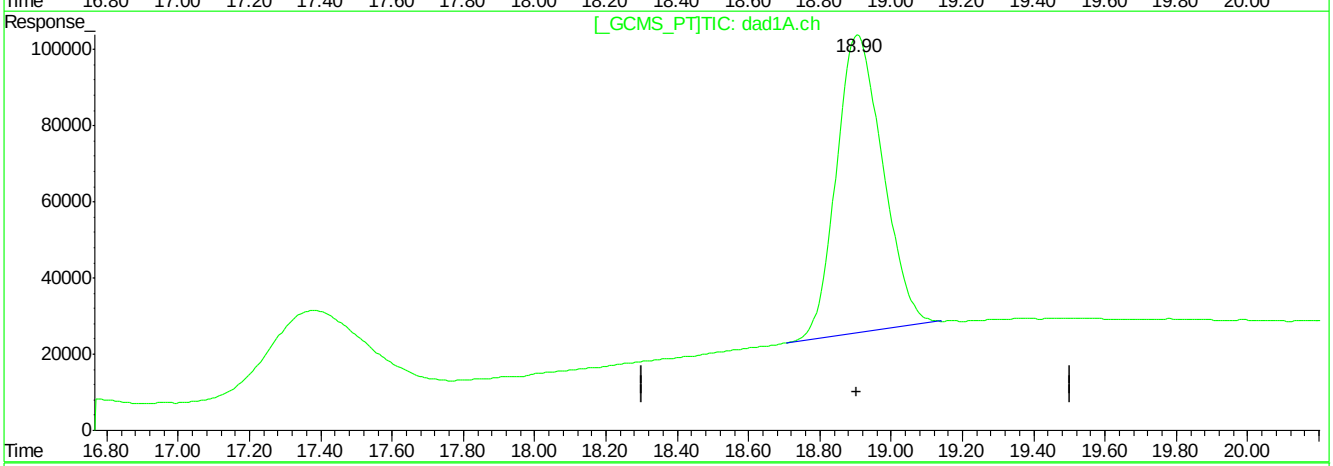
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:03:30 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.91min 0.000ppb

response 134464

(21) PETN #2

18.90min 5370.800ppb m

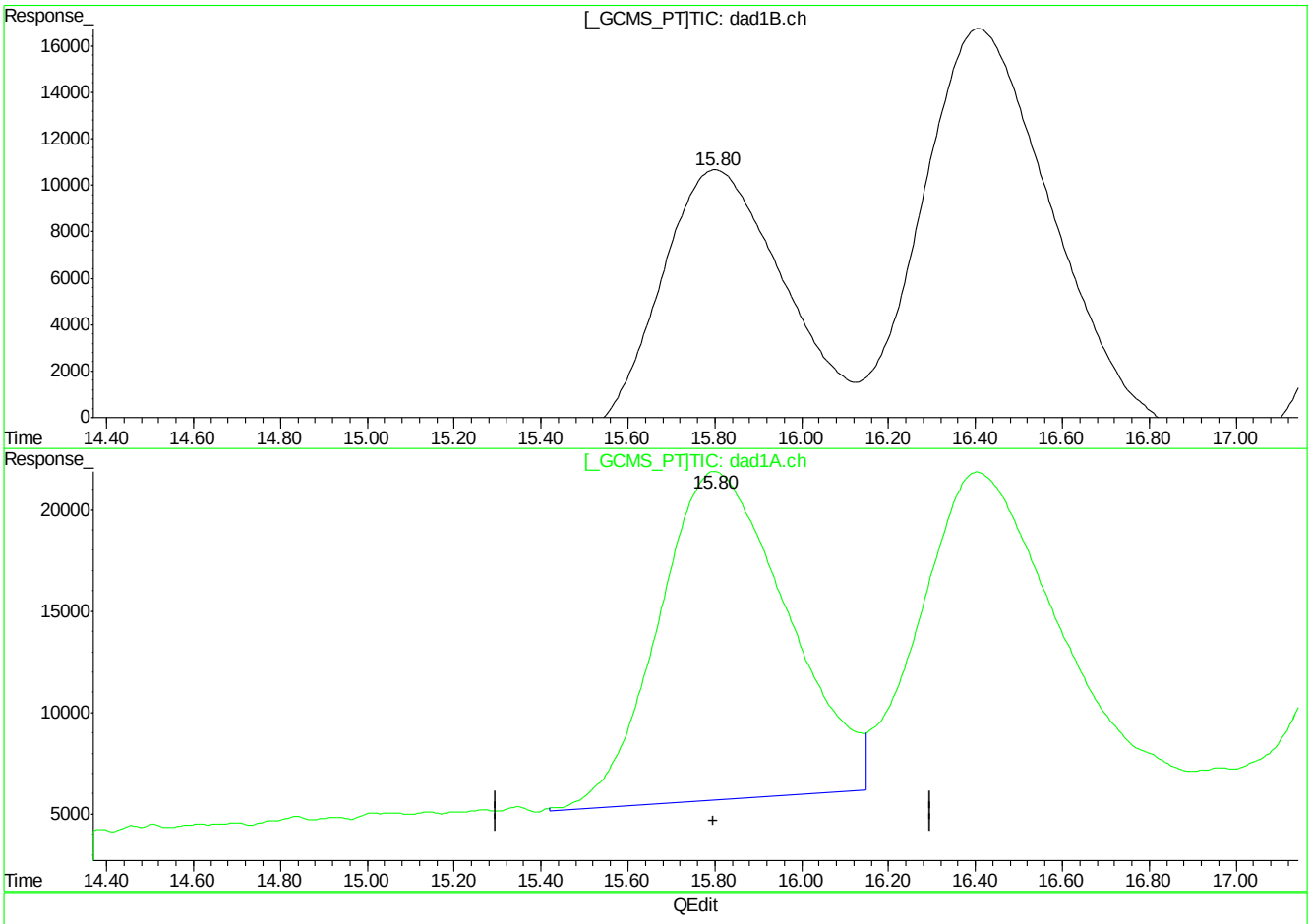
response 7077497

(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:03:41 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:05 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.80min 910.866ppb

response 2353681

(18) o-Nitrotoluene #2

15.80min 994.603ppb m

response 3312890

(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 14:58:22 2018

BB060206.D

Manual Integrations APPROVED (compounds with "m" flag)

Mike Eger 07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1A.ch
Acq On : 06-Jul-2018, 18:32:59 Operator: kismetl
Sample : ic1748-2000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:33 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.39	11.39	5115538	9053265	2055.656	2152.381
	Spiked Amount 500.000	Range 70 - 136		Recovery =		411.13%#	430.48%#
	Target Compounds						
1)	TNX	1.39	1.39	10105818	15448809	2064.770	2023.940
2)	HMX	1.53	1.54	3483085	9749731	1926.900	1970.281
3)	DNX	1.78	1.78	5255169	8449746	1708.792	1666.558
4)	MNX	2.38	2.38	5357968	8298916	1714.601	1760.113
5)	RDX	3.01	3.01	3919638	6255301	1929.035	1918.264
6)	1,3,5-Trinitrobe	4.81	4.81	8513836	16411515	1953.840	2002.061
7)	1,3-Dinitrobenze	6.04	6.04	11037661	7502576	1893.565	1995.846
8)	3,5-Dinitroanili	6.39	6.39	9333920	15843000	1996.249	2026.539
9)	Nitrobenzene	7.67	7.67	6798534	6515780	1816.782	1979.353
10)	Nitroglycerin	0.00	9.02	0	12866154	N.D. d	10068.976
11)	Tetryl	9.54	9.54	5097597	8150390	1722.490	1969.047
12)	2,4,6-Trinitroto	10.02	10.02	6742837	8172998	1721.455	1911.244
13)	2-Amino-4,6-Dini	10.40	10.40	7309803	10968055	1957.481	1958.696
14)	4-Amino-2,6-Dini	10.90	10.90	5081720	10532204	1860.921	1975.933
16)	2,4-Dinitrotolue	12.06	12.06	10059472	6208052	1938.924	1967.523
17)	2,6-Dinitrotolue	12.49	12.50	6133132	8070107	2003.485	2187.118
18)	o-Nitrotoluene	15.78	15.78	4702437	6540969	1819.826	1963.744m
19)	p-Nitrotoluene	16.39	16.39	7610234	6456208	1904.376	2038.802
20)	m-Nitrotoluene	17.36	17.36	7122912	7918223	2005.015	1931.495
21)	PETN	0.00	18.90	0	14289945	N.D. d	10844.008m

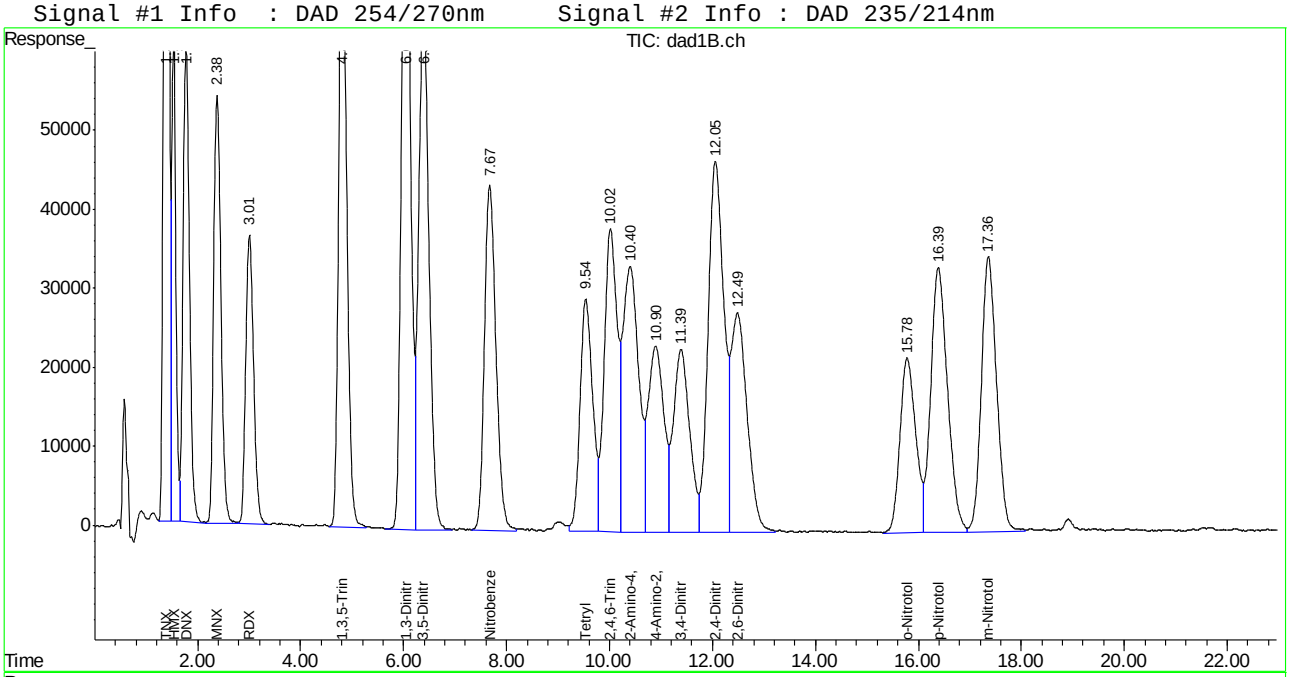
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060206.D 8330B_0707PLUS.M Mon Jul 09 11:20:54 2018 Page 1

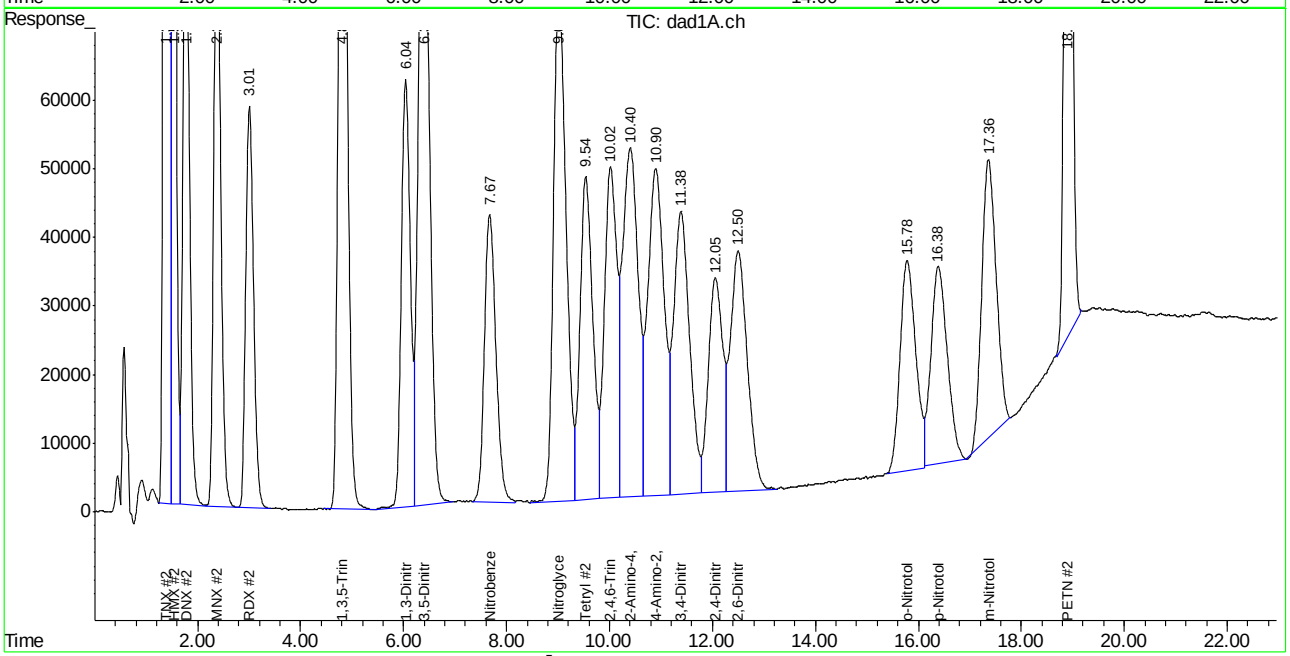
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1A.ch
Acq On : 06-Jul-2018, 18:32:59 Operator: kismetl
Sample : ic1748-2000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:04 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

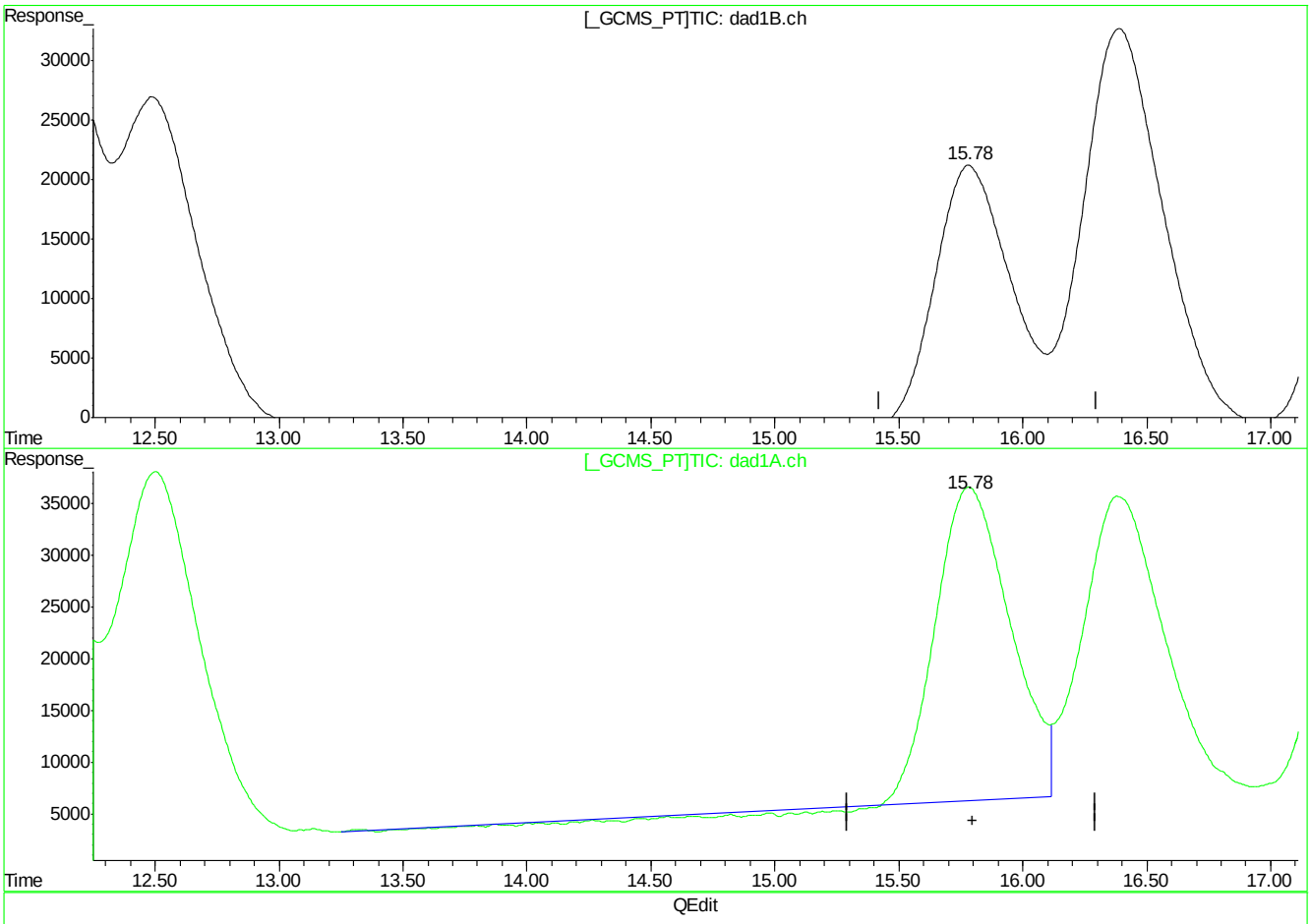
Sample Number: GBB1748-IC1748
Lab FileID: BB060206.D
Injection Time: 07/06/18 18:32
Method: SW846 8330A
Analyst approved: 07/09/18 11:23 William Hustedde
Supervisor approved: 07/09/18 16:15 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.78	Poor instrument integration
PETN	78-11-5	2	18.90	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1A.ch
Acq On : 06-Jul-2018, 18:32:59 Operator: kismetl
Sample : ic1748-2000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.78min 1819.826ppb

response 4702437

(18) o-Nitrotoluene #2

15.78min 1839.383ppb

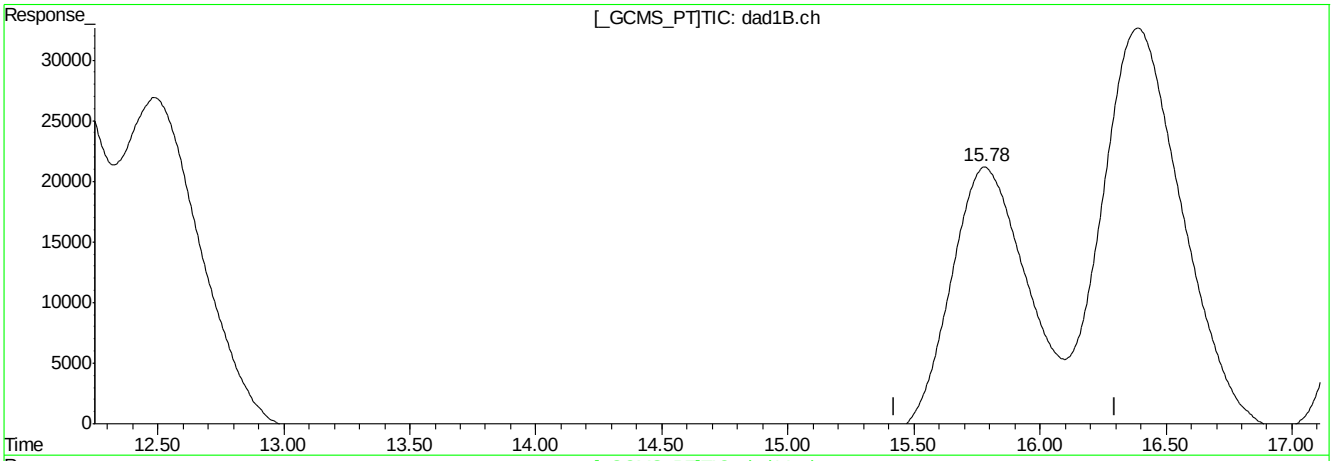
response 6126739

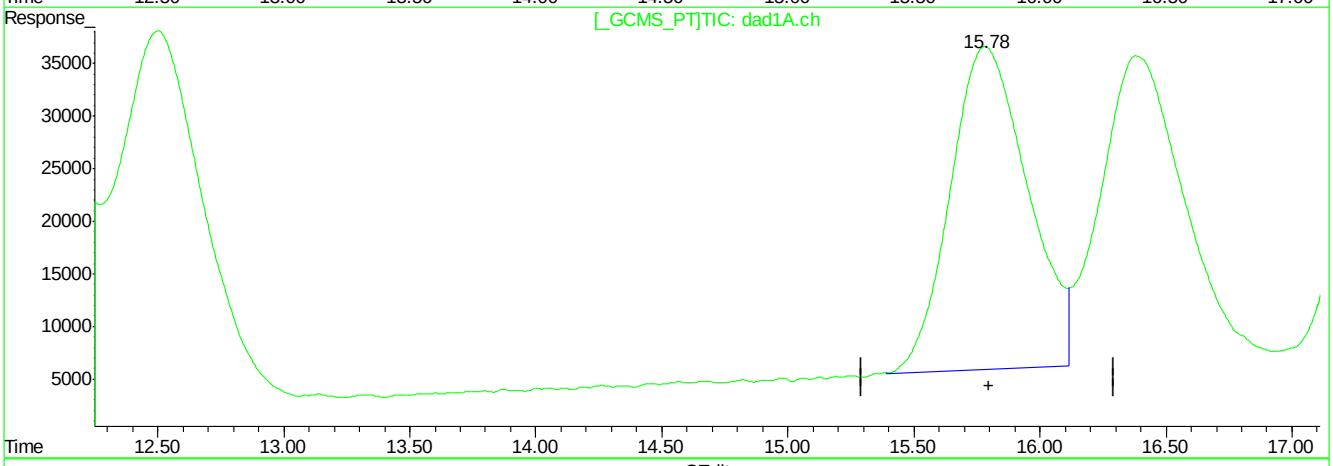
(+) = Expected Retention Time
BB060206.D 8330B_0707PLUS.M Mon Jul 09 10:04:22 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1A.ch
Acq On : 06-Jul-2018, 18:32:59 Operator: kismetl
Sample : ic1748-2000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.78min 1819.826ppb

response 4702437

(18) o-Nitrotoluene #2

15.78min 1963.744ppb m

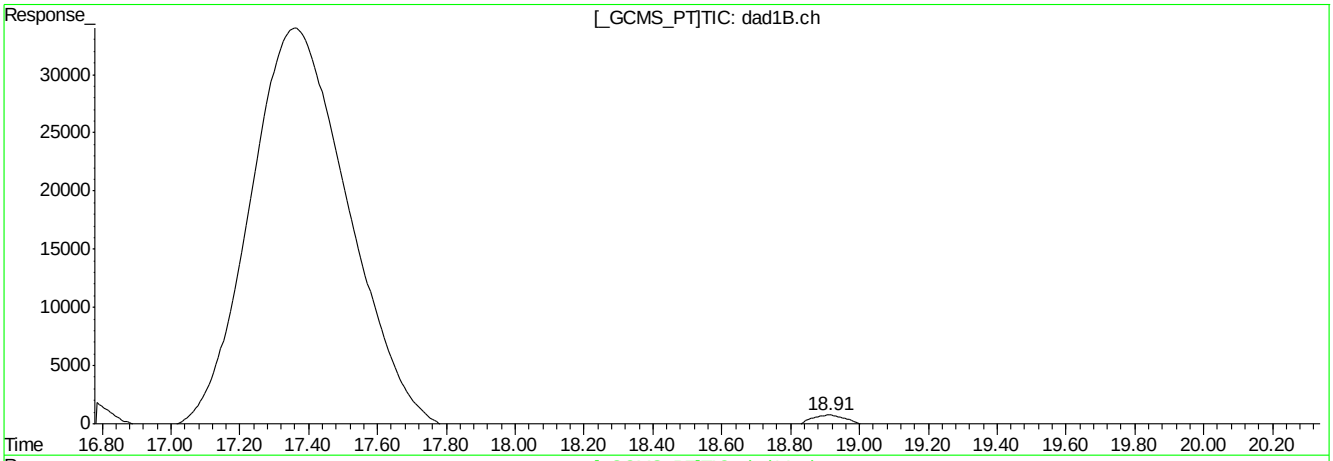
response 6540969

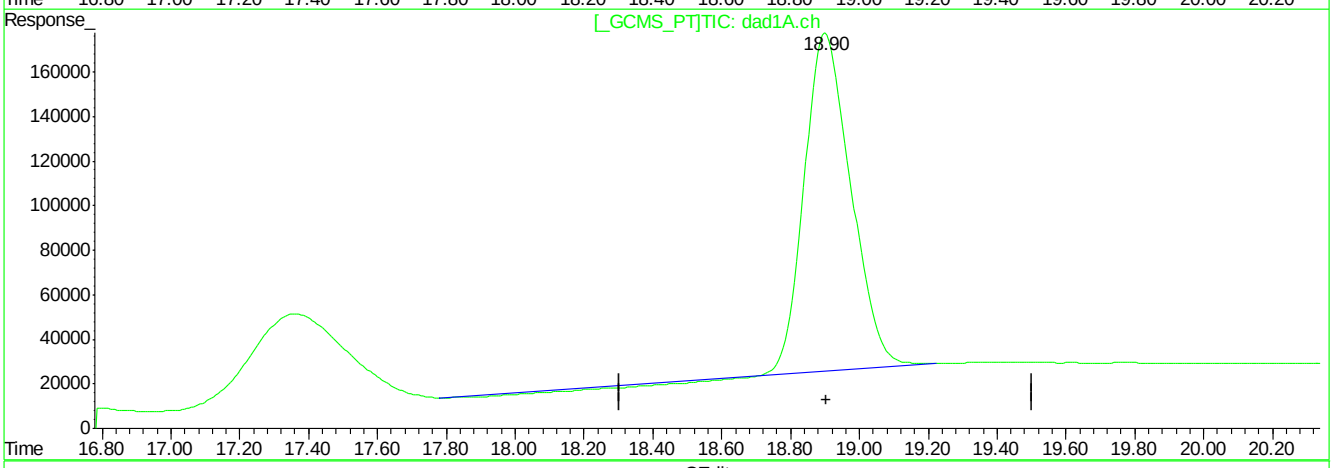
(+) = Expected Retention Time
BB060206.D 8330B_0707PLUS.M Mon Jul 09 10:04:29 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1A.ch
Acq On : 06-Jul-2018, 18:32:59 Operator: kismetl
Sample : ic1748-2000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.91min 0.000ppb

response 168009

(21) PETN #2

18.90min 10471.514ppb

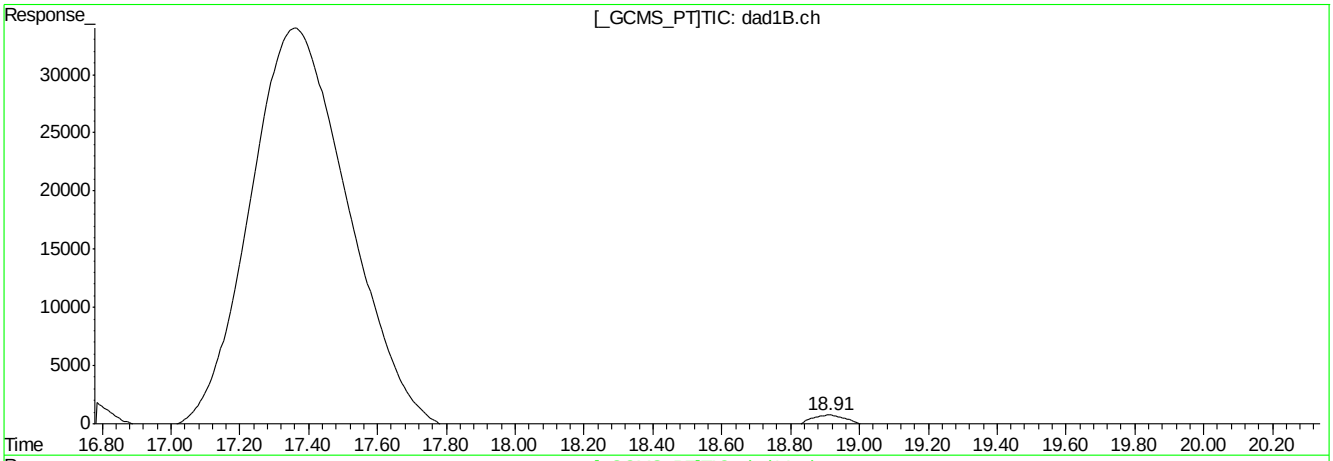
response 13799082

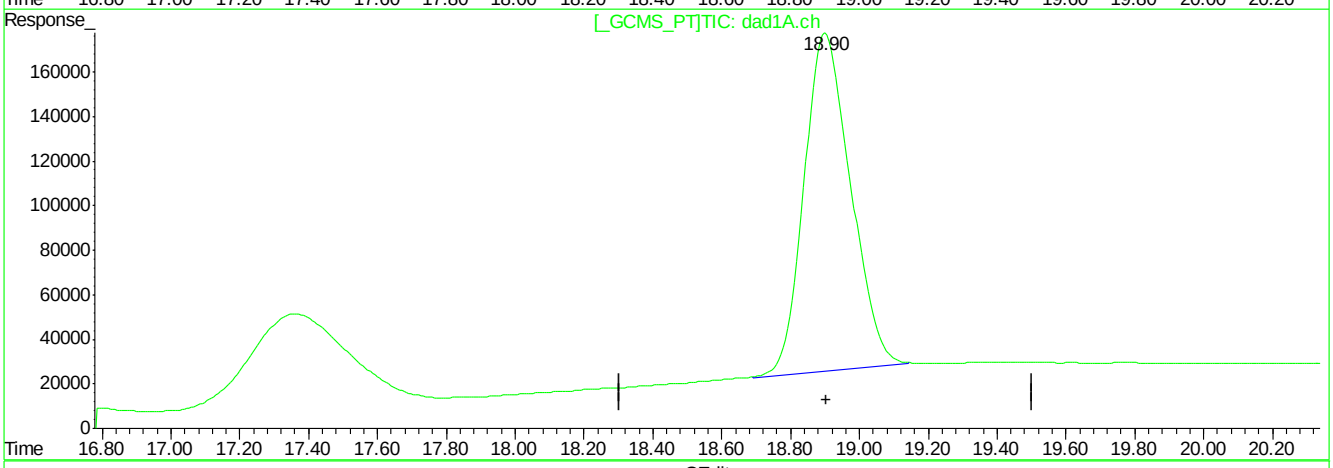
(+) = Expected Retention Time
BB060206.D 8330B_0707PLUS.M Mon Jul 09 10:04:41 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1A.ch
Acq On : 06-Jul-2018, 18:32:59 Operator: kismetl
Sample : ic1748-2000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.91min 0.000ppb

response 168009

(21) PETN #2

18.90min 10844.008ppb m

response 14289945

(+) = Expected Retention Time
BB060206.D 8330B_0707PLUS.M Mon Jul 09 10:04:55 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 11:03:35 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
Spiked Amount	500.000	Range	70 - 136	Recovery	=	0.00%#	0.00%#
	Target Compounds						
1)	TNX	1.39	1.39	4515438	6945759	888.280	881.147
2)	HMX	1.54	1.54	2011935	5533116	1043.978	1137.187
3)	DNX	1.78	1.78	2521630	4036157	965.091	889.408
4)	MNX	2.39	2.39	2620001	4050127	908.873	939.824
5)	RDX	3.01	3.01	2243559	3605185	1088.039	1056.691
6)	1,3,5-Trinitrobe	4.82	4.82	4810677	9191960	1122.936	1101.772
7)	1,3-Dinitrobenze	6.05	6.05	6161966	4294442	1067.478	1117.069
8)	3,5-Dinitroanili	6.40	6.40	4358334	7455000	933.611	945.674
9)	Nitrobenzene	7.68	7.68	3736320	3624907	1003.720	1112.210
10)	Nitroglycerin	0.00	9.02	0	6279551	N.D. d	4813.802
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	12.06	12.06	5571508	3462562	1020.089	1133.416
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	15.79	15.78	2663398	3599618	1120.494	1116.301m
19)	p-Nitrotoluene	16.39	16.39	4189871	3567103	1066.427	1019.236
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	18.90	0	7180831	N.D. d	5002.949m

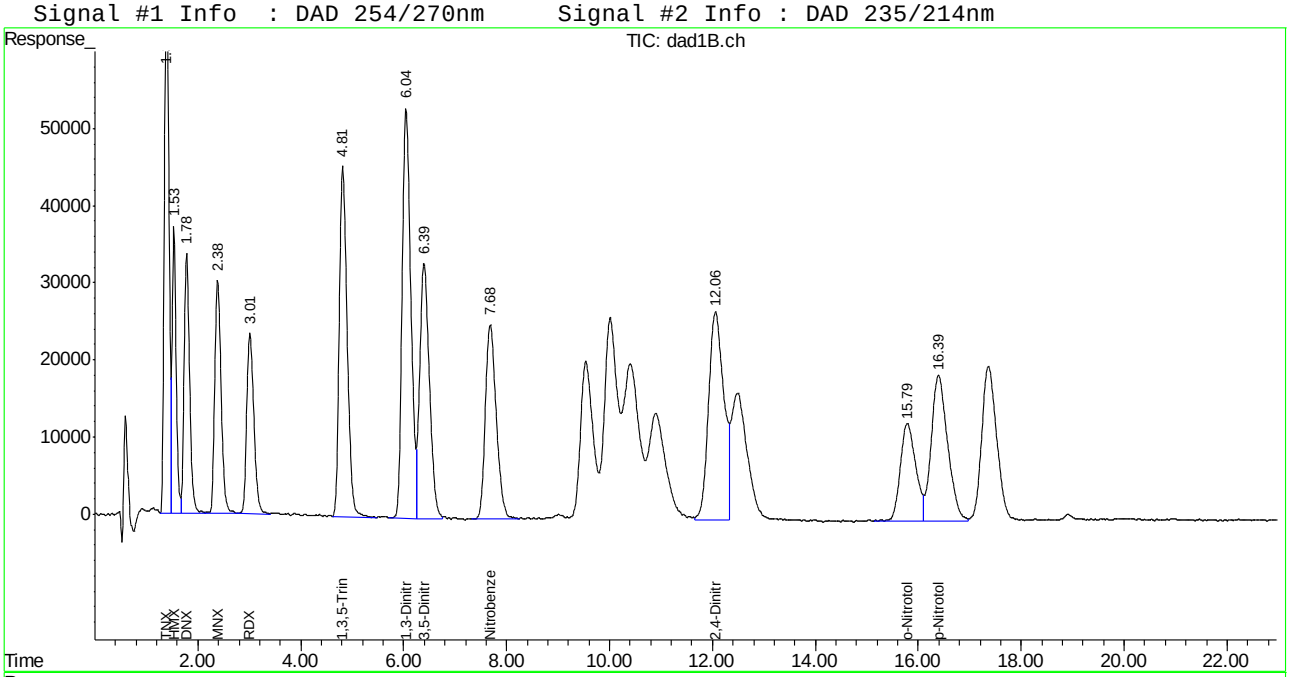
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060207.D 8330B_0707PLUS.M Mon Jul 09 11:20:55 2018 Page 1

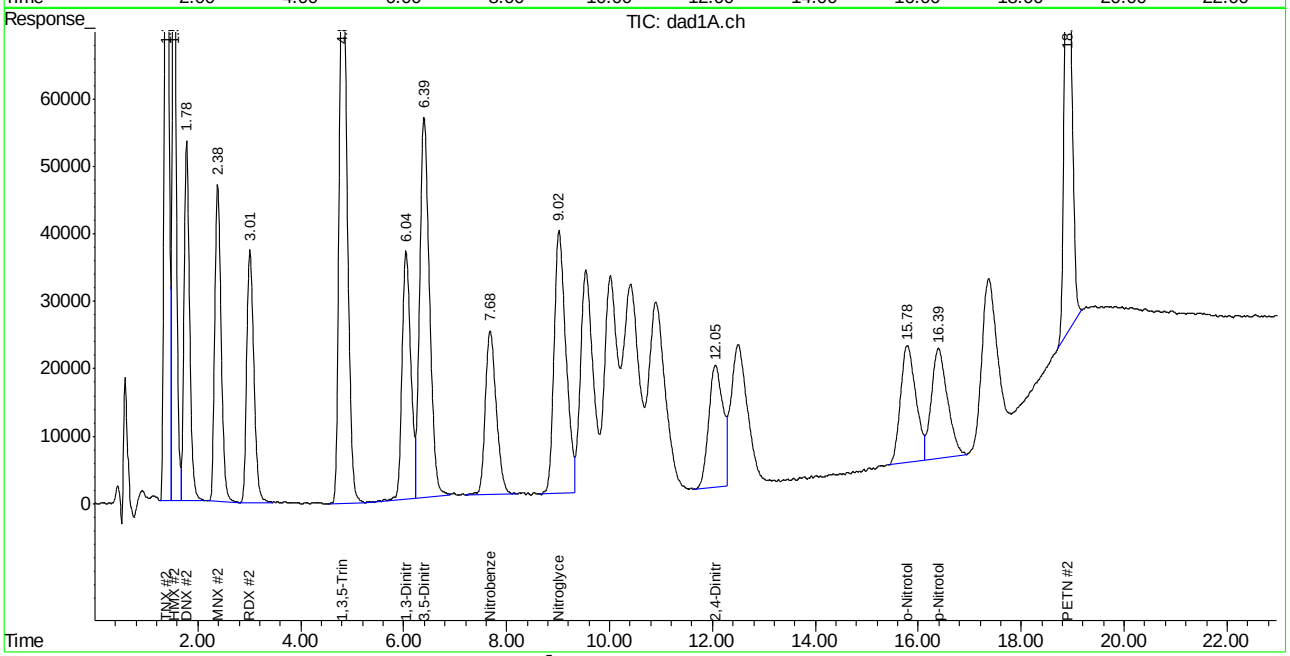
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 11:17 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

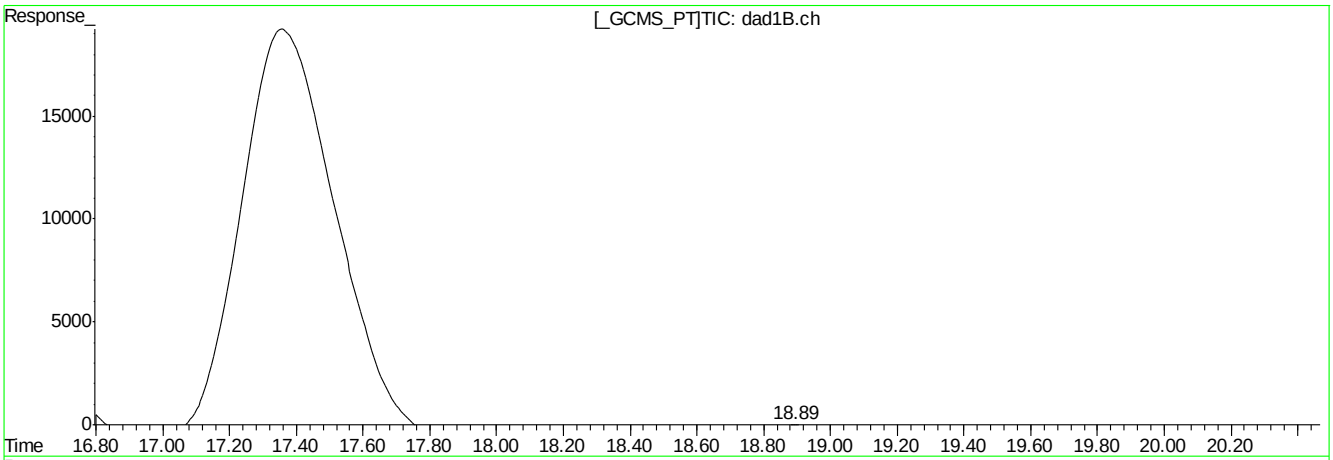
Sample Number: GBB1748-ICV1748 **Method:** SW846 8330A
Lab FileID: BB060207.D **Analyst approved:** 07/09/18 11:23 William Hustedde
Injection Time: 07/06/18 19:02 **Supervisor approved:** 07/09/18 16:15 Mike Eger

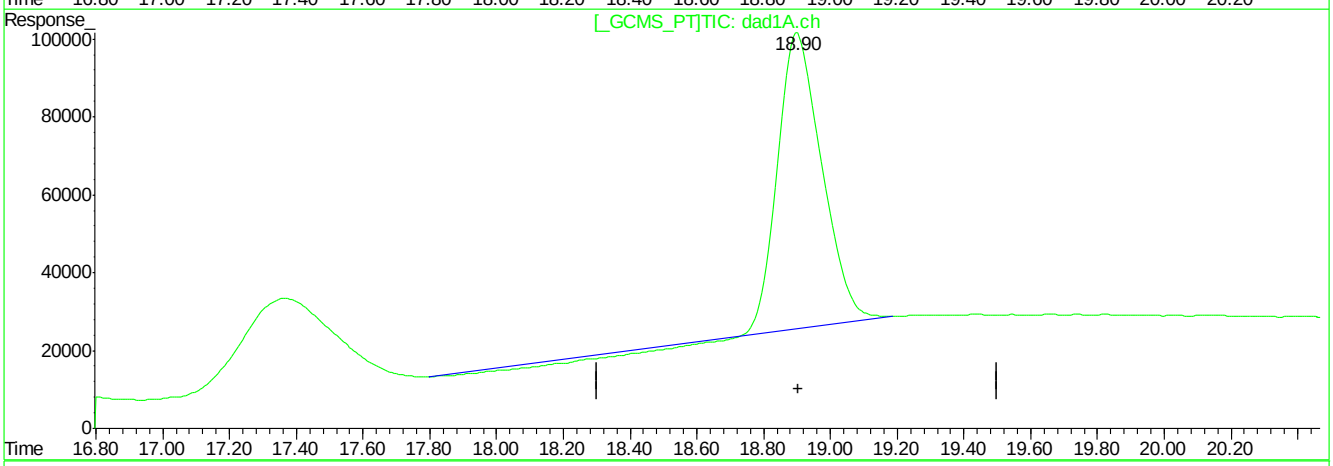
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.78	Poor instrument integration
PETN	78-11-5	2	18.90	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 11:03 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.90min 0.000ppb

response 121084

(21) PETN #2

18.90min 4641.987ppb

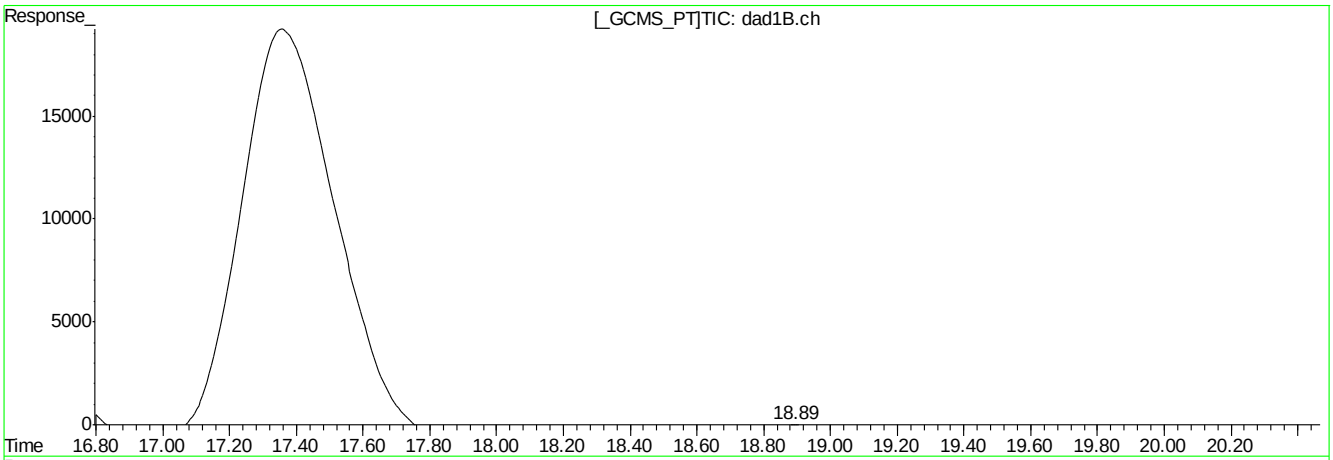
response 6662734

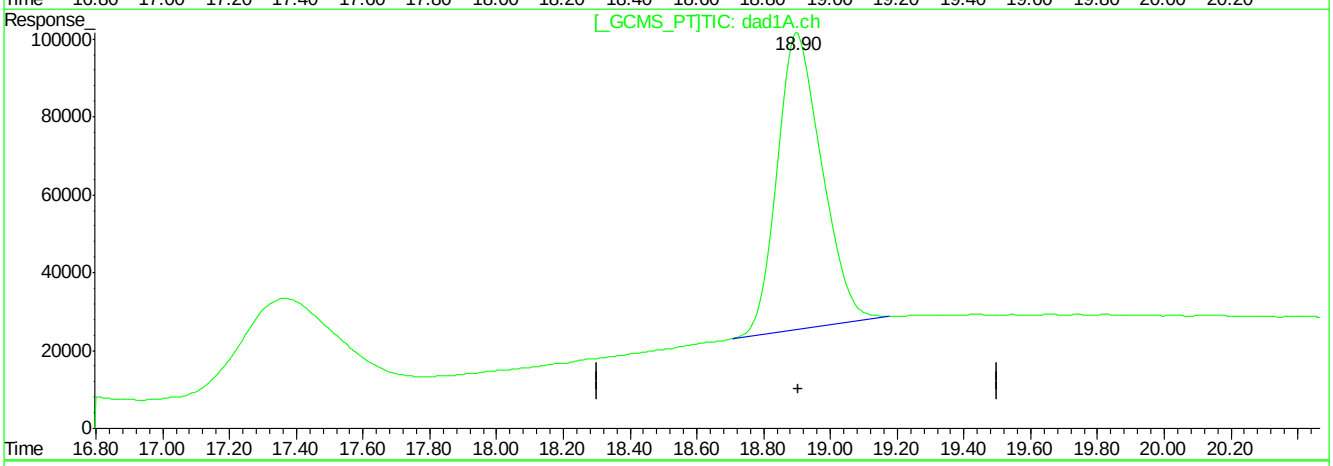
(+) = Expected Retention Time
BB060207.D 8330B_0707PLUS.M Mon Jul 09 11:04:29 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 11:03 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.90min 0.000ppb

response 121084

(21) PETN #2

18.90min 5002.949ppb m

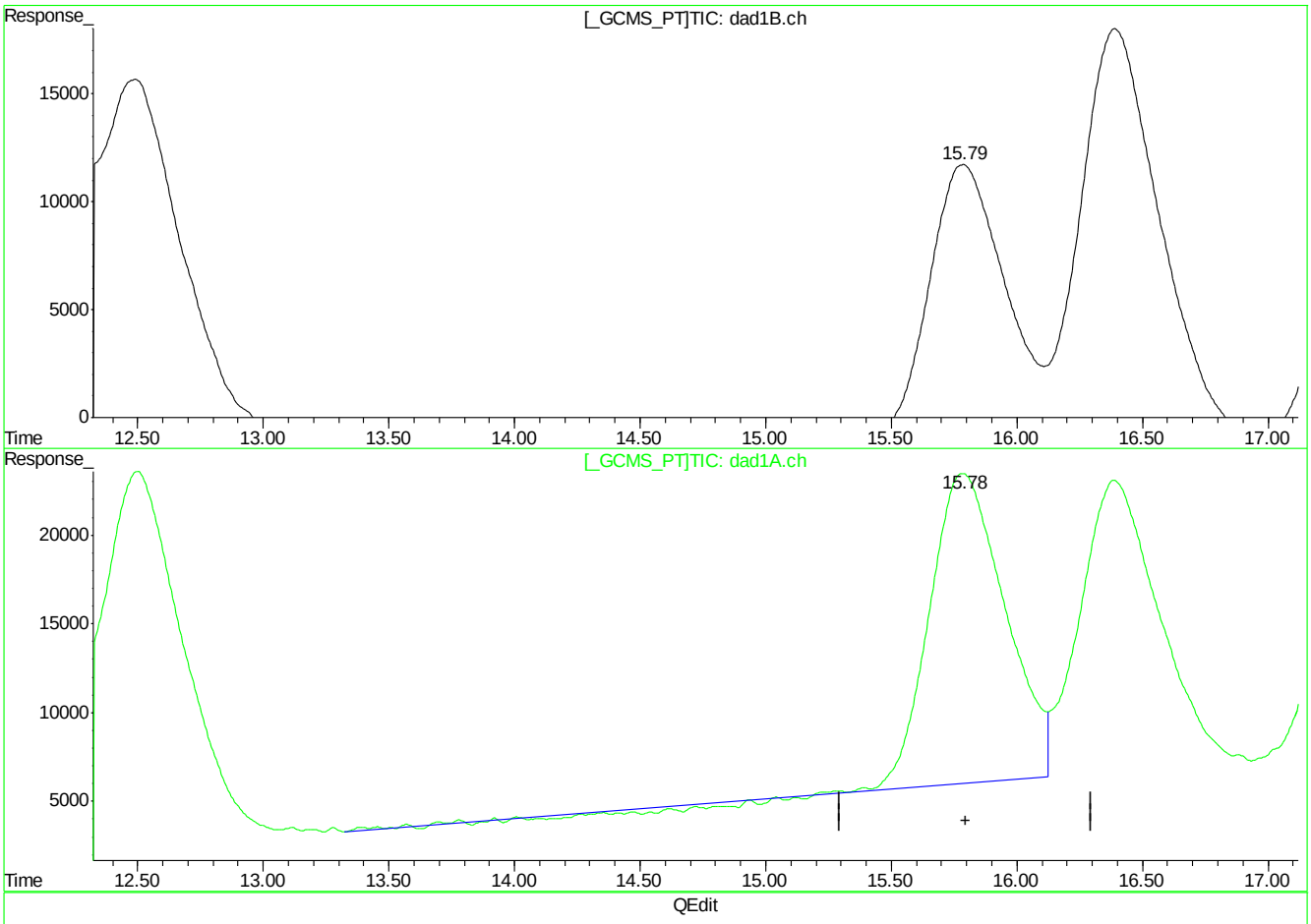
response 7180831

(+) = Expected Retention Time
BB060207.D 8330B_0707PLUS.M Mon Jul 09 11:04:38 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 11:03 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.79min 1120.494ppb

response 2663398

(18) o-Nitrotoluene #2

15.79min 1097.541ppb

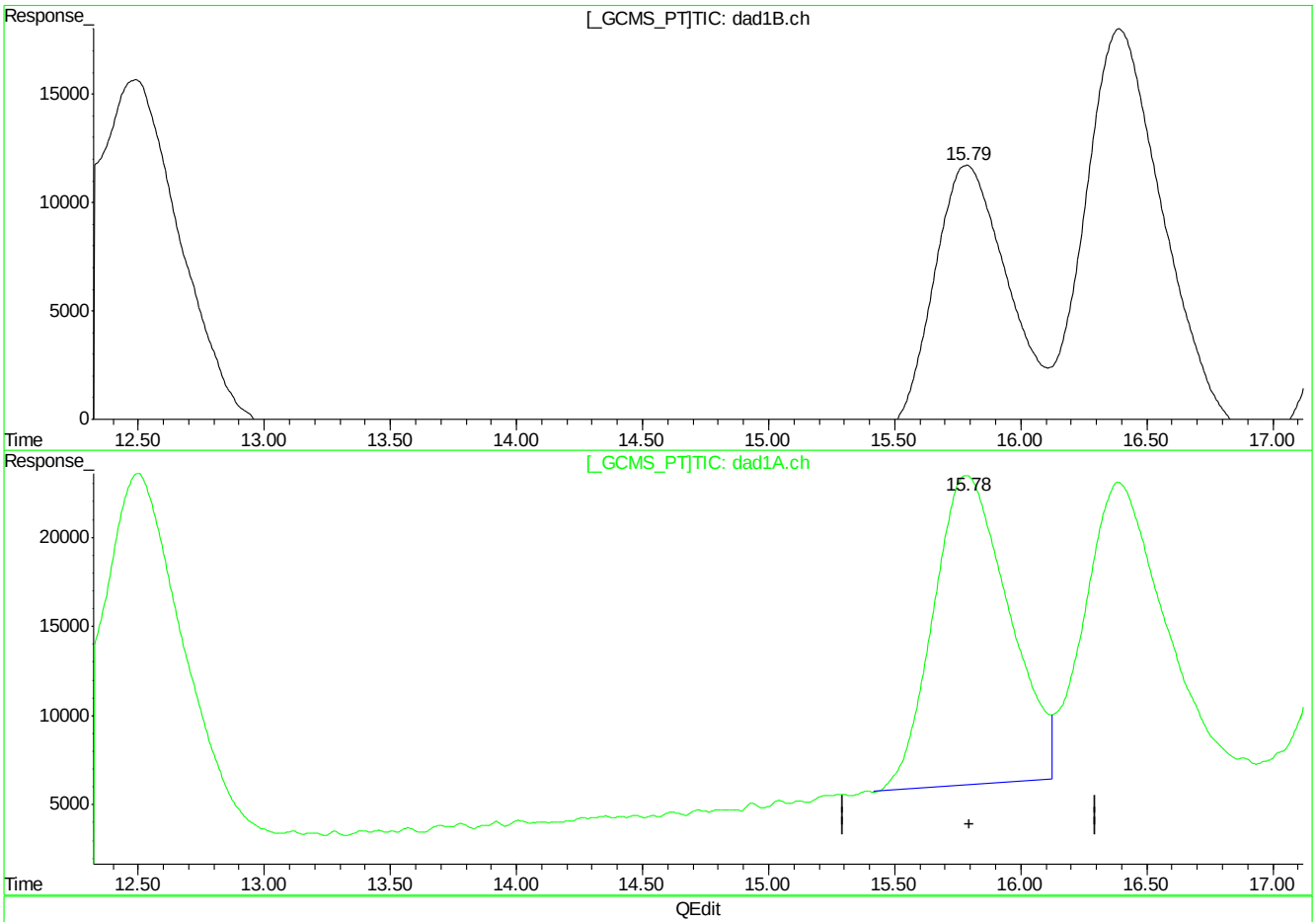
response 3539122

(+) = Expected Retention Time
BB060207.D 8330B_0707PLUS.M Mon Jul 09 11:04:43 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 11:03 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration



QEdit

(18) o-Nitrotoluene

15.79min 1120.494ppb

response 2663398

(18) o-Nitrotoluene #2

15.78min 1116.301ppb m

response 3599618

(+) = Expected Retention Time
BB060207.D 8330B_0707PLUS.M Mon Jul 09 11:04:52 2018

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1A.ch
Acq On : 06-Jul-2018, 19:32:55 Operator: kismetl
Sample : icv1748-1000 spk Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 11:03:36 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
	Spiked Amount 500.000	Range 70 - 136		Recovery	=	0.00%#	0.00%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	9.55	9.55	2737696	4395456	982.234	1095.709
12)	2,4,6-Trinitroto	10.02	10.02	3431479	4263770	1000.138	1053.616
13)	2-Amino-4,6-Dini	10.42	10.43	3553663	5249645	913.856	1033.000
14)	4-Amino-2,6-Dini	10.92	10.92	2653232	5361584	994.624	1058.821
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	12.51	12.52	2978778	4005471	958.888	1024.395
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	17.37	17.37	3386708	3621920	956.540	1002.550
21)	PETN	0.00	0.00	0	0	N.D.	N.D.

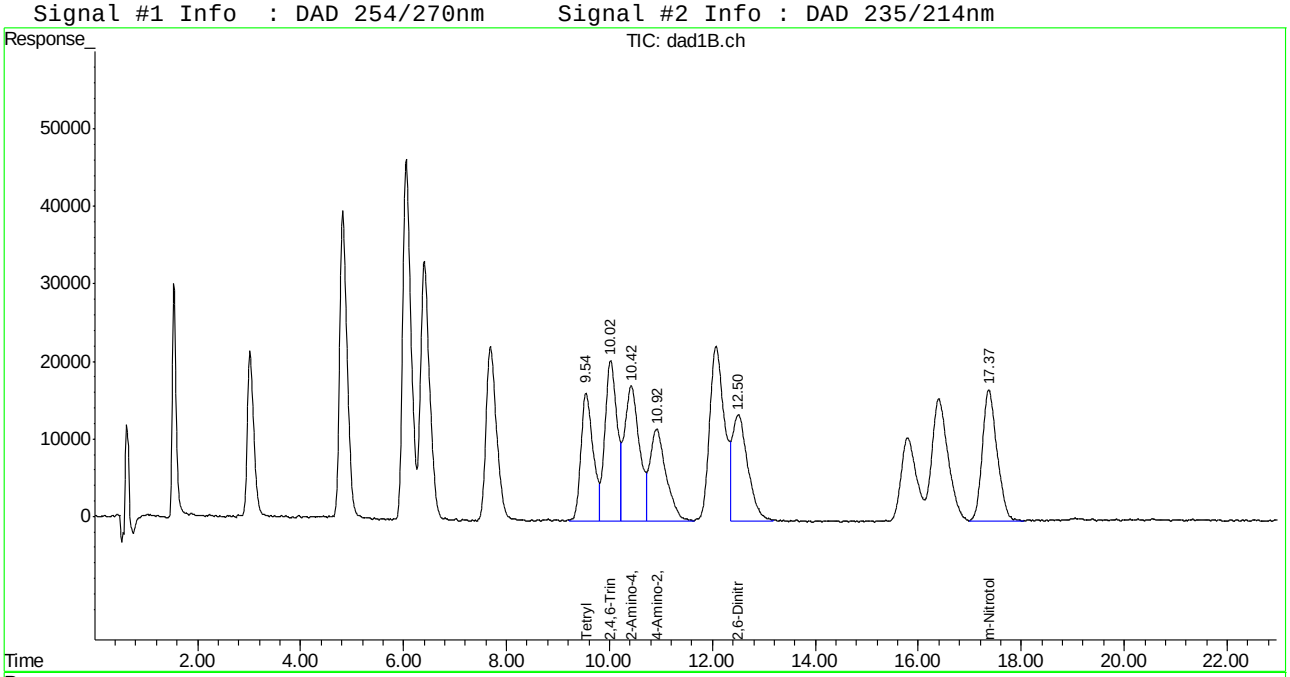
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060208.D 8330B_0707PLUS.M Mon Jul 09 11:20:56 2018 Page 1

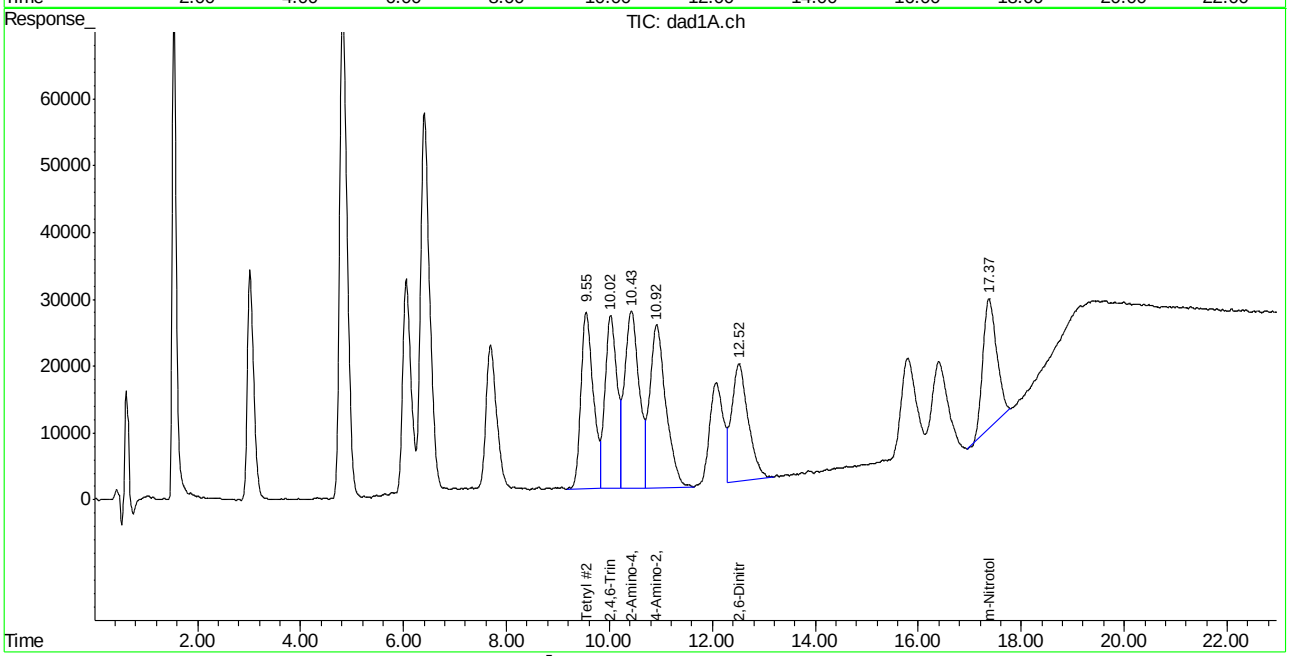
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1A.ch
Acq On : 06-Jul-2018, 19:32:55 Operator: kismetl
Sample : icv1748-1000 spk Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 11:05 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

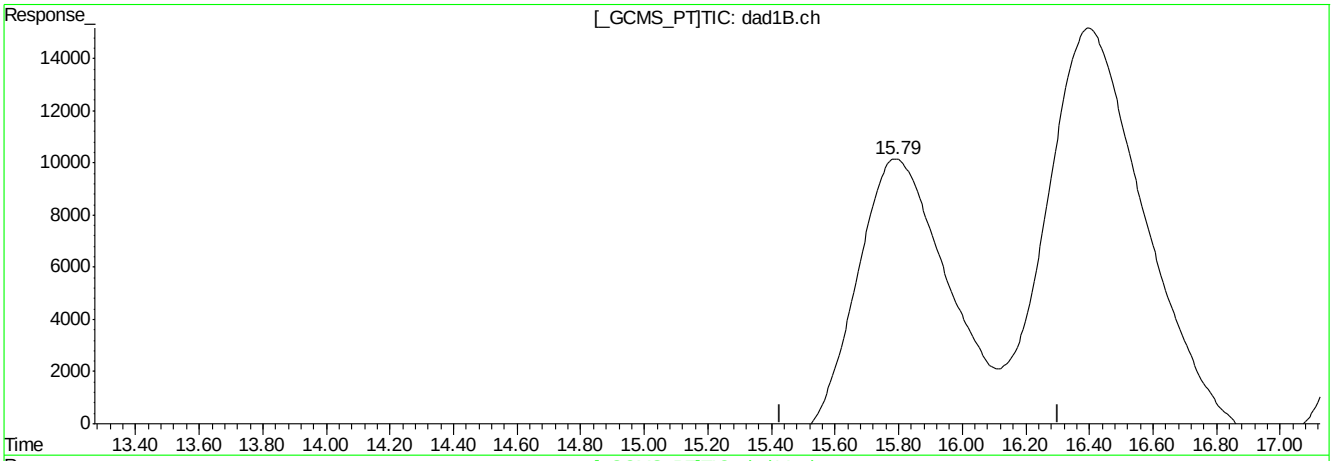


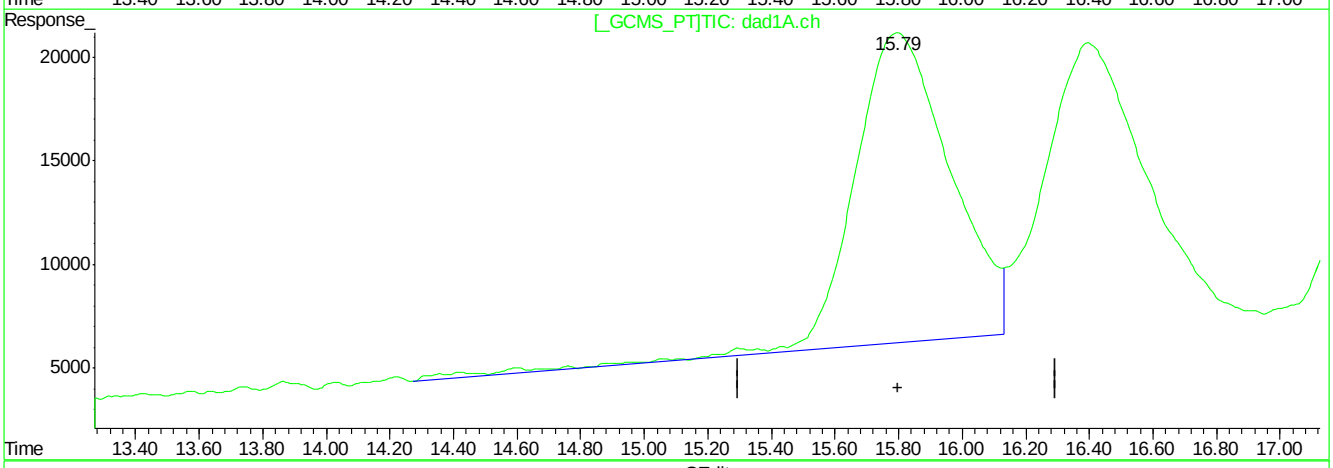


Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1A.ch
Acq On : 06-Jul-2018, 19:32:55 Operator: kismetl
Sample : icv1748-1000 spk Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:27 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:27:29 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.79min 919.460ppb

response 2185543

(18) o-Nitrotoluene #2

15.80min 981.327ppb

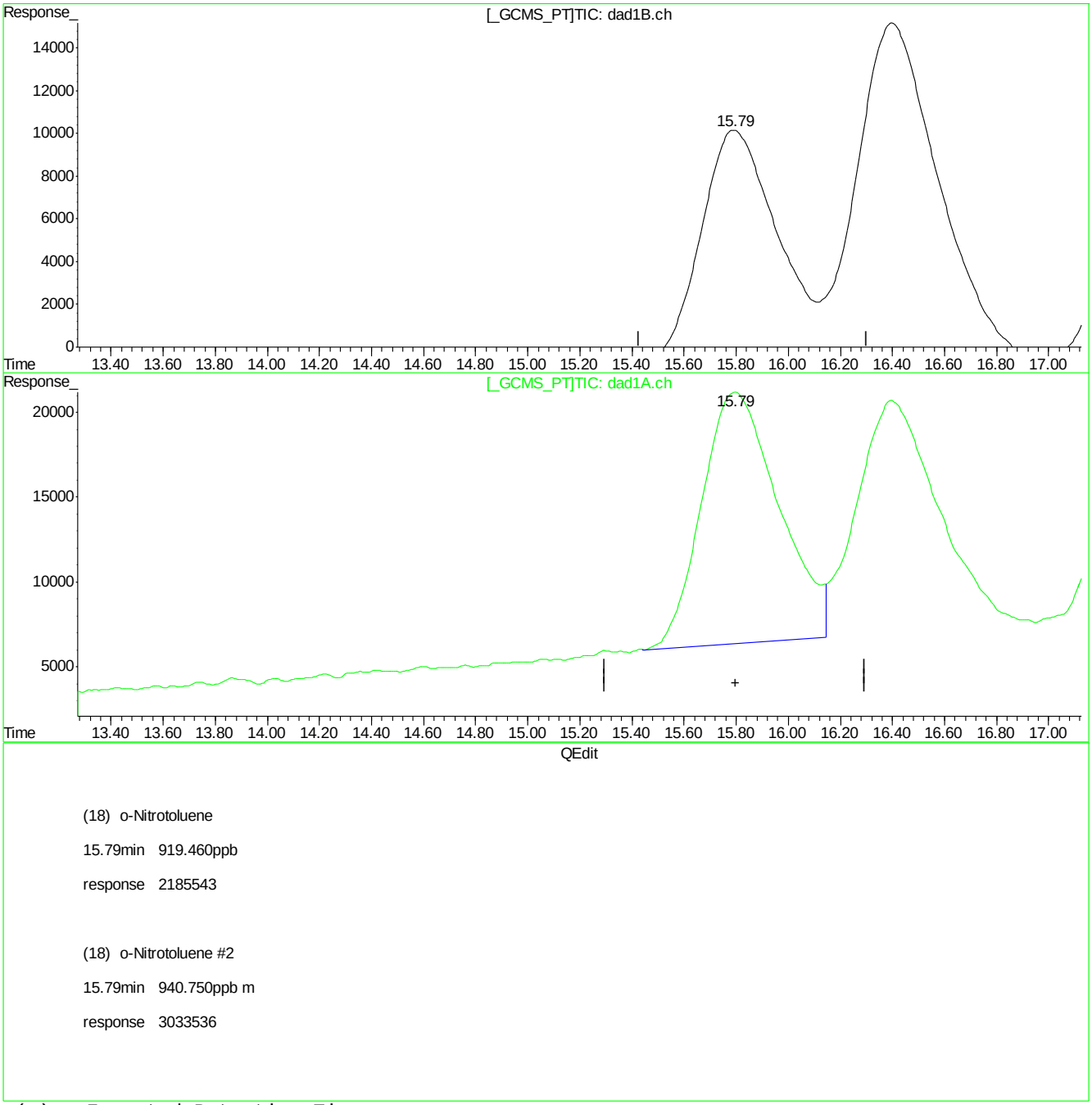
response 3164380

(+) = Expected Retention Time
BB060208.D 8330B_0707PLUS.M Mon Jul 09 10:30:33 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1A.ch
Acq On : 06-Jul-2018, 19:32:55 Operator: kismetl
Sample : icv1748-1000 spk Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:27 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:27:29 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.79min 919.460ppb

response 2185543

(18) o-Nitrotoluene #2

15.79min 940.750ppb m

response 3033536

(+) = Expected Retention Time
BB060208.D 8330B_0707PLUS.M Mon Jul 09 10:30:44 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/27/18 15:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1A.ch
Acq On : 24-Jul-2018, 12:57:10 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:12 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.78	10.78	2477436	4164578	958.440	983.923
	Spiked Amount 500.000	Range 70 - 136		Recovery =		191.69%#	196.78%#
	Target Compounds						
1)	TNX	1.28	1.28	4881635	7501749	960.319	951.681
2)	HMX	1.42	1.42	1715679	4713268	890.253	968.803
3)	DNX	1.65	1.65	2467189	3952960	944.348	871.074
4)	MNX	2.21	2.21	2616019	4087604	907.491	948.521
5)	RDX	2.80	2.80	1972523	3125958	956.597	916.228
6)	1,3,5-Trinitrobe	4.57	4.57	4231811	8211458	986.871	984.246
7)	1,3-Dinitrobenze	5.74	5.74	5384488	3711711	932.790	961.393
8)	3,5-Dinitroanili	6.03	6.03	4589908	7759257	983.267	984.138
9)	Nitrobenzene	7.26	7.26	3303070	3234159	887.332	992.060
10)	Nitroglycerin	0.00	8.69	0	6247688	N.D. d	4789.376
11)	Tetryl	9.11	9.11	2367919	3835481	849.565	958.424
12)	2,4,6-Trinitroto	9.58	9.59	3309358	3703362	963.911	916.522
13)	2-Amino-4,6-Dini	9.77	9.78	3631649	5746556	933.911	1130.780
14)	4-Amino-2,6-Dini	10.24	10.25	2651198	5225769	993.861	1033.139
16)	2,4-Dinitrotolue	11.45	11.45	5028924	3059110	920.747	1003.802
17)	2,6-Dinitrotolue	11.88	11.89	3078229	3770212	991.293	966.094
18)	o-Nitrotoluene	15.10	15.10	2271754	3262284	955.729	1011.688m
19)	p-Nitrotoluene	15.71	15.71	3652501	3154824	929.653	901.434
20)	m-Nitrotoluene	16.68	16.68	3417042	3847672	965.078	1065.038
21)	PETN	0.00	18.74	0	6862039	N.D. d	4780.845m

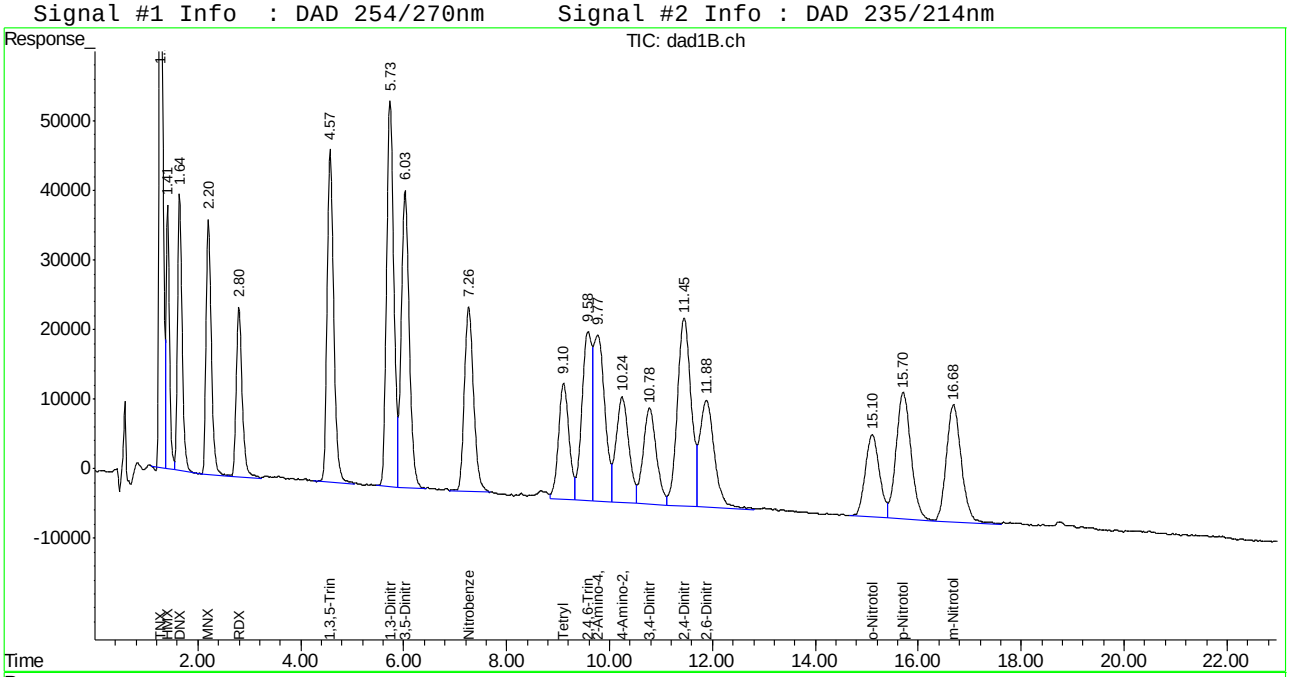
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

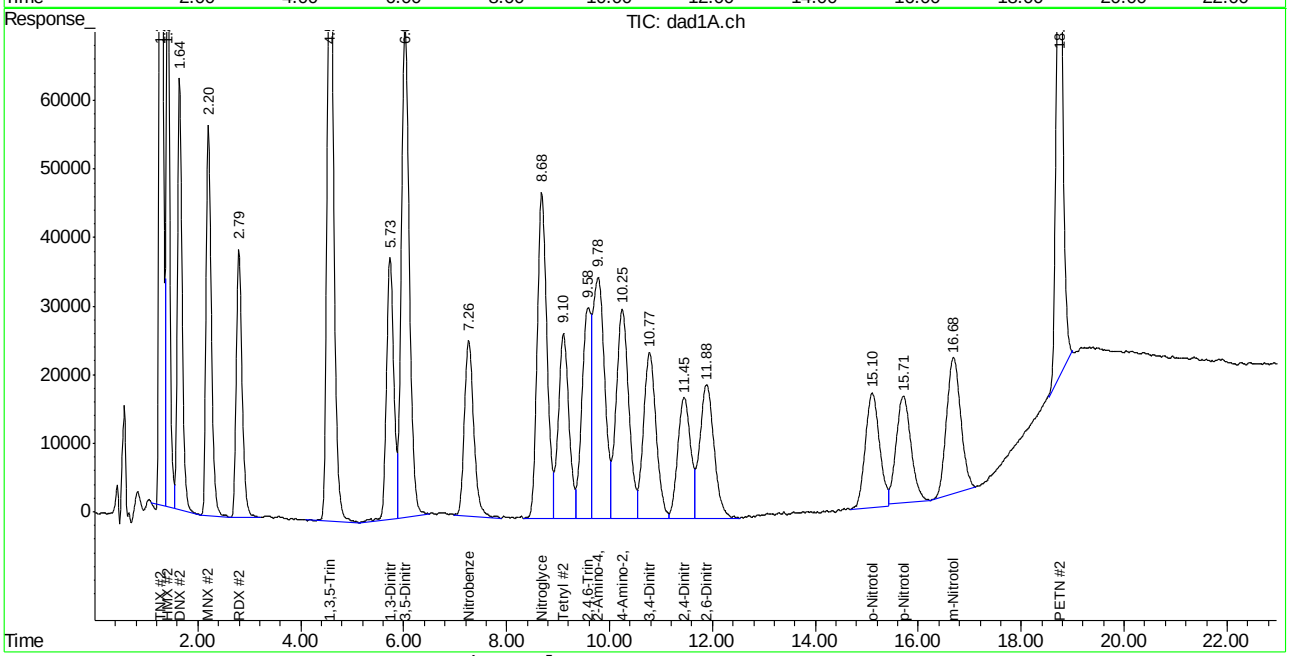
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1A.ch
Acq On : 24-Jul-2018, 12:57:10 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 15:33 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

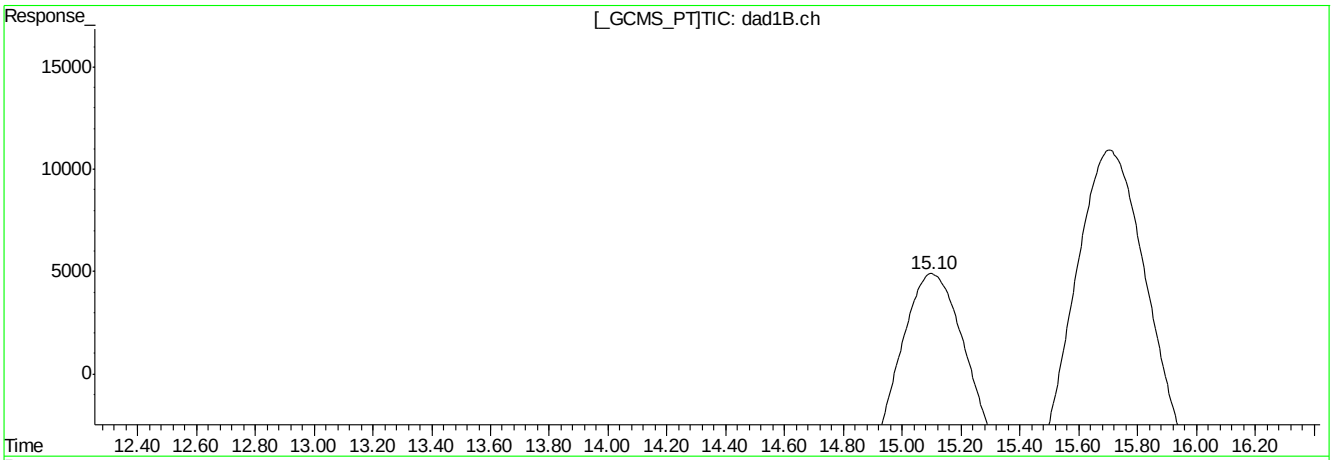
Sample Number:	GBB1754-CC1748	**Method:**	SW846 8330A
Lab FileID:	BB060341.D	**Analyst approved:**	07/26/18 16:20 Mike Eger
Injection Time:	07/24/18 12:57	**Supervisor approved:**	07/27/18 15:26 Mike Eger

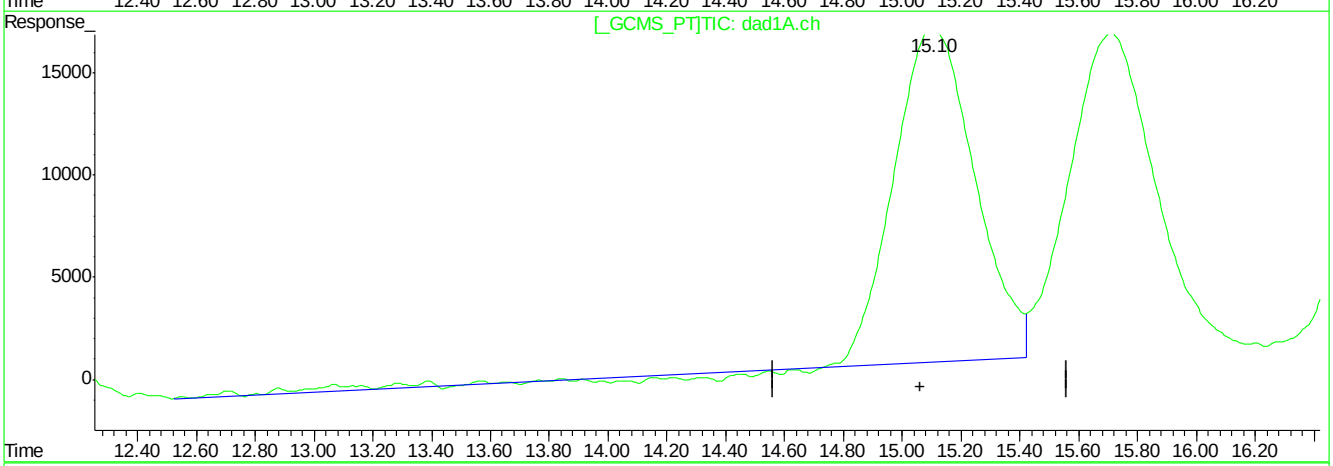
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.10	Poor instrument integration
PETN	78-11-5	2	18.74	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1A.ch
Acq On : 24-Jul-2018, 12:57:10 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 24 13:44 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 23 10:50:09 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.10min 955.729ppb

response 2271754

(18) o-Nitrotoluene #2

15.10min 958.809ppb

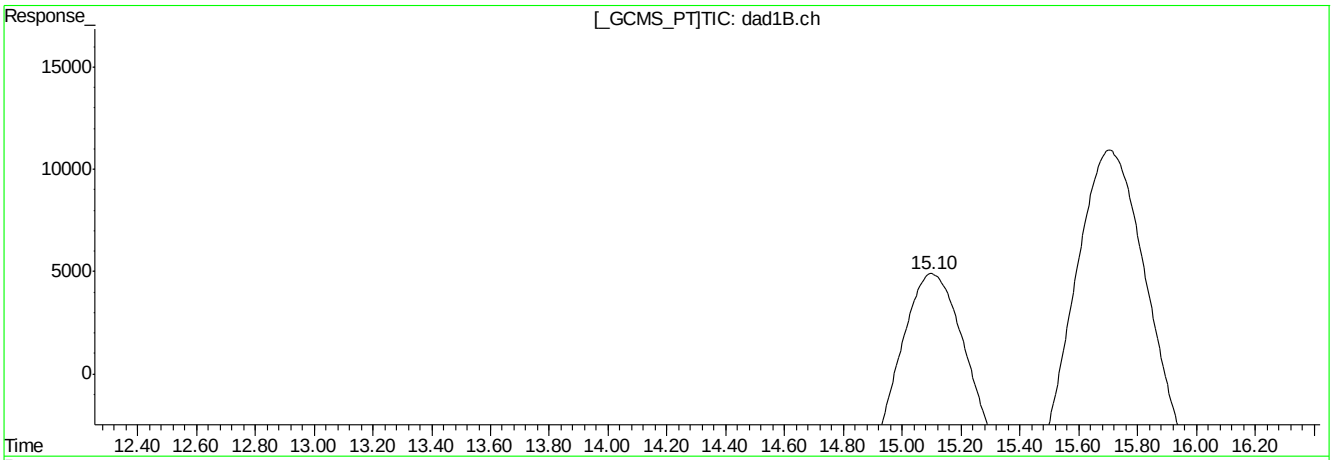
response 3091769

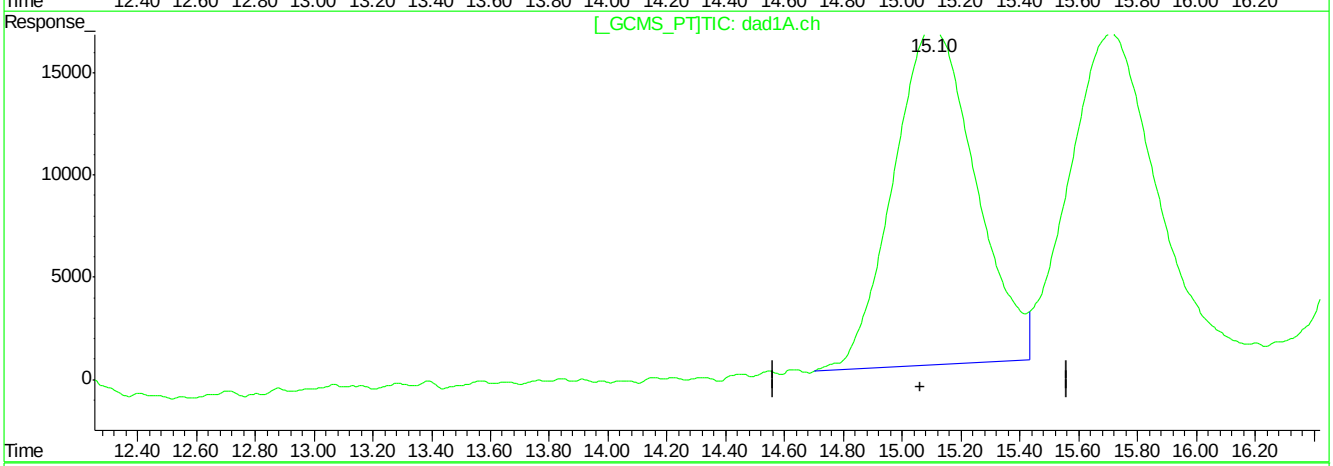
(+) = Expected Retention Time
BB060341.D 8330B_0707PLUS.M Tue Jul 24 13:58:34 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1A.ch
Acq On : 24-Jul-2018, 12:57:10 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 24 13:44 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 23 10:50:09 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.10min 955.729ppb

response 2271754

(18) o-Nitrotoluene #2

15.10min 989.700ppb m

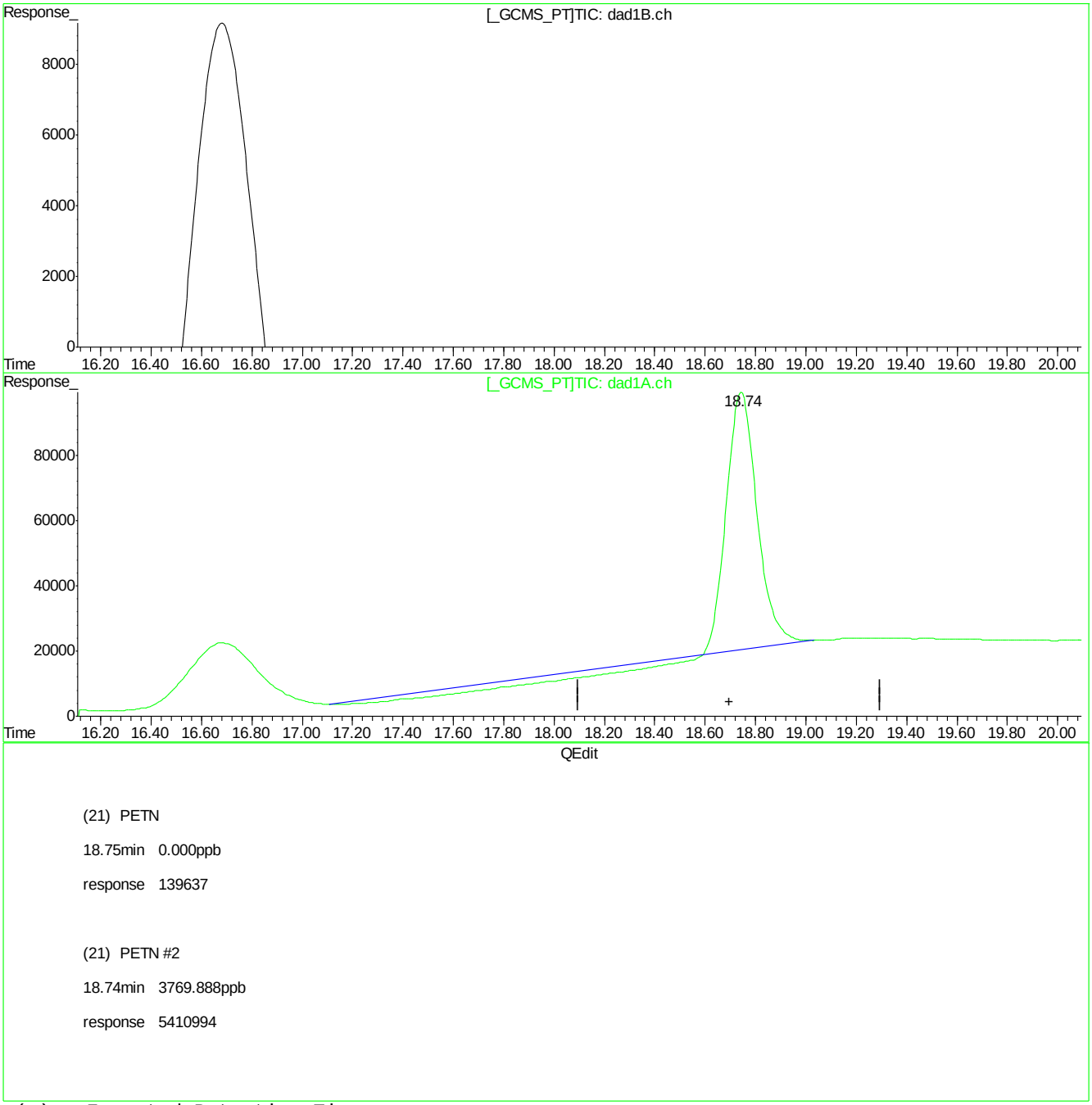
response 3191380

(+) = Expected Retention Time
BB060341.D 8330B_0707PLUS.M Tue Jul 24 13:58:44 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1A.ch
Acq On : 24-Jul-2018, 12:57:10 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 24 13:44 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 23 10:50:09 2018
Response via : Multiple Level Calibration



(21) PETN

18.75min 0.000ppb

response 139637

(21) PETN #2

18.74min 3769.888ppb

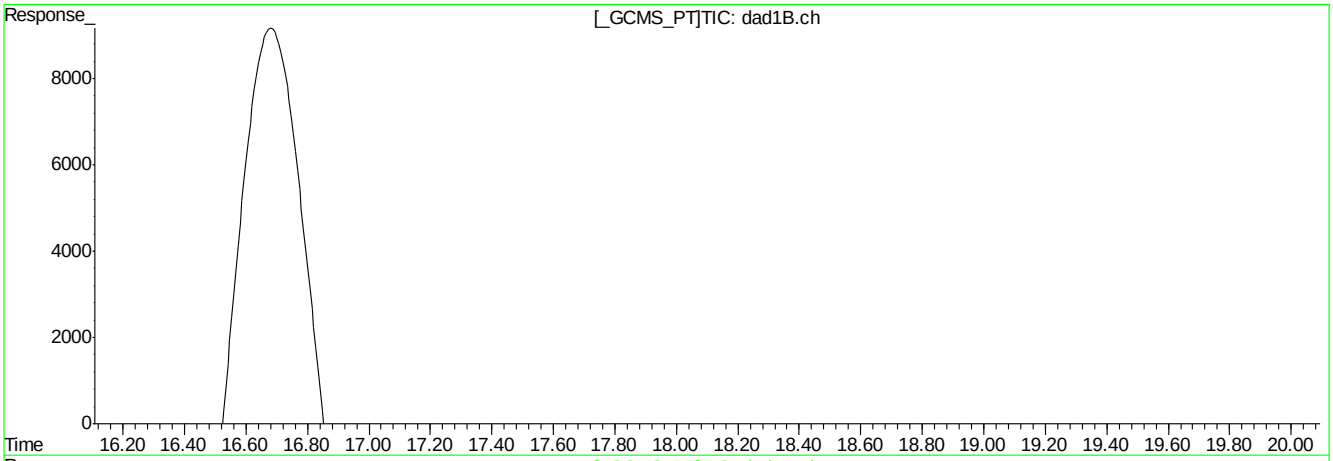
response 5410994

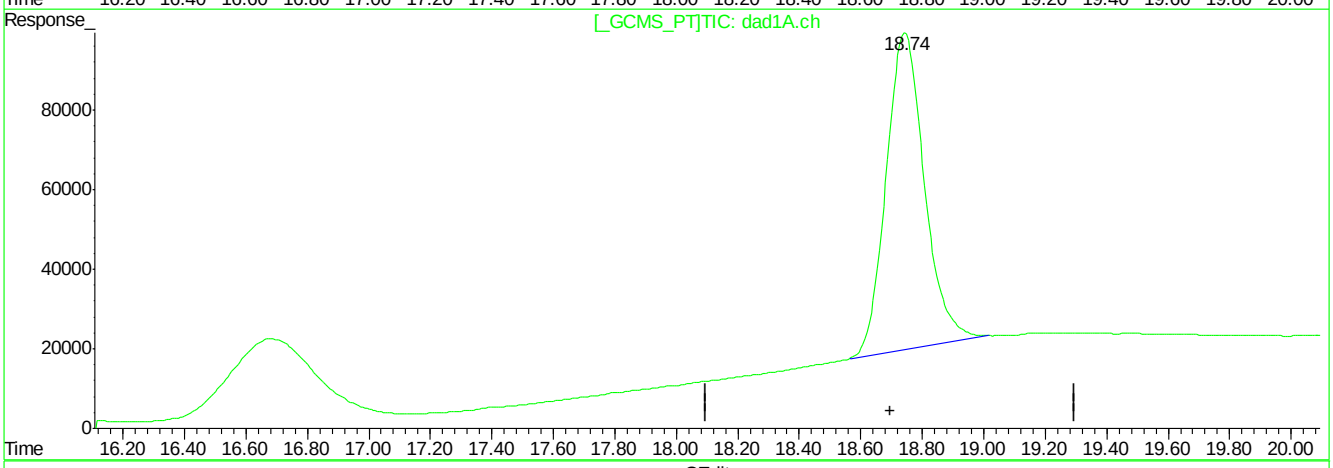
(+) = Expected Retention Time
BB060341.D 8330B_0707PLUS.M Tue Jul 24 13:58:52 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1A.ch
Acq On : 24-Jul-2018, 12:57:10 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 24 13:44 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 23 10:50:09 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.75min 0.000ppb

response 139637

(21) PETN #2

18.74min 4785.061ppb m

response 6868091

(+) = Expected Retention Time
BB060341.D 8330B_0707PLUS.M Tue Jul 24 13:59:02 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/27/18 15:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060352.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060352.D\dad1A.ch
Acq On : 24-Jul-2018, 18:47:13 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:23 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.78	10.78	2418572	4157590	935.436	982.378
	Spiked Amount 500.000	Range 70 - 136		Recovery =		187.09%#	196.48%#
	Target Compounds						
1)	TNX	1.29	1.29	4877614	7566747	959.528	959.927
2)	HMX	1.42	1.42	1731220	4836775	898.317	994.172
3)	DNX	1.65	1.65	2476072	4039988	947.733	890.252
4)	MNX	2.21	2.21	2616272	4055550	907.579	941.083
5)	RDX	2.80	2.80	1937615	3090209	939.668	905.750
6)	1,3,5-Trinitrobe	4.57	4.57	4216316	8197573	983.233	982.582
7)	1,3-Dinitrobenze	5.73	5.73	5321551	3673806	921.887	951.313
8)	3,5-Dinitroanili	6.03	6.03	4596483	7893126	984.677	1001.058
9)	Nitrobenzene	7.27	7.27	3317119	3153203	891.106	967.175
10)	Nitroglycerin	0.00	8.69	0	6139861	N.D. d	4706.718
11)	Tetryl	9.11	9.10	2371704	3809428	850.923	952.021
12)	2,4,6-Trinitroto	9.59	9.64	3252075	3734976	946.934	924.267m
13)	2-Amino-4,6-Dini	9.76	9.77	3587923	5516174	922.666	1085.446m
14)	4-Amino-2,6-Dini	10.25	10.25	2699712	5271246	1012.048	1041.744
16)	2,4-Dinitrotolue	11.45	11.45	4899864	3021190	897.118	991.588
17)	2,6-Dinitrotolue	11.88	11.89	3002389	3785896	966.580	969.987
18)	o-Nitrotoluene	15.11	15.10	2364636	3098310	994.805	960.838m
19)	p-Nitrotoluene	15.71	15.71	3754009	3172703	955.489	906.543
20)	m-Nitrotoluene	16.68	16.68	3470817	3729495	980.213	1032.327
21)	PETN	0.00	18.74	0	6781610	N.D. d	4724.808m

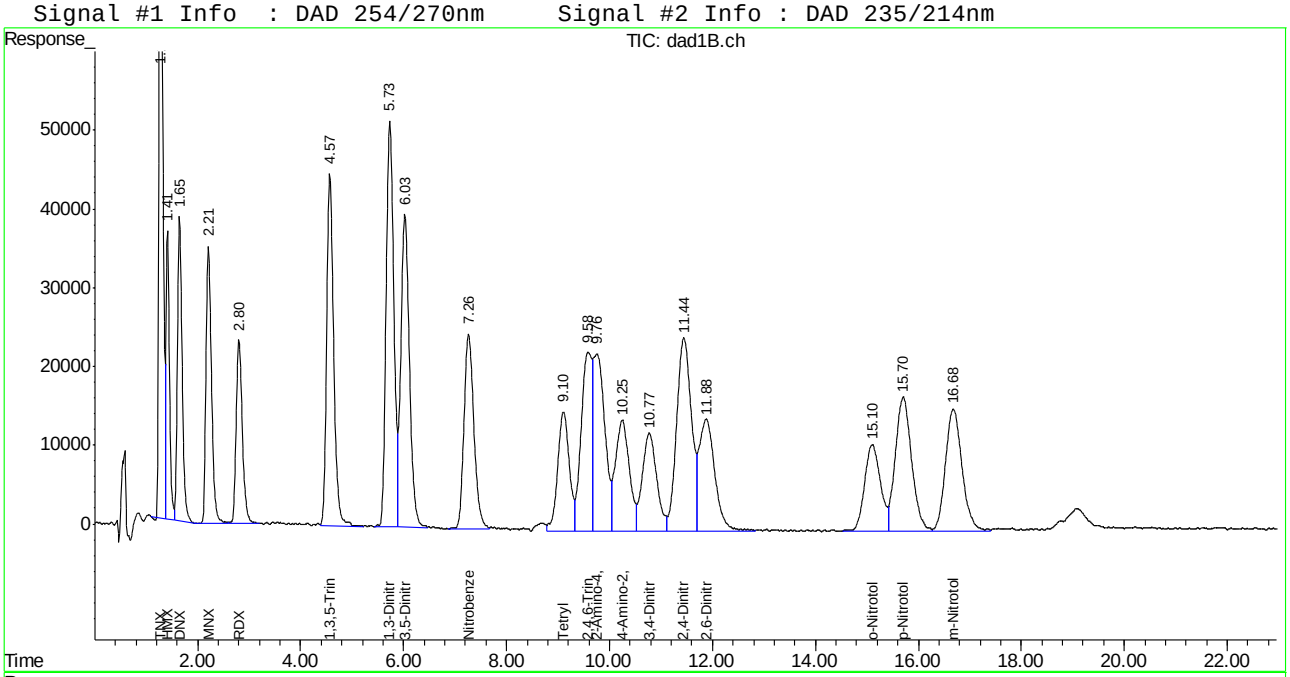
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060352.D 8330B_0707PLUS.M Thu Jul 26 16:02:24 2018 Page 1

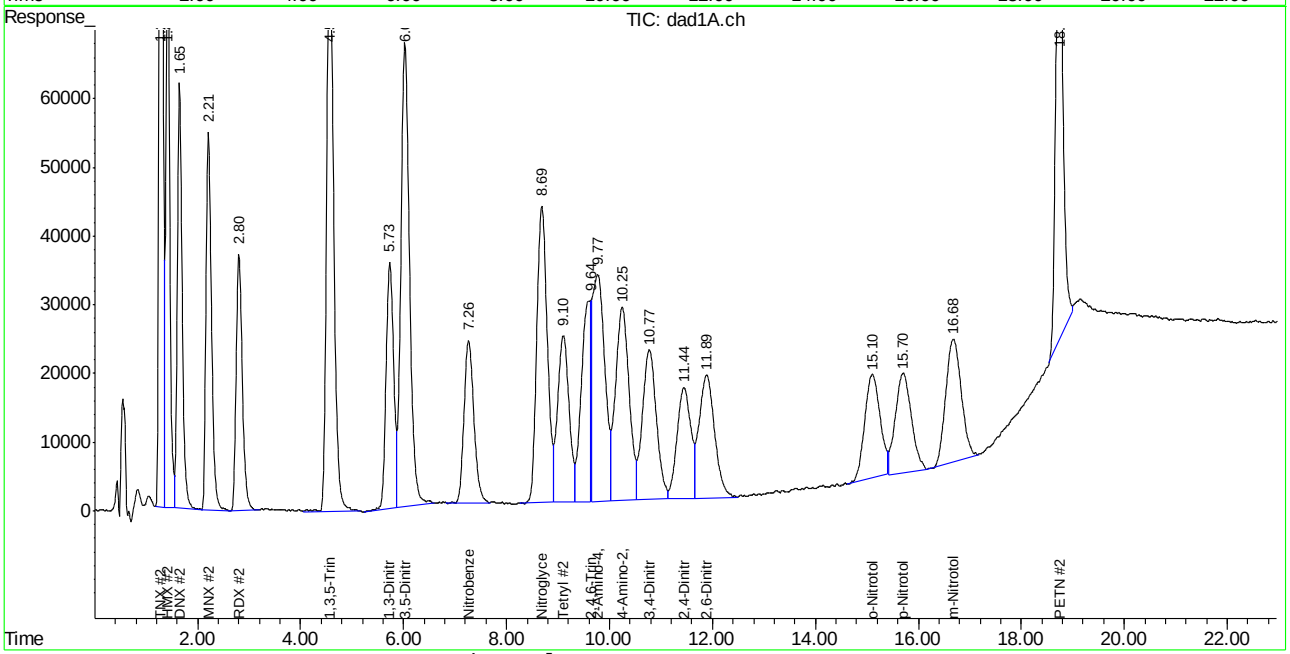
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060352.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060352.D\dad1A.ch
Acq On : 24-Jul-2018, 18:47:13 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 15:56 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

Sample Number: GBB1754-CC1748
Lab FileID: BB060352.D
Injection Time: 07/24/18 18:47
Method: SW846 8330A
Analyst approved: 07/26/18 16:20 Mike Eger
Supervisor approved: 07/27/18 15:26 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
2,4,6-Trinitrotoluene	118-96-7	2	9.64	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	9.77	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.10	Poor instrument integration
PETN	78-11-5	2	18.74	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/27/18 15:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060359.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060359.D\dad1A.ch
Acq On : 24-Jul-2018, 22:16:59 Operator: williamh
Sample : ecc1748-1000 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:30 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.74	10.74	2468290	4135877	954.864	977.576
	Spiked Amount 500.000	Range 70 - 136		Recovery =		190.97%#	195.52%#
	Target Compounds						
1)	TNX	1.29	1.29	4836049	7427974	951.351	942.322
2)	HMX	1.42	1.42	1698979	4683356	881.588	962.659
3)	DNX	1.65	1.65	2443595	3907022	935.357	860.951
4)	MNX	2.21	2.21	2580723	4034731	895.247	936.252
5)	RDX	2.80	2.80	1903705	3091747	923.223	906.201
6)	1,3,5-Trinitrobe	4.56	4.56	4087732	8167258	953.045	978.948
7)	1,3-Dinitrobenze	5.72	5.72	5308903	3596030	919.696	930.650
8)	3,5-Dinitroanili	6.02	6.02	4585893	7801985	982.406	989.539
9)	Nitrobenzene	7.25	7.25	3326206	3160361	893.547	969.376
10)	Nitroglycerin	0.00	8.66	0	6117437	N.D. d	4689.528
11)	Tetryl	9.08	9.08	2311106	3789892	829.181	947.219
12)	2,4,6-Trinitroto	9.55	9.56	3291520	3758298	958.623	929.979
13)	2-Amino-4,6-Dini	9.74	9.75	3528238	5554603	907.318	1093.008
14)	4-Amino-2,6-Dini	10.22	10.22	2666711	5244182	999.676	1036.624
16)	2,4-Dinitrotolue	11.41	11.41	4931773	3031109	902.960	994.783
17)	2,6-Dinitrotolue	11.84	11.85	3074647	3696041	990.125	947.668
18)	o-Nitrotoluene	15.07	15.07	2312472	2972646	972.859	921.867
19)	p-Nitrotoluene	15.67	15.68	3756339	3185473	956.082	910.191
20)	m-Nitrotoluene	16.65	16.65	3448866	3871172	974.035	1071.543
21)	PETN	0.00	18.71	0	6798286	N.D. d	4736.427m

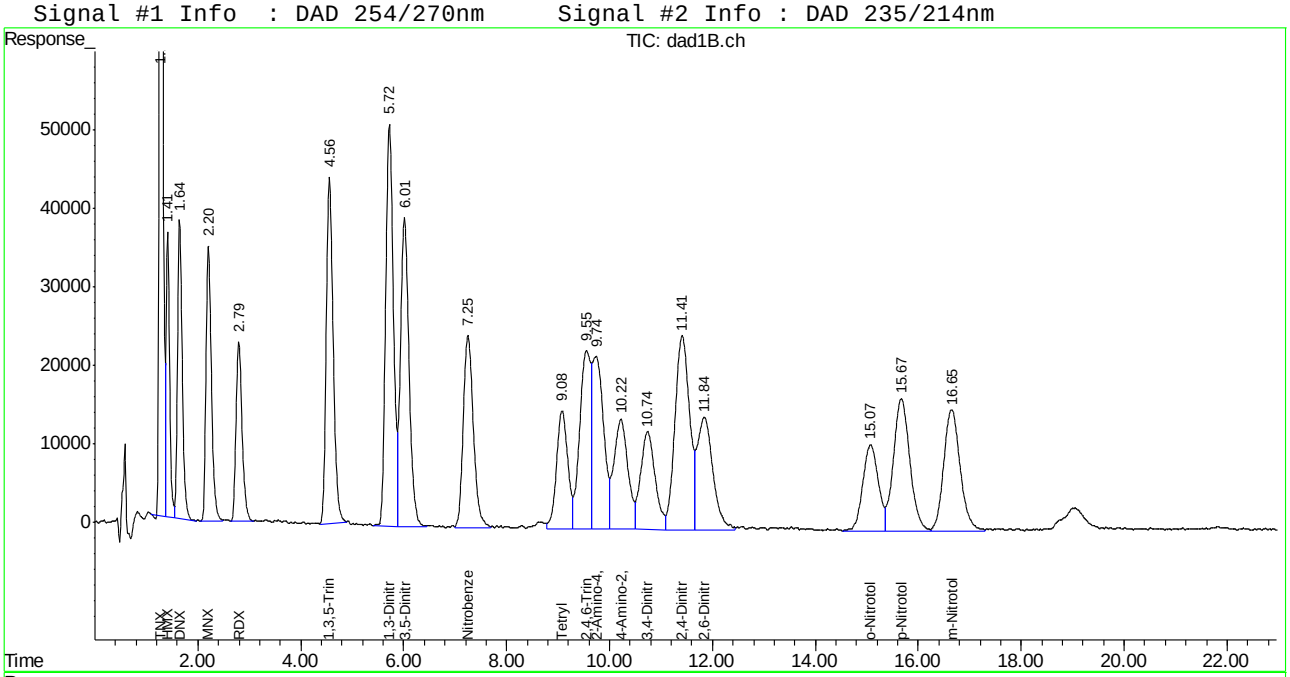
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

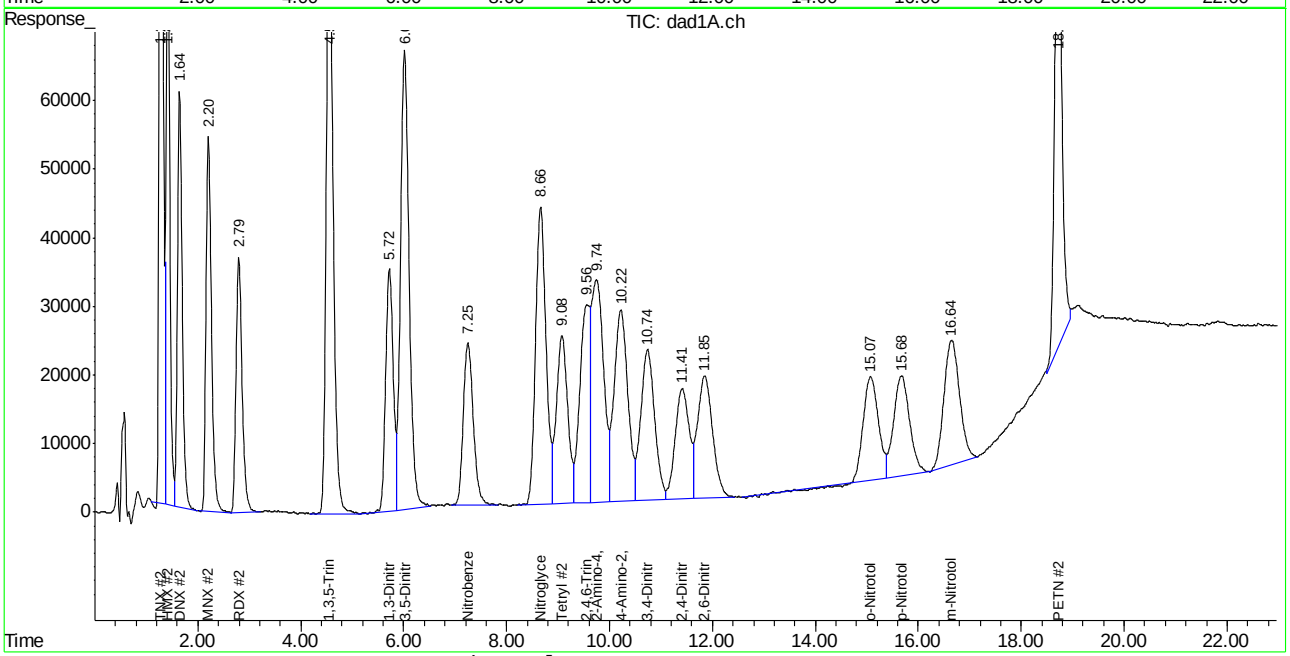
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060359.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060359.D\dad1A.ch
Acq On : 24-Jul-2018, 22:16:59 Operator: williamh
Sample : ecc1748-1000 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 16:01 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

Sample Number:	GBB1754-ECC1748	**Method:**	SW846 8330A
Lab FileID:	BB060359.D	**Analyst approved:**	07/26/18 16:20 Mike Eger
Injection Time:	07/24/18 22:16	**Supervisor approved:**	07/27/18 15:26 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	18.71	Poor instrument integration

SGS ACCUTEST-ORLANDO

DATE:	7/6/18
COLUMN TYPE:	Extend C18
AMOUNT INJECTED:	100 ul
INSTRUMENT:	HPLC5-BB

HPLC5-BB ANALYSIS LOG

METHODS:	8330A+B
ACQ. METHOD:	8330B
PROC. METHOD:	8330B_0707PLUS.M
CALIB. DATE:	7/6/18
RUN BATCH:	GBB 1748

ANALYST:	WTH
ACETONITRILE LOT #:	
MEOH LOT #:	
HEAD PRESSURE:	292

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
BB 060197	1	ccb	8330		1		✓
BB 98	62	TEST			1		✓
BB 99	1	ccb			1		✓
BB 060200	2	ic1748-20		LC1079	4/400		✓
BB 01	3	ic1748-50			10/400		✓
BB 02	4	ic1748-100			20/400		✓
BB 03	5	ic1748-200			40/400		✓
BB 04	6	ic1748-500			100/400		✓
BB 05	7	icc1748-1000			200/400		✓
BB 06	8	ic1748-2000			400/400		✓
BB 07	9	icv1748-1000 std		E6231, E6248 LC1058, LC1491	20+10+25+25/500		Tetryl, TNT, 4A26 3A46 26DNT, mNTA okay in spk ICV
BB 08	10	icv1748-1000 spk		E6264	20/400		HMX, 24DNT okay to std ICV
BB 09	11	op 70738-BS		op 70738	1		✓
BB 10	12	op 70734-MB			1		ND
BB 11	13	FA55464-1			1		RDX -150
BB 12	14	FA55469-2			1		RDX -130
BB 13	15	FA55467-3			1		RDX -114
BB 14	16	op 70734-MS			1		✓
BB 15	17	op 70734-MSD			1		✓
BB 16	7	cc1748-1000		LC1074	200/400		24-DNT ↓ SI, report S2

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Analyst's Signature: _____

SGS ACCUTEST-ORLANDO

DATE:	7/6/18
COLUMN TYPE:	Extend C18
AMOUNT INJECTED:	100 ul
INSTRUMENT: HPLC5-BB	

HPLC5-BB ANALYSIS LOG

METHODS:	8330A+B
ACQ. METHOD:	8330B
PROC. METHOD:	8330B_07072PLus.M
CALIB. DATE:	7/6/18
RUN BATCH:	GBB

ANALYST:	WFL
ACETONITRILE LOT #:	
MEOH LOT #:	
HEAD PRESSURE:	292

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
BB 060217	1	ccb	8330		1		
BB 18	18	op 70744-BS	↓	op 70744	1		✓
BB 19	19	op 70744-MB	↓	↓	1		✓
BB 20	20	FA55475-3	↓	↓	1		ND
BB 21	21	FA55475-7	↓	↓	1		ND
BB 22	22	FA55475-8	↓	↓	1		ND
BB 23	23	FA55518-1	↓	↓	1		ND
BB 24	24	FA55518-12	↓	↓	1		ND
BB 25	25	FA55518-13	↓	↓	1		ND
BB 26	7	ecc1748-1000	↓	LC1074	200/400		Tetryl ↓ S1
BB							
BB							
BB							
BB							
BB							
BB							
BB							
BB							
BB							
BB							
BB							

WFL 7/9/18

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Analyst's Signature:

Instrument Run Log GBB1754 page 1 of 1

SGS ACCUTEST-ORLANDO

DATE:	
COLUMN TYPE:	Extend C18
AMOUNT INJECTED:	100ul
INSTRUMENT: HPLC5-BB	

HPLC5-BB ANALYSIS LOG

METHODS:	8330 A+B
ACQ. METHOD:	8330B
PROC. METHOD:	8330B-0707P145
CALIB. DATE:	07/07/18
RUN BATCH: GBB	1754

ANALYST:	[signature]
ACETONITRILE LOT #:	
MEOH LOT #:	
HEAD PRESSURE:	2 ±7

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
BB 060339	71	ccb	8330B	—	—		
BB 40	71	ccb		—	—		
BB 41	72	CC1748-1000		LC1079	300/600	pu	pass
BB 42	73	OP71008-bs		OP71008	1	pu	✓
BB 43	74	↓ -mb					BDL
BB 44	75	FA55941-1					ND
BB 45	76	-2					Conf → ND
BB 46	77	-3					ND
BB 47	78	-4					CR. – ND
BB 48	79	-5					ND
BB 49	80	-6					ND
BB 50	81	-7					ND
BB 51	82	↓ -8		↓	↓		ND
BB 52	72	CC1748-1000		LC1079	300/600		pass
BB 53	71	ccb		—			—
BB 54	83	FA55941-9		OP71008			ND
BB 55	84	OP71008-ms					—
BB 56	85	↓ -msd					—
BB 57	86	FA55914-2					ND
BB 58	87	↓ -9		↓	↓		ND
BB 59	72	CC1748-1000		LC1079	300/600		pass

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

hplc5_bb_log.xls NF rev. 06/16

Analyst's Signature: [signature]

SGS - ORLANDO

SPE LIQUID SAMPLE PREP REPORT

Date/Time: 07/23/18 0930
Started {mm/dd/yy 24:00}

Date/Time: 07/23/18 1600
Finished {mm/dd/yy 24:00}

Prep Method: 3535A or 537 or 537MOD (circle)

Analytical Method: 8330

Batch#: OP 71008 Ext. By: MB MB 07/23/18 Conc. By: ✓ Vialed By: MB

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Manifold ID	Comments
OP 71008 MB	X	1000	6	N/A	250ul		10 ml	N/A	
OP 71008 BS	X	1000				25+25 250ul			
FAS5941-1	6	1060	13+ 6	6+ N/A					
-2	6	1050							
-3	6	1050							
-4	6	1060							
-5	12	1060							
-6	6	1060							
-7	5	1060							
-8	5	1050							
-9	5	1000							
FAS5914-2	6	1060							
-9	5	1060							
				MB	07/23/18				
FAS5941-5 MS	9	520	6	N/A	250ul	25+25 250ul	10 ml	N/A	
-5 MSD	9	520	+	+	+	+	+	+	
DUP									

Comments:

Surr.1 ID: E6285C Conc: 20 ppm Exp. Date: 12/01/18 Inj. By: MB Ver. By MB

Spk.1 ID: E6264 Conc: 20 ppm Exp. Date: 11/09/18 Inj. By: MB Ver. By MB

Spk.2 ID: 9078B Conc: 1000 ug/mL Exp. Date: 07/10/19 Inj. By: MB Ver. By MB

Spk.3 ID: 9079B Conc: 1000 ug/mL Exp. Date: 07/10/19 Inj. By: MB Ver. By MB

TurboVap Temp (Therm ID): ✓
Observed Temp °C: ✓ Corr. Temp °C: ✓

N-Evap Temp (Therm ID): ✓
Observed Temp °C: ✓ Corr. Temp °C: ✓

Methanol Lot # ✓
Acetonitrile Lot # 175291
Water Lot# DI H2O
Solvent# ✓

SPE Lot # 5214-0075
Syringe filter Lot # ✓
Pre-filter Lot# ✓
Carbon Lot# ✓

pH Paper # 215517
Reagent # ✓
Reagent # ✓
Other ✓

Relinquished By: [signature] Date: 07/23/18

Accepted By: [signature] Date: 07-24-18

ORLD-EXT-0001-3-08-FORM-extwater_spe.xls 032718

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15064
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:29	MA15064-STD1	1		STD1
12:31	MA15064-STD2	1		STD2
12:32	MA15064-STD3	1		STD3
12:34	MA15064-STD4	1		STD4
12:35	MA15064-STD5	1		STD5
12:37	MA15064-STD6	1		STD6
12:39	MA15064-HSTD1	1		
12:41	MA15064-ICV1	1		
12:43	MA15064-ICB1	1		
12:45	MA15064-CRI1	1		
12:46	MA15064-CCV1	1		
12:47	MA15064-CCB1	1		
12:49	MP34053-MB1	1		
12:50	MP34053-B1	1		
12:52	FA55914-1	1		
12:54	MP34053-D1	1		
12:55	MP34053-SD1	5		
12:56	MP34053-S1	1		
12:57	MP34053-S2	1		
12:59	FA55914-2	1		
13:01	FA55914-9	1		
---------->	Last reportable sample/prep for job FA55914			
13:02	ZZZZZZ	1		
13:04	MA15064-CCV2	1		
13:05	MA15064-CCB2	1		
13:07	ZZZZZZ	1		
13:08	ZZZZZZ	1		
13:10	ZZZZZZ	1		
13:11	ZZZZZZ	1		
13:13	ZZZZZZ	1		
13:14	ZZZZZZ	1		
13:15	ZZZZZZ	1		
13:17	ZZZZZZ	1		
13:18	MP34054-MB1	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15064
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:19	MP34054-B1	1		
13:21	MA15064-CCV3	1		
13:22	MA15064-CCB3	1		
13:24	FA55967-1	1		(sample used for QC only; not part of login FA55914)
13:26	MP34054-D1	1		
13:27	MP34054-SD1	5		
13:28	MP34054-S1	1		
13:29	MP34054-S2	1		
13:31	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:34	ZZZZZZ	1		
13:36	ZZZZZZ	1		
13:37	ZZZZZZ	1		
13:38	MA15064-CCV4	1		
13:40	MA15064-CCB4	1		
13:41	ZZZZZZ	1		
13:43	ZZZZZZ	1		
13:44	ZZZZZZ	1		
13:45	ZZZZZZ	1		
13:47	ZZZZZZ	1		
13:48	ZZZZZZ	1		
13:49	ZZZZZZ	1		
13:51	ZZZZZZ	1		
13:53	MP34055-B1	1		
13:55	MA15064-CCV5	1		
13:57	MA15064-CCB5	1		
13:59	ZZZZZZ	1		
14:00	MP34055-D1	1		
14:01	MP34055-SD1	5		
14:03	MP34055-S1	1		
14:04	MP34055-S2	1		
14:06	FA55925-2	1		(sample used for QC only; not part of login FA55914)
14:08	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15064
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:09	ZZZZZZ	1		
14:10	ZZZZZZ	1		
14:12	ZZZZZZ	1		
14:13	MA15064-CCV6	1		
14:14	MA15064-CCB6	1		
14:16	FA55819-1L	1		(sample used for QC only; not part of login FA55914)
14:18	MP34055-D2	1		
14:19	MP34055-MB2	1		
14:20	MP34055-B2	1		
14:21	MA15064-CRI2	1		
14:23	MA15064-CCV7	1		
14:25	MA15064-CCB7	1		
---------->	Last reportable CCB for job FA55914			
15:02	MA15064-CCV8	1		
15:03	MA15064-CCB8	1		
15:08	MP34055-MB1	1		
15:09	MA15064-CRI3	1		
15:11	MA15064-CCV9	1		
15:12	MA15064-CCB9	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15064
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg	
12:39	MA15064-HSTD1	1	X	
12:41	MA15064-ICV1	1	X	
12:43	MA15064-ICB1	1	X	
12:45	MA15064-CRI1	1	X	
12:46	MA15064-CCV1	1	X	
12:47	MA15064-CCB1	1	X	
12:49	MP34053-MB1	1	X	
12:50	MP34053-B1	1	X	
12:52	FA55914-1	1	X	
12:54	MP34053-D1	1	X	
12:55	MP34053-SD1	5	X	
12:56	MP34053-S1	1	X	
12:57	MP34053-S2	1	X	
12:59	FA55914-2	1	X	
13:01	FA55914-9	1	X	
13:02	ZZZZZZ	1		
13:04	MA15064-CCV2	1	X	
13:05	MA15064-CCB2	1	X	
13:07	ZZZZZZ	1		
13:08	ZZZZZZ	1		
13:10	ZZZZZZ	1		
13:11	ZZZZZZ	1		
13:13	ZZZZZZ	1		
13:14	ZZZZZZ	1		
13:15	ZZZZZZ	1		
13:17	ZZZZZZ	1		
13:18	MP34054-MB1	1	X	
13:19	MP34054-B1	1	X	
13:21	MA15064-CCV3	1	X	
13:22	MA15064-CCB3	1	X	
13:24	FA55967-1	1	X	(a)
13:26	MP34054-D1	1	X	
13:27	MP34054-SD1	5	X	
		Element:	Hg	

REPORTED ELEMENTS SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15064
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg	
13:28	MP34054-S1	1	X	
13:29	MP34054-S2	1	X	
13:31	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:34	ZZZZZZ	1		
13:36	ZZZZZZ	1		
13:37	ZZZZZZ	1		
13:38	MA15064-CCV4	1	X	
13:40	MA15064-CCB4	1	X	
13:41	ZZZZZZ	1		
13:43	ZZZZZZ	1		
13:44	ZZZZZZ	1		
13:45	ZZZZZZ	1		
13:47	ZZZZZZ	1		
13:48	ZZZZZZ	1		
13:49	ZZZZZZ	1		
13:51	ZZZZZZ	1		
13:53	MP34055-B1	1	X	
13:55	MA15064-CCV5	1	X	
13:57	MA15064-CCB5	1	X	
13:59	ZZZZZZ	1		
14:00	MP34055-D1	1	X	
14:01	MP34055-SD1	5	X	
14:03	MP34055-S1	1	X	
14:04	MP34055-S2	1	X	
14:06	FA55925-2	1	X	(a)
14:08	ZZZZZZ	1		
14:09	ZZZZZZ	1		
14:10	ZZZZZZ	1		
14:12	ZZZZZZ	1		
14:13	MA15064-CCV6	1	X	
14:14	MA15064-CCB6	1	X	
14:16	FA55819-1L	1	X	(a)
		Element:	Hg	

REPORTED ELEMENTS SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15064
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg
14:18	MP34055-D2	1	X
14:19	MP34055-MB2	1	X
14:20	MP34055-B2	1	X
14:21	MA15064-CRI2	1	X
14:23	MA15064-CCV7	1	X
14:25	MA15064-CCB7	1	X
15:02	MA15064-CCV8	1	X
15:03	MA15064-CCB8	1	X
15:08	MP34055-MB1	1	X
15:09	MA15064-CRI3	1	X
15:11	MA15064-CCV9	1	X
15:12	MA15064-CCB9	1	X

(a) Sample used for QC only; not part of login FA55914.

Element: Hg

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA15064 Units: ug/l

Time: / Sample ID:			12:43 ICB1		12:47 CCB1		13:05 CCB2		13:22 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	0.00800	<0.50	0.0117	<0.50	0.00540	<0.50	0.00560	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA15064 Units: ug/l

Time: / Sample ID:			13:40 CCB4		13:57 CCB5		14:14 CCB6		14:25 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	0.00670	<0.50	0.0112	<0.50	0.00970	<0.50	0.00850	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA15064 Units: ug/l

Time:		12:41			12:46			13:04	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.07	102.3	3.0	3.00	100.0	3	2.95	98.3

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA15064 Units: ug/l

Time:		13:21			13:38			13:55	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.94	98.0	3	2.90	96.7	3	2.96	98.7

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA15064 Units: ug/l

Time:		14:13			14:23	
Sample ID:	CCV	CCV6		CCV	CCV7	
Metal	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.87	95.7	3	2.94	98.0

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
QC Limits: 95 to 105 % Recovery Run ID: MA15064 Units: ug/l

Time:		12:39	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6	6.05	100.8

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
QC Limits: 80 to 120 % Recovery Run ID: MA15064 Units: ug/l

Time:			12:45		14:21	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.198	99.0	0.189	94.5

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15082
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:57	MA15082-STD1	1		STDA
09:05	MA15082-STD2	1		STDB
09:09	MA15082-STD3	1		STDC
09:13	MA15082-STD4	1		STDD
09:17	MA15082-STD5	1		STDE
09:21	MA15082-STD6	1		STDF
09:25	MA15082-HSTD1	1		
09:29	MA15082-HSTD2	1		
09:33	MA15082-ICV1	1		
09:37	MA15082-ICB1	1		
09:41	MA15082-CRIA1	1		
09:44	MA15082-ICSA1	1		
09:48	MA15082-ICSAB1	1		
09:52	MA15082-CCV1	1		
09:56	MA15082-CCV2	1		
10:00	MA15082-CCB1	1		
10:03	MA15082-ICV2	1		
10:07	MP34080-MB1	2		
10:11	MP34080-B1	2		
10:15	FA55941-5	2		(sample used for QC only; not part of login FA55914)
10:19	MP34080-D1	2		
10:22	MP34080-SD1	10		
10:26	MP34080-S1	2		
10:30	MP34080-S2	2		
10:34	MP34080-PS1	2		
10:37	ZZZZZZ	2		
10:41	MA15082-CCV3	1		
10:45	MA15082-CCV4	1		
10:49	MA15082-CCB2	1		
10:53	ZZZZZZ	2		
10:57	ZZZZZZ	2		
11:00	ZZZZZZ	2		
11:04	ZZZZZZ	2		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15082
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:08	ZZZZZZ	2		
11:12	ZZZZZZ	2		
11:15	ZZZZZZ	2		
11:19	FA55914-1	2		
11:23	FA55914-2	2		
11:27	FA55914-3	2		
11:31	MA15082-CCV5	1		
11:34	MA15082-CCV6	1		
11:38	MA15082-CCB3	1		
11:42	FA55914-4	2		
11:46	FA55914-6	2		
11:50	FA55914-8	2		
11:53	FA55914-9	2		
11:57	ZZZZZZ	2		
12:01	ZZZZZZ	2		
12:05	ZZZZZZ	2		
12:20	MA15082-CCV7	1		
12:24	MA15082-CCV8	1		
12:28	MA15082-CCB4	1		
12:50	ZZZZZZ	40		
12:54	ZZZZZZ	100		
12:58	ZZZZZZ	10		
13:02	ZZZZZZ	5		
13:05	ZZZZZZ	20		
13:09	MA15082-CCV9	1		
13:13	MA15082-CCV10	1		
13:17	MA15082-CCB5	1		
13:21	FA55914-1	5		
13:24	FA55914-2	20		
---------->	Last reportable sample/prep for job FA55914			
13:28	MA15082-CRIA2	1		
13:32	MA15082-ICSA2	1		
13:36	MA15082-ICSAB2	1		
13:40	MA15082-CCV11	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15082
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:43	MA15082-CCV12	1		
13:47	MA15082-CCB6	1		
---------->	Last reportable CCB for job FA55914			
	Refer to raw data for calibration curve and standards.			

REPORTED ELEMENTS SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15082
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element: Dilution	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn	
09:25	MA15082-HSTD1	1																		X					
09:29	MA15082-HSTD2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
09:33	MA15082-ICV1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
09:37	MA15082-ICB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
09:41	MA15082-CRIA1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
09:44	MA15082-ICSA1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
09:48	MA15082-ICSAB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
09:52	MA15082-CCV1	1																		X					
09:56	MA15082-CCV2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
10:00	MA15082-CCB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:03	MA15082-ICV2	1																		X					
10:07	MP34080-MB1	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:11	MP34080-B1	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:15	FA55941-5	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X (a)
10:19	MP34080-D1	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:22	MP34080-SD1	10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:26	MP34080-S1	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:30	MP34080-S2	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:34	MP34080-PS1	2																							
10:37	ZZZZZZ	2																							
10:41	MA15082-CCV3	1																		X					
10:45	MA15082-CCV4	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
10:49	MA15082-CCB2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:53	ZZZZZZ	2																							
10:57	ZZZZZZ	2																							
11:00	ZZZZZZ	2																							
11:04	ZZZZZZ	2																							
11:08	ZZZZZZ	2																							
11:12	ZZZZZZ	2																							
11:15	ZZZZZZ	2																							
11:19	FA55914-1	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
11:23	FA55914-2	2	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X		X	X	X	X
11:27	FA55914-3	2			X																				
		Element:	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn	

REPORTED ELEMENTS SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15082
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn
11:31	MA15082-CCV5	1																		X				
11:34	MA15082-CCV6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
11:38	MA15082-CCB3	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11:42	FA55914-4	2			X																			
11:46	FA55914-6	2			X																			
11:50	FA55914-8	2			X																			
11:53	FA55914-9	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11:57	ZZZZZZ	2																						
12:01	ZZZZZZ	2																						
12:05	ZZZZZZ	2																						
12:20	MA15082-CCV7	1																		X				
12:24	MA15082-CCV8	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
12:28	MA15082-CCB4	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12:50	ZZZZZZ	40																						
12:54	ZZZZZZ	100																						
12:58	ZZZZZZ	10																						
13:02	ZZZZZZ	5																						
13:05	ZZZZZZ	20																						
13:09	MA15082-CCV9	1																		X				
13:13	MA15082-CCV10	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
13:17	MA15082-CCB5	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13:21	FA55914-1	5																			X			
13:24	FA55914-2	20							X												X			
13:28	MA15082-CRIA2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13:32	MA15082-ICSA2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13:36	MA15082-ICSAB2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13:40	MA15082-CCV11	1																		X				
13:43	MA15082-CCV12	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
13:47	MA15082-CCB6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

(a) Sample used for QC only; not part of login FA55914.

Element: Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn

INTERNAL STANDARD SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15082
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
08:57	MA15082-STD1	100	100	100	100	100	100	100	100
09:05	MA15082-STD2	93.1	96.3	97.9	97.9	98	99.3	98.7	98.3
09:09	MA15082-STD3	95.8	96	97.3	96.2	96.1	99.2	96.9	96.7
09:13	MA15082-STD4	90.9	94.6	95.7	96.2	96	98.2	95.4	93.2
09:17	MA15082-STD5	91.2	95.1	96.4	96.4	96.5	99.4	93.8	93
09:21	MA15082-STD6	83.9	97.2	97.8	97.5	96.3	100.6	92.9	88.3
09:25	MA15082-HSTD1	90.3	98.5	99.5	98.6	98.5	101.6	95.8	93
09:29	MA15082-HSTD2	94.3	97.1	96.5	96.7	96.4	100.9	92.6	89.5
09:33	MA15082-ICV1	99.1	97.4	98.6	98.5	97.2	101.7	95	93.5
09:37	MA15082-ICB1	95	98.2	99.9	99.6	100.7	102.3	99.1	101
09:41	MA15082-CRIA1	92.5	99.2	100.4	99.8	101	103.4	100	101.3
09:44	MA15082-ICSA1	79	98.7	97.2	94.6	93.9	98.6	86	83.9
09:48	MA15082-ICSAB1	82.1	97.9	96.7	95.3	93.3	97.7	85.8	82.1
09:52	MA15082-CCV1	91.8	95.5	98.4	98.2	96.4	102.2	96.8	93.7
09:56	MA15082-CCV2	95.9	96.7	98.6	98.4	96.9	102.3	95.5	90.8
10:00	MA15082-CCB1	90.4	95.6	99.7	99.3	97.8	103.2	98.9	98
10:03	MA15082-ICV2	123.1	91.1	91.8	93.3	94.2	100.2	91.7	83.7
10:07	MP34080-MB1	82.9	90	91.5	91.1	91.8	100.4	94.8	76.4
10:11	MP34080-B1	92	90.6	92.5	91.3	90.6	100.3	91.3	73.9
10:15	FA55941-5	90.6	91.5	94	94.1	91.7	100.1	93.9	76.7
10:19	MP34080-D1	102.8	93.9	96	97.8	93.2	103.1	95.7	78
10:22	MP34080-SD1	98.9	100.8	102.9	103.5	99.5	105.4	99.2	94
10:26	MP34080-S1	89.3	92.3	94.7	93.6	90.8	99.8	90.5	74.8
10:30	MP34080-S2	90.2	92.7	94.6	94.1	90.3	100.8	91	73.1
10:34	MP34080-PS1	No results reported for the elements associated with this internal standard.							
10:37	ZZZZZZ	96.4	97.2	95.2	94.6	90.7	100.5	86.2	72.3
10:41	MA15082-CCV3	104.1	100	102.4	102	98.8	105.8	96.8	95.2
10:45	MA15082-CCV4	96	100.9	101.4	101.9	98.4	105.9	94.8	91.6
10:49	MA15082-CCB2	96.4	100.1	102	102.8	100.1	106.2	99.6	98
10:53	ZZZZZZ	79.7	94.2	92	90.5	86.4	91.1	78.6	66.4 !
10:57	ZZZZZZ	94.7	95.6	97.9	97.4	94.8	102.8	93.8	76.9
11:00	ZZZZZZ	96	95.8	98	97.9	95	103.1	93.1	76.8
11:04	ZZZZZZ	95.9	95.6	96.8	96.4	92.9	102.7	91.1	76.3

INTERNAL STANDARD SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15082
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
11:08	ZZZZZZ	97.4	95.1	97.2	97.6	93.4	102.4	93.4	78.1
11:12	ZZZZZZ	93.6	94.7	93.9	94.5	91	100	88.6	74.7
11:15	ZZZZZZ	102.5	98.2	100.5	99.4	96.5	104.1	95.7	79.5
11:19	FA55914-1	89.7	93.5	94.3	95.1	90.1	100.5	88.5	73.4
11:23	FA55914-2	95.6	95.3	95.7	94.9	89.9	99.4	86.6	72.2
11:27	FA55914-3	96.4	95.2	95.2	95.3	90.5	99.7	88.1	74.4
11:31	MA15082-CCV5	102.3	100.4	102.2	101.2	97.2	105	94.2	94.3
11:34	MA15082-CCV6	93.3	101.3	101.6	101.8	96.5	103.4	93.1	92.5
11:38	MA15082-CCB3	99.2	100.3	102.2	101	98.9	104.2	95.4	98.1
11:42	FA55914-4	96.8	98.1	96.7	96.6	94.3	104	91.1	77.6
11:46	FA55914-6	94.5	91.8	93.4	92.5	90	100	89.3	74.6
11:50	FA55914-8	96	91.6	95.1	93.7	89.9	101.5	90.6	75.9
11:53	FA55914-9	91.9	94.3	97.1	96.4	92.1	103.8	91.7	77.4
11:57	ZZZZZZ	94.1	97.1	99.1	98.6	95.1	104.3	94.1	77.5
12:01	ZZZZZZ	92.9	96.2	97.3	97	93.9	102.4	93.1	77.7
12:05	ZZZZZZ	95.7	94.9	96.5	97.3	93.4	102.8	93.2	78.3
12:20	MA15082-CCV7	98.7	102.2	101.3	101.3	97.7	105.2	93.4	94.4
12:24	MA15082-CCV8	97.5	98.8	99.5	98.7	94.1	101	89.2	90.5
12:28	MA15082-CCB4	93.6	100.2	101.4	100.5	97.9	103.2	94.8	96.2
12:50	ZZZZZZ	97.6	102.4	102.6	101.8	99.1	104.9	94.3	98.1
12:54	ZZZZZZ	94.4	102.1	102.8	101.6	98.6	103.9	93.9	95.2
12:58	ZZZZZZ	93.9	98.5	98.3	97.3	92.6	100.8	86.2	83
13:02	ZZZZZZ	93.5	96	97.7	96.6	93.8	101.8	90.5	84.2
13:05	ZZZZZZ	95.4	101.3	101.2	100.7	97.5	103.8	93.8	93.5
13:09	MA15082-CCV9	90.5	99.9	100.8	99.9	96.1	103.2	90.5	92.5
13:13	MA15082-CCV10	91.5	100.6	100.2	99.5	95.5	103.2	90.1	90
13:17	MA15082-CCB5	94.7	99	99.4	99.6	97	103	92.4	97
13:21	FA55914-1	94.5	95.7	96.4	96.2	92.7	102.1	89.3	83.9
13:24	FA55914-2	103.8	101.1	100.6	101.1	97.5	103.8	92	92.9
13:28	MA15082-CRIA2	92.8	102.5	102.3	102.4	97.8	104.4	94.3	97.9
13:32	MA15082-ICSA2	81.9	98.5	95.3	93	90	97.5	79.8	79.8
13:36	MA15082-ICSAB2	75.5	96.9	94.2	92.7	88.5	96.9	79.2	78.7
13:40	MA15082-CCV11	84.1	92.5	95.5	94.4	92	101.2	89.2	89.6

INTERNAL STANDARD SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15082
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
13:43	MA15082-CCV12	87	93.4	95.8	95	91.7	101.2	87.7	85.9
13:47	MA15082-CCB6	91.9	93.9	96.1	95.4	93.4	101.8	92.4	89.6

! = Outside limits.

LEGEND:

Istd#	Parameter	Limits	CCV/CCB Limits
Istd#1	Lithium	70-130 %	70-130 %
Istd#2	Scandium	70-130 %	70-130 %
Istd#3	Germanium (72-2)	70-130 %	70-130 %
Istd#4	Germanium (74-2)	70-130 %	70-130 %
Istd#5	Indium	70-130 %	70-130 %
Istd#6	Terbium	70-130 %	70-130 %
Istd#7	Bismuth	70-130 %	70-130 %
Istd#8	Tellurium	70-130 %	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: result < RL Run ID: MA15082 Units: ug/l

Time: / Sample ID:			09:37 ICB1		10:00 CCB1		10:49 CCB2		11:38 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	100	4.4	0.278	<100	0.764	<100	0.371	<100	0.382	<100
Antimony	1.0	.1	0.00975	<1.0	0.0102	<1.0	0.0113	<1.0	0.0103	<1.0
Arsenic	1.0	.1	0.00691	<1.0	0.0000100	<1.0	0.00306	<1.0	-0.00442	<1.0
Barium	1.0	.1	0.000980	<1.0	-0.00174	<1.0	0.00439	<1.0	0.00242	<1.0
Beryllium	1.0	.1	0.00733	<1.0	0.000170	<1.0	0.0263	<1.0	0.00705	<1.0
Cadmium	1.0	.1	0.00662	<1.0	0.00292	<1.0	0.00477	<1.0	0.00664	<1.0
Calcium	100	7.2	0.00188	<100	0.0952	<100	-0.0803	<100	0.509	<100
Chromium	1.0	.1	0.00514	<1.0	-0.00172	<1.0	0.00246	<1.0	0.000380	<1.0
Cobalt	1.0	.1	0.00608	<1.0	0.00317	<1.0	0.00599	<1.0	0.00597	<1.0
Copper	1.0	.1	-0.0553	<1.0	-0.0702	<1.0	-0.0821	<1.0	-0.108	<1.0
Iron	100	7.9	0.558	<100	1.10	<100	0.690	<100	0.753	<100
Lead	1.0	.1	0.0226	<1.0	0.0164	<1.0	0.0163	<1.0	0.0154	<1.0
Magnesium	100	5.2	0.420	<100	1.03	<100	0.539	<100	0.538	<100
Manganese	1.0	.1	-0.00344	<1.0	0.00500	<1.0	0.00103	<1.0	0.000510	<1.0
Molybdenum	1.0	.1	anr							
Nickel	1.0	.1	0.00387	<1.0	0.00391	<1.0	0.00413	<1.0	0.00304	<1.0
Potassium	100	6.6	0.822	<100	2.81	<100	2.65	<100	3.16	<100
Selenium	1.0	.11	0.00241	<1.0	-0.0131	<1.0	0.0219	<1.0	0.0312	<1.0
Silver	1.0	.1	0.109	<1.0	0.0403	<1.0	0.0119	<1.0	0.00917	<1.0
Sodium	100	4.8	1.50	<100	5.32	<100	4.18	<100	6.46	<100
Strontium	1.0	.1	anr							
Thallium	1.0	.1	0.0487	<1.0	0.0784	<1.0	0.0764	<1.0	0.0712	<1.0
Tin	1.0	.1	anr							
Titanium	1.0	.3	anr							
Vanadium	1.0	.1	-0.0552	<1.0	-0.0529	<1.0	-0.0537	<1.0	-0.0511	<1.0
Zinc	2.0	.29	-0.109	<2.0	-0.117	<2.0	-0.116	<2.0	-0.0850	<2.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: result < RL Run ID: MA15082 Units: ug/l

Time: / Sample ID:			12:28 CCB4		13:17 CCB5		13:47 CCB6	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	100	4.4	0.284	<100	0.320	<100	0.761	<100
Antimony	1.0	.1	0.00750	<1.0	0.00726	<1.0	0.0103	<1.0
Arsenic	1.0	.1	0.00217	<1.0	-0.00107	<1.0	0.00255	<1.0
Barium	1.0	.1	0.00341	<1.0	0.00178	<1.0	0.00219	<1.0
Beryllium	1.0	.1	0.0143	<1.0	0.0120	<1.0	0.0181	<1.0
Cadmium	1.0	.1	0.00620	<1.0	0.00548	<1.0	0.00413	<1.0
Calcium	100	7.2	-0.293	<100	0.185	<100	-0.0290	<100
Chromium	1.0	.1	0.00126	<1.0	0.00129	<1.0	-0.00152	<1.0
Cobalt	1.0	.1	0.00544	<1.0	0.00489	<1.0	0.00352	<1.0
Copper	1.0	.1	-0.116	<1.0	-0.120	<1.0	-0.107	<1.0
Iron	100	7.9	0.626	<100	0.603	<100	1.01	<100
Lead	1.0	.1	0.0175	<1.0	0.0154	<1.0	0.0149	<1.0
Magnesium	100	5.2	0.527	<100	0.568	<100	1.25	<100
Manganese	1.0	.1	0.00480	<1.0	0.0109	<1.0	0.0114	<1.0
Molybdenum	1.0	.1	anr					
Nickel	1.0	.1	0.00433	<1.0	0.00536	<1.0	0.00164	<1.0
Potassium	100	6.6	2.85	<100	2.45	<100	4.55	<100
Selenium	1.0	.11	0.0189	<1.0	0.0289	<1.0	-0.00257	<1.0
Silver	1.0	.1	0.00961	<1.0	0.00948	<1.0	0.0121	<1.0
Sodium	100	4.8	2.42	<100	3.83	<100	6.53	<100
Strontium	1.0	.1	anr					
Thallium	1.0	.1	0.0730	<1.0	0.0752	<1.0	0.0745	<1.0
Tin	1.0	.1	anr					
Titanium	1.0	.3	anr					
Vanadium	1.0	.1	-0.0567	<1.0	-0.0563	<1.0	-0.0552	<1.0
Zinc	2.0	.29	-0.0773	<2.0	-0.0854	<2.0	-0.0680	<2.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15082 Units: ug/l

Time:		09:33			09:52			09:56	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	10000	9530	95.3				10000	9490	94.9
Antimony	100	97.4	97.4				100	98.6	98.6
Arsenic	100	97.3	97.3				100	98.7	98.7
Barium	100	100	100.0				100	98.0	98.0
Beryllium	100	96.4	96.4				100	100	100.0
Cadmium	100	97.7	97.7				100	101	101.0
Calcium	10000	9670	96.7				10000	9750	97.5
Chromium	100	96.8	96.8				100	99.1	99.1
Cobalt	100	99.3	99.3				100	101	101.0
Copper	100	98.9	98.9				100	101	101.0
Iron	10000	9770	97.7				10000	10100	101.0
Lead	100	96.1	96.1				100	97.9	97.9
Magnesium	10000	10100	101.0				10000	9860	98.6
Manganese	100	96.8	96.8				100	98.5	98.5
Molybdenum	anr								
Nickel	100	97.5	97.5				100	101	101.0
Potassium	10000	9570	95.7				10000	9720	97.2
Selenium	100	100	100.0				100	99.8	99.8
Silver				50	51.6	103.2			
Sodium	10000	9890	98.9				10000	9960	99.6
Strontium	anr								
Thallium	100	97.6	97.6				100	101	101.0
Tin	anr								
Titanium	anr								
Vanadium	100	98.4	98.4				100	100	100.0
Zinc	100	99.3	99.3				100	100	100.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15082 Units: ug/l

Time:		10:03			10:41			10:45	
Sample ID:	ICV	ICV2		CCV	CCV3		CCV	CCV4	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum							10000	9560	95.6
Antimony							100	97.0	97.0
Arsenic							100	99.8	99.8
Barium							100	98.1	98.1
Beryllium							100	103	103.0
Cadmium							100	99.5	99.5
Calcium							10000	9690	96.9
Chromium							100	102	102.0
Cobalt							100	102	102.0
Copper							100	103	103.0
Iron							10000	10300	103.0
Lead							100	98.4	98.4
Magnesium							10000	10100	101.0
Manganese							100	98.3	98.3
Molybdenum									
Nickel							100	102	102.0
Potassium							10000	10200	102.0
Selenium							100	101	101.0
Silver	50	56.6	91.0	50	51.4	102.8			
Sodium							10000	10300	103.0
Strontium									
Thallium							100	103	103.0
Tin									
Titanium									
Vanadium							100	101	101.0
Zinc							100	100	100.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15082 Units: ug/l

Time:		11:31			11:34			12:20	
Sample ID:	CCV	CCV5		CCV	CCV6		CCV	CCV7	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum				10000	9540	95.4			
Antimony				100	95.0	95.0			
Arsenic				100	99.6	99.6			
Barium				100	98.6	98.6			
Beryllium				100	101	101.0			
Cadmium				100	97.7	97.7			
Calcium				10000	9680	96.8			
Chromium				100	101	101.0			
Cobalt				100	100	100.0			
Copper				100	101	101.0			
Iron				10000	10300	103.0			
Lead				100	97.8	97.8			
Magnesium				10000	10100	101.0			
Manganese				100	99.0	99.0			
Molybdenum									
Nickel				100	102	102.0			
Potassium				10000	10200	102.0			
Selenium				100	100	100.0			
Silver	50	51.6	103.2				50	50.3	100.6
Sodium				10000	10200	102.0			
Strontium									
Thallium				100	104	104.0			
Tin									
Titanium									
Vanadium				100	99.2	99.2			
Zinc				100	98.9	98.9			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15082 Units: ug/l

Time:		12:24			13:09			13:13	
Sample ID:	CCV	CCV8		CCV	CCV9		CCV	CCV10	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	10000	9740	97.4				10000	9600	96.0
Antimony	100	97.4	97.4				100	95.6	95.6
Arsenic	100	101	101.0				100	98.7	98.7
Barium	100	100	100.0				100	97.8	97.8
Beryllium	100	103	103.0				100	99.2	99.2
Cadmium	100	98.9	98.9				100	97.4	97.4
Calcium	10000	9890	98.9				10000	9690	96.9
Chromium	100	101	101.0				100	99.4	99.4
Cobalt	100	101	101.0				100	99.3	99.3
Copper	100	102	102.0				100	99.9	99.9
Iron	10000	10400	104.0				10000	10300	103.0
Lead	100	99.7	99.7				100	97.1	97.1
Magnesium	10000	10300	103.0				10000	10100	101.0
Manganese	100	101	101.0				100	98.9	98.9
Molybdenum	anr								
Nickel	100	101	101.0				100	99.4	99.4
Potassium	10000	10400	104.0				10000	10300	103.0
Selenium	100	103	103.0				100	101	101.0
Silver				50	49.8	99.6			
Sodium	10000	10300	103.0				10000	10100	101.0
Strontium	anr								
Thallium	100	107	107.0				100	105	105.0
Tin	anr								
Titanium	anr								
Vanadium	100	101	101.0				100	98.6	98.6
Zinc	100	101	101.0				100	99.1	99.1

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15082 Units: ug/l

Time:		13:40			13:43	
Sample ID:	CCV	CCV11		CCV	CCV12	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum				10000	9490	94.9
Antimony				100	96.3	96.3
Arsenic				100	98.2	98.2
Barium				100	97.7	97.7
Beryllium				100	99.5	99.5
Cadmium				100	97.8	97.8
Calcium				10000	9720	97.2
Chromium				100	98.6	98.6
Cobalt				100	99.5	99.5
Copper				100	98.8	98.8
Iron				10000	10400	104.0
Lead				100	98.3	98.3
Magnesium				10000	10100	101.0
Manganese				100	97.6	97.6
Molybdenum						
Nickel				100	99.1	99.1
Potassium				10000	9780	97.8
Selenium				100	100	100.0
Silver	50	51.4	102.8			
Sodium				10000	10200	102.0
Strontium						
Thallium				100	108	108.0
Tin						
Titanium						
Vanadium				100	101	101.0
Zinc				100	98.9	98.9

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15082 Units: ug/l

Time:		09:25			09:29	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum				20000	19600	98.0
Antimony				200	200	100.0
Arsenic				200	200	100.0
Barium				200	197	98.5
Beryllium				200	198	99.0
Cadmium				200	199	99.5
Calcium				20000	19900	99.5
Chromium				200	202	101.0
Cobalt				200	201	100.5
Copper				200	200	100.0
Iron				20000	20300	101.5
Lead				200	200	100.0
Magnesium				20000	19900	99.5
Manganese				200	203	101.5
Molybdenum						
Nickel				200	202	101.0
Potassium				20000	20000	100.0
Selenium				200	198	99.0
Silver	100	98.1	98.1			
Sodium				20000	19800	99.0
Strontium						
Thallium				200	198	99.0
Tin						
Titanium						
Vanadium				200	200	100.0
Zinc				200	198	99.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: CRI 70-130% CRIA 80-120% Run ID: MA15082 Units: ug/l

Time:			09:41		13:28	
Sample ID:	CRI	CRIA	CRIA1		CRIA2	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	100	100	99.6	99.6	98.4	98.4
Antimony	1.0	1.0	1.01	101.0	0.954	95.4
Arsenic	1.0	1.0	1.00	100.0	1.00	100.0
Barium	1.0	1.0	0.950	95.0	0.977	97.7
Beryllium	1.0	1.0	1.03	103.0	0.933	93.3
Cadmium	1.0	1.0	1.08	108.0	0.946	94.6
Calcium	100	100	99.3	99.3	102	102.0
Chromium	1.0	1.0	1.02	102.0	1.01	101.0
Cobalt	1.0	1.0	1.04	104.0	1.03	103.0
Copper	1.0	1.0	1.19	119.0	1.13	113.0
Iron	100	100	102	102.0	100	100.0
Lead	1.0	1.0	0.978	97.8	0.959	95.9
Magnesium	100	100	101	101.0	99.6	99.6
Manganese	1.0	1.0	1.06	106.0	1.07	107.0
Molybdenum	1.0	1.0	anr			
Nickel	1.0	1.0	1.05	105.0	1.01	101.0
Potassium	100	100	99.4	99.4	102	102.0
Selenium	1.0	1.0	1.08	108.0	1.08	108.0
Silver	1.0	1.0	1.08	108.0	1.01	101.0
Sodium	100	100	108	108.0	112	112.0
Strontium	1.0	1.0	anr			
Thallium	1.0	1.0	1.01	101.0	0.985	98.5
Tin	1.0	1.0	anr			
Titanium	1.0	1.0	anr			
Vanadium	1.0	1.0	0.944	94.4	0.939	93.9
Zinc	1.0	1.0	1.11	111.0	1.22	122.0*(a

(*) Outside of QC limits
(anr) Analyte not requested
(a) Possible instrument baseline drift.

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: 80 to 120 % Recovery Run ID: MA15082 Units: ug/l

Time:			09:44		09:48		13:32		13:36	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	100000	100000	91700	91.7	89900	89.9	91400	91.4	89900	89.9
Antimony			0.0480		0.0416		0.0357		0.0375	
Arsenic		20	0.0712		19.3	96.5	0.0788		18.9	94.5
Barium			0.0763		0.0650		0.0674		0.0598	
Beryllium			0.0267		0.0245		0.00722		0.0100	
Cadmium		20	0.394		18.5	92.5	0.364		18.0	90.0
Calcium	100000	100000	92000	92.0	91000	91.0	89900	89.9	89000	89.0
Chromium		20	1.24		20.5	102.5	1.29		20.5	102.5
Cobalt		20	0.0137		19.0	95.0	0.0108		18.8	94.0
Copper		20	0.163		18.3	91.5	0.107		17.9	89.5
Iron	100000	100000	96900	96.9	97300	97.3	100000	100.0	99700	99.7
Lead			0.0936		0.0925		0.0829		0.0852	
Magnesium	100000	100000	96300	96.3	96000	96.0	97200	97.2	95900	95.9
Manganese		20	0.278		19.4	97.0	0.288		19.3	96.5
Molybdenum	2000	2000	2010	100.5	2020	101.0	2090	104.5	2060	103.0
Nickel		20	0.141		18.6	93.0	0.149		18.4	92.0
Potassium	100000	100000	98400	98.4	98600	98.6	100000	100.0	100000	100.0
Selenium			0.0830		0.0402		0.0771		0.0981	
Silver		20	0.0946		17.8	89.0	0.0360		17.7	88.5
Sodium	100000	100000	96500	96.5	96900	96.9	98100	98.1	96800	96.8
Strontium			0.933		0.903		0.912		0.929	
Thallium			0.0178		0.0125		0.00654		0.00556	
Tin			0.118		0.160		0.122		0.193	
Titanium	2000	2000	1950	97.5	1940	97.0	1940	97.0	1920	96.0
Vanadium			-0.0330		-0.0300		-0.0354		-0.0374	
Zinc		20	0.976		19.1	95.5	0.957		18.9	94.5

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34053
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/23/18

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	0.022	<0.50

Associated samples MP34053: FA55914-1, FA55914-2, FA55914-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34053
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/23/18 07/23/18

Metal	FA55914-1 Original	DUP	RPD	QC Limits	FA55914-1 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	2.9	3	96.7	80-120

Associated samples MP34053: FA55914-1, FA55914-2, FA55914-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34053 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/23/18

Metal	FA55914-1 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	2.8	3	93.3	3.5	20

Associated samples MP34053: FA55914-1, FA55914-2, FA55914-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34053
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/23/18

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	2.9	3	96.7	80-120

Associated samples MP34053: FA55914-1, FA55914-2, FA55914-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34053
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/23/18

Metal	FA55914-1 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP34053: FA55914-1, FA55914-2, FA55914-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34080
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 07/27/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.7	22	10.4	<200
Antimony	2.0	.2	.2	0.16	<2.0
Arsenic	2.0	.2	.21	0.12	<2.0
Barium	2.0	.2	.2	0.11	<2.0
Beryllium	2.0	.2	.2	0.065	<2.0
Cadmium	2.0	.2	.2	0.056	<2.0
Calcium	200	14	36	20.4	<200
Chromium	2.0	.2	.2	0.33	<2.0
Cobalt	2.0	.2	.2	0.15	<2.0
Copper	2.0	.2	.2	1.3	* (a)
Iron	200	16	23	10.0	<200
Lead	2.0	.2	.2	0.32	<2.0
Magnesium	200	10	19	11.2	<200
Manganese	2.0	.2	.2	0.29	<2.0
Molybdenum	2.0	.2	.39		
Nickel	2.0	.2	.2	0.10	<2.0
Potassium	200	13	75	11.1	<200
Selenium	2.0	.22	.22	0.069	<2.0
Silver	2.0	.2	.2	0.29	<2.0
Sodium	200	9.6	24	30.9	<200
Strontium	2.0	.2	.2		
Thallium	2.0	.2	.2	0.45	<2.0
Tin	2.0	.2	.2		
Titanium	2.0	.61	.88		
Vanadium	2.0	.2	.24	0.15	<2.0
Zinc	4.0	.58	1.7	2.2	* (a)

Associated samples MP34080: FA55914-1, FA55914-2, FA55914-3, FA55914-4, FA55914-6, FA55914-8, FA55914-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) All associated samples with results >MDL "B" coded.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34080
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date:			07/27/18					07/27/18	
Metal	FA55941-5 Original	DUP	RPD	QC Limits	FA55941-5 Original	MS	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum	10.7	9.7	9.8	0-20	10.7	17100	20000	85.4	80-120
Antimony	0.0	0.0	NC	0-20	0.0	195	200	97.5	80-120
Arsenic	0.94	0.94	0.0	0-20	0.94	207	200	103.0	80-120
Barium	7.6	7.7	1.3	0-20	7.6	210	200	101.2	80-120
Beryllium	0.0	0.0	NC	0-20	0.0	209	200	104.5	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	200	200	100.0	80-120
Calcium	20300	20400	0.5	0-20	20300	39200	20000	94.5	80-120
Chromium	0.54	0.40	29.8 (a)	0-20	0.54	208	200	103.7	80-120
Cobalt	0.0	0.0	NC	0-20	0.0	208	200	104.0	80-120
Copper	0.60	0.0	200.0(a)	0-20	0.60	208	200	103.7	80-120
Iron	34.8	0.00	200.0(a)	0-20	34.8	20200	20000	100.8	80-120
Lead	0.22	0.0	200.0(a)	0-20	0.22	205	200	102.4	80-120
Magnesium	5480	5530	0.9	0-20	5480	25400	20000	99.6	80-120
Manganese	24.0	24.1	0.4	0-20	24.0	223	200	99.5	80-120
Molybdenum	anr								
Nickel	0.0	0.0	NC	0-20	0.0	207	200	103.5	80-120
Potassium	1590	1590	0.0	0-20	1590	20700	20000	95.6	80-120
Selenium	0.0	0.0	NC	0-20	0.0	177	200	88.5	80-120
Silver	0.0	0.0	NC	0-20	0.0	104	100	104.0	80-120
Sodium	3770	3790	0.5	0-20	3770	23800	20000	100.2	80-120
Strontium	anr								
Thallium	0.22	0.0	200.0(a)	0-20	0.22	205	200	102.4	80-120
Tin	anr								
Titanium	anr								
Vanadium	0.35	0.37	5.6	0-20	0.35	208	200	103.8	80-120
Zinc	6.9	6.9	0.0	0-20	6.9	194	200	93.6	80-120

Associated samples MP34080: FA55914-1, FA55914-2, FA55914-3, FA55914-4, FA55914-6, FA55914-8, FA55914-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34080
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 07/27/18

Metal	FA55941-5 Original	MSD	Spikelot MPICPMS1	% Rec	MSD RPD	QC Limit
Aluminum	10.7	17900	20000	89.4	4.6	20
Antimony	0.0	203	200	101.5	4.0	20
Arsenic	0.94	217	200	108.0	4.7	20
Barium	7.6	223	200	107.7	6.0	20
Beryllium	0.0	221	200	110.5	5.6	20
Cadmium	0.0	208	200	104.0	3.9	20
Calcium	20300	40500	20000	101.0	3.3	20
Chromium	0.54	221	200	110.2	6.1	20
Cobalt	0.0	221	200	110.5	6.1	20
Copper	0.60	221	200	110.2	6.1	20
Iron	34.8	21300	20000	106.3	5.3	20
Lead	0.22	214	200	106.9	4.3	20
Magnesium	5480	26800	20000	106.6	5.4	20
Manganese	24.0	235	200	105.5	5.2	20
Molybdenum	anr					
Nickel	0.0	218	200	109.0	5.2	20
Potassium	1590	22200	20000	103.1	7.0	20
Selenium	0.0	188	200	94.0	6.0	20
Silver	0.0	112	100	112.0	7.4	20
Sodium	3770	25100	20000	106.7	5.3	20
Strontium	anr					
Thallium	0.22	217	200	108.4	5.7	20
Tin	anr					
Titanium	anr					
Vanadium	0.35	218	200	108.8	4.7	20
Zinc	6.9	203	200	98.1	4.5	20

Associated samples MP34080: FA55914-1, FA55914-2, FA55914-3, FA55914-4, FA55914-6, FA55914-8, FA55914-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34080
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 07/27/18

Metal	BSP Result	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum	18200	20000	91.0	80-120
Antimony	208	200	104.0	80-120
Arsenic	216	200	108.0	80-120
Barium	209	200	104.5	80-120
Beryllium	219	200	109.5	80-120
Cadmium	213	200	106.5	80-120
Calcium	20100	20000	100.5	80-120
Chromium	219	200	109.5	80-120
Cobalt	220	200	110.0	80-120
Copper	220	200	110.0	80-120
Iron	21300	20000	106.5	80-120
Lead	212	200	106.0	80-120
Magnesium	20900	20000	104.5	80-120
Manganese	210	200	105.0	80-120
Molybdenum	anr			
Nickel	219	200	109.5	80-120
Potassium	20100	20000	100.5	80-120
Selenium	186	200	93.0	80-120
Silver	108	100	108.0	80-120
Sodium	21000	20000	105.0	80-120
Strontium	anr			
Thallium	213	200	106.5	80-120
Tin	anr			
Titanium	anr			
Vanadium	220	200	110.0	80-120
Zinc	202	200	101.0	80-120

Associated samples MP34080: FA55914-1, FA55914-2, FA55914-3, FA55914-4, FA55914-6, FA55914-8, FA55914-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA55914
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34080
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 07/27/18

Metal	FA55941-5 Original	SDL 2:10	%DIF	QC Limits
Aluminum	10.7	0.00	100.0(a)	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	0.939	1.15	22.9 (a)	0-10
Barium	7.60	8.28	8.9	0-10
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	20300	22600	11.2*(b)	0-10
Chromium	0.536	0.00	100.0(a)	0-10
Cobalt	0.00	0.00	NC	0-10
Copper	0.605	0.00	100.0(a)	0-10
Iron	34.8	0.00	100.0(a)	0-10
Lead	0.222	0.00	100.0(a)	0-10
Magnesium	5480	6090	11.1*(b)	0-10
Manganese	24.0	26.2	9.2	0-10
Molybdenum	anr			
Nickel	0.00	0.00	NC	0-10
Potassium	1590	1780	11.6*(b)	0-10
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium	3770	4150	10.2*(b)	0-10
Strontium	anr			
Thallium	0.215	0.00	100.0(a)	0-10
Tin	anr			
Titanium	anr			
Vanadium	0.355	0.00	100.0(a)	0-10
Zinc	6.88	6.48	5.8	0-10

Associated samples MP34080: FA55914-1, FA55914-2, FA55914-3, FA55914-4, FA55914-6, FA55914-8, FA55914-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

Instrument Detection Limits

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	IDL ug/l
Aluminum	4.35
Antimony	.1
Arsenic	.1
Arsenic	.1
Barium	.1
Beryllium	.1
Boron	.5
Cadmium	.1
Cadmium	.1
Calcium	7.2
Calcium	7.2
Chromium	.1
Chromium	.1
Cobalt	.1
Cobalt	.1
Copper	.1
Copper	.1
Iron	7.9
Iron	7.9
Lead	.1
Magnesium	5.2
Manganese	.1
Manganese	.1
Molybdenum	.1
Nickel	.1
Nickel	.1
Potassium	6.57
Selenium	.11
Selenium	.11
Silver	.1
Sodium	4.8
Strontium	.1
Thallium	.1
Tin	.1
Tin	.1
Titanium	.303
Vanadium	.1
Vanadium	.1
Zinc	.29
Zinc	.29

The above applies to the following instrument runs:
MA15082

Instrument Detection Limits

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Instrument ID: LEEMANHG5 **Effective Date:** 10/01/12

Analyte	IDL ug/l
Mercury	.03

The above applies to the following instrument runs:
MA15064

Instrument Linear Ranges

Job Number: FA55914
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	Linear Range ug/l
Aluminum	100000
Antimony	1000
Arsenic	1000
Arsenic	1000
Barium	1000
Beryllium	1000
Cadmium	1000
Cadmium	1000
Calcium	100000
Calcium	100000
Chromium	1000
Chromium	1000
Cobalt	1000
Cobalt	1000
Copper	1000
Copper	1000
Iron	100000
Iron	100000
Lead	1000
Magnesium	100000
Manganese	1000
Manganese	1000
Molybdenum	1000
Nickel	1000
Nickel	1000
Potassium	100000
Selenium	1000
Selenium	1000
Silver	100
Sodium	100000
Strontium	1000
Thallium	1000
Tin	1000
Tin	1000
Titanium	1000
Vanadium	1000
Vanadium	1000
Zinc	1000
Zinc	1000

The above applies to the following instrument runs:
MA15082

Metals Analysis

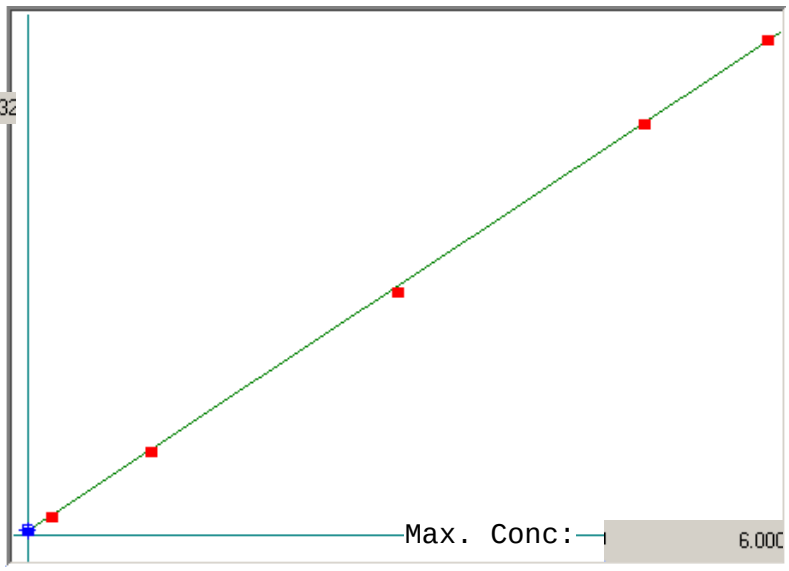
Raw Data

Hg7470/EPA245.1 HG5

Linear

μ Abs.:

64932



A= 0.0000e+000

B= 9.3483e-005

C= -4.3280e-002

Rho= 0.9999225

Accept= Accepted

Accepted Date=

07/23/18 12:39

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
blank	0.000	0.031	0.031	790	0.000	790				
0.2ppb	0.200	0.194	-0.006	2537	0.0 %	2537				
1.0ppb	1.000	1.006	0.006	11223	0.0 %	11223				
3.0ppb	3.000	2.942	-0.058	31938	0.0 %	31938				
5.0ppb	5.000	5.001	0.001	53954	0.0 %	53954				
6.0ppb	6.000	6.027	0.027	64932	0.0 %	64932				

Method: Hg7470/EPA245.1 HG5 Operator: Admin Date of Analysis: 23 Jul 2018 11:44:16

Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
blank - 1	23 Jul 2018 12:29:59	S		-	790	1.000	1.000
0.2ppb - 1	23 Jul 2018 12:31:15	S		-	2537	1.000	1.000
1.0ppb - 1	23 Jul 2018 12:32:36	S		-	11223	1.000	1.000
3.0ppb - 1	23 Jul 2018 12:34:05	S		-	31938	1.000	1.000
5.0ppb - 1	23 Jul 2018 12:35:44	S		-	53954	1.000	1.000
6.0ppb - 1	23 Jul 2018 12:37:34	S		-	64932	1.000	1.000
HSTD - 1	23 Jul 2018 12:39:26	C		100.8% 6.0471	65149	1.000	1.000
ICV - 1	23 Jul 2018 12:41:20	C		102.4% 3.0722	33327	1.000	1.000
ICB - 1	23 Jul 2018 12:43:12	C		0.0080	549	1.000	1.000
CRI - 1	23 Jul 2018 12:45:01	C		99.0% 0.1980	2581	1.000	1.000
CCV - 1	23 Jul 2018 12:46:21	C		99.9% 2.9961	32513	1.000	1.000
CCB - 1	23 Jul 2018 12:47:48	C		0.0117	588	1.000	1.000
MP34053-MB1 - 1	23 Jul 2018 12:49:37	U		0.0223	701	1.000	1.000
MP34053-B1 - 1	23 Jul 2018 12:50:56	U		2.8518	30969	1.000	1.000
FA55914-1 - 1	23 Jul 2018 12:52:16	U		0.0005	468	1.000	1.000
MP34053-D1 - 1	23 Jul 2018 12:54:05	U		0.0009	473	1.000	1.000
MP34053-SD1 - 1	23 Jul 2018 12:55:23	U		-0.2664	-107	1.000	5.000
MP34053-S1 - 1	23 Jul 2018 12:56:41	U		2.9162	31658	1.000	1.000
MP34053-S2 - 1	23 Jul 2018 12:57:57	U		2.8212	30642	1.000	1.000
FA55914-2 - 1	23 Jul 2018 12:59:47	U		-0.0086	371	1.000	1.000
FA55914-9 - 1	23 Jul 2018 13:01:36	U		-0.0076	382	1.000	1.000
FA55977-1 - 1	23 Jul 2018 13:02:55	U		0.1882	2476	1.000	1.000
CCV - 1	23 Jul 2018 13:04:14	C		98.3% 2.9495	32014	1.000	1.000
CCB - 1	23 Jul 2018 13:05:42	C		0.0054	521	1.000	1.000
FA55977-2 - 1	23 Jul 2018 13:07:29	U		0.0653	1161	1.000	1.000
FA55977-3 - 1	23 Jul 2018 13:08:50	U		0.1620	2196	1.000	1.000
FA55977-4 - 1	23 Jul 2018 13:10:14	U		0.1949	2548	1.000	1.000
FA55950-1 - 1	23 Jul 2018 13:11:42	U		0.0070	538	1.000	1.000
FA55951-1 - 1	23 Jul 2018 13:13:11	U		0.0403	894	1.000	1.000
FA55951-2 - 1	23 Jul 2018 13:14:29	U		0.0089	558	1.000	1.000
FA56015-2 - 1	23 Jul 2018 13:15:50	U		-0.0050	409	1.000	1.000
FA56015-3 - 1	23 Jul 2018 13:17:09	U		-0.0149	304	1.000	1.000
MP34054-MB1 - 1	23 Jul 2018 13:18:27	U		-0.0120	335	1.000	1.000
MP34054-B1 - 1	23 Jul 2018 13:19:46	U		2.8911	31389	1.000	1.000
CCV - 1	23 Jul 2018 13:21:05	C		97.9% 2.9377	31888	1.000	1.000
CCB - 1	23 Jul 2018 13:22:52	C		0.0056	523	1.000	1.000
FA55967-1 - 1	23 Jul 2018 13:24:40	U		0.0023	488	1.000	1.000
MP34054-D1 - 1	23 Jul 2018 13:26:00	U		0.0051	518	1.000	1.000
MP34054-SD1 - 1	23 Jul 2018 13:27:19	U		-0.2664	-107	1.000	5.000
MP34054-S1 - 1	23 Jul 2018 13:28:39	U		2.8541	30994	1.000	1.000
MP34054-S2 - 1	23 Jul 2018 13:29:56	U		2.9521	32042	1.000	1.000
FA55967-2 - 1	23 Jul 2018 13:31:44	U		-0.0148	305	1.000	1.000
FA55967-3 - 1	23 Jul 2018 13:33:31	U		-0.0078	380	1.000	1.000
FA55967-4 - 1	23 Jul 2018 13:34:49	U		-0.0039	421	1.000	1.000
FA55967-5 - 1	23 Jul 2018 13:36:07	U		-0.0031	430	1.000	1.000
FA55967-6 - 1	23 Jul 2018 13:37:25	U		-0.0036	424	1.000	1.000
CCV - 1	23 Jul 2018 13:38:43	C		96.8% 2.9048	31536	1.000	1.000
CCB - 1	23 Jul 2018 13:40:01	C		0.0067	535	1.000	1.000
FA55967-1F - 1	23 Jul 2018 13:41:49	U		-0.0029	432	1.000	1.000
FA55967-2F - 1	23 Jul 2018 13:43:08	U		-0.0064	395	1.000	1.000
FA55967-3F - 1	23 Jul 2018 13:44:27	U		-0.0022	439	1.000	1.000
FA55967-4F - 1	23 Jul 2018 13:45:46	U		-0.0041	419	1.000	1.000
FA55967-6F - 1	23 Jul 2018 13:47:05	U		-0.0036	424	1.000	1.000
FA55888-1A - 1	23 Jul 2018 13:48:25	U		-0.0042	418	1.000	1.000
FA55889-1A - 1	23 Jul 2018 13:49:45	U		-0.0015	447	1.000	1.000
FA55978-1 - 1	23 Jul 2018 13:51:03	U		0.2871	3534	1.000	1.000
MP34055-B1 - 1	23 Jul 2018 13:53:55	U		2.9911	32459	1.000	1.000
CCV - 1	23 Jul 2018 13:55:30	C		98.7% 2.9608	32135	1.000	1.000
CCB - 1	23 Jul 2018 13:57:18	C		0.0112	583	1.000	1.000
FA55941-8A - 1	23 Jul 2018 13:59:08	U		-0.0147	306	1.000	1.000
MP34055-D1 - 1	23 Jul 2018 14:00:27	U		0.0338	825	1.000	1.000
MP34055-SD1 - 1	23 Jul 2018 14:01:45	U		-0.2566	-86	1.000	5.000
MP34055-S1 - 1	23 Jul 2018 14:03:06	U		2.9323	31830	1.000	1.000
MP34055-S2 - 1	23 Jul 2018 14:04:23	U		2.9772	32310	1.000	1.000
FA55925-2 - 1	23 Jul 2018 14:06:12	U		0.0425	918	1.000	1.000
FA55692-4 - 1	23 Jul 2018 14:08:02	U		0.0701	1213	1.000	1.000
FA55692-5 - 1	23 Jul 2018 14:09:26	U		0.0846	1368	1.000	1.000
FA55666-4 - 1	23 Jul 2018 14:10:51	U		0.0049	515	1.000	1.000
FA55666-5 - 1	23 Jul 2018 14:12:17	U		-0.0031	430	1.000	1.000

Method: Hg7470/EPA245.1 HG5 Operator: Admin Date of Analysis: 23 Jul 2018 11:44:16

Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
CCV - 1	23 Jul 2018 14:13:35	C		95.5% 2.8663	31124	1.000	1.000
CCB - 1	23 Jul 2018 14:14:53	C		0.0097	567	1.000	1.000
FA55819-1L - 1	23 Jul 2018 14:16:43	U		-0.0078	380	1.000	1.000
MP34055-D2 - 1	23 Jul 2018 14:18:02	U		-0.0081	376	1.000	1.000
MP34055-MB2 - 1	23 Jul 2018 14:19:20	U		-0.0032	429	1.000	1.000
MP34055-B2 - 1	23 Jul 2018 14:20:38	U		2.8057	30476	1.000	1.000
CRI - 1	23 Jul 2018 14:21:57	U		0.1885	2479	1.000	1.000
CCV - 1	23 Jul 2018 14:23:45	C		97.8% 2.9350	31859	1.000	1.000
CCB - 1	23 Jul 2018 14:25:15	C		0.0085	554	1.000	1.000
CCV - 1	23 Jul 2018 15:02:18	C		96.9% 2.9056	31545	1.000	1.000
CCB - 1	23 Jul 2018 15:03:34	C		-0.0093	364	1.000	1.000
MP34055-MB1 - 1	23 Jul 2018 15:08:32	U		0.0355	843	1.000	1.000
CRI - 1	23 Jul 2018 15:09:48	U		0.1732	2316	1.000	1.000
CCV - 1	23 Jul 2018 15:11:08	C		93.9% 2.8181	30609	1.000	1.000
CCB - 1	23 Jul 2018 15:12:36	C		-0.0078	379	1.000	1.000

Quantitation Report

File Name	001CALB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 8:53
Sample Name	Blank
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.002	ug/l	132.93	580.68	3.454E-03	Pulse	0.50	3
As			1	-0.004	ug/l	-69.09	17.67	1.053E-04	Pulse	1.00	3
Mo			1	0.001	ug/l	151.65	12.00	4.723E-05	Pulse	0.50	3
Pb			1	0.000	ug/l	-226.37	1,134.71	2.150E-04	Pulse	1.00	3
Be			1	0.002	ug/l	534.27	0.50	2.494E-06	Pulse	2.00	3
Ag			1	0.000	ug/l	175.82	29.33	1.726E-05	Pulse	0.50	3
Ba			1	-0.002	ug/l	-147.47	22.67	1.337E-05	Pulse	0.50	3
Tl			1	0.001	ug/l	7.49	119.33	2.261E-05	Pulse	0.50	3
Sn			1	0.003	ug/l	272.47	336.67	1.980E-04	Pulse	0.30	3
Sr			1	0.003	ug/l	306.15	539.34	3.176E-04	Pulse	0.50	3
[Pb]			1	-0.001	ug/l	-60.10	502.68	9.524E-05	Pulse	0.50	3
Ca			1	0.743	ug/l	154.84	137.33	6.855E-04	Pulse	0.50	3
Ti			1	0.000	ug/l	-72429.93	2.67	1.334E-05	Pulse	0.50	3
Na			1	-0.054	ug/l	-140.55	10,907.30	5.446E-02	Pulse	1.00	3
Mg			1	-0.041	ug/l	-69.34	184.67	9.218E-04	Pulse	1.00	3
K			1	-0.298	ug/l	-157.18	17,032.33	8.503E-02	Pulse	1.00	3
V			1	0.007	ug/l	96.16	958.69	4.786E-03	Pulse	0.50	3
Mn			1	-0.003	ug/l	-108.71	90.67	5.404E-04	Pulse	0.50	3
Fe			1	0.011	ug/l	331.13	7,234.70	4.307E-02	Pulse	0.50	3
Co			1	0.000	ug/l	153.95	36.67	2.187E-04	Pulse	0.50	3
Ni			1	0.002	ug/l	81.04	98.67	5.876E-04	Pulse	0.50	3
Cu			1	0.014	ug/l	72.44	8,591.93	5.114E-02	Pulse	0.50	3
Zn			1	0.032	ug/l	111.20	1,993.44	7.814E-03	Pulse	1.00	3
Cd			1	-0.001	ug/l	-0.54	4.00	1.568E-05	Pulse	0.50	3
Al			1	0.039	ug/l	91.29	145.67	7.272E-04	Pulse	1.00	3
Se			1	-0.016	ug/l	-89.76	13.56	7.985E-06	Pulse	3.00	3
Sb			1	-0.001	ug/l	-163.36	123.67	4.846E-04	Pulse	1.00	3
Se			1	-0.010	ug/l	-121.78	26.67	1.787E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,277,984.00	0.56	100.0	Pulse	0.50	3
1	Sc		200,296.84	0.28	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		168,042.08	1.12	100.0	Pulse	0.30	3
1	In		1,698,643.68	0.97	100.0	Pulse	0.30	3
1	Tb		6,822,442.33	0.39	100.0	Analog	0.50	3
1	Lu		4,229,223.17	0.42	100.0	Pulse	0.50	3
1	Ge		255,145.02	0.71	100.0	Pulse	0.30	3
1	Te		14,919.45	2.56	100.0	Pulse	0.50	3
1	Li		1,074.48	5.04	100.0	Pulse	0.30	3

Quantitation Report

File Name	002CALB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 8:57
Sample Name	CALSTD-1
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	---	554.01	3.307E-03	Pulse	0.50	3
As			1	0.000	ug/l	---	23.67	1.416E-04	Pulse	1.00	3
Mo			1	0.000	ug/l	---	4.67	1.825E-05	Pulse	0.50	3
Pb			1	0.000	ug/l	---	1,153.37	2.172E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.33	1.685E-06	Pulse	2.00	3
Ag			1	0.000	ug/l	---	24.67	1.451E-05	Pulse	0.50	3
Ba			1	0.000	ug/l	---	28.00	1.647E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	---	71.33	1.343E-05	Pulse	0.50	3
Sn			1	0.000	ug/l	---	315.56	1.856E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	---	522.68	3.074E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	---	532.01	1.002E-04	Pulse	0.50	3
Ca			1	0.000	ug/l	---	117.33	5.827E-04	Pulse	0.50	3
Ti			1	0.000	ug/l	---	2.67	1.336E-05	Pulse	0.50	3
Na			1	0.000	ug/l	---	11,046.04	5.485E-02	Pulse	1.00	3
Mg			1	0.000	ug/l	---	213.33	1.059E-03	Pulse	1.00	3
K			1	0.000	ug/l	---	17,272.54	8.577E-02	Pulse	1.00	3
V			1	0.000	ug/l	---	898.69	4.463E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	---	108.00	6.443E-04	Pulse	0.50	3
Fe			1	0.000	ug/l	---	7,109.32	4.244E-02	Pulse	0.50	3
Co			1	0.000	ug/l	---	26.00	1.554E-04	Pulse	0.50	3
Ni			1	0.000	ug/l	---	84.67	5.060E-04	Pulse	0.50	3
Cu			1	0.000	ug/l	---	8,315.14	4.964E-02	Pulse	0.50	3
Zn			1	0.000	ug/l	---	1,920.10	7.519E-03	Pulse	1.00	3
Cd			1	0.000	ug/l	---	9.33	3.641E-05	Pulse	0.50	3
Al			1	0.000	ug/l	---	138.67	6.878E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	15.11	8.888E-06	Pulse	3.00	3
Sb			1	0.000	ug/l	---	131.67	5.153E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	27.00	1.823E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,311,698.17	0.96	100.0	Pulse	0.50	3
1	Sc		201,421.81	1.82	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		167,529.01	0.92	100.0	Pulse	0.30	3
1	In		1,700,192.57	0.17	100.0	Pulse	0.30	3
1	Tb		6,812,502.50	0.09	100.0	Analog	0.50	3
1	Lu		4,237,731.33	0.68	100.0	Pulse	0.50	3
1	Ge		255,382.93	0.89	100.0	Pulse	0.30	3
1	Te		14,797.36	0.80	100.0	Pulse	0.50	3
1	Li		1,094.48	4.89	100.0	Pulse	0.30	3

Quantitation Report

File Name	003CALS.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:02
Sample Name	CALSTD-2
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name	004CALS.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:05
Sample Name	CALSTD-3
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.010	ug/l	1.71	12,878.95	7.850E-02	Pulse	0.50	3
As			1	0.980	ug/l	3.88	1,416.72	8.636E-03	Pulse	1.00	3
Mo			1	0.973	ug/l	0.88	8,322.55	3.330E-02	Pulse	0.50	3
Pb			1	0.971	ug/l	0.89	51,516.84	9.831E-03	Pulse	1.00	3
Be			1	1.033	ug/l	17.81	69.67	3.593E-04	Pulse	2.00	3
Ag			1	1.004	ug/l	0.43	32,124.39	1.927E-02	Pulse	0.50	3
Ba			1	0.943	ug/l	5.06	2,972.92	1.784E-03	Pulse	0.50	3
Tl			1	0.977	ug/l	1.37	74,219.88	1.416E-02	Pulse	0.50	3
Sn			1	1.111	ug/l	0.91	7,999.57	4.800E-03	Pulse	0.30	3
Sr			1	0.990	ug/l	3.16	6,657.86	3.995E-03	Pulse	0.50	3
[Pb]			1	0.974	ug/l	0.29	24,225.16	4.623E-03	Pulse	0.50	3
Ca			1	100.902	ug/l	0.82	2,821.55	1.455E-02	Pulse	0.50	3
Ti			1	0.967	ug/l	11.43	217.33	1.120E-03	Pulse	0.50	3
Na			1	113.019	ug/l	0.66	169,880.55	8.761E-01	Pulse	1.00	3
Mg			1	101.577	ug/l	0.49	66,269.94	3.417E-01	Pulse	1.00	3
K			1	99.471	ug/l	1.88	64,380.62	3.320E-01	Pulse	1.00	3
V			1	0.981	ug/l	3.57	9,693.77	5.000E-02	Pulse	0.50	3
Mn			1	1.051	ug/l	2.99	5,815.56	3.545E-02	Pulse	0.50	3
Fe			1	99.229	ug/l	1.14	981,178.06	5.980E+00	Pulse	0.50	3
Co			1	1.013	ug/l	2.06	22,198.73	1.353E-01	Pulse	0.50	3
Ni			1	1.057	ug/l	2.28	6,509.12	3.967E-02	Pulse	0.50	3
Cu			1	1.256	ug/l	0.70	29,523.90	1.799E-01	Pulse	0.50	3
Zn			1	1.200	ug/l	0.95	4,674.91	1.871E-02	Pulse	1.00	3
Cd			1	1.026	ug/l	1.11	4,189.82	1.677E-02	Pulse	0.50	3
Al			1	104.234	ug/l	0.32	20,601.26	1.062E-01	Pulse	1.00	3
Se			1	0.964	ug/l	4.26	105.11	6.308E-05	Pulse	3.00	3
Sb			1	0.971	ug/l	0.85	9,304.03	3.723E-02	Pulse	1.00	3
Se			1	0.718	ug/l	18.62	63.44	4.367E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,240,316.33	0.56	98.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		193,919.35	0.71	96.3	Pulse	0.30	3
1	Ge		164,082.56	1.09	97.9	Pulse	0.30	3
1	In		1,666,692.09	0.94	98.0	Pulse	0.30	3
1	Tb		6,764,322.67	0.59	99.3	Analog	0.50	3
1	Lu		4,207,824.83	0.66	99.3	Pulse	0.50	3
1	Ge		249,909.32	0.25	97.9	Pulse	0.30	3
1	Te		14,542.48	1.59	98.3	Pulse	0.50	3
1	Li		1,018.92	6.55	93.1	Pulse	0.30	3

Quantitation Report

File Name	005CALS.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:09
Sample Name	CALSTD-4
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	10.539	ug/l	1.08	128,468.04	7.882E-01	Pulse	0.50	3
As			1	10.235	ug/l	1.60	14,488.16	8.889E-02	Pulse	1.00	3
Mo			1	10.230	ug/l	0.98	86,010.48	3.501E-01	Pulse	0.50	3
Pb			1	10.205	ug/l	0.33	520,772.73	1.012E-01	Pulse	1.00	3
Be			1	10.600	ug/l	2.60	709.68	3.671E-03	Pulse	2.00	3
Ag			1	10.520	ug/l	1.03	329,776.88	2.018E-01	Pulse	0.50	3
Ba			1	10.233	ug/l	1.67	31,375.79	1.919E-02	Pulse	0.50	3
Tl			1	10.197	ug/l	0.10	760,137.71	1.478E-01	Pulse	0.50	3
Sn			1	10.526	ug/l	1.11	71,768.25	4.391E-02	Pulse	0.30	3
Sr			1	10.151	ug/l	1.19	62,320.98	3.813E-02	Pulse	0.50	3
[Pb]			1	10.334	ug/l	1.11	247,446.98	4.810E-02	Pulse	0.50	3
Ca			1	1021.354	ug/l	0.69	27,446.49	1.420E-01	Pulse	0.50	3
Ti			1	9.920	ug/l	5.24	2,196.80	1.136E-02	Pulse	0.50	3
Na			1	1053.895	ug/l	0.18	1,491,070.21	7.713E+00	Pulse	1.00	3
Mg			1	1044.776	ug/l	0.86	677,657.39	3.505E+00	Pulse	1.00	3
K			1	1020.352	ug/l	1.08	504,896.01	2.612E+00	Pulse	1.00	3
V			1	10.363	ug/l	0.77	93,827.97	4.853E-01	Pulse	0.50	3
Mn			1	10.645	ug/l	1.24	57,548.70	3.531E-01	Pulse	0.50	3
Fe			1	1040.250	ug/l	0.94	10,152,947.33	6.229E+01	Analog	0.50	3
Co			1	10.521	ug/l	1.38	228,866.19	1.404E+00	Pulse	0.50	3
Ni			1	10.692	ug/l	0.86	64,678.84	3.968E-01	Pulse	0.50	3
Cu			1	11.040	ug/l	1.01	194,822.31	1.195E+00	Pulse	0.50	3
Zn			1	11.067	ug/l	0.69	27,182.76	1.107E-01	Pulse	1.00	3
Cd			1	10.733	ug/l	1.15	43,013.15	1.751E-01	Pulse	0.50	3
Al			1	1060.459	ug/l	0.49	207,737.84	1.075E+00	Pulse	1.00	3
Se			1	10.747	ug/l	2.95	1,002.14	6.130E-04	Pulse	3.00	3
Sb			1	10.452	ug/l	1.33	97,196.51	3.957E-01	Pulse	1.00	3
Se			1	9.694	ug/l	0.72	517.45	3.616E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,144,713.17	0.49	96.9	Pulse	0.50	3
1	Sc		193,329.94	0.57	96.0	Pulse	0.30	3
1	Ge		163,011.41	1.54	97.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,634,633.75	1.05	96.1	Pulse	0.30	3
1	Tb		6,760,097.17	0.54	99.2	Analog	0.50	3
1	Lu		4,181,255.92	0.51	98.7	Pulse	0.50	3
1	Ge		245,661.33	0.36	96.2	Pulse	0.30	3
1	Te		14,311.63	1.59	96.7	Pulse	0.50	3
1	Li		1,048.37	6.04	95.8	Pulse	0.30	3

Quantitation Report

File Name	006CALS.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:13
Sample Name	CALSTD-5
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.335	ug/l	0.96	601,597.02	3.752E+00	Pulse	0.50	3
As			1	50.390	ug/l	1.57	70,084.26	4.371E-01	Pulse	1.00	3
Mo			1	49.746	ug/l	1.81	418,403.00	1.702E+00	Pulse	0.50	3
Pb			1	49.300	ug/l	0.88	2,472,965.83	4.882E-01	Pulse	1.00	3
Be			1	52.260	ug/l	1.01	3,447.96	1.809E-02	Pulse	2.00	3
Ag			1	50.250	ug/l	1.26	1,573,230.67	9.636E-01	Pulse	0.50	3
Ba			1	49.355	ug/l	1.44	151,037.05	9.251E-02	Pulse	0.50	3
Tl			1	49.392	ug/l	0.39	3,624,931.92	7.156E-01	Pulse	0.50	3
Sn			1	50.447	ug/l	1.10	342,405.67	2.097E-01	Pulse	0.30	3
Sr			1	48.916	ug/l	1.17	298,055.19	1.826E-01	Pulse	0.50	3
[Pb]			1	49.595	ug/l	1.29	1,167,371.58	2.305E-01	Pulse	0.50	3
Ca			1	4987.516	ug/l	1.09	131,693.77	6.910E-01	Pulse	0.50	3
Ti			1	50.381	ug/l	2.09	10,989.11	5.766E-02	Pulse	0.50	3
Na			1	5000.729	ug/l	0.24	6,935,643.33	3.639E+01	Analog	1.00	3
Mg			1	5024.209	ug/l	0.92	3,211,775.33	1.685E+01	Pulse	1.00	3
K			1	4962.255	ug/l	0.94	2,357,537.08	1.237E+01	Pulse	1.00	3
V			1	50.352	ug/l	0.54	446,154.44	2.341E+00	Pulse	0.50	3
Mn			1	50.803	ug/l	0.83	269,811.86	1.683E+00	Pulse	0.50	3
Fe			1	5023.015	ug/l	1.45	48,202,193.33	3.006E+02	Analog	0.50	3
Co			1	50.986	ug/l	1.39	1,091,045.46	6.804E+00	Pulse	0.50	3
Ni			1	51.393	ug/l	1.29	305,490.58	1.905E+00	Pulse	0.50	3
Cu			1	52.083	ug/l	1.15	874,563.89	5.454E+00	Pulse	0.50	3
Zn			1	51.480	ug/l	0.98	119,760.26	4.873E-01	Pulse	1.00	3
Cd			1	51.408	ug/l	1.20	206,087.45	8.385E-01	Pulse	0.50	3
Al			1	5061.521	ug/l	0.42	976,967.87	5.126E+00	Pulse	1.00	3
Se			1	50.627	ug/l	0.50	4,660.79	2.855E-03	Pulse	3.00	3
Sb			1	50.333	ug/l	1.32	467,795.67	1.903E+00	Pulse	1.00	3
Se			1	48.734	ug/l	0.20	2,406.82	1.744E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,065,629.17	0.40	95.4	Pulse	0.50	3
1	Sc		190,588.00	0.25	94.6	Pulse	0.30	3
1	Ge		160,356.80	0.77	95.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,632,708.62	0.84	96.0	Pulse	0.30	3
1	Tb		6,690,992.33	0.29	98.2	Analog	0.50	3
1	Lu		4,167,726.50	0.76	98.3	Pulse	0.50	3
1	Ge		245,795.55	1.19	96.2	Pulse	0.30	3
1	Te		13,797.90	0.87	93.2	Pulse	0.50	3
1	Li		994.48	6.95	90.9	Pulse	0.30	3

Quantitation Report

File Name	007CALS.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:17
Sample Name	CALSTD-6
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	101.491	ug/l	0.90	1,221,266.13	7.561E+00	Pulse	0.50	3
As			1	101.568	ug/l	0.02	142,273.83	8.809E-01	Pulse	1.00	3
Mo			1	101.476	ug/l	1.38	854,676.08	3.473E+00	Pulse	0.50	3
Pb			1	100.587	ug/l	0.78	4,961,850.17	9.958E-01	Pulse	1.00	3
Be			1	102.366	ug/l	1.78	6,789.13	3.543E-02	Pulse	2.00	3
Ag			1	99.823	ug/l	0.56	3,139,734.25	1.914E+00	Pulse	0.50	3
Ba			1	100.445	ug/l	0.86	308,795.72	1.883E-01	Pulse	0.50	3
Tl			1	100.652	ug/l	1.60	7,265,523.00	1.458E+00	Analog	0.50	3
Sn			1	100.883	ug/l	1.69	687,585.60	4.192E-01	Pulse	0.30	3
Sr			1	100.042	ug/l	0.87	611,869.08	3.731E-01	Pulse	0.50	3
[Pb]			1	101.632	ug/l	1.54	2,352,470.33	4.722E-01	Pulse	0.50	3
Ca			1	10190.788	ug/l	0.99	270,406.03	1.411E+00	Pulse	0.50	3
Ti			1	101.149	ug/l	1.78	22,176.56	1.157E-01	Pulse	0.50	3
Na			1	10182.382	ug/l	1.00	14,186,683.00	7.404E+01	Analog	1.00	3
Mg			1	10214.259	ug/l	0.88	6,564,375.67	3.426E+01	Analog	1.00	3
K			1	10101.711	ug/l	1.01	4,807,855.33	2.509E+01	Pulse	1.00	3
V			1	101.739	ug/l	1.27	905,474.81	4.725E+00	Pulse	0.50	3
Mn			1	101.709	ug/l	0.67	543,988.69	3.368E+00	Pulse	0.50	3
Fe			1	10189.152	ug/l	0.37	98,483,202.67	6.097E+02	Analog	0.50	3
Co			1	102.445	ug/l	0.68	2,208,170.42	1.367E+01	Pulse	0.50	3
Ni			1	102.035	ug/l	0.76	610,861.90	3.782E+00	Pulse	0.50	3
Cu			1	103.346	ug/l	0.81	1,740,088.71	1.077E+01	Pulse	0.50	3
Zn			1	103.172	ug/l	1.63	238,464.35	9.690E-01	Pulse	1.00	3
Cd			1	102.579	ug/l	1.12	411,771.59	1.673E+00	Pulse	0.50	3
Al			1	10262.089	ug/l	1.40	1,991,196.08	1.039E+01	Pulse	1.00	3
Se			1	102.185	ug/l	0.40	9,435.66	5.753E-03	Pulse	3.00	3
Sb			1	101.758	ug/l	0.45	946,942.73	3.848E+00	Pulse	1.00	3
Se			1	98.205	ug/l	1.03	4,812.61	3.497E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,982,867.67	0.99	93.8	Pulse	0.50	3
1	Sc		191,618.15	1.13	95.1	Pulse	0.30	3
1	Ge		161,515.19	0.24	96.4	Pulse	0.30	3
1	In		1,640,202.51	0.43	96.5	Pulse	0.30	3
1	Tb		6,771,485.33	0.34	99.4	Analog	0.50	3
1	Lu		4,167,779.17	0.69	98.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,122.62	1.04	96.4	Pulse	0.30	3
1	Te		13,763.88	0.41	93.0	Pulse	0.50	3
1	Li		997.81	15.57	91.2	Pulse	0.30	3

Quantitation Report

File Name	008CALS.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:21
Sample Name	CALSTD-7
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	199.144	ug/l	0.92	2,429,184.33	1.483E+01	Pulse	0.50	3
As			1	199.107	ug/l	1.23	282,756.40	1.727E+00	Pulse	1.00	3
Mo			1	199.314	ug/l	0.21	1,697,732.09	6.821E+00	Pulse	0.50	3
Pb			1	199.871	ug/l	1.96	9,763,872.33	1.979E+00	Analog	1.00	3
Be			1	198.222	ug/l	1.45	13,433.59	6.861E-02	Pulse	2.00	3
Ag			1	170.439	ug/l	0.53	5,352,425.50	3.268E+00	Pulse	0.50	3
Ba			1	199.928	ug/l	0.55	613,633.08	3.747E-01	Pulse	0.50	3
Tl			1	199.817	ug/l	2.25	14,285,885.33	2.895E+00	Analog	0.50	3
Sn			1	199.420	ug/l	0.29	1,356,806.48	8.285E-01	Pulse	0.30	3
Sr			1	200.243	ug/l	0.61	1,222,303.33	7.464E-01	Pulse	0.50	3
[Pb]			1	199.269	ug/l	1.95	4,567,976.67	9.257E-01	Pulse	0.50	3
Ca			1	19906.655	ug/l	0.68	539,619.83	2.756E+00	Pulse	0.50	3
Ti			1	199.334	ug/l	1.48	44,656.76	2.281E-01	Pulse	0.50	3
Na			1	19905.867	ug/l	0.93	28,327,792.67	1.447E+02	Analog	1.00	3
Mg			1	19884.572	ug/l	0.61	13,057,338.00	6.669E+01	Analog	1.00	3
K			1	19957.566	ug/l	0.84	9,689,217.67	4.949E+01	Analog	1.00	3
V			1	199.024	ug/l	1.48	1,808,886.00	9.240E+00	Pulse	0.50	3
Mn			1	198.912	ug/l	0.57	1,078,602.42	6.586E+00	Pulse	0.50	3
Fe			1	19897.662	ug/l	2.09	194,979,968.00	1.191E+03	Analog	0.50	3
Co			1	198.505	ug/l	0.68	4,338,306.00	2.649E+01	Pulse	0.50	3
Ni			1	198.599	ug/l	1.60	1,205,404.67	7.361E+00	Pulse	0.50	3
Cu			1	197.753	ug/l	1.13	3,368,677.17	2.057E+01	Pulse	0.50	3
Zn			1	197.990	ug/l	0.80	461,092.27	1.853E+00	Pulse	1.00	3
Cd			1	198.322	ug/l	1.06	805,089.56	3.235E+00	Pulse	0.50	3
Al			1	19850.531	ug/l	0.82	3,935,507.17	2.010E+01	Pulse	1.00	3
Se			1	198.714	ug/l	0.82	18,306.85	1.118E-02	Pulse	3.00	3
Sb			1	199.015	ug/l	0.89	1,872,735.46	7.524E+00	Pulse	1.00	3
Se			1	201.230	ug/l	1.72	9,337.40	7.146E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,936,049.17	1.89	92.9	Pulse	0.50	3
1	Sc		195,787.82	0.89	97.2	Pulse	0.30	3
1	Ge		163,768.83	0.69	97.8	Pulse	0.30	3
1	In		1,637,640.94	0.46	96.3	Pulse	0.30	3
1	Tb		6,851,230.83	1.31	100.6	Analog	0.50	3
1	Lu		4,186,118.92	0.60	98.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		248,892.32	0.46	97.5	Pulse	0.30	3
1	Te		13,068.69	0.99	88.3	Pulse	0.50	3
1	Li		917.81	2.55	83.9	Pulse	0.30	3

Quantitation Report

File Name	009HSAG.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:25
Sample Name	HSTD (Ag)
Sample Type	HSTD _Ag
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	98.170	ug/l	0.87	1,218,502.17	7.314E+00	Pulse	0.50	3
As			1	98.389	ug/l	1.11	142,164.10	8.533E-01	Pulse	1.00	3
Mo			1	99.125	ug/l	1.82	854,297.60	3.392E+00	Pulse	0.50	3
Pb			1	97.703	ug/l	0.55	4,921,882.67	9.673E-01	Pulse	1.00	3
Be			1	98.423	ug/l	0.82	6,757.29	3.407E-02	Pulse	2.00	3
Ag			1	98.090	ug/l	1.99	3,149,386.58	1.881E+00	Pulse	0.50	3
Ba			1	98.286	ug/l	1.52	308,454.25	1.842E-01	Pulse	0.50	3
Tl			1	97.786	ug/l	0.69	7,208,865.83	1.417E+00	Analog	0.50	3
Sn			1	100.397	ug/l	1.67	698,553.09	4.172E-01	Pulse	0.30	3
Sr			1	98.669	ug/l	1.93	616,039.89	3.679E-01	Pulse	0.50	3
[Pb]			1	98.376	ug/l	0.80	2,325,532.42	4.570E-01	Pulse	0.50	3
Ca			1	9737.951	ug/l	0.27	267,474.23	1.349E+00	Pulse	0.50	3
Ti			1	99.043	ug/l	0.17	22,478.91	1.133E-01	Pulse	0.50	3
Na			1	9778.092	ug/l	0.57	14,102,387.00	7.110E+01	Analog	1.00	3
Mg			1	9808.448	ug/l	1.07	6,524,898.83	3.290E+01	Analog	1.00	3
K			1	9696.334	ug/l	1.33	4,777,580.17	2.409E+01	Pulse	1.00	3
V			1	98.610	ug/l	0.59	908,427.00	4.580E+00	Pulse	0.50	3
Mn			1	98.421	ug/l	0.78	542,975.40	3.259E+00	Pulse	0.50	3
Fe			1	9877.853	ug/l	0.70	98,480,216.00	5.911E+02	Analog	0.50	3
Co			1	99.313	ug/l	1.13	2,208,058.00	1.325E+01	Pulse	0.50	3
Ni			1	99.694	ug/l	1.46	615,605.35	3.695E+00	Pulse	0.50	3
Cu			1	99.905	ug/l	1.67	1,735,247.33	1.042E+01	Pulse	0.50	3
Zn			1	100.941	ug/l	1.04	238,788.53	9.482E-01	Pulse	1.00	3
Cd			1	100.917	ug/l	1.06	414,525.52	1.646E+00	Pulse	0.50	3
Al			1	9791.017	ug/l	0.90	1,966,528.33	9.915E+00	Pulse	1.00	3
Se			1	99.359	ug/l	1.50	9,366.41	5.594E-03	Pulse	3.00	3
Sb			1	99.437	ug/l	0.75	946,836.79	3.760E+00	Pulse	1.00	3
Se			1	97.877	ug/l	1.35	4,793.83	3.485E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,088,443.67	0.55	95.8	Pulse	0.50	3
1	Sc		198,336.37	0.37	98.5	Pulse	0.30	3
1	Ge		166,609.49	1.33	99.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,674,613.58	1.45	98.5	Pulse	0.30	3
1	Tb		6,921,335.33	0.85	101.6	Analog	0.50	3
1	Lu		4,224,004.50	0.63	99.7	Pulse	0.50	3
1	Ge		251,834.95	0.29	98.6	Pulse	0.30	3
1	Te		13,757.20	0.99	93.0	Pulse	0.50	3
1	Li		987.81	4.58	90.3	Pulse	0.30	3

Quantitation Report

File Name	010HSTD.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:29
Sample Name	HSTD
Sample Type	HSTD
Comment	=std 6
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	202.064	ug/l	0.73	2,432,150.17	1.505E+01	Pulse	0.50	3
As			1	200.376	ug/l	0.46	280,795.82	1.738E+00	Pulse	1.00	3
Mo			1	201.173	ug/l	0.85	1,700,031.17	6.885E+00	Pulse	0.50	3
Pb			1	200.164	ug/l	0.57	9,748,229.33	1.981E+00	Analog	1.00	3
Be			1	197.906	ug/l	1.44	13,392.90	6.851E-02	Pulse	2.00	3
Ag			1	167.588	ug/l	1.10	5,269,376.17	3.214E+00	Pulse	0.50	3
Ba			1	197.433	ug/l	0.18	606,713.69	3.700E-01	Pulse	0.50	3
Tl			1	198.498	ug/l	0.37	14,148,533.33	2.876E+00	Analog	0.50	3
Sn			1	201.494	ug/l	0.18	1,372,587.62	8.371E-01	Pulse	0.30	3
Sr			1	199.614	ug/l	0.39	1,219,966.66	7.440E-01	Pulse	0.50	3
[Pb]			1	198.675	ug/l	0.68	4,540,441.83	9.229E-01	Pulse	0.50	3
Ca			1	19888.763	ug/l	0.67	538,366.50	2.754E+00	Pulse	0.50	3
Ti			1	198.900	ug/l	1.03	44,496.42	2.276E-01	Pulse	0.50	3
Na			1	19764.216	ug/l	0.80	28,086,618.67	1.437E+02	Analog	1.00	3
Mg			1	19899.563	ug/l	0.38	13,048,685.67	6.674E+01	Analog	1.00	3
K			1	20037.837	ug/l	0.39	9,714,480.00	4.969E+01	Analog	1.00	3
V			1	199.961	ug/l	1.17	1,814,833.12	9.283E+00	Pulse	0.50	3
Mn			1	202.922	ug/l	0.58	1,085,744.79	6.719E+00	Pulse	0.50	3
Fe			1	20344.217	ug/l	1.35	196,715,594.67	1.217E+03	Analog	0.50	3
Co			1	200.574	ug/l	0.97	4,325,271.33	2.677E+01	Pulse	0.50	3
Ni			1	201.519	ug/l	0.96	1,206,930.50	7.469E+00	Pulse	0.50	3
Cu			1	200.171	ug/l	1.15	3,364,384.75	2.082E+01	Pulse	0.50	3
Zn			1	198.399	ug/l	0.52	458,399.96	1.856E+00	Pulse	1.00	3
Cd			1	199.363	ug/l	0.59	802,941.50	3.252E+00	Pulse	0.50	3
Al			1	19627.408	ug/l	0.88	3,885,705.50	1.988E+01	Pulse	1.00	3
Se			1	198.390	ug/l	0.56	18,299.18	1.116E-02	Pulse	3.00	3
Sb			1	200.090	ug/l	0.30	1,868,036.83	7.565E+00	Pulse	1.00	3
Se			1	196.172	ug/l	1.40	9,226.56	6.966E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,919,808.83	0.44	92.6	Pulse	0.50	3
1	Sc		195,507.23	0.77	97.1	Pulse	0.30	3
1	Ge		161,598.09	0.96	96.5	Pulse	0.30	3
1	In		1,639,630.04	0.29	96.4	Pulse	0.30	3
1	Tb		6,877,030.17	0.61	100.9	Analog	0.50	3
1	Lu		4,162,561.08	1.13	98.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,927.78	0.32	96.7	Pulse	0.30	3
1	Te		13,246.83	2.17	89.5	Pulse	0.50	3
1	Li		1,032.25	3.23	94.3	Pulse	0.30	3

Quantitation Report

File Name	011_ICV.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:33
Sample Name	ICV
Sample Type	ICV
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	96.804	ug/l	1.48	1,190,826.54	7.212E+00	Pulse	0.50	3
As			1	97.302	ug/l	1.32	139,334.16	8.439E-01	Pulse	1.00	3
Mo			1	97.943	ug/l	0.61	842,835.71	3.352E+00	Pulse	0.50	3
Pb			1	96.077	ug/l	1.68	4,797,095.33	9.512E-01	Pulse	1.00	3
Be			1	96.410	ug/l	0.54	6,547.39	3.337E-02	Pulse	2.00	3
Ag			1	42.007	ug/l	0.41	1,331,160.17	8.056E-01	Pulse	0.50	3
Ba			1	100.159	ug/l	1.48	310,193.29	1.877E-01	Pulse	0.50	3
Tl			1	97.571	ug/l	1.39	7,129,478.50	1.414E+00	Analog	0.50	3
Sn			1	109.041	ug/l	1.33	748,764.62	4.531E-01	Pulse	0.30	3
Sr			1	98.969	ug/l	0.37	609,845.23	3.691E-01	Pulse	0.50	3
[Pb]			1	97.512	ug/l	0.97	2,284,795.08	4.530E-01	Pulse	0.50	3
Ca			1	9673.971	ug/l	0.46	262,841.36	1.340E+00	Pulse	0.50	3
Ti			1	99.310	ug/l	0.37	22,295.35	1.136E-01	Pulse	0.50	3
Na			1	9890.357	ug/l	0.93	14,109,548.67	7.192E+01	Analog	1.00	3
Mg			1	10142.537	ug/l	1.11	6,673,998.17	3.402E+01	Analog	1.00	3
K			1	9571.407	ug/l	0.27	4,665,307.33	2.378E+01	Pulse	1.00	3
V			1	98.393	ug/l	0.48	896,608.19	4.570E+00	Pulse	0.50	3
Mn			1	96.842	ug/l	2.46	529,438.58	3.207E+00	Pulse	0.50	3
Fe			1	9772.645	ug/l	1.44	96,563,573.33	5.848E+02	Analog	0.50	3
Co			1	99.298	ug/l	1.47	2,188,024.50	1.325E+01	Pulse	0.50	3
Ni			1	97.504	ug/l	1.47	596,731.50	3.614E+00	Pulse	0.50	3
Cu			1	98.851	ug/l	0.98	1,701,914.00	1.031E+01	Pulse	0.50	3
Zn			1	99.303	ug/l	0.87	234,570.09	9.329E-01	Pulse	1.00	3
Cd			1	97.711	ug/l	0.15	400,747.74	1.594E+00	Pulse	0.50	3
Al			1	9534.078	ug/l	0.93	1,894,188.67	9.655E+00	Pulse	1.00	3
Se			1	100.156	ug/l	0.46	9,318.05	5.639E-03	Pulse	3.00	3
Sb			1	97.429	ug/l	1.12	926,229.75	3.684E+00	Pulse	1.00	3
Se			1	96.945	ug/l	0.45	4,777.38	3.452E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,043,804.67	1.00	95.0	Pulse	0.50	3
1	Sc		196,188.14	0.28	97.4	Pulse	0.30	3
1	Ge		165,136.11	1.64	98.6	Pulse	0.30	3
1	In		1,652,478.30	0.73	97.2	Pulse	0.30	3
1	Tb		6,928,897.83	1.02	101.7	Analog	0.50	3
1	Lu		4,209,877.58	0.78	99.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		251,443.71	1.13	98.5	Pulse	0.30	3
1	Te		13,839.92	0.73	93.5	Pulse	0.50	3
1	Li		1,084.48	9.77	99.1	Pulse	0.30	3

Quantitation Report

File Name	012_ICB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:37
Sample Name	ICB
Sample Type	ICB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.005	ug/l	80.76	617.34	3.690E-03	Pulse	0.50	3
As			1	0.007	ug/l	79.49	33.67	2.015E-04	Pulse	1.00	3
Mo			1	0.047	ug/l	20.32	416.67	1.640E-03	Pulse	0.50	3
Pb			1	0.023	ug/l	18.97	2,318.83	4.405E-04	Pulse	1.00	3
Be			1	0.007	ug/l	153.33	0.83	4.222E-06	Pulse	2.00	3
Ag			1	0.109	ug/l	10.74	3,593.69	2.099E-03	Pulse	0.50	3
Ba			1	0.001	ug/l	265.48	31.33	1.831E-05	Pulse	0.50	3
Tl			1	0.049	ug/l	7.78	3,784.44	7.190E-04	Pulse	0.50	3
Sn			1	0.052	ug/l	15.50	687.80	4.018E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	1447.12	529.34	3.092E-04	Pulse	0.50	3
[Pb]			1	0.021	ug/l	32.49	1,045.37	1.985E-04	Pulse	0.50	3
Ca			1	0.002	ug/l	29449.98	115.33	5.829E-04	Pulse	0.50	3
Ti			1	0.003	ug/l	451.76	3.33	1.677E-05	Pulse	0.50	3
Na			1	1.504	ug/l	29.62	13,012.58	6.577E-02	Pulse	1.00	3
Mg			1	0.420	ug/l	39.63	487.67	2.468E-03	Pulse	1.00	3
K			1	0.822	ug/l	34.78	17,374.96	8.781E-02	Pulse	1.00	3
V			1	-0.055	ug/l	-6.16	376.67	1.903E-03	Pulse	0.50	3
Mn			1	-0.003	ug/l	-90.75	88.67	5.303E-04	Pulse	0.50	3
Fe			1	0.558	ug/l	27.64	12,685.56	7.580E-02	Pulse	0.50	3
Co			1	0.006	ug/l	36.72	162.00	9.672E-04	Pulse	0.50	3
Ni			1	0.004	ug/l	95.90	108.67	6.496E-04	Pulse	0.50	3
Cu			1	-0.055	ug/l	-2.78	7,345.42	4.391E-02	Pulse	0.50	3
Zn			1	-0.109	ug/l	-26.20	1,653.41	6.503E-03	Pulse	1.00	3
Cd			1	0.007	ug/l	59.74	36.67	1.443E-04	Pulse	0.50	3
Al			1	0.278	ug/l	58.96	191.67	9.696E-04	Pulse	1.00	3
Se			1	0.002	ug/l	328.08	15.45	9.024E-06	Pulse	3.00	3
Sb			1	0.010	ug/l	25.35	224.67	8.838E-04	Pulse	1.00	3
Se			1	-0.013	ug/l	-633.32	26.56	1.778E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,262,585.50	0.69	99.1	Pulse	0.50	3
1	Sc		197,886.80	0.98	98.2	Pulse	0.30	3

Quantitation Report

1	Ge		167,280.50	0.65	99.9	Pulse	0.30	3
1	In		1,711,815.77	0.44	100.7	Pulse	0.30	3
1	Tb		6,971,478.67	0.07	102.3	Analog	0.50	3
1	Lu		4,197,966.50	0.57	99.1	Pulse	0.50	3
1	Ge		254,265.60	0.72	99.6	Pulse	0.30	3
1	Te		14,948.80	2.14	101.0	Pulse	0.50	3
1	Li		1,040.03	6.09	95.0	Pulse	0.30	3

Quantitation Report

File Name	013LCCV.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:41
Sample Name	CRIA
Sample Type	CRIA
Comment	=std 2
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.016	ug/l	2.81	13,281.89	7.900E-02	Pulse	0.50	3
As			1	1.003	ug/l	5.01	1,485.39	8.837E-03	Pulse	1.00	3
Mo			1	1.045	ug/l	1.40	9,116.91	3.577E-02	Pulse	0.50	3
Pb			1	0.978	ug/l	0.76	52,568.32	9.897E-03	Pulse	1.00	3
Be			1	1.034	ug/l	8.31	71.83	3.594E-04	Pulse	2.00	3
Ag			1	1.083	ug/l	2.26	35,690.93	2.079E-02	Pulse	0.50	3
Ba			1	0.950	ug/l	5.16	3,084.94	1.797E-03	Pulse	0.50	3
Tl			1	1.011	ug/l	0.43	77,855.94	1.466E-02	Pulse	0.50	3
Sn			1	1.096	ug/l	3.81	8,136.31	4.739E-03	Pulse	0.30	3
Sr			1	1.001	ug/l	2.84	6,930.63	4.037E-03	Pulse	0.50	3
[Pb]			1	1.002	ug/l	0.93	25,243.94	4.753E-03	Pulse	0.50	3
Ca			1	99.269	ug/l	4.85	2,862.89	1.432E-02	Pulse	0.50	3
Ti			1	1.067	ug/l	17.01	246.67	1.234E-03	Pulse	0.50	3
Na			1	107.508	ug/l	0.18	167,085.39	8.360E-01	Pulse	1.00	3
Mg			1	100.540	ug/l	0.43	67,605.74	3.383E-01	Pulse	1.00	3
K			1	99.421	ug/l	0.94	66,330.65	3.319E-01	Pulse	1.00	3
V			1	0.944	ug/l	1.24	9,649.08	4.828E-02	Pulse	0.50	3
Mn			1	1.056	ug/l	1.59	5,986.28	3.560E-02	Pulse	0.50	3
Fe			1	101.868	ug/l	1.01	1,032,052.73	6.138E+00	Pulse	0.50	3
Co			1	1.040	ug/l	2.02	23,365.41	1.390E-01	Pulse	0.50	3
Ni			1	1.054	ug/l	2.40	6,651.83	3.956E-02	Pulse	0.50	3
Cu			1	1.194	ug/l	0.13	29,182.69	1.736E-01	Pulse	0.50	3
Zn			1	1.110	ug/l	3.00	4,553.88	1.786E-02	Pulse	1.00	3
Cd			1	1.076	ug/l	1.36	4,483.89	1.759E-02	Pulse	0.50	3
Al			1	99.638	ug/l	0.65	20,302.30	1.016E-01	Pulse	1.00	3
Se			1	1.084	ug/l	9.91	119.89	6.981E-05	Pulse	3.00	3
Sb			1	1.010	ug/l	1.93	9,864.65	3.870E-02	Pulse	1.00	3
Se			1	0.921	ug/l	11.39	76.22	5.083E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,311,772.17	0.93	100.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		199,858.16	0.08	99.2	Pulse	0.30	3
1	Ge		168,149.69	0.95	100.4	Pulse	0.30	3
1	In		1,717,016.01	0.44	101.0	Pulse	0.30	3
1	Tb		7,044,051.67	0.17	103.4	Analog	0.50	3
1	Lu		4,264,168.17	0.61	100.6	Pulse	0.50	3
1	Ge		254,898.51	0.51	99.8	Pulse	0.30	3
1	Te		14,988.20	1.58	101.3	Pulse	0.50	3
1	Li		1,012.25	5.06	92.5	Pulse	0.30	3

Quantitation Report

File Name 014ICSA.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 9:44
Sample Name ICSA
Sample Type ICSA
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.239	ug/l	2.45	15,572.92	9.561E-02	Pulse	0.50	3
As			1	0.071	ug/l	12.33	123.67	7.589E-04	Pulse	1.00	3
Mo			1	2014.888	ug/l	0.97	16,657,615.00	6.896E+01	Analog	0.50	3
Pb			1	0.094	ug/l	4.40	5,218.47	1.143E-03	Pulse	1.00	3
Be			1	0.027	ug/l	43.02	2.17	1.094E-05	Pulse	2.00	3
Ag			1	0.095	ug/l	15.21	2,916.91	1.829E-03	Pulse	0.50	3
Ba			1	0.076	ug/l	5.94	254.67	1.594E-04	Pulse	0.50	3
Tl			1	0.018	ug/l	6.64	1,234.72	2.705E-04	Pulse	0.50	3
Sn			1	0.118	ug/l	6.07	1,077.82	6.752E-04	Pulse	0.30	3
Sr			1	0.933	ug/l	1.65	6,041.65	3.782E-03	Pulse	0.50	3
[Pb]			1	0.097	ug/l	6.23	2,514.86	5.510E-04	Pulse	0.50	3
Ca			1	91992.475	ug/l	2.38	2,530,296.33	1.273E+01	Pulse	0.50	3
Ti			1	1954.867	ug/l	2.17	444,433.21	2.237E+00	Pulse	0.50	3
Na			1	96539.632	ug/l	2.46	139,384,858.67	7.015E+02	Analog	1.00	3
Mg			1	96271.926	ug/l	3.28	64,149,545.33	3.229E+02	Analog	1.00	3
K			1	98387.667	ug/l	2.51	48,409,006.67	2.436E+02	Analog	1.00	3
V			1	-0.033	ug/l	-18.85	582.01	2.931E-03	Pulse	0.50	3
Mn			1	0.278	ug/l	4.30	1,605.41	9.856E-03	Pulse	0.50	3
Fe			1	96893.080	ug/l	1.25	944,392,960.00	5.798E+03	Analog	0.50	3
Co			1	0.014	ug/l	8.58	322.67	1.981E-03	Pulse	0.50	3
Ni			1	0.141	ug/l	4.74	933.36	5.731E-03	Pulse	0.50	3
Cu			1	0.163	ug/l	5.52	10,849.75	6.661E-02	Pulse	0.50	3
Zn			1	0.976	ug/l	4.10	4,012.42	1.661E-02	Pulse	1.00	3
Cd			1	0.394	ug/l	2.56	1,560.74	6.461E-03	Pulse	0.50	3
Al			1	91714.479	ug/l	2.17	18,453,291.33	9.287E+01	Analog	1.00	3
Se			1	0.083	ug/l	27.30	21.67	1.355E-05	Pulse	3.00	3
Sb			1	0.048	ug/l	6.47	563.01	2.331E-03	Pulse	1.00	3
Se			1	-0.043	ug/l	-269.55	20.78	1.671E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,566,288.50	1.29	86.0	Pulse	0.50	3
1	Sc		198,742.22	1.68	98.7	Pulse	0.30	3
1	Ge		162,888.15	0.87	97.2	Pulse	0.30	3
1	In		1,597,058.34	1.65	93.9	Pulse	0.30	3
1	Tb		6,719,619.67	0.58	98.6	Analog	0.50	3
1	Lu		4,078,903.50	0.76	96.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		241,565.43	0.26	94.6	Pulse	0.30	3
1	Te		12,422.24	1.31	83.9	Pulse	0.50	3
1	Li		864.47	5.35	79.0	Pulse	0.30	3

Quantitation Report

File Name 015ICSB.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 9:48
Sample Name ICSAB
Sample Type ICSAB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	20.481	ug/l	0.48	247,753.97	1.529E+00	Pulse	0.50	3
As			1	19.300	ug/l	0.64	27,147.20	1.675E-01	Pulse	1.00	3
Mo			1	2019.557	ug/l	0.39	16,829,551.00	6.912E+01	Analog	0.50	3
Pb			1	0.092	ug/l	2.39	5,160.45	1.132E-03	Pulse	1.00	3
Be			1	0.025	ug/l	156.02	2.00	1.018E-05	Pulse	2.00	3
Ag			1	17.843	ug/l	0.36	542,598.96	3.422E-01	Pulse	0.50	3
Ba			1	0.065	ug/l	5.12	219.33	1.383E-04	Pulse	0.50	3
Tl			1	0.012	ug/l	11.66	886.03	1.944E-04	Pulse	0.50	3
Sn			1	0.160	ug/l	10.00	1,346.73	8.491E-04	Pulse	0.30	3
Sr			1	0.903	ug/l	0.96	5,824.25	3.673E-03	Pulse	0.50	3
[Pb]			1	0.091	ug/l	5.51	2,380.18	5.224E-04	Pulse	0.50	3
Ca			1	90962.896	ug/l	0.91	2,484,134.67	1.259E+01	Pulse	0.50	3
Ti			1	1941.785	ug/l	0.12	438,290.91	2.222E+00	Pulse	0.50	3
Na			1	96863.269	ug/l	0.87	138,856,837.33	7.039E+02	Analog	1.00	3
Mg			1	95962.161	ug/l	0.39	63,492,882.67	3.219E+02	Analog	1.00	3
K			1	98612.745	ug/l	0.91	48,174,829.33	2.442E+02	Analog	1.00	3
V			1	-0.030	ug/l	-17.38	605.34	3.069E-03	Pulse	0.50	3
Mn			1	19.406	ug/l	1.10	104,237.61	6.431E-01	Pulse	0.50	3
Fe			1	97320.311	ug/l	1.51	943,877,632.00	5.824E+03	Analog	0.50	3
Co			1	19.046	ug/l	0.33	411,996.75	2.542E+00	Pulse	0.50	3
Ni			1	18.625	ug/l	0.75	111,962.71	6.908E-01	Pulse	0.50	3
Cu			1	18.313	ug/l	0.41	316,055.23	1.950E+00	Pulse	0.50	3
Zn			1	19.085	ug/l	0.41	45,137.91	1.854E-01	Pulse	1.00	3
Cd			1	18.464	ug/l	0.27	73,342.33	3.012E-01	Pulse	0.50	3
Al			1	89942.521	ug/l	0.46	17,967,239.33	9.108E+01	Analog	1.00	3
Se			1	0.040	ug/l	105.93	17.67	1.115E-05	Pulse	3.00	3
Sb			1	0.042	ug/l	4.68	508.01	2.086E-03	Pulse	1.00	3
Se			1	0.040	ug/l	199.25	23.89	1.964E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,556,906.33	0.71	85.8	Pulse	0.50	3
1	Sc		197,269.20	0.48	97.9	Pulse	0.30	3
1	Ge		162,082.52	0.73	96.7	Pulse	0.30	3
1	In		1,585,736.26	0.56	93.3	Pulse	0.30	3
1	Tb		6,657,382.17	0.71	97.7	Analog	0.50	3
1	Lu		4,024,529.17	0.91	95.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		243,498.01	0.26	95.3	Pulse	0.30	3
1	Te		12,155.40	0.63	82.1	Pulse	0.50	3
1	Li		898.91	2.78	82.1	Pulse	0.30	3

Quantitation Report

File Name	016CCVA.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:52
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	49.966	ug/l	1.58	614,196.77	3.724E+00	Pulse	0.50	3
As			1	49.993	ug/l	0.72	71,516.20	4.336E-01	Pulse	1.00	3
Mo			1	50.801	ug/l	0.58	436,033.20	1.739E+00	Pulse	0.50	3
Pb			1	49.245	ug/l	1.38	2,507,967.58	4.876E-01	Pulse	1.00	3
Be			1	49.852	ug/l	1.50	3,321.11	1.726E-02	Pulse	2.00	3
Ag			1	51.580	ug/l	1.32	1,620,292.42	9.891E-01	Pulse	0.50	3
Ba			1	50.271	ug/l	1.52	154,357.31	9.423E-02	Pulse	0.50	3
Tl			1	49.536	ug/l	1.15	3,691,213.42	7.177E-01	Pulse	0.50	3
Sn			1	51.397	ug/l	1.08	350,021.72	2.137E-01	Pulse	0.30	3
Sr			1	49.853	ug/l	1.41	304,771.53	1.861E-01	Pulse	0.50	3
[Pb]			1	49.810	ug/l	1.10	1,190,416.63	2.315E-01	Pulse	0.50	3
Ca			1	4886.750	ug/l	0.97	130,284.50	6.770E-01	Pulse	0.50	3
Ti			1	49.847	ug/l	0.86	10,977.78	5.705E-02	Pulse	0.50	3
Na			1	5019.185	ug/l	0.66	7,028,640.83	3.653E+01	Analog	1.00	3
Mg			1	4843.935	ug/l	0.25	3,126,623.08	1.625E+01	Pulse	1.00	3
K			1	4907.571	ug/l	0.44	2,354,364.75	1.223E+01	Pulse	1.00	3
V			1	50.516	ug/l	1.06	451,947.81	2.349E+00	Pulse	0.50	3
Mn			1	49.364	ug/l	0.92	269,643.94	1.635E+00	Pulse	0.50	3
Fe			1	5068.254	ug/l	0.78	50,024,564.00	3.033E+02	Analog	0.50	3
Co			1	50.761	ug/l	0.99	1,117,227.54	6.774E+00	Pulse	0.50	3
Ni			1	50.732	ug/l	0.60	310,166.99	1.881E+00	Pulse	0.50	3
Cu			1	51.945	ug/l	0.90	897,131.10	5.440E+00	Pulse	0.50	3
Zn			1	51.284	ug/l	1.11	121,743.72	4.854E-01	Pulse	1.00	3
Cd			1	51.136	ug/l	1.17	209,180.54	8.341E-01	Pulse	0.50	3
Al			1	4765.451	ug/l	0.60	928,746.98	4.826E+00	Pulse	1.00	3
Se			1	50.099	ug/l	1.79	4,627.45	2.825E-03	Pulse	3.00	3
Sb			1	49.895	ug/l	0.95	473,198.32	1.887E+00	Pulse	1.00	3
Se			1	47.642	ug/l	4.10	2,363.81	1.706E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,143,568.67	1.11	96.8	Pulse	0.50	3
1	Sc		192,438.92	0.83	95.5	Pulse	0.30	3
1	Ge		164,923.04	0.43	98.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,638,211.01	0.99	96.4	Pulse	0.30	3
1	Tb		6,963,161.17	1.09	102.2	Analog	0.50	3
1	Lu		4,144,452.08	0.74	97.8	Pulse	0.50	3
1	Ge		250,793.04	0.32	98.2	Pulse	0.30	3
1	Te		13,871.30	3.35	93.7	Pulse	0.50	3
1	Li		1,004.47	9.67	91.8	Pulse	0.30	3

Quantitation Report

File Name	017_CCV.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:56
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	99.090	ug/l	1.33	1,219,380.50	7.383E+00	Pulse	0.50	3
As			1	98.722	ug/l	0.88	141,421.50	8.562E-01	Pulse	1.00	3
Mo			1	100.474	ug/l	0.39	864,085.63	3.439E+00	Pulse	0.50	3
Pb			1	97.855	ug/l	1.07	4,914,684.67	9.688E-01	Pulse	1.00	3
Be			1	100.045	ug/l	0.35	6,748.79	3.463E-02	Pulse	2.00	3
Ag			1	100.569	ug/l	0.63	3,175,767.58	1.929E+00	Pulse	0.50	3
Ba			1	98.013	ug/l	0.13	302,513.81	1.837E-01	Pulse	0.50	3
Tl			1	101.034	ug/l	0.81	7,425,924.50	1.464E+00	Analog	0.50	3
Sn			1	101.507	ug/l	0.62	694,611.13	4.218E-01	Pulse	0.30	3
Sr			1	99.165	ug/l	0.19	608,935.69	3.698E-01	Pulse	0.50	3
[Pb]			1	98.471	ug/l	2.52	2,320,515.33	4.575E-01	Pulse	0.50	3
Ca			1	9753.981	ug/l	0.38	263,236.18	1.351E+00	Pulse	0.50	3
Ti			1	99.285	ug/l	0.69	22,140.52	1.136E-01	Pulse	0.50	3
Na			1	9959.625	ug/l	0.32	14,113,231.67	7.242E+01	Analog	1.00	3
Mg			1	9855.849	ug/l	0.37	6,441,979.67	3.306E+01	Analog	1.00	3
K			1	9720.138	ug/l	0.57	4,705,750.67	2.415E+01	Pulse	1.00	3
V			1	100.479	ug/l	0.26	909,478.58	4.667E+00	Pulse	0.50	3
Mn			1	98.510	ug/l	0.44	538,844.62	3.262E+00	Pulse	0.50	3
Fe			1	10089.124	ug/l	1.54	99,722,058.67	6.038E+02	Analog	0.50	3
Co			1	100.750	ug/l	1.89	2,220,678.17	1.345E+01	Pulse	0.50	3
Ni			1	101.379	ug/l	1.74	620,645.06	3.758E+00	Pulse	0.50	3
Cu			1	101.132	ug/l	1.21	1,741,552.38	1.054E+01	Pulse	0.50	3
Zn			1	99.962	ug/l	0.31	235,984.32	9.391E-01	Pulse	1.00	3
Cd			1	100.539	ug/l	0.43	412,093.10	1.640E+00	Pulse	0.50	3
Al			1	9490.905	ug/l	0.50	1,873,013.75	9.611E+00	Pulse	1.00	3
Se			1	99.759	ug/l	1.25	9,248.68	5.616E-03	Pulse	3.00	3
Sb			1	98.593	ug/l	0.42	936,807.56	3.728E+00	Pulse	1.00	3
Se			1	97.757	ug/l	0.58	4,674.91	3.481E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,073,395.17	1.22	95.5	Pulse	0.50	3
1	Sc		194,873.45	0.29	96.7	Pulse	0.30	3
1	Ge		165,187.18	1.22	98.6	Pulse	0.30	3
1	In		1,646,725.04	0.33	96.9	Pulse	0.30	3
1	Tb		6,969,129.17	0.31	102.3	Analog	0.50	3
1	Lu		4,134,440.58	1.06	97.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		251,292.84	0.37	98.4	Pulse	0.30	3
1	Te		13,431.63	1.24	90.8	Pulse	0.50	3
1	Li		1,050.04	9.37	95.9	Pulse	0.30	3

Quantitation Report

File Name	018_CCB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:00
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.002	ug/l	-216.58	530.68	3.179E-03	Pulse	0.50	3
As			1	0.000	ug/l	33052.98	23.67	1.416E-04	Pulse	1.00	3
Mo			1	0.080	ug/l	14.14	696.01	2.747E-03	Pulse	0.50	3
Pb			1	0.016	ug/l	15.86	1,994.45	3.796E-04	Pulse	1.00	3
Be			1	0.000	ug/l	5160.11	0.33	1.744E-06	Pulse	2.00	3
Ag			1	0.040	ug/l	13.65	1,308.05	7.871E-04	Pulse	0.50	3
Ba			1	-0.002	ug/l	-264.81	22.00	1.321E-05	Pulse	0.50	3
Tl			1	0.078	ug/l	14.70	6,039.77	1.149E-03	Pulse	0.50	3
Sn			1	0.028	ug/l	39.21	503.34	3.026E-04	Pulse	0.30	3
Sr			1	0.007	ug/l	61.02	557.34	3.352E-04	Pulse	0.50	3
[Pb]			1	0.018	ug/l	22.31	967.37	1.841E-04	Pulse	0.50	3
Ca			1	0.095	ug/l	489.57	114.67	5.958E-04	Pulse	0.50	3
Ti			1	0.010	ug/l	55.17	4.67	2.424E-05	Pulse	0.50	3
Na			1	5.316	ug/l	9.74	17,993.40	9.347E-02	Pulse	1.00	3
Mg			1	1.032	ug/l	17.53	870.02	4.521E-03	Pulse	1.00	3
K			1	2.807	ug/l	15.04	17,851.06	9.272E-02	Pulse	1.00	3
V			1	-0.053	ug/l	-6.46	386.67	2.008E-03	Pulse	0.50	3
Mn			1	0.005	ug/l	97.41	135.33	8.099E-04	Pulse	0.50	3
Fe			1	1.101	ug/l	20.17	18,089.89	1.083E-01	Pulse	0.50	3
Co			1	0.003	ug/l	53.55	96.67	5.784E-04	Pulse	0.50	3
Ni			1	0.004	ug/l	67.48	108.67	6.510E-04	Pulse	0.50	3
Cu			1	-0.070	ug/l	-12.97	7,071.99	4.235E-02	Pulse	0.50	3
Zn			1	-0.117	ug/l	-12.29	1,630.74	6.433E-03	Pulse	1.00	3
Cd			1	0.003	ug/l	98.78	21.33	8.400E-05	Pulse	0.50	3
Al			1	0.764	ug/l	5.72	281.33	1.461E-03	Pulse	1.00	3
Se			1	-0.013	ug/l	-113.12	13.56	8.153E-06	Pulse	3.00	3
Sb			1	0.010	ug/l	39.63	228.67	9.014E-04	Pulse	1.00	3
Se			1	-0.038	ug/l	-112.05	24.44	1.687E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,252,770.33	0.72	98.9	Pulse	0.50	3
1	Sc		192,531.09	0.73	95.6	Pulse	0.30	3

Quantitation Report

1	Ge		166,974.07	0.68	99.7	Pulse	0.30	3
1	In		1,662,675.49	0.58	97.8	Pulse	0.30	3
1	Tb		7,033,382.33	0.75	103.2	Analog	0.50	3
1	Lu		4,175,520.42	0.55	98.5	Pulse	0.50	3
1	Ge		253,500.55	0.63	99.3	Pulse	0.30	3
1	Te		14,501.77	2.46	98.0	Pulse	0.50	3
1	Li		988.92	8.29	90.4	Pulse	0.30	3

Quantitation Report

File Name	019SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:03
Sample Name	ICV
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	516.962	ug/l	1.56	5,921,720.67	3.850E+01	Analog	0.50	3
As			1	500.692	ug/l	1.22	667,809.06	4.342E+00	Pulse	1.00	3
Mo			1	514.200	ug/l	0.41	4,192,838.42	1.760E+01	Pulse	0.50	3
Pb			1	515.770	ug/l	1.85	24,850,950.00	5.105E+00	Analog	1.00	3
Be			1	505.808	ug/l	1.70	32,115.57	1.751E-01	Pulse	2.00	3
Ag			1	56.627	ug/l	0.72	1,738,992.13	1.086E+00	Pulse	0.50	3
Ba			1	471.741	ug/l	0.78	1,415,837.79	8.841E-01	Pulse	0.50	3
Tl			1	510.051	ug/l	1.13	35,971,800.00	7.390E+00	Analog	0.50	3
Sn			1	513.960	ug/l	1.19	3,418,957.16	2.135E+00	Pulse	0.30	3
Sr			1	481.261	ug/l	0.96	2,871,991.33	1.793E+00	Pulse	0.50	3
[Pb]			1	514.075	ug/l	1.34	11,623,601.33	2.388E+00	Analog	0.50	3
Ca			1	11864.726	ug/l	1.12	301,386.32	1.643E+00	Pulse	0.50	3
Ti			1	507.720	ug/l	1.24	106,563.78	5.809E-01	Pulse	0.50	3
Na			1	10023.350	ug/l	0.60	13,370,284.33	7.289E+01	Analog	1.00	3
Mg			1	10584.295	ug/l	1.18	6,511,970.67	3.550E+01	Analog	1.00	3
K			1	9981.101	ug/l	1.02	4,548,146.00	2.479E+01	Pulse	1.00	3
V			1	510.488	ug/l	0.54	4,346,226.17	2.369E+01	Pulse	0.50	3
Mn			1	497.685	ug/l	0.56	2,534,690.67	1.648E+01	Pulse	0.50	3
Fe			1	10640.826	ug/l	1.23	97,944,384.00	6.368E+02	Analog	0.50	3
Co			1	537.563	ug/l	2.00	11,033,342.00	7.174E+01	Analog	0.50	3
Ni			1	511.933	ug/l	0.97	2,918,421.25	1.897E+01	Pulse	0.50	3
Cu			1	532.905	ug/l	1.89	8,512,447.67	5.535E+01	Analog	0.50	3
Zn			1	495.639	ug/l	1.24	1,102,245.54	4.626E+00	Pulse	1.00	3
Cd			1	502.726	ug/l	1.34	1,953,586.75	8.200E+00	Pulse	0.50	3
Al			1	9479.045	ug/l	0.73	1,760,901.00	9.599E+00	Pulse	1.00	3
Se			1	471.559	ug/l	0.50	42,464.85	2.652E-02	Pulse	3.00	3
Sb			1	491.116	ug/l	0.50	4,423,927.83	1.857E+01	Pulse	1.00	3
Se			1	488.404	ug/l	1.62	21,443.81	1.732E+00	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,868,286.67	1.13	91.7	Pulse	0.50	3
1	Sc		183,448.97	1.15	91.1	Pulse	0.30	3
1	Ge		153,827.58	1.47	91.8	Pulse	0.30	3
1	In		1,601,490.60	1.02	94.2	Pulse	0.30	3
1	Tb		6,823,673.17	1.13	100.2	Analog	0.50	3
1	Lu		3,989,283.08	0.73	94.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		238,269.10	1.10	93.3	Pulse	0.30	3
1	Te		12,385.56	1.86	83.7	Pulse	0.50	3
1	Li		1,347.28	4.58	123.1	Pulse	0.30	3

Quantitation Report

File Name	020_MB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:07
Sample Name	MP34080-MB1
Sample Type	MB
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.329	ug/l	10.66	2,384.83	1.555E-02	Pulse	0.50	3
As			1	0.118	ug/l	23.86	100.33	6.533E-04	Pulse	1.00	3
Mo			1	0.421	ug/l	2.42	1,681.42	7.225E-03	Pulse	0.50	3
Pb			1	0.321	ug/l	15.92	9,087.46	1.803E-03	Pulse	1.00	3
Be			1	0.065	ug/l	94.47	2.33	1.293E-05	Pulse	2.00	3
Ag			1	0.291	ug/l	11.46	4,375.87	2.804E-03	Pulse	0.50	3
Ba			1	0.111	ug/l	15.46	188.67	1.208E-04	Pulse	0.50	3
Tl			1	0.452	ug/l	21.31	16,563.65	3.286E-03	Pulse	0.50	3
Sn			1	1.281	ug/l	15.88	4,443.36	2.846E-03	Pulse	0.30	3
Sr			1	0.138	ug/l	5.90	880.02	5.637E-04	Pulse	0.50	3
[Pb]			1	0.329	ug/l	16.72	4,355.92	8.643E-04	Pulse	0.50	3
Ca			1	20.376	ug/l	16.04	361.34	1.993E-03	Pulse	0.50	3
Ti			1	0.285	ug/l	17.75	32.00	1.764E-04	Pulse	0.50	3
Na			1	30.897	ug/l	4.39	30,310.50	1.671E-01	Pulse	1.00	3
Mg			1	11.164	ug/l	3.06	3,587.99	1.978E-02	Pulse	1.00	3
K			1	11.112	ug/l	17.25	18,050.91	9.953E-02	Pulse	1.00	3
V			1	0.154	ug/l	15.13	1,457.39	8.032E-03	Pulse	0.50	3
Mn			1	0.288	ug/l	5.72	828.69	5.406E-03	Pulse	0.50	3
Fe			1	10.009	ug/l	2.12	52,406.66	3.419E-01	Pulse	0.50	3
Co			1	0.154	ug/l	9.60	1,605.41	1.046E-02	Pulse	0.50	3
Ni			1	0.102	ug/l	40.73	368.67	2.397E-03	Pulse	0.50	3
Cu			1	1.331	ug/l	1.87	18,189.24	1.187E-01	Pulse	0.50	3
Zn			1	2.248	ug/l	1.96	4,187.47	1.799E-02	Pulse	1.00	3
Cd			1	0.056	ug/l	31.94	115.33	4.953E-04	Pulse	0.50	3
Al			1	10.365	ug/l	4.61	1,076.36	5.936E-03	Pulse	1.00	3
Se			1	0.069	ug/l	110.18	16.89	1.081E-05	Pulse	3.00	3
Sb			1	0.155	ug/l	15.61	802.69	3.448E-03	Pulse	1.00	3
Se			1	0.250	ug/l	98.55	25.55	2.265E-03	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,037,496.83	1.08	94.8	Pulse	0.50	3
1	Sc		181,379.61	1.16	90.0	Pulse	0.30	3
1	Ge		153,254.05	1.69	91.5	Pulse	0.30	3
1	In		1,561,195.91	0.38	91.8	Pulse	0.30	3
1	Tb		6,839,830.83	1.24	100.4	Analog	0.50	3
1	Lu		3,988,452.83	1.72	94.1	Pulse	0.50	3
1	Ge		232,733.49	0.30	91.1	Pulse	0.30	3
1	Te		11,307.53	1.84	76.4	Pulse	0.50	3
1	Li		907.81	6.94	82.9	Pulse	0.30	3

Quantitation Report

File Name 021_BSP.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 10:11
Sample Name MP34080-B1
Sample Type BSP
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	219.367	ug/l	1.18	1,266,196.96	8.172E+00	Pulse	0.50	3
As			1	216.387	ug/l	1.03	145,396.45	9.383E-01	Pulse	1.00	3
Mo			1	221.405	ug/l	2.58	883,159.91	3.789E+00	Pulse	0.50	3
Pb			1	211.994	ug/l	1.72	5,086,416.67	1.049E+00	Pulse	1.00	3
Be			1	219.335	ug/l	2.42	6,923.69	3.796E-02	Pulse	2.00	3
Ag			1	108.488	ug/l	2.88	1,602,285.59	1.040E+00	Pulse	0.50	3
Ba			1	208.861	ug/l	2.81	301,492.20	1.957E-01	Pulse	0.50	3
Tl			1	212.961	ug/l	1.71	7,477,533.83	1.543E+00	Analog	0.50	3
Sn			1	235.804	ug/l	2.70	754,643.95	4.899E-01	Pulse	0.30	3
Sr			1	210.949	ug/l	3.17	605,769.13	3.933E-01	Pulse	0.50	3
[Pb]			1	204.493	ug/l	1.38	2,302,424.92	4.750E-01	Pulse	0.50	3
Ca			1	20074.569	ug/l	2.17	253,529.11	1.390E+00	Pulse	0.50	3
Ti			1	212.504	ug/l	2.75	22,175.24	1.216E-01	Pulse	0.50	3
Na			1	20995.096	ug/l	2.19	13,922,055.00	7.633E+01	Analog	1.00	3
Mg			1	20930.573	ug/l	2.88	6,401,657.50	3.510E+01	Analog	1.00	3
K			1	20088.650	ug/l	2.35	4,550,620.67	2.495E+01	Pulse	1.00	3
V			1	219.753	ug/l	2.19	930,766.54	5.103E+00	Pulse	0.50	3
Mn			1	210.337	ug/l	2.06	539,620.56	3.483E+00	Pulse	0.50	3
Fe			1	21288.851	ug/l	1.86	98,700,565.33	6.370E+02	Analog	0.50	3
Co			1	220.356	ug/l	1.93	2,278,300.00	1.470E+01	Pulse	0.50	3
Ni			1	218.577	ug/l	1.45	627,691.12	4.051E+00	Pulse	0.50	3
Cu			1	220.097	ug/l	1.71	1,777,124.37	1.147E+01	Pulse	0.50	3
Zn			1	202.233	ug/l	2.61	221,416.55	9.498E-01	Pulse	1.00	3
Cd			1	213.423	ug/l	2.96	405,725.46	1.741E+00	Pulse	0.50	3
Al			1	18208.398	ug/l	2.26	1,681,580.79	9.220E+00	Pulse	1.00	3
Se			1	185.708	ug/l	1.34	8,055.14	5.228E-03	Pulse	3.00	3
Sb			1	208.499	ug/l	2.14	918,903.79	3.942E+00	Pulse	1.00	3
Se			1	207.570	ug/l	3.03	4,037.43	3.694E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,847,319.33	0.50	91.3	Pulse	0.50	3
1	Sc		182,435.48	1.74	90.6	Pulse	0.30	3
1	Ge		154,961.07	0.69	92.5	Pulse	0.30	3
1	In		1,540,969.10	2.24	90.6	Pulse	0.30	3
1	Tb		6,833,598.83	0.41	100.3	Analog	0.50	3
1	Lu		3,989,290.50	0.63	94.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		233,175.33	1.68	91.3	Pulse	0.30	3
1	Te		10,933.30	1.90	73.9	Pulse	0.50	3
1	Li		1,006.70	9.29	92.0	Pulse	0.30	3

Quantitation Report

File Name 022SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 10:15
Sample Name FA55941-5
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.536	ug/l	4.64	3,663.03	2.327E-02	Pulse	0.50	3
As			1	0.939	ug/l	5.23	663.01	4.211E-03	Pulse	1.00	3
Mo			1	3.051	ug/l	1.48	12,555.56	5.222E-02	Pulse	0.50	3
Pb			1	0.222	ug/l	3.77	6,557.94	1.314E-03	Pulse	1.00	3
Be			1	0.037	ug/l	43.10	1.50	8.159E-06	Pulse	2.00	3
Ag			1	0.158	ug/l	13.12	2,374.83	1.525E-03	Pulse	0.50	3
Ba			1	7.604	ug/l	2.71	11,129.46	7.142E-03	Pulse	0.50	3
Tl			1	0.215	ug/l	13.47	7,848.52	1.572E-03	Pulse	0.50	3
Sn			1	0.791	ug/l	2.11	2,850.24	1.829E-03	Pulse	0.30	3
Sr			1	42.069	ug/l	1.22	122,622.28	7.868E-02	Pulse	0.50	3
[Pb]			1	0.210	ug/l	6.60	2,926.93	5.867E-04	Pulse	0.50	3
Ca			1	20309.666	ug/l	1.64	259,073.67	1.406E+00	Pulse	0.50	3
Ti			1	0.217	ug/l	34.15	25.33	1.378E-04	Pulse	0.50	3
Na			1	3768.821	ug/l	0.89	2,532,595.50	1.375E+01	Pulse	1.00	3
Mg			1	5484.808	ug/l	0.61	1,694,703.58	9.199E+00	Pulse	1.00	3
K			1	1593.280	ug/l	1.38	379,098.51	2.058E+00	Pulse	1.00	3
V			1	0.355	ug/l	13.75	2,339.48	1.269E-02	Pulse	0.50	3
Mn			1	23.967	ug/l	2.63	62,555.46	3.974E-01	Pulse	0.50	3
Fe			1	34.770	ug/l	1.70	170,441.34	1.083E+00	Pulse	0.50	3
Co			1	0.042	ug/l	14.99	461.34	2.930E-03	Pulse	0.50	3
Ni			1	0.135	ug/l	1.22	474.01	3.011E-03	Pulse	0.50	3
Cu			1	0.605	ug/l	2.58	12,755.56	8.103E-02	Pulse	0.50	3
Zn			1	6.876	ug/l	1.45	9,510.35	3.956E-02	Pulse	1.00	3
Cd			1	0.025	ug/l	18.39	58.67	2.441E-04	Pulse	0.50	3
Al			1	10.700	ug/l	6.41	1,124.37	6.105E-03	Pulse	1.00	3
Se			1	0.044	ug/l	158.42	15.78	1.011E-05	Pulse	3.00	3
Sb			1	0.186	ug/l	2.08	969.03	4.031E-03	Pulse	1.00	3
Se			1	0.072	ug/l	38.97	22.11	1.950E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,990,158.67	1.42	93.9	Pulse	0.50	3
1	Sc		184,225.25	0.91	91.5	Pulse	0.30	3
1	Ge		157,424.60	0.36	94.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,558,587.44	0.83	91.7	Pulse	0.30	3
1	Tb		6,818,518.67	0.69	100.1	Analog	0.50	3
1	Lu		3,991,990.75	0.22	94.2	Pulse	0.50	3
1	Ge		240,419.98	0.32	94.1	Pulse	0.30	3
1	Te		11,345.56	2.96	76.7	Pulse	0.50	3
1	Li		991.15	1.36	90.6	Pulse	0.30	3

Quantitation Report

File Name	023SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:19
Sample Name	MP34080-D1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.402	ug/l	4.30	2,937.57	1.826E-02	Pulse	0.50	3
As			1	0.938	ug/l	3.56	677.01	4.209E-03	Pulse	1.00	3
Mo			1	2.991	ug/l	3.32	12,788.39	5.120E-02	Pulse	0.50	3
Pb			1	0.185	ug/l	1.04	5,764.98	1.134E-03	Pulse	1.00	3
Be			1	-0.005	ug/l	-187.07	0.17	8.751E-07	Pulse	2.00	3
Ag			1	0.119	ug/l	9.65	1,821.43	1.151E-03	Pulse	0.50	3
Ba			1	7.664	ug/l	2.91	11,400.96	7.198E-03	Pulse	0.50	3
Tl			1	0.059	ug/l	6.10	2,222.15	4.372E-04	Pulse	0.50	3
Sn			1	0.661	ug/l	6.02	2,469.07	1.559E-03	Pulse	0.30	3
Sr			1	42.481	ug/l	2.24	125,826.33	7.945E-02	Pulse	0.50	3
[Pb]			1	0.179	ug/l	7.13	2,616.88	5.150E-04	Pulse	0.50	3
Ca			1	20402.971	ug/l	1.74	267,135.99	1.413E+00	Pulse	0.50	3
Ti			1	0.161	ug/l	49.01	20.00	1.054E-04	Pulse	0.50	3
Na			1	3786.307	ug/l	1.47	2,611,517.58	1.381E+01	Pulse	1.00	3
Mg			1	5529.480	ug/l	1.18	1,753,687.92	9.274E+00	Pulse	1.00	3
K			1	1591.199	ug/l	1.57	388,633.44	2.055E+00	Pulse	1.00	3
V			1	0.366	ug/l	0.86	2,450.83	1.296E-02	Pulse	0.50	3
Mn			1	24.076	ug/l	0.42	64,222.82	3.992E-01	Pulse	0.50	3
Fe			1	11.227	ug/l	4.84	60,870.39	3.783E-01	Pulse	0.50	3
Co			1	0.035	ug/l	9.35	404.68	2.516E-03	Pulse	0.50	3
Ni			1	0.101	ug/l	8.68	383.34	2.383E-03	Pulse	0.50	3
Cu			1	0.191	ug/l	8.22	9,578.40	5.954E-02	Pulse	0.50	3
Zn			1	6.874	ug/l	3.48	9,878.20	3.955E-02	Pulse	1.00	3
Cd			1	0.017	ug/l	10.63	44.00	1.762E-04	Pulse	0.50	3
Al			1	9.683	ug/l	6.64	1,056.70	5.590E-03	Pulse	1.00	3
Se			1	0.051	ug/l	25.52	16.33	1.031E-05	Pulse	3.00	3
Sb			1	0.177	ug/l	4.48	966.70	3.869E-03	Pulse	1.00	3
Se			1	0.184	ug/l	86.52	24.78	2.149E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,082,993.17	1.07	95.7	Pulse	0.50	3
1	Sc		189,113.57	1.27	93.9	Pulse	0.30	3
1	Ge		160,877.95	0.49	96.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,584,119.49	1.57	93.2	Pulse	0.30	3
1	Tb		7,022,335.50	0.85	103.1	Analog	0.50	3
1	Lu		4,062,867.58	0.73	95.9	Pulse	0.50	3
1	Ge		249,808.01	0.74	97.8	Pulse	0.30	3
1	Te		11,536.34	1.92	78.0	Pulse	0.50	3
1	Li		1,125.60	0.45	102.8	Pulse	0.30	3

Quantitation Report

File Name 024SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 10:22
Sample Name MP34080-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.496	ug/l	12.04	1,206.71	6.999E-03	Pulse	0.50	3
As			1	1.153	ug/l	11.81	196.67	1.142E-03	Pulse	1.00	3
Mo			1	3.385	ug/l	4.12	3,066.93	1.160E-02	Pulse	0.50	3
Pb			1	0.207	ug/l	2.52	2,226.48	4.225E-04	Pulse	1.00	3
Be			1	0.094	ug/l	76.57	1.00	4.929E-06	Pulse	2.00	3
Ag			1	0.184	ug/l	12.69	620.68	3.670E-04	Pulse	0.50	3
Ba			1	8.278	ug/l	1.69	2,652.87	1.568E-03	Pulse	0.50	3
Tl			1	0.119	ug/l	3.00	982.03	1.864E-04	Pulse	0.50	3
Sn			1	0.562	ug/l	25.66	707.80	4.191E-04	Pulse	0.30	3
Sr			1	46.678	ug/l	2.10	29,934.37	1.770E-02	Pulse	0.50	3
[Pb]			1	0.220	ug/l	4.89	1,066.04	2.023E-04	Pulse	0.50	3
Ca			1	22585.825	ug/l	0.98	63,583.00	3.132E-01	Pulse	0.50	3
Ti			1	0.456	ug/l	84.16	13.33	6.549E-05	Pulse	0.50	3
Na			1	4153.531	ug/l	1.24	623,746.65	3.073E+00	Pulse	1.00	3
Mg			1	6094.995	ug/l	1.13	415,171.50	2.045E+00	Pulse	1.00	3
K			1	1778.347	ug/l	0.51	106,775.33	5.260E-01	Pulse	1.00	3
V			1	0.296	ug/l	19.20	1,185.37	5.838E-03	Pulse	0.50	3
Mn			1	26.173	ug/l	0.71	15,045.86	8.730E-02	Pulse	0.50	3
Fe			1	21.591	ug/l	0.82	29,582.51	1.716E-01	Pulse	0.50	3
Co			1	0.054	ug/l	23.54	151.33	8.792E-04	Pulse	0.50	3
Ni			1	0.172	ug/l	5.00	197.33	1.145E-03	Pulse	0.50	3
Cu			1	-0.620	ug/l	-22.28	7,445.46	4.321E-02	Pulse	0.50	3
Zn			1	6.477	ug/l	5.61	3,583.67	1.356E-02	Pulse	1.00	3
Cd			1	0.027	ug/l	41.84	21.33	8.058E-05	Pulse	0.50	3
Al			1	12.915	ug/l	7.50	405.00	1.996E-03	Pulse	1.00	3
Se			1	0.044	ug/l	394.56	15.45	9.133E-06	Pulse	3.00	3
Sb			1	0.213	ug/l	10.57	349.33	1.322E-03	Pulse	1.00	3
Se			1	-0.563	ug/l	-140.32	22.56	1.623E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,269,249.00	0.84	99.2	Pulse	0.50	3
1	Sc		202,999.34	0.92	100.8	Pulse	0.30	3
1	Ge		172,353.88	1.27	102.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,691,625.04	1.62	99.5	Pulse	0.30	3
1	Tb		7,178,775.00	0.80	105.4	Analog	0.50	3
1	Lu		4,159,317.58	0.78	98.1	Pulse	0.50	3
1	Ge		264,417.22	1.04	103.5	Pulse	0.30	3
1	Te		13,904.66	1.72	94.0	Pulse	0.50	3
1	Li		1,082.26	4.61	98.9	Pulse	0.30	3

Quantitation Report

File Name	025SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:26
Sample Name	MP34080-S1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	208.162	ug/l	1.67	1,230,611.75	7.754E+00	Pulse	0.50	3
As			1	206.537	ug/l	1.82	142,133.83	8.956E-01	Pulse	1.00	3
Mo			1	212.638	ug/l	0.81	869,326.27	3.639E+00	Pulse	0.50	3
Pb			1	205.043	ug/l	1.25	4,881,011.83	1.015E+00	Pulse	1.00	3
Be			1	208.914	ug/l	0.34	6,719.78	3.616E-02	Pulse	2.00	3
Ag			1	104.446	ug/l	0.87	1,545,470.29	1.001E+00	Pulse	0.50	3
Ba			1	210.087	ug/l	0.71	303,828.95	1.969E-01	Pulse	0.50	3
Tl			1	204.916	ug/l	1.70	7,138,416.17	1.484E+00	Analog	0.50	3
Sn			1	226.413	ug/l	0.55	725,950.25	4.704E-01	Pulse	0.30	3
Sr			1	243.101	ug/l	0.18	699,383.48	4.532E-01	Pulse	0.50	3
[Pb]			1	197.302	ug/l	0.95	2,204,028.33	4.583E-01	Pulse	0.50	3
Ca			1	39168.460	ug/l	1.05	503,907.62	2.712E+00	Pulse	0.50	3
Ti			1	202.947	ug/l	1.88	21,579.24	1.161E-01	Pulse	0.50	3
Na			1	23836.854	ug/l	0.95	16,103,731.67	8.666E+01	Analog	1.00	3
Mg			1	25377.661	ug/l	1.40	7,908,849.00	4.256E+01	Analog	1.00	3
K			1	20684.380	ug/l	0.26	4,773,878.50	2.569E+01	Pulse	1.00	3
V			1	207.899	ug/l	1.07	897,212.19	4.828E+00	Pulse	0.50	3
Mn			1	222.514	ug/l	1.48	584,689.92	3.684E+00	Pulse	0.50	3
Fe			1	20230.942	ug/l	1.42	96,070,226.67	6.053E+02	Analog	0.50	3
Co			1	207.581	ug/l	1.58	2,198,235.33	1.385E+01	Pulse	0.50	3
Ni			1	206.810	ug/l	1.63	608,278.83	3.833E+00	Pulse	0.50	3
Cu			1	208.430	ug/l	1.69	1,724,086.66	1.086E+01	Pulse	0.50	3
Zn			1	193.514	ug/l	1.04	217,224.53	9.092E-01	Pulse	1.00	3
Cd			1	199.659	ug/l	1.56	389,022.13	1.628E+00	Pulse	0.50	3
Al			1	17088.678	ug/l	1.53	1,607,975.00	8.653E+00	Pulse	1.00	3
Se			1	176.647	ug/l	0.68	7,675.32	4.974E-03	Pulse	3.00	3
Sb			1	195.137	ug/l	1.03	881,411.06	3.689E+00	Pulse	1.00	3
Se			1	199.364	ug/l	1.13	3,928.07	3.549E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,809,183.17	0.59	90.5	Pulse	0.50	3
1	Sc		185,842.80	0.65	92.3	Pulse	0.30	3
1	Ge		158,721.04	1.13	94.7	Pulse	0.30	3
1	In		1,543,247.13	0.63	90.8	Pulse	0.30	3
1	Tb		6,798,950.00	1.43	99.8	Analog	0.50	3
1	Lu		3,964,888.67	0.33	93.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		238,926.47	0.81	93.6	Pulse	0.30	3
1	Te		11,068.70	0.16	74.8	Pulse	0.50	3
1	Li		977.81	2.08	89.3	Pulse	0.30	3

Quantitation Report

File Name	026SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:30
Sample Name	MP34080-S2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	221.393	ug/l	1.83	1,307,135.25	8.247E+00	Pulse	0.50	3
As			1	216.818	ug/l	1.39	149,023.34	9.402E-01	Pulse	1.00	3
Mo			1	221.883	ug/l	1.36	912,390.23	3.797E+00	Pulse	0.50	3
Pb			1	214.114	ug/l	1.88	5,122,452.50	1.060E+00	Pulse	1.00	3
Be			1	220.837	ug/l	3.52	7,134.42	3.822E-02	Pulse	2.00	3
Ag			1	111.683	ug/l	2.71	1,642,800.50	1.071E+00	Pulse	0.50	3
Ba			1	222.673	ug/l	2.42	320,151.50	2.087E-01	Pulse	0.50	3
Tl			1	216.734	ug/l	2.12	7,588,029.67	1.570E+00	Analog	0.50	3
Sn			1	237.456	ug/l	1.96	756,913.46	4.933E-01	Pulse	0.30	3
Sr			1	253.175	ug/l	2.36	724,063.04	4.720E-01	Pulse	0.50	3
[Pb]			1	205.484	ug/l	1.84	2,306,964.58	4.773E-01	Pulse	0.50	3
Ca			1	40547.028	ug/l	2.43	524,005.61	2.807E+00	Pulse	0.50	3
Ti			1	209.559	ug/l	4.01	22,378.78	1.199E-01	Pulse	0.50	3
Na			1	25124.190	ug/l	2.45	17,049,772.67	9.133E+01	Analog	1.00	3
Mg			1	26791.472	ug/l	2.97	8,386,873.83	4.493E+01	Analog	1.00	3
K			1	22175.500	ug/l	4.37	5,138,613.67	2.753E+01	Mix	1.00	3
V			1	217.945	ug/l	2.53	944,817.75	5.061E+00	Pulse	0.50	3
Mn			1	234.770	ug/l	1.38	616,118.92	3.887E+00	Pulse	0.50	3
Fe			1	21306.174	ug/l	1.48	101,047,978.67	6.375E+02	Analog	0.50	3
Co			1	220.506	ug/l	2.04	2,332,119.33	1.471E+01	Pulse	0.50	3
Ni			1	217.754	ug/l	1.59	639,661.52	4.036E+00	Pulse	0.50	3
Cu			1	220.580	ug/l	1.64	1,821,868.92	1.149E+01	Pulse	0.50	3
Zn			1	202.849	ug/l	0.87	228,949.15	9.527E-01	Pulse	1.00	3
Cd			1	208.318	ug/l	1.21	408,273.91	1.699E+00	Pulse	0.50	3
Al			1	17914.071	ug/l	2.66	1,693,258.79	9.071E+00	Pulse	1.00	3
Se			1	188.110	ug/l	2.36	8,124.61	5.296E-03	Pulse	3.00	3
Sb			1	203.109	ug/l	1.58	922,750.87	3.840E+00	Pulse	1.00	3
Se			1	210.625	ug/l	2.62	4,053.43	3.748E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,833,775.83	1.32	91.0	Pulse	0.50	3
1	Sc		186,737.17	1.99	92.7	Pulse	0.30	3
1	Ge		158,513.20	0.71	94.6	Pulse	0.30	3
1	In		1,534,556.33	1.69	90.3	Pulse	0.30	3
1	Tb		6,866,016.00	0.35	100.8	Analog	0.50	3
1	Lu		4,006,484.08	1.44	94.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		240,326.43	1.05	94.1	Pulse	0.30	3
1	Te		10,817.23	1.75	73.1	Pulse	0.50	3
1	Li		986.70	7.32	90.2	Pulse	0.30	3

Quantitation Report

File Name 027SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 10:34
Sample Name MP34080-PS1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	21.018	ug/l	2.27	129,905.70	7.859E-01	Pulse	0.50	3
As			1	21.286	ug/l	0.78	15,280.10	9.243E-02	Pulse	1.00	3
Mo			1	23.576	ug/l	0.40	100,176.77	4.034E-01	Pulse	0.50	3
Pb			1	20.333	ug/l	2.15	508,360.38	1.008E-01	Pulse	1.00	3
Be			1	21.778	ug/l	2.36	720.34	3.771E-03	Pulse	2.00	3
Ag			1	4.794	ug/l	1.22	73,128.63	4.598E-02	Pulse	0.50	3
Ba			1	27.970	ug/l	2.37	41,706.52	2.623E-02	Pulse	0.50	3
Tl			1	19.887	ug/l	1.32	726,312.63	1.441E-01	Pulse	0.50	3
Sn			1	23.968	ug/l	2.29	79,456.04	4.996E-02	Pulse	0.30	3
Sr			1	62.518	ug/l	1.63	185,711.00	1.168E-01	Pulse	0.50	3
[Pb]			1	19.717	ug/l	1.82	231,334.34	4.589E-02	Pulse	0.50	3
Ca			1	22478.392	ug/l	1.84	297,257.92	1.556E+00	Pulse	0.50	3
Ti			1	20.762	ug/l	5.59	2,270.81	1.189E-02	Pulse	0.50	3
Na			1	5802.702	ug/l	1.53	4,036,900.75	2.114E+01	Pulse	1.00	3
Mg			1	7484.205	ug/l	1.43	2,397,382.58	1.255E+01	Pulse	1.00	3
K			1	3541.045	ug/l	0.87	853,518.89	4.469E+00	Pulse	1.00	3
V			1	21.469	ug/l	2.28	95,984.27	5.026E-01	Pulse	0.50	3
Mn			1	43.676	ug/l	0.90	119,623.23	7.237E-01	Pulse	0.50	3
Fe			1	2041.311	ug/l	1.17	10,102,640.00	6.112E+01	Analog	0.50	3
Co			1	20.721	ug/l	1.18	228,589.35	1.383E+00	Pulse	0.50	3
Ni			1	20.717	ug/l	0.49	63,545.04	3.844E-01	Pulse	0.50	3
Cu			1	20.973	ug/l	1.29	188,082.08	1.138E+00	Pulse	0.50	3
Zn			1	25.601	ug/l	1.22	31,487.28	1.268E-01	Pulse	1.00	3
Cd			1	19.980	ug/l	1.06	40,468.81	1.630E-01	Pulse	0.50	3
Al			1	1750.316	ug/l	1.66	169,388.61	8.869E-01	Pulse	1.00	3
Se			1	17.245	ug/l	3.15	784.91	4.936E-04	Pulse	3.00	3
Sb			1	18.710	ug/l	1.32	87,946.10	3.542E-01	Pulse	1.00	3
Se			1	19.960	ug/l	6.12	426.90	3.717E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,041,874.50	1.35	94.9	Pulse	0.50	3
1	Sc		191,008.61	0.87	94.8	Pulse	0.30	3
1	Ge		165,313.18	1.12	98.7	Pulse	0.30	3
1	In		1,590,493.86	0.93	93.5	Pulse	0.30	3
1	Tb		7,017,278.83	0.85	103.0	Analog	0.50	3
1	Lu		4,010,100.92	1.26	94.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		248,306.65	0.15	97.2	Pulse	0.30	3
1	Te		11,500.32	3.45	77.7	Pulse	0.50	3
1	Li		1,125.59	10.08	102.8	Pulse	0.30	3

Quantitation Report

File Name	028SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:37
Sample Name	FA55941-1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.604	ug/l	4.65	4,115.79	2.581E-02	Pulse	0.50	3
As			1	3.750	ug/l	5.65	2,616.52	1.640E-02	Pulse	1.00	3
Mo			1	5.644	ug/l	2.36	23,331.18	9.659E-02	Pulse	0.50	3
Pb			1	7.508	ug/l	1.87	171,185.71	3.737E-02	Pulse	1.00	3
Be			1	0.000	ug/l	20838.85	0.33	1.692E-06	Pulse	2.00	3
Ag			1	0.047	ug/l	6.49	714.68	4.633E-04	Pulse	0.50	3
Ba			1	534.116	ug/l	2.05	771,424.10	5.005E-01	Pulse	0.50	3
Tl			1	0.058	ug/l	4.23	2,002.13	4.370E-04	Pulse	0.50	3
Sn			1	0.664	ug/l	11.14	2,415.77	1.565E-03	Pulse	0.30	3
Sr			1	13797.049	ug/l	2.02	39,615,764.00	2.570E+01	Analog	0.50	3
[Pb]			1	7.886	ug/l	1.37	84,354.63	1.842E-02	Pulse	0.50	3
Ca			1	319201.420	ug/l	1.06	4,325,467.50	2.209E+01	Pulse	0.50	3
Ti			1	0.350	ug/l	39.13	42.00	2.138E-04	Pulse	0.50	3
Na			1	320418.102	ug/l	1.62	227,901,413.33	1.164E+03	Analog	1.00	3
Mg			1	36.869	ug/l	1.61	12,311.45	6.289E-02	Pulse	1.00	3
K			1	27095.101	ug/l	1.87	6,581,963.17	3.362E+01	Analog	1.00	3
V			1	4.028	ug/l	0.64	19,172.11	9.791E-02	Pulse	0.50	3
Mn			1	0.505	ug/l	8.01	1,434.73	9.000E-03	Pulse	0.50	3
Fe			1	13.605	ug/l	3.10	71,689.68	4.495E-01	Pulse	0.50	3
Co			1	0.156	ug/l	6.19	1,686.08	1.056E-02	Pulse	0.50	3
Ni			1	2.239	ug/l	1.78	6,699.18	4.199E-02	Pulse	0.50	3
Cu			1	1.258	ug/l	5.39	18,328.05	1.149E-01	Pulse	0.50	3
Zn			1	6.495	ug/l	2.31	9,127.83	3.779E-02	Pulse	1.00	3
Cd			1	0.012	ug/l	51.67	33.33	1.373E-04	Pulse	0.50	3
Al			1	83.155	ug/l	0.26	8,378.44	4.279E-02	Pulse	1.00	3
Se			1	0.095	ug/l	154.55	17.78	1.155E-05	Pulse	3.00	3
Sb			1	1.362	ug/l	1.88	6,343.44	2.626E-02	Pulse	1.00	3
Se			1	0.617	ug/l	34.64	31.22	2.915E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,580,955.67	1.12	86.2	Pulse	0.50	3
1	Sc		195,800.69	1.71	97.2	Pulse	0.30	3
1	Ge		159,542.11	1.71	95.2	Pulse	0.30	3
1	In		1,541,658.55	1.95	90.7	Pulse	0.30	3
1	Tb		6,844,027.67	0.44	100.5	Analog	0.50	3
1	Lu		3,968,391.50	0.82	93.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		241,618.19	1.93	94.6	Pulse	0.30	3
1	Te		10,704.49	2.57	72.3	Pulse	0.50	3
1	Li		1,055.59	7.20	96.4	Pulse	0.30	3

Quantitation Report

File Name	029CCVA.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:41
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.800	ug/l	1.14	649,731.58	3.786E+00	Pulse	0.50	3
As			1	49.731	ug/l	0.49	74,025.32	4.314E-01	Pulse	1.00	3
Mo			1	50.202	ug/l	1.41	447,394.63	1.718E+00	Pulse	0.50	3
Pb			1	49.376	ug/l	0.32	2,513,890.17	4.889E-01	Pulse	1.00	3
Be			1	52.816	ug/l	1.60	3,681.83	1.828E-02	Pulse	2.00	3
Ag			1	51.421	ug/l	0.73	1,655,728.58	9.861E-01	Pulse	0.50	3
Ba			1	49.380	ug/l	0.07	155,427.92	9.256E-02	Pulse	0.50	3
Tl			1	49.848	ug/l	0.94	3,713,031.42	7.222E-01	Pulse	0.50	3
Sn			1	50.638	ug/l	0.13	353,502.20	2.105E-01	Pulse	0.30	3
Sr			1	50.063	ug/l	0.53	313,727.73	1.868E-01	Pulse	0.50	3
[Pb]			1	50.070	ug/l	0.74	1,196,188.21	2.327E-01	Pulse	0.50	3
Ca			1	4927.308	ug/l	1.08	137,482.58	6.827E-01	Pulse	0.50	3
Ti			1	49.903	ug/l	4.51	11,497.42	5.711E-02	Pulse	0.50	3
Na			1	5217.488	ug/l	0.94	7,646,007.00	3.797E+01	Analog	1.00	3
Mg			1	4953.039	ug/l	1.16	3,345,729.92	1.661E+01	Pulse	1.00	3
K			1	4988.950	ug/l	1.36	2,504,410.58	1.244E+01	Pulse	1.00	3
V			1	50.907	ug/l	2.12	476,571.50	2.367E+00	Pulse	0.50	3
Mn			1	49.235	ug/l	1.25	279,822.12	1.631E+00	Pulse	0.50	3
Fe			1	5171.728	ug/l	0.35	53,113,652.00	3.095E+02	Analog	0.50	3
Co			1	51.066	ug/l	0.64	1,169,472.21	6.815E+00	Pulse	0.50	3
Ni			1	51.551	ug/l	1.34	327,930.22	1.911E+00	Pulse	0.50	3
Cu			1	52.160	ug/l	1.28	937,268.44	5.462E+00	Pulse	0.50	3
Zn			1	51.236	ug/l	1.13	126,294.53	4.850E-01	Pulse	1.00	3
Cd			1	50.319	ug/l	0.27	213,741.51	8.208E-01	Pulse	0.50	3
Al			1	4797.809	ug/l	1.89	978,467.10	4.859E+00	Pulse	1.00	3
Se			1	51.033	ug/l	0.42	4,831.83	2.878E-03	Pulse	3.00	3
Sb			1	48.462	ug/l	0.31	477,255.62	1.833E+00	Pulse	1.00	3
Se			1	47.601	ug/l	2.55	2,399.49	1.704E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,141,507.17	1.04	96.8	Pulse	0.50	3
1	Sc		201,412.89	1.71	100.0	Pulse	0.30	3
1	Ge		171,607.74	1.06	102.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,679,187.26	1.08	98.8	Pulse	0.30	3
1	Tb		7,205,754.33	0.79	105.8	Analog	0.50	3
1	Lu		4,154,973.17	0.69	98.0	Pulse	0.50	3
1	Ge		260,412.54	0.49	102.0	Pulse	0.30	3
1	Te		14,081.45	1.19	95.2	Pulse	0.50	3
1	Li		1,138.93	3.89	104.1	Pulse	0.30	3

Quantitation Report

File Name 030_CCV.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 10:45
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	101.600	ug/l	0.77	1,286,301.92	7.570E+00	Pulse	0.50	3
As			1	99.755	ug/l	0.45	147,015.71	8.651E-01	Pulse	1.00	3
Mo			1	100.098	ug/l	0.91	891,555.15	3.426E+00	Pulse	0.50	3
Pb			1	98.374	ug/l	1.45	4,904,506.83	9.739E-01	Pulse	1.00	3
Be			1	102.949	ug/l	1.88	7,238.29	3.564E-02	Pulse	2.00	3
Ag			1	101.735	ug/l	0.42	3,264,557.58	1.951E+00	Pulse	0.50	3
Ba			1	98.074	ug/l	0.46	307,595.72	1.838E-01	Pulse	0.50	3
Tl			1	103.053	ug/l	1.46	7,518,661.00	1.493E+00	Analog	0.50	3
Sn			1	101.495	ug/l	1.34	705,750.63	4.218E-01	Pulse	0.30	3
Sr			1	100.119	ug/l	0.34	624,727.98	3.733E-01	Pulse	0.50	3
[Pb]			1	98.686	ug/l	1.45	2,308,794.50	4.585E-01	Pulse	0.50	3
Ca			1	9687.105	ug/l	0.52	272,517.25	1.342E+00	Pulse	0.50	3
Ti			1	99.709	ug/l	0.27	23,177.70	1.141E-01	Pulse	0.50	3
Na			1	10253.835	ug/l	1.22	15,144,961.67	7.456E+01	Analog	1.00	3
Mg			1	10074.210	ug/l	1.02	6,863,655.00	3.379E+01	Analog	1.00	3
K			1	10196.002	ug/l	1.29	5,144,265.50	2.533E+01	Analog	1.00	3
V			1	100.641	ug/l	1.01	949,517.16	4.675E+00	Pulse	0.50	3
Mn			1	98.328	ug/l	0.78	553,327.04	3.256E+00	Pulse	0.50	3
Fe			1	10284.165	ug/l	1.40	104,582,392.00	6.154E+02	Analog	0.50	3
Co			1	102.015	ug/l	0.44	2,313,520.42	1.361E+01	Pulse	0.50	3
Ni			1	102.001	ug/l	0.61	642,482.11	3.781E+00	Pulse	0.50	3
Cu			1	102.504	ug/l	0.55	1,815,960.12	1.069E+01	Pulse	0.50	3
Zn			1	99.978	ug/l	0.27	244,436.91	9.392E-01	Pulse	1.00	3
Cd			1	99.488	ug/l	0.86	422,312.88	1.623E+00	Pulse	0.50	3
Al			1	9556.459	ug/l	1.45	1,965,747.46	9.678E+00	Pulse	1.00	3
Se			1	100.614	ug/l	0.73	9,478.57	5.665E-03	Pulse	3.00	3
Sb			1	96.951	ug/l	0.73	954,025.77	3.666E+00	Pulse	1.00	3
Se			1	98.915	ug/l	1.14	4,771.93	3.522E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,036,405.00	1.30	94.8	Pulse	0.50	3
1	Sc		203,138.06	0.95	100.9	Pulse	0.30	3
1	Ge		169,933.82	0.55	101.4	Pulse	0.30	3
1	In		1,673,345.32	0.31	98.4	Pulse	0.30	3
1	Tb		7,216,346.50	0.54	105.9	Analog	0.50	3
1	Lu		4,142,291.00	0.50	97.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		260,254.01	0.54	101.9	Pulse	0.30	3
1	Te		13,550.39	1.54	91.6	Pulse	0.50	3
1	Li		1,051.14	5.57	96.0	Pulse	0.30	3

Quantitation Report

File Name	031_CCB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:49
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.002	ug/l	24.86	596.68	3.490E-03	Pulse	0.50	3
As			1	0.003	ug/l	136.15	28.67	1.681E-04	Pulse	1.00	3
Mo			1	0.036	ug/l	12.23	329.34	1.255E-03	Pulse	0.50	3
Pb			1	0.016	ug/l	19.66	2,003.45	3.785E-04	Pulse	1.00	3
Be			1	0.026	ug/l	57.50	2.17	1.077E-05	Pulse	2.00	3
Ag			1	0.012	ug/l	7.44	412.68	2.425E-04	Pulse	0.50	3
Ba			1	0.004	ug/l	64.41	42.00	2.470E-05	Pulse	0.50	3
Tl			1	0.076	ug/l	13.48	5,931.07	1.120E-03	Pulse	0.50	3
Sn			1	0.029	ug/l	26.45	523.34	3.076E-04	Pulse	0.30	3
Sr			1	0.023	ug/l	39.67	668.02	3.926E-04	Pulse	0.50	3
[Pb]			1	0.017	ug/l	16.25	959.36	1.813E-04	Pulse	0.50	3
Ca			1	-0.080	ug/l	-1116.01	115.33	5.715E-04	Pulse	0.50	3
Ti			1	0.017	ug/l	77.65	6.67	3.312E-05	Pulse	0.50	3
Na			1	4.183	ug/l	5.47	17,192.03	8.524E-02	Pulse	1.00	3
Mg			1	0.539	ug/l	39.54	578.68	2.866E-03	Pulse	1.00	3
K			1	2.651	ug/l	7.36	18,620.41	9.233E-02	Pulse	1.00	3
V			1	-0.054	ug/l	-5.73	397.34	1.971E-03	Pulse	0.50	3
Mn			1	0.001	ug/l	285.98	116.00	6.783E-04	Pulse	0.50	3
Fe			1	0.690	ug/l	42.06	14,318.17	8.373E-02	Pulse	0.50	3
Co			1	0.006	ug/l	35.33	163.33	9.547E-04	Pulse	0.50	3
Ni			1	0.004	ug/l	25.28	112.67	6.590E-04	Pulse	0.50	3
Cu			1	-0.082	ug/l	-12.32	7,029.31	4.113E-02	Pulse	0.50	3
Zn			1	-0.116	ug/l	-11.97	1,689.75	6.437E-03	Pulse	1.00	3
Cd			1	0.005	ug/l	61.16	30.00	1.143E-04	Pulse	0.50	3
Al			1	0.371	ug/l	69.15	214.67	1.063E-03	Pulse	1.00	3
Se			1	0.022	ug/l	18.93	17.22	1.012E-05	Pulse	3.00	3
Sb			1	0.011	ug/l	25.91	247.00	9.411E-04	Pulse	1.00	3
Se			1	-0.004	ug/l	-1480.34	26.22	1.810E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,291,687.00	0.59	99.6	Pulse	0.50	3
1	Sc		201,668.82	0.81	100.1	Pulse	0.30	3

Quantitation Report

1	Ge		170,956.32	1.72	102.0	Pulse	0.30	3
1	In		1,702,271.60	0.66	100.1	Pulse	0.30	3
1	Tb		7,237,065.17	0.21	106.2	Analog	0.50	3
1	Lu		4,147,429.83	0.67	97.9	Pulse	0.50	3
1	Ge		262,528.57	0.48	102.8	Pulse	0.30	3
1	Te		14,495.10	2.05	98.0	Pulse	0.50	3
1	Li		1,055.59	11.34	96.4	Pulse	0.30	3

Quantitation Report

File Name 032SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 10:53
Sample Name FA55941-2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.473	ug/l	6.53	8,957.59	5.816E-02	Pulse	0.50	3
As			1	8.608	ug/l	1.61	5,771.54	3.746E-02	Pulse	1.00	3
Mo			1	0.669	ug/l	28.88	2,652.13	1.147E-02	Pulse	0.50	3
Pb			1	1.111	ug/l	2.82	23,841.90	5.713E-03	Pulse	1.00	3
Be			1	0.116	ug/l	102.80	4.17	2.171E-05	Pulse	2.00	3
Ag			1	0.061	ug/l	7.82	884.02	6.017E-04	Pulse	0.50	3
Ba			1	1298.877	ug/l	1.87	1,786,695.83	1.217E+00	Pulse	0.50	3
Tl			1	0.076	ug/l	5.64	2,360.17	5.649E-04	Pulse	0.50	3
Sn			1	0.810	ug/l	1.74	2,742.45	1.868E-03	Pulse	0.30	3
Sr			1	650.562	ug/l	2.49	1,779,416.04	1.212E+00	Pulse	0.50	3
[Pb]			1	1.174	ug/l	1.75	11,801.46	2.827E-03	Pulse	0.50	3
Ca			1	129082.101	ug/l	3.40	1,693,450.08	8.935E+00	Pulse	0.50	3
Ti			1	24.646	ug/l	25.85	2,689.08	1.411E-02	Pulse	0.50	3
Na			1	1168907.257	ug/l	3.10	804,949,312.00	4.247E+03	Analog	1.00	3
Mg			1	29649.585	ug/l	3.78	9,423,481.67	4.972E+01	Analog	1.00	3
K			1	4676.470	ug/l	3.07	1,113,407.41	5.874E+00	Pulse	1.00	3
V			1	1.859	ug/l	5.37	9,018.12	4.759E-02	Pulse	0.50	3
Mn			1	1129.397	ug/l	1.12	2,880,653.83	1.870E+01	Pulse	0.50	3
Fe			1	60366.887	ug/l	1.88	278,270,293.33	1.806E+03	Analog	0.50	3
Co			1	0.924	ug/l	4.11	9,526.36	6.183E-02	Pulse	0.50	3
Ni			1	1.618	ug/l	2.99	4,696.58	3.049E-02	Pulse	0.50	3
Cu			1	2.306	ug/l	5.04	26,075.61	1.693E-01	Pulse	0.50	3
Zn			1	11.949	ug/l	2.11	14,609.87	6.320E-02	Pulse	1.00	3
Cd			1	0.038	ug/l	19.27	80.00	3.459E-04	Pulse	0.50	3
Al			1	1133.992	ug/l	5.12	108,917.00	5.748E-01	Pulse	1.00	3
Se			1	0.615	ug/l	3.94	38.44	2.618E-05	Pulse	3.00	3
Sb			1	0.252	ug/l	3.51	1,221.38	5.283E-03	Pulse	1.00	3
Se			1	1.947	ug/l	6.78	51.78	5.271E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,174,996.83	2.48	78.6	Pulse	0.50	3
1	Sc		189,652.22	2.79	94.2	Pulse	0.30	3
1	Ge		154,086.35	1.27	92.0	Pulse	0.30	3
1	In		1,468,237.68	1.67	86.4	Pulse	0.30	3
1	Tb		6,203,382.00	5.37	91.1	Mix	0.50	3
1	Lu		3,766,074.17	3.24	88.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		231,208.71	1.20	90.5	Pulse	0.30	3
1	Te		9,822.00	1.92	66.4	Pulse	0.50	3
1	Li		872.25	13.19	79.7	Pulse	0.30	3

Quantitation Report

File Name 033SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 10:57
Sample Name FA55941-3
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.506	ug/l	3.32	3,633.68	2.215E-02	Pulse	0.50	3
As			1	0.184	ug/l	9.08	154.33	9.406E-04	Pulse	1.00	3
Mo			1	0.196	ug/l	3.80	839.35	3.373E-03	Pulse	0.50	3
Pb			1	0.812	ug/l	1.82	21,109.00	4.238E-03	Pulse	1.00	3
Be			1	0.005	ug/l	511.72	0.50	2.548E-06	Pulse	2.00	3
Ag			1	0.031	ug/l	4.13	508.68	3.155E-04	Pulse	0.50	3
Ba			1	6.940	ug/l	1.10	10,507.08	6.519E-03	Pulse	0.50	3
Tl			1	0.029	ug/l	10.99	1,114.71	2.239E-04	Pulse	0.50	3
Sn			1	0.750	ug/l	11.30	2,806.90	1.743E-03	Pulse	0.30	3
Sr			1	60.811	ug/l	1.12	183,079.94	1.136E-01	Pulse	0.50	3
[Pb]			1	0.845	ug/l	2.83	10,274.45	2.063E-03	Pulse	0.50	3
Ca			1	13458.188	ug/l	1.49	179,499.17	9.321E-01	Pulse	0.50	3
Ti			1	0.772	ug/l	100.74	87.34	4.548E-04	Pulse	0.50	3
Na			1	13893.913	ug/l	1.17	9,732,075.00	5.053E+01	Analog	1.00	3
Mg			1	8804.167	ug/l	1.29	2,843,571.25	1.477E+01	Pulse	1.00	3
K			1	1458.008	ug/l	1.18	364,056.52	1.890E+00	Pulse	1.00	3
V			1	0.122	ug/l	10.76	1,404.05	7.291E-03	Pulse	0.50	3
Mn			1	21.567	ug/l	1.32	58,673.47	3.577E-01	Pulse	0.50	3
Fe			1	186.540	ug/l	0.64	922,502.57	5.624E+00	Pulse	0.50	3
Co			1	0.125	ug/l	5.34	1,396.06	8.509E-03	Pulse	0.50	3
Ni			1	0.234	ug/l	13.29	796.02	4.851E-03	Pulse	0.50	3
Cu			1	0.161	ug/l	10.46	9,509.78	5.797E-02	Pulse	0.50	3
Zn			1	7.225	ug/l	1.13	10,246.73	4.118E-02	Pulse	1.00	3
Cd			1	0.022	ug/l	40.19	54.00	2.168E-04	Pulse	0.50	3
Al			1	12.221	ug/l	3.50	1,323.72	6.876E-03	Pulse	1.00	3
Se			1	0.079	ug/l	29.25	17.89	1.110E-05	Pulse	3.00	3
Sb			1	0.135	ug/l	3.33	762.69	3.066E-03	Pulse	1.00	3
Se			1	0.206	ug/l	25.91	24.89	2.187E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,981,107.50	0.61	93.8	Pulse	0.50	3
1	Sc		192,587.32	1.66	95.6	Pulse	0.30	3
1	Ge		164,050.00	1.49	97.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,611,720.11	1.05	94.8	Pulse	0.30	3
1	Tb		7,005,811.17	0.99	102.8	Analog	0.50	3
1	Lu		4,038,354.75	0.77	95.3	Pulse	0.50	3
1	Ge		248,791.03	0.73	97.4	Pulse	0.30	3
1	Te		11,372.23	2.85	76.9	Pulse	0.50	3
1	Li		1,036.70	4.18	94.7	Pulse	0.30	3

Quantitation Report

File Name	034SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 11:00
Sample Name	FA55941-4
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.355	ug/l	1.18	14,935.09	9.101E-02	Pulse	0.50	3
As			1	1.159	ug/l	3.90	847.69	5.166E-03	Pulse	1.00	3
Mo			1	5.982	ug/l	1.29	25,584.09	1.024E-01	Pulse	0.50	3
Pb			1	0.336	ug/l	3.32	9,291.87	1.880E-03	Pulse	1.00	3
Be			1	0.015	ug/l	151.34	0.83	4.306E-06	Pulse	2.00	3
Ag			1	0.026	ug/l	13.07	421.34	2.610E-04	Pulse	0.50	3
Ba			1	9.619	ug/l	2.88	14,579.24	9.030E-03	Pulse	0.50	3
Tl			1	0.014	ug/l	9.52	584.01	1.182E-04	Pulse	0.50	3
Sn			1	0.560	ug/l	11.68	2,179.03	1.350E-03	Pulse	0.30	3
Sr			1	434.251	ug/l	1.39	1,306,718.33	8.093E-01	Pulse	0.50	3
[Pb]			1	0.366	ug/l	5.10	4,700.66	9.510E-04	Pulse	0.50	3
Ca			1	6144.376	ug/l	2.00	82,122.01	4.259E-01	Pulse	0.50	3
Ti			1	0.152	ug/l	27.28	19.33	1.002E-04	Pulse	0.50	3
Na			1	31890.216	ug/l	1.90	22,352,877.33	1.159E+02	Analog	1.00	3
Mg			1	198.156	ug/l	1.35	64,289.20	3.334E-01	Pulse	1.00	3
K			1	32219.633	ug/l	1.37	7,707,274.67	3.997E+01	Analog	1.00	3
V			1	3.950	ug/l	1.01	18,534.16	9.610E-02	Pulse	0.50	3
Mn			1	0.654	ug/l	5.04	1,883.43	1.148E-02	Pulse	0.50	3
Fe			1	33.184	ug/l	0.51	169,890.34	1.035E+00	Pulse	0.50	3
Co			1	0.106	ug/l	2.03	1,185.37	7.224E-03	Pulse	0.50	3
Ni			1	0.249	ug/l	13.54	840.69	5.124E-03	Pulse	0.50	3
Cu			1	0.134	ug/l	15.92	9,290.92	5.662E-02	Pulse	0.50	3
Zn			1	5.697	ug/l	3.58	8,512.22	3.407E-02	Pulse	1.00	3
Cd			1	0.008	ug/l	52.26	24.67	9.855E-05	Pulse	0.50	3
Al			1	15.446	ug/l	3.26	1,640.74	8.508E-03	Pulse	1.00	3
Se			1	0.257	ug/l	39.48	26.00	1.611E-05	Pulse	3.00	3
Sb			1	0.584	ug/l	2.77	2,885.90	1.155E-02	Pulse	1.00	3
Se			1	0.250	ug/l	97.05	25.78	2.266E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,943,978.33	1.53	93.1	Pulse	0.50	3
1	Sc		192,870.86	1.33	95.8	Pulse	0.30	3
1	Ge		164,100.12	0.32	98.0	Pulse	0.30	3
1	In		1,614,770.25	1.03	95.0	Pulse	0.30	3
1	Tb		7,021,798.67	1.00	103.1	Analog	0.50	3
1	Lu		4,012,333.00	1.85	94.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		249,918.98	0.92	97.9	Pulse	0.30	3
1	Te		11,364.23	1.06	76.8	Pulse	0.50	3
1	Li		1,051.15	8.69	96.0	Pulse	0.30	3

Quantitation Report

File Name 035SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 11:04
Sample Name FA55941-6
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.523	ug/l	4.39	3,697.03	2.278E-02	Pulse	0.50	3
As			1	0.113	ug/l	8.50	102.67	6.327E-04	Pulse	1.00	3
Mo			1	0.224	ug/l	8.54	947.36	3.849E-03	Pulse	0.50	3
Pb			1	0.077	ug/l	5.58	2,904.25	5.999E-04	Pulse	1.00	3
Be			1	0.010	ug/l	167.67	0.67	3.486E-06	Pulse	2.00	3
Ag			1	0.022	ug/l	11.00	354.67	2.244E-04	Pulse	0.50	3
Ba			1	26.743	ug/l	1.65	39,609.88	2.508E-02	Pulse	0.50	3
Tl			1	0.011	ug/l	22.93	436.01	9.013E-05	Pulse	0.50	3
Sn			1	0.545	ug/l	5.12	2,079.03	1.316E-03	Pulse	0.30	3
Sr			1	114.057	ug/l	1.58	336,107.79	2.128E-01	Pulse	0.50	3
[Pb]			1	0.089	ug/l	2.05	1,481.40	3.060E-04	Pulse	0.50	3
Ca			1	27787.663	ug/l	1.06	370,254.87	1.924E+00	Pulse	0.50	3
Ti			1	0.055	ug/l	67.21	8.67	4.486E-05	Pulse	0.50	3
Na			1	42784.377	ug/l	1.78	29,922,658.67	1.555E+02	Analog	1.00	3
Mg			1	12400.871	ug/l	2.21	4,002,012.25	2.080E+01	Pulse	1.00	3
K			1	2938.934	ug/l	1.46	716,547.42	3.723E+00	Pulse	1.00	3
V			1	0.193	ug/l	21.67	1,718.08	8.931E-03	Pulse	0.50	3
Mn			1	4.187	ug/l	1.11	11,350.67	6.996E-02	Pulse	0.50	3
Fe			1	9.693	ug/l	2.44	53,938.60	3.324E-01	Pulse	0.50	3
Co			1	0.067	ug/l	7.07	753.35	4.644E-03	Pulse	0.50	3
Ni			1	0.868	ug/l	8.13	2,690.20	1.658E-02	Pulse	0.50	3
Cu			1	0.196	ug/l	6.30	9,707.81	5.983E-02	Pulse	0.50	3
Zn			1	6.354	ug/l	1.64	9,140.51	3.712E-02	Pulse	1.00	3
Cd			1	0.021	ug/l	51.84	50.67	2.053E-04	Pulse	0.50	3
Al			1	6.164	ug/l	0.24	733.02	3.809E-03	Pulse	1.00	3
Se			1	0.085	ug/l	136.33	17.78	1.128E-05	Pulse	3.00	3
Sb			1	0.059	ug/l	4.98	400.34	1.626E-03	Pulse	1.00	3
Se			1	0.235	ug/l	111.43	25.22	2.239E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,841,117.50	0.62	91.1	Pulse	0.50	3
1	Sc		192,465.46	1.28	95.6	Pulse	0.30	3
1	Ge		162,245.28	0.31	96.8	Pulse	0.30	3
1	In		1,579,762.16	1.38	92.9	Pulse	0.30	3
1	Tb		6,994,680.67	1.17	102.7	Analog	0.50	3
1	Lu		3,968,933.17	1.34	93.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,220.09	1.01	96.4	Pulse	0.30	3
1	Te		11,290.18	2.44	76.3	Pulse	0.50	3
1	Li		1,050.03	8.45	95.9	Pulse	0.30	3

Quantitation Report

File Name	036SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 11:08
Sample Name	FA55941-7
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.287	ug/l	3.99	2,282.15	1.401E-02	Pulse	0.50	3
As			1	0.945	ug/l	4.24	690.68	4.240E-03	Pulse	1.00	3
Mo			1	2.983	ug/l	1.69	12,721.01	5.106E-02	Pulse	0.50	3
Pb			1	0.201	ug/l	3.77	6,010.07	1.211E-03	Pulse	1.00	3
Be			1	0.051	ug/l	79.45	2.00	1.045E-05	Pulse	2.00	3
Ag			1	0.016	ug/l	8.20	274.00	1.725E-04	Pulse	0.50	3
Ba			1	7.465	ug/l	1.82	11,130.79	7.011E-03	Pulse	0.50	3
Tl			1	0.012	ug/l	7.86	486.68	9.808E-05	Pulse	0.50	3
Sn			1	0.535	ug/l	6.38	2,056.80	1.296E-03	Pulse	0.30	3
Sr			1	42.573	ug/l	3.02	126,378.73	7.962E-02	Pulse	0.50	3
[Pb]			1	0.209	ug/l	3.02	2,905.59	5.855E-04	Pulse	0.50	3
Ca			1	20403.246	ug/l	1.42	270,458.68	1.413E+00	Pulse	0.50	3
Ti			1	0.184	ug/l	42.72	22.67	1.187E-04	Pulse	0.50	3
Na			1	3938.424	ug/l	2.01	2,749,535.25	1.436E+01	Pulse	1.00	3
Mg			1	5516.499	ug/l	2.32	1,771,033.00	9.252E+00	Pulse	1.00	3
K			1	1595.806	ug/l	2.04	394,524.45	2.061E+00	Pulse	1.00	3
V			1	0.330	ug/l	4.34	2,320.81	1.212E-02	Pulse	0.50	3
Mn			1	23.896	ug/l	2.18	64,539.91	3.962E-01	Pulse	0.50	3
Fe			1	15.567	ug/l	3.96	82,772.23	5.082E-01	Pulse	0.50	3
Co			1	0.027	ug/l	30.49	323.34	1.988E-03	Pulse	0.50	3
Ni			1	0.079	ug/l	6.34	320.67	1.968E-03	Pulse	0.50	3
Cu			1	0.028	ug/l	117.72	8,323.83	5.110E-02	Pulse	0.50	3
Zn			1	5.185	ug/l	3.32	7,890.96	3.168E-02	Pulse	1.00	3
Cd			1	0.008	ug/l	48.49	26.00	1.046E-04	Pulse	0.50	3
Al			1	8.795	ug/l	7.88	984.02	5.141E-03	Pulse	1.00	3
Se			1	0.015	ug/l	150.74	14.78	9.313E-06	Pulse	3.00	3
Sb			1	0.144	ug/l	5.87	806.35	3.237E-03	Pulse	1.00	3
Se			1	0.268	ug/l	6.59	26.56	2.297E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,962,647.83	0.24	93.4	Pulse	0.50	3
1	Sc		191,468.81	1.73	95.1	Pulse	0.30	3
1	Ge		162,913.82	1.03	97.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,587,932.82	2.10	93.4	Pulse	0.30	3
1	Tb		6,972,995.33	0.66	102.4	Analog	0.50	3
1	Lu		3,988,397.42	0.92	94.1	Pulse	0.50	3
1	Ge		249,136.91	0.91	97.6	Pulse	0.30	3
1	Te		11,560.35	1.27	78.1	Pulse	0.50	3
1	Li		1,065.59	4.25	97.4	Pulse	0.30	3

Quantitation Report

File Name	037SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 11:12
Sample Name	FA55941-8A
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.427	ug/l	1.59	3,021.58	1.922E-02	Pulse	0.50	3
As			1	0.145	ug/l	10.37	121.00	7.696E-04	Pulse	1.00	3
Mo			1	0.145	ug/l	3.85	601.34	2.492E-03	Pulse	0.50	3
Pb			1	0.053	ug/l	8.66	2,251.82	4.787E-04	Pulse	1.00	3
Be			1	0.020	ug/l	146.54	1.00	5.152E-06	Pulse	2.00	3
Ag			1	0.026	ug/l	13.04	410.01	2.652E-04	Pulse	0.50	3
Ba			1	19.896	ug/l	1.57	28,852.97	1.866E-02	Pulse	0.50	3
Tl			1	0.010	ug/l	11.71	393.34	8.364E-05	Pulse	0.50	3
Sn			1	0.536	ug/l	4.17	2,007.90	1.299E-03	Pulse	0.30	3
Sr			1	128.964	ug/l	2.27	371,937.33	2.406E-01	Pulse	0.50	3
[Pb]			1	0.051	ug/l	10.74	1,028.04	2.186E-04	Pulse	0.50	3
Ca			1	36794.216	ug/l	3.18	485,567.33	2.547E+00	Pulse	0.50	3
Ti			1	0.431	ug/l	44.32	49.33	2.599E-04	Pulse	0.50	3
Na			1	160052.251	ug/l	3.15	110,854,122.67	5.815E+02	Analog	1.00	3
Mg			1	13531.284	ug/l	3.02	4,325,855.00	2.269E+01	Pulse	1.00	3
K			1	1572.068	ug/l	3.20	387,275.13	2.032E+00	Pulse	1.00	3
V			1	0.260	ug/l	12.98	1,997.45	1.049E-02	Pulse	0.50	3
Mn			1	1.126	ug/l	2.79	3,031.60	1.928E-02	Pulse	0.50	3
Fe			1	21.872	ug/l	1.31	109,562.79	6.968E-01	Pulse	0.50	3
Co			1	0.035	ug/l	7.43	393.34	2.502E-03	Pulse	0.50	3
Ni			1	0.301	ug/l	7.69	957.36	6.089E-03	Pulse	0.50	3
Cu			1	0.215	ug/l	12.78	9,557.05	6.078E-02	Pulse	0.50	3
Zn			1	5.524	ug/l	1.08	8,028.34	3.326E-02	Pulse	1.00	3
Cd			1	0.013	ug/l	118.89	34.00	1.409E-04	Pulse	0.50	3
Al			1	20.307	ug/l	1.72	2,092.79	1.097E-02	Pulse	1.00	3
Se			1	0.279	ug/l	34.93	25.89	1.672E-05	Pulse	3.00	3
Sb			1	0.034	ug/l	14.77	280.33	1.162E-03	Pulse	1.00	3
Se			1	0.262	ug/l	137.91	25.22	2.286E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,704,394.83	0.92	88.6	Pulse	0.50	3
1	Sc		190,735.56	2.86	94.7	Pulse	0.30	3
1	Ge		157,237.89	0.91	93.9	Pulse	0.30	3
1	In		1,546,408.27	1.26	91.0	Pulse	0.30	3
1	Tb		6,814,885.50	0.32	100.0	Analog	0.50	3
1	Lu		3,923,324.00	1.51	92.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		241,380.08	0.98	94.5	Pulse	0.30	3
1	Te		11,055.36	1.08	74.7	Pulse	0.50	3
1	Li		1,024.48	10.81	93.6	Pulse	0.30	3

Quantitation Report

File Name 038SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 11:15
Sample Name FA55941-9
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.355	ug/l	7.55	2,779.54	1.651E-02	Pulse	0.50	3
As			1	0.042	ug/l	25.25	54.33	3.227E-04	Pulse	1.00	3
Mo			1	0.063	ug/l	15.18	277.33	1.094E-03	Pulse	0.50	3
Pb			1	0.028	ug/l	6.67	1,816.77	3.575E-04	Pulse	1.00	3
Be			1	0.000	ug/l	-38270.17	0.33	1.678E-06	Pulse	2.00	3
Ag			1	0.009	ug/l	5.13	164.67	1.003E-04	Pulse	0.50	3
Ba			1	0.157	ug/l	5.93	268.00	1.633E-04	Pulse	0.50	3
Tl			1	0.005	ug/l	11.90	248.67	4.890E-05	Pulse	0.50	3
Sn			1	0.527	ug/l	4.66	2,100.14	1.279E-03	Pulse	0.30	3
Sr			1	0.864	ug/l	5.17	3,144.28	1.916E-03	Pulse	0.50	3
[Pb]			1	0.028	ug/l	10.03	844.02	1.660E-04	Pulse	0.50	3
Ca			1	182.587	ug/l	2.12	2,615.52	1.322E-02	Pulse	0.50	3
Ti			1	0.071	ug/l	37.27	10.67	5.385E-05	Pulse	0.50	3
Na			1	667.843	ug/l	1.05	490,771.47	2.481E+00	Pulse	1.00	3
Mg			1	66.769	ug/l	0.49	22,358.11	1.130E-01	Pulse	1.00	3
K			1	18.361	ug/l	10.16	21,458.95	1.085E-01	Pulse	1.00	3
V			1	0.203	ug/l	12.28	1,812.76	9.168E-03	Pulse	0.50	3
Mn			1	0.130	ug/l	9.89	469.34	2.788E-03	Pulse	0.50	3
Fe			1	6.253	ug/l	4.72	38,641.00	2.295E-01	Pulse	0.50	3
Co			1	0.013	ug/l	7.32	174.00	1.033E-03	Pulse	0.50	3
Ni			1	0.055	ug/l	7.33	256.00	1.521E-03	Pulse	0.50	3
Cu			1	-0.175	ug/l	-16.14	6,832.57	4.058E-02	Pulse	0.50	3
Zn			1	6.404	ug/l	1.86	9,480.67	3.736E-02	Pulse	1.00	3
Cd			1	0.002	ug/l	182.63	14.00	5.514E-05	Pulse	0.50	3
Al			1	4.230	ug/l	9.56	559.34	2.829E-03	Pulse	1.00	3
Se			1	0.111	ug/l	63.56	19.67	1.201E-05	Pulse	3.00	3
Sb			1	0.019	ug/l	14.50	221.67	8.733E-04	Pulse	1.00	3
Se			1	0.177	ug/l	146.36	25.11	2.136E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,082,832.83	1.04	95.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		197,814.13	1.20	98.2	Pulse	0.30	3
1	Ge		168,375.02	0.54	100.5	Pulse	0.30	3
1	In		1,640,748.06	1.86	96.5	Pulse	0.30	3
1	Tb		7,091,411.67	0.86	104.1	Analog	0.50	3
1	Lu		4,068,671.33	0.39	96.0	Pulse	0.50	3
1	Ge		253,778.48	0.92	99.4	Pulse	0.30	3
1	Te		11,769.82	2.19	79.5	Pulse	0.50	3
1	Li		1,122.26	8.48	102.5	Pulse	0.30	3

Quantitation Report

File Name	039SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 11:19
Sample Name	FA55914-1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.634	ug/l	1.35	10,137.32	6.416E-02	Pulse	0.50	3
As			1	0.429	ug/l	6.75	316.00	2.000E-03	Pulse	1.00	3
Mo			1	0.988	ug/l	4.39	4,115.13	1.693E-02	Pulse	0.50	3
Pb			1	7.508	ug/l	1.41	175,609.76	3.737E-02	Pulse	1.00	3
Be			1	0.001	ug/l	1511.00	0.33	1.788E-06	Pulse	2.00	3
Ag			1	0.020	ug/l	8.70	312.00	2.036E-04	Pulse	0.50	3
Ba			1	8.791	ug/l	2.03	12,650.45	8.254E-03	Pulse	0.50	3
Tl			1	0.009	ug/l	12.82	364.68	7.762E-05	Pulse	0.50	3
Sn			1	0.750	ug/l	3.26	2,671.32	1.743E-03	Pulse	0.30	3
Sr			1	138.495	ug/l	0.62	395,884.75	2.583E-01	Pulse	0.50	3
[Pb]			1	7.476	ug/l	2.10	82,048.30	1.746E-02	Pulse	0.50	3
Ca			1	39259.556	ug/l	2.45	511,641.39	2.718E+00	Pulse	0.50	3
Ti			1	8.981	ug/l	0.49	970.03	5.151E-03	Pulse	0.50	3
Na			1	53957.320	ug/l	2.45	36,912,342.67	1.961E+02	Analog	1.00	3
Mg			1	26699.705	ug/l	2.06	8,429,423.67	4.478E+01	Analog	1.00	3
K			1	2672.760	ug/l	1.47	638,981.71	3.394E+00	Pulse	1.00	3
V			1	1.793	ug/l	3.56	8,670.62	4.605E-02	Pulse	0.50	3
Mn			1	32.952	ug/l	0.53	86,286.87	5.461E-01	Pulse	0.50	3
Fe			1	1807.359	ug/l	1.71	8,549,749.67	5.412E+01	Analog	0.50	3
Co			1	0.300	ug/l	1.79	3,185.61	2.016E-02	Pulse	0.50	3
Ni			1	2.332	ug/l	1.87	6,907.93	4.372E-02	Pulse	0.50	3
Cu			1	2.096	ug/l	2.97	25,020.88	1.584E-01	Pulse	0.50	3
Zn			1	24.573	ug/l	2.18	29,638.37	1.220E-01	Pulse	1.00	3
Cd			1	0.043	ug/l	18.65	93.33	3.847E-04	Pulse	0.50	3
Al			1	252.968	ug/l	3.24	24,237.65	1.288E-01	Pulse	1.00	3
Se			1	0.120	ug/l	83.56	18.78	1.225E-05	Pulse	3.00	3
Sb			1	0.179	ug/l	6.01	948.03	3.904E-03	Pulse	1.00	3
Se			1	0.531	ug/l	26.52	30.00	2.763E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,698,873.00	0.63	88.5	Pulse	0.50	3
1	Sc		188,303.11	1.89	93.5	Pulse	0.30	3
1	Ge		157,999.32	0.79	94.3	Pulse	0.30	3
1	In		1,532,571.67	0.31	90.1	Pulse	0.30	3
1	Tb		6,845,440.00	0.48	100.5	Analog	0.50	3
1	Lu		3,891,634.50	1.86	91.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		242,945.07	1.70	95.1	Pulse	0.30	3
1	Te		10,855.92	0.76	73.4	Pulse	0.50	3
1	Li		982.25	1.96	89.7	Pulse	0.30	3

Quantitation Report

File Name 040SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 11:23
Sample Name FA55914-2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.400	ug/l	1.84	2,916.89	1.820E-02	Pulse	0.50	3
As			1	0.218	ug/l	9.63	174.00	1.086E-03	Pulse	1.00	3
Mo			1	0.093	ug/l	6.88	388.67	1.604E-03	Pulse	0.50	3
Pb			1	0.369	ug/l	2.24	9,397.93	2.043E-03	Pulse	1.00	3
Be			1	0.010	ug/l	222.81	0.67	3.491E-06	Pulse	2.00	3
Ag			1	0.057	ug/l	1.69	864.02	5.652E-04	Pulse	0.50	3
Ba			1	48.132	ug/l	0.36	68,973.38	4.512E-02	Pulse	0.50	3
Tl			1	0.007	ug/l	2.89	299.33	6.507E-05	Pulse	0.50	3
Sn			1	0.526	ug/l	4.91	1,953.45	1.278E-03	Pulse	0.30	3
Sr			1	207.021	ug/l	1.50	589,995.10	3.860E-01	Pulse	0.50	3
[Pb]			1	0.377	ug/l	4.48	4,487.94	9.757E-04	Pulse	0.50	3
Ca			1	51703.301	ug/l	1.07	686,824.44	3.579E+00	Pulse	0.50	3
Ti			1	1.453	ug/l	20.68	162.00	8.448E-04	Pulse	0.50	3
Na			1	226349.494	ug/l	0.70	157,816,901.33	8.224E+02	Analog	1.00	3
Mg			1	16135.619	ug/l	0.90	5,192,747.33	2.706E+01	Analog	1.00	3
K			1	2352.722	ug/l	0.67	575,288.54	2.998E+00	Pulse	1.00	3
V			1	0.502	ug/l	2.93	3,090.92	1.611E-02	Pulse	0.50	3
Mn			1	29.154	ug/l	0.68	77,458.67	4.833E-01	Pulse	0.50	3
Fe			1	196.941	ug/l	0.81	951,240.52	5.935E+00	Pulse	0.50	3
Co			1	0.218	ug/l	2.14	2,358.82	1.472E-02	Pulse	0.50	3
Ni			1	0.671	ug/l	1.53	2,072.79	1.293E-02	Pulse	0.50	3
Cu			1	0.309	ug/l	8.11	10,525.57	6.566E-02	Pulse	0.50	3
Zn			1	5.752	ug/l	0.97	8,319.13	3.432E-02	Pulse	1.00	3
Cd			1	0.024	ug/l	26.14	55.33	2.283E-04	Pulse	0.50	3
Al			1	86.834	ug/l	3.67	8,570.51	4.465E-02	Pulse	1.00	3
Se			1	0.617	ug/l	9.59	40.11	2.623E-05	Pulse	3.00	3
Sb			1	0.072	ug/l	11.65	457.01	1.885E-03	Pulse	1.00	3
Se			1	0.887	ug/l	19.63	36.22	3.393E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,600,211.83	0.67	86.6	Pulse	0.50	3
1	Sc		191,905.50	0.94	95.3	Pulse	0.30	3
1	Ge		160,284.55	0.52	95.7	Pulse	0.30	3
1	In		1,528,719.73	0.98	89.9	Pulse	0.30	3
1	Tb		6,771,351.50	0.35	99.4	Analog	0.50	3
1	Lu		3,881,600.75	0.45	91.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		242,380.78	0.30	94.9	Pulse	0.30	3
1	Te		10,687.14	2.08	72.2	Pulse	0.50	3
1	Li		1,046.70	3.44	95.6	Pulse	0.30	3

Quantitation Report

File Name 041SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 11:27
Sample Name FA55914-3
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.669	ug/l	1.10	4,499.87	2.820E-02	Pulse	0.50	3
As			1	4.107	ug/l	2.59	2,863.55	1.795E-02	Pulse	1.00	3
Mo			1	0.286	ug/l	9.14	1,196.71	4.920E-03	Pulse	0.50	3
Pb			1	0.058	ug/l	4.35	2,356.17	5.037E-04	Pulse	1.00	3
Be			1	0.000	ug/l	2822.93	0.33	1.739E-06	Pulse	2.00	3
Ag			1	0.009	ug/l	14.81	157.33	1.023E-04	Pulse	0.50	3
Ba			1	40.551	ug/l	0.30	58,512.14	3.802E-02	Pulse	0.50	3
Tl			1	0.004	ug/l	18.60	206.67	4.417E-05	Pulse	0.50	3
Sn			1	0.621	ug/l	3.21	2,270.20	1.475E-03	Pulse	0.30	3
Sr			1	121.150	ug/l	1.60	347,848.43	2.260E-01	Pulse	0.50	3
[Pb]			1	0.059	ug/l	6.59	1,110.04	2.373E-04	Pulse	0.50	3
Ca			1	55036.352	ug/l	0.96	730,160.54	3.810E+00	Pulse	0.50	3
Ti			1	0.171	ug/l	49.63	21.33	1.114E-04	Pulse	0.50	3
Na			1	63731.901	ug/l	1.80	44,384,706.67	2.316E+02	Analog	1.00	3
Mg			1	24958.677	ug/l	1.41	8,021,699.67	4.186E+01	Analog	1.00	3
K			1	1416.120	ug/l	0.79	352,363.93	1.839E+00	Pulse	1.00	3
V			1	0.434	ug/l	5.11	2,785.54	1.454E-02	Pulse	0.50	3
Mn			1	162.277	ug/l	0.74	428,750.23	2.687E+00	Pulse	0.50	3
Fe			1	249.664	ug/l	1.45	1,198,678.79	7.512E+00	Pulse	0.50	3
Co			1	0.069	ug/l	4.75	757.35	4.746E-03	Pulse	0.50	3
Ni			1	0.262	ug/l	7.97	856.02	5.365E-03	Pulse	0.50	3
Cu			1	0.236	ug/l	6.93	9,875.22	6.189E-02	Pulse	0.50	3
Zn			1	4.216	ug/l	1.72	6,608.47	2.716E-02	Pulse	1.00	3
Cd			1	0.008	ug/l	119.27	25.33	1.039E-04	Pulse	0.50	3
Al			1	14.416	ug/l	8.37	1,530.40	7.987E-03	Pulse	1.00	3
Se			1	0.233	ug/l	65.81	23.78	1.544E-05	Pulse	3.00	3
Sb			1	0.108	ug/l	7.20	621.68	2.556E-03	Pulse	1.00	3
Se			1	0.567	ug/l	42.50	31.11	2.828E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,678,094.00	0.43	88.1	Pulse	0.50	3
1	Sc		191,654.48	0.42	95.2	Pulse	0.30	3
1	Ge		159,565.47	0.12	95.2	Pulse	0.30	3
1	In		1,539,174.66	0.41	90.5	Pulse	0.30	3
1	Tb		6,791,629.83	0.35	99.7	Analog	0.50	3
1	Lu		3,899,340.25	0.26	92.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		243,265.13	0.42	95.3	Pulse	0.30	3
1	Te		11,016.01	1.58	74.4	Pulse	0.50	3
1	Li		1,055.59	5.91	96.4	Pulse	0.30	3

Quantitation Report

File Name	042CCVA.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 11:31
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.602	ug/l	0.92	645,536.71	3.772E+00	Pulse	0.50	3
As			1	49.646	ug/l	0.07	73,707.42	4.306E-01	Pulse	1.00	3
Mo			1	50.299	ug/l	0.30	444,855.80	1.721E+00	Pulse	0.50	3
Pb			1	49.581	ug/l	0.81	2,457,518.17	4.910E-01	Pulse	1.00	3
Be			1	51.660	ug/l	0.40	3,617.49	1.788E-02	Pulse	2.00	3
Ag			1	51.573	ug/l	0.65	1,634,874.00	9.890E-01	Pulse	0.50	3
Ba			1	48.961	ug/l	1.00	151,708.11	9.178E-02	Pulse	0.50	3
Tl			1	50.349	ug/l	0.39	3,651,385.92	7.295E-01	Pulse	0.50	3
Sn			1	50.533	ug/l	0.81	347,279.47	2.101E-01	Pulse	0.30	3
Sr			1	49.968	ug/l	1.04	308,258.69	1.865E-01	Pulse	0.50	3
[Pb]			1	49.932	ug/l	0.90	1,161,362.67	2.320E-01	Pulse	0.50	3
Ca			1	4915.653	ug/l	1.47	137,754.95	6.810E-01	Pulse	0.50	3
Ti			1	48.944	ug/l	4.31	11,329.31	5.601E-02	Pulse	0.50	3
Na			1	5170.649	ug/l	1.15	7,610,520.50	3.763E+01	Analog	1.00	3
Mg			1	4926.441	ug/l	0.79	3,342,428.17	1.652E+01	Pulse	1.00	3
K			1	4962.092	ug/l	0.93	2,502,014.25	1.237E+01	Pulse	1.00	3
V			1	50.204	ug/l	1.04	472,121.77	2.334E+00	Pulse	0.50	3
Mn			1	49.425	ug/l	0.84	280,187.86	1.637E+00	Pulse	0.50	3
Fe			1	5197.193	ug/l	0.58	53,237,469.33	3.110E+02	Analog	0.50	3
Co			1	50.778	ug/l	1.11	1,159,873.71	6.777E+00	Pulse	0.50	3
Ni			1	51.196	ug/l	0.75	324,850.87	1.898E+00	Pulse	0.50	3
Cu			1	51.335	ug/l	0.71	920,228.06	5.377E+00	Pulse	0.50	3
Zn			1	51.028	ug/l	0.59	124,833.97	4.831E-01	Pulse	1.00	3
Cd			1	50.008	ug/l	0.56	210,798.60	8.157E-01	Pulse	0.50	3
Al			1	4778.862	ug/l	1.50	978,945.65	4.840E+00	Pulse	1.00	3
Se			1	50.809	ug/l	0.48	4,735.92	2.865E-03	Pulse	3.00	3
Sb			1	48.325	ug/l	1.26	472,260.05	1.827E+00	Pulse	1.00	3
Se			1	47.713	ug/l	2.32	2,383.26	1.708E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,005,553.67	0.61	94.2	Pulse	0.50	3
1	Sc		202,282.62	0.85	100.4	Pulse	0.30	3
1	Ge		171,159.46	0.51	102.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,653,052.16	0.31	97.2	Pulse	0.30	3
1	Tb		7,151,646.50	0.69	105.0	Analog	0.50	3
1	Lu		4,051,810.67	0.47	95.6	Pulse	0.50	3
1	Ge		258,429.35	0.47	101.2	Pulse	0.30	3
1	Te		13,950.67	1.14	94.3	Pulse	0.50	3
1	Li		1,120.04	7.81	102.3	Pulse	0.30	3

Quantitation Report

File Name	043_CCV.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 11:34
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	100.857	ug/l	0.53	1,279,015.04	7.514E+00	Pulse	0.50	3
As			1	99.581	ug/l	0.80	147,002.01	8.636E-01	Pulse	1.00	3
Mo			1	99.094	ug/l	0.84	881,825.15	3.391E+00	Pulse	0.50	3
Pb			1	97.847	ug/l	0.85	4,788,878.33	9.687E-01	Pulse	1.00	3
Be			1	101.231	ug/l	0.60	7,147.09	3.504E-02	Pulse	2.00	3
Ag			1	101.559	ug/l	1.23	3,195,620.00	1.948E+00	Pulse	0.50	3
Ba			1	98.593	ug/l	0.41	303,225.27	1.848E-01	Pulse	0.50	3
Tl			1	104.121	ug/l	1.02	7,457,414.67	1.509E+00	Analog	0.50	3
Sn			1	101.417	ug/l	0.56	691,541.86	4.214E-01	Pulse	0.30	3
Sr			1	100.675	ug/l	0.47	616,012.07	3.754E-01	Pulse	0.50	3
[Pb]			1	99.477	ug/l	0.73	2,284,707.08	4.621E-01	Pulse	0.50	3
Ca			1	9683.500	ug/l	1.71	273,506.44	1.341E+00	Pulse	0.50	3
Ti			1	99.557	ug/l	3.01	23,233.13	1.139E-01	Pulse	0.50	3
Na			1	10162.906	ug/l	1.94	15,070,535.00	7.390E+01	Analog	1.00	3
Mg			1	10091.209	ug/l	1.32	6,902,851.83	3.385E+01	Analog	1.00	3
K			1	10196.679	ug/l	1.63	5,165,451.33	2.533E+01	Analog	1.00	3
V			1	99.175	ug/l	1.85	939,412.06	4.606E+00	Pulse	0.50	3
Mn			1	98.951	ug/l	0.34	557,767.44	3.277E+00	Pulse	0.50	3
Fe			1	10284.306	ug/l	0.57	104,758,178.67	6.154E+02	Analog	0.50	3
Co			1	100.485	ug/l	1.04	2,282,539.67	1.341E+01	Pulse	0.50	3
Ni			1	101.521	ug/l	0.41	640,522.56	3.763E+00	Pulse	0.50	3
Cu			1	100.737	ug/l	0.84	1,787,720.50	1.050E+01	Pulse	0.50	3
Zn			1	98.863	ug/l	0.37	241,518.31	9.288E-01	Pulse	1.00	3
Cd			1	97.719	ug/l	0.05	414,450.61	1.594E+00	Pulse	0.50	3
Al			1	9543.234	ug/l	1.89	1,970,878.00	9.664E+00	Pulse	1.00	3
Se			1	100.154	ug/l	1.73	9,251.90	5.639E-03	Pulse	3.00	3
Sb			1	94.983	ug/l	0.47	933,854.06	3.591E+00	Pulse	1.00	3
Se			1	97.030	ug/l	0.51	4,726.15	3.455E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,943,711.83	0.62	93.1	Pulse	0.50	3
1	Sc		203,970.22	1.50	101.3	Pulse	0.30	3
1	Ge		170,217.63	0.72	101.6	Pulse	0.30	3
1	In		1,640,923.24	0.66	96.5	Pulse	0.30	3
1	Tb		7,043,049.33	0.71	103.4	Analog	0.50	3
1	Lu		4,046,690.08	0.46	95.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		260,024.36	0.46	101.8	Pulse	0.30	3
1	Te		13,680.48	2.14	92.5	Pulse	0.50	3
1	Li		1,021.14	1.54	93.3	Pulse	0.30	3

Quantitation Report

File Name	044_CCB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 11:38
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	1120.58	571.34	3.335E-03	Pulse	0.50	3
As			1	-0.004	ug/l	-47.82	17.67	1.032E-04	Pulse	1.00	3
Mo			1	0.040	ug/l	15.22	356.67	1.383E-03	Pulse	0.50	3
Pb			1	0.015	ug/l	27.38	1,875.77	3.694E-04	Pulse	1.00	3
Be			1	0.007	ug/l	58.90	0.83	4.127E-06	Pulse	2.00	3
Ag			1	0.009	ug/l	4.75	320.00	1.904E-04	Pulse	0.50	3
Ba			1	0.002	ug/l	225.11	35.33	2.100E-05	Pulse	0.50	3
Tl			1	0.071	ug/l	16.46	5,311.53	1.045E-03	Pulse	0.50	3
Sn			1	0.032	ug/l	26.16	534.45	3.179E-04	Pulse	0.30	3
Sr			1	0.006	ug/l	81.98	556.01	3.307E-04	Pulse	0.50	3
[Pb]			1	0.017	ug/l	21.15	911.37	1.795E-04	Pulse	0.50	3
Ca			1	0.509	ug/l	136.48	132.00	6.532E-04	Pulse	0.50	3
Ti			1	0.020	ug/l	49.42	7.33	3.627E-05	Pulse	0.50	3
Na			1	6.459	ug/l	5.04	20,567.52	1.018E-01	Pulse	1.00	3
Mg			1	0.538	ug/l	51.08	579.01	2.863E-03	Pulse	1.00	3
K			1	3.164	ug/l	8.29	18,914.07	9.360E-02	Pulse	1.00	3
V			1	-0.051	ug/l	-5.65	422.68	2.092E-03	Pulse	0.50	3
Mn			1	0.001	ug/l	827.24	113.33	6.613E-04	Pulse	0.50	3
Fe			1	0.753	ug/l	33.80	15,000.61	8.748E-02	Pulse	0.50	3
Co			1	0.006	ug/l	37.71	163.33	9.517E-04	Pulse	0.50	3
Ni			1	0.003	ug/l	74.98	106.00	6.186E-04	Pulse	0.50	3
Cu			1	-0.107	ug/l	-8.25	6,591.81	3.849E-02	Pulse	0.50	3
Zn			1	-0.085	ug/l	-20.98	1,735.75	6.727E-03	Pulse	1.00	3
Cd			1	0.007	ug/l	46.23	37.33	1.447E-04	Pulse	0.50	3
Al			1	0.382	ug/l	87.88	217.33	1.075E-03	Pulse	1.00	3
Se			1	0.031	ug/l	82.88	17.89	1.064E-05	Pulse	3.00	3
Sb			1	0.010	ug/l	25.13	234.00	9.064E-04	Pulse	1.00	3
Se			1	-0.006	ug/l	-1183.79	26.11	1.800E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,069,830.67	1.99	95.4	Pulse	0.50	3
1	Sc		202,066.15	0.53	100.3	Pulse	0.30	3

Quantitation Report

1	Ge		171,279.94	1.11	102.2	Pulse	0.30	3
1	In		1,680,743.20	0.54	98.9	Pulse	0.30	3
1	Tb		7,097,304.00	1.15	104.2	Analog	0.50	3
1	Lu		4,060,520.33	0.53	95.8	Pulse	0.50	3
1	Ge		258,016.93	0.83	101.0	Pulse	0.30	3
1	Te		14,514.45	0.54	98.1	Pulse	0.50	3
1	Li		1,085.59	4.96	99.2	Pulse	0.30	3

Quantitation Report

File Name 045SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 11:42
Sample Name FA55914-4
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.621	ug/l	4.48	22,344.15	1.381E-01	Pulse	0.50	3
As			1	0.248	ug/l	14.11	196.67	1.217E-03	Pulse	1.00	3
Mo			1	0.745	ug/l	0.78	3,148.28	1.277E-02	Pulse	0.50	3
Pb			1	0.178	ug/l	7.13	5,301.50	1.098E-03	Pulse	1.00	3
Be			1	0.050	ug/l	83.63	2.00	1.034E-05	Pulse	2.00	3
Ag			1	0.021	ug/l	11.73	352.67	2.206E-04	Pulse	0.50	3
Ba			1	317.432	ug/l	5.12	476,301.27	2.975E-01	Pulse	0.50	3
Tl			1	0.059	ug/l	8.94	2,134.14	4.405E-04	Pulse	0.50	3
Sn			1	0.677	ug/l	8.00	2,546.86	1.591E-03	Pulse	0.30	3
Sr			1	18517.805	ug/l	5.62	55,228,260.00	3.450E+01	Analog	0.50	3
[Pb]			1	0.180	ug/l	5.74	2,505.53	5.186E-04	Pulse	0.50	3
Ca			1	135153.062	ug/l	6.93	1,844,313.42	9.355E+00	Pulse	0.50	3
Ti			1	0.719	ug/l	6.48	84.00	4.250E-04	Pulse	0.50	3
Na			1	56299.727	ug/l	6.81	40,336,980.00	2.046E+02	Analog	1.00	3
Mg			1	4087.868	ug/l	7.51	1,351,412.46	6.856E+00	Pulse	1.00	3
K			1	44821.156	ug/l	6.09	10,957,481.00	5.556E+01	Analog	1.00	3
V			1	0.179	ug/l	17.60	1,697.41	8.615E-03	Pulse	0.50	3
Mn			1	15.672	ug/l	5.29	42,061.36	2.601E-01	Pulse	0.50	3
Fe			1	49.783	ug/l	6.31	247,680.83	1.532E+00	Pulse	0.50	3
Co			1	0.505	ug/l	8.67	5,467.46	3.384E-02	Pulse	0.50	3
Ni			1	0.542	ug/l	6.73	1,705.41	1.055E-02	Pulse	0.50	3
Cu			1	0.632	ug/l	14.06	13,329.29	8.243E-02	Pulse	0.50	3
Zn			1	2.056	ug/l	6.75	4,213.14	1.710E-02	Pulse	1.00	3
Cd			1	0.012	ug/l	16.31	32.67	1.328E-04	Pulse	0.50	3
Al			1	27.241	ug/l	10.93	2,851.88	1.448E-02	Pulse	1.00	3
Se			1	0.108	ug/l	27.90	19.11	1.192E-05	Pulse	3.00	3
Sb			1	1.290	ug/l	3.96	6,134.70	2.490E-02	Pulse	1.00	3
Se			1	0.357	ug/l	64.11	28.11	2.454E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,837,901.83	4.71	91.1	Pulse	0.50	3
1	Sc		197,658.69	5.63	98.1	Pulse	0.30	3
1	Ge		161,956.54	4.18	96.7	Pulse	0.30	3
1	In		1,603,726.01	4.69	94.3	Pulse	0.30	3
1	Tb		7,084,119.50	4.21	104.0	Analog	0.50	3
1	Lu		4,028,864.75	5.56	95.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,587.54	3.54	96.6	Pulse	0.30	3
1	Te		11,481.64	2.19	77.6	Pulse	0.50	3
1	Li		1,058.92	8.10	96.8	Pulse	0.30	3

Quantitation Report

File Name	046SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 11:46
Sample Name	FA55914-6
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	4.648	ug/l	0.27	27,592.18	1.764E-01	Pulse	0.50	3
As			1	140.305	ug/l	1.16	95,182.78	6.085E-01	Pulse	1.00	3
Mo			1	1.770	ug/l	3.97	7,162.05	3.031E-02	Pulse	0.50	3
Pb			1	0.294	ug/l	1.78	7,939.85	1.673E-03	Pulse	1.00	3
Be			1	0.198	ug/l	74.62	6.67	3.602E-05	Pulse	2.00	3
Ag			1	0.019	ug/l	10.89	300.67	1.963E-04	Pulse	0.50	3
Ba			1	188.153	ug/l	1.34	269,879.11	1.763E-01	Pulse	0.50	3
Tl			1	0.026	ug/l	4.57	951.36	2.005E-04	Pulse	0.50	3
Sn			1	0.609	ug/l	4.08	2,221.26	1.451E-03	Pulse	0.30	3
Sr			1	379.644	ug/l	1.28	1,082,976.87	7.076E-01	Pulse	0.50	3
[Pb]			1	0.296	ug/l	2.67	3,743.09	7.886E-04	Pulse	0.50	3
Ca			1	92589.557	ug/l	1.36	1,185,009.29	6.409E+00	Pulse	0.50	3
Ti			1	5.810	ug/l	3.05	617.35	3.337E-03	Pulse	0.50	3
Na			1	9015.364	ug/l	1.57	6,065,951.67	3.281E+01	Analog	1.00	3
Mg			1	14491.760	ug/l	1.73	4,495,074.83	2.430E+01	Mix	1.00	3
K			1	4079.894	ug/l	1.40	949,558.06	5.136E+00	Pulse	1.00	3
V			1	7.213	ug/l	2.01	31,765.79	1.718E-01	Pulse	0.50	3
Mn			1	1167.322	ug/l	1.05	3,023,157.33	1.932E+01	Pulse	0.50	3
Fe			1	18751.541	ug/l	1.08	87,772,077.33	5.611E+02	Analog	0.50	3
Co			1	0.426	ug/l	2.95	4,467.87	2.856E-02	Pulse	0.50	3
Ni			1	0.526	ug/l	6.06	1,603.40	1.025E-02	Pulse	0.50	3
Cu			1	0.313	ug/l	10.56	10,302.78	6.587E-02	Pulse	0.50	3
Zn			1	2.226	ug/l	0.73	4,227.14	1.789E-02	Pulse	1.00	3
Cd			1	0.009	ug/l	12.24	26.67	1.129E-04	Pulse	0.50	3
Al			1	133.255	ug/l	2.54	12,600.66	6.816E-02	Pulse	1.00	3
Se			1	0.420	ug/l	4.25	31.67	2.069E-05	Pulse	3.00	3
Sb			1	0.085	ug/l	4.48	500.34	2.117E-03	Pulse	1.00	3
Se			1	1.205	ug/l	37.99	43.55	3.956E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,745,927.67	1.33	89.3	Pulse	0.50	3
1	Sc		184,925.76	1.83	91.8	Pulse	0.30	3
1	Ge		156,449.71	1.32	93.4	Pulse	0.30	3
1	In		1,530,635.91	0.82	90.0	Pulse	0.30	3
1	Tb		6,810,930.33	1.59	100.0	Analog	0.50	3
1	Lu		3,885,710.42	1.36	91.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		236,264.66	1.76	92.5	Pulse	0.30	3
1	Te		11,041.37	3.26	74.6	Pulse	0.50	3
1	Li		1,034.48	13.86	94.5	Pulse	0.30	3

Quantitation Report

File Name 047SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 11:50
Sample Name FA55914-8
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.494	ug/l	1.77	9,388.95	5.895E-02	Pulse	0.50	3
As			1	26.318	ug/l	1.18	18,197.98	1.142E-01	Pulse	1.00	3
Mo			1	1.237	ug/l	5.43	5,068.04	2.118E-02	Pulse	0.50	3
Pb			1	0.139	ug/l	1.37	4,351.89	9.042E-04	Pulse	1.00	3
Be			1	0.349	ug/l	37.77	11.50	6.214E-05	Pulse	2.00	3
Ag			1	0.016	ug/l	5.67	260.00	1.700E-04	Pulse	0.50	3
Ba			1	92.965	ug/l	1.18	133,215.24	8.713E-02	Pulse	0.50	3
Tl			1	0.013	ug/l	11.62	512.68	1.066E-04	Pulse	0.50	3
Sn			1	0.592	ug/l	3.95	2,164.59	1.416E-03	Pulse	0.30	3
Sr			1	145.070	ug/l	1.69	413,647.67	2.706E-01	Pulse	0.50	3
[Pb]			1	0.139	ug/l	6.61	2,037.46	4.234E-04	Pulse	0.50	3
Ca			1	32348.448	ug/l	2.58	413,017.30	2.240E+00	Pulse	0.50	3
Ti			1	0.463	ug/l	2.34	51.33	2.782E-04	Pulse	0.50	3
Na			1	12249.118	ug/l	3.28	8,216,458.67	4.456E+01	Analog	1.00	3
Mg			1	7522.383	ug/l	2.36	2,326,741.00	1.262E+01	Pulse	1.00	3
K			1	2046.417	ug/l	1.43	483,039.04	2.619E+00	Pulse	1.00	3
V			1	6.324	ug/l	2.80	27,883.25	1.512E-01	Pulse	0.50	3
Mn			1	1027.058	ug/l	3.27	2,707,559.50	1.700E+01	Pulse	0.50	3
Fe			1	65154.108	ug/l	2.77	310,444,512.00	1.949E+03	Analog	0.50	3
Co			1	13.667	ug/l	3.03	145,243.62	9.121E-01	Pulse	0.50	3
Ni			1	3.080	ug/l	2.64	9,169.53	5.758E-02	Pulse	0.50	3
Cu			1	0.371	ug/l	15.41	10,971.16	6.891E-02	Pulse	0.50	3
Zn			1	11.955	ug/l	1.12	15,129.93	6.322E-02	Pulse	1.00	3
Cd			1	0.020	ug/l	6.51	48.67	2.033E-04	Pulse	0.50	3
Al			1	38.735	ug/l	4.69	3,742.69	2.030E-02	Pulse	1.00	3
Se			1	1.296	ug/l	12.78	69.22	4.531E-05	Pulse	3.00	3
Sb			1	0.077	ug/l	1.95	470.01	1.964E-03	Pulse	1.00	3
Se			1	4.971	ug/l	6.94	119.33	1.063E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,812,970.00	0.84	90.6	Pulse	0.50	3
1	Sc		184,492.26	2.29	91.6	Pulse	0.30	3
1	Ge		159,310.01	2.11	95.1	Pulse	0.30	3
1	In		1,529,056.43	1.34	89.9	Pulse	0.30	3
1	Tb		6,912,634.83	0.38	101.5	Analog	0.50	3
1	Lu		3,882,592.50	1.76	91.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		239,327.09	0.94	93.7	Pulse	0.30	3
1	Te		11,230.81	0.98	75.9	Pulse	0.50	3
1	Li		1,051.14	9.72	96.0	Pulse	0.30	3

Quantitation Report

File Name	048SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 11:53
Sample Name	FA55914-9
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.441	ug/l	6.09	3,208.28	1.972E-02	Pulse	0.50	3
As			1	0.126	ug/l	11.95	111.67	6.865E-04	Pulse	1.00	3
Mo			1	0.108	ug/l	6.76	460.68	1.871E-03	Pulse	0.50	3
Pb			1	0.133	ug/l	2.60	4,272.88	8.773E-04	Pulse	1.00	3
Be			1	0.011	ug/l	85.68	0.67	3.521E-06	Pulse	2.00	3
Ag			1	0.011	ug/l	2.47	192.00	1.226E-04	Pulse	0.50	3
Ba			1	20.558	ug/l	1.15	30,187.15	1.928E-02	Pulse	0.50	3
Tl			1	0.007	ug/l	12.18	326.67	6.707E-05	Pulse	0.50	3
Sn			1	0.602	ug/l	12.49	2,245.72	1.435E-03	Pulse	0.30	3
Sr			1	593.513	ug/l	2.72	1,731,537.08	1.106E+00	Pulse	0.50	3
[Pb]			1	0.130	ug/l	5.29	1,958.79	4.022E-04	Pulse	0.50	3
Ca			1	36060.981	ug/l	1.93	474,410.28	2.497E+00	Pulse	0.50	3
Ti			1	0.119	ug/l	110.67	15.33	8.127E-05	Pulse	0.50	3
Na			1	11012.996	ug/l	2.56	7,613,583.33	4.007E+01	Analog	1.00	3
Mg			1	8536.484	ug/l	2.28	2,720,436.33	1.432E+01	Pulse	1.00	3
K			1	941.253	ug/l	2.91	237,684.27	1.251E+00	Pulse	1.00	3
V			1	0.141	ug/l	16.88	1,469.39	7.735E-03	Pulse	0.50	3
Mn			1	2.813	ug/l	3.99	7,678.87	4.721E-02	Pulse	0.50	3
Fe			1	66.180	ug/l	1.58	328,959.09	2.022E+00	Pulse	0.50	3
Co			1	0.078	ug/l	7.18	869.36	5.346E-03	Pulse	0.50	3
Ni			1	0.291	ug/l	6.36	959.36	5.898E-03	Pulse	0.50	3
Cu			1	0.149	ug/l	12.03	9,335.60	5.739E-02	Pulse	0.50	3
Zn			1	7.676	ug/l	1.71	10,655.29	4.329E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	1311.74	9.33	3.783E-05	Pulse	0.50	3
Al			1	6.206	ug/l	4.76	728.02	3.830E-03	Pulse	1.00	3
Se			1	0.022	ug/l	38.78	14.89	9.509E-06	Pulse	3.00	3
Sb			1	0.024	ug/l	15.11	236.67	9.611E-04	Pulse	1.00	3
Se			1	0.045	ug/l	153.22	21.78	1.902E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,870,462.50	0.12	91.7	Pulse	0.50	3
1	Sc		190,038.06	1.22	94.3	Pulse	0.30	3
1	Ge		162,658.09	0.48	97.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,565,768.59	0.70	92.1	Pulse	0.30	3
1	Tb		7,069,187.33	0.23	103.8	Analog	0.50	3
1	Lu		3,982,742.08	0.21	94.0	Pulse	0.50	3
1	Ge		246,145.31	0.90	96.4	Pulse	0.30	3
1	Te		11,450.96	1.91	77.4	Pulse	0.50	3
1	Li		1,005.58	4.57	91.9	Pulse	0.30	3

Quantitation Report

File Name 049SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 11:57
Sample Name FA56136-22
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.496	ug/l	1.67	3,615.68	2.178E-02	Pulse	0.50	3
As			1	0.026	ug/l	36.23	42.00	2.535E-04	Pulse	1.00	3
Mo			1	0.035	ug/l	12.18	154.67	6.149E-04	Pulse	0.50	3
Pb			1	0.045	ug/l	4.96	2,202.15	4.409E-04	Pulse	1.00	3
Be			1	0.000	ug/l	16220.49	0.33	1.704E-06	Pulse	2.00	3
Ag			1	0.032	ug/l	8.13	519.34	3.207E-04	Pulse	0.50	3
Ba			1	0.575	ug/l	5.16	898.03	5.552E-04	Pulse	0.50	3
Tl			1	0.005	ug/l	22.38	248.67	4.982E-05	Pulse	0.50	3
Sn			1	0.701	ug/l	8.83	2,651.33	1.642E-03	Pulse	0.30	3
Sr			1	1.168	ug/l	3.78	4,014.45	2.483E-03	Pulse	0.50	3
[Pb]			1	0.047	ug/l	16.96	1,039.37	2.082E-04	Pulse	0.50	3
Ca			1	132.209	ug/l	10.20	1,902.77	9.733E-03	Pulse	0.50	3
Ti			1	0.209	ug/l	41.70	26.00	1.328E-04	Pulse	0.50	3
Na			1	254.610	ug/l	1.89	191,513.75	9.799E-01	Pulse	1.00	3
Mg			1	33.190	ug/l	2.89	11,084.41	5.672E-02	Pulse	1.00	3
K			1	19.740	ug/l	1.51	21,543.72	1.102E-01	Pulse	1.00	3
V			1	0.147	ug/l	26.88	1,539.40	7.865E-03	Pulse	0.50	3
Mn			1	0.758	ug/l	5.45	2,189.47	1.319E-02	Pulse	0.50	3
Fe			1	9.328	ug/l	3.57	53,359.56	3.215E-01	Pulse	0.50	3
Co			1	0.033	ug/l	5.40	388.68	2.342E-03	Pulse	0.50	3
Ni			1	0.332	ug/l	7.30	1,107.37	6.667E-03	Pulse	0.50	3
Cu			1	1.927	ug/l	2.40	24,839.97	1.496E-01	Pulse	0.50	3
Zn			1	1.342	ug/l	5.49	3,465.98	1.377E-02	Pulse	1.00	3
Cd			1	-0.001	ug/l	-117.29	7.33	2.904E-05	Pulse	0.50	3
Al			1	8.030	ug/l	5.96	928.69	4.753E-03	Pulse	1.00	3
Se			1	0.075	ug/l	89.33	17.78	1.101E-05	Pulse	3.00	3
Sb			1	0.025	ug/l	12.83	249.00	9.897E-04	Pulse	1.00	3
Se			1	0.040	ug/l	570.58	21.67	1.894E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,996,024.83	1.50	94.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		195,485.94	1.65	97.1	Pulse	0.30	3
1	Ge		166,019.06	1.75	99.1	Pulse	0.30	3
1	In		1,617,416.15	2.78	95.1	Pulse	0.30	3
1	Tb		7,104,498.67	1.90	104.3	Analog	0.50	3
1	Lu		4,035,769.58	2.44	95.2	Pulse	0.50	3
1	Ge		251,739.93	1.55	98.6	Pulse	0.30	3
1	Te		11,472.95	2.53	77.5	Pulse	0.50	3
1	Li		1,030.03	12.49	94.1	Pulse	0.30	3

Quantitation Report

File Name 050SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 12:01
Sample Name FA55888-1A
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.350	ug/l	5.25	2,661.53	1.634E-02	Pulse	0.50	3
As			1	0.034	ug/l	42.54	47.00	2.890E-04	Pulse	1.00	3
Mo			1	0.019	ug/l	45.33	85.33	3.460E-04	Pulse	0.50	3
Pb			1	0.145	ug/l	2.35	4,631.97	9.366E-04	Pulse	1.00	3
Be			1	0.010	ug/l	168.03	0.67	3.479E-06	Pulse	2.00	3
Ag			1	0.008	ug/l	24.43	152.67	9.563E-05	Pulse	0.50	3
Ba			1	0.154	ug/l	11.86	256.67	1.609E-04	Pulse	0.50	3
Tl			1	0.003	ug/l	21.95	188.67	3.817E-05	Pulse	0.50	3
Sn			1	0.484	ug/l	0.41	1,900.11	1.190E-03	Pulse	0.30	3
Sr			1	0.145	ug/l	12.50	921.36	5.767E-04	Pulse	0.50	3
[Pb]			1	0.150	ug/l	4.62	2,213.49	4.477E-04	Pulse	0.50	3
Ca			1	22.370	ug/l	3.31	412.68	2.131E-03	Pulse	0.50	3
Ti			1	0.109	ug/l	62.37	14.67	7.570E-05	Pulse	0.50	3
Na			1	21.344	ug/l	4.66	25,634.32	1.324E-01	Pulse	1.00	3
Mg			1	7.589	ug/l	4.97	2,669.85	1.379E-02	Pulse	1.00	3
K			1	11.620	ug/l	10.65	19,395.50	1.002E-01	Pulse	1.00	3
V			1	0.106	ug/l	16.47	1,342.05	6.934E-03	Pulse	0.50	3
Mn			1	0.379	ug/l	3.88	1,125.37	6.910E-03	Pulse	0.50	3
Fe			1	18.662	ug/l	5.06	97,938.15	6.008E-01	Pulse	0.50	3
Co			1	0.029	ug/l	16.04	338.67	2.080E-03	Pulse	0.50	3
Ni			1	0.043	ug/l	6.61	211.33	1.298E-03	Pulse	0.50	3
Cu			1	0.591	ug/l	9.91	13,073.79	8.029E-02	Pulse	0.50	3
Zn			1	1.575	ug/l	6.34	3,680.36	1.486E-02	Pulse	1.00	3
Cd			1	-0.001	ug/l	-230.54	6.00	2.426E-05	Pulse	0.50	3
Al			1	6.362	ug/l	2.19	757.35	3.909E-03	Pulse	1.00	3
Se			1	0.066	ug/l	122.23	17.11	1.073E-05	Pulse	3.00	3
Sb			1	0.015	ug/l	6.36	200.00	8.078E-04	Pulse	1.00	3
Se			1	0.073	ug/l	128.66	22.44	1.952E-03	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,945,179.00	0.59	93.1	Pulse	0.50	3
1	Sc		193,694.68	2.14	96.2	Pulse	0.30	3
1	Ge		162,926.88	2.14	97.3	Pulse	0.30	3
1	In		1,596,974.97	1.38	93.9	Pulse	0.30	3
1	Tb		6,976,160.00	1.04	102.4	Analog	0.50	3
1	Lu		3,909,354.25	1.07	92.3	Pulse	0.50	3
1	Ge		247,599.39	1.51	97.0	Pulse	0.30	3
1	Te		11,502.31	0.89	77.7	Pulse	0.50	3
1	Li		1,016.70	6.55	92.9	Pulse	0.30	3

Quantitation Report

File Name	051SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:05
Sample Name	FA55889-1A
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.296	ug/l	8.57	2,318.15	1.435E-02	Pulse	0.50	3
As			1	0.021	ug/l	41.62	37.33	2.310E-04	Pulse	1.00	3
Mo			1	0.011	ug/l	16.30	52.67	2.121E-04	Pulse	0.50	3
Pb			1	0.021	ug/l	5.53	1,587.08	3.207E-04	Pulse	1.00	3
Be			1	0.011	ug/l	333.17	0.67	3.510E-06	Pulse	2.00	3
Ag			1	0.010	ug/l	12.02	176.00	1.108E-04	Pulse	0.50	3
Ba			1	0.024	ug/l	18.77	62.00	3.900E-05	Pulse	0.50	3
Tl			1	0.003	ug/l	14.50	170.67	3.449E-05	Pulse	0.50	3
Sn			1	0.512	ug/l	7.97	1,982.35	1.248E-03	Pulse	0.30	3
Sr			1	0.101	ug/l	14.51	786.69	4.950E-04	Pulse	0.50	3
[Pb]			1	0.022	ug/l	41.12	754.02	1.523E-04	Pulse	0.50	3
Ca			1	13.688	ug/l	13.88	292.67	1.530E-03	Pulse	0.50	3
Ti			1	0.013	ug/l	139.45	4.00	2.094E-05	Pulse	0.50	3
Na			1	14.871	ug/l	2.41	20,820.78	1.089E-01	Pulse	1.00	3
Mg			1	7.314	ug/l	2.83	2,548.17	1.333E-02	Pulse	1.00	3
K			1	8.562	ug/l	6.56	18,429.58	9.637E-02	Pulse	1.00	3
V			1	0.111	ug/l	30.08	1,345.39	7.038E-03	Pulse	0.50	3
Mn			1	0.077	ug/l	20.71	310.00	1.918E-03	Pulse	0.50	3
Fe			1	2.791	ug/l	3.53	20,349.37	1.259E-01	Pulse	0.50	3
Co			1	0.016	ug/l	10.73	196.67	1.217E-03	Pulse	0.50	3
Ni			1	0.031	ug/l	54.26	173.33	1.073E-03	Pulse	0.50	3
Cu			1	0.259	ug/l	21.54	10,190.05	6.306E-02	Pulse	0.50	3
Zn			1	3.411	ug/l	3.00	5,817.22	2.341E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	1745.85	9.33	3.747E-05	Pulse	0.50	3
Al			1	5.045	ug/l	3.25	620.01	3.242E-03	Pulse	1.00	3
Se			1	0.037	ug/l	104.52	15.78	9.940E-06	Pulse	3.00	3
Sb			1	0.014	ug/l	5.05	192.00	7.727E-04	Pulse	1.00	3
Se			1	0.267	ug/l	64.14	26.56	2.295E-03	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,949,922.50	1.22	93.2	Pulse	0.50	3
1	Sc		191,244.40	0.71	94.9	Pulse	0.30	3
1	Ge		161,596.06	0.25	96.5	Pulse	0.30	3
1	In		1,588,716.08	1.17	93.4	Pulse	0.30	3
1	Tb		7,005,301.83	0.56	102.8	Analog	0.50	3
1	Lu		3,918,405.42	0.17	92.5	Pulse	0.50	3
1	Ge		248,475.47	0.78	97.3	Pulse	0.30	3
1	Te		11,591.70	2.09	78.3	Pulse	0.50	3
1	Li		1,047.81	10.41	95.7	Pulse	0.30	3

Quantitation Report

File Name	052_MB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:08
Sample Name	MP34081-MB1
Sample Type	MB
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.060	ug/l	9.67	938.69	5.532E-03	Pulse	0.50	3
As			1	-0.010	ug/l	-49.84	17.00	1.001E-04	Pulse	1.00	3
Mo			1	0.008	ug/l	27.08	40.00	1.553E-04	Pulse	0.50	3
Pb			1	0.057	ug/l	2.04	2,531.53	4.994E-04	Pulse	1.00	3
Be			1	-0.010	ug/l	0.00	0.00	0.000E+00	Pulse	2.00	3
Ag			1	0.008	ug/l	18.79	155.33	9.326E-05	Pulse	0.50	3
Ba			1	0.049	ug/l	21.45	104.67	6.283E-05	Pulse	0.50	3
Tl			1	0.002	ug/l	18.78	147.33	2.905E-05	Pulse	0.50	3
Sn			1	0.207	ug/l	14.45	1,026.71	6.158E-04	Pulse	0.30	3
Sr			1	0.126	ug/l	34.23	902.69	5.415E-04	Pulse	0.50	3
[Pb]			1	0.056	ug/l	6.06	1,169.38	2.307E-04	Pulse	0.50	3
Ca			1	16.513	ug/l	4.53	347.33	1.726E-03	Pulse	0.50	3
Ti			1	0.040	ug/l	123.63	7.33	3.633E-05	Pulse	0.50	3
Na			1	10.852	ug/l	4.54	18,979.55	9.428E-02	Pulse	1.00	3
Mg			1	7.553	ug/l	4.59	2,762.20	1.373E-02	Pulse	1.00	3
K			1	10.756	ug/l	9.74	19,943.71	9.909E-02	Pulse	1.00	3
V			1	-0.044	ug/l	-22.55	692.01	3.439E-03	Pulse	0.50	3
Mn			1	0.156	ug/l	18.17	548.01	3.230E-03	Pulse	0.50	3
Fe			1	14.540	ug/l	1.87	81,015.96	4.775E-01	Pulse	0.50	3
Co			1	0.006	ug/l	23.02	92.00	5.421E-04	Pulse	0.50	3
Ni			1	0.026	ug/l	20.93	168.00	9.907E-04	Pulse	0.50	3
Cu			1	0.251	ug/l	1.78	10,636.29	6.268E-02	Pulse	0.50	3
Zn			1	1.455	ug/l	5.39	3,689.36	1.430E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	1388.67	10.00	3.898E-05	Pulse	0.50	3
Al			1	4.627	ug/l	2.77	610.01	3.030E-03	Pulse	1.00	3
Se			1	0.035	ug/l	185.40	16.45	9.868E-06	Pulse	3.00	3
Sb			1	0.012	ug/l	20.02	191.00	7.401E-04	Pulse	1.00	3
Se			1	-0.033	ug/l	-326.28	23.56	1.764E-03	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,068,433.50	0.79	95.4	Pulse	0.50	3
1	Sc		201,294.85	1.00	99.9	Pulse	0.30	3
1	Ge		169,698.56	1.05	101.3	Pulse	0.30	3
1	In		1,666,632.64	0.69	98.0	Pulse	0.30	3
1	Tb		7,073,129.33	0.71	103.8	Analog	0.50	3
1	Lu		4,023,538.00	0.77	94.9	Pulse	0.50	3
1	Ge		257,964.70	1.12	101.0	Pulse	0.30	3
1	Te		13,354.91	1.38	90.3	Pulse	0.50	3
1	Li		1,058.92	5.06	96.8	Pulse	0.30	3

Quantitation Report

File Name	053_BSP.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:12
Sample Name	MP34081-B1
Sample Type	BSP
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	209.059	ug/l	1.73	1,253,942.21	7.788E+00	Pulse	0.50	3
As			1	216.875	ug/l	1.00	151,430.82	9.404E-01	Pulse	1.00	3
Mo			1	205.484	ug/l	1.30	860,090.31	3.516E+00	Pulse	0.50	3
Pb			1	201.181	ug/l	0.26	4,722,525.67	9.959E-01	Pulse	1.00	3
Be			1	211.284	ug/l	1.09	7,065.06	3.657E-02	Pulse	2.00	3
Ag			1	101.601	ug/l	0.32	1,544,197.12	9.742E-01	Pulse	0.50	3
Ba			1	199.925	ug/l	1.14	296,978.71	1.874E-01	Pulse	0.50	3
Tl			1	210.092	ug/l	1.19	7,216,989.17	1.522E+00	Analog	0.50	3
Sn			1	224.274	ug/l	1.09	738,599.17	4.660E-01	Pulse	0.30	3
Sr			1	203.387	ug/l	1.42	601,069.42	3.792E-01	Pulse	0.50	3
[Pb]			1	195.107	ug/l	0.77	2,149,185.67	4.532E-01	Pulse	0.50	3
Ca			1	19384.834	ug/l	0.67	259,336.54	1.342E+00	Pulse	0.50	3
Ti			1	199.055	ug/l	1.69	22,004.37	1.139E-01	Pulse	0.50	3
Na			1	20373.259	ug/l	0.55	14,310,977.67	7.407E+01	Analog	1.00	3
Mg			1	20432.853	ug/l	0.86	6,620,370.83	3.427E+01	Analog	1.00	3
K			1	19429.617	ug/l	0.74	4,662,880.00	2.413E+01	Pulse	1.00	3
V			1	205.565	ug/l	0.51	922,331.73	4.774E+00	Pulse	0.50	3
Mn			1	202.553	ug/l	1.16	540,019.16	3.354E+00	Pulse	0.50	3
Fe			1	20888.939	ug/l	1.19	100,641,722.67	6.250E+02	Analog	0.50	3
Co			1	209.377	ug/l	1.17	2,249,633.58	1.397E+01	Pulse	0.50	3
Ni			1	206.135	ug/l	1.62	615,126.86	3.820E+00	Pulse	0.50	3
Cu			1	209.744	ug/l	1.57	1,760,233.29	1.093E+01	Pulse	0.50	3
Zn			1	201.155	ug/l	0.69	231,122.51	9.448E-01	Pulse	1.00	3
Cd			1	202.624	ug/l	0.68	404,231.21	1.652E+00	Pulse	0.50	3
Al			1	17669.789	ug/l	1.22	1,728,565.96	8.947E+00	Pulse	1.00	3
Se			1	195.159	ug/l	1.09	8,708.32	5.494E-03	Pulse	3.00	3
Sb			1	197.267	ug/l	0.87	912,280.94	3.729E+00	Pulse	1.00	3
Se			1	196.097	ug/l	1.72	4,411.51	3.491E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,742,133.83	0.30	89.3	Pulse	0.50	3
1	Sc		193,206.11	0.52	95.9	Pulse	0.30	3
1	Ge		161,035.71	1.27	96.1	Pulse	0.30	3
1	In		1,585,127.89	0.44	93.2	Pulse	0.30	3
1	Tb		6,887,391.50	0.77	101.1	Analog	0.50	3
1	Lu		3,903,389.67	1.11	92.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		244,628.25	0.87	95.8	Pulse	0.30	3
1	Te		12,638.40	1.10	85.4	Pulse	0.50	3
1	Li		1,034.48	5.85	94.5	Pulse	0.30	3

Quantitation Report

File Name	054SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:16
Sample Name	FA56145-2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.183	ug/l	7.19	1,684.74	1.012E-02	Pulse	0.50	3
As			1	0.245	ug/l	3.33	200.67	1.205E-03	Pulse	1.00	3
Mo			1	1.187	ug/l	1.94	5,102.04	2.033E-02	Pulse	0.50	3
Pb			1	0.379	ug/l	3.69	10,215.73	2.092E-03	Pulse	1.00	3
Be			1	0.043	ug/l	156.77	1.83	9.163E-06	Pulse	2.00	3
Ag			1	0.024	ug/l	16.78	398.01	2.452E-04	Pulse	0.50	3
Ba			1	12.112	ug/l	1.17	18,456.13	1.137E-02	Pulse	0.50	3
Tl			1	0.152	ug/l	16.59	5,444.23	1.115E-03	Pulse	0.50	3
Sn			1	0.169	ug/l	5.21	870.03	5.359E-04	Pulse	0.30	3
Sr			1	251.181	ug/l	1.32	760,193.48	4.682E-01	Pulse	0.50	3
[Pb]			1	0.376	ug/l	6.88	4,755.35	9.739E-04	Pulse	0.50	3
Ca			1	34975.480	ug/l	2.32	477,536.19	2.421E+00	Pulse	0.50	3
Ti			1	0.285	ug/l	37.80	34.67	1.762E-04	Pulse	0.50	3
Na			1	13762.862	ug/l	1.66	9,872,692.67	5.006E+01	Analog	1.00	3
Mg			1	2210.462	ug/l	1.87	731,312.65	3.708E+00	Pulse	1.00	3
K			1	820.318	ug/l	1.66	217,178.55	1.101E+00	Pulse	1.00	3
V			1	0.387	ug/l	4.83	2,650.86	1.344E-02	Pulse	0.50	3
Mn			1	11.153	ug/l	2.17	30,832.38	1.853E-01	Pulse	0.50	3
Fe			1	388.846	ug/l	1.79	1,943,215.71	1.168E+01	Pulse	0.50	3
Co			1	0.418	ug/l	5.90	4,673.92	2.806E-02	Pulse	0.50	3
Ni			1	0.366	ug/l	2.87	1,212.71	7.284E-03	Pulse	0.50	3
Cu			1	2.259	ug/l	2.76	27,770.64	1.669E-01	Pulse	0.50	3
Zn			1	5.878	ug/l	0.50	8,762.33	3.491E-02	Pulse	1.00	3
Cd			1	0.009	ug/l	75.45	28.67	1.138E-04	Pulse	0.50	3
Al			1	28.591	ug/l	3.56	2,991.56	1.516E-02	Pulse	1.00	3
Se			1	0.071	ug/l	107.76	17.67	1.090E-05	Pulse	3.00	3
Sb			1	0.129	ug/l	9.86	741.02	2.951E-03	Pulse	1.00	3
Se			1	0.075	ug/l	82.27	26.00	1.956E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,884,098.83	1.33	91.9	Pulse	0.50	3
1	Sc		197,267.96	1.70	97.9	Pulse	0.30	3
1	Ge		166,452.94	1.61	99.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,623,708.03	1.54	95.5	Pulse	0.30	3
1	Tb		7,004,999.00	1.44	102.8	Analog	0.50	3
1	Lu		3,973,178.42	0.46	93.8	Pulse	0.50	3
1	Ge		251,019.85	0.97	98.3	Pulse	0.30	3
1	Te		13,302.19	2.28	89.9	Pulse	0.50	3
1	Li		1,041.14	2.87	95.1	Pulse	0.30	3

Quantitation Report

File Name	055CCVA.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:20
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.158	ug/l	1.90	634,513.71	3.739E+00	Pulse	0.50	3
As			1	49.718	ug/l	1.55	73,196.82	4.313E-01	Pulse	1.00	3
Mo			1	49.707	ug/l	2.32	439,814.91	1.701E+00	Pulse	0.50	3
Pb			1	48.616	ug/l	1.62	2,388,897.33	4.814E-01	Pulse	1.00	3
Be			1	49.873	ug/l	1.52	3,554.81	1.726E-02	Pulse	2.00	3
Ag			1	50.296	ug/l	1.12	1,601,845.58	9.645E-01	Pulse	0.50	3
Ba			1	48.299	ug/l	2.84	150,328.29	9.053E-02	Pulse	0.50	3
Tl			1	49.391	ug/l	1.99	3,550,658.58	7.156E-01	Pulse	0.50	3
Sn			1	49.877	ug/l	1.08	344,383.44	2.074E-01	Pulse	0.30	3
Sr			1	49.907	ug/l	2.10	309,298.58	1.863E-01	Pulse	0.50	3
[Pb]			1	49.131	ug/l	1.96	1,132,848.08	2.283E-01	Pulse	0.50	3
Ca			1	4796.451	ug/l	1.23	136,830.06	6.645E-01	Pulse	0.50	3
Ti			1	47.918	ug/l	1.44	11,292.63	5.484E-02	Pulse	0.50	3
Na			1	5020.738	ug/l	1.62	7,522,558.83	3.654E+01	Analog	1.00	3
Mg			1	4764.883	ug/l	1.24	3,290,768.08	1.598E+01	Pulse	1.00	3
K			1	4831.282	ug/l	1.71	2,480,090.50	1.205E+01	Pulse	1.00	3
V			1	49.111	ug/l	1.80	470,121.98	2.283E+00	Pulse	0.50	3
Mn			1	49.927	ug/l	1.35	280,670.87	1.654E+00	Pulse	0.50	3
Fe			1	5194.745	ug/l	2.10	52,764,600.00	3.109E+02	Analog	0.50	3
Co			1	50.314	ug/l	1.48	1,139,660.42	6.715E+00	Pulse	0.50	3
Ni			1	50.475	ug/l	2.23	317,568.02	1.871E+00	Pulse	0.50	3
Cu			1	51.215	ug/l	1.57	910,426.62	5.364E+00	Pulse	0.50	3
Zn			1	50.433	ug/l	2.27	123,457.42	4.775E-01	Pulse	1.00	3
Cd			1	49.126	ug/l	1.13	207,201.21	8.013E-01	Pulse	0.50	3
Al			1	4701.615	ug/l	2.12	980,351.46	4.762E+00	Pulse	1.00	3
Se			1	50.273	ug/l	1.16	4,707.92	2.835E-03	Pulse	3.00	3
Sb			1	47.727	ug/l	1.98	466,647.10	1.805E+00	Pulse	1.00	3
Se			1	47.918	ug/l	3.08	2,396.71	1.715E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,962,943.17	1.62	93.4	Pulse	0.50	3
1	Sc		205,920.95	1.28	102.2	Pulse	0.30	3
1	Ge		169,754.55	1.62	101.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,660,955.45	1.62	97.7	Pulse	0.30	3
1	Tb		7,170,062.00	1.80	105.2	Analog	0.50	3
1	Lu		4,073,704.17	1.26	96.1	Pulse	0.50	3
1	Ge		258,609.32	1.80	101.3	Pulse	0.30	3
1	Te		13,974.04	0.98	94.4	Pulse	0.50	3
1	Li		1,080.04	13.68	98.7	Pulse	0.30	3

Quantitation Report

File Name	056_CCV.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:24
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	101.434	ug/l	3.39	1,258,314.21	7.557E+00	Pulse	0.50	3
As			1	100.925	ug/l	3.00	145,753.29	8.753E-01	Pulse	1.00	3
Mo			1	100.573	ug/l	3.42	867,131.58	3.442E+00	Pulse	0.50	3
Pb			1	99.726	ug/l	2.48	4,675,892.00	9.873E-01	Pulse	1.00	3
Be			1	102.797	ug/l	3.31	7,075.90	3.558E-02	Pulse	2.00	3
Ag			1	102.046	ug/l	3.29	3,127,469.17	1.957E+00	Pulse	0.50	3
Ba			1	100.367	ug/l	3.74	300,619.61	1.881E-01	Pulse	0.50	3
Tl			1	107.023	ug/l	3.69	7,341,944.67	1.551E+00	Analog	0.50	3
Sn			1	103.135	ug/l	3.97	684,850.82	4.286E-01	Pulse	0.30	3
Sr			1	103.643	ug/l	3.89	617,573.71	3.865E-01	Pulse	0.50	3
[Pb]			1	100.678	ug/l	3.25	2,214,856.17	4.677E-01	Pulse	0.50	3
Ca			1	9885.446	ug/l	2.94	272,252.26	1.369E+00	Pulse	0.50	3
Ti			1	101.777	ug/l	4.13	23,155.67	1.165E-01	Pulse	0.50	3
Na			1	10297.845	ug/l	3.97	14,887,769.33	7.488E+01	Analog	1.00	3
Mg			1	10267.550	ug/l	3.38	6,847,910.67	3.444E+01	Analog	1.00	3
K			1	10420.003	ug/l	3.61	5,145,980.33	2.588E+01	Analog	1.00	3
V			1	101.307	ug/l	3.31	935,665.79	4.705E+00	Pulse	0.50	3
Mn			1	101.013	ug/l	3.61	556,944.33	3.345E+00	Pulse	0.50	3
Fe			1	10429.149	ug/l	2.60	103,933,874.67	6.241E+02	Analog	0.50	3
Co			1	101.174	ug/l	2.66	2,248,503.58	1.350E+01	Pulse	0.50	3
Ni			1	101.335	ug/l	2.45	625,534.37	3.756E+00	Pulse	0.50	3
Cu			1	101.743	ug/l	3.61	1,766,125.12	1.061E+01	Pulse	0.50	3
Zn			1	101.023	ug/l	2.97	239,095.34	9.490E-01	Pulse	1.00	3
Cd			1	98.903	ug/l	3.94	406,370.60	1.613E+00	Pulse	0.50	3
Al			1	9741.454	ug/l	4.04	1,961,339.79	9.865E+00	Pulse	1.00	3
Se			1	103.479	ug/l	4.24	9,308.49	5.826E-03	Pulse	3.00	3
Sb			1	97.392	ug/l	3.22	927,769.52	3.682E+00	Pulse	1.00	3
Se			1	99.365	ug/l	3.94	4,732.81	3.538E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,737,909.50	2.47	89.2	Pulse	0.50	3
1	Sc		199,003.01	3.50	98.8	Pulse	0.30	3
1	Ge		166,612.53	2.81	99.5	Pulse	0.30	3
1	In		1,599,270.84	3.11	94.1	Pulse	0.30	3
1	Tb		6,877,771.83	3.55	101.0	Analog	0.50	3
1	Lu		3,925,115.58	3.56	92.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		252,103.04	3.02	98.7	Pulse	0.30	3
1	Te		13,389.61	3.18	90.5	Pulse	0.50	3
1	Li		1,066.70	8.43	97.5	Pulse	0.30	3

Quantitation Report

File Name	057_CCB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:28
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.001	ug/l	49.34	578.01	3.401E-03	Pulse	0.50	3
As			1	0.002	ug/l	399.88	27.33	1.604E-04	Pulse	1.00	3
Mo			1	0.034	ug/l	9.83	298.67	1.165E-03	Pulse	0.50	3
Pb			1	0.018	ug/l	25.60	1,967.79	3.908E-04	Pulse	1.00	3
Be			1	0.014	ug/l	153.17	1.33	6.626E-06	Pulse	2.00	3
Ag			1	0.010	ug/l	14.67	330.67	1.987E-04	Pulse	0.50	3
Ba			1	0.003	ug/l	191.11	38.00	2.286E-05	Pulse	0.50	3
Tl			1	0.073	ug/l	15.88	5,390.21	1.070E-03	Pulse	0.50	3
Sn			1	0.031	ug/l	23.35	523.34	3.146E-04	Pulse	0.30	3
Sr			1	0.011	ug/l	63.12	581.34	3.493E-04	Pulse	0.50	3
[Pb]			1	0.018	ug/l	20.31	928.03	1.843E-04	Pulse	0.50	3
Ca			1	-0.293	ug/l	-162.98	109.33	5.421E-04	Pulse	0.50	3
Ti			1	0.009	ug/l	156.17	4.67	2.322E-05	Pulse	0.50	3
Na			1	2.417	ug/l	3.82	14,614.99	7.241E-02	Pulse	1.00	3
Mg			1	0.527	ug/l	38.97	571.68	2.827E-03	Pulse	1.00	3
K			1	2.846	ug/l	17.43	18,733.21	9.282E-02	Pulse	1.00	3
V			1	-0.057	ug/l	-12.40	369.34	1.831E-03	Pulse	0.50	3
Mn			1	0.005	ug/l	67.37	136.67	8.033E-04	Pulse	0.50	3
Fe			1	0.626	ug/l	46.23	13,596.34	7.990E-02	Pulse	0.50	3
Co			1	0.005	ug/l	39.84	150.00	8.809E-04	Pulse	0.50	3
Ni			1	0.004	ug/l	43.82	113.33	6.665E-04	Pulse	0.50	3
Cu			1	-0.116	ug/l	-5.06	6,385.07	3.757E-02	Pulse	0.50	3
Zn			1	-0.077	ug/l	-27.51	1,744.08	6.799E-03	Pulse	1.00	3
Cd			1	0.006	ug/l	60.79	35.33	1.375E-04	Pulse	0.50	3
Al			1	0.284	ug/l	103.22	197.33	9.756E-04	Pulse	1.00	3
Se			1	0.019	ug/l	201.01	16.56	9.949E-06	Pulse	3.00	3
Sb			1	0.007	ug/l	25.11	205.00	7.987E-04	Pulse	1.00	3
Se			1	-0.081	ug/l	-31.21	21.89	1.538E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,034,883.83	0.29	94.8	Pulse	0.50	3
1	Sc		201,843.35	1.05	100.2	Pulse	0.30	3

Quantitation Report

1	Ge		169,957.49	1.13	101.4	Pulse	0.30	3
1	In		1,663,942.37	0.64	97.9	Pulse	0.30	3
1	Tb		7,032,837.67	0.69	103.2	Analog	0.50	3
1	Lu		4,014,693.33	0.21	94.7	Pulse	0.50	3
1	Ge		256,547.13	0.89	100.5	Pulse	0.30	3
1	Te		14,238.90	0.55	96.2	Pulse	0.50	3
1	Li		1,024.48	12.18	93.6	Pulse	0.30	3

Quantitation Report

File Name	058SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:31
Sample Name	MP34081-D1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.239	ug/l	4.78	2,014.78	1.220E-02	Pulse	0.50	3
As			1	0.240	ug/l	17.71	194.67	1.181E-03	Pulse	1.00	3
Mo			1	1.160	ug/l	3.49	5,004.02	1.987E-02	Pulse	0.50	3
Pb			1	0.328	ug/l	0.68	9,055.40	1.841E-03	Pulse	1.00	3
Be			1	0.015	ug/l	208.28	0.83	4.224E-06	Pulse	2.00	3
Ag			1	0.027	ug/l	4.30	450.68	2.760E-04	Pulse	0.50	3
Ba			1	12.326	ug/l	0.61	18,889.21	1.157E-02	Pulse	0.50	3
Tl			1	0.048	ug/l	13.71	1,790.77	3.641E-04	Pulse	0.50	3
Sn			1	0.192	ug/l	11.61	955.59	5.853E-04	Pulse	0.30	3
Sr			1	252.287	ug/l	1.81	767,940.04	4.703E-01	Pulse	0.50	3
[Pb]			1	0.342	ug/l	1.31	4,393.91	8.935E-04	Pulse	0.50	3
Ca			1	35336.079	ug/l	0.78	483,611.01	2.446E+00	Pulse	0.50	3
Ti			1	0.224	ug/l	26.87	28.00	1.416E-04	Pulse	0.50	3
Na			1	13836.127	ug/l	0.87	9,948,094.33	5.032E+01	Analog	1.00	3
Mg			1	2233.602	ug/l	0.86	740,694.29	3.747E+00	Pulse	1.00	3
K			1	832.647	ug/l	0.47	220,694.42	1.116E+00	Pulse	1.00	3
V			1	0.377	ug/l	5.84	2,613.52	1.322E-02	Pulse	0.50	3
Mn			1	11.764	ug/l	0.67	32,263.39	1.954E-01	Pulse	0.50	3
Fe			1	404.855	ug/l	0.94	2,006,961.46	1.216E+01	Pulse	0.50	3
Co			1	0.318	ug/l	3.55	3,532.34	2.140E-02	Pulse	0.50	3
Ni			1	0.371	ug/l	2.23	1,219.37	7.386E-03	Pulse	0.50	3
Cu			1	2.219	ug/l	1.56	27,207.79	1.648E-01	Pulse	0.50	3
Zn			1	6.496	ug/l	3.08	9,515.02	3.779E-02	Pulse	1.00	3
Cd			1	0.014	ug/l	63.63	37.33	1.480E-04	Pulse	0.50	3
Al			1	69.241	ug/l	10.41	7,065.61	3.575E-02	Pulse	1.00	3
Se			1	0.042	ug/l	96.81	16.44	1.007E-05	Pulse	3.00	3
Sb			1	0.122	ug/l	2.29	709.02	2.815E-03	Pulse	1.00	3
Se			1	0.169	ug/l	118.60	27.56	2.122E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,917,932.83	0.60	92.6	Pulse	0.50	3
1	Sc		197,689.16	0.40	98.1	Pulse	0.30	3
1	Ge		165,123.76	1.52	98.6	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,633,011.53	0.99	96.0	Pulse	0.30	3
1	Tb		7,024,204.83	0.44	103.1	Analog	0.50	3
1	Lu		3,941,904.33	0.33	93.0	Pulse	0.50	3
1	Ge		251,833.88	0.78	98.6	Pulse	0.30	3
1	Te		12,995.97	0.91	87.8	Pulse	0.50	3
1	Li		1,097.81	8.43	100.3	Pulse	0.30	3

Quantitation Report

File Name 059SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 12:35
Sample Name MP34081-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.216	ug/l	25.24	856.03	4.916E-03	Pulse	0.50	3
As			1	0.164	ug/l	50.49	49.33	2.833E-04	Pulse	1.00	3
Mo			1	1.204	ug/l	1.69	1,079.37	4.139E-03	Pulse	0.50	3
Pb			1	0.415	ug/l	1.58	3,149.63	6.281E-04	Pulse	1.00	3
Be			1	0.022	ug/l	558.15	0.50	2.444E-06	Pulse	2.00	3
Ag			1	0.052	ug/l	5.31	191.33	1.143E-04	Pulse	0.50	3
Ba			1	13.055	ug/l	2.24	4,122.49	2.463E-03	Pulse	0.50	3
Tl			1	0.094	ug/l	3.71	752.69	1.501E-04	Pulse	0.50	3
Sn			1	0.175	ug/l	13.58	432.23	2.583E-04	Pulse	0.30	3
Sr			1	272.529	ug/l	0.35	170,466.41	1.018E-01	Pulse	0.50	3
[Pb]			1	0.429	ug/l	4.46	1,501.41	2.994E-04	Pulse	0.50	3
Ca			1	37526.834	ug/l	0.44	107,108.45	5.201E-01	Pulse	0.50	3
Ti			1	0.706	ug/l	69.25	19.33	9.410E-05	Pulse	0.50	3
Na			1	14384.236	ug/l	0.17	2,163,902.00	1.051E+01	Pulse	1.00	3
Mg			1	2384.408	ug/l	0.40	164,925.46	8.008E-01	Pulse	1.00	3
K			1	912.979	ug/l	0.88	64,211.67	3.118E-01	Pulse	1.00	3
V			1	0.020	ug/l	123.53	938.03	4.555E-03	Pulse	0.50	3
Mn			1	12.665	ug/l	2.82	7,411.44	4.258E-02	Pulse	0.50	3
Fe			1	419.925	ug/l	0.37	444,737.70	2.555E+00	Pulse	0.50	3
Co			1	0.532	ug/l	5.07	1,264.04	7.260E-03	Pulse	0.50	3
Ni			1	0.522	ug/l	9.72	424.68	2.439E-03	Pulse	0.50	3
Cu			1	1.151	ug/l	15.99	10,717.68	6.158E-02	Pulse	0.50	3
Zn			1	12.374	ug/l	2.37	4,967.98	1.905E-02	Pulse	1.00	3
Cd			1	-0.007	ug/l	-109.54	6.67	2.561E-05	Pulse	0.50	3
Al			1	27.946	ug/l	14.49	724.35	3.518E-03	Pulse	1.00	3
Se			1	0.674	ug/l	65.97	21.22	1.268E-05	Pulse	3.00	3
Sb			1	0.131	ug/l	6.93	264.00	1.012E-03	Pulse	1.00	3
Se			1	0.103	ug/l	337.41	26.22	1.859E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,014,881.50	0.06	94.4	Pulse	0.50	3
1	Sc		205,956.78	0.60	102.3	Pulse	0.30	3
1	Ge		174,055.14	0.95	103.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,673,726.08	0.52	98.4	Pulse	0.30	3
1	Tb		7,155,169.83	1.04	105.0	Analog	0.50	3
1	Lu		4,031,061.00	0.87	95.1	Pulse	0.50	3
1	Ge		260,784.92	0.72	102.1	Pulse	0.30	3
1	Te		14,104.81	0.48	95.3	Pulse	0.50	3
1	Li		1,047.81	8.60	95.7	Pulse	0.30	3

Quantitation Report

File Name	060SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:39
Sample Name	MP34081-S1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	209.831	ug/l	1.47	1,268,350.46	7.816E+00	Pulse	0.50	3
As			1	219.501	ug/l	1.66	154,453.72	9.518E-01	Pulse	1.00	3
Mo			1	203.734	ug/l	1.33	861,062.77	3.486E+00	Pulse	0.50	3
Pb			1	199.390	ug/l	0.45	4,655,520.83	9.870E-01	Pulse	1.00	3
Be			1	205.827	ug/l	0.69	6,944.69	3.562E-02	Pulse	2.00	3
Ag			1	100.646	ug/l	1.51	1,530,235.25	9.650E-01	Pulse	0.50	3
Ba			1	211.351	ug/l	1.12	314,080.07	1.981E-01	Pulse	0.50	3
Tl			1	210.286	ug/l	1.11	7,185,347.17	1.523E+00	Analog	0.50	3
Sn			1	224.853	ug/l	1.17	740,809.92	4.672E-01	Pulse	0.30	3
Sr			1	459.057	ug/l	0.53	1,356,677.58	8.555E-01	Pulse	0.50	3
[Pb]			1	193.413	ug/l	0.63	2,119,177.83	4.493E-01	Pulse	0.50	3
Ca			1	54487.698	ug/l	1.00	735,289.90	3.772E+00	Pulse	0.50	3
Ti			1	202.732	ug/l	1.27	22,615.06	1.160E-01	Pulse	0.50	3
Na			1	33840.270	ug/l	1.31	23,976,697.33	1.230E+02	Analog	1.00	3
Mg			1	22665.175	ug/l	1.13	7,409,622.83	3.801E+01	Analog	1.00	3
K			1	21338.823	ug/l	1.46	5,165,289.50	2.650E+01	Analog	1.00	3
V			1	206.906	ug/l	1.53	936,642.27	4.805E+00	Pulse	0.50	3
Mn			1	212.710	ug/l	1.16	571,499.79	3.522E+00	Pulse	0.50	3
Fe			1	21052.761	ug/l	1.26	102,219,677.33	6.299E+02	Analog	0.50	3
Co			1	208.954	ug/l	1.33	2,262,503.42	1.394E+01	Pulse	0.50	3
Ni			1	203.865	ug/l	1.43	613,094.25	3.778E+00	Pulse	0.50	3
Cu			1	209.010	ug/l	0.98	1,767,781.54	1.089E+01	Pulse	0.50	3
Zn			1	204.049	ug/l	2.05	236,679.65	9.583E-01	Pulse	1.00	3
Cd			1	200.308	ug/l	2.44	403,455.95	1.634E+00	Pulse	0.50	3
Al			1	17833.950	ug/l	1.72	1,760,248.54	9.030E+00	Pulse	1.00	3
Se			1	198.266	ug/l	1.27	8,850.27	5.581E-03	Pulse	3.00	3
Sb			1	196.725	ug/l	1.56	918,592.86	3.719E+00	Pulse	1.00	3
Se			1	200.100	ug/l	4.55	4,507.65	3.562E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,716,794.83	0.27	88.8	Pulse	0.50	3
1	Sc		194,951.63	1.04	96.8	Pulse	0.30	3
1	Ge		162,280.61	0.80	96.9	Pulse	0.30	3
1	In		1,585,882.61	1.25	93.3	Pulse	0.30	3
1	Tb		6,918,845.50	0.47	101.6	Analog	0.50	3
1	Lu		3,889,179.25	0.55	91.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		247,009.06	0.93	96.7	Pulse	0.30	3
1	Te		12,665.08	2.66	85.6	Pulse	0.50	3
1	Li		956.70	1.52	87.4	Pulse	0.30	3

Quantitation Report

File Name 061SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 12:43
Sample Name MP34081-S2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	207.762	ug/l	1.48	1,262,363.38	7.739E+00	Pulse	0.50	3
As			1	216.995	ug/l	0.52	153,488.27	9.410E-01	Pulse	1.00	3
Mo			1	203.862	ug/l	1.65	865,565.02	3.488E+00	Pulse	0.50	3
Pb			1	198.805	ug/l	0.87	4,629,959.17	9.841E-01	Pulse	1.00	3
Be			1	203.166	ug/l	1.92	6,880.83	3.516E-02	Pulse	2.00	3
Ag			1	99.870	ug/l	1.33	1,528,299.08	9.576E-01	Pulse	0.50	3
Ba			1	207.914	ug/l	0.09	310,992.30	1.948E-01	Pulse	0.50	3
Tl			1	208.790	ug/l	1.48	7,115,772.17	1.512E+00	Analog	0.50	3
Sn			1	222.060	ug/l	0.25	736,410.33	4.614E-01	Pulse	0.30	3
Sr			1	454.012	ug/l	1.31	1,350,354.50	8.461E-01	Pulse	0.50	3
[Pb]			1	191.843	ug/l	0.50	2,096,638.08	4.456E-01	Pulse	0.50	3
Ca			1	53373.333	ug/l	0.21	723,052.10	3.695E+00	Pulse	0.50	3
Ti			1	198.678	ug/l	0.61	22,247.31	1.137E-01	Pulse	0.50	3
Na			1	33571.077	ug/l	1.05	23,877,479.33	1.220E+02	Analog	1.00	3
Mg			1	22399.295	ug/l	0.98	7,350,868.17	3.756E+01	Analog	1.00	3
K			1	20674.944	ug/l	2.49	5,025,725.67	2.568E+01	Mix	1.00	3
V			1	205.818	ug/l	1.51	935,288.54	4.780E+00	Pulse	0.50	3
Mn			1	211.605	ug/l	1.30	571,474.79	3.504E+00	Pulse	0.50	3
Fe			1	20840.407	ug/l	1.33	101,711,829.33	6.236E+02	Analog	0.50	3
Co			1	205.137	ug/l	1.16	2,232,745.17	1.369E+01	Pulse	0.50	3
Ni			1	202.917	ug/l	1.67	613,401.81	3.761E+00	Pulse	0.50	3
Cu			1	204.835	ug/l	0.68	1,741,656.21	1.068E+01	Pulse	0.50	3
Zn			1	201.041	ug/l	1.01	234,308.79	9.443E-01	Pulse	1.00	3
Cd			1	197.851	ug/l	0.96	400,375.73	1.614E+00	Pulse	0.50	3
Al			1	17723.226	ug/l	0.72	1,756,137.83	8.974E+00	Pulse	1.00	3
Se			1	196.476	ug/l	1.21	8,827.26	5.531E-03	Pulse	3.00	3
Sb			1	195.256	ug/l	0.07	915,981.73	3.691E+00	Pulse	1.00	3
Se			1	196.906	ug/l	1.53	4,414.85	3.505E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,704,879.67	0.63	88.6	Pulse	0.50	3
1	Sc		195,698.94	1.17	97.2	Pulse	0.30	3
1	Ge		163,125.83	1.05	97.4	Pulse	0.30	3
1	In		1,596,103.44	1.05	93.9	Pulse	0.30	3
1	Tb		6,915,089.50	0.46	101.5	Analog	0.50	3
1	Lu		3,944,643.67	1.10	93.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		248,137.26	0.48	97.2	Pulse	0.30	3
1	Te		12,594.37	0.29	85.1	Pulse	0.50	3
1	Li		1,000.03	1.73	91.4	Pulse	0.30	3

Quantitation Report

File Name 062SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 12:46
Sample Name MP34081-PS1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	20.644	ug/l	1.10	127,252.55	7.720E-01	Pulse	0.50	3
As			1	21.392	ug/l	1.31	15,311.80	9.289E-02	Pulse	1.00	3
Mo			1	21.326	ug/l	0.26	91,524.43	3.649E-01	Pulse	0.50	3
Pb			1	20.247	ug/l	0.62	486,205.90	1.004E-01	Pulse	1.00	3
Be			1	20.734	ug/l	0.62	707.84	3.590E-03	Pulse	2.00	3
Ag			1	4.521	ug/l	2.68	69,786.38	4.337E-02	Pulse	0.50	3
Ba			1	32.155	ug/l	2.03	48,518.13	3.015E-02	Pulse	0.50	3
Tl			1	19.509	ug/l	0.78	684,314.40	1.413E-01	Pulse	0.50	3
Sn			1	22.738	ug/l	1.19	76,311.09	4.741E-02	Pulse	0.30	3
Sr			1	279.466	ug/l	1.52	838,400.23	5.209E-01	Pulse	0.50	3
[Pb]			1	19.735	ug/l	0.43	222,392.72	4.593E-02	Pulse	0.50	3
Ca			1	37673.324	ug/l	0.58	514,236.04	2.608E+00	Pulse	0.50	3
Ti			1	20.586	ug/l	1.96	2,324.81	1.179E-02	Pulse	0.50	3
Na			1	15991.349	ug/l	1.27	11,465,698.00	5.815E+01	Analog	1.00	3
Mg			1	4216.780	ug/l	0.81	1,394,491.50	7.073E+00	Pulse	1.00	3
K			1	2797.548	ug/l	0.74	699,645.58	3.548E+00	Pulse	1.00	3
V			1	20.949	ug/l	0.24	96,713.24	4.905E-01	Pulse	0.50	3
Mn			1	31.870	ug/l	0.57	87,075.55	5.282E-01	Pulse	0.50	3
Fe			1	2488.877	ug/l	1.85	12,281,745.00	7.451E+01	Analog	0.50	3
Co			1	21.133	ug/l	0.90	232,470.15	1.410E+00	Pulse	0.50	3
Ni			1	20.931	ug/l	1.57	64,019.29	3.884E-01	Pulse	0.50	3
Cu			1	23.068	ug/l	0.33	205,481.54	1.247E+00	Pulse	0.50	3
Zn			1	25.189	ug/l	1.92	31,320.35	1.249E-01	Pulse	1.00	3
Cd			1	20.014	ug/l	0.85	40,943.83	1.633E-01	Pulse	0.50	3
Al			1	1805.407	ug/l	0.57	180,366.58	9.148E-01	Pulse	1.00	3
Se			1	20.418	ug/l	2.11	937.91	5.827E-04	Pulse	3.00	3
Sb			1	18.700	ug/l	0.77	88,778.60	3.540E-01	Pulse	1.00	3
Se			1	19.879	ug/l	3.73	484.45	3.703E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,841,724.67	0.35	91.2	Pulse	0.50	3
1	Sc		197,169.37	0.25	97.9	Pulse	0.30	3
1	Ge		164,847.84	0.60	98.4	Pulse	0.30	3
1	In		1,609,659.63	1.60	94.7	Pulse	0.30	3
1	Tb		7,043,795.33	1.30	103.4	Analog	0.50	3
1	Lu		3,950,550.25	0.88	93.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		250,795.89	0.53	98.2	Pulse	0.30	3
1	Te		13,079.40	1.83	88.4	Pulse	0.50	3
1	Li		1,012.25	2.52	92.5	Pulse	0.30	3

Quantitation Report

File Name	063SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:50
Sample Name	FA55941-1
Sample Type	Sample
Comment	
Prep Dilution	40.000
Auto Dilution	N/A
Total Dilution	40.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.563	ug/l	17.65	748.69	4.356E-03	Pulse	0.50	3
As			1	3.516	ug/l	4.99	155.33	9.037E-04	Pulse	1.00	3
Mo			1	5.869	ug/l	3.58	1,310.05	5.040E-03	Pulse	0.50	3
Pb			1	7.645	ug/l	1.81	10,562.60	2.109E-03	Pulse	1.00	3
Be			1	-0.008	ug/l	-2030.23	0.33	1.616E-06	Pulse	2.00	3
Ag			1	0.258	ug/l	6.51	232.67	1.381E-04	Pulse	0.50	3
Ba			1	484.242	ug/l	0.59	38,259.02	2.270E-02	Pulse	0.50	3
Tl			1	0.748	ug/l	9.40	1,424.07	2.843E-04	Pulse	0.50	3
Sn			1	1.052	ug/l	27.99	496.68	2.948E-04	Pulse	0.30	3
Sr			1	12534.669	ug/l	0.60	1,967,952.42	1.168E+00	Pulse	0.50	3
[Pb]			1	7.919	ug/l	2.26	5,107.45	1.020E-03	Pulse	0.50	3
Ca			1	306053.631	ug/l	0.56	218,670.20	1.060E+00	Pulse	0.50	3
Ti			1	2.015	ug/l	41.71	14.67	7.100E-05	Pulse	0.50	3
Na			1	302775.774	ug/l	0.66	11,360,054.33	5.506E+01	Analog	1.00	3
Mg			1	49.931	ug/l	7.51	1,082.36	5.246E-03	Pulse	1.00	3
K			1	25318.142	ug/l	0.36	341,009.80	1.653E+00	Pulse	1.00	3
V			1	1.763	ug/l	13.05	1,342.72	6.508E-03	Pulse	0.50	3
Mn			1	1.860	ug/l	4.20	375.34	2.184E-03	Pulse	0.50	3
Fe			1	61.857	ug/l	2.97	23,199.86	1.350E-01	Pulse	0.50	3
Co			1	0.289	ug/l	16.83	192.67	1.121E-03	Pulse	0.50	3
Ni			1	1.936	ug/l	13.33	395.34	2.300E-03	Pulse	0.50	3
Cu			1	-3.559	ug/l	-11.04	6,945.93	4.041E-02	Pulse	0.50	3
Zn			1	17.317	ug/l	9.85	3,003.24	1.155E-02	Pulse	1.00	3
Cd			1	0.043	ug/l	245.72	14.00	5.378E-05	Pulse	0.50	3
Al			1	102.638	ug/l	3.37	678.01	3.286E-03	Pulse	1.00	3
Se			1	1.790	ug/l	53.20	19.22	1.140E-05	Pulse	3.00	3
Sb			1	2.474	ug/l	9.94	741.68	2.854E-03	Pulse	1.00	3
Se			1	-1.044	ug/l	-153.97	25.11	1.730E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,008,617.00	0.08	94.3	Pulse	0.50	3
1	Sc		206,343.66	0.51	102.4	Pulse	0.30	3
1	Ge		171,883.50	0.07	102.6	Pulse	0.30	3
1	In		1,685,091.57	0.45	99.1	Pulse	0.30	3
1	Tb		7,145,689.33	0.29	104.9	Analog	0.50	3
1	Lu		4,047,007.08	1.25	95.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		259,943.90	0.28	101.8	Pulse	0.30	3
1	Te		14,513.13	0.58	98.1	Pulse	0.50	3
1	Li		1,067.81	9.03	97.6	Pulse	0.30	3

Quantitation Report

File Name	064SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:54
Sample Name	FA55941-2
Sample Type	Sample
Comment	
Prep Dilution	100.000
Auto Dilution	N/A
Total Dilution	100.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.889	ug/l	12.25	683.34	3.969E-03	Pulse	0.50	3
As			1	8.438	ug/l	11.53	150.33	8.732E-04	Pulse	1.00	3
Mo			1	1.209	ug/l	17.30	112.00	4.321E-04	Pulse	0.50	3
Pb			1	1.819	ug/l	3.40	1,982.12	3.972E-04	Pulse	1.00	3
Be			1	0.685	ug/l	213.37	0.83	4.055E-06	Pulse	2.00	3
Ag			1	0.335	ug/l	14.54	132.00	7.873E-05	Pulse	0.50	3
Ba			1	1136.799	ug/l	1.60	35,735.23	2.132E-02	Pulse	0.50	3
Tl			1	0.839	ug/l	4.12	673.35	1.350E-04	Pulse	0.50	3
Sn			1	1.021	ug/l	42.21	382.23	2.280E-04	Pulse	0.30	3
Sr			1	573.465	ug/l	1.61	36,326.81	2.167E-02	Pulse	0.50	3
[Pb]			1	1.823	ug/l	5.35	922.03	1.848E-04	Pulse	0.50	3
Ca			1	118504.748	ug/l	1.27	33,845.09	1.646E-01	Pulse	0.50	3
Ti			1	14.697	ug/l	46.53	37.33	1.815E-04	Pulse	0.50	3
Na			1	1060843.449	ug/l	0.82	15,858,725.67	7.714E+01	Analog	1.00	3
Mg			1	26440.002	ug/l	1.33	182,532.93	8.879E-01	Pulse	1.00	3
K			1	4527.177	ug/l	2.23	40,674.00	1.978E-01	Pulse	1.00	3
V			1	-3.831	ug/l	-19.06	552.01	2.685E-03	Pulse	0.50	3
Mn			1	1023.686	ug/l	0.57	58,468.77	3.396E-01	Pulse	0.50	3
Fe			1	54981.117	ug/l	0.71	5,672,126.33	3.294E+01	Analog	0.50	3
Co			1	1.087	ug/l	8.32	276.67	1.607E-03	Pulse	0.50	3
Ni			1	1.549	ug/l	24.81	186.00	1.080E-03	Pulse	0.50	3
Cu			1	-9.233	ug/l	-16.02	6,897.91	4.006E-02	Pulse	0.50	3
Zn			1	7.605	ug/l	41.03	2,135.45	8.228E-03	Pulse	1.00	3
Cd			1	-0.034	ug/l	-376.29	8.00	3.093E-05	Pulse	0.50	3
Al			1	752.204	ug/l	3.44	1,707.42	8.305E-03	Pulse	1.00	3
Se			1	3.528	ug/l	4.38	18.22	1.087E-05	Pulse	3.00	3
Sb			1	1.100	ug/l	27.26	241.67	9.310E-04	Pulse	1.00	3
Se			1	-1.328	ug/l	-70.23	25.00	1.776E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,989,232.83	1.35	93.9	Pulse	0.50	3
1	Sc		205,595.21	0.49	102.1	Pulse	0.30	3
1	Ge		172,184.84	0.28	102.8	Pulse	0.30	3
1	In		1,676,215.32	1.20	98.6	Pulse	0.30	3
1	Tb		7,074,862.00	0.75	103.9	Analog	0.50	3
1	Lu		4,040,310.92	1.11	95.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		259,565.82	1.42	101.6	Pulse	0.30	3
1	Te		14,082.12	2.48	95.2	Pulse	0.50	3
1	Li		1,033.37	9.03	94.4	Pulse	0.30	3

Quantitation Report

File Name 065SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 12:58
Sample Name FA55941-2
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.283	ug/l	8.60	2,117.46	1.286E-02	Pulse	0.50	3
As			1	9.085	ug/l	2.33	1,320.72	8.019E-03	Pulse	1.00	3
Mo			1	0.488	ug/l	6.47	419.34	1.689E-03	Pulse	0.50	3
Pb			1	1.170	ug/l	1.36	6,293.50	1.375E-03	Pulse	1.00	3
Be			1	0.147	ug/l	153.87	1.33	6.782E-06	Pulse	2.00	3
Ag			1	0.044	ug/l	2.44	156.67	9.947E-05	Pulse	0.50	3
Ba			1	1274.089	ug/l	0.52	376,109.63	2.388E-01	Pulse	0.50	3
Tl			1	0.062	ug/l	8.22	470.01	1.027E-04	Pulse	0.50	3
Sn			1	0.689	ug/l	3.62	743.35	4.720E-04	Pulse	0.30	3
Sr			1	624.965	ug/l	0.18	367,238.39	2.332E-01	Pulse	0.50	3
[Pb]			1	1.228	ug/l	0.86	3,068.95	6.706E-04	Pulse	0.50	3
Ca			1	127908.750	ug/l	1.50	351,260.58	1.771E+00	Pulse	0.50	3
Ti			1	18.187	ug/l	34.04	414.02	2.094E-03	Pulse	0.50	3
Na			1	1154242.794	ug/l	1.81	166,332,544.00	8.387E+02	Analog	1.00	3
Mg			1	28479.984	ug/l	1.53	1,894,565.71	9.553E+00	Pulse	1.00	3
K			1	4637.058	ug/l	0.76	244,684.53	1.234E+00	Pulse	1.00	3
V			1	1.142	ug/l	6.82	1,936.10	9.764E-03	Pulse	0.50	3
Mn			1	1108.043	ug/l	0.78	604,303.64	3.669E+00	Pulse	0.50	3
Fe			1	60297.004	ug/l	0.51	59,431,744.00	3.609E+02	Analog	0.50	3
Co			1	0.939	ug/l	4.76	2,089.45	1.269E-02	Pulse	0.50	3
Ni			1	1.610	ug/l	3.13	1,066.03	6.473E-03	Pulse	0.50	3
Cu			1	1.477	ug/l	14.31	10,698.99	6.497E-02	Pulse	0.50	3
Zn			1	21.991	ug/l	3.61	6,957.60	2.801E-02	Pulse	1.00	3
Cd			1	0.045	ug/l	111.89	27.33	1.099E-04	Pulse	0.50	3
Al			1	851.257	ug/l	3.33	17,230.55	8.689E-02	Pulse	1.00	3
Se			1	0.502	ug/l	22.39	18.44	1.171E-05	Pulse	3.00	3
Sb			1	0.303	ug/l	8.74	412.01	1.659E-03	Pulse	1.00	3
Se			1	2.313	ug/l	45.66	32.45	2.642E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,576,663.17	0.68	86.2	Pulse	0.50	3
1	Sc		198,346.18	1.47	98.5	Pulse	0.30	3
1	Ge		164,700.94	0.61	98.3	Pulse	0.30	3
1	In		1,575,024.14	0.21	92.6	Pulse	0.30	3
1	Tb		6,865,512.17	1.08	100.8	Analog	0.50	3
1	Lu		3,912,935.00	0.56	92.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		248,398.82	0.80	97.3	Pulse	0.30	3
1	Te		12,276.82	0.50	83.0	Pulse	0.50	3
1	Li		1,027.81	6.88	93.9	Pulse	0.30	3

Quantitation Report

File Name	066SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:02
Sample Name	FA55941-6
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.535	ug/l	6.57	1,845.43	1.128E-02	Pulse	0.50	3
As			1	0.105	ug/l	22.92	53.00	3.241E-04	Pulse	1.00	3
Mo			1	0.208	ug/l	4.80	355.34	1.440E-03	Pulse	0.50	3
Pb			1	0.094	ug/l	8.53	1,941.78	4.038E-04	Pulse	1.00	3
Be			1	0.001	ug/l	5826.98	0.33	1.737E-06	Pulse	2.00	3
Ag			1	0.025	ug/l	13.38	174.67	1.095E-04	Pulse	0.50	3
Ba			1	26.649	ug/l	3.30	15,951.69	1.001E-02	Pulse	0.50	3
Tl			1	0.021	ug/l	10.86	353.34	7.349E-05	Pulse	0.50	3
Sn			1	0.623	ug/l	7.00	1,122.26	7.034E-04	Pulse	0.30	3
Sr			1	113.073	ug/l	1.25	134,847.96	8.457E-02	Pulse	0.50	3
[Pb]			1	0.107	ug/l	4.06	958.70	1.994E-04	Pulse	0.50	3
Ca			1	27657.985	ug/l	0.98	148,144.93	7.663E-01	Pulse	0.50	3
Ti			1	0.063	ug/l	167.37	5.33	2.769E-05	Pulse	0.50	3
Na			1	42093.534	ug/l	1.33	11,836,115.67	6.123E+01	Analog	1.00	3
Mg			1	12371.387	ug/l	0.90	1,604,543.42	8.300E+00	Pulse	1.00	3
K			1	2898.981	ug/l	0.95	294,053.64	1.521E+00	Pulse	1.00	3
V			1	-0.023	ug/l	-86.78	820.69	4.245E-03	Pulse	0.50	3
Mn			1	4.422	ug/l	3.52	4,899.30	2.993E-02	Pulse	0.50	3
Fe			1	16.172	ug/l	1.54	38,624.95	2.360E-01	Pulse	0.50	3
Co			1	0.078	ug/l	5.07	367.33	2.245E-03	Pulse	0.50	3
Ni			1	0.906	ug/l	0.54	1,181.37	7.218E-03	Pulse	0.50	3
Cu			1	-0.200	ug/l	-22.58	7,445.46	4.550E-02	Pulse	0.50	3
Zn			1	6.932	ug/l	2.35	5,044.33	2.044E-02	Pulse	1.00	3
Cd			1	0.014	ug/l	35.91	20.00	8.102E-05	Pulse	0.50	3
Al			1	8.802	ug/l	5.21	477.68	2.470E-03	Pulse	1.00	3
Se			1	0.215	ug/l	65.80	18.00	1.130E-05	Pulse	3.00	3
Sb			1	0.066	ug/l	3.83	249.67	1.012E-03	Pulse	1.00	3
Se			1	0.615	ug/l	43.65	28.11	2.259E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,808,626.33	0.41	90.5	Pulse	0.50	3
1	Sc		193,329.76	0.75	96.0	Pulse	0.30	3
1	Ge		163,666.49	1.35	97.7	Pulse	0.30	3
1	In		1,594,742.12	1.35	93.8	Pulse	0.30	3
1	Tb		6,936,298.33	0.32	101.8	Analog	0.50	3
1	Lu		3,921,446.42	0.70	92.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,811.38	0.57	96.6	Pulse	0.30	3
1	Te		12,455.61	1.37	84.2	Pulse	0.50	3
1	Li		1,023.37	2.28	93.5	Pulse	0.30	3

Quantitation Report

File Name	067SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:05
Sample Name	FA55941-8A
Sample Type	Sample
Comment	
Prep Dilution	20.000
Auto Dilution	N/A
Total Dilution	20.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.440	ug/l	22.17	838.02	4.945E-03	Pulse	0.50	3
As			1	0.164	ug/l	100.99	36.00	2.125E-04	Pulse	1.00	3
Mo			1	0.190	ug/l	33.95	88.00	3.430E-04	Pulse	0.50	3
Pb			1	0.259	ug/l	9.04	1,721.76	3.456E-04	Pulse	1.00	3
Be			1	-0.003	ug/l	-2708.65	0.33	1.633E-06	Pulse	2.00	3
Ag			1	0.064	ug/l	20.12	125.33	7.563E-05	Pulse	0.50	3
Ba			1	19.928	ug/l	3.70	3,121.62	1.884E-03	Pulse	0.50	3
Tl			1	0.050	ug/l	6.44	246.67	4.951E-05	Pulse	0.50	3
Sn			1	0.563	ug/l	28.76	501.12	3.024E-04	Pulse	0.30	3
Sr			1	127.274	ug/l	0.63	39,798.48	2.402E-02	Pulse	0.50	3
[Pb]			1	0.310	ug/l	0.92	858.03	1.722E-04	Pulse	0.50	3
Ca			1	36849.770	ug/l	1.77	52,141.61	2.556E-01	Pulse	0.50	3
Ti			1	0.397	ug/l	133.70	7.33	3.608E-05	Pulse	0.50	3
Na			1	156235.219	ug/l	1.33	11,588,973.67	5.682E+01	Analog	1.00	3
Mg			1	13649.371	ug/l	1.60	467,099.20	2.290E+00	Pulse	1.00	3
K			1	1666.081	ug/l	1.46	59,559.55	2.920E-01	Pulse	1.00	3
V			1	-0.704	ug/l	-23.07	577.34	2.830E-03	Pulse	0.50	3
Mn			1	1.191	ug/l	7.39	443.34	2.616E-03	Pulse	0.50	3
Fe			1	29.982	ug/l	4.41	22,393.64	1.321E-01	Pulse	0.50	3
Co			1	0.070	ug/l	11.18	106.00	6.256E-04	Pulse	0.50	3
Ni			1	0.574	ug/l	27.12	266.00	1.570E-03	Pulse	0.50	3
Cu			1	-1.971	ug/l	-2.24	6,679.17	3.942E-02	Pulse	0.50	3
Zn			1	6.211	ug/l	13.54	2,676.19	1.041E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	442466.41	9.33	3.642E-05	Pulse	0.50	3
Al			1	23.594	ug/l	6.22	384.00	1.882E-03	Pulse	1.00	3
Se			1	0.726	ug/l	100.47	18.11	1.093E-05	Pulse	3.00	3
Sb			1	0.008	ug/l	47.26	136.33	5.304E-04	Pulse	1.00	3
Se			1	0.787	ug/l	219.19	27.11	1.962E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,982,123.83	0.47	93.8	Pulse	0.50	3
1	Sc		203,992.32	1.08	101.3	Pulse	0.30	3
1	Ge		169,458.65	0.38	101.2	Pulse	0.30	3
1	In		1,657,038.27	0.17	97.5	Pulse	0.30	3
1	Tb		7,072,210.67	0.21	103.8	Analog	0.50	3
1	Lu		3,999,037.33	0.17	94.4	Pulse	0.50	3
1	Ge		257,043.72	0.87	100.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Te		13,828.59	0.91	93.5	Pulse	0.50	3
1	Li		1,044.48	1.76	95.4	Pulse	0.30	3

Quantitation Report

File Name	068CCVA.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:09
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	49.977	ug/l	0.52	629,127.35	3.725E+00	Pulse	0.50	3
As			1	49.572	ug/l	0.32	72,620.35	4.300E-01	Pulse	1.00	3
Mo			1	49.220	ug/l	1.66	429,531.64	1.684E+00	Pulse	0.50	3
Pb			1	49.274	ug/l	1.72	2,344,916.08	4.879E-01	Pulse	1.00	3
Be			1	51.014	ug/l	3.49	3,551.48	1.766E-02	Pulse	2.00	3
Ag			1	49.841	ug/l	0.91	1,562,156.29	9.558E-01	Pulse	0.50	3
Ba			1	48.810	ug/l	0.33	149,539.84	9.149E-02	Pulse	0.50	3
Tl			1	49.762	ug/l	0.66	3,465,171.83	7.210E-01	Pulse	0.50	3
Sn			1	50.298	ug/l	1.56	341,766.12	2.091E-01	Pulse	0.30	3
Sr			1	50.153	ug/l	0.41	305,920.81	1.872E-01	Pulse	0.50	3
[Pb]			1	49.963	ug/l	1.38	1,115,787.63	2.322E-01	Pulse	0.50	3
Ca			1	4878.258	ug/l	1.78	135,931.19	6.759E-01	Pulse	0.50	3
Ti			1	49.061	ug/l	3.55	11,290.62	5.615E-02	Pulse	0.50	3
Na			1	5150.757	ug/l	1.94	7,537,972.00	3.748E+01	Analog	1.00	3
Mg			1	4894.047	ug/l	1.91	3,301,425.25	1.642E+01	Pulse	1.00	3
K			1	4970.128	ug/l	1.67	2,491,837.33	1.239E+01	Pulse	1.00	3
V			1	49.920	ug/l	2.06	466,765.83	2.321E+00	Pulse	0.50	3
Mn			1	49.382	ug/l	0.60	276,230.34	1.636E+00	Pulse	0.50	3
Fe			1	5201.879	ug/l	0.94	52,576,121.33	3.113E+02	Analog	0.50	3
Co			1	49.935	ug/l	0.42	1,125,482.25	6.664E+00	Pulse	0.50	3
Ni			1	50.417	ug/l	0.75	315,650.85	1.869E+00	Pulse	0.50	3
Cu			1	50.404	ug/l	0.91	891,678.90	5.280E+00	Pulse	0.50	3
Zn			1	50.543	ug/l	1.28	122,026.37	4.785E-01	Pulse	1.00	3
Cd			1	49.056	ug/l	0.95	204,045.37	8.002E-01	Pulse	0.50	3
Al			1	4845.633	ug/l	2.15	986,939.79	4.907E+00	Pulse	1.00	3
Se			1	51.820	ug/l	0.31	4,775.49	2.922E-03	Pulse	3.00	3
Sb			1	48.111	ug/l	0.99	463,950.80	1.819E+00	Pulse	1.00	3
Se			1	49.057	ug/l	3.63	2,404.26	1.756E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,806,485.50	1.21	90.5	Pulse	0.50	3
1	Sc		201,165.73	2.00	99.9	Pulse	0.30	3
1	Ge		168,888.69	0.65	100.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,634,440.77	0.39	96.1	Pulse	0.30	3
1	Tb		7,033,194.67	0.68	103.2	Analog	0.50	3
1	Lu		3,946,748.33	0.40	93.1	Pulse	0.50	3
1	Ge		255,014.16	0.82	99.9	Pulse	0.30	3
1	Te		13,693.81	0.70	92.5	Pulse	0.50	3
1	Li		990.03	6.96	90.5	Pulse	0.30	3

Quantitation Report

File Name	069_CCV.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:13
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	99.378	ug/l	0.71	1,243,335.46	7.404E+00	Pulse	0.50	3
As			1	98.679	ug/l	0.35	143,716.66	8.558E-01	Pulse	1.00	3
Mo			1	99.069	ug/l	1.11	861,881.17	3.390E+00	Pulse	0.50	3
Pb			1	97.119	ug/l	1.10	4,600,965.50	9.615E-01	Pulse	1.00	3
Be			1	99.151	ug/l	2.47	6,952.85	3.432E-02	Pulse	2.00	3
Ag			1	98.349	ug/l	0.27	3,062,525.58	1.886E+00	Pulse	0.50	3
Ba			1	97.802	ug/l	0.70	297,659.23	1.833E-01	Pulse	0.50	3
Tl			1	105.413	ug/l	1.24	7,308,170.00	1.527E+00	Analog	0.50	3
Sn			1	101.261	ug/l	0.89	683,296.80	4.208E-01	Pulse	0.30	3
Sr			1	101.815	ug/l	0.90	616,485.13	3.797E-01	Pulse	0.50	3
[Pb]			1	97.593	ug/l	0.44	2,169,657.08	4.534E-01	Pulse	0.50	3
Ca			1	9689.637	ug/l	0.09	271,838.68	1.342E+00	Pulse	0.50	3
Ti			1	97.996	ug/l	0.67	22,716.50	1.121E-01	Pulse	0.50	3
Na			1	10112.277	ug/l	0.38	14,896,131.67	7.353E+01	Analog	1.00	3
Mg			1	10096.779	ug/l	0.47	6,860,270.50	3.387E+01	Analog	1.00	3
K			1	10318.606	ug/l	0.35	5,191,897.33	2.563E+01	Analog	1.00	3
V			1	98.612	ug/l	0.51	927,858.69	4.580E+00	Pulse	0.50	3
Mn			1	98.947	ug/l	1.78	550,218.23	3.277E+00	Pulse	0.50	3
Fe			1	10345.867	ug/l	0.86	103,968,085.33	6.191E+02	Analog	0.50	3
Co			1	99.316	ug/l	1.15	2,225,698.58	1.325E+01	Pulse	0.50	3
Ni			1	99.381	ug/l	0.92	618,604.75	3.684E+00	Pulse	0.50	3
Cu			1	99.858	ug/l	1.35	1,748,366.37	1.041E+01	Pulse	0.50	3
Zn			1	99.070	ug/l	0.69	236,607.34	9.308E-01	Pulse	1.00	3
Cd			1	97.405	ug/l	0.46	403,879.31	1.589E+00	Pulse	0.50	3
Al			1	9597.369	ug/l	0.63	1,968,847.50	9.719E+00	Pulse	1.00	3
Se			1	101.306	ug/l	0.22	9,261.35	5.703E-03	Pulse	3.00	3
Sb			1	95.631	ug/l	0.62	919,192.23	3.616E+00	Pulse	1.00	3
Se			1	98.213	ug/l	3.20	4,653.69	3.497E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,785,276.83	0.54	90.1	Pulse	0.50	3
1	Sc		202,577.19	0.54	100.6	Pulse	0.30	3
1	Ge		167,930.82	0.45	100.2	Pulse	0.30	3
1	In		1,623,827.16	0.51	95.5	Pulse	0.30	3
1	Tb		7,033,190.83	0.59	103.2	Analog	0.50	3
1	Lu		3,968,739.17	0.88	93.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		254,215.31	0.82	99.5	Pulse	0.30	3
1	Te		13,310.88	0.94	90.0	Pulse	0.50	3
1	Li		1,001.14	3.50	91.5	Pulse	0.30	3

Quantitation Report

File Name	070_CCB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:17
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.001	ug/l	243.84	566.68	3.403E-03	Pulse	0.50	3
As			1	-0.001	ug/l	-186.77	22.00	1.323E-04	Pulse	1.00	3
Mo			1	0.037	ug/l	24.30	326.67	1.285E-03	Pulse	0.50	3
Pb			1	0.015	ug/l	28.95	1,814.44	3.695E-04	Pulse	1.00	3
Be			1	0.012	ug/l	152.13	1.17	5.847E-06	Pulse	2.00	3
Ag			1	0.009	ug/l	16.27	324.00	1.964E-04	Pulse	0.50	3
Ba			1	0.002	ug/l	178.19	32.67	1.980E-05	Pulse	0.50	3
Tl			1	0.075	ug/l	13.46	5,419.55	1.103E-03	Pulse	0.50	3
Sn			1	0.029	ug/l	50.16	506.68	3.074E-04	Pulse	0.30	3
Sr			1	0.011	ug/l	101.08	576.01	3.493E-04	Pulse	0.50	3
[Pb]			1	0.016	ug/l	9.69	862.69	1.758E-04	Pulse	0.50	3
Ca			1	0.185	ug/l	65.15	121.33	6.083E-04	Pulse	0.50	3
Ti			1	0.017	ug/l	144.57	6.67	3.333E-05	Pulse	0.50	3
Na			1	3.828	ug/l	7.58	16,486.43	8.266E-02	Pulse	1.00	3
Mg			1	0.568	ug/l	37.30	591.35	2.965E-03	Pulse	1.00	3
K			1	2.454	ug/l	13.49	18,317.81	9.185E-02	Pulse	1.00	3
V			1	-0.056	ug/l	-2.27	369.33	1.852E-03	Pulse	0.50	3
Mn			1	0.011	ug/l	37.59	167.33	1.004E-03	Pulse	0.50	3
Fe			1	0.603	ug/l	43.35	13,082.62	7.852E-02	Pulse	0.50	3
Co			1	0.005	ug/l	59.40	134.67	8.078E-04	Pulse	0.50	3
Ni			1	0.005	ug/l	52.82	117.33	7.045E-04	Pulse	0.50	3
Cu			1	-0.120	ug/l	-6.44	6,191.01	3.718E-02	Pulse	0.50	3
Zn			1	-0.085	ug/l	-10.04	1,710.75	6.724E-03	Pulse	1.00	3
Cd			1	0.005	ug/l	9.44	32.00	1.258E-04	Pulse	0.50	3
Al			1	0.320	ug/l	88.85	201.67	1.011E-03	Pulse	1.00	3
Se			1	0.029	ug/l	99.68	17.33	1.051E-05	Pulse	3.00	3
Sb			1	0.007	ug/l	34.20	201.00	7.898E-04	Pulse	1.00	3
Se			1	-0.035	ug/l	-348.01	24.34	1.699E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,905,764.00	1.32	92.4	Pulse	0.50	3
1	Sc		199,446.05	0.77	99.0	Pulse	0.30	3

Quantitation Report

1	Ge		166,496.18	1.05	99.4	Pulse	0.30	3
1	In		1,649,247.23	0.43	97.0	Pulse	0.30	3
1	Tb		7,013,549.67	0.36	103.0	Analog	0.50	3
1	Lu		3,953,032.00	0.26	93.3	Pulse	0.50	3
1	Ge		254,447.65	0.68	99.6	Pulse	0.30	3
1	Te		14,356.33	1.53	97.0	Pulse	0.50	3
1	Li		1,036.70	8.38	94.7	Pulse	0.30	3

Quantitation Report

File Name	071SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:21
Sample Name	FA55914-1
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.541	ug/l	4.37	4,239.81	2.626E-02	Pulse	0.50	3
As			1	0.416	ug/l	16.66	139.33	8.629E-04	Pulse	1.00	3
Mo			1	1.054	ug/l	6.63	1,777.43	7.235E-03	Pulse	0.50	3
Pb			1	7.026	ug/l	1.40	66,969.93	1.413E-02	Pulse	1.00	3
Be			1	0.050	ug/l	196.28	1.00	5.180E-06	Pulse	2.00	3
Ag			1	0.043	ug/l	3.22	280.67	1.780E-04	Pulse	0.50	3
Ba			1	8.339	ug/l	3.63	4,953.36	3.142E-03	Pulse	0.50	3
Tl			1	0.129	ug/l	14.88	1,837.44	3.878E-04	Pulse	0.50	3
Sn			1	0.846	ug/l	4.68	1,401.18	8.884E-04	Pulse	0.30	3
Sr			1	135.712	ug/l	1.05	159,942.67	1.014E-01	Pulse	0.50	3
[Pb]			1	6.986	ug/l	2.10	31,242.50	6.589E-03	Pulse	0.50	3
Ca			1	38649.861	ug/l	0.16	206,283.84	1.071E+00	Pulse	0.50	3
Ti			1	10.643	ug/l	27.60	471.36	2.449E-03	Pulse	0.50	3
Na			1	52455.140	ug/l	0.84	14,697,688.67	7.628E+01	Analog	1.00	3
Mg			1	25088.066	ug/l	1.20	3,242,601.83	1.683E+01	Pulse	1.00	3
K			1	2621.241	ug/l	0.67	266,570.29	1.384E+00	Pulse	1.00	3
V			1	1.505	ug/l	6.60	3,551.67	1.843E-02	Pulse	0.50	3
Mn			1	32.640	ug/l	1.66	34,998.09	2.168E-01	Pulse	0.50	3
Fe			1	1661.182	ug/l	0.91	3,216,417.42	1.992E+01	Pulse	0.50	3
Co			1	0.312	ug/l	3.23	1,367.38	8.470E-03	Pulse	0.50	3
Ni			1	2.253	ug/l	2.68	2,778.21	1.721E-02	Pulse	0.50	3
Cu			1	1.540	ug/l	4.99	13,173.84	8.160E-02	Pulse	0.50	3
Zn			1	24.532	ug/l	2.25	13,083.10	5.324E-02	Pulse	1.00	3
Cd			1	0.057	ug/l	32.36	54.67	2.222E-04	Pulse	0.50	3
Al			1	254.766	ug/l	0.93	10,073.55	5.228E-02	Pulse	1.00	3
Se			1	0.175	ug/l	70.96	17.11	1.085E-05	Pulse	3.00	3
Sb			1	0.193	ug/l	3.29	486.01	1.977E-03	Pulse	1.00	3
Se			1	0.224	ug/l	201.52	24.55	1.982E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,741,590.33	0.92	89.3	Pulse	0.50	3
1	Sc		192,676.29	0.62	95.7	Pulse	0.30	3
1	Ge		161,446.74	0.58	96.4	Pulse	0.30	3
1	In		1,576,875.60	0.98	92.7	Pulse	0.30	3
1	Tb		6,953,925.33	0.10	102.1	Analog	0.50	3
1	Lu		3,877,060.83	0.79	91.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		245,749.06	0.77	96.2	Pulse	0.30	3
1	Te		12,408.90	1.56	83.9	Pulse	0.50	3
1	Li		1,034.48	10.54	94.5	Pulse	0.30	3

Quantitation Report

File Name	072SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:24
Sample Name	FA55914-2
Sample Type	Sample
Comment	
Prep Dilution	20.000
Auto Dilution	N/A
Total Dilution	20.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.369	ug/l	25.06	788.69	4.682E-03	Pulse	0.50	3
As			1	0.234	ug/l	79.93	41.00	2.432E-04	Pulse	1.00	3
Mo			1	0.249	ug/l	21.04	114.67	4.438E-04	Pulse	0.50	3
Pb			1	0.690	ug/l	7.00	2,729.55	5.588E-04	Pulse	1.00	3
Be			1	0.232	ug/l	91.45	1.17	5.697E-06	Pulse	2.00	3
Ag			1	0.140	ug/l	12.04	247.33	1.490E-04	Pulse	0.50	3
Ba			1	47.851	ug/l	3.56	7,458.23	4.500E-03	Pulse	0.50	3
Tl			1	0.168	ug/l	9.20	660.02	1.351E-04	Pulse	0.50	3
Sn			1	0.513	ug/l	14.99	484.45	2.920E-04	Pulse	0.30	3
Sr			1	207.461	ug/l	2.73	64,564.41	3.896E-02	Pulse	0.50	3
[Pb]			1	0.661	ug/l	2.06	1,239.38	2.537E-04	Pulse	0.50	3
Ca			1	53453.907	ug/l	1.73	75,482.83	3.706E-01	Pulse	0.50	3
Ti			1	2.278	ug/l	71.50	29.33	1.437E-04	Pulse	0.50	3
Na			1	229310.255	ug/l	1.48	16,981,448.67	8.337E+01	Analog	1.00	3
Mg			1	16060.117	ug/l	1.65	548,828.44	2.694E+00	Pulse	1.00	3
K			1	2496.923	ug/l	0.43	80,435.27	3.948E-01	Pulse	1.00	3
V			1	-0.167	ug/l	-41.62	830.69	4.076E-03	Pulse	0.50	3
Mn			1	30.255	ug/l	1.34	8,549.24	5.073E-02	Pulse	0.50	3
Fe			1	207.224	ug/l	0.86	111,629.53	6.624E-01	Pulse	0.50	3
Co			1	0.251	ug/l	8.19	308.67	1.831E-03	Pulse	0.50	3
Ni			1	0.716	ug/l	13.89	308.67	1.832E-03	Pulse	0.50	3
Cu			1	-1.460	ug/l	-9.13	7,089.32	4.207E-02	Pulse	0.50	3
Zn			1	4.925	ug/l	8.17	2,532.84	9.814E-03	Pulse	1.00	3
Cd			1	0.019	ug/l	118.34	13.33	5.172E-05	Pulse	0.50	3
Al			1	67.332	ug/l	1.96	834.69	4.097E-03	Pulse	1.00	3
Se			1	0.757	ug/l	91.26	18.22	1.101E-05	Pulse	3.00	3
Sb			1	0.074	ug/l	55.40	169.33	6.559E-04	Pulse	1.00	3
Se			1	1.255	ug/l	147.93	28.11	2.045E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,884,295.83	0.17	92.0	Pulse	0.50	3
1	Sc		203,723.79	1.20	101.1	Pulse	0.30	3
1	Ge		168,520.50	0.88	100.6	Pulse	0.30	3
1	In		1,657,887.50	1.80	97.5	Pulse	0.30	3
1	Tb		7,074,662.33	0.34	103.8	Analog	0.50	3
1	Lu		3,985,179.25	0.42	94.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		258,103.10	0.95	101.1	Pulse	0.30	3
1	Te		13,750.53	1.19	92.9	Pulse	0.50	3
1	Li		1,135.59	9.11	103.8	Pulse	0.30	3

Quantitation Report

File Name 073SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 13:28
Sample Name CRIA
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.014	ug/l	0.83	13,508.04	7.885E-02	Pulse	0.50	3
As			1	1.002	ug/l	3.77	1,512.06	8.827E-03	Pulse	1.00	3
Mo			1	0.991	ug/l	1.63	8,873.46	3.395E-02	Pulse	0.50	3
Pb			1	0.959	ug/l	0.83	48,655.87	9.709E-03	Pulse	1.00	3
Be			1	0.933	ug/l	15.67	67.00	3.246E-04	Pulse	2.00	3
Ag			1	1.013	ug/l	0.83	32,335.45	1.945E-02	Pulse	0.50	3
Ba			1	0.977	ug/l	4.37	3,070.94	1.847E-03	Pulse	0.50	3
Tl			1	0.985	ug/l	0.54	71,579.56	1.428E-02	Pulse	0.50	3
Sn			1	1.087	ug/l	4.50	7,816.16	4.700E-03	Pulse	0.30	3
Sr			1	1.015	ug/l	1.17	6,801.25	4.090E-03	Pulse	0.50	3
[Pb]			1	0.972	ug/l	0.88	23,132.98	4.616E-03	Pulse	0.50	3
Ca			1	102.052	ug/l	1.38	3,035.58	1.471E-02	Pulse	0.50	3
Ti			1	0.931	ug/l	9.35	222.67	1.079E-03	Pulse	0.50	3
Na			1	111.611	ug/l	0.93	178,685.41	8.658E-01	Pulse	1.00	3
Mg			1	99.641	ug/l	1.15	69,185.73	3.353E-01	Pulse	1.00	3
K			1	102.096	ug/l	0.50	69,857.34	3.385E-01	Pulse	1.00	3
V			1	0.939	ug/l	3.72	9,917.21	4.806E-02	Pulse	0.50	3
Mn			1	1.069	ug/l	1.05	6,172.33	3.603E-02	Pulse	0.50	3
Fe			1	100.169	ug/l	0.48	1,034,101.19	6.036E+00	Pulse	0.50	3
Co			1	1.030	ug/l	1.40	23,574.34	1.376E-01	Pulse	0.50	3
Ni			1	1.005	ug/l	2.41	6,468.44	3.776E-02	Pulse	0.50	3
Cu			1	1.134	ug/l	1.33	28,667.28	1.673E-01	Pulse	0.50	3
Zn			1	1.225	ug/l	1.69	4,949.64	1.893E-02	Pulse	1.00	3
Cd			1	0.946	ug/l	2.35	4,044.46	1.547E-02	Pulse	0.50	3
Al			1	98.430	ug/l	1.15	20,710.73	1.004E-01	Pulse	1.00	3
Se			1	1.077	ug/l	4.07	115.45	6.942E-05	Pulse	3.00	3
Sb			1	0.954	ug/l	1.53	9,561.16	3.658E-02	Pulse	1.00	3
Se			1	0.691	ug/l	12.48	61.89	4.269E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,011,289.17	0.64	94.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		206,369.66	0.47	102.5	Pulse	0.30	3
1	Ge		171,308.68	0.62	102.3	Pulse	0.30	3
1	In		1,662,888.69	0.43	97.8	Pulse	0.30	3
1	Tb		7,114,965.00	1.26	104.4	Analog	0.50	3
1	Lu		3,985,116.58	0.69	94.0	Pulse	0.50	3
1	Ge		261,420.13	0.65	102.4	Pulse	0.30	3
1	Te		14,489.77	2.36	97.9	Pulse	0.50	3
1	Li		1,015.58	7.39	92.8	Pulse	0.30	3

Quantitation Report

File Name	074SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:32
Sample Name	ICSA
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.289	ug/l	0.67	15,858.48	9.932E-02	Pulse	0.50	3
As			1	0.079	ug/l	8.39	131.67	8.245E-04	Pulse	1.00	3
Mo			1	2087.773	ug/l	1.30	16,974,390.67	7.145E+01	Analog	0.50	3
Pb			1	0.083	ug/l	4.01	4,396.57	1.038E-03	Pulse	1.00	3
Be			1	0.007	ug/l	207.96	0.83	4.185E-06	Pulse	2.00	3
Ag			1	0.036	ug/l	15.27	1,076.71	7.040E-04	Pulse	0.50	3
Ba			1	0.067	ug/l	21.55	218.67	1.427E-04	Pulse	0.50	3
Tl			1	0.007	ug/l	12.56	458.68	1.082E-04	Pulse	0.50	3
Sn			1	0.122	ug/l	13.88	1,057.82	6.907E-04	Pulse	0.30	3
Sr			1	0.912	ug/l	1.67	5,668.20	3.704E-03	Pulse	0.50	3
[Pb]			1	0.084	ug/l	4.97	2,082.80	4.915E-04	Pulse	0.50	3
Ca			1	89906.735	ug/l	0.09	2,470,538.58	1.245E+01	Pulse	0.50	3
Ti			1	1941.517	ug/l	0.48	440,949.70	2.221E+00	Pulse	0.50	3
Na			1	98067.112	ug/l	0.84	141,446,949.33	7.126E+02	Analog	1.00	3
Mg			1	97178.455	ug/l	0.92	64,693,406.67	3.259E+02	Analog	1.00	3
K			1	99986.516	ug/l	0.34	49,148,525.33	2.476E+02	Analog	1.00	3
V			1	-0.035	ug/l	-10.18	559.34	2.819E-03	Pulse	0.50	3
Mn			1	0.288	ug/l	2.71	1,626.08	1.018E-02	Pulse	0.50	3
Fe			1	100302.680	ug/l	1.02	958,314,645.33	6.002E+03	Analog	0.50	3
Co			1	0.011	ug/l	22.19	255.33	1.598E-03	Pulse	0.50	3
Ni			1	0.149	ug/l	5.36	964.03	6.038E-03	Pulse	0.50	3
Cu			1	0.107	ug/l	7.79	9,707.14	6.080E-02	Pulse	0.50	3
Zn			1	0.957	ug/l	2.39	3,904.74	1.644E-02	Pulse	1.00	3
Cd			1	0.364	ug/l	2.73	1,420.73	5.979E-03	Pulse	0.50	3
Al			1	91412.194	ug/l	1.15	18,373,177.33	9.257E+01	Analog	1.00	3
Se			1	0.077	ug/l	45.27	20.22	1.322E-05	Pulse	3.00	3
Sb			1	0.036	ug/l	13.80	443.34	1.865E-03	Pulse	1.00	3
Se			1	0.035	ug/l	158.05	23.00	1.948E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,237,112.67	0.40	79.8	Pulse	0.50	3
1	Sc		198,498.16	1.11	98.5	Pulse	0.30	3
1	Ge		159,671.99	0.62	95.3	Pulse	0.30	3
1	In		1,530,536.71	0.95	90.0	Pulse	0.30	3
1	Tb		6,641,821.17	1.15	97.5	Analog	0.50	3
1	Lu		3,761,732.92	0.61	88.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		237,591.15	1.24	93.0	Pulse	0.30	3
1	Te		11,808.50	0.59	79.8	Pulse	0.50	3
1	Li		896.69	9.64	81.9	Pulse	0.30	3

Quantitation Report

File Name	075SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:36
Sample Name	ICSAB
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	20.483	ug/l	1.08	241,310.75	1.529E+00	Pulse	0.50	3
As			1	18.867	ug/l	1.58	25,846.40	1.637E-01	Pulse	1.00	3
Mo			1	2057.181	ug/l	1.42	16,667,294.00	7.040E+01	Analog	0.50	3
Pb			1	0.085	ug/l	2.03	4,459.26	1.060E-03	Pulse	1.00	3
Be			1	0.010	ug/l	130.11	1.00	5.155E-06	Pulse	2.00	3
Ag			1	17.729	ug/l	1.49	511,252.64	3.400E-01	Pulse	0.50	3
Ba			1	0.060	ug/l	3.70	193.33	1.286E-04	Pulse	0.50	3
Tl			1	0.006	ug/l	15.39	395.34	9.397E-05	Pulse	0.50	3
Sn			1	0.193	ug/l	7.97	1,481.18	9.854E-04	Pulse	0.30	3
Sr			1	0.929	ug/l	3.35	5,664.87	3.768E-03	Pulse	0.50	3
[Pb]			1	0.090	ug/l	4.86	2,180.15	5.184E-04	Pulse	0.50	3
Ca			1	89028.908	ug/l	1.10	2,404,311.92	1.232E+01	Pulse	0.50	3
Ti			1	1920.230	ug/l	0.31	428,644.02	2.197E+00	Pulse	0.50	3
Na			1	96843.028	ug/l	2.09	137,275,189.33	7.037E+02	Analog	1.00	3
Mg			1	95895.648	ug/l	1.33	62,745,024.00	3.216E+02	Analog	1.00	3
K			1	100179.943	ug/l	1.10	48,395,880.00	2.481E+02	Analog	1.00	3
V			1	-0.037	ug/l	-4.28	532.01	2.727E-03	Pulse	0.50	3
Mn			1	19.252	ug/l	1.38	100,716.20	6.380E-01	Pulse	0.50	3
Fe			1	99669.529	ug/l	0.68	941,472,277.33	5.964E+03	Analog	0.50	3
Co			1	18.819	ug/l	0.77	396,483.50	2.512E+00	Pulse	0.50	3
Ni			1	18.351	ug/l	1.31	107,437.47	6.806E-01	Pulse	0.50	3
Cu			1	17.851	ug/l	1.57	300,236.12	1.902E+00	Pulse	0.50	3
Zn			1	18.935	ug/l	1.87	43,553.62	1.840E-01	Pulse	1.00	3
Cd			1	18.004	ug/l	1.21	69,529.77	2.937E-01	Pulse	0.50	3
Al			1	89941.856	ug/l	0.56	17,768,423.33	9.108E+01	Analog	1.00	3
Se			1	0.098	ug/l	11.17	21.67	1.440E-05	Pulse	3.00	3
Sb			1	0.037	ug/l	13.08	457.01	1.931E-03	Pulse	1.00	3
Se			1	0.006	ug/l	1681.22	21.44	1.842E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,206,032.58	0.59	79.2	Pulse	0.50	3
1	Sc		195,095.94	1.07	96.9	Pulse	0.30	3
1	Ge		157,856.79	0.39	94.2	Pulse	0.30	3
1	In		1,503,917.72	1.30	88.5	Pulse	0.30	3
1	Tb		6,603,751.00	0.50	96.9	Analog	0.50	3
1	Lu		3,722,060.58	0.62	87.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		236,755.28	0.73	92.7	Pulse	0.30	3
1	Te		11,648.41	0.62	78.7	Pulse	0.50	3
1	Li		826.69	5.65	75.5	Pulse	0.30	3

Quantitation Report

File Name	076CCVA.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:40
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	49.358	ug/l	2.07	588,627.83	3.679E+00	Pulse	0.50	3
As			1	49.476	ug/l	1.38	68,667.86	4.292E-01	Pulse	1.00	3
Mo			1	50.685	ug/l	0.70	418,064.99	1.735E+00	Pulse	0.50	3
Pb			1	49.388	ug/l	0.57	2,316,692.42	4.891E-01	Pulse	1.00	3
Be			1	49.981	ug/l	1.81	3,222.92	1.730E-02	Pulse	2.00	3
Ag			1	51.432	ug/l	0.67	1,542,051.59	9.863E-01	Pulse	0.50	3
Ba			1	49.428	ug/l	1.01	144,855.30	9.265E-02	Pulse	0.50	3
Tl			1	50.225	ug/l	0.82	3,446,937.75	7.277E-01	Pulse	0.50	3
Sn			1	50.596	ug/l	0.94	328,885.13	2.103E-01	Pulse	0.30	3
Sr			1	49.819	ug/l	0.83	290,696.05	1.859E-01	Pulse	0.50	3
[Pb]			1	49.802	ug/l	1.31	1,096,187.00	2.314E-01	Pulse	0.50	3
Ca			1	4896.705	ug/l	1.52	126,359.08	6.784E-01	Pulse	0.50	3
Ti			1	49.115	ug/l	1.27	10,470.83	5.621E-02	Pulse	0.50	3
Na			1	5115.856	ug/l	0.63	6,934,181.83	3.723E+01	Analog	1.00	3
Mg			1	4813.973	ug/l	0.68	3,007,655.25	1.615E+01	Pulse	1.00	3
K			1	4901.425	ug/l	0.96	2,275,970.25	1.222E+01	Pulse	1.00	3
V			1	49.884	ug/l	0.82	431,988.87	2.319E+00	Pulse	0.50	3
Mn			1	48.996	ug/l	1.73	259,650.71	1.623E+00	Pulse	0.50	3
Fe			1	5206.174	ug/l	1.69	49,851,753.33	3.116E+02	Analog	0.50	3
Co			1	49.985	ug/l	0.89	1,067,393.83	6.671E+00	Pulse	0.50	3
Ni			1	50.039	ug/l	2.01	296,801.64	1.855E+00	Pulse	0.50	3
Cu			1	50.881	ug/l	0.26	852,800.62	5.329E+00	Pulse	0.50	3
Zn			1	50.755	ug/l	0.78	115,809.04	4.805E-01	Pulse	1.00	3
Cd			1	50.294	ug/l	0.67	197,720.62	8.204E-01	Pulse	0.50	3
Al			1	4716.542	ug/l	0.82	889,734.06	4.777E+00	Pulse	1.00	3
Se			1	49.932	ug/l	0.79	4,402.28	2.816E-03	Pulse	3.00	3
Sb			1	49.196	ug/l	0.83	448,383.23	1.860E+00	Pulse	1.00	3
Se			1	47.672	ug/l	2.61	2,262.80	1.707E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,737,113.00	0.69	89.2	Pulse	0.50	3
1	Sc		186,273.65	1.08	92.5	Pulse	0.30	3
1	Ge		160,021.95	1.21	95.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,563,530.32	0.85	92.0	Pulse	0.30	3
1	Tb		6,891,838.00	0.99	101.2	Analog	0.50	3
1	Lu		3,842,425.50	0.13	90.7	Pulse	0.50	3
1	Ge		241,017.86	0.57	94.4	Pulse	0.30	3
1	Te		13,262.84	2.12	89.6	Pulse	0.50	3
1	Li		920.03	7.07	84.1	Pulse	0.30	3

Quantitation Report

File Name	077_CCV.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:43
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	98.559	ug/l	1.48	1,178,931.08	7.343E+00	Pulse	0.50	3
As			1	98.242	ug/l	1.58	136,793.33	8.520E-01	Pulse	1.00	3
Mo			1	100.381	ug/l	0.80	833,897.58	3.435E+00	Pulse	0.50	3
Pb			1	98.258	ug/l	0.47	4,530,238.50	9.728E-01	Pulse	1.00	3
Be			1	99.529	ug/l	2.19	6,482.87	3.445E-02	Pulse	2.00	3
Ag			1	100.254	ug/l	0.96	2,997,602.00	1.923E+00	Pulse	0.50	3
Ba			1	97.674	ug/l	1.29	285,442.26	1.831E-01	Pulse	0.50	3
Tl			1	107.509	ug/l	0.15	7,253,862.33	1.558E+00	Analog	0.50	3
Sn			1	101.163	ug/l	1.67	655,482.47	4.204E-01	Pulse	0.30	3
Sr			1	100.009	ug/l	0.60	581,486.94	3.729E-01	Pulse	0.50	3
[Pb]			1	98.918	ug/l	0.95	2,140,115.92	4.596E-01	Pulse	0.50	3
Ca			1	9716.018	ug/l	0.86	253,205.26	1.346E+00	Pulse	0.50	3
Ti			1	99.734	ug/l	2.20	21,474.46	1.141E-01	Pulse	0.50	3
Na			1	10202.754	ug/l	1.22	13,960,332.33	7.419E+01	Analog	1.00	3
Mg			1	10139.572	ug/l	1.17	6,399,540.17	3.401E+01	Analog	1.00	3
K			1	9783.937	ug/l	0.76	4,573,954.83	2.431E+01	Pulse	1.00	3
V			1	100.738	ug/l	1.05	880,489.38	4.679E+00	Pulse	0.50	3
Mn			1	97.562	ug/l	1.78	518,699.09	3.231E+00	Pulse	0.50	3
Fe			1	10357.064	ug/l	1.40	99,509,717.33	6.198E+02	Analog	0.50	3
Co			1	99.534	ug/l	1.45	2,132,662.92	1.328E+01	Pulse	0.50	3
Ni			1	99.130	ug/l	0.90	589,965.29	3.674E+00	Pulse	0.50	3
Cu			1	98.804	ug/l	1.10	1,654,115.96	1.030E+01	Pulse	0.50	3
Zn			1	98.867	ug/l	0.58	225,470.81	9.289E-01	Pulse	1.00	3
Cd			1	97.808	ug/l	1.39	387,234.01	1.595E+00	Pulse	0.50	3
Al			1	9493.216	ug/l	1.08	1,809,040.96	9.614E+00	Pulse	1.00	3
Se			1	100.433	ug/l	1.23	8,816.14	5.654E-03	Pulse	3.00	3
Sb			1	96.347	ug/l	0.27	884,283.38	3.643E+00	Pulse	1.00	3
Se			1	97.257	ug/l	1.19	4,401.84	3.463E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,657,062.00	0.39	87.7	Pulse	0.50	3
1	Sc		188,183.90	0.87	93.4	Pulse	0.30	3
1	Ge		160,573.17	1.38	95.8	Pulse	0.30	3
1	In		1,559,282.20	0.80	91.7	Pulse	0.30	3
1	Tb		6,894,457.50	0.66	101.2	Analog	0.50	3
1	Lu		3,831,317.17	0.11	90.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		242,737.15	0.41	95.0	Pulse	0.30	3
1	Te		12,712.45	1.17	85.9	Pulse	0.50	3
1	Li		952.25	14.42	87.0	Pulse	0.30	3

Quantitation Report

File Name	078_CCB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:47
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.002	ug/l	-78.06	514.01	3.193E-03	Pulse	0.50	3
As			1	0.003	ug/l	173.33	26.33	1.636E-04	Pulse	1.00	3
Mo			1	0.068	ug/l	7.65	568.68	2.336E-03	Pulse	0.50	3
Pb			1	0.015	ug/l	21.74	1,790.43	3.647E-04	Pulse	1.00	3
Be			1	0.018	ug/l	73.28	1.50	7.932E-06	Pulse	2.00	3
Ag			1	0.012	ug/l	10.05	392.01	2.468E-04	Pulse	0.50	3
Ba			1	0.002	ug/l	231.14	32.67	2.057E-05	Pulse	0.50	3
Tl			1	0.075	ug/l	14.14	5,368.20	1.093E-03	Pulse	0.50	3
Sn			1	0.031	ug/l	37.90	496.68	3.126E-04	Pulse	0.30	3
Sr			1	0.004	ug/l	147.15	512.68	3.227E-04	Pulse	0.50	3
[Pb]			1	0.015	ug/l	26.88	837.36	1.706E-04	Pulse	0.50	3
Ca			1	-0.029	ug/l	-4078.10	109.33	5.786E-04	Pulse	0.50	3
Ti			1	0.001	ug/l	1691.17	2.67	1.408E-05	Pulse	0.50	3
Na			1	6.526	ug/l	5.30	19,334.97	1.023E-01	Pulse	1.00	3
Mg			1	1.249	ug/l	17.22	992.36	5.249E-03	Pulse	1.00	3
K			1	4.552	ug/l	6.21	18,346.84	9.704E-02	Pulse	1.00	3
V			1	-0.055	ug/l	-9.56	359.34	1.901E-03	Pulse	0.50	3
Mn			1	0.011	ug/l	61.78	164.67	1.022E-03	Pulse	0.50	3
Fe			1	1.012	ug/l	27.95	16,583.96	1.030E-01	Pulse	0.50	3
Co			1	0.004	ug/l	32.86	100.67	6.250E-04	Pulse	0.50	3
Ni			1	0.002	ug/l	283.57	91.33	5.669E-04	Pulse	0.50	3
Cu			1	-0.107	ug/l	-8.69	6,195.01	3.849E-02	Pulse	0.50	3
Zn			1	-0.068	ug/l	-24.47	1,676.74	6.886E-03	Pulse	1.00	3
Cd			1	0.004	ug/l	97.45	25.33	1.038E-04	Pulse	0.50	3
Al			1	0.761	ug/l	61.36	275.67	1.458E-03	Pulse	1.00	3
Se			1	-0.003	ug/l	-1311.15	13.89	8.744E-06	Pulse	3.00	3
Sb			1	0.010	ug/l	34.20	220.67	9.060E-04	Pulse	1.00	3
Se			1	-0.020	ug/l	-324.14	23.22	1.752E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,907,222.50	0.67	92.4	Pulse	0.50	3
1	Sc		189,063.67	0.34	93.9	Pulse	0.30	3

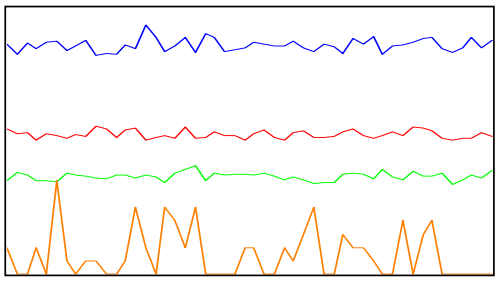
Quantitation Report

1	Ge		160,959.36	0.48	96.1	Pulse	0.30	3
1	In		1,588,741.85	0.19	93.4	Pulse	0.30	3
1	Tb		6,935,462.00	0.77	101.8	Analog	0.50	3
1	Lu		3,870,977.25	0.51	91.3	Pulse	0.50	3
1	Ge		243,522.30	0.56	95.4	Pulse	0.30	3
1	Te		13,259.50	0.23	89.6	Pulse	0.50	3
1	Li		1,005.59	7.65	91.9	Pulse	0.30	3

Tune Report

Batch Folder	D:\2018\07-July\xa073118m1.b
Acq. Date-Time	7/31/2018 8:45
Report Comment	073118TUNE2
Instrument Name	G3281A JP12151709

[2]



Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59	5000	2616	26162.73	5000.00	
89	5000	1829	18293.61	5000.00	
205	10000	8582	85822.20	5000.00	
78	20	1			

Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	
89		-	
205		-	
78		-	

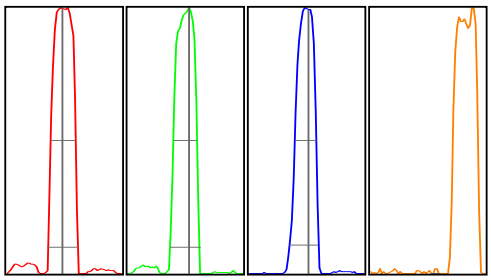
Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	2.89	8.00	
89	4.12	8.00	
205	2.77	8.00	
78	126.39		

Mass	Background (Actual)	Background (Required)	Background (Flag)
59	0.10	2	
89	0.00	2	
205	0.70	2	
78	0.00	5	

Ratio	156/140	0.268 %	
Ratio	70/140	1.517 %	

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.412

Tune Report



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-10% (Actual)	W-10% (Required)	W-10% (Flag)
59	2642.91	59.00	58.9 - 59.1		0.64	0.765	0.900	
89	1913.54	89.10	88.9 - 89.1		0.60	0.750	0.900	
205	8539.37	205.05	204.9 - 205.1		0.54	0.744	0.900	
78	0.00	78.15	-		0.18	0.175		

Integration Time [sec] 0.1 **Acquisition Time [sec]** 29.92 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Nebulizer Pump	0.10 rps
RF Matching	1.70 V	S/C Temp	2 ℃
Smpl Depth	9.0 mm	Gas Switch	Dilution Gas
Carrier Gas	0.80 L/min	Makeup/Dilution Gas	0.35 L/min
Option Gas	0.0 %		

Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-40 V
Extract 2	-175.0 V	Cell Exit	-70 V
Omega Bias	-85 V	Deflect	1.6 V
Omega Lens	8.7 V	Plate Bias	-60 V

Cell Parameters

Use Gas	true	OctP Bias	-18.0 V
He Flow	5.0 mL/min	OctP RF	200 V
H2 Flow	0.0 mL/min	Energy Discrimination	3.0 V
3rd Gas Flow	0 %		

History

	Sensitivity										
Created Date	Channel 1 Count	Channel 1 Mass	Channel 1 RSD%	Channel 2 Count	Channel 2 Mass	Channel 2 RSD%	Channel 3 Count	Channel 3 Mass	Channel 3 RSD%	Oxide Mass	Integration Time
7/31/2018 8:34 AM	4265.202	7	2.4514922	16275.843	89	1.9471442	14039.377	205	2.0196329	156/140	0.100 sec

History

		Background										
Oxide Ratio	Sampling Period	Channel 1 Count	Channel 1 Mass	Channel 2 Count	Channel 2 Mass	Channel 3 Count	Channel 3 Mass	Acquisition Time	Channel 1 Mass	Channel 1 Axis	Channel 1 Height	Channel 1 W-10%
1.20 %	0.311 sec	2.0000002	7	2.6500003	89	13.350006	205	00:00:23	7	6.9	4227.2726	0.7770909

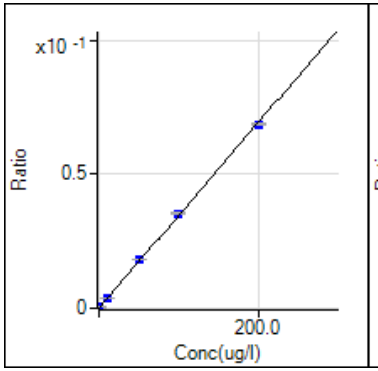
History

Resolution/Axis												Stand
Channel 1 W-50%	Channel 2 Mass	Channel 2 Axis	Channel 2 Height	Integration Time	Channel 2 W-10%	Channel 2 W-50%	Channel 3 Mass	Channel 3 Axis	Channel 3 Height	Channel 3 W-10%	Channel 3 W-50%	Extract 1
0.6795096	89	89.05	16059.969	0.100 sec	0.7666013	0.6167467	205	205	14174.365	0.7731726	0.5329638	0.0 V

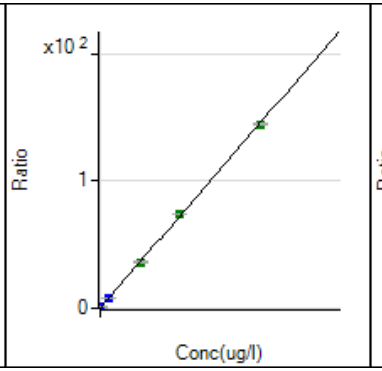
History

lard Tune Parameters Ion Lenses	
Extract 2	Omega Bias
-185.0 V	-80 V

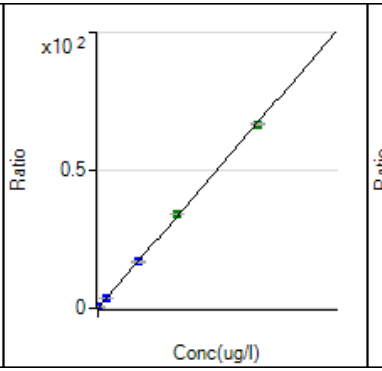
Calibration for D:\2018\07-July\xa073118m1.b\001CALB.d



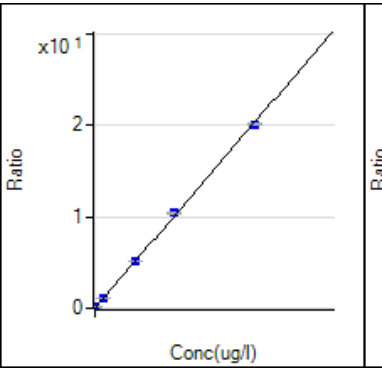
9 Be [2] / ISTD: 45 Sc
y = 3.461E-4 x + 1.685E-6
R 0.9998
DL 0.0253
BEC 0.004869



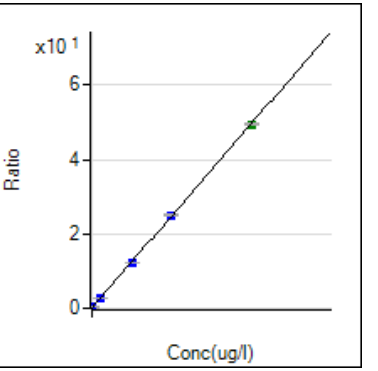
23 Na [2] / ISTD: 45 Sc
y = 7.266E-3 x + 5.485E-2
R 0.9999
DL 0.2951
BEC 7.549



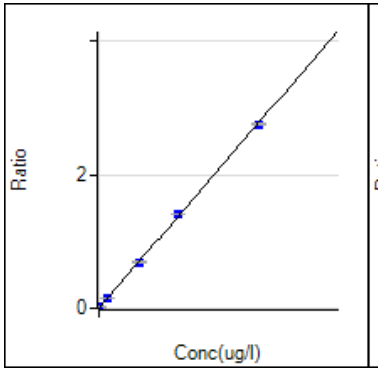
24 Mg [2] / ISTD: 45 Sc
y = 3.354E-3 x + 1.059E-3
R 0.9999
DL 0.06602
BEC 0.3159



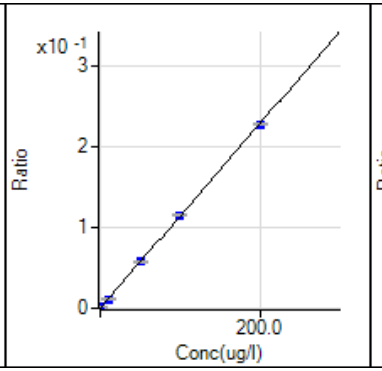
27 Al [2] / ISTD: 45 Sc
y = 1.013E-3 x + 6.878E-4
R 0.9999
DL 0.3388
BEC 0.6792



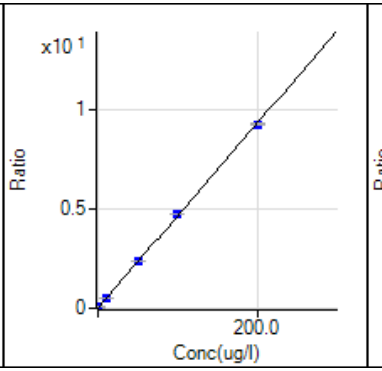
39 K [2] / ISTD: 45 Sc
y = 2.476E-3 x + 8.577E-2
R 1.0000
DL 2.298
BEC 34.65



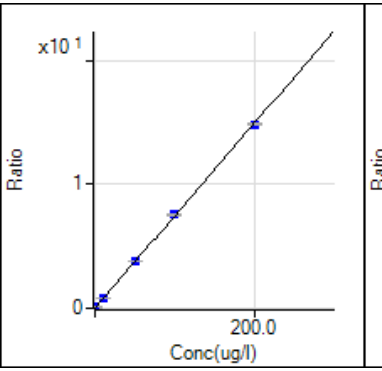
44 Ca [2] / ISTD: 45 Sc
y = 1.384E-4 x + 5.827E-4
R 0.9999
DL 0.2622
BEC 4.209



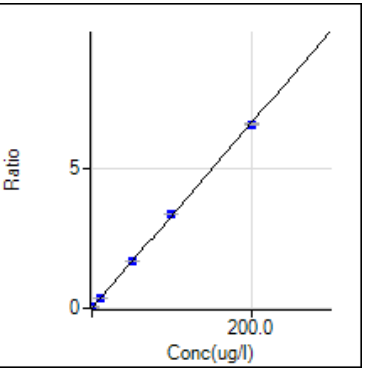
47 Ti [2] / ISTD: 45 Sc
y = 1.144E-3 x + 1.336E-5
R 1.0000
DL 0.04061
BEC 0.01168



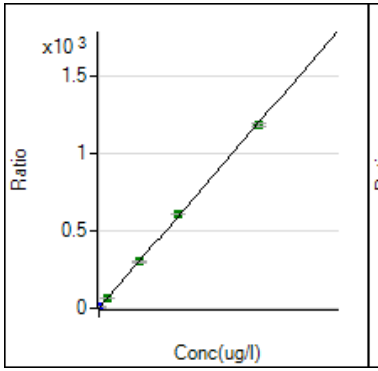
51 V [2] / ISTD: 45 Sc
y = 4.640E-2 x + 4.463E-3
R 0.9999
DL 0.01081
BEC 0.09618



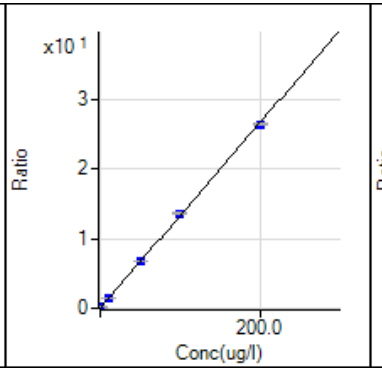
52 Cr [2] / ISTD: 72 Ge
y = 7.447E-2 x + 3.307E-3
R 1.0000
DL 0.00445
BEC 0.0444



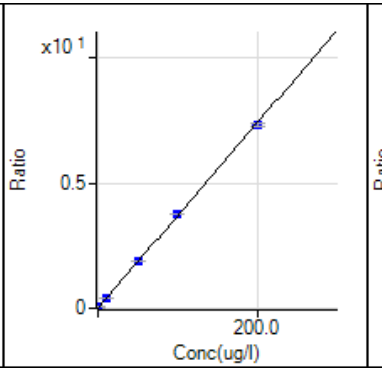
55 Mn [2] / ISTD: 72 Ge
y = 3.311E-2 x + 6.443E-4
R 0.9999
DL 0.005964
BEC 0.01946



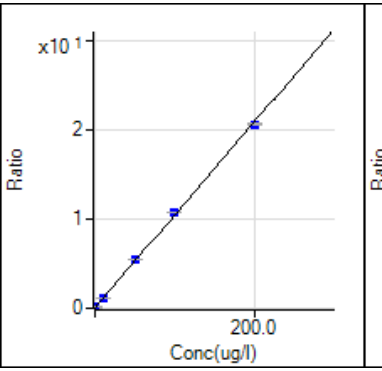
56 Fe [2] / ISTD: 72 Ge
y = 5.984E-2 x + 4.244E-2
R 0.9999
DL 0.05118
BEC 0.7092



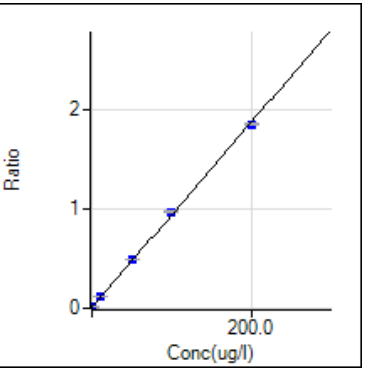
59 Co [2] / ISTD: 72 Ge
y = 1.335E-1 x + 1.554E-4
R 0.9999
DL 0.001691
BEC 0.001164



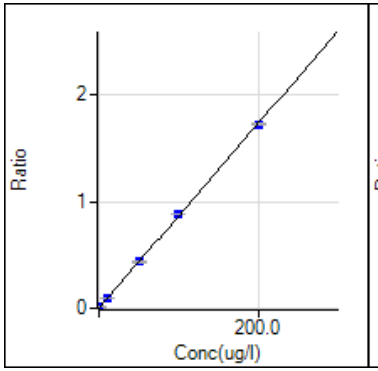
60 Ni [2] / ISTD: 72 Ge
y = 3.706E-2 x + 5.060E-4
R 0.9999
DL 0.008119
BEC 0.01365



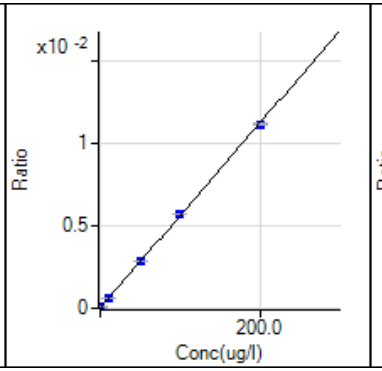
63 Cu [2] / ISTD: 72 Ge
y = 1.038E-1 x + 4.964E-2
R 0.9997
DL 0.04543
BEC 0.4784



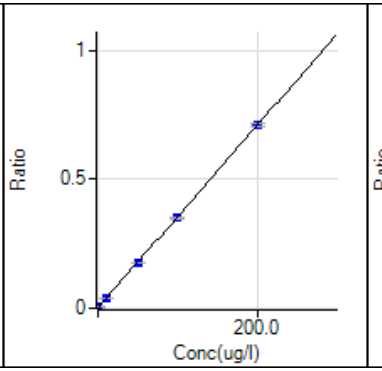
66 Zn [2] / ISTD: 74 Ge
y = 9.319E-3 x + 7.519E-3
R 0.9998
DL 0.05675
BEC 0.8069



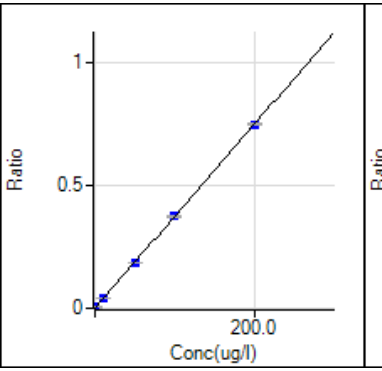
75 As [2] / ISTD: 72 Ge
y = 8.671E-3 x + 1.416E-4
R 1.0000
DL 0.01922
BEC 0.01633



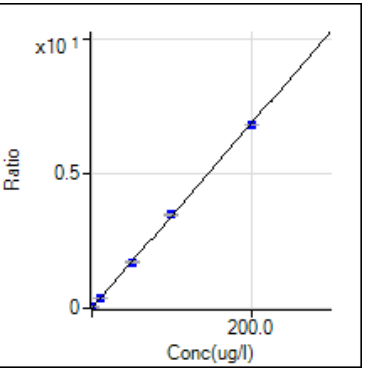
78 Se [2] / ISTD: 115 In
y = 5.621E-5 x + 8.888E-6
R 0.9999
DL 0.04294
BEC 0.1581



82 Se [2] / ISTD: 125 Te
y = 3.542E-3 x + 1.823E-3
R 0.9999
DL 0.6307
BEC 0.5146

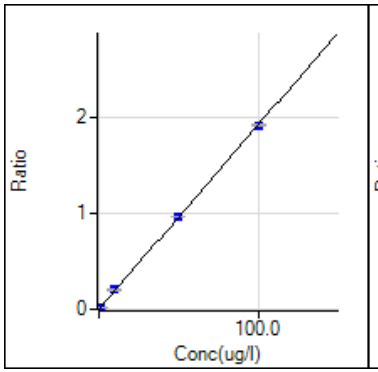


88 Sr [2] / ISTD: 115 In
y = 3.726E-3 x + 3.074E-4
R 1.0000
DL 0.00838
BEC 0.08251

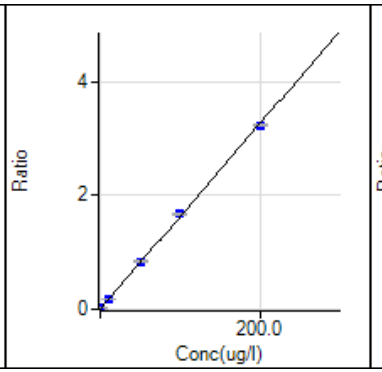


95 Mo [2] / ISTD: 74 Ge
y = 3.422E-2 x + 1.825E-5
R 1.0000
DL 0.0003837
BEC 0.0005334

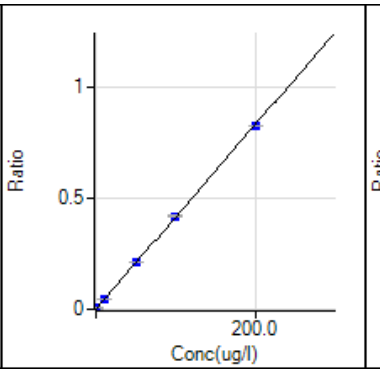
Calibration for D:\2018\07-July\xa073118m1.b\001CALB.d



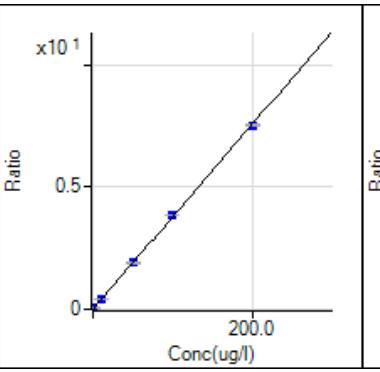
107 Ag [2] / ISTD: 115 In
y = 1.918E-2 x + 1.451E-5
R 1.0000
DL 0.0009094
BEC 0.0007567



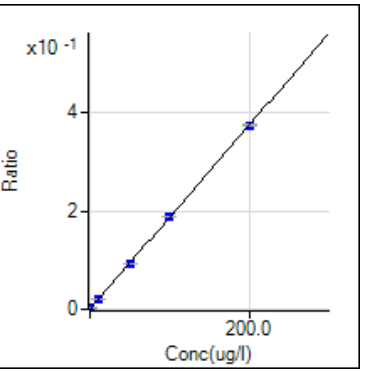
111 Cd [2] / ISTD: 74 Ge
y = 1.631E-2 x + 3.641E-5
R 0.9998
DL 0.004339
BEC 0.002233



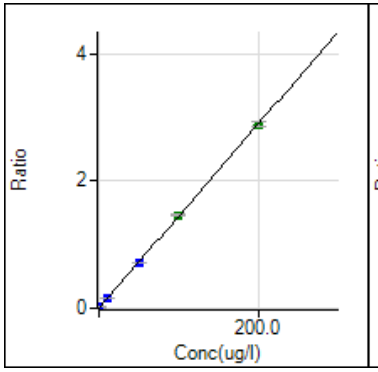
118 Sn [2] / ISTD: 115 In
y = 4.154E-3 x + 1.856E-4
R 1.0000
DL 0.01824
BEC 0.04468



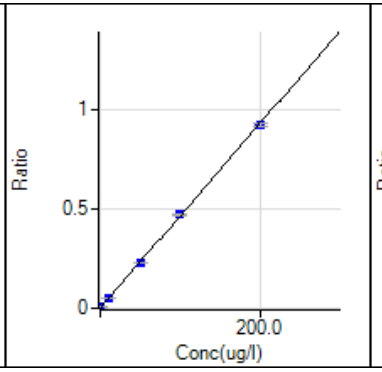
121 Sb [2] / ISTD: 74 Ge
y = 3.781E-2 x + 5.153E-4
R 0.9999
DL 0.003838
BEC 0.01363



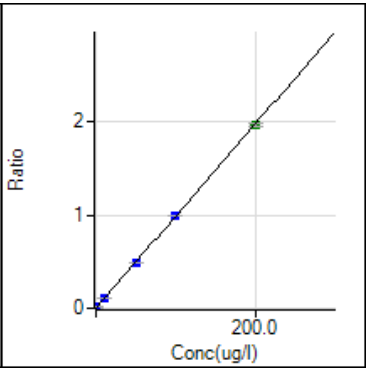
137 Ba [2] / ISTD: 115 In
y = 1.874E-3 x + 1.647E-5
R 1.0000
DL 0.005645
BEC 0.008787



205 Tl [2] / ISTD: 209 Bi
y = 1.449E-2 x + 1.343E-5
R 1.0000
DL 0.0001711
BEC 0.0009271



206 [Pb] [2] / ISTD: 209 Bi
y = 4.645E-3 x + 1.002E-4
R 0.9999
DL 9.497E-05
BEC 0.02156



208 Pb [2] / ISTD: 209 Bi
y = 9.898E-3 x + 2.172E-4
R 1.0000
DL 0.003183
BEC 0.02194

SGS Accutest - Orlando Mercury Digestion Log

Method of Digestion: SW846-7470A / 7471B / EPA 245.1 (circle one) MP # 34053

Matrix: Water / Soil / TCLPW / TCLPS / SPLP / Other (circle one)

Analyst: JC Thermometer I.D.: MERCURY

Date/Time started (mm/dd/yy 24:00) 07/23/18 / 09:40 Correction Factor(°C): -1

Date/Time ended (mm/dd/yy 24:00) 07/23/18 / 11:40 Temp Observed/Corrected(°C): 95/94

HotBlock I.D.: 8 Balance ID —— Pipette # Used: 0083294 Pipette # Used: P08121

Digestion Tube Lot # 302316-8143154 Filter Lot #: 160921731-P pH paper Lot#: 220416 PTFE Chips Lot #: ——

Reagents:[A]	HNO_3	HCL	H_2SO_4	$KMnO_4$	$K_2S_2O_8$	$SnCl_2$	$NaCl/NH_2OH$-HCL
Lot/Met#:	0000187345	——	0000177544	MET6084 ~~MET5~~	MET6074	10214100	MET6082

Sample #	Wt., g	Init.Vol(ml)	pH<2	Fin.Vol.(ml)	Comments
STD1 Cal. Blank		50.0	N/A	50.0	
STD2 0.1ml [B]			N/A		
STD3 0.5ml [B]			N/A		
STD4 1.5ml [B]			N/A		
STD5 2.5ml [B]			N/A		
STD6 3.0ml [B]			N/A		
ICV 1.5ml [F]			N/A		
ICB			N/A		
CRI 0.1ml [B]			N/A		
CCV 1.5ml [B]			N/A		
CCB			N/A		
Method Blank		50.0	N/A	50.0	
Blank Spk. 1.5ml [F]			N/A		
Matrix Spk 1.5ml [F]			✓		
Mat. Spk.Dup 1.5ml [F]			✓		
Duplicate			✓		
1 QC [C] FA55914-1	D 4		✓		
2 -2			✓		
3 -9			✓		
4 FA55977-1	1		✓		
5 -2			✓		
6 -3			✓		
7 -4			✓		
8 FA55950-1	4		✓		
9 FA55951-1			✓		
10 -2			✓		
11 FA56015-2	1		✓		
12 -3			✓		
13					
14					
15					
16					
17					
18					
19					
20					
21 [E]					
22 [E]					
23 [E]					
24 [E]					

JC 07/23/18

Analyst/Date Jordan Cwiat 07/23/18 QC Rev./Date [signature] / 7.23.18

10ppm int. met# 6016 100ppb(curve,bs,ms,msd,cri,ccv)met# 6080

10ppm int. 2nd met# 6069 100ppb 2nd(ICV)met# 6047

A For reagent volumes used consult SOP MET 105 or MET 106, current revision
B Amount of 100 ppb standard added (100ppb standard prepared from 10ppm Intermediate).
C Parent sample used to prepare MS, MSD, DUP
D Bottle number
E Additional Matrix QC
F Amount of 100 ppb 2nd source standard added (100ppb 2nd source standard prepared from 10ppm Intermediate 2nd).

✱JC 07/23/18

6020
DOD

SGS Accutest - Orlando **Metals Digestion Log Water**

Method of digestion(circle one): SW846-3010A / SW846-3005A / EPA 200.7 / EPA 200.8 / SM3030C

MP #: 34080

Prep Date/Time (mm/dd/yy 24:00): 07/27/18 08:30

HotBlock I.D. 7

Thermometer I.D. 213

Correction Factor (°C) -1

Temperature Observed/Corrected (°C) 95, 94

pH paper lot# 220916

Volume

Spk. Sol. [A]	Used(ml)	Pipette #
ACC1074	0.05	MU45274
ACC1051	0.2	KU15244
MET6081	1.0	↓

Dig. Tube Lot#: MP3065

Added [B]: HNO_3 HCL

Lot# 0000197345 0000190962

Sample #			Initial Volume(ml)	pH<2	Final Volume(ml)	Comments
Method Blank(MB)			50.0	N/A	50.0	
Spike Blank(SB)				N/A		
Matrix Spike(MS)				✓		
Matrix Spike Dup(MSD)				✓		
Duplicate(DUP)				✓		
1 QC [C]	FA55941-5	D 8		✓		
2	-1	4		✓		
3	-2			✓		
4	-3			✓		
5	-4			✓		
6	-6			✓		
7	-7	↓		✓		
8	-8A	6		✓		
9	-9	4		✓		
10	FA55914-1	1		✓		
11	-2			✓		
12	-3			✓		
13	-4	↓		✓		
14	-6	1		①		① Received pH 12; preserved in lab
15	-8	1		✓		
16	-9	4		✓		
17	~~FA55136-22~~	~~1~~		✓		FA56136-22
18	FA55888-1A	1		✓		
19	FA55889-1A	1		✓		
20						
21 [E]						
22 [E]	JC 07/27/18					
23 [E]						
24 [E]						

Analyst: Jordan Cuevas Date: 07/27/18

QC Review: Date: 7.30.18

A Used for SB, MS, MSD
B For reagent volumes used consult SOP MET 103, current revision
C Parent sample used to prepare MS, MSD, DUP
D Bottle Number
E Additional matrix QC

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

EA Engineering

SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

RB577

SGS Job Number: FA55941

Sampling Date: 07/18/18

Report to:

EA Engineering
6712 Brooklawn Pkwy Suite 104
Syracuse, NY 13211
asmith@eaest.com; hwilliams@eaest.com;
tlamond@eaest.com; fdesantis@eaest.com
ATTN: Amanda Smith

Total number of pages in report: **781**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Caitlin Brice, M.S.
General Manager

Client Service contact: Ariel Hartney 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AK, AR, IA, KY, MA, MS, ND, NH, NV, OK, OR, UT, WA, WV

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EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

EA Engineering

Job No: FA55941

SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Project No: RB577

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA55941-1	07/18/18	09:50	AREL	07/19/18	AQ	Ground Water	SB2-1A
FA55941-2	07/18/18	10:25	AREL	07/19/18	AQ	Ground Water	SB2-2
FA55941-3	07/18/18	09:02	AREL	07/19/18	AQ	Ground Water	SB2-3
FA55941-4	07/18/18	11:30	AREL	07/19/18	AQ	Ground Water	SB3-1B
FA55941-5	07/18/18	12:35	AREL	07/19/18	AQ	Ground Water	SB3-2
FA55941-5D	07/18/18	12:35	AREL	07/19/18	AQ	Ground Water	SB3-2
FA55941-5S	07/18/18	12:35	AREL	07/19/18	AQ	Ground Water	SB3-2
FA55941-6	07/18/18	12:05	AREL	07/19/18	AQ	Ground Water	SB3-3
FA55941-7	07/18/18	00:00	AREL	07/19/18	AQ	Ground Water	DUP-C
FA55941-8	07/18/18	14:10	AREL	07/19/18	AQ	Ground Water	SB1-7
FA55941-8A	07/18/18	14:10	AREL	07/21/18	AQ	Ground Water	SB1-7
FA55941-9	07/18/18	14:30	AREL	07/19/18	AQ	Field Blank Water	FB
FA55941-10	07/18/18	06:00	AREL	07/19/18	AQ	Trip Blank Water	TB

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: EA Engineering **Job No:** FA55941

Site: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ **Report Date:** 8/1/2018 12:22:55 PM

8 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) were collected on 07/18/2018 and were received at SGS North America Inc - Orlando between 07/19/2018 and 07/21/2018 properly preserved, at 4.8 Deg. C and intact. These Samples received an SGS Orlando job number of FA55941. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Please refer to the QC Evaluation: DOD QSM5 Limits Summary Section for recoveries or RPDs exceeding control limits.

MS Volatiles By Method SW846 8260C

Matrix: AQ **Batch ID:** VI1685

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA55941-5MS, FA55941-5MSD were used as the QC samples indicated.

Matrix: AQ **Batch ID:** VI1686

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s)FA56212-10MS, FA56212-10MSD were used as the QC samples indicated.

FA55941-6 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA55941-7 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA55941-8 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA55941-9 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA55941-10 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

GC/LC Semi-volatiles By Method SW846 8330A

Matrix: AQ **Batch ID:** OP71008

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA55941-5MS, FA55941-5MSD were used as the QC samples indicated.

Metals Analysis By Method SW846 6020A

Matrix: AQ **Batch ID:** MP34080

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) FA55941-5DUP, FA55941-5MS, FA55941-5MSD, FA55941-5SDL were used as the QC samples for metals.

RPD(s) for Duplicate for Chromium, Copper, Iron, Lead, Thallium are outside control limits for sample MP34080-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Aluminum, Arsenic, Chromium, Copper, Iron, Lead, Thallium, Vanadium, Calcium, Magnesium, Potassium, Sodium are outside control limits for sample MP34080-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP34080-MB1 for Zinc: All associated samples with results >MDL "B" coded.

MP34080-MB1 for Copper: All associated samples with results >MDL "B" coded.

MP34080-SD1 for Sodium: Serial dilution indicates possible matrix interference.

MP34080-SD1 for Magnesium: Serial dilution indicates possible matrix interference.

MP34080-SD1 for Potassium: Serial dilution indicates possible matrix interference.

MP34080-SD1 for Calcium: Serial dilution indicates possible matrix interference.

Metals Analysis By Method SW846 6020A

Matrix: AQ **Batch ID:** MP34080

FA55941-1 for Copper: Analyte detected in the associated MB.
FA55941-1 for Zinc: Analyte detected in the associated MB.
FA55941-2 for Copper: Analyte detected in the associated MB.
FA55941-2 for Zinc: Analyte detected in the associated MB.
FA55941-3 for Zinc: Analyte detected in the associated MB.
FA55941-4 for Zinc: Analyte detected in the associated MB.
FA55941-5 for Copper: Analyte detected in the associated MB.
FA55941-5 for Zinc: Analyte detected in the associated MB.
FA55941-6 for Copper: Analyte detected in the associated MB.
FA55941-6 for Zinc: Analyte detected in the associated MB.
FA55941-7 for Zinc: Analyte detected in the associated MB.
FA55941-9 for Zinc: Analyte detected in the associated MB.
FA55941-8A for Zinc: Analyte detected in the associated MB.
FA55941-8A for Copper: Analyte detected in the associated MB.

Metals Analysis By Method SW846 7470A

Matrix: AQ **Batch ID:** MP34054

All samples were digested within the recommended method holding time.
All samples were analyzed within the recommended method holding time.
All method blanks for this batch meet method specific criteria.
Sample(s) FA55967-1DUP, FA55967-1MS, FA55967-1MSD, FA55967-1SDL were used as the QC samples for metals.

Matrix: AQ **Batch ID:** MP34076

All samples were digested within the recommended method holding time.
All samples were analyzed within the recommended method holding time.
All method blanks for this batch meet method specific criteria.
Sample(s) FA55941-5DUP, FA55941-5MS, FA55941-5MSD, FA55941-5SDL were used as the QC samples for metals.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____
Kim Benham, Client Services (signature on file)

Summary of Hits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA55941-1	**SB2-1A**					
Aluminum		83.2 J	200	50	ug/l	SW846 6020A
Antimony		1.4 J	2.0	1.0	ug/l	SW846 6020A
Arsenic		3.8	2.0	1.0	ug/l	SW846 6020A
Barium		484	40	20	ug/l	SW846 6020A
Calcium		306000	4000	2000	ug/l	SW846 6020A
Chromium		0.60 J	2.0	1.0	ug/l	SW846 6020A
Copper [a]		1.3 JB	2.0	1.0	ug/l	SW846 6020A
Lead		7.5	2.0	1.0	ug/l	SW846 6020A
Magnesium		36.9 J	200	50	ug/l	SW846 6020A
Manganese		0.50 J	2.0	1.0	ug/l	SW846 6020A
Nickel		2.2	2.0	1.0	ug/l	SW846 6020A
Potassium		27100	200	100	ug/l	SW846 6020A
Sodium		303000	4000	2000	ug/l	SW846 6020A
Vanadium		4.0	2.0	1.0	ug/l	SW846 6020A
Zinc [a]		6.5 B	4.0	2.0	ug/l	SW846 6020A
FA55941-2	**SB2-2**					
Aluminum		1130	200	50	ug/l	SW846 6020A
Antimony		0.25 J	2.0	1.0	ug/l	SW846 6020A
Arsenic		8.6	2.0	1.0	ug/l	SW846 6020A
Barium		1270	10	5.0	ug/l	SW846 6020A
Calcium		128000	1000	500	ug/l	SW846 6020A
Chromium		1.5 J	2.0	1.0	ug/l	SW846 6020A
Cobalt		0.92 J	2.0	1.0	ug/l	SW846 6020A
Copper [a]		2.3 B	2.0	1.0	ug/l	SW846 6020A
Iron		55000	10000	2500	ug/l	SW846 6020A
Lead		1.1 J	2.0	1.0	ug/l	SW846 6020A
Magnesium		29600	200	50	ug/l	SW846 6020A
Manganese		1110	10	5.0	ug/l	SW846 6020A
Nickel		1.6 J	2.0	1.0	ug/l	SW846 6020A
Potassium		4680	200	100	ug/l	SW846 6020A
Selenium		0.62 J	2.0	1.0	ug/l	SW846 6020A
Sodium		1060000	10000	5000	ug/l	SW846 6020A
Vanadium		1.9 J	2.0	1.0	ug/l	SW846 6020A
Zinc [a]		11.9 B	4.0	2.0	ug/l	SW846 6020A
FA55941-3	**SB2-3**					
Barium		6.9	2.0	1.0	ug/l	SW846 6020A
Calcium		13500	200	100	ug/l	SW846 6020A
Chromium		0.51 J	2.0	1.0	ug/l	SW846 6020A
Iron		187 J	200	50	ug/l	SW846 6020A

Summary of Hits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
Lead		0.81 J	2.0	1.0	ug/l	SW846 6020A
Magnesium		8800	200	50	ug/l	SW846 6020A
Manganese		21.6	2.0	1.0	ug/l	SW846 6020A
Nickel		0.23 J	2.0	1.0	ug/l	SW846 6020A
Potassium		1460	200	100	ug/l	SW846 6020A
Sodium		13900	200	100	ug/l	SW846 6020A
Zinc [a]		7.2 B	4.0	2.0	ug/l	SW846 6020A
FA55941-4	**SB3-1B**					
Antimony		0.58 J	2.0	1.0	ug/l	SW846 6020A
Arsenic		1.2 J	2.0	1.0	ug/l	SW846 6020A
Barium		9.6	2.0	1.0	ug/l	SW846 6020A
Calcium		6140	200	100	ug/l	SW846 6020A
Chromium		2.4	2.0	1.0	ug/l	SW846 6020A
Iron		33.2 J	200	50	ug/l	SW846 6020A
Lead		0.34 J	2.0	1.0	ug/l	SW846 6020A
Magnesium		198 J	200	50	ug/l	SW846 6020A
Manganese		0.65 J	2.0	1.0	ug/l	SW846 6020A
Nickel		0.25 J	2.0	1.0	ug/l	SW846 6020A
Potassium		32200	200	100	ug/l	SW846 6020A
Selenium		0.26 J	2.0	1.0	ug/l	SW846 6020A
Sodium		31900	200	100	ug/l	SW846 6020A
Vanadium		3.9	2.0	1.0	ug/l	SW846 6020A
Zinc [a]		5.7 B	4.0	2.0	ug/l	SW846 6020A
FA55941-5	**SB3-2**					
Arsenic		0.94 J	2.0	1.0	ug/l	SW846 6020A
Barium		7.6	2.0	1.0	ug/l	SW846 6020A
Calcium		20300	200	100	ug/l	SW846 6020A
Chromium		0.54 J	2.0	1.0	ug/l	SW846 6020A
Copper [a]		0.60 JB	2.0	1.0	ug/l	SW846 6020A
Iron		34.8 J	200	50	ug/l	SW846 6020A
Lead		0.22 J	2.0	1.0	ug/l	SW846 6020A
Magnesium		5480	200	50	ug/l	SW846 6020A
Manganese		24.0	2.0	1.0	ug/l	SW846 6020A
Potassium		1590	200	100	ug/l	SW846 6020A
Sodium		3770	200	100	ug/l	SW846 6020A
Thallium		0.22 J	2.0	1.0	ug/l	SW846 6020A
Vanadium		0.35 J	2.0	1.0	ug/l	SW846 6020A
Zinc [a]		6.9 B	4.0	2.0	ug/l	SW846 6020A

Summary of Hits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA55941-6	**SB3-3**					
Barium		26.7	2.0	1.0	ug/l	SW846 6020A
Calcium		27800	200	100	ug/l	SW846 6020A
Chromium		0.52 J	2.0	1.0	ug/l	SW846 6020A
Copper [a]		0.20 JB	2.0	1.0	ug/l	SW846 6020A
Magnesium		12400	200	50	ug/l	SW846 6020A
Manganese		4.2	2.0	1.0	ug/l	SW846 6020A
Nickel		0.87 J	2.0	1.0	ug/l	SW846 6020A
Potassium		2940	200	100	ug/l	SW846 6020A
Sodium		42100	500	250	ug/l	SW846 6020A
Zinc [a]		6.4 B	4.0	2.0	ug/l	SW846 6020A
FA55941-7	**DUP-C**					
Arsenic		0.95 J	2.0	1.0	ug/l	SW846 6020A
Barium		7.5	2.0	1.0	ug/l	SW846 6020A
Calcium		20400	200	100	ug/l	SW846 6020A
Chromium		0.29 J	2.0	1.0	ug/l	SW846 6020A
Lead		0.20 J	2.0	1.0	ug/l	SW846 6020A
Magnesium		5520	200	50	ug/l	SW846 6020A
Manganese		23.9	2.0	1.0	ug/l	SW846 6020A
Potassium		1600	200	100	ug/l	SW846 6020A
Sodium		3940	200	100	ug/l	SW846 6020A
Vanadium		0.33 J	2.0	1.0	ug/l	SW846 6020A
Zinc [a]		5.2 B	4.0	2.0	ug/l	SW846 6020A
FA55941-8	**SB1-7**					
No hits reported in this sample.						
FA55941-8A	**SB1-7**					
Barium		19.9	2.0	1.0	ug/l	SW846 6020A
Calcium		36800	200	100	ug/l	SW846 6020A
Chromium		0.43 J	2.0	1.0	ug/l	SW846 6020A
Copper [a]		0.21 JB	2.0	1.0	ug/l	SW846 6020A
Magnesium		13500	200	50	ug/l	SW846 6020A
Manganese		1.1 J	2.0	1.0	ug/l	SW846 6020A
Nickel		0.30 J	2.0	1.0	ug/l	SW846 6020A
Potassium		1570	200	100	ug/l	SW846 6020A
Selenium		0.28 J	2.0	1.0	ug/l	SW846 6020A
Sodium		156000	2000	1000	ug/l	SW846 6020A
Vanadium		0.26 J	2.0	1.0	ug/l	SW846 6020A
Zinc [a]		5.5 B	4.0	2.0	ug/l	SW846 6020A

Summary of Hits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA55941-9	**FB**					
Toluene		0.80 J	1.0	0.50	ug/l	SW846 8260C
Calcium		183 J	200	100	ug/l	SW846 6020A
Chromium		0.35 J	2.0	1.0	ug/l	SW846 6020A
Magnesium		66.8 J	200	50	ug/l	SW846 6020A
Sodium		668	200	100	ug/l	SW846 6020A
Zinc [a]		6.4 B	4.0	2.0	ug/l	SW846 6020A
FA55941-10	**TB**					
No hits reported in this sample.						

(a) Analyte detected in the associated MB.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB2-1A		
Lab Sample ID:	FA55941-1	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56368.D	1	07/27/18 16:58	AJ	n/a	n/a	VI1685
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB2-1A		
Lab Sample ID:	FA55941-1	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB2-1A		
Lab Sample ID:	FA55941-1	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: SB2-1A
Lab Sample ID: FA55941-1 **Date Sampled:** 07/18/18
Matrix: AQ - Ground Water **Date Received:** 07/19/18
Method: SW846 8330A SW846 3535A **Percent Solids:** n/a
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060344.D	1	07/24/18 14:47	WH	07/23/18 09:30	OP71008	GBB1754
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.094 U	0.19	0.094	0.075	ug/l	
121-82-4	RDX	0.094 U	0.19	0.094	0.075	ug/l	
99-65-0	1,3-Dinitrobenzene	0.094 U	0.19	0.094	0.075	ug/l	
606-20-2	2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
121-14-2	2,4-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
98-95-3	Nitrobenzene	0.094 U	0.19	0.094	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-08-1	m-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-99-0	p-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
479-45-8	Tetryl	0.094 U	0.19	0.094	0.075	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.094 U	0.19	0.094	0.093	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
78-11-5	PETN	0.94 U	1.9	0.94	0.47	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	86%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB2-1A
Lab Sample ID: FA55941-1
Matrix: AQ - Ground Water
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Date Sampled: 07/18/18
Date Received: 07/19/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	83.2 J	200	50	22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Antimony	1.4 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Arsenic	3.8	2.0	1.0	0.21	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Barium	484	40	20	4.0	ug/l	40	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Calcium	306000	4000	2000	720	ug/l	40	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Chromium	0.60 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cobalt	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Copper [a]	1.3 JB	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Iron	50 U	200	50	23	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Lead	7.5	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Magnesium	36.9 J	200	50	19	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Manganese	0.50 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	07/26/18	07/26/18	JC	SW846 7470A [1]	SW846 7470A [3]
Nickel	2.2	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Potassium	27100	200	100	75	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Selenium	1.0 U	2.0	1.0	0.22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Sodium	303000	4000	2000	480	ug/l	40	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Vanadium	4.0	2.0	1.0	0.24	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Zinc [a]	6.5 B	4.0	2.0	1.7	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA15072
(2) Instrument QC Batch: MA15082
(3) Prep QC Batch: MP34076
(4) Prep QC Batch: MP34080

(a) Analyte detected in the associated MB.

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB2-2		
Lab Sample ID:	FA55941-2	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56369.D	1	07/27/18 17:22	AJ	n/a	n/a	VI1685
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB2-2		
Lab Sample ID:	FA55941-2	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB2-2		
Lab Sample ID:	FA55941-2	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB2-2		
Lab Sample ID:	FA55941-2	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8330A SW846 3535A	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060345.D	1	07/24/18 15:17	WH	07/23/18 09:30	OP71008	GBB1754
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.095 U	0.19	0.095	0.076	ug/l	
121-82-4	RDX	0.095 U	0.19	0.095	0.076	ug/l	
99-65-0	1,3-Dinitrobenzene	0.095 U	0.19	0.095	0.076	ug/l	
606-20-2	2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
121-14-2	2,4-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
98-95-3	Nitrobenzene	0.095 U	0.19	0.095	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-08-1	m-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-99-0	p-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
479-45-8	Tetryl	0.095 U	0.19	0.095	0.076	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.095 U	0.19	0.095	0.094	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
78-11-5	PETN	0.95 U	1.9	0.95	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	81%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB2-2
Lab Sample ID: FA55941-2
Matrix: AQ - Ground Water
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Date Sampled: 07/18/18
Date Received: 07/19/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	1130	200	50	22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Antimony	0.25 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Arsenic	8.6	2.0	1.0	0.21	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Barium	1270	10	5.0	1.0	ug/l	10	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Calcium	128000	1000	500	180	ug/l	10	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Chromium	1.5 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cobalt	0.92 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Copper [a]	2.3 B	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Iron	55000	10000	2500	1200	ug/l	100	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Lead	1.1 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Magnesium	29600	200	50	19	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Manganese	1110	10	5.0	1.0	ug/l	10	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	07/26/18	07/26/18	JC	SW846 7470A [1]	SW846 7470A [3]
Nickel	1.6 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Potassium	4680	200	100	75	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Selenium	0.62 J	2.0	1.0	0.22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Sodium	1060000	10000	5000	1200	ug/l	100	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Vanadium	1.9 J	2.0	1.0	0.24	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Zinc [a]	11.9 B	4.0	2.0	1.7	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA15072
(2) Instrument QC Batch: MA15082
(3) Prep QC Batch: MP34076
(4) Prep QC Batch: MP34080

(a) Analyte detected in the associated MB.

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB2-3		
Lab Sample ID:	FA55941-3	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56374.D	1	07/27/18 19:21	AJ	n/a	n/a	VI1685
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB2-3		
Lab Sample ID:	FA55941-3	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB2-3		
Lab Sample ID:	FA55941-3	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	99%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB2-3		
Lab Sample ID:	FA55941-3	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8330A SW846 3535A	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060346.D	1	07/24/18 15:47	WH	07/23/18 09:30	OP71008	GBB1754
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.095 U	0.19	0.095	0.076	ug/l	
121-82-4	RDX	0.095 U	0.19	0.095	0.076	ug/l	
99-65-0	1,3-Dinitrobenzene	0.095 U	0.19	0.095	0.076	ug/l	
606-20-2	2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
121-14-2	2,4-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
98-95-3	Nitrobenzene	0.095 U	0.19	0.095	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-08-1	m-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-99-0	p-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
479-45-8	Tetryl	0.095 U	0.19	0.095	0.076	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.095 U	0.19	0.095	0.094	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
78-11-5	PETN	0.95 U	1.9	0.95	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	78%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB2-3
Lab Sample ID: FA55941-3
Matrix: AQ - Ground Water
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Date Sampled: 07/18/18
Date Received: 07/19/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	50 U	200	50	22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Antimony	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Arsenic	1.0 U	2.0	1.0	0.21	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Barium	6.9	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Calcium	13500	200	100	36	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Chromium	0.51 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cobalt	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Copper	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Iron	187 J	200	50	23	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Lead	0.81 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Magnesium	8800	200	50	19	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Manganese	21.6	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	07/26/18	07/26/18	JC	SW846 7470A [1]	SW846 7470A [3]
Nickel	0.23 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Potassium	1460	200	100	75	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Selenium	1.0 U	2.0	1.0	0.22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Sodium	13900	200	100	24	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Vanadium	1.0 U	2.0	1.0	0.24	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Zinc [a]	7.2 B	4.0	2.0	1.7	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA15072
(2) Instrument QC Batch: MA15082
(3) Prep QC Batch: MP34076
(4) Prep QC Batch: MP34080

(a) Analyte detected in the associated MB.

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB3-1B		
Lab Sample ID:	FA55941-4	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56375.D	1	07/27/18 19:44	AJ	n/a	n/a	VI1685
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB3-1B		
Lab Sample ID:	FA55941-4	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB3-1B		
Lab Sample ID:	FA55941-4	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB3-1B		
Lab Sample ID:	FA55941-4	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8330A SW846 3535A	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060347.D	1	07/24/18 16:17	WH	07/23/18 09:30	OP71008	GBB1754
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.094 U	0.19	0.094	0.075	ug/l	
121-82-4	RDX	0.094 U	0.19	0.094	0.075	ug/l	
99-65-0	1,3-Dinitrobenzene	0.094 U	0.19	0.094	0.075	ug/l	
606-20-2	2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
121-14-2	2,4-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
98-95-3	Nitrobenzene	0.094 U	0.19	0.094	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-08-1	m-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-99-0	p-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
479-45-8	Tetryl	0.094 U	0.19	0.094	0.075	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.094 U	0.19	0.094	0.093	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
78-11-5	PETN	0.94 U	1.9	0.94	0.47	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	80%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB3-1B
Lab Sample ID: FA55941-4
Matrix: AQ - Ground Water
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Date Sampled: 07/18/18
Date Received: 07/19/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	50 U	200	50	22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Antimony	0.58 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Arsenic	1.2 J	2.0	1.0	0.21	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Barium	9.6	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Calcium	6140	200	100	36	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Chromium	2.4	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cobalt	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Copper	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Iron	33.2 J	200	50	23	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Lead	0.34 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Magnesium	198 J	200	50	19	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Manganese	0.65 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	07/26/18	07/26/18	JC	SW846 7470A [1]	SW846 7470A [3]
Nickel	0.25 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Potassium	32200	200	100	75	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Selenium	0.26 J	2.0	1.0	0.22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Sodium	31900	200	100	24	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Vanadium	3.9	2.0	1.0	0.24	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Zinc [a]	5.7 B	4.0	2.0	1.7	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA15072
(2) Instrument QC Batch: MA15082
(3) Prep QC Batch: MP34076
(4) Prep QC Batch: MP34080

(a) Analyte detected in the associated MB.

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB3-2		
Lab Sample ID:	FA55941-5	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56367.D	1	07/27/18 16:34	AJ	n/a	n/a	VI1685
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB3-2		
Lab Sample ID:	FA55941-5	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB3-2		
Lab Sample ID:	FA55941-5	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB3-2		
Lab Sample ID:	FA55941-5	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8330A SW846 3535A	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060348.D	1	07/24/18 16:47	WH	07/23/18 09:30	OP71008	GBB1754
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.094 U	0.19	0.094	0.075	ug/l	
121-82-4	RDX	0.094 U	0.19	0.094	0.075	ug/l	
99-65-0	1,3-Dinitrobenzene	0.094 U	0.19	0.094	0.075	ug/l	
606-20-2	2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
121-14-2	2,4-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
98-95-3	Nitrobenzene	0.094 U	0.19	0.094	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-08-1	m-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-99-0	p-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
479-45-8	Tetryl	0.094 U	0.19	0.094	0.075	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.094 U	0.19	0.094	0.093	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
78-11-5	PETN	0.94 U	1.9	0.94	0.47	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	87%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB3-2
Lab Sample ID: FA55941-5
Matrix: AQ - Ground Water
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Date Sampled: 07/18/18
Date Received: 07/19/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	50 U	200	50	22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Antimony	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Arsenic	0.94 J	2.0	1.0	0.21	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Barium	7.6	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Calcium	20300	200	100	36	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Chromium	0.54 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cobalt	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Copper [a]	0.60 JB	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Iron	34.8 J	200	50	23	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Lead	0.22 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Magnesium	5480	200	50	19	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Manganese	24.0	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	07/26/18	07/26/18	JC	SW846 7470A [1]	SW846 7470A [3]
Nickel	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Potassium	1590	200	100	75	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Selenium	1.0 U	2.0	1.0	0.22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Sodium	3770	200	100	24	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Thallium	0.22 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Vanadium	0.35 J	2.0	1.0	0.24	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Zinc [a]	6.9 B	4.0	2.0	1.7	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA15072
(2) Instrument QC Batch: MA15082
(3) Prep QC Batch: MP34076
(4) Prep QC Batch: MP34080

(a) Analyte detected in the associated MB.

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB3-3		
Lab Sample ID:	FA55941-6	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56383.D	1	07/30/18 09:58	AJ	n/a	n/a	VI1686
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB3-3		
Lab Sample ID:	FA55941-6	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB3-3		
Lab Sample ID:	FA55941-6	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	100%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB3-3		
Lab Sample ID:	FA55941-6	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8330A SW846 3535A	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060349.D	1	07/24/18 17:17	WH	07/23/18 09:30	OP71008	GBB1754
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.094 U	0.19	0.094	0.075	ug/l	
121-82-4	RDX	0.094 U	0.19	0.094	0.075	ug/l	
99-65-0	1,3-Dinitrobenzene	0.094 U	0.19	0.094	0.075	ug/l	
606-20-2	2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
121-14-2	2,4-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
98-95-3	Nitrobenzene	0.094 U	0.19	0.094	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-08-1	m-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-99-0	p-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
479-45-8	Tetryl	0.094 U	0.19	0.094	0.075	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.094 U	0.19	0.094	0.093	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
78-11-5	PETN	0.94 U	1.9	0.94	0.47	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	79%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB3-3
Lab Sample ID: FA55941-6
Matrix: AQ - Ground Water
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Date Sampled: 07/18/18
Date Received: 07/19/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	50 U	200	50	22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Antimony	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Arsenic	1.0 U	2.0	1.0	0.21	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Barium	26.7	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Calcium	27800	200	100	36	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Chromium	0.52 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cobalt	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Copper [a]	0.20 JB	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Iron	50 U	200	50	23	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Lead	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Magnesium	12400	200	50	19	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Manganese	4.2	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	07/26/18	07/26/18	JC	SW846 7470A [1]	SW846 7470A [3]
Nickel	0.87 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Potassium	2940	200	100	75	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Selenium	1.0 U	2.0	1.0	0.22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Sodium	42100	500	250	60	ug/l	5	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Vanadium	1.0 U	2.0	1.0	0.24	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Zinc [a]	6.4 B	4.0	2.0	1.7	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA15072
(2) Instrument QC Batch: MA15082
(3) Prep QC Batch: MP34076
(4) Prep QC Batch: MP34080

(a) Analyte detected in the associated MB.

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	DUP-C		
Lab Sample ID:	FA55941-7	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56384.D	1	07/30/18 10:22	AJ	n/a	n/a	VI1686
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-C		
Lab Sample ID:	FA55941-7	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-C		
Lab Sample ID:	FA55941-7	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	101%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	99%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: DUP-C
Lab Sample ID: FA55941-7 **Date Sampled:** 07/18/18
Matrix: AQ - Ground Water **Date Received:** 07/19/18
Method: SW846 8330A SW846 3535A **Percent Solids:** n/a
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060350.D	1	07/24/18 17:47	WH	07/23/18 09:30	OP71008	GBB1754
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.094 U	0.19	0.094	0.075	ug/l	
121-82-4	RDX	0.094 U	0.19	0.094	0.075	ug/l	
99-65-0	1,3-Dinitrobenzene	0.094 U	0.19	0.094	0.075	ug/l	
606-20-2	2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
121-14-2	2,4-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
98-95-3	Nitrobenzene	0.094 U	0.19	0.094	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-08-1	m-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
99-99-0	p-Nitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
479-45-8	Tetryl	0.094 U	0.19	0.094	0.075	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.094 U	0.19	0.094	0.093	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.094 U	0.19	0.094	0.075	ug/l	
78-11-5	PETN	0.94 U	1.9	0.94	0.47	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	89%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: DUP-C
Lab Sample ID: FA55941-7
Matrix: AQ - Ground Water
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Date Sampled: 07/18/18
Date Received: 07/19/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	50 U	200	50	22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Antimony	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Arsenic	0.95 J	2.0	1.0	0.21	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Barium	7.5	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Calcium	20400	200	100	36	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Chromium	0.29 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cobalt	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Copper	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Iron	50 U	200	50	23	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Lead	0.20 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Magnesium	5520	200	50	19	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Manganese	23.9	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	07/26/18	07/26/18	JC	SW846 7470A [1]	SW846 7470A [3]
Nickel	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Potassium	1600	200	100	75	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Selenium	1.0 U	2.0	1.0	0.22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Sodium	3940	200	100	24	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Vanadium	0.33 J	2.0	1.0	0.24	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Zinc [a]	5.2 B	4.0	2.0	1.7	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA15072
(2) Instrument QC Batch: MA15082
(3) Prep QC Batch: MP34076
(4) Prep QC Batch: MP34080

(a) Analyte detected in the associated MB.

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB1-7		
Lab Sample ID:	FA55941-8	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56385.D	1	07/30/18 10:46	AJ	n/a	n/a	VI1686
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB1-7		
Lab Sample ID:	FA55941-8	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB1-7		
Lab Sample ID:	FA55941-8	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	101%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB1-7		
Lab Sample ID:	FA55941-8	**Date Sampled:**	07/18/18
Matrix:	AQ - Ground Water	**Date Received:**	07/19/18
Method:	SW846 8330A SW846 3535A	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060351.D	1	07/24/18 18:17	WH	07/23/18 09:30	OP71008	GBB1754
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.095 U	0.19	0.095	0.076	ug/l	
121-82-4	RDX	0.095 U	0.19	0.095	0.076	ug/l	
99-65-0	1,3-Dinitrobenzene	0.095 U	0.19	0.095	0.076	ug/l	
606-20-2	2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
121-14-2	2,4-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
98-95-3	Nitrobenzene	0.095 U	0.19	0.095	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-08-1	m-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-99-0	p-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
479-45-8	Tetryl	0.095 U	0.19	0.095	0.076	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.095 U	0.19	0.095	0.094	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
78-11-5	PETN	0.95 U	1.9	0.95	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	85%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB1-7
Lab Sample ID: FA55941-8A
Matrix: AQ - Ground Water
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Date Sampled: 07/18/18
Date Received: 07/21/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	50 U	200	50	22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Antimony	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Arsenic	1.0 U	2.0	1.0	0.21	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Barium	19.9	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Calcium	36800	200	100	36	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Chromium	0.43 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cobalt	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Copper [a]	0.21 JB	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Iron	50 U	200	50	23	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Lead	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Magnesium	13500	200	50	19	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Manganese	1.1 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	07/23/18	07/23/18	JC	SW846 7470A [1]	SW846 7470A [3]
Nickel	0.30 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Potassium	1570	200	100	75	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Selenium	0.28 J	2.0	1.0	0.22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Sodium	156000	2000	1000	240	ug/l	20	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Vanadium	0.26 J	2.0	1.0	0.24	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Zinc [a]	5.5 B	4.0	2.0	1.7	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA15064
(2) Instrument QC Batch: MA15082
(3) Prep QC Batch: MP34054
(4) Prep QC Batch: MP34080

(a) Analyte detected in the associated MB.

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	FB		
Lab Sample ID:	FA55941-9	**Date Sampled:**	07/18/18
Matrix:	AQ - Field Blank Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56386.D	1	07/30/18 11:10	AJ	n/a	n/a	VI1686
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB		
Lab Sample ID:	FA55941-9	**Date Sampled:**	07/18/18
Matrix:	AQ - Field Blank Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.80	1.0	0.50	0.30	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB		
Lab Sample ID:	FA55941-9	**Date Sampled:**	07/18/18
Matrix:	AQ - Field Blank Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	99%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	99%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FB		
Lab Sample ID:	FA55941-9	**Date Sampled:**	07/18/18
Matrix:	AQ - Field Blank Water	**Date Received:**	07/19/18
Method:	SW846 8330A SW846 3535A	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060354.D	1	07/24/18 19:47	WH	07/23/18 09:30	OP71008	GBB1754
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.10 U	0.20	0.10	0.080	ug/l	
121-82-4	RDX	0.10 U	0.20	0.10	0.080	ug/l	
99-65-0	1,3-Dinitrobenzene	0.10 U	0.20	0.10	0.080	ug/l	
606-20-2	2,6-Dinitrotoluene	0.10 U	0.20	0.10	0.080	ug/l	
121-14-2	2,4-Dinitrotoluene	0.10 U	0.20	0.10	0.080	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.10 U	0.20	0.10	0.080	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.10 U	0.20	0.10	0.080	ug/l	
98-95-3	Nitrobenzene	0.10 U	0.20	0.10	0.097	ug/l	
88-72-2	o-Nitrotoluene	0.10 U	0.20	0.10	0.080	ug/l	
99-08-1	m-Nitrotoluene	0.10 U	0.20	0.10	0.080	ug/l	
99-99-0	p-Nitrotoluene	0.10 U	0.20	0.10	0.080	ug/l	
479-45-8	Tetryl	0.10 U	0.20	0.10	0.080	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.10 U	0.20	0.10	0.099	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.10 U	0.20	0.10	0.080	ug/l	
78-11-5	PETN	1.0 U	2.0	1.0	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	80%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: FB
Lab Sample ID: FA55941-9
Matrix: AQ - Field Blank Water
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Date Sampled: 07/18/18
Date Received: 07/19/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	50 U	200	50	22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Antimony	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Arsenic	1.0 U	2.0	1.0	0.21	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Barium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Calcium	183 J	200	100	36	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Chromium	0.35 J	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cobalt	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Copper	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Iron	50 U	200	50	23	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Lead	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Magnesium	66.8 J	200	50	19	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Manganese	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	07/26/18	07/26/18	JC	SW846 7470A [1]	SW846 7470A [3]
Nickel	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Potassium	100 U	200	100	75	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Selenium	1.0 U	2.0	1.0	0.22	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Sodium	668	200	100	24	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Vanadium	1.0 U	2.0	1.0	0.24	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]
Zinc [a]	6.4 B	4.0	2.0	1.7	ug/l	2	07/27/18	07/31/18	DM	SW846 6020A [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA15072
(2) Instrument QC Batch: MA15082
(3) Prep QC Batch: MP34076
(4) Prep QC Batch: MP34080

(a) Analyte detected in the associated MB.

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	TB		
Lab Sample ID:	FA55941-10	**Date Sampled:**	07/18/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56387.D	1	07/30/18 11:34	AJ	n/a	n/a	VI1686
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB		
Lab Sample ID:	FA55941-10	**Date Sampled:**	07/18/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB		
Lab Sample ID:	FA55941-10	**Date Sampled:**	07/18/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	07/19/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	101%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5 Limits

ACCUTEST LABORATORIES

CHAIN OF CUSTODY FA55941

PAGE 1 OF 1

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FED-EX Tracking # | Bottle Order Control #

Accutest Quote # | Accutest Job #

Client / Reporting Information

Company Name: EA. Science & Technology
Street Address: 6712 Brooklawn Prkway Suite 104
City / State / Zip: Syracuse, NY 13211
Project Contact / E-mail: Frank DeSantis Jr
Phone # / Fax #: 315 - 565 - 6554
Sampler(s) Name(s) / Phone #: Doug Thompson and Aaron Roppoli

Project Information

Project Name: Picatinny Arsenal
Street: Rte. 15, Picatinny Arsenal
City / State:
Project #: RB577
Client Purchase Order #:
Project Manager:

Billing Information (If different from Report to)

Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	H3PO4	Explosives by EPA 8330A	VOCs by EPA 8260B	TOC by method 5310B	DOC by method 5310B	Alkalinity by SM2320B	Nitrate/Nitrite by 300.0	Dissolved Gases by RSK-175	Dissolved Iron by EPA 6020	Total Metals by EPA 6020	Dissolved Metals by EPA 6020	Total Iron by 6020	LAB USE ONLY
1	SB2-1A		7/18/18	0950	MJ/EL	GW	6	X		X		X				X	X							X			
2	SB2-2			1025			6	X		X		X				X	X							X			
3	SB2-3			0902			6	X		X		X				X	X							X			
4	SB3-1B			1130			6	X		X		X				X	X							X			
5	SB3-2			1235			6	X		X		X				X	X							X			
6	SB3-3			1205			6	X		X		X				X	X							X			
5	SB3-2 MS/MSD			1235			6	X		X		X				X	X							X			
7	DUP-C			0000			6	X		X		X				X	X							X			
8	SB1-7			1410		↓	6	X		X		X				X	X							X			
9	FB			1430		FB	6	X		X		X				X	X							X			
10	TB		↓	0600	↓	TB	2	X									X										

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Waste Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Turnaround Time (Business days)

Approved By (Accutest PM): / Date:

- [X] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Emergency & Rush T/A data available VIA Labtink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [X] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other
- [ ] *NJ Data of Known Quality Protocol Reporting*

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

SHIP ALL SAMPLES TO ORLANDO, FL LAB.

collected by: (SCI - Sovereign Consulting)

(2 coolers)

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		7/18/18 1600			7/19/18 1700	
2						Fed Ex
3	Fed Ex		07/19/18 900			
4						
5				Custody Seal #	[ ] Intact [ ] Not Intact	Preserved where applicable: (4.4 4.8) On Ice: [ ] Cooler Temp: 3.4 3.6

SGS Sample Receipt Summary

Job Number: FA55941 **Client:** EA. SCIENCE & TECH **Project:** PICATINNY ARSENAL

Date / Time Received: 7/19/2018 9:00:00 AM **Delivery Method:** FED EX **Airbill #'s:** 1001891722710003281100563393520146

Therm ID: IR 1; **Therm CF:** 0.1; **# of Coolers:** 2

Cooler Temps (Raw Measured) °C: Cooler 1: (4.3); Cooler 2: (4.7);

Cooler Temps (Corrected) °C: Cooler 1: (4.4); Cooler 2: (4.8);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☑		☐	☐
2. Trip Blank listed on COC	☑		☐	☐

	W	or	S	N/A
3. Type Of TB Received	☑		☐	☐

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☑	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments NO METALS BOTTLE REC'D FOR SAMPLE #8.

SM001
Rev. Date 05/24/17

Technician: SHAYLAP Date: 7/19/2018 9:00:00 AM Reviewer: _____ Date: _____

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

FA55941

PAGE 1 OF 1

www.accutest.com

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job #

Client / Reporting Information

Company Name: EA. Science & Technology
Street Address: 6712 Brooklawn Prkway Suite 104
City / State / Zip: Syracuse, NY 13211
Project Contact / E-mail: Frank DeSantis Jr
Phone # / Fax #: 315 - 565 - 6554
Sampler(s) Name(s) / Phone #: Doug Thompson and Aaron Roppoli

Project Information

Project Name: Picatinny Arsenal
Street: Rte. 15, Picatinny Arsenal
City / State:
Project #: RB577
Client Purchase Order #:
Project Manager:

Billing Information (If different from Report to)

Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	H3PO4	Explosives by EPA 8330A	VOCs by EPA 8260B	TOC by method 5310B	DOC by method 5310B	Alkalinity by SM2320B	Nitrate/Nitrite by 300.0	Dissolved Gases by RSK-175	Dissolved Iron by EPA 6020	Total Metals by EPA 6020	Dissolved Metals by EPA 6020	Total Iron by 6020	LAB USE ONLY
	~~SB2-1A~~		7/18/18	0950	AR/EL	GW	6	X		X		X				X	X							X			
	~~SB2-2~~			1025			6	X		X		X				X	X							X			
	~~SB2-3~~			0902			6	X		X		X				X	X							X			
	~~SB3-1B~~			1130			6	X		X		X				X	X							X			
	~~SB3-2~~			1235			6	X		X		X				X	X							X			
	~~SB3-3~~			1205			6	X		X		X				X	X							X			
	~~SB3-2 MS/MSD~~			1235			6	X		X		X				X	X							X			
	~~DUP-C~~			0000			6	X		X		X				X	X							X			
8	SB1-7			1410			6	X		X		X				X	X							X			
	~~FB~~			1430		FB	6	X		X		X				X	X							X			
	~~TB~~			0600		TB	2	X									X										

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Waste Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Turnaround Time (Business days)

- [x] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] J Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other
- [ ] *NJ Data of Known Quality Protocol Reporting*

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

SHIP ALL SAMPLES TO ORLANDO, FL LAB.

* SB 1-7 - metals Jar enclosed.

collected by: (SCI - Sovereign Consulting)

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	7/19/18 1600	1 [signature]	2 [signature]	7/19/18 1800	2 Fed Ex
3		3	4		4
5 Fed Ex		5 [signature] 07/21/18 915	Custody Seal # 344	☐ Intact ☐ Not Intact	Preserved where applicable ☐ On Ice ☑ Cooler Temp. 21.0 (20)

FA55941: Chain of Custody
Page 3 of 3

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VI1685	SW846 8260C						
VI1685-BS	67-64-1	Acetone	BSP	REC	96	%	39-160
VI1685-BS	71-43-2	Benzene	BSP	REC	102	%	79-120
VI1685-BS	108-86-1	Bromobenzene	BSP	REC	100	%	80-120
VI1685-BS	74-97-5	Bromochloromethane	BSP	REC	102	%	78-123
VI1685-BS	75-27-4	Bromodichloromethane	BSP	REC	103	%	79-125
VI1685-BS	75-25-2	Bromoform	BSP	REC	95	%	66-130
VI1685-BS	78-93-3	2-Butanone (MEK)	BSP	REC	98	%	56-143
VI1685-BS	104-51-8	n-Butylbenzene	BSP	REC	111	%	75-128
VI1685-BS	135-98-8	sec-Butylbenzene	BSP	REC	106	%	77-126
VI1685-BS	98-06-6	tert-Butylbenzene	BSP	REC	103	%	78-124
VI1685-BS	75-15-0	Carbon Disulfide	BSP	REC	111	%	64-133
VI1685-BS	56-23-5	Carbon Tetrachloride	BSP	REC	101	%	72-136
VI1685-BS	108-90-7	Chlorobenzene	BSP	REC	99	%	82-118
VI1685-BS	75-00-3	Chloroethane	BSP	REC	93	%	60-138
VI1685-BS	67-66-3	Chloroform	BSP	REC	101	%	79-124
VI1685-BS	95-49-8	o-Chlorotoluene	BSP	REC	102	%	79-122
VI1685-BS	106-43-4	p-Chlorotoluene	BSP	REC	102	%	78-122
VI1685-BS	124-48-1	Dibromochloromethane	BSP	REC	103	%	74-126
VI1685-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	93	%	62-128
VI1685-BS	106-93-4	1,2-Dibromoethane	BSP	REC	102	%	77-121
VI1685-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	106	%	32-152
VI1685-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	100	%	80-119
VI1685-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	102	%	80-119
VI1685-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	97	%	79-118
VI1685-BS	75-34-3	1,1-Dichloroethane	BSP	REC	106	%	77-125
VI1685-BS	107-06-2	1,2-Dichloroethane	BSP	REC	98	%	73-128
VI1685-BS	75-35-4	1,1-Dichloroethylene	BSP	REC	107	%	71-131
VI1685-BS	156-59-2	cis-1,2-Dichloroethylene	BSP	REC	104	%	78-123
VI1685-BS	156-60-5	trans-1,2-Dichloroethylene	BSP	REC	106	%	75-124
VI1685-BS	78-87-5	1,2-Dichloropropane	BSP	REC	104	%	78-122
VI1685-BS	142-28-9	1,3-Dichloropropane	BSP	REC	97	%	80-119
VI1685-BS	594-20-7	2,2-Dichloropropane	BSP	REC	117	%	60-139
VI1685-BS	563-58-6	1,1-Dichloropropene	BSP	REC	108	%	79-125
VI1685-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	96	%	75-124
VI1685-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	102	%	73-127
VI1685-BS	100-41-4	Ethylbenzene	BSP	REC	103	%	79-121
VI1685-BS	87-68-3	Hexachlorobutadiene	BSP	REC	108	%	66-134
VI1685-BS	591-78-6	2-Hexanone	BSP	REC	98	%	57-139
VI1685-BS	98-82-8	Isopropylbenzene	BSP	REC	111	%	72-131
VI1685-BS	99-87-6	p-Isopropyltoluene	BSP	REC	107	%	77-127
VI1685-BS	74-83-9	Methyl Bromide	BSP	REC	99	%	53-141
VI1685-BS	74-87-3	Methyl Chloride	BSP	REC	92	%	50-139

* Sample used for QC is not from job FA55941

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VI1685-BS	74-88-4	Methyl Iodide	BSP	REC	98	%	69-131
VI1685-BS	74-95-3	Methylene Bromide	BSP	REC	102	%	79-123
VI1685-BS	75-09-2	Methylene Chloride	BSP	REC	104	%	74-124
VI1685-BS	108-10-1	4-Methyl-2-pentanone (MIBK)	BSP	REC	98	%	67-130
VI1685-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	100	%	71-124
VI1685-BS	91-20-3	Naphthalene	BSP	REC	96	%	61-128
VI1685-BS	103-65-1	n-Propylbenzene	BSP	REC	104	%	76-126
VI1685-BS	100-42-5	Styrene	BSP	REC	106	%	78-123
VI1685-BS	630-20-6	1,1,1,2-Tetrachloroethane	BSP	REC	99	%	78-124
VI1685-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	102	%	71-121
VI1685-BS	127-18-4	Tetrachloroethylene	BSP	REC	104	%	74-129
VI1685-BS	108-88-3	Toluene	BSP	REC	101	%	80-121
VI1685-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	103	%	69-129
VI1685-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	103	%	69-130
VI1685-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	102	%	74-131
VI1685-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	102	%	80-119
VI1685-BS	79-01-6	Trichloroethylene	BSP	REC	103	%	79-123
VI1685-BS	75-69-4	Trichlorofluoromethane	BSP	REC	106	%	65-141
VI1685-BS	96-18-4	1,2,3-Trichloropropane	BSP	REC	98	%	73-122
VI1685-BS	95-63-6	1,2,4-Trimethylbenzene	BSP	REC	102	%	76-124
VI1685-BS	108-67-8	1,3,5-Trimethylbenzene	BSP	REC	106	%	75-124
VI1685-BS	108-05-4	Vinyl Acetate	BSP	REC	95	%	54-146
VI1685-BS	75-01-4	Vinyl Chloride	BSP	REC	101	%	58-137
VI1685-BS		m,p-Xylene	BSP	REC	104	%	80-121
VI1685-BS	95-47-6	o-Xylene	BSP	REC	104	%	78-122
VI1685-BS	1330-20-7	Xylene (total)	BSP	REC	104	%	79-121
VI1685-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	101	%	80-119
VI1685-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	101	%	81-118
VI1685-BS	2037-26-5	Toluene-D8	BSP	SURR	100	%	89-112
VI1685-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	100	%	85-114
FA55941-5MS	67-64-1	Acetone	MS	REC	86	%	39-160
FA55941-5MS	71-43-2	Benzene	MS	REC	98	%	79-120
FA55941-5MS	108-86-1	Bromobenzene	MS	REC	98	%	80-120
FA55941-5MS	74-97-5	Bromochloromethane	MS	REC	100	%	78-123
FA55941-5MS	75-27-4	Bromodichloromethane	MS	REC	98	%	79-125
FA55941-5MS	75-25-2	Bromoform	MS	REC	82	%	66-130
FA55941-5MS	78-93-3	2-Butanone (MEK)	MS	REC	91	%	56-143
FA55941-5MS	104-51-8	n-Butylbenzene	MS	REC	104	%	75-128
FA55941-5MS	135-98-8	sec-Butylbenzene	MS	REC	102	%	77-126
FA55941-5MS	98-06-6	tert-Butylbenzene	MS	REC	98	%	78-124
FA55941-5MS	75-15-0	Carbon Disulfide	MS	REC	90	%	64-133
FA55941-5MS	56-23-5	Carbon Tetrachloride	MS	REC	95	%	72-136
FA55941-5MS	108-90-7	Chlorobenzene	MS	REC	96	%	82-118
FA55941-5MS	75-00-3	Chloroethane	MS	REC	90	%	60-138
FA55941-5MS	67-66-3	Chloroform	MS	REC	96	%	79-124

* Sample used for QC is not from job FA55941

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA55941-5MS	95-49-8	o-Chlorotoluene	MS	REC	99	%	79-122
FA55941-5MS	106-43-4	p-Chlorotoluene	MS	REC	99	%	78-122
FA55941-5MS	124-48-1	Dibromochloromethane	MS	REC	94	%	74-126
FA55941-5MS	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	85	%	62-128
FA55941-5MS	106-93-4	1,2-Dibromoethane	MS	REC	96	%	77-121
FA55941-5MS	75-71-8	Dichlorodifluoromethane	MS	REC	102	%	32-152
FA55941-5MS	95-50-1	1,2-Dichlorobenzene	MS	REC	95	%	80-119
FA55941-5MS	541-73-1	1,3-Dichlorobenzene	MS	REC	98	%	80-119
FA55941-5MS	106-46-7	1,4-Dichlorobenzene	MS	REC	94	%	79-118
FA55941-5MS	75-34-3	1,1-Dichloroethane	MS	REC	103	%	77-125
FA55941-5MS	107-06-2	1,2-Dichloroethane	MS	REC	95	%	73-128
FA55941-5MS	75-35-4	1,1-Dichloroethylene	MS	REC	104	%	71-131
FA55941-5MS	156-59-2	cis-1,2-Dichloroethylene	MS	REC	98	%	78-123
FA55941-5MS	156-60-5	trans-1,2-Dichloroethylene	MS	REC	101	%	75-124
FA55941-5MS	78-87-5	1,2-Dichloropropane	MS	REC	101	%	78-122
FA55941-5MS	142-28-9	1,3-Dichloropropane	MS	REC	93	%	80-119
FA55941-5MS	594-20-7	2,2-Dichloropropane	MS	REC	106	%	60-139
FA55941-5MS	563-58-6	1,1-Dichloropropene	MS	REC	102	%	79-125
FA55941-5MS	10061-01-5	cis-1,3-Dichloropropene	MS	REC	83	%	75-124
FA55941-5MS	10061-02-6	trans-1,3-Dichloropropene	MS	REC	101	%	73-127
FA55941-5MS	100-41-4	Ethylbenzene	MS	REC	98	%	79-121
FA55941-5MS	87-68-3	Hexachlorobutadiene	MS	REC	101	%	66-134
FA55941-5MS	591-78-6	2-Hexanone	MS	REC	94	%	57-139
FA55941-5MS	98-82-8	Isopropylbenzene	MS	REC	106	%	72-131
FA55941-5MS	99-87-6	p-Isopropyltoluene	MS	REC	103	%	77-127
FA55941-5MS	74-83-9	Methyl Bromide	MS	REC	92	%	53-141
FA55941-5MS	74-87-3	Methyl Chloride	MS	REC	92	%	50-139
FA55941-5MS	74-88-4	Methyl Iodide	MS	REC	94	%	69-131
FA55941-5MS	74-95-3	Methylene Bromide	MS	REC	98	%	79-123
FA55941-5MS	75-09-2	Methylene Chloride	MS	REC	104	%	74-124
FA55941-5MS	108-10-1	4-Methyl-2-pentanone (MIBK)	MS	REC	96	%	67-130
FA55941-5MS	1634-04-4	Methyl Tert Butyl Ether	MS	REC	92	%	71-124
FA55941-5MS	91-20-3	Naphthalene	MS	REC	90	%	61-128
FA55941-5MS	103-65-1	n-Propylbenzene	MS	REC	100	%	76-126
FA55941-5MS	100-42-5	Styrene	MS	REC	101	%	78-123
FA55941-5MS	630-20-6	1,1,1,2-Tetrachloroethane	MS	REC	94	%	78-124
FA55941-5MS	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	100	%	71-121
FA55941-5MS	127-18-4	Tetrachloroethylene	MS	REC	97	%	74-129
FA55941-5MS	108-88-3	Toluene	MS	REC	98	%	80-121
FA55941-5MS	87-61-6	1,2,3-Trichlorobenzene	MS	REC	96	%	69-129
FA55941-5MS	120-82-1	1,2,4-Trichlorobenzene	MS	REC	96	%	69-130
FA55941-5MS	71-55-6	1,1,1-Trichloroethane	MS	REC	98	%	74-131
FA55941-5MS	79-00-5	1,1,2-Trichloroethane	MS	REC	100	%	80-119
FA55941-5MS	79-01-6	Trichloroethylene	MS	REC	101	%	79-123
FA55941-5MS	75-69-4	Trichlorofluoromethane	MS	REC	107	%	65-141

* Sample used for QC is not from job FA55941

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA55941-5MS	96-18-4	1,2,3-Trichloropropane	MS	REC	96	%	73-122
FA55941-5MS	95-63-6	1,2,4-Trimethylbenzene	MS	REC	97	%	76-124
FA55941-5MS	108-67-8	1,3,5-Trimethylbenzene	MS	REC	101	%	75-124
FA55941-5MS	108-05-4	Vinyl Acetate	MS	REC	90	%	54-146
FA55941-5MS	75-01-4	Vinyl Chloride	MS	REC	91	%	58-137
FA55941-5MS		m,p-Xylene	MS	REC	101	%	80-121
FA55941-5MS	95-47-6	o-Xylene	MS	REC	99	%	78-122
FA55941-5MS	1330-20-7	Xylene (total)	MS	REC	100	%	79-121
FA55941-5MS	1868-53-7	Dibromofluoromethane	MS	SURR	101	%	80-119
FA55941-5MS	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	101	%	81-118
FA55941-5MS	2037-26-5	Toluene-D8	MS	SURR	99	%	89-112
FA55941-5MS	460-00-4	4-Bromofluorobenzene	MS	SURR	100	%	85-114
FA55941-5MSD	67-64-1	Acetone	MSD	REC	90	%	39-160
FA55941-5MSD	67-64-1	Acetone	MSD	RPD	5	%	20
FA55941-5MSD	71-43-2	Benzene	MSD	REC	101	%	79-120
FA55941-5MSD	71-43-2	Benzene	MSD	RPD	3	%	20
FA55941-5MSD	108-86-1	Bromobenzene	MSD	REC	100	%	80-120
FA55941-5MSD	108-86-1	Bromobenzene	MSD	RPD	2	%	20
FA55941-5MSD	74-97-5	Bromochloromethane	MSD	REC	102	%	78-123
FA55941-5MSD	74-97-5	Bromochloromethane	MSD	RPD	2	%	20
FA55941-5MSD	75-27-4	Bromodichloromethane	MSD	REC	100	%	79-125
FA55941-5MSD	75-27-4	Bromodichloromethane	MSD	RPD	2	%	20
FA55941-5MSD	75-25-2	Bromoform	MSD	REC	86	%	66-130
FA55941-5MSD	75-25-2	Bromoform	MSD	RPD	4	%	20
FA55941-5MSD	78-93-3	2-Butanone (MEK)	MSD	REC	96	%	56-143
FA55941-5MSD	78-93-3	2-Butanone (MEK)	MSD	RPD	5	%	20
FA55941-5MSD	104-51-8	n-Butylbenzene	MSD	REC	108	%	75-128
FA55941-5MSD	104-51-8	n-Butylbenzene	MSD	RPD	3	%	20
FA55941-5MSD	135-98-8	sec-Butylbenzene	MSD	REC	104	%	77-126
FA55941-5MSD	135-98-8	sec-Butylbenzene	MSD	RPD	2	%	20
FA55941-5MSD	98-06-6	tert-Butylbenzene	MSD	REC	102	%	78-124
FA55941-5MSD	98-06-6	tert-Butylbenzene	MSD	RPD	4	%	20
FA55941-5MSD	75-15-0	Carbon Disulfide	MSD	REC	93	%	64-133
FA55941-5MSD	75-15-0	Carbon Disulfide	MSD	RPD	4	%	20
FA55941-5MSD	56-23-5	Carbon Tetrachloride	MSD	REC	98	%	72-136
FA55941-5MSD	56-23-5	Carbon Tetrachloride	MSD	RPD	2	%	20
FA55941-5MSD	108-90-7	Chlorobenzene	MSD	REC	98	%	82-118
FA55941-5MSD	108-90-7	Chlorobenzene	MSD	RPD	2	%	20
FA55941-5MSD	75-00-3	Chloroethane	MSD	REC	94	%	60-138
FA55941-5MSD	75-00-3	Chloroethane	MSD	RPD	3	%	20
FA55941-5MSD	67-66-3	Chloroform	MSD	REC	98	%	79-124
FA55941-5MSD	67-66-3	Chloroform	MSD	RPD	2	%	20
FA55941-5MSD	95-49-8	o-Chlorotoluene	MSD	REC	102	%	79-122
FA55941-5MSD	95-49-8	o-Chlorotoluene	MSD	RPD	3	%	20
FA55941-5MSD	106-43-4	p-Chlorotoluene	MSD	REC	102	%	78-122

* Sample used for QC is not from job FA55941

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA55941-5MSD	106-43-4	p-Chlorotoluene	MSD	RPD	3	%	20
FA55941-5MSD	124-48-1	Dibromochloromethane	MSD	REC	98	%	74-126
FA55941-5MSD	124-48-1	Dibromochloromethane	MSD	RPD	3	%	20
FA55941-5MSD	96-12-8	1,2-Dibromo-3-chloropropane	MSD	REC	88	%	62-128
FA55941-5MSD	96-12-8	1,2-Dibromo-3-chloropropane	MSD	RPD	4	%	20
FA55941-5MSD	106-93-4	1,2-Dibromoethane	MSD	REC	100	%	77-121
FA55941-5MSD	106-93-4	1,2-Dibromoethane	MSD	RPD	4	%	20
FA55941-5MSD	75-71-8	Dichlorodifluoromethane	MSD	REC	104	%	32-152
FA55941-5MSD	75-71-8	Dichlorodifluoromethane	MSD	RPD	2	%	20
FA55941-5MSD	95-50-1	1,2-Dichlorobenzene	MSD	REC	98	%	80-119
FA55941-5MSD	95-50-1	1,2-Dichlorobenzene	MSD	RPD	3	%	20
FA55941-5MSD	541-73-1	1,3-Dichlorobenzene	MSD	REC	101	%	80-119
FA55941-5MSD	541-73-1	1,3-Dichlorobenzene	MSD	RPD	2	%	20
FA55941-5MSD	106-46-7	1,4-Dichlorobenzene	MSD	REC	97	%	79-118
FA55941-5MSD	106-46-7	1,4-Dichlorobenzene	MSD	RPD	3	%	20
FA55941-5MSD	75-34-3	1,1-Dichloroethane	MSD	REC	106	%	77-125
FA55941-5MSD	75-34-3	1,1-Dichloroethane	MSD	RPD	3	%	20
FA55941-5MSD	107-06-2	1,2-Dichloroethane	MSD	REC	99	%	73-128
FA55941-5MSD	107-06-2	1,2-Dichloroethane	MSD	RPD	4	%	20
FA55941-5MSD	75-35-4	1,1-Dichloroethylene	MSD	REC	107	%	71-131
FA55941-5MSD	75-35-4	1,1-Dichloroethylene	MSD	RPD	3	%	20
FA55941-5MSD	156-59-2	cis-1,2-Dichloroethylene	MSD	REC	102	%	78-123
FA55941-5MSD	156-59-2	cis-1,2-Dichloroethylene	MSD	RPD	4	%	20
FA55941-5MSD	156-60-5	trans-1,2-Dichloroethylene	MSD	REC	106	%	75-124
FA55941-5MSD	156-60-5	trans-1,2-Dichloroethylene	MSD	RPD	4	%	20
FA55941-5MSD	78-87-5	1,2-Dichloropropane	MSD	REC	104	%	78-122
FA55941-5MSD	78-87-5	1,2-Dichloropropane	MSD	RPD	2	%	20
FA55941-5MSD	142-28-9	1,3-Dichloropropane	MSD	REC	97	%	80-119
FA55941-5MSD	142-28-9	1,3-Dichloropropane	MSD	RPD	4	%	20
FA55941-5MSD	594-20-7	2,2-Dichloropropane	MSD	REC	113	%	60-139
FA55941-5MSD	594-20-7	2,2-Dichloropropane	MSD	RPD	6	%	20
FA55941-5MSD	563-58-6	1,1-Dichloropropene	MSD	REC	106	%	79-125
FA55941-5MSD	563-58-6	1,1-Dichloropropene	MSD	RPD	3	%	20
FA55941-5MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	86	%	75-124
FA55941-5MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	4	%	20
FA55941-5MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	108	%	73-127
FA55941-5MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	6	%	20
FA55941-5MSD	100-41-4	Ethylbenzene	MSD	REC	101	%	79-121
FA55941-5MSD	100-41-4	Ethylbenzene	MSD	RPD	3	%	20
FA55941-5MSD	87-68-3	Hexachlorobutadiene	MSD	REC	106	%	66-134
FA55941-5MSD	87-68-3	Hexachlorobutadiene	MSD	RPD	5	%	20
FA55941-5MSD	591-78-6	2-Hexanone	MSD	REC	99	%	57-139
FA55941-5MSD	591-78-6	2-Hexanone	MSD	RPD	6	%	20
FA55941-5MSD	98-82-8	Isopropylbenzene	MSD	REC	110	%	72-131
FA55941-5MSD	98-82-8	Isopropylbenzene	MSD	RPD	4	%	20

* Sample used for QC is not from job FA55941

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA55941-5MSD	99-87-6	p-Isopropyltoluene	MSD	REC	106	%	77-127
FA55941-5MSD	99-87-6	p-Isopropyltoluene	MSD	RPD	3	%	20
FA55941-5MSD	74-83-9	Methyl Bromide	MSD	REC	94	%	53-141
FA55941-5MSD	74-83-9	Methyl Bromide	MSD	RPD	2	%	20
FA55941-5MSD	74-87-3	Methyl Chloride	MSD	REC	92	%	50-139
FA55941-5MSD	74-87-3	Methyl Chloride	MSD	RPD	0	%	20
FA55941-5MSD	74-88-4	Methyl Iodide	MSD	REC	98	%	69-131
FA55941-5MSD	74-88-4	Methyl Iodide	MSD	RPD	5	%	20
FA55941-5MSD	74-95-3	Methylene Bromide	MSD	REC	101	%	79-123
FA55941-5MSD	74-95-3	Methylene Bromide	MSD	RPD	2	%	20
FA55941-5MSD	75-09-2	Methylene Chloride	MSD	REC	105	%	74-124
FA55941-5MSD	75-09-2	Methylene Chloride	MSD	RPD	2	%	20
FA55941-5MSD	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	REC	101	%	67-130
FA55941-5MSD	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	RPD	5	%	20
FA55941-5MSD	1634-04-4	Methyl Tert Butyl Ether	MSD	REC	98	%	71-124
FA55941-5MSD	1634-04-4	Methyl Tert Butyl Ether	MSD	RPD	6	%	20
FA55941-5MSD	91-20-3	Naphthalene	MSD	REC	94	%	61-128
FA55941-5MSD	91-20-3	Naphthalene	MSD	RPD	5	%	20
FA55941-5MSD	103-65-1	n-Propylbenzene	MSD	REC	103	%	76-126
FA55941-5MSD	103-65-1	n-Propylbenzene	MSD	RPD	3	%	20
FA55941-5MSD	100-42-5	Styrene	MSD	REC	104	%	78-123
FA55941-5MSD	100-42-5	Styrene	MSD	RPD	3	%	20
FA55941-5MSD	630-20-6	1,1,1,2-Tetrachloroethane	MSD	REC	96	%	78-124
FA55941-5MSD	630-20-6	1,1,1,2-Tetrachloroethane	MSD	RPD	2	%	20
FA55941-5MSD	79-34-5	1,1,2,2-Tetrachloroethane	MSD	REC	102	%	71-121
FA55941-5MSD	79-34-5	1,1,2,2-Tetrachloroethane	MSD	RPD	2	%	20
FA55941-5MSD	127-18-4	Tetrachloroethylene	MSD	REC	100	%	74-129
FA55941-5MSD	127-18-4	Tetrachloroethylene	MSD	RPD	2	%	20
FA55941-5MSD	108-88-3	Toluene	MSD	REC	100	%	80-121
FA55941-5MSD	108-88-3	Toluene	MSD	RPD	3	%	20
FA55941-5MSD	87-61-6	1,2,3-Trichlorobenzene	MSD	REC	100	%	69-129
FA55941-5MSD	87-61-6	1,2,3-Trichlorobenzene	MSD	RPD	4	%	20
FA55941-5MSD	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	99	%	69-130
FA55941-5MSD	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	3	%	20
FA55941-5MSD	71-55-6	1,1,1-Trichloroethane	MSD	REC	100	%	74-131
FA55941-5MSD	71-55-6	1,1,1-Trichloroethane	MSD	RPD	3	%	20
FA55941-5MSD	79-00-5	1,1,2-Trichloroethane	MSD	REC	102	%	80-119
FA55941-5MSD	79-00-5	1,1,2-Trichloroethane	MSD	RPD	2	%	20
FA55941-5MSD	79-01-6	Trichloroethylene	MSD	REC	103	%	79-123
FA55941-5MSD	79-01-6	Trichloroethylene	MSD	RPD	2	%	20
FA55941-5MSD	75-69-4	Trichlorofluoromethane	MSD	REC	108	%	65-141
FA55941-5MSD	75-69-4	Trichlorofluoromethane	MSD	RPD	1	%	20
FA55941-5MSD	96-18-4	1,2,3-Trichloropropane	MSD	REC	98	%	73-122
FA55941-5MSD	96-18-4	1,2,3-Trichloropropane	MSD	RPD	2	%	20
FA55941-5MSD	95-63-6	1,2,4-Trimethylbenzene	MSD	REC	100	%	76-124

* Sample used for QC is not from job FA55941

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA55941-5MSD	95-63-6	1,2,4-Trimethylbenzene	MSD	RPD	2	%	20
FA55941-5MSD	108-67-8	1,3,5-Trimethylbenzene	MSD	REC	104	%	75-124
FA55941-5MSD	108-67-8	1,3,5-Trimethylbenzene	MSD	RPD	3	%	20
FA55941-5MSD	108-05-4	Vinyl Acetate	MSD	REC	94	%	54-146
FA55941-5MSD	108-05-4	Vinyl Acetate	MSD	RPD	4	%	20
FA55941-5MSD	75-01-4	Vinyl Chloride	MSD	REC	94	%	58-137
FA55941-5MSD	75-01-4	Vinyl Chloride	MSD	RPD	4	%	20
FA55941-5MSD		m,p-Xylene	MSD	REC	103	%	80-121
FA55941-5MSD		m,p-Xylene	MSD	RPD	3	%	20
FA55941-5MSD	95-47-6	o-Xylene	MSD	REC	103	%	78-122
FA55941-5MSD	95-47-6	o-Xylene	MSD	RPD	4	%	20
FA55941-5MSD	1330-20-7	Xylene (total)	MSD	REC	103	%	79-121
FA55941-5MSD	1330-20-7	Xylene (total)	MSD	RPD	3	%	20
FA55941-5MSD	1868-53-7	Dibromofluoromethane	MSD	SURR	101	%	80-119
FA55941-5MSD	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	101	%	81-118
FA55941-5MSD	2037-26-5	Toluene-D8	MSD	SURR	99	%	89-112
FA55941-5MSD	460-00-4	4-Bromofluorobenzene	MSD	SURR	99	%	85-114
VI1685-MB	1868-53-7	Dibromofluoromethane	MB	SURR	96	%	80-119
VI1685-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	100	%	81-118
VI1685-MB	2037-26-5	Toluene-D8	MB	SURR	99	%	89-112
VI1685-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	100	%	85-114
FA55941-1	1868-53-7	Dibromofluoromethane	SAMP	SURR	98	%	80-119
FA55941-1	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	104	%	81-118
FA55941-1	2037-26-5	Toluene-D8	SAMP	SURR	101	%	89-112
FA55941-1	460-00-4	4-Bromofluorobenzene	SAMP	SURR	98	%	85-114
FA55941-2	1868-53-7	Dibromofluoromethane	SAMP	SURR	98	%	80-119
FA55941-2	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
FA55941-2	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
FA55941-2	460-00-4	4-Bromofluorobenzene	SAMP	SURR	98	%	85-114
FA55941-3	1868-53-7	Dibromofluoromethane	SAMP	SURR	97	%	80-119
FA55941-3	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	102	%	81-118
FA55941-3	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
FA55941-3	460-00-4	4-Bromofluorobenzene	SAMP	SURR	99	%	85-114
FA55941-4	1868-53-7	Dibromofluoromethane	SAMP	SURR	96	%	80-119
FA55941-4	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	102	%	81-118
FA55941-4	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA55941-4	460-00-4	4-Bromofluorobenzene	SAMP	SURR	98	%	85-114
FA55941-5	1868-53-7	Dibromofluoromethane	SAMP	SURR	97	%	80-119
FA55941-5	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
FA55941-5	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA55941-5	460-00-4	4-Bromofluorobenzene	SAMP	SURR	98	%	85-114
VI1686	SW846 8260C						
VI1686-BS	67-64-1	Acetone	BSP	REC	87	%	39-160

* Sample used for QC is not from job FA55941

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VI1686-BS	71-43-2	Benzene	BSP	REC	102	%	79-120
VI1686-BS	108-86-1	Bromobenzene	BSP	REC	102	%	80-120
VI1686-BS	74-97-5	Bromochloromethane	BSP	REC	103	%	78-123
VI1686-BS	75-27-4	Bromodichloromethane	BSP	REC	103	%	79-125
VI1686-BS	75-25-2	Bromoform	BSP	REC	90	%	66-130
VI1686-BS	78-93-3	2-Butanone (MEK)	BSP	REC	89	%	56-143
VI1686-BS	104-51-8	n-Butylbenzene	BSP	REC	110	%	75-128
VI1686-BS	135-98-8	sec-Butylbenzene	BSP	REC	107	%	77-126
VI1686-BS	98-06-6	tert-Butylbenzene	BSP	REC	105	%	78-124
VI1686-BS	75-15-0	Carbon Disulfide	BSP	REC	106	%	64-133
VI1686-BS	56-23-5	Carbon Tetrachloride	BSP	REC	103	%	72-136
VI1686-BS	108-90-7	Chlorobenzene	BSP	REC	99	%	82-118
VI1686-BS	75-00-3	Chloroethane	BSP	REC	96	%	60-138
VI1686-BS	67-66-3	Chloroform	BSP	REC	102	%	79-124
VI1686-BS	95-49-8	o-Chlorotoluene	BSP	REC	104	%	79-122
VI1686-BS	106-43-4	p-Chlorotoluene	BSP	REC	104	%	78-122
VI1686-BS	124-48-1	Dibromochloromethane	BSP	REC	101	%	74-126
VI1686-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	88	%	62-128
VI1686-BS	106-93-4	1,2-Dibromoethane	BSP	REC	99	%	77-121
VI1686-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	104	%	32-152
VI1686-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	101	%	80-119
VI1686-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	104	%	80-119
VI1686-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	99	%	79-118
VI1686-BS	75-34-3	1,1-Dichloroethane	BSP	REC	107	%	77-125
VI1686-BS	107-06-2	1,2-Dichloroethane	BSP	REC	98	%	73-128
VI1686-BS	75-35-4	1,1-Dichloroethylene	BSP	REC	107	%	71-131
VI1686-BS	156-59-2	cis-1,2-Dichloroethylene	BSP	REC	103	%	78-123
VI1686-BS	156-60-5	trans-1,2-Dichloroethylene	BSP	REC	106	%	75-124
VI1686-BS	78-87-5	1,2-Dichloropropane	BSP	REC	104	%	78-122
VI1686-BS	142-28-9	1,3-Dichloropropane	BSP	REC	95	%	80-119
VI1686-BS	594-20-7	2,2-Dichloropropane	BSP	REC	119	%	60-139
VI1686-BS	563-58-6	1,1-Dichloropropene	BSP	REC	107	%	79-125
VI1686-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	98	%	75-124
VI1686-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	101	%	73-127
VI1686-BS	100-41-4	Ethylbenzene	BSP	REC	103	%	79-121
VI1686-BS	87-68-3	Hexachlorobutadiene	BSP	REC	108	%	66-134
VI1686-BS	591-78-6	2-Hexanone	BSP	REC	89	%	57-139
VI1686-BS	98-82-8	Isopropylbenzene	BSP	REC	111	%	72-131
VI1686-BS	99-87-6	p-Isopropyltoluene	BSP	REC	109	%	77-127
VI1686-BS	74-83-9	Methyl Bromide	BSP	REC	96	%	53-141
VI1686-BS	74-87-3	Methyl Chloride	BSP	REC	93	%	50-139
VI1686-BS	74-88-4	Methyl Iodide	BSP	REC	98	%	69-131
VI1686-BS	74-95-3	Methylene Bromide	BSP	REC	101	%	79-123
VI1686-BS	75-09-2	Methylene Chloride	BSP	REC	107	%	74-124
VI1686-BS	108-10-1	4-Methyl-2-pentanone (MIBK)	BSP	REC	92	%	67-130

* Sample used for QC is not from job FA55941

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VI1686-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	95	%	71-124
VI1686-BS	91-20-3	Naphthalene	BSP	REC	92	%	61-128
VI1686-BS	103-65-1	n-Propylbenzene	BSP	REC	106	%	76-126
VI1686-BS	100-42-5	Styrene	BSP	REC	107	%	78-123
VI1686-BS	630-20-6	1,1,1,2-Tetrachloroethane	BSP	REC	101	%	78-124
VI1686-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	99	%	71-121
VI1686-BS	127-18-4	Tetrachloroethylene	BSP	REC	102	%	74-129
VI1686-BS	108-88-3	Toluene	BSP	REC	102	%	80-121
VI1686-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	102	%	69-129
VI1686-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	104	%	69-130
VI1686-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	104	%	74-131
VI1686-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	100	%	80-119
VI1686-BS	79-01-6	Trichloroethylene	BSP	REC	105	%	79-123
VI1686-BS	75-69-4	Trichlorofluoromethane	BSP	REC	107	%	65-141
VI1686-BS	96-18-4	1,2,3-Trichloropropane	BSP	REC	94	%	73-122
VI1686-BS	95-63-6	1,2,4-Trimethylbenzene	BSP	REC	103	%	76-124
VI1686-BS	108-67-8	1,3,5-Trimethylbenzene	BSP	REC	108	%	75-124
VI1686-BS	108-05-4	Vinyl Acetate	BSP	REC	89	%	54-146
VI1686-BS	75-01-4	Vinyl Chloride	BSP	REC	97	%	58-137
VI1686-BS		m,p-Xylene	BSP	REC	105	%	80-121
VI1686-BS	95-47-6	o-Xylene	BSP	REC	105	%	78-122
VI1686-BS	1330-20-7	Xylene (total)	BSP	REC	105	%	79-121
VI1686-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	101	%	80-119
VI1686-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	99	%	81-118
VI1686-BS	2037-26-5	Toluene-D8	BSP	SURR	99	%	89-112
VI1686-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	100	%	85-114
FA56212-10MS*	67-64-1	Acetone	MS	REC	79	%	39-160
FA56212-10MS*	71-43-2	Benzene	MS	REC	98	%	79-120
FA56212-10MS*	108-86-1	Bromobenzene	MS	REC	98	%	80-120
FA56212-10MS*	74-97-5	Bromochloromethane	MS	REC	98	%	78-123
FA56212-10MS*	75-27-4	Bromodichloromethane	MS	REC	98	%	79-125
FA56212-10MS*	75-25-2	Bromoform	MS	REC	83	%	66-130
FA56212-10MS*	78-93-3	2-Butanone (MEK)	MS	REC	84	%	56-143
FA56212-10MS*	104-51-8	n-Butylbenzene	MS	REC	105	%	75-128
FA56212-10MS*	135-98-8	sec-Butylbenzene	MS	REC	103	%	77-126
FA56212-10MS*	98-06-6	tert-Butylbenzene	MS	REC	100	%	78-124
FA56212-10MS*	75-15-0	Carbon Disulfide	MS	REC	97	%	64-133
FA56212-10MS*	56-23-5	Carbon Tetrachloride	MS	REC	99	%	72-136
FA56212-10MS*	108-90-7	Chlorobenzene	MS	REC	95	%	82-118
FA56212-10MS*	75-00-3	Chloroethane	MS	REC	100	%	60-138
FA56212-10MS*	67-66-3	Chloroform	MS	REC	97	%	79-124
FA56212-10MS*	95-49-8	o-Chlorotoluene	MS	REC	99	%	79-122
FA56212-10MS*	106-43-4	p-Chlorotoluene	MS	REC	99	%	78-122
FA56212-10MS*	124-48-1	Dibromochloromethane	MS	REC	94	%	74-126
FA56212-10MS*	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	80	%	62-128

* Sample used for QC is not from job FA55941

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56212-10MS*	106-93-4	1,2-Dibromoethane	MS	REC	94	%	77-121
FA56212-10MS*	75-71-8	Dichlorodifluoromethane	MS	REC	100	%	32-152
FA56212-10MS*	95-50-1	1,2-Dichlorobenzene	MS	REC	96	%	80-119
FA56212-10MS*	541-73-1	1,3-Dichlorobenzene	MS	REC	99	%	80-119
FA56212-10MS*	106-46-7	1,4-Dichlorobenzene	MS	REC	94	%	79-118
FA56212-10MS*	75-34-3	1,1-Dichloroethane	MS	REC	103	%	77-125
FA56212-10MS*	107-06-2	1,2-Dichloroethane	MS	REC	94	%	73-128
FA56212-10MS*	75-35-4	1,1-Dichloroethylene	MS	REC	102	%	71-131
FA56212-10MS*	156-59-2	cis-1,2-Dichloroethylene	MS	REC	99	%	78-123
FA56212-10MS*	156-60-5	trans-1,2-Dichloroethylene	MS	REC	102	%	75-124
FA56212-10MS*	78-87-5	1,2-Dichloropropane	MS	REC	100	%	78-122
FA56212-10MS*	142-28-9	1,3-Dichloropropane	MS	REC	90	%	80-119
FA56212-10MS*	594-20-7	2,2-Dichloropropane	MS	REC	114	%	60-139
FA56212-10MS*	563-58-6	1,1-Dichloropropene	MS	REC	103	%	79-125
FA56212-10MS*	10061-01-5	cis-1,3-Dichloropropene	MS	REC	86	%	75-124
FA56212-10MS*	10061-02-6	trans-1,3-Dichloropropene	MS	REC	102	%	73-127
FA56212-10MS*	100-41-4	Ethylbenzene	MS	REC	98	%	79-121
FA56212-10MS*	87-68-3	Hexachlorobutadiene	MS	REC	103	%	66-134
FA56212-10MS*	591-78-6	2-Hexanone	MS	REC	85	%	57-139
FA56212-10MS*	98-82-8	Isopropylbenzene	MS	REC	106	%	72-131
FA56212-10MS*	99-87-6	p-Isopropyltoluene	MS	REC	104	%	77-127
FA56212-10MS*	74-83-9	Methyl Bromide	MS	REC	90	%	53-141
FA56212-10MS*	74-87-3	Methyl Chloride	MS	REC	91	%	50-139
FA56212-10MS*	74-88-4	Methyl Iodide	MS	REC	94	%	69-131
FA56212-10MS*	74-95-3	Methylene Bromide	MS	REC	96	%	79-123
FA56212-10MS*	75-09-2	Methylene Chloride	MS	REC	102	%	74-124
FA56212-10MS*	108-10-1	4-Methyl-2-pentanone (MIBK)	MS	REC	88	%	67-130
FA56212-10MS*	1634-04-4	Methyl Tert Butyl Ether	MS	REC	90	%	71-124
FA56212-10MS*	91-20-3	Naphthalene	MS	REC	85	%	61-128
FA56212-10MS*	103-65-1	n-Propylbenzene	MS	REC	101	%	76-126
FA56212-10MS*	100-42-5	Styrene	MS	REC	96	%	78-123
FA56212-10MS*	630-20-6	1,1,1,2-Tetrachloroethane	MS	REC	97	%	78-124
FA56212-10MS*	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	95	%	71-121
FA56212-10MS*	127-18-4	Tetrachloroethylene	MS	REC	96	%	74-129
FA56212-10MS*	108-88-3	Toluene	MS	REC	97	%	80-121
FA56212-10MS*	87-61-6	1,2,3-Trichlorobenzene	MS	REC	95	%	69-129
FA56212-10MS*	120-82-1	1,2,4-Trichlorobenzene	MS	REC	96	%	69-130
FA56212-10MS*	71-55-6	1,1,1-Trichloroethane	MS	REC	99	%	74-131
FA56212-10MS*	79-00-5	1,1,2-Trichloroethane	MS	REC	96	%	80-119
FA56212-10MS*	79-01-6	Trichloroethylene	MS	REC	101	%	79-123
FA56212-10MS*	75-69-4	Trichlorofluoromethane	MS	REC	114	%	65-141
FA56212-10MS*	96-18-4	1,2,3-Trichloropropane	MS	REC	90	%	73-122
FA56212-10MS*	95-63-6	1,2,4-Trimethylbenzene	MS	REC	98	%	76-124
FA56212-10MS*	108-67-8	1,3,5-Trimethylbenzene	MS	REC	102	%	75-124
FA56212-10MS*	108-05-4	Vinyl Acetate	MS	REC	81	%	54-146

* Sample used for QC is not from job FA55941

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56212-10MS*	75-01-4	Vinyl Chloride	MS	REC	92	%	58-137
FA56212-10MS*		m,p-Xylene	MS	REC	100	%	80-121
FA56212-10MS*	95-47-6	o-Xylene	MS	REC	100	%	78-122
FA56212-10MS*	1330-20-7	Xylene (total)	MS	REC	100	%	79-121
FA56212-10MS*	1868-53-7	Dibromofluoromethane	MS	SURR	101	%	80-119
FA56212-10MS*	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	100	%	81-118
FA56212-10MS*	2037-26-5	Toluene-D8	MS	SURR	99	%	89-112
FA56212-10MS*	460-00-4	4-Bromofluorobenzene	MS	SURR	100	%	85-114
FA56212-10MSD*	67-64-1	Acetone	MSD	REC	82	%	39-160
FA56212-10MSD*	67-64-1	Acetone	MSD	RPD	4	%	20
FA56212-10MSD*	71-43-2	Benzene	MSD	REC	100	%	79-120
FA56212-10MSD*	71-43-2	Benzene	MSD	RPD	2	%	20
FA56212-10MSD*	108-86-1	Bromobenzene	MSD	REC	100	%	80-120
FA56212-10MSD*	108-86-1	Bromobenzene	MSD	RPD	2	%	20
FA56212-10MSD*	74-97-5	Bromochloromethane	MSD	REC	100	%	78-123
FA56212-10MSD*	74-97-5	Bromochloromethane	MSD	RPD	2	%	20
FA56212-10MSD*	75-27-4	Bromodichloromethane	MSD	REC	101	%	79-125
FA56212-10MSD*	75-27-4	Bromodichloromethane	MSD	RPD	2	%	20
FA56212-10MSD*	75-25-2	Bromoform	MSD	REC	86	%	66-130
FA56212-10MSD*	75-25-2	Bromoform	MSD	RPD	3	%	20
FA56212-10MSD*	78-93-3	2-Butanone (MEK)	MSD	REC	86	%	56-143
FA56212-10MSD*	78-93-3	2-Butanone (MEK)	MSD	RPD	2	%	20
FA56212-10MSD*	104-51-8	n-Butylbenzene	MSD	REC	109	%	75-128
FA56212-10MSD*	104-51-8	n-Butylbenzene	MSD	RPD	3	%	20
FA56212-10MSD*	135-98-8	sec-Butylbenzene	MSD	REC	105	%	77-126
FA56212-10MSD*	135-98-8	sec-Butylbenzene	MSD	RPD	2	%	20
FA56212-10MSD*	98-06-6	tert-Butylbenzene	MSD	REC	102	%	78-124
FA56212-10MSD*	98-06-6	tert-Butylbenzene	MSD	RPD	2	%	20
FA56212-10MSD*	75-15-0	Carbon Disulfide	MSD	REC	99	%	64-133
FA56212-10MSD*	75-15-0	Carbon Disulfide	MSD	RPD	2	%	20
FA56212-10MSD*	56-23-5	Carbon Tetrachloride	MSD	REC	101	%	72-136
FA56212-10MSD*	56-23-5	Carbon Tetrachloride	MSD	RPD	2	%	20
FA56212-10MSD*	108-90-7	Chlorobenzene	MSD	REC	98	%	82-118
FA56212-10MSD*	108-90-7	Chlorobenzene	MSD	RPD	2	%	20
FA56212-10MSD*	75-00-3	Chloroethane	MSD	REC	102	%	60-138
FA56212-10MSD*	75-00-3	Chloroethane	MSD	RPD	2	%	20
FA56212-10MSD*	67-66-3	Chloroform	MSD	REC	98	%	79-124
FA56212-10MSD*	67-66-3	Chloroform	MSD	RPD	2	%	20
FA56212-10MSD*	95-49-8	o-Chlorotoluene	MSD	REC	102	%	79-122
FA56212-10MSD*	95-49-8	o-Chlorotoluene	MSD	RPD	3	%	20
FA56212-10MSD*	106-43-4	p-Chlorotoluene	MSD	REC	102	%	78-122
FA56212-10MSD*	106-43-4	p-Chlorotoluene	MSD	RPD	3	%	20
FA56212-10MSD*	124-48-1	Dibromochloromethane	MSD	REC	97	%	74-126
FA56212-10MSD*	124-48-1	Dibromochloromethane	MSD	RPD	3	%	20
FA56212-10MSD*	96-12-8	1,2-Dibromo-3-chloropropane	MSD	REC	85	%	62-128

* Sample used for QC is not from job FA55941

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56212-10MSD*	96-12-8	1,2-Dibromo-3-chloropropane	MSD	RPD	5	%	20
FA56212-10MSD*	106-93-4	1,2-Dibromoethane	MSD	REC	96	%	77-121
FA56212-10MSD*	106-93-4	1,2-Dibromoethane	MSD	RPD	2	%	20
FA56212-10MSD*	75-71-8	Dichlorodifluoromethane	MSD	REC	103	%	32-152
FA56212-10MSD*	75-71-8	Dichlorodifluoromethane	MSD	RPD	3	%	20
FA56212-10MSD*	95-50-1	1,2-Dichlorobenzene	MSD	REC	98	%	80-119
FA56212-10MSD*	95-50-1	1,2-Dichlorobenzene	MSD	RPD	3	%	20
FA56212-10MSD*	541-73-1	1,3-Dichlorobenzene	MSD	REC	101	%	80-119
FA56212-10MSD*	541-73-1	1,3-Dichlorobenzene	MSD	RPD	2	%	20
FA56212-10MSD*	106-46-7	1,4-Dichlorobenzene	MSD	REC	98	%	79-118
FA56212-10MSD*	106-46-7	1,4-Dichlorobenzene	MSD	RPD	3	%	20
FA56212-10MSD*	75-34-3	1,1-Dichloroethane	MSD	REC	105	%	77-125
FA56212-10MSD*	75-34-3	1,1-Dichloroethane	MSD	RPD	2	%	20
FA56212-10MSD*	107-06-2	1,2-Dichloroethane	MSD	REC	96	%	73-128
FA56212-10MSD*	107-06-2	1,2-Dichloroethane	MSD	RPD	2	%	20
FA56212-10MSD*	75-35-4	1,1-Dichloroethylene	MSD	REC	105	%	71-131
FA56212-10MSD*	75-35-4	1,1-Dichloroethylene	MSD	RPD	3	%	20
FA56212-10MSD*	156-59-2	cis-1,2-Dichloroethylene	MSD	REC	101	%	78-123
FA56212-10MSD*	156-59-2	cis-1,2-Dichloroethylene	MSD	RPD	2	%	20
FA56212-10MSD*	156-60-5	trans-1,2-Dichloroethylene	MSD	REC	104	%	75-124
FA56212-10MSD*	156-60-5	trans-1,2-Dichloroethylene	MSD	RPD	2	%	20
FA56212-10MSD*	78-87-5	1,2-Dichloropropane	MSD	REC	103	%	78-122
FA56212-10MSD*	78-87-5	1,2-Dichloropropane	MSD	RPD	3	%	20
FA56212-10MSD*	142-28-9	1,3-Dichloropropane	MSD	REC	94	%	80-119
FA56212-10MSD*	142-28-9	1,3-Dichloropropane	MSD	RPD	4	%	20
FA56212-10MSD*	594-20-7	2,2-Dichloropropane	MSD	REC	120	%	60-139
FA56212-10MSD*	594-20-7	2,2-Dichloropropane	MSD	RPD	4	%	20
FA56212-10MSD*	563-58-6	1,1-Dichloropropene	MSD	REC	104	%	79-125
FA56212-10MSD*	563-58-6	1,1-Dichloropropene	MSD	RPD	1	%	20
FA56212-10MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	89	%	75-124
FA56212-10MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	4	%	20
FA56212-10MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	105	%	73-127
FA56212-10MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	3	%	20
FA56212-10MSD*	100-41-4	Ethylbenzene	MSD	REC	101	%	79-121
FA56212-10MSD*	100-41-4	Ethylbenzene	MSD	RPD	2	%	20
FA56212-10MSD*	87-68-3	Hexachlorobutadiene	MSD	REC	107	%	66-134
FA56212-10MSD*	87-68-3	Hexachlorobutadiene	MSD	RPD	4	%	20
FA56212-10MSD*	591-78-6	2-Hexanone	MSD	REC	87	%	57-139
FA56212-10MSD*	591-78-6	2-Hexanone	MSD	RPD	3	%	20
FA56212-10MSD*	98-82-8	Isopropylbenzene	MSD	REC	110	%	72-131
FA56212-10MSD*	98-82-8	Isopropylbenzene	MSD	RPD	3	%	20
FA56212-10MSD*	99-87-6	p-Isopropyltoluene	MSD	REC	106	%	77-127
FA56212-10MSD*	99-87-6	p-Isopropyltoluene	MSD	RPD	3	%	20
FA56212-10MSD*	74-83-9	Methyl Bromide	MSD	REC	98	%	53-141
FA56212-10MSD*	74-83-9	Methyl Bromide	MSD	RPD	8	%	20

* Sample used for QC is not from job FA55941

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56212-10MSD*	74-87-3	Methyl Chloride	MSD	REC	92	%	50-139
FA56212-10MSD*	74-87-3	Methyl Chloride	MSD	RPD	1	%	20
FA56212-10MSD*	74-88-4	Methyl Iodide	MSD	REC	96	%	69-131
FA56212-10MSD*	74-88-4	Methyl Iodide	MSD	RPD	2	%	20
FA56212-10MSD*	74-95-3	Methylene Bromide	MSD	REC	98	%	79-123
FA56212-10MSD*	74-95-3	Methylene Bromide	MSD	RPD	1	%	20
FA56212-10MSD*	75-09-2	Methylene Chloride	MSD	REC	103	%	74-124
FA56212-10MSD*	75-09-2	Methylene Chloride	MSD	RPD	1	%	20
FA56212-10MSD*	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	REC	90	%	67-130
FA56212-10MSD*	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	RPD	2	%	20
FA56212-10MSD*	1634-04-4	Methyl Tert Butyl Ether	MSD	REC	96	%	71-124
FA56212-10MSD*	1634-04-4	Methyl Tert Butyl Ether	MSD	RPD	6	%	20
FA56212-10MSD*	91-20-3	Naphthalene	MSD	REC	90	%	61-128
FA56212-10MSD*	91-20-3	Naphthalene	MSD	RPD	5	%	20
FA56212-10MSD*	103-65-1	n-Propylbenzene	MSD	REC	102	%	76-126
FA56212-10MSD*	103-65-1	n-Propylbenzene	MSD	RPD	1	%	20
FA56212-10MSD*	100-42-5	Styrene	MSD	REC	99	%	78-123
FA56212-10MSD*	100-42-5	Styrene	MSD	RPD	2	%	20
FA56212-10MSD*	630-20-6	1,1,1,2-Tetrachloroethane	MSD	REC	98	%	78-124
FA56212-10MSD*	630-20-6	1,1,1,2-Tetrachloroethane	MSD	RPD	1	%	20
FA56212-10MSD*	79-34-5	1,1,2,2-Tetrachloroethane	MSD	REC	97	%	71-121
FA56212-10MSD*	79-34-5	1,1,2,2-Tetrachloroethane	MSD	RPD	3	%	20
FA56212-10MSD*	127-18-4	Tetrachloroethylene	MSD	REC	98	%	74-129
FA56212-10MSD*	127-18-4	Tetrachloroethylene	MSD	RPD	2	%	20
FA56212-10MSD*	108-88-3	Toluene	MSD	REC	99	%	80-121
FA56212-10MSD*	108-88-3	Toluene	MSD	RPD	2	%	20
FA56212-10MSD*	87-61-6	1,2,3-Trichlorobenzene	MSD	REC	99	%	69-129
FA56212-10MSD*	87-61-6	1,2,3-Trichlorobenzene	MSD	RPD	4	%	20
FA56212-10MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	100	%	69-130
FA56212-10MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	4	%	20
FA56212-10MSD*	71-55-6	1,1,1-Trichloroethane	MSD	REC	102	%	74-131
FA56212-10MSD*	71-55-6	1,1,1-Trichloroethane	MSD	RPD	3	%	20
FA56212-10MSD*	79-00-5	1,1,2-Trichloroethane	MSD	REC	100	%	80-119
FA56212-10MSD*	79-00-5	1,1,2-Trichloroethane	MSD	RPD	4	%	20
FA56212-10MSD*	79-01-6	Trichloroethylene	MSD	REC	102	%	79-123
FA56212-10MSD*	79-01-6	Trichloroethylene	MSD	RPD	2	%	20
FA56212-10MSD*	75-69-4	Trichlorofluoromethane	MSD	REC	108	%	65-141
FA56212-10MSD*	75-69-4	Trichlorofluoromethane	MSD	RPD	5	%	20
FA56212-10MSD*	96-18-4	1,2,3-Trichloropropane	MSD	REC	94	%	73-122
FA56212-10MSD*	96-18-4	1,2,3-Trichloropropane	MSD	RPD	5	%	20
FA56212-10MSD*	95-63-6	1,2,4-Trimethylbenzene	MSD	REC	100	%	76-124
FA56212-10MSD*	95-63-6	1,2,4-Trimethylbenzene	MSD	RPD	2	%	20
FA56212-10MSD*	108-67-8	1,3,5-Trimethylbenzene	MSD	REC	105	%	75-124
FA56212-10MSD*	108-67-8	1,3,5-Trimethylbenzene	MSD	RPD	2	%	20
FA56212-10MSD*	108-05-4	Vinyl Acetate	MSD	REC	85	%	54-146

* Sample used for QC is not from job FA55941

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56212-10MSD*	108-05-4	Vinyl Acetate	MSD	RPD	5	%	20
FA56212-10MSD*	75-01-4	Vinyl Chloride	MSD	REC	95	%	58-137
FA56212-10MSD*	75-01-4	Vinyl Chloride	MSD	RPD	3	%	20
FA56212-10MSD*		m,p-Xylene	MSD	REC	103	%	80-121
FA56212-10MSD*		m,p-Xylene	MSD	RPD	3	%	20
FA56212-10MSD*	95-47-6	o-Xylene	MSD	REC	102	%	78-122
FA56212-10MSD*	95-47-6	o-Xylene	MSD	RPD	3	%	20
FA56212-10MSD*	1330-20-7	Xylene (total)	MSD	REC	103	%	79-121
FA56212-10MSD*	1330-20-7	Xylene (total)	MSD	RPD	2	%	20
FA56212-10MSD*	1868-53-7	Dibromofluoromethane	MSD	SURR	101	%	80-119
FA56212-10MSD*	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	100	%	81-118
FA56212-10MSD*	2037-26-5	Toluene-D8	MSD	SURR	98	%	89-112
FA56212-10MSD*	460-00-4	4-Bromofluorobenzene	MSD	SURR	100	%	85-114
VI1686-MB	1868-53-7	Dibromofluoromethane	MB	SURR	97	%	80-119
VI1686-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	100	%	81-118
VI1686-MB	2037-26-5	Toluene-D8	MB	SURR	99	%	89-112
VI1686-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	100	%	85-114
FA55941-6	1868-53-7	Dibromofluoromethane	SAMP	SURR	97	%	80-119
FA55941-6	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	100	%	81-118
FA55941-6	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
FA55941-6	460-00-4	4-Bromofluorobenzene	SAMP	SURR	100	%	85-114
FA55941-7	1868-53-7	Dibromofluoromethane	SAMP	SURR	98	%	80-119
FA55941-7	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	101	%	81-118
FA55941-7	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA55941-7	460-00-4	4-Bromofluorobenzene	SAMP	SURR	99	%	85-114
FA55941-8	1868-53-7	Dibromofluoromethane	SAMP	SURR	97	%	80-119
FA55941-8	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	101	%	81-118
FA55941-8	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA55941-8	460-00-4	4-Bromofluorobenzene	SAMP	SURR	100	%	85-114
FA55941-9	1868-53-7	Dibromofluoromethane	SAMP	SURR	97	%	80-119
FA55941-9	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	99	%	81-118
FA55941-9	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA55941-9	460-00-4	4-Bromofluorobenzene	SAMP	SURR	99	%	85-114
FA55941-10	1868-53-7	Dibromofluoromethane	SAMP	SURR	98	%	80-119
FA55941-10	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	101	%	81-118
FA55941-10	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA55941-10	460-00-4	4-Bromofluorobenzene	SAMP	SURR	98	%	85-114
OP71008	SW846 8330A						
OP71008-BS	2691-41-0	HMX	BSP	REC	88	%	65-135
OP71008-BS	121-82-4	RDX	BSP	REC	98	%	68-130
OP71008-BS	99-65-0	1,3-Dinitrobenzene	BSP	REC	94	%	78-120
OP71008-BS	606-20-2	2,6-Dinitrotoluene	BSP	REC	102	%	77-127
OP71008-BS	121-14-2	2,4-Dinitrotoluene	BSP	REC	92	%	78-120

* Sample used for QC is not from job FA55941

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP71008-BS	35572-78-2	2-amino-4,6-Dinitrotoluene	BSP	REC	86	%	79-120
OP71008-BS	19406-51-0	4-amino-2,6-Dinitrotoluene	BSP	REC	102	%	76-125
OP71008-BS	98-95-3	Nitrobenzene	BSP	REC	92	%	65-134
OP71008-BS	88-72-2	o-Nitrotoluene	BSP	REC	102	%	70-127
OP71008-BS	99-08-1	m-Nitrotoluene	BSP	REC	98	%	73-125
OP71008-BS	99-99-0	p-Nitrotoluene	BSP	REC	94	%	71-127
OP71008-BS	479-45-8	Tetryl	BSP	REC	104	%	64-128
OP71008-BS	99-35-4	1,3,5-Trinitrobenzene	BSP	REC	96	%	73-125
OP71008-BS	118-96-7	2,4,6-Trinitrotoluene	BSP	REC	108	%	71-123
OP71008-BS	78-11-5	PETN	BSP	REC	109	%	73-127
OP71008-MS	2691-41-0	HMX	MS	REC	86	%	65-135
OP71008-MS	121-82-4	RDX	MS	REC	96	%	68-130
OP71008-MS	99-65-0	1,3-Dinitrobenzene	MS	REC	94	%	78-120
OP71008-MS	606-20-2	2,6-Dinitrotoluene	MS	REC	102	%	77-127
OP71008-MS	121-14-2	2,4-Dinitrotoluene	MS	REC	90	%	78-120
OP71008-MS	35572-78-2	2-amino-4,6-Dinitrotoluene	MS	REC	83	%	79-120
OP71008-MS	19406-51-0	4-amino-2,6-Dinitrotoluene	MS	REC	97	%	76-125
OP71008-MS	98-95-3	Nitrobenzene	MS	REC	90	%	65-134
OP71008-MS	88-72-2	o-Nitrotoluene	MS	REC	101	%	70-127
OP71008-MS	99-08-1	m-Nitrotoluene	MS	REC	100	%	73-125
OP71008-MS	99-99-0	p-Nitrotoluene	MS	REC	96	%	71-127
OP71008-MS	479-45-8	Tetryl	MS	REC	82	%	64-128
OP71008-MS	99-35-4	1,3,5-Trinitrobenzene	MS	REC	97	%	73-125
OP71008-MS	118-96-7	2,4,6-Trinitrotoluene	MS	REC	110	%	71-123
OP71008-MS	78-11-5	PETN	MS	REC	105	%	73-127
OP71008-MSD	2691-41-0	HMX	MSD	REC	85	%	65-135
OP71008-MSD	2691-41-0	HMX	MSD	RPD	1	%	30
OP71008-MSD	121-82-4	RDX	MSD	REC	96	%	68-130
OP71008-MSD	121-82-4	RDX	MSD	RPD	0	%	30
OP71008-MSD	99-65-0	1,3-Dinitrobenzene	MSD	REC	93	%	78-120
OP71008-MSD	99-65-0	1,3-Dinitrobenzene	MSD	RPD	1	%	30
OP71008-MSD	606-20-2	2,6-Dinitrotoluene	MSD	REC	99	%	77-127
OP71008-MSD	606-20-2	2,6-Dinitrotoluene	MSD	RPD	3	%	30
OP71008-MSD	121-14-2	2,4-Dinitrotoluene	MSD	REC	93	%	78-120
OP71008-MSD	121-14-2	2,4-Dinitrotoluene	MSD	RPD	2	%	30
OP71008-MSD	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	REC	85	%	79-120
OP71008-MSD	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	RPD	2	%	30
OP71008-MSD	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	REC	99	%	76-125
OP71008-MSD	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	RPD	2	%	30
OP71008-MSD	98-95-3	Nitrobenzene	MSD	REC	90	%	65-134
OP71008-MSD	98-95-3	Nitrobenzene	MSD	RPD	0	%	30
OP71008-MSD	88-72-2	o-Nitrotoluene	MSD	REC	101	%	70-127
OP71008-MSD	88-72-2	o-Nitrotoluene	MSD	RPD	0	%	30
OP71008-MSD	99-08-1	m-Nitrotoluene	MSD	REC	94	%	73-125
OP71008-MSD	99-08-1	m-Nitrotoluene	MSD	RPD	6	%	30

* Sample used for QC is not from job FA55941

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP71008-MSD	99-99-0	p-Nitrotoluene	MSD	REC	92	%	71-127
OP71008-MSD	99-99-0	p-Nitrotoluene	MSD	RPD	4	%	30
OP71008-MSD	479-45-8	Tetryl	MSD	REC	83	%	64-128
OP71008-MSD	479-45-8	Tetryl	MSD	RPD	1	%	30
OP71008-MSD	99-35-4	1,3,5-Trinitrobenzene	MSD	REC	94	%	73-125
OP71008-MSD	99-35-4	1,3,5-Trinitrobenzene	MSD	RPD	3	%	30
OP71008-MSD	118-96-7	2,4,6-Trinitrotoluene	MSD	REC	103	%	71-123
OP71008-MSD	118-96-7	2,4,6-Trinitrotoluene	MSD	RPD	7	%	30
OP71008-MSD	78-11-5	PETN	MSD	REC	108	%	73-127
OP71008-MSD	78-11-5	PETN	MSD	RPD	2	%	30
MP34054	SW846 7470A						
MP34054-B1	7439-97-6	Mercury	BSP	REC	96.7	%	82-119
MP34054-S1*	7439-97-6	Mercury	MS	REC	96.7	%	82-119
MP34054-S2*	7439-97-6	Mercury	MSD	REC	100	%	82-119
MP34054-S2*	7439-97-6	Mercury	MSD	RPD	3.4	%	20
MP34054-D1*	7439-97-6	Mercury	DUP	RPD	0	%	20
MP34076	SW846 7470A						
MP34076-B1	7439-97-6	Mercury	BSP	REC	100	%	82-119
MP34076-S1	7439-97-6	Mercury	MS	REC	96.7	%	82-119
MP34076-S2	7439-97-6	Mercury	MSD	REC	96.7	%	82-119
MP34076-S2	7439-97-6	Mercury	MSD	RPD	0	%	20
MP34076-D1	7439-97-6	Mercury	DUP	RPD	0	%	20
MP34080	SW846 6020A						
MP34080-B1	7429-90-5	Aluminum	BSP	REC	91	%	84-117
MP34080-B1	7440-36-0	Antimony	BSP	REC	104	%	85-117
MP34080-B1	7440-38-2	Arsenic	BSP	REC	108	%	84-116
MP34080-B1	7440-39-3	Barium	BSP	REC	104.5	%	86-114
MP34080-B1	7440-41-7	Beryllium	BSP	REC	109.5	%	83-121
MP34080-B1	7440-43-9	Cadmium	BSP	REC	106.5	%	87-115
MP34080-B1	7440-70-2	Calcium	BSP	REC	100.5	%	87-118
MP34080-B1	7440-47-3	Chromium	BSP	REC	109.5	%	85-116
MP34080-B1	7440-48-4	Cobalt	BSP	REC	110	%	86-115
MP34080-B1	7440-50-8	Copper	BSP	REC	110	%	85-118
MP34080-B1	7439-89-6	Iron	BSP	REC	106.5	%	87-118
MP34080-B1	7439-92-1	Lead	BSP	REC	106	%	88-115
MP34080-B1	7439-95-4	Magnesium	BSP	REC	104.5	%	83-118
MP34080-B1	7439-96-5	Manganese	BSP	REC	105	%	87-115
MP34080-B1	7440-02-0	Nickel	BSP	REC	109.5	%	85-117
MP34080-B1	7440-09-7	Potassium	BSP	REC	100.5	%	87-115

* Sample used for QC is not from job FA55941

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP34080-B1	7782-49-2	Selenium	BSP	REC	93	%	80-120
MP34080-B1	7440-22-4	Silver	BSP	REC	108	%	85-116
MP34080-B1	7440-23-5	Sodium	BSP	REC	105	%	85-117
MP34080-B1	7440-28-0	Thallium	BSP	REC	106.5	%	82-116
MP34080-B1	7440-62-2	Vanadium	BSP	REC	110	%	86-115
MP34080-B1	7440-66-6	Zinc	BSP	REC	101	%	83-119
MP34080-S1	7429-90-5	Aluminum	MS	REC	85.4	%	84-117
MP34080-S1	7440-36-0	Antimony	MS	REC	97.5	%	85-117
MP34080-S1	7440-38-2	Arsenic	MS	REC	103	%	84-116
MP34080-S1	7440-39-3	Barium	MS	REC	101.2	%	86-114
MP34080-S1	7440-41-7	Beryllium	MS	REC	104.5	%	83-121
MP34080-S1	7440-43-9	Cadmium	MS	REC	100	%	87-115
MP34080-S1	7440-70-2	Calcium	MS	REC	94.5	%	87-118
MP34080-S1	7440-47-3	Chromium	MS	REC	103.7	%	85-116
MP34080-S1	7440-48-4	Cobalt	MS	REC	104	%	86-115
MP34080-S1	7440-50-8	Copper	MS	REC	103.7	%	85-118
MP34080-S1	7439-89-6	Iron	MS	REC	100.8	%	87-118
MP34080-S1	7439-92-1	Lead	MS	REC	102.4	%	88-115
MP34080-S1	7439-95-4	Magnesium	MS	REC	99.6	%	83-118
MP34080-S1	7439-96-5	Manganese	MS	REC	99.5	%	87-115
MP34080-S1	7440-02-0	Nickel	MS	REC	103.5	%	85-117
MP34080-S1	7440-09-7	Potassium	MS	REC	95.6	%	87-115
MP34080-S1	7782-49-2	Selenium	MS	REC	88.5	%	80-120
MP34080-S1	7440-22-4	Silver	MS	REC	104	%	85-116
MP34080-S1	7440-23-5	Sodium	MS	REC	100.2	%	85-117
MP34080-S1	7440-28-0	Thallium	MS	REC	102.4	%	82-116
MP34080-S1	7440-62-2	Vanadium	MS	REC	103.8	%	86-115
MP34080-S1	7440-66-6	Zinc	MS	REC	93.6	%	83-119
MP34080-S2	7429-90-5	Aluminum	MSD	REC	89.4	%	84-117
MP34080-S2	7429-90-5	Aluminum	MSD	RPD	4.6	%	20
MP34080-S2	7440-36-0	Antimony	MSD	REC	101.5	%	85-117
MP34080-S2	7440-36-0	Antimony	MSD	RPD	4	%	20
MP34080-S2	7440-38-2	Arsenic	MSD	REC	108	%	84-116
MP34080-S2	7440-38-2	Arsenic	MSD	RPD	4.7	%	20
MP34080-S2	7440-39-3	Barium	MSD	REC	107.7	%	86-114
MP34080-S2	7440-39-3	Barium	MSD	RPD	6	%	20
MP34080-S2	7440-41-7	Beryllium	MSD	REC	110.5	%	83-121
MP34080-S2	7440-41-7	Beryllium	MSD	RPD	5.6	%	20
MP34080-S2	7440-43-9	Cadmium	MSD	REC	104	%	87-115
MP34080-S2	7440-43-9	Cadmium	MSD	RPD	3.9	%	20
MP34080-S2	7440-70-2	Calcium	MSD	REC	101	%	87-118
MP34080-S2	7440-70-2	Calcium	MSD	RPD	3.3	%	20
MP34080-S2	7440-47-3	Chromium	MSD	REC	110.2	%	85-116
MP34080-S2	7440-47-3	Chromium	MSD	RPD	6.1	%	20
MP34080-S2	7440-48-4	Cobalt	MSD	REC	110.5	%	86-115

* Sample used for QC is not from job FA55941

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP34080-S2	7440-48-4	Cobalt	MSD	RPD	6.1	%	20
MP34080-S2	7440-50-8	Copper	MSD	REC	110.2	%	85-118
MP34080-S2	7440-50-8	Copper	MSD	RPD	6.1	%	20
MP34080-S2	7439-89-6	Iron	MSD	REC	106.3	%	87-118
MP34080-S2	7439-89-6	Iron	MSD	RPD	5.3	%	20
MP34080-S2	7439-92-1	Lead	MSD	REC	106.9	%	88-115
MP34080-S2	7439-92-1	Lead	MSD	RPD	4.3	%	20
MP34080-S2	7439-95-4	Magnesium	MSD	REC	106.6	%	83-118
MP34080-S2	7439-95-4	Magnesium	MSD	RPD	5.4	%	20
MP34080-S2	7439-96-5	Manganese	MSD	REC	105.5	%	87-115
MP34080-S2	7439-96-5	Manganese	MSD	RPD	5.2	%	20
MP34080-S2	7440-02-0	Nickel	MSD	REC	109	%	85-117
MP34080-S2	7440-02-0	Nickel	MSD	RPD	5.2	%	20
MP34080-S2	7440-09-7	Potassium	MSD	REC	103.1	%	87-115
MP34080-S2	7440-09-7	Potassium	MSD	RPD	7	%	20
MP34080-S2	7782-49-2	Selenium	MSD	REC	94	%	80-120
MP34080-S2	7782-49-2	Selenium	MSD	RPD	6	%	20
MP34080-S2	7440-22-4	Silver	MSD	REC	112	%	85-116
MP34080-S2	7440-22-4	Silver	MSD	RPD	7.4	%	20
MP34080-S2	7440-23-5	Sodium	MSD	REC	106.7	%	85-117
MP34080-S2	7440-23-5	Sodium	MSD	RPD	5.3	%	20
MP34080-S2	7440-28-0	Thallium	MSD	REC	108.4	%	82-116
MP34080-S2	7440-28-0	Thallium	MSD	RPD	5.7	%	20
MP34080-S2	7440-62-2	Vanadium	MSD	REC	108.8	%	86-115
MP34080-S2	7440-62-2	Vanadium	MSD	RPD	4.7	%	20
MP34080-S2	7440-66-6	Zinc	MSD	REC	98.1	%	83-119
MP34080-S2	7440-66-6	Zinc	MSD	RPD	4.5	%	20
MP34080-D1	7429-90-5	Aluminum	DUP	RPD	9.8	%	20
MP34080-D1	7440-36-0	Antimony	DUP	RPD	0	%	20
MP34080-D1	7440-38-2	Arsenic	DUP	RPD	0	%	20
MP34080-D1	7440-39-3	Barium	DUP	RPD	1.3	%	20
MP34080-D1	7440-41-7	Beryllium	DUP	RPD	0	%	20
MP34080-D1	7440-43-9	Cadmium	DUP	RPD	0	%	20
MP34080-D1	7440-70-2	Calcium	DUP	RPD	.5	%	20
MP34080-D1	7440-47-3	Chromium	DUP	RPD	29.8 [a]	%	20
MP34080-D1	7440-48-4	Cobalt	DUP	RPD	0	%	20
MP34080-D1	7440-50-8	Copper	DUP	RPD	200 [a]	%	20
MP34080-D1	7439-89-6	Iron	DUP	RPD	200 [a]	%	20
MP34080-D1	7439-92-1	Lead	DUP	RPD	200 [a]	%	20
MP34080-D1	7439-95-4	Magnesium	DUP	RPD	.9	%	20
MP34080-D1	7439-96-5	Manganese	DUP	RPD	.4	%	20
MP34080-D1	7440-02-0	Nickel	DUP	RPD	0	%	20
MP34080-D1	7440-09-7	Potassium	DUP	RPD	0	%	20
MP34080-D1	7782-49-2	Selenium	DUP	RPD	0	%	20
MP34080-D1	7440-22-4	Silver	DUP	RPD	0	%	20

* Sample used for QC is not from job FA55941

QC Evaluation: DOD QSM5 Limits

Job Number: FA55941
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/18/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP34080-D1	7440-23-5	Sodium	DUP	RPD	.5	%	20
MP34080-D1	7440-28-0	Thallium	DUP	RPD	200 [a]	%	20
MP34080-D1	7440-62-2	Vanadium	DUP	RPD	5.6	%	20
MP34080-D1	7440-66-6	Zinc	DUP	RPD	0	%	20

(a) RPD acceptable due to low duplicate and sample concentrations.

* Sample used for QC is not from job FA55941

MS Volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1685-MB	I56358.D	1	07/27/18	AJ	n/a	n/a	VI1685

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.37	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.23	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.24	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.31	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.31	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.24	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	

Method Blank Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1685-MB	I56358.D	1	07/27/18	AJ	n/a	n/a	VI1685

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	0.45	2.0	0.30	ug/l	J
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl Iodide	ND	1.0	0.27	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.37	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.29	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.27	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	2.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

Method Blank Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1685-MB	I56358.D	1	07/27/18	AJ	n/a	n/a	VI1685

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

Method Blank Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1686-MB	I56381.D	1	07/30/18	AJ	n/a	n/a	VI1686

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55941-6, FA55941-7, FA55941-8, FA55941-9, FA55941-10

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.37	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.23	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.24	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.31	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.31	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.24	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	

Method Blank Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1686-MB	I56381.D	1	07/30/18	AJ	n/a	n/a	VI1686

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55941-6, FA55941-7, FA55941-8, FA55941-9, FA55941-10

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	0.46	2.0	0.30	ug/l	J
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl Iodide	ND	1.0	0.27	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.37	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.29	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.27	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	2.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

Method Blank Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1686-MB	I56381.D	1	07/30/18	AJ	n/a	n/a	VI1686

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55941-6, FA55941-7, FA55941-8, FA55941-9, FA55941-10

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

Blank Spike Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1685-BS	I56357.D	1	07/27/18	AJ	n/a	n/a	VI1685

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	120	96	50-147
71-43-2	Benzene	25	25.4	102	81-122
108-86-1	Bromobenzene	25	25.1	100	80-121
74-97-5	Bromochloromethane	25	25.5	102	76-123
75-27-4	Bromodichloromethane	25	25.8	103	79-123
75-25-2	Bromoform	25	23.7	95	66-123
78-93-3	2-Butanone (MEK)	125	122	98	56-143
104-51-8	n-Butylbenzene	25	27.7	111	79-126
135-98-8	sec-Butylbenzene	25	26.6	106	83-133
98-06-6	tert-Butylbenzene	25	25.8	103	80-133
75-15-0	Carbon Disulfide	25	27.7	111	66-148
56-23-5	Carbon Tetrachloride	25	25.3	101	76-136
108-90-7	Chlorobenzene	25	24.7	99	82-124
75-00-3	Chloroethane	25	23.3	93	62-144
67-66-3	Chloroform	25	25.2	101	80-124
95-49-8	o-Chlorotoluene	25	25.6	102	81-127
106-43-4	p-Chlorotoluene	25	25.6	102	83-130
124-48-1	Dibromochloromethane	25	25.7	103	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	23.2	93	64-123
106-93-4	1,2-Dibromoethane	25	25.5	102	75-120
75-71-8	Dichlorodifluoromethane	25	26.5	106	42-167
95-50-1	1,2-Dichlorobenzene	25	24.9	100	82-124
541-73-1	1,3-Dichlorobenzene	25	25.6	102	84-125
106-46-7	1,4-Dichlorobenzene	25	24.3	97	78-120
75-34-3	1,1-Dichloroethane	25	26.6	106	81-122
107-06-2	1,2-Dichloroethane	25	24.6	98	75-125
75-35-4	1,1-Dichloroethylene	25	26.8	107	78-137
156-59-2	cis-1,2-Dichloroethylene	25	26.0	104	78-120
156-60-5	trans-1,2-Dichloroethylene	25	26.6	106	76-127
78-87-5	1,2-Dichloropropane	25	26.0	104	76-124
142-28-9	1,3-Dichloropropane	25	24.2	97	80-118
594-20-7	2,2-Dichloropropane	25	29.2	117	74-139
563-58-6	1,1-Dichloropropene	25	27.0	108	79-131
10061-01-5	cis-1,3-Dichloropropene	25	23.9	96	75-118
10061-02-6	trans-1,3-Dichloropropene	25	25.6	102	80-120
100-41-4	Ethylbenzene	25	25.7	103	81-121

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1685-BS	I56357.D	1	07/27/18	AJ	n/a	n/a	VI1685

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
87-68-3	Hexachlorobutadiene	25	27.1	108	75-142
591-78-6	2-Hexanone	125	123	98	61-129
98-82-8	Isopropylbenzene	25	27.8	111	83-132
99-87-6	p-Isopropyltoluene	25	26.8	107	79-130
74-83-9	Methyl Bromide	25	24.8	99	59-143
74-87-3	Methyl Chloride	25	23.1	92	50-159
74-88-4	Methyl Iodide	25	24.5	98	73-123
74-95-3	Methylene Bromide	25	25.4	102	78-119
75-09-2	Methylene Chloride	25	25.9	104	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	123	98	66-122
1634-04-4	Methyl Tert Butyl Ether	25	25.1	100	72-117
91-20-3	Naphthalene	25	24.1	96	63-132
103-65-1	n-Propylbenzene	25	26.0	104	82-133
100-42-5	Styrene	25	26.6	106	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	24.8	99	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	25.5	102	72-120
127-18-4	Tetrachloroethylene	25	26.1	104	76-135
108-88-3	Toluene	25	25.3	101	80-120
87-61-6	1,2,3-Trichlorobenzene	25	25.7	103	68-131
120-82-1	1,2,4-Trichlorobenzene	25	25.8	103	73-129
71-55-6	1,1,1-Trichloroethane	25	25.6	102	75-130
79-00-5	1,1,2-Trichloroethane	25	25.4	102	76-119
79-01-6	Trichloroethylene	25	25.8	103	81-126
75-69-4	Trichlorofluoromethane	25	26.5	106	71-156
96-18-4	1,2,3-Trichloropropane	25	24.5	98	77-120
95-63-6	1,2,4-Trimethylbenzene	25	25.4	102	79-120
108-67-8	1,3,5-Trimethylbenzene	25	26.5	106	79-120
108-05-4	Vinyl Acetate	125	119	95	43-154
75-01-4	Vinyl Chloride	25	25.2	101	69-159
	m,p-Xylene	50	52.2	104	79-126
95-47-6	o-Xylene	25	26.1	104	80-127
1330-20-7	Xylene (total)	75	78.3	104	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1685-BS	I56357.D	1	07/27/18	AJ	n/a	n/a	VI1685

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1686-BS	I56388.D	1	07/30/18	AJ	n/a	n/a	VI1686

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55941-6, FA55941-7, FA55941-8, FA55941-9, FA55941-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	109	87	50-147
71-43-2	Benzene	25	25.5	102	81-122
108-86-1	Bromobenzene	25	25.4	102	80-121
74-97-5	Bromochloromethane	25	25.7	103	76-123
75-27-4	Bromodichloromethane	25	25.7	103	79-123
75-25-2	Bromoform	25	22.5	90	66-123
78-93-3	2-Butanone (MEK)	125	111	89	56-143
104-51-8	n-Butylbenzene	25	27.6	110	79-126
135-98-8	sec-Butylbenzene	25	26.8	107	83-133
98-06-6	tert-Butylbenzene	25	26.2	105	80-133
75-15-0	Carbon Disulfide	25	26.6	106	66-148
56-23-5	Carbon Tetrachloride	25	25.8	103	76-136
108-90-7	Chlorobenzene	25	24.7	99	82-124
75-00-3	Chloroethane	25	24.0	96	62-144
67-66-3	Chloroform	25	25.6	102	80-124
95-49-8	o-Chlorotoluene	25	26.1	104	81-127
106-43-4	p-Chlorotoluene	25	26.1	104	83-130
124-48-1	Dibromochloromethane	25	25.3	101	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	21.9	88	64-123
106-93-4	1,2-Dibromoethane	25	24.8	99	75-120
75-71-8	Dichlorodifluoromethane	25	25.9	104	42-167
95-50-1	1,2-Dichlorobenzene	25	25.2	101	82-124
541-73-1	1,3-Dichlorobenzene	25	26.0	104	84-125
106-46-7	1,4-Dichlorobenzene	25	24.8	99	78-120
75-34-3	1,1-Dichloroethane	25	26.8	107	81-122
107-06-2	1,2-Dichloroethane	25	24.6	98	75-125
75-35-4	1,1-Dichloroethylene	25	26.7	107	78-137
156-59-2	cis-1,2-Dichloroethylene	25	25.8	103	78-120
156-60-5	trans-1,2-Dichloroethylene	25	26.4	106	76-127
78-87-5	1,2-Dichloropropane	25	26.1	104	76-124
142-28-9	1,3-Dichloropropane	25	23.7	95	80-118
594-20-7	2,2-Dichloropropane	25	29.8	119	74-139
563-58-6	1,1-Dichloropropene	25	26.8	107	79-131
10061-01-5	cis-1,3-Dichloropropene	25	24.5	98	75-118
10061-02-6	trans-1,3-Dichloropropene	25	25.3	101	80-120
100-41-4	Ethylbenzene	25	25.7	103	81-121

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1686-BS	I56388.D	1	07/30/18	AJ	n/a	n/a	VI1686

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55941-6, FA55941-7, FA55941-8, FA55941-9, FA55941-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
87-68-3	Hexachlorobutadiene	25	27.1	108	75-142
591-78-6	2-Hexanone	125	111	89	61-129
98-82-8	Isopropylbenzene	25	27.8	111	83-132
99-87-6	p-Isopropyltoluene	25	27.2	109	79-130
74-83-9	Methyl Bromide	25	24.1	96	59-143
74-87-3	Methyl Chloride	25	23.2	93	50-159
74-88-4	Methyl Iodide	25	24.4	98	73-123
74-95-3	Methylene Bromide	25	25.3	101	78-119
75-09-2	Methylene Chloride	25	26.7	107	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	115	92	66-122
1634-04-4	Methyl Tert Butyl Ether	25	23.7	95	72-117
91-20-3	Naphthalene	25	22.9	92	63-132
103-65-1	n-Propylbenzene	25	26.5	106	82-133
100-42-5	Styrene	25	26.7	107	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	25.2	101	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	24.7	99	72-120
127-18-4	Tetrachloroethylene	25	25.4	102	76-135
108-88-3	Toluene	25	25.4	102	80-120
87-61-6	1,2,3-Trichlorobenzene	25	25.4	102	68-131
120-82-1	1,2,4-Trichlorobenzene	25	26.0	104	73-129
71-55-6	1,1,1-Trichloroethane	25	26.0	104	75-130
79-00-5	1,1,2-Trichloroethane	25	24.9	100	76-119
79-01-6	Trichloroethylene	25	26.2	105	81-126
75-69-4	Trichlorofluoromethane	25	26.8	107	71-156
96-18-4	1,2,3-Trichloropropane	25	23.4	94	77-120
95-63-6	1,2,4-Trimethylbenzene	25	25.8	103	79-120
108-67-8	1,3,5-Trimethylbenzene	25	26.9	108	79-120
108-05-4	Vinyl Acetate	125	111	89	43-154
75-01-4	Vinyl Chloride	25	24.2	97	69-159
	m,p-Xylene	50	52.3	105	79-126
95-47-6	o-Xylene	25	26.2	105	80-127
1330-20-7	Xylene (total)	75	78.6	105	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1686-BS	I56388.D	1	07/30/18	AJ	n/a	n/a	VI1686

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55941-6, FA55941-7, FA55941-8, FA55941-9, FA55941-10

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA55941-5MS	I56370.D	1	07/27/18	AJ	n/a	n/a	VI1685
FA55941-5MSD	I56371.D	1	07/27/18	AJ	n/a	n/a	VI1685
FA55941-5	I56367.D	1	07/27/18	AJ	n/a	n/a	VI1685

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5

CAS No.	Compound	FA55941-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25 U		125	107	86	125	113	90	5	50-147/21
71-43-2	Benzene	1.0 U		25	24.5	98	25	25.3	101	3	81-122/14
108-86-1	Bromobenzene	1.0 U		25	24.4	98	25	24.9	100	2	80-121/14
74-97-5	Bromochloromethane	1.0 U		25	25.1	100	25	25.5	102	2	76-123/14
75-27-4	Bromodichloromethane	1.0 U		25	24.4	98	25	25.0	100	2	79-123/19
75-25-2	Bromoform	1.0 U		25	20.5	82	25	21.4	86	4	66-123/21
78-93-3	2-Butanone (MEK)	5.0 U		125	114	91	125	120	96	5	56-143/18
104-51-8	n-Butylbenzene	1.0 U		25	26.1	104	25	26.9	108	3	79-126/16
135-98-8	sec-Butylbenzene	1.0 U		25	25.4	102	25	26.0	104	2	83-133/16
98-06-6	tert-Butylbenzene	1.0 U		25	24.5	98	25	25.4	102	4	80-133/16
75-15-0	Carbon Disulfide	2.0 U		25	22.4	90	25	23.3	93	4	66-148/23
56-23-5	Carbon Tetrachloride	1.0 U		25	23.8	95	25	24.4	98	2	76-136/23
108-90-7	Chlorobenzene	1.0 U		25	24.0	96	25	24.5	98	2	82-124/14
75-00-3	Chloroethane	2.0 U		25	22.6	90	25	23.4	94	3	62-144/20
67-66-3	Chloroform	1.0 U		25	23.9	96	25	24.4	98	2	80-124/15
95-49-8	o-Chlorotoluene	1.0 U		25	24.7	99	25	25.4	102	3	81-127/15
106-43-4	p-Chlorotoluene	1.0 U		25	24.7	99	25	25.4	102	3	83-130/15
124-48-1	Dibromochloromethane	1.0 U		25	23.6	94	25	24.4	98	3	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U		25	21.3	85	25	22.1	88	4	64-123/18
106-93-4	1,2-Dibromoethane	2.0 U		25	24.1	96	25	25.1	100	4	75-120/13
75-71-8	Dichlorodifluoromethane	2.0 U		25	25.4	102	25	26.0	104	2	42-167/19
95-50-1	1,2-Dichlorobenzene	1.0 U		25	23.8	95	25	24.5	98	3	82-124/14
541-73-1	1,3-Dichlorobenzene	1.0 U		25	24.6	98	25	25.2	101	2	84-125/14
106-46-7	1,4-Dichlorobenzene	1.0 U		25	23.6	94	25	24.2	97	3	78-120/15
75-34-3	1,1-Dichloroethane	1.0 U		25	25.8	103	25	26.6	106	3	81-122/15
107-06-2	1,2-Dichloroethane	1.0 U		25	23.8	95	25	24.8	99	4	75-125/14
75-35-4	1,1-Dichloroethylene	1.0 U		25	25.9	104	25	26.7	107	3	78-137/18
156-59-2	cis-1,2-Dichloroethylene	1.0 U		25	24.6	98	25	25.5	102	4	78-120/15
156-60-5	trans-1,2-Dichloroethylene	1.0 U		25	25.3	101	25	26.4	106	4	76-127/17
78-87-5	1,2-Dichloropropane	1.0 U		25	25.3	101	25	25.9	104	2	76-124/14
142-28-9	1,3-Dichloropropane	1.0 U		25	23.3	93	25	24.3	97	4	80-118/13
594-20-7	2,2-Dichloropropane	1.0 U		25	26.6	106	25	28.2	113	6	74-139/17
563-58-6	1,1-Dichloropropene	1.0 U		25	25.6	102	25	26.5	106	3	79-131/16
10061-01-5	cis-1,3-Dichloropropene	1.0 U		25	20.7	83	25	21.5	86	4	75-118/23
10061-02-6	trans-1,3-Dichloropropene	1.0 U		25	25.3	101	25	26.9	108	6	80-120/22
100-41-4	Ethylbenzene	1.0 U		25	24.6	98	25	25.3	101	3	81-121/14

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA55941-5MS	I56370.D	1	07/27/18	AJ	n/a	n/a	VI1685
FA55941-5MSD	I56371.D	1	07/27/18	AJ	n/a	n/a	VI1685
FA55941-5	I56367.D	1	07/27/18	AJ	n/a	n/a	VI1685

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5

CAS No.	Compound	FA55941-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	2.0 U		25	25.2	101	25	26.5	106	5	75-142/19
591-78-6	2-Hexanone	10 U		125	117	94	125	124	99	6	61-129/18
98-82-8	Isopropylbenzene	1.0 U		25	26.5	106	25	27.5	110	4	83-132/15
99-87-6	p-Isopropyltoluene	1.0 U		25	25.7	103	25	26.4	106	3	79-130/16
74-83-9	Methyl Bromide	2.0 U		25	23.0	92	25	23.5	94	2	59-143/19
74-87-3	Methyl Chloride	2.0 U		25	23.0	92	25	22.9	92	0	50-159/19
74-88-4	Methyl Iodide	1.0 U		25	23.4	94	25	24.5	98	5	73-123/16
74-95-3	Methylene Bromide	2.0 U		25	24.6	98	25	25.2	101	2	78-119/14
75-09-2	Methylene Chloride	5.0 U		25	25.9	104	25	26.3	105	2	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U		125	120	96	125	126	101	5	66-122/16
1634-04-4	Methyl Tert Butyl Ether	1.0 U		25	22.9	92	25	24.4	98	6	72-117/14
91-20-3	Naphthalene	5.0 U		25	22.5	90	25	23.6	94	5	63-132/25
103-65-1	n-Propylbenzene	1.0 U		25	24.9	100	25	25.7	103	3	82-133/15
100-42-5	Styrene	1.0 U		25	25.3	101	25	26.1	104	3	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U		25	23.5	94	25	24.0	96	2	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		25	25.0	100	25	25.4	102	2	72-120/14
127-18-4	Tetrachloroethylene	1.0 U		25	24.3	97	25	24.9	100	2	76-135/16
108-88-3	Toluene	1.0 U		25	24.4	98	25	25.1	100	3	80-120/14
87-61-6	1,2,3-Trichlorobenzene	2.0 U		25	24.0	96	25	25.1	100	4	68-131/25
120-82-1	1,2,4-Trichlorobenzene	2.0 U		25	24.0	96	25	24.8	99	3	73-129/20
71-55-6	1,1,1-Trichloroethane	1.0 U		25	24.4	98	25	25.1	100	3	75-130/16
79-00-5	1,1,2-Trichloroethane	1.0 U		25	25.0	100	25	25.4	102	2	76-119/14
79-01-6	Trichloroethylene	1.0 U		25	25.3	101	25	25.8	103	2	81-126/15
75-69-4	Trichlorofluoromethane	2.0 U		25	26.7	107	25	27.0	108	1	71-156/21
96-18-4	1,2,3-Trichloropropane	2.0 U		25	24.1	96	25	24.5	98	2	77-120/16
95-63-6	1,2,4-Trimethylbenzene	1.0 U		25	24.3	97	25	24.9	100	2	79-120/18
108-67-8	1,3,5-Trimethylbenzene	1.0 U		25	25.3	101	25	26.1	104	3	79-120/19
108-05-4	Vinyl Acetate	10 U		125	112	90	125	117	94	4	43-154/14
75-01-4	Vinyl Chloride	1.0 U		25	22.7	91	25	23.6	94	4	69-159/18
	m,p-Xylene	2.0 U		50	50.3	101	50	51.6	103	3	79-126/15
95-47-6	o-Xylene	1.0 U		25	24.8	99	25	25.7	103	4	80-127/14
1330-20-7	Xylene (total)	3.0 U		75	75.1	100	75	77.4	103	3	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA55941-5MS	I56370.D	1	07/27/18	AJ	n/a	n/a	VI1685
FA55941-5MSD	I56371.D	1	07/27/18	AJ	n/a	n/a	VI1685
FA55941-5	I56367.D	1	07/27/18	AJ	n/a	n/a	VI1685

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5

CAS No.	Surrogate Recoveries	MS	MSD	FA55941-5	Limits
1868-53-7	Dibromofluoromethane	101%	101%	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	101%	103%	79-125%
2037-26-5	Toluene-D8	99%	99%	99%	85-112%
460-00-4	4-Bromofluorobenzene	100%	99%	98%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA56212-10MS	I56392.D	1	07/30/18	AJ	n/a	n/a	VI1686
FA56212-10MSD	I56393.D	1	07/30/18	AJ	n/a	n/a	VI1686
FA56212-10	I56390.D	1	07/30/18	AJ	n/a	n/a	VI1686

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55941-6, FA55941-7, FA55941-8, FA55941-9, FA55941-10

CAS No.	Compound	FA56212-10 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	98.3	79	125	102	82	4	50-147/21
71-43-2	Benzene	ND		25	24.5	98	25	25.0	100	2	81-122/14
108-86-1	Bromobenzene	ND		25	24.6	98	25	25.0	100	2	80-121/14
74-97-5	Bromochloromethane	ND		25	24.5	98	25	24.9	100	2	76-123/14
75-27-4	Bromodichloromethane	ND		25	24.6	98	25	25.2	101	2	79-123/19
75-25-2	Bromoform	ND		25	20.8	83	25	21.5	86	3	66-123/21
78-93-3	2-Butanone (MEK)	ND		125	105	84	125	107	86	2	56-143/18
104-51-8	n-Butylbenzene	ND		25	26.3	105	25	27.2	109	3	79-126/16
135-98-8	sec-Butylbenzene	ND		25	25.7	103	25	26.3	105	2	83-133/16
98-06-6	tert-Butylbenzene	ND		25	25.1	100	25	25.6	102	2	80-133/16
75-15-0	Carbon Disulfide	ND		25	24.2	97	25	24.7	99	2	66-148/23
56-23-5	Carbon Tetrachloride	ND		25	24.7	99	25	25.3	101	2	76-136/23
108-90-7	Chlorobenzene	ND		25	23.8	95	25	24.4	98	2	82-124/14
75-00-3	Chloroethane	ND		25	24.9	100	25	25.4	102	2	62-144/20
67-66-3	Chloroform	ND		25	24.2	97	25	24.6	98	2	80-124/15
95-49-8	o-Chlorotoluene	ND		25	24.8	99	25	25.5	102	3	81-127/15
106-43-4	p-Chlorotoluene	ND		25	24.8	99	25	25.5	102	3	83-130/15
124-48-1	Dibromochloromethane	ND		25	23.6	94	25	24.2	97	3	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND		25	20.1	80	25	21.2	85	5	64-123/18
106-93-4	1,2-Dibromoethane	ND		25	23.6	94	25	24.1	96	2	75-120/13
75-71-8	Dichlorodifluoromethane	ND		25	25.0	100	25	25.7	103	3	42-167/19
95-50-1	1,2-Dichlorobenzene	ND		25	23.9	96	25	24.6	98	3	82-124/14
541-73-1	1,3-Dichlorobenzene	ND		25	24.7	99	25	25.3	101	2	84-125/14
106-46-7	1,4-Dichlorobenzene	ND		25	23.6	94	25	24.4	98	3	78-120/15
75-34-3	1,1-Dichloroethane	ND		25	25.8	103	25	26.2	105	2	81-122/15
107-06-2	1,2-Dichloroethane	ND		25	23.5	94	25	23.9	96	2	75-125/14
75-35-4	1,1-Dichloroethylene	ND		25	25.5	102	25	26.3	105	3	78-137/18
156-59-2	cis-1,2-Dichloroethylene	ND		25	24.8	99	25	25.3	101	2	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND		25	25.4	102	25	25.9	104	2	76-127/17
78-87-5	1,2-Dichloropropane	ND		25	25.0	100	25	25.7	103	3	76-124/14
142-28-9	1,3-Dichloropropane	ND		25	22.6	90	25	23.6	94	4	80-118/13
594-20-7	2,2-Dichloropropane	ND		25	28.6	114	25	29.9	120	4	74-139/17
563-58-6	1,1-Dichloropropene	ND		25	25.8	103	25	26.1	104	1	79-131/16
10061-01-5	cis-1,3-Dichloropropene	ND		25	21.4	86	25	22.3	89	4	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND		25	25.5	102	25	26.2	105	3	80-120/22
100-41-4	Ethylbenzene	ND		25	24.6	98	25	25.2	101	2	81-121/14

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA56212-10MS	I56392.D	1	07/30/18	AJ	n/a	n/a	VI1686
FA56212-10MSD	I56393.D	1	07/30/18	AJ	n/a	n/a	VI1686
FA56212-10	I56390.D	1	07/30/18	AJ	n/a	n/a	VI1686

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55941-6, FA55941-7, FA55941-8, FA55941-9, FA55941-10

CAS No.	Compound	FA56212-10 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	ND		25	25.8	103	25	26.8	107	4	75-142/19
591-78-6	2-Hexanone	ND		125	106	85	125	109	87	3	61-129/18
98-82-8	Isopropylbenzene	ND		25	26.6	106	25	27.4	110	3	83-132/15
99-87-6	p-Isopropyltoluene	ND		25	25.9	104	25	26.6	106	3	79-130/16
74-83-9	Methyl Bromide	ND		25	22.5	90	25	24.4	98	8	59-143/19
74-87-3	Methyl Chloride	ND		25	22.7	91	25	23.0	92	1	50-159/19
74-88-4	Methyl Iodide	ND		25	23.6	94	25	24.1	96	2	73-123/16
74-95-3	Methylene Bromide	ND		25	24.1	96	25	24.4	98	1	78-119/14
75-09-2	Methylene Chloride	ND		25	25.4	102	25	25.7	103	1	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		125	110	88	125	112	90	2	66-122/16
1634-04-4	Methyl Tert Butyl Ether	ND		25	22.6	90	25	23.9	96	6	72-117/14
91-20-3	Naphthalene	ND		25	21.3	85	25	22.5	90	5	63-132/25
103-65-1	n-Propylbenzene	ND		25	25.3	101	25	25.6	102	1	82-133/15
100-42-5	Styrene	ND		25	24.1	96	25	24.7	99	2	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	ND		25	24.2	97	25	24.5	98	1	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	23.7	95	25	24.3	97	3	72-120/14
127-18-4	Tetrachloroethylene	ND		25	24.1	96	25	24.5	98	2	76-135/16
108-88-3	Toluene	ND		25	24.2	97	25	24.8	99	2	80-120/14
87-61-6	1,2,3-Trichlorobenzene	ND		25	23.8	95	25	24.8	99	4	68-131/25
120-82-1	1,2,4-Trichlorobenzene	ND		25	24.0	96	25	25.1	100	4	73-129/20
71-55-6	1,1,1-Trichloroethane	ND		25	24.7	99	25	25.5	102	3	75-130/16
79-00-5	1,1,2-Trichloroethane	ND		25	24.0	96	25	24.9	100	4	76-119/14
79-01-6	Trichloroethylene	ND		25	25.2	101	25	25.6	102	2	81-126/15
75-69-4	Trichlorofluoromethane	ND		25	28.4	114	25	27.1	108	5	71-156/21
96-18-4	1,2,3-Trichloropropane	ND		25	22.4	90	25	23.5	94	5	77-120/16
95-63-6	1,2,4-Trimethylbenzene	ND		25	24.6	98	25	25.1	100	2	79-120/18
108-67-8	1,3,5-Trimethylbenzene	ND		25	25.6	102	25	26.2	105	2	79-120/19
108-05-4	Vinyl Acetate	ND		125	101	81	125	106	85	5	43-154/14
75-01-4	Vinyl Chloride	ND		25	23.0	92	25	23.7	95	3	69-159/18
	m,p-Xylene	ND		50	50.2	100	50	51.5	103	3	79-126/15
95-47-6	o-Xylene	ND		25	24.9	100	25	25.6	102	3	80-127/14
1330-20-7	Xylene (total)	ND		75	75.2	100	75	77.1	103	2	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA56212-10MS	I56392.D	1	07/30/18	AJ	n/a	n/a	VI1686
FA56212-10MSD	I56393.D	1	07/30/18	AJ	n/a	n/a	VI1686
FA56212-10	I56390.D	1	07/30/18	AJ	n/a	n/a	VI1686

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA55941-6, FA55941-7, FA55941-8, FA55941-9, FA55941-10

CAS No.	Surrogate Recoveries	MS	MSD	FA56212-10	Limits
1868-53-7	Dibromofluoromethane	101%	101%	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	100%	99%	79-125%
2037-26-5	Toluene-D8	99%	98%	99%	85-112%
460-00-4	4-Bromofluorobenzene	100%	100%	99%	83-118%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample: VI1683-BFB
Lab File ID: I56313.D
Instrument ID: GCMSI
Injection Date: 07/25/18
Injection Time: 14:36

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	74779	24.9		Pass
75	30.0 - 60.0% of mass 95	151371	50.4		Pass
95	Base peak, 100% relative abundance	300437	100.0		Pass
96	5.0 - 9.0% of mass 95	21401	7.12		Pass
173	Less than 2.0% of mass 174	1809	0.60	(0.84) [a]	Pass
174	50.0 - 100.0% of mass 95	215941	71.9		Pass
175	5.0 - 9.0% of mass 174	15559	5.18	(7.21) [a]	Pass
176	95.0 - 101.0% of mass 174	207501	69.1	(96.1) [a]	Pass
177	5.0 - 9.0% of mass 176	13778	4.59	(6.64) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VI1683-IC1683	I56314.D	07/25/18	15:14	00:38	Initial cal 1
VI1683-IC1683	I56315.D	07/25/18	15:37	01:01	Initial cal 2
VI1683-IC1683	I56316.D	07/25/18	16:01	01:25	Initial cal 3
VI1683-IC1683	I56317.D	07/25/18	16:25	01:49	Initial cal 4
VI1683-ICC1683	I56318.D	07/25/18	16:49	02:13	Initial cal 5
VI1683-IC1683	I56319.D	07/25/18	17:13	02:37	Initial cal 6
VI1683-IC1683	I56320.D	07/25/18	17:36	03:00	Initial cal 7
VI1683-ICV1683	I56322.D	07/25/18	18:24	03:48	Initial cal verification 5
VI1683-BS	I56323.D	07/25/18	18:48	04:12	Blank Spike
VI1683-MB	I56324.D	07/25/18	19:12	04:36	Method Blank

Instrument Performance Check (BFB)

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample: VI1685-BFB
Lab File ID: I56355.D
Instrument ID: GCMSI
Injection Date: 07/27/18
Injection Time: 08:25

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	75584	25.3		Pass
75	30.0 - 60.0% of mass 95	151317	50.7		Pass
95	Base peak, 100% relative abundance	298347	100.0		Pass
96	5.0 - 9.0% of mass 95	20582	6.90		Pass
173	Less than 2.0% of mass 174	1647	0.55	(0.76) [a]	Pass
174	50.0 - 100.0% of mass 95	217544	72.9		Pass
175	5.0 - 9.0% of mass 174	15969	5.35	(7.34) [a]	Pass
176	95.0 - 101.0% of mass 174	209861	70.3	(96.5) [a]	Pass
177	5.0 - 9.0% of mass 176	13887	4.65	(6.62) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VI1685-CC1683	I56356.D	07/27/18	08:49	00:24	Continuing cal 5
VI1685-BS	I56357.D	07/27/18	09:30	01:05	Blank Spike
VI1685-MB	I56358.D	07/27/18	09:54	01:29	Method Blank
ZZZZZZ	I56359.D	07/27/18	13:02	04:37	(unrelated sample)
ZZZZZZ	I56360.D	07/27/18	13:26	05:01	(unrelated sample)
ZZZZZZ	I56361.D	07/27/18	14:11	05:46	(unrelated sample)
ZZZZZZ	I56362.D	07/27/18	14:35	06:10	(unrelated sample)
ZZZZZZ	I56363.D	07/27/18	14:59	06:34	(unrelated sample)
ZZZZZZ	I56364.D	07/27/18	15:23	06:58	(unrelated sample)
ZZZZZZ	I56365.D	07/27/18	15:46	07:21	(unrelated sample)
ZZZZZZ	I56366.D	07/27/18	16:10	07:45	(unrelated sample)
FA55941-5	I56367.D	07/27/18	16:34	08:09	SB3-2
FA55941-1	I56368.D	07/27/18	16:58	08:33	SB2-1A
FA55941-2	I56369.D	07/27/18	17:22	08:57	SB2-2
FA55941-5MS	I56370.D	07/27/18	17:45	09:20	Matrix Spike
FA55941-5MSD	I56371.D	07/27/18	18:09	09:44	Matrix Spike Duplicate
ZZZZZZ	I56372.D	07/27/18	18:33	10:08	(unrelated sample)
ZZZZZZ	I56373.D	07/27/18	18:57	10:32	(unrelated sample)
FA55941-3	I56374.D	07/27/18	19:21	10:56	SB2-3
FA55941-4	I56375.D	07/27/18	19:44	11:19	SB3-1B
VI1685-ECC1683	I56376.D	07/27/18	20:08	11:43	Ending cal 5

Instrument Performance Check (BFB)

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample: VI1686-BFB
Lab File ID: I56378.D
Instrument ID: GCMSI
Injection Date: 07/30/18
Injection Time: 07:37

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	79512	24.7		Pass
75	30.0 - 60.0% of mass 95	162320	50.5		Pass
95	Base peak, 100% relative abundance	321408	100.0		Pass
96	5.0 - 9.0% of mass 95	21878	6.81		Pass
173	Less than 2.0% of mass 174	1956	0.61	(0.83) [a]	Pass
174	50.0 - 100.0% of mass 95	235960	73.4		Pass
175	5.0 - 9.0% of mass 174	17265	5.37	(7.32) [a]	Pass
176	95.0 - 101.0% of mass 174	227595	70.8	(96.5) [a]	Pass
177	5.0 - 9.0% of mass 176	15097	4.70	(6.63) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VI1686-CC1683	I56379.D	07/30/18	08:01	00:24	Continuing cal 5
VI1686-MB	I56381.D	07/30/18	08:57	01:20	Method Blank
FA55941-6	I56383.D	07/30/18	09:58	02:21	SB3-3
FA55941-7	I56384.D	07/30/18	10:22	02:45	DUP-C
FA55941-8	I56385.D	07/30/18	10:46	03:09	SB1-7
FA55941-9	I56386.D	07/30/18	11:10	03:33	FB
FA55941-10	I56387.D	07/30/18	11:34	03:57	TB
VI1686-BS	I56388.D	07/30/18	11:57	04:20	Blank Spike
ZZZZZZ	I56389.D	07/30/18	12:21	04:44	(unrelated sample)
FA56212-10	I56390.D	07/30/18	12:46	05:09	(used for QC only; not part of job FA55941)
ZZZZZZ	I56391.D	07/30/18	13:09	05:32	(unrelated sample)
FA56212-10MS	I56392.D	07/30/18	13:33	05:56	Matrix Spike
FA56212-10MSD	I56393.D	07/30/18	13:57	06:20	Matrix Spike Duplicate
ZZZZZZ	I56394.D	07/30/18	14:21	06:44	(unrelated sample)
ZZZZZZ	I56395.D	07/30/18	14:45	07:08	(unrelated sample)
ZZZZZZ	I56396.D	07/30/18	15:08	07:31	(unrelated sample)
ZZZZZZ	I56397.D	07/30/18	15:32	07:55	(unrelated sample)
ZZZZZZ	I56398.D	07/30/18	15:56	08:19	(unrelated sample)
ZZZZZZ	I56399.D	07/30/18	16:20	08:43	(unrelated sample)
ZZZZZZ	I56400.D	07/30/18	16:44	09:07	(unrelated sample)
ZZZZZZ	I56401.D	07/30/18	17:07	09:30	(unrelated sample)
ZZZZZZ	I56404.D	07/30/18	18:19	10:42	(unrelated sample)
ZZZZZZ	I56405.D	07/30/18	18:43	11:06	(unrelated sample)
VI1686-ECC1683	I56406.D	07/30/18	19:06	11:29	Ending cal 5

Internal Standard Area Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Check Std:	VI1685-CC1683	**Injection Date:**	07/27/18
Lab File ID:	I56356.D	**Injection Time:**	08:49
Instrument ID:	GCMSI	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Initial Cal [a]	1197770	9.42	847395	12.46	427469	14.13	101391	5.62
Check Std [b]	1141426	9.42	807815	12.46	414777	14.13	92605	5.62
Upper Limit [c]	2282852	9.59	1615630	12.63	829554	14.30	185210	5.79
Lower Limit [d]	570713	9.25	403908	12.29	207389	13.96	46303	5.45

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VI1685-BS	1193275	9.41	835432	12.45	428829	14.13	103713	5.60
VI1685-MB	1198027	9.42	840362	12.46	420454	14.13	94245	5.60
ZZZZZZ	1172205	9.41	821755	12.45	416449	14.13	82148	5.59
ZZZZZZ	1148075	9.42	813117	12.46	412195	14.13	82404	5.60
ZZZZZZ	1147470	9.41	802699	12.46	409630	14.13	84123	5.59
ZZZZZZ	1123505	9.42	782702	12.46	398440	14.13	80264	5.60
ZZZZZZ	1060234	9.41	757007	12.46	380382	14.13	76653	5.60
ZZZZZZ	1105011	9.41	783406	12.46	403786	14.13	84044	5.60
ZZZZZZ	1127823	9.42	787779	12.46	400956	14.13	82416	5.60
ZZZZZZ	1118772	9.42	790973	12.46	397200	14.13	83703	5.61
FA55941-5	1109535	9.42	782241	12.46	395278	14.13	80772	5.60
FA55941-1	1110213	9.42	773127	12.46	394320	14.13	80163	5.60
FA55941-2	1103420	9.42	771857	12.46	390455	14.13	82474	5.61
FA55941-5MS	1131731	9.41	801051	12.46	409193	14.13	87339	5.61
FA55941-5MSD	1160621	9.42	816157	12.46	418002	14.13	96925	5.62
ZZZZZZ	1145374	9.42	805762	12.46	405826	14.13	91111	5.60
ZZZZZZ	1124261	9.42	785470	12.46	400710	14.13	85813	5.61
FA55941-3	1112479	9.42	784067	12.46	398573	14.13	81920	5.60
FA55941-4	1101495	9.42	776003	12.46	392252	14.13	78872	5.61
VI1685-ECC1683	1141769	9.42	805903	12.46	413011	14.13	94281	5.62

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Initial Cal is: VI1683-ICC1683 I56318.D 07/25/18 16:49
(b) Check Std Limit = -50 to + 100% of initial cal area.
(c) Upper Limit = + 100% of check standard area; Retention time + 0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

Internal Standard Area Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Check Std: VI1686-CC1683 **Injection Date:** 07/30/18
Lab File ID: I56379.D **Injection Time:** 08:01
Instrument ID: GCMSI **Method:** SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Initial Cal [a]	1197770	9.42	847395	12.46	427469	14.13	101391	5.62
Check Std [b]	1187158	9.41	842663	12.46	434674	14.13	104226	5.60
Upper Limit [c]	2374316	9.58	1685326	12.63	869348	14.30	208452	5.77
Lower Limit [d]	593579	9.24	421332	12.29	217337	13.96	52113	5.43

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VI1686-MB	1240359	9.42	867259	12.46	440784	14.13	102307	5.60
FA55941-6	1241342	9.42	873346	12.46	440719	14.13	80356	5.61
FA55941-7	1214594	9.42	849135	12.46	428866	14.13	81656	5.61
FA55941-8	1205191	9.42	843690	12.46	423364	14.13	80750	5.60
FA55941-9	1199060	9.42	827672	12.46	420099	14.13	80752	5.61
FA55941-10	1169942	9.42	817861	12.46	413874	14.13	82637	5.61
VI1686-BS	1193695	9.41	846693	12.46	426722	14.13	84484	5.61
ZZZZZZ	1194141	9.42	845607	12.46	426155	14.13	88461	5.61
FA56212-10	1174762	9.42	816219	12.46	412157	14.13	64463	5.60
ZZZZZZ	1153177	9.42	815448	12.46	408269	14.13	71000	5.61
FA56212-10MS	1180279	9.42	841294	12.46	425213	14.13	82692	5.62
FA56212-10MSD	1194502	9.42	847753	12.46	430033	14.13	91062	5.61
ZZZZZZ	1188929	9.41	844629	12.46	426299	14.13	95696	5.60
ZZZZZZ	1175308	9.42	824507	12.46	417286	14.13	84028	5.61
ZZZZZZ	1173254	9.42	829540	12.46	419318	14.13	85833	5.61
ZZZZZZ	1159088	9.42	818239	12.46	412014	14.13	85317	5.61
ZZZZZZ	1155337	9.42	812358	12.46	411597	14.13	84133	5.62
ZZZZZZ	1144295	9.42	803723	12.46	409732	14.13	84101	5.61
ZZZZZZ	1130644	9.42	808179	12.46	406219	14.13	81365	5.61
ZZZZZZ	1131450	9.42	799053	12.46	404137	14.13	81031	5.61
ZZZZZZ	1133583	9.42	806464	12.46	403803	14.13	79567	5.61
ZZZZZZ	1110285	9.42	777090	12.46	395486	14.13	76572	5.60
VI1686-ECC1683	1152534	9.42	823043	12.46	417479	14.13	93830	5.62

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Initial Cal is: VI1683-ICC1683 I56318.D 07/25/18 16:49
(b) Check Std Limit = -50 to + 100% of initial cal area.
(c) Upper Limit = + 100% of check standard area; Retention time + 0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

Surrogate Recovery Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Method: SW846 8260C **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
FA55941-1	I56368.D	98	104	101	98
FA55941-2	I56369.D	98	103	98	98
FA55941-3	I56374.D	97	102	98	99
FA55941-4	I56375.D	96	102	99	98
FA55941-5	I56367.D	97	103	99	98
FA55941-6	I56383.D	97	100	98	100
FA55941-7	I56384.D	98	101	99	99
FA55941-8	I56385.D	97	101	99	100
FA55941-9	I56386.D	97	99	99	99
FA55941-10	I56387.D	98	101	99	98
FA55941-5MS	I56370.D	101	101	99	100
FA55941-5MSD	I56371.D	101	101	99	99
FA56212-10MS	I56392.D	101	100	99	100
FA56212-10MSD	I56393.D	101	100	98	100
VI1685-BS	I56357.D	101	101	100	100
VI1685-MB	I56358.D	96	100	99	100
VI1686-BS	I56388.D	101	99	99	100
VI1686-MB	I56381.D	97	100	99	100

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	83-118%
S2 = 1,2-Dichloroethane-D4	79-125%
S3 = Toluene-D8	85-112%
S4 = 4-Bromofluorobenzene	83-118%

Initial Calibration Summary

Job Number: FA55941 **Sample:** VI1683-ICC1683
Account: EAENYS EA Engineering **Lab FileID:** I56318.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Response Factor Report MSVOA16

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Calibration Files
1 =I56314.D 2 =I56315.D 3 =I56316.D 4 =I56317.D
5 =I56318.D 6 =I56319.D 7 =I56320.D

Compound	1	2	3	4	5	6	7	Avg	%RSD
1) I Fluorobenzene	----------ISTD----------								
2) Dichlorodifluorom	0.274	0.308	0.275	0.288	0.282	0.279	0.287	0.285	4.07
3)P Chloromethane	0.439	0.418	0.390	0.384	0.365	0.372	0.369	0.391	7.09
4) 1,3-Butadiene	0.243	0.200	0.180	0.199	0.216	0.213	0.224	0.211	9.50
5)C Vinyl Chloride	0.339	0.331	0.304	0.327	0.330	0.329	0.342	0.329	3.79
6) Bromomethane	0.215	0.184	0.175	0.163	0.159	0.157	0.152	0.172	12.56
7) Chloroethane	0.195	0.163	0.138	0.102	0.084	0.070		0.126	38.75
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9922									
Response Ratio = 0.00000 + 0.11744 *A + -0.03433 *A^2									
8) Trichlorofluorome	0.416	0.422	0.374	0.398	0.356	0.352	0.326	0.378	9.50
9) Ethyl Ether	0.287	0.284	0.290	0.295	0.295	0.291	0.298	0.291	1.65
10) 1,2-Dichlorotrifl	0.349	0.365	0.335	0.354	0.348	0.346	0.352	0.350	2.61
11)C 1,1-Dichloroethen	0.470	0.459	0.442	0.470	0.475	0.473	0.485	0.468	2.95
12) Freon 113	0.264	0.274	0.251	0.261	0.262	0.255	0.261	0.261	2.85
13) Carbon Disulfide	0.691	0.709	0.684	0.748	0.769	0.780	0.809	0.741	6.48
14) Iodomethane	0.407	0.394	0.376	0.402	0.403	0.405	0.418	0.401	3.23
15) Allyl chloride	0.345	0.385	0.375	0.412	0.424	0.433	0.442	0.402	8.77
16) Methylene Chlorid	0.695	0.509	0.486	0.470	0.463	0.452	0.456	0.504	17.15
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
Response Ratio = 0.00000 + 0.46608 *A + -0.00604 *A^2									
17) Acetone	0.077	0.079	0.081	0.085	0.089	0.085	0.086	0.083	5.21
18) Methyl acetate	0.106	0.153	0.179	0.205	0.210	0.207	0.213	0.182	22.04
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997									
Response Ratio = 0.00000 + 0.19960 *A + 0.00134 *A^2									
19) trans-1,2-Dichlor	0.434	0.448	0.441	0.468	0.473	0.475	0.487	0.461	4.29
20) Hexane	0.375	0.374	0.347	0.362	0.349	0.335	0.334	0.354	4.75
21) Methyl Tert Butyl	0.521	0.540	0.544	0.584	0.597	0.602	0.626	0.573	6.78
22) Acetonitrile		0.024	0.025	0.030	0.032	0.031	0.031	0.029	12.16
23) Di-isopropyl ethe	0.960	0.979	0.979	1.061	1.064	1.075	1.093	1.030	5.34
24) Chloroprene	0.388	0.442	0.438	0.497	0.505	0.522	0.527	0.474	10.97
25)P 1,1-Dichloroethan	0.559	0.554	0.538	0.555	0.555	0.557	0.568	0.555	1.61
26) Acrylonitrile	0.021	0.079	0.098	0.118	0.125	0.126	0.131	0.100	39.36
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996									
Response Ratio = 0.00000 + 0.11541 *A + 0.00153 *A^2									
27) ETBE	0.692	0.772	0.796	0.867	0.881	0.891	0.916	0.831	9.68
28) Vinyl acetate	0.361	0.527	0.591	0.664	0.662	0.697	0.699	0.600	20.36
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997									
Response Ratio = 0.00000 + 0.64932 *A + 0.00524 *A^2									
29) cis-1,2-Dichloroe	0.233	0.262	0.258	0.272	0.271	0.277	0.287	0.266	6.54
30) 2,2-Dichloropropa	0.197	0.207	0.206	0.240	0.248	0.269	0.284	0.236	14.34
31) Bromochloromethan	0.111	0.127	0.126	0.133	0.133	0.137	0.140	0.130	7.26

Initial Calibration Summary

Job Number: FA55941 **Sample:** VI1683-ICC1683
Account: EAENYS EA Engineering **Lab FileID:** I56318.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

32)	Cyclohexane	0.574	0.619	0.589	0.636	0.633	0.622	0.635	0.615	3.98
33)C	Chloroform	0.524	0.481	0.457	0.469	0.467	0.469	0.479	0.478	4.58
34)	Ethyl acetate	0.133	0.239	0.263	0.291	0.292	0.293	0.297	0.258	22.86
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 0.28449 *A + 0.00127 *A^2									
35)	Tetrahydrofuran	0.135	0.164	0.180	0.186	0.187	0.182	0.183	0.174	10.81
36)S	Dibromofluorometh	0.258	0.258	0.262	0.266	0.268	0.269	0.269	0.264	1.85
37)	Carbon Tetrachlor	0.270	0.283	0.266	0.291	0.295	0.299	0.310	0.288	5.54
38)	1,1,1-Trichloroet	0.363	0.369	0.358	0.390	0.398	0.401	0.415	0.385	5.62
39)	2-Butanone	0.068	0.097	0.111	0.124	0.129	0.128	0.132	0.113	20.61
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998									
	Response Ratio = 0.00000 + 0.12222 *A + 0.00095 *A^2									
40)	1,1-Dichloroprope	0.303	0.331	0.322	0.355	0.354	0.357	0.364	0.341	6.63
41)	tert-Butyl format	0.071	0.073	0.081	0.097	0.110	0.128	0.143	0.100	27.67
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998									
	Response Ratio = 0.00000 + 0.08592 *A + 0.00287 *A^2									
42)	Propionitrile	0.034	0.041	0.044	0.047	0.048	0.046	0.046	0.044	11.50
43)	Methacrylonitrile	0.155	0.175	0.173	0.181	0.179	0.169	0.166	0.171	5.14
44)	Benzene	1.055	1.024	0.986	1.021	1.005	1.009	1.026	1.018	2.10
45)	TAME	0.455	0.507	0.518	0.576	0.590	0.606	0.632	0.555	11.39
46)S	1,2-Dichloroethan	0.359	0.360	0.358	0.357	0.356	0.354	0.355	0.357	0.69
47)	1,2-Dichloroethan	0.449	0.447	0.432	0.442	0.434	0.435	0.438	0.440	1.50
48)	Trichloroethene	0.266	0.268	0.258	0.272	0.270	0.272	0.276	0.269	2.16
49)	Methylcyclohexane	0.427	0.432	0.417	0.449	0.450	0.446	0.458	0.440	3.35
50)	Dibromomethane	0.152	0.160	0.162	0.171	0.170	0.173	0.176	0.166	5.13
51)C	1,2-Dichloropropa	0.307	0.318	0.314	0.334	0.331	0.335	0.338	0.325	3.74
52)	Bromodichlorometh	0.283	0.300	0.306	0.334	0.336	0.346	0.354	0.323	8.20
53)	Methyl methacryla	0.126	0.161	0.190	0.224	0.240	0.250	0.255	0.206	23.73
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996									
	Response Ratio = 0.00000 + 0.22300 *A + 0.01651 *A^2									
54)	2-Chloroethyl vin	0.138	0.176	0.190	0.206	0.211	0.212	0.209	0.192	14.08
55)	cis-1,3-Dichlorop	0.281	0.335	0.351	0.407	0.416	0.429	0.443	0.380	15.61
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 0.39225 *A + 0.02559 *A^2									
56) I	Chlorobenzene-d5	----------ISTD----------								
57)S	Toluene-d8	1.379	1.375	1.386	1.372	1.371	1.393	1.383	1.380	0.57
58)C	Toluene	1.621	1.533	1.488	1.546	1.506	1.552	1.565	1.544	2.79
59)	2-Nitropropane	0.052	0.060	0.069	0.083	0.085	0.088	0.091	0.076	20.26
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997									
	Response Ratio = 0.00000 + 0.08026 *A + 0.00110 *A^2									
60)	4-Methyl-2-pentan	0.414	0.399	0.412	0.428	0.425	0.411	0.402	0.413	2.56
61)	trans-1,3-Dichlor	0.026	0.029	0.032	0.033	0.031	0.030	0.031	0.030	7.78
62)	Tetrachloroethene	0.376	0.400	0.391	0.417	0.431	0.384	0.388	0.398	4.90
63)	Ethyl methacrylat	0.241	0.347	0.372	0.435	0.454	0.471	0.481	0.400	21.58
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998									
	Response Ratio = 0.00000 + 0.42779 *A + 0.02741 *A^2									
64)	1,1,2-Trichloroet	0.270	0.289	0.292	0.300	0.289	0.294	0.295	0.290	3.33
65)	Dibromochlorometh	0.259	0.319	0.328	0.363	0.366	0.381	0.388	0.344	13.19
66)	1,3-Dichloropropa	0.559	0.574	0.571	0.598	0.587	0.593	0.598	0.583	2.59
67)	1,2-Dibromoethane	0.267	0.298	0.312	0.336	0.334	0.340	0.348	0.319	9.04
68)	2-hexanone	0.345	0.331	0.343	0.360	0.361	0.336	0.319	0.342	4.40
69)	1-Chlorohexane	0.533	0.513	0.498	0.522	0.540	0.540	0.564	0.530	4.07

Initial Calibration Summary

Job Number: FA55941 **Sample:** VI1683-ICC1683
Account: EAENYS EA Engineering **Lab FileID:** I56318.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

70)C	Ethylbenzene	1.789	1.768	1.700	1.795	1.745	1.796	1.772	1.766	1.95
71)P	Chlorobenzene	1.095	1.025	0.972	0.997	0.967	0.986	0.991	1.005	4.39
72)	1,1,1,2-Tetrachlo	0.271	0.296	0.292	0.320	0.319	0.331	0.339	0.310	7.87
73)	m,p-Xylene	1.272	1.355	1.304	1.386	1.362	1.377	1.362	1.345	3.08
74)	o-Xylene	1.170	1.298	1.302	1.411	1.391	1.428	1.445	1.349	7.28
75)	Styrene	0.708	0.900	0.904	1.009	1.009	1.046	1.062	0.948	13.06
76)P	Bromoform	0.150	0.176	0.186	0.215	0.220	0.230	0.238	0.202	15.84

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999
Response Ratio = 0.00000 + 0.20580 *A + 0.01648 *A^2

77)	Isopropylbenzene	1.255	1.458	1.435	1.558	1.540	1.579	1.583	1.487	7.91
78) I	1,4-Dichlorobenzene-d	----------ISTD----------								
79)S	4-Bromofluorobenz	0.771	0.777	0.783	0.795	0.793	0.803	0.805	0.790	1.66
80)	cis-1,4-Dichloro-	0.266	0.277	0.273	0.321	0.331	0.341	0.344	0.308	11.12
81)	n-Propylbenzene	3.811	3.967	3.861	4.158	4.076	4.078	4.070	4.003	3.19
82)	Bromobenzene	0.747	0.769	0.745	0.787	0.786	0.796	0.800	0.776	2.90
83)P	1,1,2,2-Tetrachlo	0.863	0.881	0.853	0.895	0.880	0.868	0.876	0.874	1.59
84)	1,3,5-Trimethylbe	2.158	2.462	2.447	2.652	2.630	2.656	2.652	2.523	7.33
85)	2-Chlorotoluene	2.301	2.386	2.324	2.479	2.477	2.517	2.540	2.432	3.91
86)	trans-1,4-Dichlor	0.222	0.250	0.273	0.310	0.311	0.312	0.318	0.285	13.13
87)	1,2,3-Trichloropr	0.209	0.246	0.228	0.246	0.241	0.238	0.239	0.235	5.62
88)	Cyclohexanone	0.028	0.035	0.036	0.042	0.042	0.040	0.039	0.037	13.12
89)	4-Chlorotoluene	2.301	2.386	2.324	2.479	2.477	2.517	2.540	2.432	3.91
90)	tert-Butylbenzene	1.426	1.509	1.485	1.608	1.615	1.635	1.651	1.561	5.55
91)	a-Methyl styrene			0.019					0.019	0.00
92)	1,2,4-Trimethylbe	2.186	2.557	2.549	2.731	2.717	2.751	2.772	2.609	7.96
93)	Pentachloroethane	0.332	0.368	0.364	0.409	0.388	0.491	0.500	0.407	15.90

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9973
Response Ratio = 0.00000 + 0.37152 *A + 0.06751 *A^2

94)	sec-Butylbenzene	2.894	3.181	3.101	3.351	3.326	3.329	3.363	3.221	5.42
95)	4-Isopropyltoluen	2.192	2.514	2.513	2.743	2.738	2.763	2.811	2.611	8.45
96)	1,3-Dichlorobenze	1.420	1.396	1.381	1.465	1.450	1.473	1.495	1.440	2.92
97)	1,4-Dichlorobenze	1.690	1.579	1.523	1.567	1.516	1.539	1.556	1.567	3.75
98)	n-Butylbenzene	1.268	1.415	1.422	1.577	1.584	1.610	1.647	1.503	9.16
99)	Benzyl Chloride	0.060	0.100	0.116	0.174	0.187	0.227	0.245	0.158	43.26

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9990
Response Ratio = 0.00000 + 0.15325 *A + 0.04719 *A^2

100)	1,2-Dichlorobenze	1.367	1.373	1.341	1.429	1.419	1.434	1.454	1.402	2.99
101)	1,2-Dibromo-3-Chl	0.097	0.110	0.117	0.142	0.146	0.149	0.156	0.131	17.38

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998
Response Ratio = 0.00000 + 0.13512 *A + 0.01035 *A^2

102)	Hexachlorobutadie	0.452	0.437	0.427	0.472	0.477	0.486	0.510	0.466	6.25
103)	1,2,4-Trichlorobe	0.819	0.854	0.871	0.964	0.977	0.999	1.032	0.931	8.78
104)	Naphthalene	1.500	1.903	2.074	2.394	2.447	2.466	2.529	2.188	17.42

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998
Response Ratio = 0.00000 + 2.33042 *A + 0.09975 *A^2

105)	1,2,3-Trichlorobe	0.797	0.809	0.839	0.893	0.907	0.917	0.948	0.873	6.64
106) I	Tert Butyl Alcohol-d1	----------ISTD----------								
107)	Ethanol		0.048	0.180	0.189	0.188	0.188	0.181	0.182	0.165	31.33

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998
Response Ratio = 0.00000 + 0.18817 *A + -0.00089 *A^2

108)	Acrolein		1.222	3.681	3.841	4.096	4.035	4.093	3.992	3.566	29.28

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998

Initial Calibration Summary

Job Number: FA55941 **Sample:** VI1683-ICC1683
Account: EAENYS EA Engineering **Lab FileID:** I56318.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

```
               Response Ratio = 0.00000 + 4.12258 *A + -0.05810 *A^2

109)  Tert Butyl Alcoho 1.600 1.540 1.597 1.658 1.616 1.584 1.621 1.602   2.27
110)  Isobutyl alcohol  0.649 0.563 0.600 0.707 0.700 0.707 0.711 0.662   9.07
111)  Tert Amyl Alcohol 0.768 0.848 0.914 1.091 1.077 1.100 1.159 0.994  15.04
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9997
               Response Ratio = 0.00000 + 1.00771 *A + 0.03719 *A^2

112)  1,4-Dioxane       0.060 0.132 0.142 0.171 0.160 0.158 0.157 0.140  26.92
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9994
               Response Ratio = 0.00000 + 0.16309 *A + -0.00084 *A^2

113)  3,3-Dimethyl-1-bu 1.650 1.596 1.594 1.790 1.873 1.748 1.682 1.705   6.10
 ----------------------------------------------------------------------------
 (#) = Out of Range

          I-July2518.M        Thu Jul 26 08:21:24 2018
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Initial Calibration Verification

Job Number: FA55941 **Sample:** VI1683-ICV1683
Account: EAENYS EA Engineering **Lab FileID:** I56322.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\2\DATA\072518\I56322.D Vial: 9
Acq On : 25 Jul 2018 6:24 pm Operator: ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Jul 26 08:15:52 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	104	0.00	9.42
2	Dichlorodifluoromethane	0.285	0.296	-3.9	109	0.00	2.25
3 P	Chloromethane	0.391	0.351	10.2	100	-0.01	2.53
4	1,3-Butadiene	0.211	0.180	14.7	86	-0.01	2.64
5 C	Vinyl Chloride	0.329	0.320	2.7	101	-0.01	2.66
6	Bromomethane	0.172	0.172	0.0	112	-0.01	3.10
		Amount	Calc.	%Drift			
7	Chloroethane	40.000	32.088	19.8	95	-0.02	3.26
		AvgRF	CCRF	%Dev			
8	Trichlorofluoromethane	0.378	0.389	-2.9	113	-0.01	3.51
9	Ethyl Ether	0.291	0.297	-2.1	105	0.00	3.92
10	1,2-Dichlorotrifluoroetha	0.350	0.353	-0.9	105	0.00	4.23
11 C	1,1-Dichloroethene	0.468	0.490	-4.7	107	-0.01	4.21
12	Freon 113	0.261	0.236	9.6	94	-0.01	4.31
13	Carbon Disulfide	0.741	0.817	-10.3	110	-0.02	4.26
14	Iodomethane	0.401	0.409	-2.0	105	-0.01	4.42
15	Allyl chloride	0.402	0.403	-0.2	99	-0.01	4.92
		Amount	Calc.	%Drift			
16	Methylene Chloride	40.000	41.556	-3.9	107	0.00	5.10
		AvgRF	CCRF	%Dev			
17	Acetone	0.083	0.084	-1.2	98	0.00	5.16
		Amount	Calc.	%Drift			
18	Methyl acetate	200.000	206.883	-3.4	105	0.00	5.37
		AvgRF	CCRF	%Dev			
19	trans-1,2-Dichloroethene	0.461	0.477	-3.5	104	0.00	5.35
20	Hexane	0.354	0.340	4.0	101	0.00	5.49
21	Methyl Tert Butyl Ether	0.573	0.622	-8.6	108	-0.01	5.55
22	Acetonitrile	0.029	0.032	-10.3	104	0.00	5.88
23	Di-isopropyl ether	1.030	1.099	-6.7	107	0.00	6.18
24	Chloroprene	0.474	0.484	-2.1	100	0.00	6.31
25 P	1,1-Dichloroethane	0.555	0.584	-5.2	109	0.00	6.34
		Amount	Calc.	%Drift			
26	Acrylonitrile	200.000	205.471	-2.7	104	0.00	6.39
		AvgRF	CCRF	%Dev			

Initial Calibration Verification

Job Number: FA55941 **Sample:** VI1683-ICV1683
Account: EAENYS EA Engineering **Lab FileID:** I56322.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

27		ETBE	0.831	0.930	-11.9	110	0.00	6.80
			Amount	Calc.	%Drift			
28		Vinyl acetate	200.000	194.769	2.6	102	0.00	6.77
			AvgRF	CCRF	%Dev			
29		cis-1,2-Dichloroethene	0.266	0.279	-4.9	107	-0.01	7.26
30		2,2-Dichloropropane	0.236	0.259	-9.7	108	-0.01	7.45
31		Bromochloromethane	0.130	0.135	-3.8	105	0.00	7.61
32		Cyclohexane	0.615	0.632	-2.8	104	0.00	7.65
33	C	Chloroform	0.478	0.475	0.6	105	-0.01	7.76
			Amount	Calc.	%Drift			
34		Ethyl acetate	200.000	201.997	-1.0	104	0.00	8.00
			AvgRF	CCRF	%Dev			
35		Tetrahydrofuran	0.174	0.187	-7.5	104	0.00	8.03
36	S	Dibromofluoromethane	0.264	0.264	0.0	102	0.00	8.09
37		Carbon Tetrachloride	0.288	0.277	3.8	98	0.00	8.02
38		1,1,1-Trichloroethane	0.385	0.387	-0.5	101	0.00	8.13
			Amount	Calc.	%Drift			
39		2-Butanone	200.000	209.892	-4.9	106	0.00	8.30
			AvgRF	CCRF	%Dev			
40		1,1-Dichloropropene	0.341	0.358	-5.0	105	0.00	8.36
			Amount	Calc.	%Drift			
41		tert-Butyl formate	400.000	296.136	26.0#	72	0.00	8.57
			AvgRF	CCRF	%Dev			
42		Propionitrile	0.044	0.047	-6.8	101	0.00	8.79
43		Methacrylonitrile	0.171	0.176	-2.9	102	0.00	8.84
44		Benzene	1.018	1.030	-1.2	106	0.00	8.79
45		TAME	0.555	0.608	-9.5	107	0.00	9.02
46	S	1,2-Dichloroethane-d4	0.357	0.353	1.1	103	0.00	8.99
47		1,2-Dichloroethane	0.440	0.441	-0.2	105	0.00	9.10
48		Trichloroethene	0.269	0.273	-1.5	105	0.00	9.66
49		Methylcyclohexane	0.440	0.461	-4.8	106	0.00	9.65
50		Dibromomethane	0.166	0.175	-5.4	107	0.00	10.15
51	C	1,2-Dichloropropane	0.325	0.342	-5.2	107	0.00	10.25
52		Bromodichloromethane	0.323	0.346	-7.1	107	0.00	10.34
			Amount	Calc.	%Drift			
53		Methyl methacrylate	40.000	39.888	0.3	102	0.00	10.51
			AvgRF	CCRF	%Dev			
54		2-Chloroethyl vinyl ether	0.192	0.226	-17.7	111	0.00	10.91
			Amount	Calc.	%Drift			
55		cis-1,3-Dichloropropene	40.000	39.535	1.2	102	0.00	10.98
			AvgRF	CCRF	%Dev			
56	I	Chlorobenzene-d5	1.000	1.000	0.0	104	0.00	12.46
57	S	Toluene-d8	1.380	1.375	0.4	104	0.00	11.15
58	C	Toluene	1.544	1.553	-0.6	107	0.00	11.20
			Amount	Calc.	%Drift			
59		2-Nitropropane	200.000	178.791	10.6	91	0.00	11.38

Initial Calibration Verification

Job Number: FA55941 **Sample:** VI1683-ICV1683
Account: EAENYS EA Engineering **Lab FileID:** I56322.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			AvgRF	CCRF	%Dev			
60		4-Methyl-2-pentanone	0.413	0.434	-5.1	106	0.00	11.52
61		trans-1,3-Dichloropropene	0.030	0.032	-6.7	108	0.00	11.93
62		Tetrachloroethene	0.398	0.390	2.0	94	0.00	11.55
			Amount	Calc.	%Drift			
63		Ethyl methacrylate	40.000	41.227	-3.1	106	0.00	11.70
			AvgRF	CCRF	%Dev			
64		1,1,2-Trichloroethane	0.290	0.304	-4.8	109	0.00	11.70
65		Dibromochloromethane	0.344	0.376	-9.3	106	0.00	11.86
66		1,3-Dichloropropane	0.583	0.587	-0.7	104	0.00	11.93
67		1,2-Dibromoethane	0.319	0.342	-7.2	106	0.00	12.05
68		2-hexanone	0.342	0.357	-4.4	102	0.00	12.21
69		1-Chlorohexane	0.530	0.549	-3.6	105	0.00	12.44
70	C	Ethylbenzene	1.766	1.790	-1.4	106	0.00	12.48
71	P	Chlorobenzene	1.005	0.998	0.7	107	0.00	12.47
72		1,1,1,2-Tetrachloroethane	0.310	0.320	-3.2	104	0.00	12.52
73		m,p-Xylene	1.345	1.401	-4.2	107	0.00	12.59
74		o-Xylene	1.349	1.441	-6.8	107	0.00	12.91
75		Styrene	0.948	1.057	-11.5	109	0.00	12.95
			Amount	Calc.	%Drift			
76	P	Bromoform	40.000	40.604	-1.5	105	0.00	12.99
			AvgRF	CCRF	%Dev			
77		Isopropylbenzene	1.487	1.662	-11.8	112	0.00	13.13
78	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	14.13
79	S	4-Bromofluorobenzene	0.790	0.799	-1.1	105	0.00	13.35
80		cis-1,4-Dichloro-2-butene	0.308	0.304	1.3	96	0.00	13.38
81		n-Propylbenzene	4.003	4.146	-3.6	106	0.00	13.43
82		Bromobenzene	0.776	0.811	-4.5	107	0.00	13.44
83	P	1,1,2,2-Tetrachloroethane	0.874	0.934	-6.9	111	0.00	13.47
84		1,3,5-Trimethylbenzene	2.523	2.727	-8.1	108	0.00	13.55
85		2-Chlorotoluene	2.432	2.551	-4.9	107	0.00	13.67
86		trans-1,4-Dichloro-2-Bute	0.285	0.285	0.0	96	0.00	13.60
87		1,2,3-Trichloropropane	0.235	0.248	-5.5	107	0.00	13.58
88		Cyclohexanone	0.037	0.032	13.5	80	0.00	13.62
89		4-Chlorotoluene	2.432	2.551	-4.9	107	0.00	13.67
90		tert-Butylbenzene	1.561	1.631	-4.5	105	0.00	13.79
91		a-Methyl styrene		----------NA----------				
92		1,2,4-Trimethylbenzene	2.609	2.724	-4.4	104	0.00	13.83
			Amount	Calc.	%Drift			
93		Pentachloroethane	40.000	39.863	0.3	114	0.00	13.82
			AvgRF	CCRF	%Dev			
94		sec-Butylbenzene	3.221	3.389	-5.2	106	0.00	13.91
95		4-Isopropyltoluene	2.611	2.841	-8.8	108	0.00	13.99
96		1,3-Dichlorobenzene	1.440	1.524	-5.8	110	0.00	14.08
97		1,4-Dichlorobenzene	1.567	1.568	-0.1	108	0.00	14.14
98		n-Butylbenzene	1.503	1.640	-9.1	108	0.00	14.29
			Amount	Calc.	%Drift			
99		Benzyl Chloride	40.000	39.157	2.1	104	0.00	14.30
			AvgRF	CCRF	%Dev			
100		1,2-Dichlorobenzene	1.402	1.449	-3.4	106	0.00	14.43

Initial Calibration Verification

Job Number: FA55941 **Sample:** VI1683-ICV1683
Account: EAENYS EA Engineering **Lab FileID:** I56322.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			Amount	Calc.	%Drift			
101		1,2-Dibromo-3-Chloropropa	40.000	40.578	-1.4	104	0.00	14.96
			AvgRF	CCRF	%Dev			
102		Hexachlorobutadiene	0.466	0.493	-5.8	108	0.00	15.38
103		1,2,4-Trichlorobenzene	0.931	1.019	-9.5	109	0.00	15.41
			Amount	Calc.	%Drift			
104		Naphthalene	40.000	41.942	-4.9	108	0.00	15.63
			AvgRF	CCRF	%Dev			
105		1,2,3-Trichlorobenzene	0.873	0.937	-7.3	108	0.00	15.75
106	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	106	0.00	5.62
			Amount	Calc.	%Drift			
107		Ethanol	800.000	819.004	-2.4	107	0.00	4.23
108		Acrolein	200.000	151.695	24.2#	81	0.00	4.70
			AvgRF	CCRF	%Dev			
109		Tert Butyl Alcohol	1.602	1.841	-14.9	121	0.00	5.73
110		Isobutyl alcohol	0.662	0.700	-5.7	106	0.00	9.21
			Amount	Calc.	%Drift			
111		Tert Amyl Alcohol	400.000	416.240	-4.1	110	0.00	9.33
112		1,4-Dioxane	800.000	823.330	-2.9	110	0.00	10.55
			AvgRF	CCRF	%Dev			
113		3,3-Dimethyl-1-butanol	1.705	1.738	-1.9	98	0.00	12.20

(#) = Out of Range SPCC's out = 0 CCC's out = 0
I56318.D I-July2518.M Thu Jul 26 08:21:15 2018

Continuing Calibration Summary

Job Number: FA55941 **Sample:** VI1685-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56356.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\2\DATA\072718\I56356.D Vial: 1
Acq On : 27 Jul 2018 8:49 am Operator: ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40895,VI1685,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Jul 26 08:15:52 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	95	0.00	9.42
2		Dichlorodifluoromethane	0.285	0.271	4.9	92	0.00	2.25
3	P	Chloromethane	0.391	0.366	6.4	95	0.00	2.53
4		1,3-Butadiene	0.211	0.197	6.6	87	0.00	2.64
5	C	Vinyl Chloride	0.329	0.323	1.8	93	0.00	2.67
6		Bromomethane	0.172	0.160	7.0	96	0.00	3.11
		----------	Amount	Calc.	%Drift			
7		Chloroethane	40.000	36.516	8.7	96	0.00	3.27
		----------	AvgRF	CCRF	%Dev			
8		Trichlorofluoromethane	0.378	0.364	3.7	97	0.00	3.51
9		Ethyl Ether	0.291	0.294	-1.0	95	0.00	3.92
10		1,2-Dichlorotrifluoroetha	0.350	0.358	-2.3	98	0.00	4.24
11	C	1,1-Dichloroethene	0.468	0.479	-2.4	96	0.00	4.22
12		Freon 113	0.261	0.266	-1.9	97	-0.01	4.31
13		Carbon Disulfide	0.741	0.776	-4.7	96	0.00	4.27
14		Iodomethane	0.401	0.401	0.0	95	0.00	4.43
15		Allyl chloride	0.402	0.416	-3.5	93	0.00	4.93
		----------	Amount	Calc.	%Drift			
16		Methylene Chloride	40.000	41.266	-3.2	98	0.00	5.10
		----------	AvgRF	CCRF	%Dev			
17		Acetone	0.083	0.090	-8.4	97	0.00	5.16
		----------	Amount	Calc.	%Drift			
18		Methyl acetate	200.000	204.695	-2.3	95	0.00	5.37
		----------	AvgRF	CCRF	%Dev			
19		trans-1,2-Dichloroethene	0.461	0.477	-3.5	96	0.00	5.35
20		Hexane	0.354	0.353	0.3	96	0.00	5.49
21		Methyl Tert Butyl Ether	0.573	0.585	-2.1	93	0.00	5.56
22		Acetonitrile	0.029	0.032	-10.3	98	0.00	5.88
23		Di-isopropyl ether	1.030	1.076	-4.5	96	0.00	6.18
24		Chloroprene	0.474	0.487	-2.7	92	0.00	6.31
25	P	1,1-Dichloroethane	0.555	0.559	-0.7	96	0.00	6.34
		----------	Amount	Calc.	%Drift			
26		Acrylonitrile	200.000	205.078	-2.5	95	0.00	6.39
		----------	AvgRF	CCRF	%Dev			

Continuing Calibration Summary

Job Number: FA55941 **Sample:** VI1685-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56356.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

27		ETBE	0.831	0.910	-9.5	98	0.00	6.80
			Amount	Calc.	%Drift			
28		Vinyl acetate	200.000	205.697	-2.8	99	0.00	6.77
			AvgRF	CCRF	%Dev			
29		cis-1,2-Dichloroethene	0.266	0.271	-1.9	95	-0.01	7.26
30		2,2-Dichloropropane	0.236	0.265	-12.3	102	0.00	7.46
31		Bromochloromethane	0.130	0.135	-3.8	97	0.00	7.61
32		Cyclohexane	0.615	0.643	-4.6	97	0.00	7.65
33	C	Chloroform	0.478	0.463	3.1	95	0.00	7.77
			Amount	Calc.	%Drift			
34		Ethyl acetate	200.000	203.312	-1.7	96	0.00	8.00
			AvgRF	CCRF	%Dev			
35		Tetrahydrofuran	0.174	0.188	-8.0	96	0.00	8.03
36	S	Dibromofluoromethane	0.264	0.266	-0.8	95	0.00	8.09
37		Carbon Tetrachloride	0.288	0.299	-3.8	96	0.00	8.02
38		1,1,1-Trichloroethane	0.385	0.398	-3.4	95	0.00	8.13
			Amount	Calc.	%Drift			
39		2-Butanone	200.000	204.927	-2.5	95	0.00	8.30
			AvgRF	CCRF	%Dev			
40		1,1-Dichloropropene	0.341	0.352	-3.2	95	0.00	8.36
			Amount	Calc.	%Drift			
41		tert-Butyl formate	400.000	469.638	-17.4	115	0.00	8.57
			AvgRF	CCRF	%Dev			
42		Propionitrile	0.044	0.048	-9.1	95	0.00	8.79
43		Methacrylonitrile	0.171	0.180	-5.3	96	0.00	8.84
44		Benzene	1.018	1.005	1.3	95	0.00	8.79
45		TAME	0.555	0.595	-7.2	96	0.00	9.03
46	S	1,2-Dichloroethane-d4	0.357	0.358	-0.3	96	0.00	9.00
47		1,2-Dichloroethane	0.440	0.435	1.1	96	0.00	9.10
48		Trichloroethene	0.269	0.268	0.4	95	0.00	9.66
49		Methylcyclohexane	0.440	0.449	-2.0	95	0.00	9.65
50		Dibromomethane	0.166	0.172	-3.6	97	0.00	10.15
51	C	1,2-Dichloropropane	0.325	0.332	-2.2	96	0.00	10.25
52		Bromodichloromethane	0.323	0.336	-4.0	95	0.00	10.34
			Amount	Calc.	%Drift			
53		Methyl methacrylate	40.000	40.224	-0.6	95	0.00	10.51
			AvgRF	CCRF	%Dev			
54		2-Chloroethyl vinyl ether	0.192	0.214	-11.5	97	0.00	10.91
			Amount	Calc.	%Drift			
55		cis-1,3-Dichloropropene	40.000	40.578	-1.4	96	0.00	10.98
			AvgRF	CCRF	%Dev			
56	I	Chlorobenzene-d5	1.000	1.000	0.0	95	0.00	12.46
57	S	Toluene-d8	1.380	1.362	1.3	95	0.00	11.15
58	C	Toluene	1.544	1.523	1.4	96	0.00	11.20
			Amount	Calc.	%Drift			
59		2-Nitropropane	200.000	200.788	-0.4	95	0.00	11.38

Continuing Calibration Summary

Job Number: FA55941 **Sample:** VI1685-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56356.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			AvgRF	CCRF	%Dev			
60		4-Methyl-2-pentanone	0.413	0.434	-5.1	97	0.00	11.52
61		trans-1,3-Dichloropropene	0.030	0.032	-6.7	98	0.00	11.93
62		Tetrachloroethene	0.398	0.388	2.5	86	0.00	11.55
			Amount	Calc.	%Drift			
63		Ethyl methacrylate	40.000	39.062	2.3	92	0.00	11.69
			AvgRF	CCRF	%Dev			
64		1,1,2-Trichloroethane	0.290	0.296	-2.1	98	0.00	11.70
65		Dibromochloromethane	0.344	0.367	-6.7	95	0.00	11.86
66		1,3-Dichloropropane	0.583	0.591	-1.4	96	0.00	11.93
67		1,2-Dibromoethane	0.319	0.335	-5.0	96	0.00	12.05
68		2-hexanone	0.342	0.362	-5.8	96	0.00	12.21
69		1-Chlorohexane	0.530	0.523	1.3	92	0.00	12.44
70	C	Ethylbenzene	1.766	1.769	-0.2	97	0.00	12.48
71	P	Chlorobenzene	1.005	0.982	2.3	97	0.00	12.47
72		1,1,1,2-Tetrachloroethane	0.310	0.318	-2.6	95	0.00	12.52
73		m,p-Xylene	1.345	1.364	-1.4	95	0.00	12.59
74		o-Xylene	1.349	1.393	-3.3	95	0.00	12.91
75		Styrene	0.948	1.007	-6.2	95	0.00	12.95
			Amount	Calc.	%Drift			
76	P	Bromoform	40.000	40.213	-0.5	95	0.00	12.99
			AvgRF	CCRF	%Dev			
77		Isopropylbenzene	1.487	1.543	-3.8	96	0.00	13.13
78	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	14.13
79	S	4-Bromofluorobenzene	0.790	0.791	-0.1	97	0.00	13.35
80		cis-1,4-Dichloro-2-butene	0.308	0.330	-7.1	97	0.00	13.38
81		n-Propylbenzene	4.003	4.077	-1.8	97	0.00	13.43
82		Bromobenzene	0.776	0.783	-0.9	97	0.00	13.44
83	P	1,1,2,2-Tetrachloroethane	0.874	0.873	0.1	96	0.00	13.47
84		1,3,5-Trimethylbenzene	2.523	2.607	-3.3	96	0.00	13.55
85		2-Chlorotoluene	2.432	2.451	-0.8	96	0.00	13.67
86		trans-1,4-Dichloro-2-Bute	0.285	0.313	-9.8	98	0.00	13.59
87		1,2,3-Trichloropropane	0.235	0.238	-1.3	96	0.00	13.58
88		Cyclohexanone	0.037	0.043	-16.2	100	0.00	13.62
89		4-Chlorotoluene	2.432	2.451	-0.8	96	0.00	13.67
90		tert-Butylbenzene	1.561	1.589	-1.8	96	0.00	13.79
91		a-Methyl styrene		----------NA----------				
92		1,2,4-Trimethylbenzene	2.609	2.696	-3.3	96	0.00	13.83
			Amount	Calc.	%Drift			
93		Pentachloroethane	40.000	40.655	-1.6	108	0.00	13.82
			AvgRF	CCRF	%Dev			
94		sec-Butylbenzene	3.221	3.290	-2.1	96	0.00	13.91
95		4-Isopropyltoluene	2.611	2.710	-3.8	96	0.00	13.99
96		1,3-Dichlorobenzene	1.440	1.440	0.0	96	0.00	14.08
97		1,4-Dichlorobenzene	1.567	1.513	3.4	97	0.00	14.14
98		n-Butylbenzene	1.503	1.582	-5.3	97	0.00	14.29
			Amount	Calc.	%Drift			
99		Benzyl Chloride	40.000	41.244	-3.1	103	0.00	14.30
			AvgRF	CCRF	%Dev			
100		1,2-Dichlorobenzene	1.402	1.399	0.2	96	0.00	14.43

Continuing Calibration Summary

Job Number: FA55941 **Sample:** VI1685-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56356.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			Amount	Calc.	%Drift			
101		1,2-Dibromo-3-Chloropropa	40.000	39.553	1.1	94	0.00	14.96
			AvgRF	CCRF	%Dev			
102		Hexachlorobutadiene	0.466	0.466	0.0	95	0.00	15.38
103		1,2,4-Trichlorobenzene	0.931	0.963	-3.4	96	0.00	15.41
			Amount	Calc.	%Drift			
104		Naphthalene	40.000	39.819	0.5	95	0.00	15.63
			AvgRF	CCRF	%Dev			
105		1,2,3-Trichlorobenzene	0.873	0.897	-2.7	96	0.00	15.76
106	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	91	0.00	5.62
			Amount	Calc.	%Drift			
107		Ethanol	800.000	854.534	-6.8	96	0.00	4.21
108		Acrolein	200.000	211.556	-5.8	98	0.00	4.71
			AvgRF	CCRF	%Dev			
109		Tert Butyl Alcohol	1.602	1.629	-1.7	92	0.00	5.73
110		Isobutyl alcohol	0.662	0.721	-8.9	94	0.00	9.21
			Amount	Calc.	%Drift			
111		Tert Amyl Alcohol	400.000	415.999	-4.0	94	0.00	9.33
112		1,4-Dioxane	800.000	827.319	-3.4	95	0.00	10.55
			AvgRF	CCRF	%Dev			
113		3,3-Dimethyl-1-butanol	1.705	1.884	-10.5	92	0.00	12.19

(#) = Out of Range SPCC's out = 0 CCC's out = 0
I56318.D I-July2518.M Fri Jul 27 09:17:00 2018

Continuing Calibration Summary

Job Number: FA55941 **Sample:** VI1685-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56376.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\2\DATA\072718\I56376.D Vial: 18
Acq On : 27 Jul 2018 8:08 pm Operator: ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40907,VI1685,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Jul 26 08:15:52 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	95	0.00	9.42
2		Dichlorodifluoromethane	0.285	0.260	8.8	88	0.00	2.26
3	P	Chloromethane	0.391	0.345	11.8	90	0.00	2.53
4		1,3-Butadiene	0.211	0.191	9.5	84	0.00	2.64
5	C	Vinyl Chloride	0.329	0.312	5.2	90	-0.01	2.66
6		Bromomethane	0.172	0.153	11.0	91	0.00	3.11
			Amount	Calc.	%Drift			
7		Chloroethane	40.000	34.950	12.6	93	0.00	3.27
			AvgRF	CCRF	%Dev			
8		Trichlorofluoromethane	0.378	0.383	-1.3	103	-0.01	3.51
9		Ethyl Ether	0.291	0.288	1.0	93	0.00	3.93
10		1,2-Dichlorotrifluoroetha	0.350	0.347	0.9	95	0.00	4.24
11	C	1,1-Dichloroethene	0.468	0.460	1.7	92	0.00	4.22
12		Freon 113	0.261	0.254	2.7	92	0.00	4.32
13		Carbon Disulfide	0.741	0.747	-0.8	93	0.00	4.27
14		Iodomethane	0.401	0.388	3.2	92	0.00	4.43
15		Allyl chloride	0.402	0.410	-2.0	92	0.00	4.93
			Amount	Calc.	%Drift			
16		Methylene Chloride	40.000	41.781	-4.5	99	0.00	5.10
			AvgRF	CCRF	%Dev			
17		Acetone	0.083	0.088	-6.0	94	0.00	5.17
			Amount	Calc.	%Drift			
18		Methyl acetate	200.000	207.023	-3.5	96	0.00	5.37
			AvgRF	CCRF	%Dev			
19		trans-1,2-Dichloroethene	0.461	0.471	-2.2	95	0.00	5.36
20		Hexane	0.354	0.343	3.1	94	0.00	5.50
21		Methyl Tert Butyl Ether	0.573	0.572	0.2	91	0.00	5.56
22		Acetonitrile	0.029	0.033	-13.8	99	0.00	5.88
23		Di-isopropyl ether	1.030	1.075	-4.4	96	0.00	6.18
24		Chloroprene	0.474	0.495	-4.4	94	0.00	6.31
25	P	1,1-Dichloroethane	0.555	0.562	-1.3	96	0.00	6.34
			Amount	Calc.	%Drift			
26		Acrylonitrile	200.000	208.993	-4.5	97	0.00	6.40
			AvgRF	CCRF	%Dev			

Continuing Calibration Summary

Job Number: FA55941 **Sample:** VI1685-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56376.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

27		ETBE	0.831	0.895	-7.7	97	0.00	6.80
			Amount	Calc.	%Drift			
28		Vinyl acetate	200.000	208.158	-4.1	101	0.00	6.77
			AvgRF	CCRF	%Dev			
29		cis-1,2-Dichloroethene	0.266	0.271	-1.9	95	0.00	7.27
30		2,2-Dichloropropane	0.236	0.242	-2.5	93	0.00	7.46
31		Bromochloromethane	0.130	0.134	-3.1	96	0.00	7.61
32		Cyclohexane	0.615	0.624	-1.5	94	0.00	7.65
33	C	Chloroform	0.478	0.463	3.1	95	0.00	7.77
			Amount	Calc.	%Drift			
34		Ethyl acetate	200.000	208.175	-4.1	98	0.00	8.00
			AvgRF	CCRF	%Dev			
35		Tetrahydrofuran	0.174	0.191	-9.8	98	0.00	8.04
36	S	Dibromofluoromethane	0.264	0.268	-1.5	96	0.00	8.09
37		Carbon Tetrachloride	0.288	0.274	4.9	89	0.00	8.02
38		1,1,1-Trichloroethane	0.385	0.385	0.0	92	0.00	8.13
			Amount	Calc.	%Drift			
39		2-Butanone	200.000	206.237	-3.1	96	0.00	8.30
			AvgRF	CCRF	%Dev			
40		1,1-Dichloropropene	0.341	0.345	-1.2	93	0.00	8.37
			Amount	Calc.	%Drift			
41		tert-Butyl formate	400.000	459.057	-14.8	112	0.00	8.58
			AvgRF	CCRF	%Dev			
42		Propionitrile	0.044	0.048	-9.1	96	0.00	8.79
43		Methacrylonitrile	0.171	0.184	-7.6	98	0.00	8.84
44		Benzene	1.018	1.007	1.1	95	0.00	8.80
45		TAME	0.555	0.580	-4.5	94	0.00	9.03
46	S	1,2-Dichloroethane-d4	0.357	0.363	-1.7	97	0.00	9.00
47		1,2-Dichloroethane	0.440	0.441	-0.2	97	0.00	9.10
48		Trichloroethene	0.269	0.271	-0.7	96	0.00	9.66
49		Methylcyclohexane	0.440	0.432	1.8	91	0.00	9.65
50		Dibromomethane	0.166	0.170	-2.4	95	0.00	10.15
51	C	1,2-Dichloropropane	0.325	0.335	-3.1	96	0.00	10.25
52		Bromodichloromethane	0.323	0.326	-0.9	93	0.00	10.34
			Amount	Calc.	%Drift			
53		Methyl methacrylate	40.000	40.027	-0.1	94	0.00	10.51
			AvgRF	CCRF	%Dev			
54		2-Chloroethyl vinyl ether	0.192	0.214	-11.5	97	0.00	10.91
			Amount	Calc.	%Drift			
55		cis-1,3-Dichloropropene	40.000	38.955	2.6	92	0.00	10.98
			AvgRF	CCRF	%Dev			
56	I	Chlorobenzene-d5	1.000	1.000	0.0	95	0.00	12.46
57	S	Toluene-d8	1.380	1.365	1.1	95	0.00	11.15
58	C	Toluene	1.544	1.513	2.0	96	0.00	11.20
			Amount	Calc.	%Drift			
59		2-Nitropropane	200.000	181.134	9.4	85	0.00	11.38

Continuing Calibration Summary

Job Number: FA55941 **Sample:** VI1685-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56376.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			AvgRF	CCRF	%Dev			
60		4-Methyl-2-pentanone	0.413	0.441	-6.8	99	0.00	11.52
61		trans-1,3-Dichloropropene	0.030	0.033	-10.0	100	0.00	11.93
62		Tetrachloroethene	0.398	0.401	-0.8	89	0.00	11.55
			Amount	Calc.	%Drift			
63		Ethyl methacrylate	40.000	38.846	2.9	91	0.00	11.70
			AvgRF	CCRF	%Dev			
64		1,1,2-Trichloroethane	0.290	0.296	-2.1	98	0.00	11.70
65		Dibromochloromethane	0.344	0.350	-1.7	91	0.00	11.86
66		1,3-Dichloropropane	0.583	0.588	-0.9	95	0.00	11.93
67		1,2-Dibromoethane	0.319	0.332	-4.1	95	0.00	12.05
68		2-hexanone	0.342	0.371	-8.5	98	0.00	12.21
69		1-Chlorohexane	0.530	0.528	0.4	93	0.00	12.44
70	C	Ethylbenzene	1.766	1.735	1.8	95	0.00	12.48
71	P	Chlorobenzene	1.005	0.972	3.3	96	0.00	12.47
72		1,1,1,2-Tetrachloroethane	0.310	0.306	1.3	91	0.00	12.52
73		m,p-Xylene	1.345	1.355	-0.7	95	0.00	12.59
74		o-Xylene	1.349	1.389	-3.0	95	0.00	12.91
75		Styrene	0.948	1.005	-6.0	95	0.00	12.95
			Amount	Calc.	%Drift			
76	P	Bromoform	40.000	37.578	6.1	89	0.00	12.99
			AvgRF	CCRF	%Dev			
77		Isopropylbenzene	1.487	1.530	-2.9	94	0.00	13.13
78	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	14.13
79	S	4-Bromofluorobenzene	0.790	0.780	1.3	95	0.00	13.35
80		cis-1,4-Dichloro-2-butene	0.308	0.318	-3.2	93	0.00	13.38
81		n-Propylbenzene	4.003	4.041	-0.9	96	0.00	13.43
82		Bromobenzene	0.776	0.773	0.4	95	0.00	13.44
83	P	1,1,2,2-Tetrachloroethane	0.874	0.870	0.5	96	0.00	13.47
84		1,3,5-Trimethylbenzene	2.523	2.585	-2.5	95	0.00	13.55
85		2-Chlorotoluene	2.432	2.450	-0.7	96	0.00	13.67
86		trans-1,4-Dichloro-2-Bute	0.285	0.306	-7.4	95	0.00	13.60
87		1,2,3-Trichloropropane	0.235	0.242	-3.0	97	0.00	13.58
88		Cyclohexanone	0.037	0.041	-10.8	94	0.00	13.62
89		4-Chlorotoluene	2.432	2.450	-0.7	96	0.00	13.67
90		tert-Butylbenzene	1.561	1.583	-1.4	95	0.00	13.79
91		a-Methyl styrene		----------NA----------				
92		1,2,4-Trimethylbenzene	2.609	2.677	-2.6	95	0.00	13.83
			Amount	Calc.	%Drift			
93		Pentachloroethane	40.000	37.081	7.3	97	0.00	13.82
			AvgRF	CCRF	%Dev			
94		sec-Butylbenzene	3.221	3.243	-0.7	94	0.00	13.91
95		4-Isopropyltoluene	2.611	2.660	-1.9	94	0.00	13.99
96		1,3-Dichlorobenzene	1.440	1.436	0.3	96	0.00	14.08
97		1,4-Dichlorobenzene	1.567	1.514	3.4	96	0.00	14.14
98		n-Butylbenzene	1.503	1.546	-2.9	94	0.00	14.29
			Amount	Calc.	%Drift			
99		Benzyl Chloride	40.000	37.013	7.5	90	0.00	14.30
			AvgRF	CCRF	%Dev			
100		1,2-Dichlorobenzene	1.402	1.394	0.6	95	0.00	14.43

Continuing Calibration Summary

Job Number: FA55941 **Sample:** VI1685-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56376.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			Amount	Calc.	%Drift			
101		1,2-Dibromo-3-Chloropropa	40.000	37.652	5.9	89	0.00	14.96
			AvgRF	CCRF	%Dev			
102		Hexachlorobutadiene	0.466	0.456	2.1	92	0.00	15.38
103		1,2,4-Trichlorobenzene	0.931	0.947	-1.7	94	0.00	15.41
			Amount	Calc.	%Drift			
104		Naphthalene	40.000	39.612	1.0	94	0.00	15.63
			AvgRF	CCRF	%Dev			
105		1,2,3-Trichlorobenzene	0.873	0.882	-1.0	94	0.00	15.76
106	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	93	0.00	5.62
			Amount	Calc.	%Drift			
107		Ethanol	800.000	797.658	0.3	91	0.02	4.24
108		Acrolein	200.000	201.925	-1.0	95	0.00	4.71
			AvgRF	CCRF	%Dev			
109		Tert Butyl Alcohol	1.602	1.572	1.9	90	0.00	5.73
110		Isobutyl alcohol	0.662	0.717	-8.3	95	0.00	9.21
			Amount	Calc.	%Drift			
111		Tert Amyl Alcohol	400.000	411.493	-2.9	95	0.00	9.33
112		1,4-Dioxane	800.000	798.588	0.2	93	0.00	10.55
			AvgRF	CCRF	%Dev			
113		3,3-Dimethyl-1-butanol	1.705	1.903	-11.6	94	0.00	12.20

(#) = Out of Range SPCC's out = 0 CCC's out = 0
I56318.D I-July2518.M Mon Jul 30 07:03:51 2018

Continuing Calibration Summary

Job Number: FA55941 **Sample:** VI1686-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56379.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\2\DATA\073018\I56379.D Vial: 1
Acq On : 30 Jul 2018 8:01 am Operator: ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40907,VI1686,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Jul 26 08:15:52 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	99	0.00	9.41
2		Dichlorodifluoromethane	0.285	0.246	13.7	87	0.00	2.25
3	P	Chloromethane	0.391	0.356	9.0	97	-0.01	2.53
4		1,3-Butadiene	0.211	0.191	9.5	87	-0.01	2.64
5	C	Vinyl Chloride	0.329	0.310	5.8	93	-0.01	2.66
6		Bromomethane	0.172	0.150	12.8	93	0.00	3.10
			Amount	Calc.	%Drift			
7		Chloroethane	40.000	35.320	11.7	97	-0.01	3.26
			AvgRF	CCRF	%Dev			
8		Trichlorofluoromethane	0.378	0.364	3.7	101	-0.01	3.51
9		Ethyl Ether	0.291	0.291	0.0	98	-0.01	3.92
10		1,2-Dichlorotrifluoroetha	0.350	0.342	2.3	98	0.00	4.23
11	C	1,1-Dichloroethene	0.468	0.468	0.0	98	-0.01	4.21
12		Freon 113	0.261	0.257	1.5	97	-0.01	4.31
13		Carbon Disulfide	0.741	0.768	-3.6	99	0.00	4.27
14		Iodomethane	0.401	0.401	0.0	99	0.00	4.43
15		Allyl chloride	0.402	0.426	-6.0	100	-0.01	4.92
			Amount	Calc.	%Drift			
16		Methylene Chloride	40.000	40.398	-1.0	100	0.00	5.10
			AvgRF	CCRF	%Dev			
17		Acetone	0.083	0.088	-6.0	98	-0.01	5.15
			Amount	Calc.	%Drift			
18		Methyl acetate	200.000	199.910	0.0	97	0.00	5.37
			AvgRF	CCRF	%Dev			
19		trans-1,2-Dichloroethene	0.461	0.469	-1.7	98	-0.01	5.35
20		Hexane	0.354	0.336	5.1	96	-0.01	5.49
21		Methyl Tert Butyl Ether	0.573	0.611	-6.6	101	-0.01	5.55
22		Acetonitrile	0.029	0.031	-6.9	98	-0.01	5.87
23		Di-isopropyl ether	1.030	1.074	-4.3	100	0.00	6.18
24		Chloroprene	0.474	0.489	-3.2	96	-0.01	6.30
25	P	1,1-Dichloroethane	0.555	0.556	-0.2	99	0.00	6.33
			Amount	Calc.	%Drift			
26		Acrylonitrile	200.000	201.854	-0.9	97	0.00	6.39
			AvgRF	CCRF	%Dev			

Continuing Calibration Summary

Job Number: FA55941 **Sample:** VI1686-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56379.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

27		ETBE	0.831	0.929	-11.8	105	0.00	6.79
		----------	Amount	Calc.	%Drift	----------		
28		Vinyl acetate	200.000	207.151	-3.6	104	0.00	6.77
		----------	AvgRF	CCRF	%Dev	----------		
29		cis-1,2-Dichloroethene	0.266	0.272	-2.3	99	-0.01	7.26
30		2,2-Dichloropropane	0.236	0.285	-20.8#	114	0.00	7.46
31		Bromochloromethane	0.130	0.135	-3.8	101	-0.01	7.60
32		Cyclohexane	0.615	0.618	-0.5	97	0.00	7.65
33	C	Chloroform	0.478	0.466	2.5	99	-0.01	7.76
		----------	Amount	Calc.	%Drift	----------		
34		Ethyl acetate	200.000	199.494	0.3	98	0.00	8.00
		----------	AvgRF	CCRF	%Dev	----------		
35		Tetrahydrofuran	0.174	0.181	-4.0	96	0.00	8.03
36	S	Dibromofluoromethane	0.264	0.267	-1.1	99	0.00	8.09
37		Carbon Tetrachloride	0.288	0.313	-8.7	105	-0.01	8.01
38		1,1,1-Trichloroethane	0.385	0.401	-4.2	100	0.00	8.13
		----------	Amount	Calc.	%Drift	----------		
39		2-Butanone	200.000	198.782	0.6	96	0.00	8.30
		----------	AvgRF	CCRF	%Dev	----------		
40		1,1-Dichloropropene	0.341	0.345	-1.2	97	0.00	8.36
		----------	Amount	Calc.	%Drift	----------		
41		tert-Butyl formate	400.000	520.912	-30.2#	136	0.00	8.57
		----------	AvgRF	CCRF	%Dev	----------		
42		Propionitrile	0.044	0.046	-4.5	96	0.00	8.79
43		Methacrylonitrile	0.171	0.175	-2.3	97	0.00	8.84
44		Benzene	1.018	0.995	2.3	98	0.00	8.79
45		TAME	0.555	0.612	-10.3	103	0.00	9.02
46	S	1,2-Dichloroethane-d4	0.357	0.355	0.6	99	0.00	8.99
47		1,2-Dichloroethane	0.440	0.431	2.0	98	0.00	9.10
48		Trichloroethene	0.269	0.269	0.0	99	0.00	9.65
49		Methylcyclohexane	0.440	0.438	0.5	96	0.00	9.65
50		Dibromomethane	0.166	0.171	-3.0	99	0.00	10.15
51	C	1,2-Dichloropropane	0.325	0.330	-1.5	99	0.00	10.25
52		Bromodichloromethane	0.323	0.343	-6.2	101	0.00	10.34
		----------	Amount	Calc.	%Drift	----------		
53		Methyl methacrylate	40.000	39.378	1.6	96	0.00	10.51
		----------	AvgRF	CCRF	%Dev	----------		
54		2-Chloroethyl vinyl ether	0.192	0.208	-8.3	98	0.00	10.91
		----------	Amount	Calc.	%Drift	----------		
55		cis-1,3-Dichloropropene	40.000	41.840	-4.6	103	0.00	10.98
		----------	AvgRF	CCRF	%Dev	----------		
56	I	Chlorobenzene-d5	1.000	1.000	0.0	99	0.00	12.46
57	S	Toluene-d8	1.380	1.364	1.2	99	0.00	11.15
58	C	Toluene	1.544	1.503	2.7	99	0.00	11.20
		----------	Amount	Calc.	%Drift	----------		
59		2-Nitropropane	200.000	212.884	-6.4	105	0.00	11.38

Continuing Calibration Summary

Job Number: FA55941 **Sample:** VI1686-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56379.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			AvgRF	CCRF	%Dev			
60		4-Methyl-2-pentanone	0.413	0.410	0.7	96	0.00	11.52
61		trans-1,3-Dichloropropene	0.030	0.033	-10.0	106	0.00	11.93
62		Tetrachloroethene	0.398	0.376	5.5	87	0.00	11.55
			Amount	Calc.	%Drift			
63		Ethyl methacrylate	40.000	38.894	2.8	96	0.00	11.69
			AvgRF	CCRF	%Dev			
64		1,1,2-Trichloroethane	0.290	0.293	-1.0	101	0.00	11.70
65		Dibromochloromethane	0.344	0.373	-8.4	101	0.00	11.86
66		1,3-Dichloropropane	0.583	0.579	0.7	98	0.00	11.93
67		1,2-Dibromoethane	0.319	0.334	-4.7	99	0.00	12.05
68		2-hexanone	0.342	0.344	-0.6	95	0.00	12.21
69		1-Chlorohexane	0.530	0.519	2.1	96	0.00	12.44
70	C	Ethylbenzene	1.766	1.747	1.1	100	0.00	12.48
71	P	Chlorobenzene	1.005	0.972	3.3	100	0.00	12.47
72		1,1,1,2-Tetrachloroethane	0.310	0.330	-6.5	103	0.00	12.52
73		m,p-Xylene	1.345	1.351	-0.4	99	0.00	12.59
74		o-Xylene	1.349	1.381	-2.4	99	0.00	12.91
75		Styrene	0.948	1.005	-6.0	99	0.00	12.95
			Amount	Calc.	%Drift			
76	P	Bromoform	40.000	42.341	-5.9	105	0.00	12.99
			AvgRF	CCRF	%Dev			
77		Isopropylbenzene	1.487	1.541	-3.6	100	0.00	13.13
78	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	14.13
79	S	4-Bromofluorobenzene	0.790	0.792	-0.3	101	0.00	13.35
80		cis-1,4-Dichloro-2-butene	0.308	0.332	-7.8	102	0.00	13.38
81		n-Propylbenzene	4.003	3.973	0.7	99	0.00	13.43
82		Bromobenzene	0.776	0.775	0.1	100	0.00	13.43
83	P	1,1,2,2-Tetrachloroethane	0.874	0.858	1.8	99	0.00	13.47
84		1,3,5-Trimethylbenzene	2.523	2.563	-1.6	99	0.00	13.55
85		2-Chlorotoluene	2.432	2.429	0.1	100	0.00	13.67
86		trans-1,4-Dichloro-2-Bute	0.285	0.310	-8.8	101	0.00	13.59
87		1,2,3-Trichloropropane	0.235	0.234	0.4	99	0.00	13.58
88		Cyclohexanone	0.037	0.044	-18.9	107	0.00	13.62
89		4-Chlorotoluene	2.432	2.429	0.1	100	0.00	13.67
90		tert-Butylbenzene	1.561	1.566	-0.3	99	0.00	13.79
91		a-Methyl styrene		----------NA----------				
92		1,2,4-Trimethylbenzene	2.609	2.665	-2.1	100	0.00	13.83
			Amount	Calc.	%Drift			
93		Pentachloroethane	40.000	43.889	-9.7	124	0.00	13.82
			AvgRF	CCRF	%Dev			
94		sec-Butylbenzene	3.221	3.204	0.5	98	0.00	13.91
95		4-Isopropyltoluene	2.611	2.650	-1.5	98	0.00	13.99
96		1,3-Dichlorobenzene	1.440	1.436	0.3	101	0.00	14.08
97		1,4-Dichlorobenzene	1.567	1.499	4.3	101	0.00	14.14
98		n-Butylbenzene	1.503	1.563	-4.0	100	0.00	14.28
			Amount	Calc.	%Drift			
99		Benzyl Chloride	40.000	47.255	-18.1	127	0.00	14.30
			AvgRF	CCRF	%Dev			
100		1,2-Dichlorobenzene	1.402	1.388	1.0	99	0.00	14.43

Continuing Calibration Summary

Job Number: FA55941 **Sample:** VI1686-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56379.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			Amount	Calc.	%Drift			
101		1,2-Dibromo-3-Chloropropa	40.000	41.052	-2.6	103	0.00	14.96
			AvgRF	CCRF	%Dev			
102		Hexachlorobutadiene	0.466	0.469	-0.6	100	0.00	15.38
103		1,2,4-Trichlorobenzene	0.931	0.969	-4.1	101	0.00	15.41
			Amount	Calc.	%Drift			
104		Naphthalene	40.000	40.067	-0.2	100	0.00	15.63
			AvgRF	CCRF	%Dev			
105		1,2,3-Trichlorobenzene	0.873	0.891	-2.1	100	0.00	15.75
106	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	103	-0.02	5.60
			Amount	Calc.	%Drift			
107		Ethanol	800.000	798.234	0.2	101	-0.01	4.21
108		Acrolein	200.000	186.942	6.5	97	0.00	4.70
			AvgRF	CCRF	%Dev			
109		Tert Butyl Alcohol	1.602	1.608	-0.4	102	-0.01	5.72
110		Isobutyl alcohol	0.662	0.652	1.5	96	0.00	9.20
			Amount	Calc.	%Drift			
111		Tert Amyl Alcohol	400.000	398.371	0.4	101	0.00	9.33
112		1,4-Dioxane	800.000	743.787	7.0	96	0.00	10.55
			AvgRF	CCRF	%Dev			
113		3,3-Dimethyl-1-butanol	1.705	1.665	2.3	91	0.00	12.19

(#) = Out of Range SPCC's out = 0 CCC's out = 0
I56318.D I-July2518.M Mon Jul 30 08:20:43 2018

Continuing Calibration Summary

Job Number: FA55941 **Sample:** VI1686-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56406.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\2\DATA\073018\I56406.D Vial: 25
Acq On : 30 Jul 2018 7:06 pm Operator: ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40916,VI1686,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Jul 26 08:15:52 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	96	0.00	9.42
2		Dichlorodifluoromethane	0.285	0.239	16.1	82	0.00	2.25
3	P	Chloromethane	0.391	0.346	11.5	91	-0.01	2.53
4		1,3-Butadiene	0.211	0.187	11.4	83	0.00	2.64
5	C	Vinyl Chloride	0.329	0.309	6.1	90	-0.01	2.66
6		Bromomethane	0.172	0.153	11.0	92	0.00	3.10
			Amount	Calc.	%Drift			
7		Chloroethane	40.000	36.340	9.1	97	-0.01	3.26
			AvgRF	CCRF	%Dev			
8		Trichlorofluoromethane	0.378	0.397	-5.0	107	0.00	3.51
9		Ethyl Ether	0.291	0.295	-1.4	96	0.00	3.92
10		1,2-Dichlorotrifluoroetha	0.350	0.357	-2.0	99	0.00	4.23
11	C	1,1-Dichloroethene	0.468	0.466	0.4	94	0.00	4.22
12		Freon 113	0.261	0.255	2.3	93	0.00	4.32
13		Carbon Disulfide	0.741	0.747	-0.8	93	-0.01	4.26
14		Iodomethane	0.401	0.388	3.2	93	0.00	4.43
15		Allyl chloride	0.402	0.421	-4.7	95	0.00	4.93
			Amount	Calc.	%Drift			
16		Methylene Chloride	40.000	43.429	-8.6	104	0.00	5.10
			AvgRF	CCRF	%Dev			
17		Acetone	0.083	0.087	-4.8	94	0.00	5.16
			Amount	Calc.	%Drift			
18		Methyl acetate	200.000	204.146	-2.1	96	0.00	5.37
			AvgRF	CCRF	%Dev			
19		trans-1,2-Dichloroethene	0.461	0.475	-3.0	97	0.00	5.35
20		Hexane	0.354	0.342	3.4	94	0.00	5.50
21		Methyl Tert Butyl Ether	0.573	0.573	0.0	92	0.00	5.56
22		Acetonitrile	0.029	0.033	-13.8	100	0.00	5.88
23		Di-isopropyl ether	1.030	1.081	-5.0	98	0.00	6.18
24		Chloroprene	0.474	0.511	-7.8	97	0.00	6.31
25	P	1,1-Dichloroethane	0.555	0.566	-2.0	98	0.00	6.34
			Amount	Calc.	%Drift			
26		Acrylonitrile	200.000	208.289	-4.1	98	0.00	6.40
			AvgRF	CCRF	%Dev			

Continuing Calibration Summary

Job Number: FA55941 **Sample:** VI1686-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56406.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

27		ETBE	0.831	0.911	-9.6	100	0.00	6.80
			Amount	Calc.	%Drift			
28		Vinyl acetate	200.000	210.331	-5.2	103	0.00	6.77
			AvgRF	CCRF	%Dev			
29		cis-1,2-Dichloroethene	0.266	0.272	-2.3	96	0.00	7.27
30		2,2-Dichloropropane	0.236	0.241	-2.1	94	0.00	7.46
31		Bromochloromethane	0.130	0.135	-3.8	97	0.00	7.61
32		Cyclohexane	0.615	0.630	-2.4	96	0.00	7.65
33	C	Chloroform	0.478	0.474	0.8	98	0.00	7.77
			Amount	Calc.	%Drift			
34		Ethyl acetate	200.000	208.031	-4.0	99	0.00	8.01
			AvgRF	CCRF	%Dev			
35		Tetrahydrofuran	0.174	0.191	-9.8	99	0.00	8.04
36	S	Dibromofluoromethane	0.264	0.268	-1.5	96	0.00	8.09
37		Carbon Tetrachloride	0.288	0.284	1.4	93	0.00	8.02
38		1,1,1-Trichloroethane	0.385	0.391	-1.6	94	0.00	8.13
			Amount	Calc.	%Drift			
39		2-Butanone	200.000	204.370	-2.2	96	0.00	8.31
			AvgRF	CCRF	%Dev			
40		1,1-Dichloropropene	0.341	0.348	-2.1	95	0.00	8.37
			Amount	Calc.	%Drift			
41		tert-Butyl formate	400.000	493.406	-23.4	123	0.00	8.57
			AvgRF	CCRF	%Dev			
42		Propionitrile	0.044	0.049	-11.4	98	0.00	8.79
43		Methacrylonitrile	0.171	0.186	-8.8	100	0.00	8.84
44		Benzene	1.018	1.012	0.6	97	0.00	8.79
45		TAME	0.555	0.582	-4.9	95	0.00	9.02
46	S	1,2-Dichloroethane-d4	0.357	0.365	-2.2	99	0.00	9.00
47		1,2-Dichloroethane	0.440	0.444	-0.9	98	0.00	9.10
48		Trichloroethene	0.269	0.272	-1.1	97	0.00	9.66
49		Methylcyclohexane	0.440	0.436	0.9	93	0.00	9.65
50		Dibromomethane	0.166	0.172	-3.6	98	0.00	10.15
51	C	1,2-Dichloropropane	0.325	0.337	-3.7	98	0.00	10.25
52		Bromodichloromethane	0.323	0.332	-2.8	95	0.00	10.34
			Amount	Calc.	%Drift			
53		Methyl methacrylate	40.000	40.138	-0.3	95	0.00	10.51
			AvgRF	CCRF	%Dev			
54		2-Chloroethyl vinyl ether	0.192	0.216	-12.5	99	0.00	10.91
			Amount	Calc.	%Drift			
55		cis-1,3-Dichloropropene	40.000	39.807	0.5	95	0.00	10.98
			AvgRF	CCRF	%Dev			
56	I	Chlorobenzene-d5	1.000	1.000	0.0	97	0.00	12.46
57	S	Toluene-d8	1.380	1.364	1.2	97	0.00	11.15
58	C	Toluene	1.544	1.510	2.2	97	0.00	11.20
			Amount	Calc.	%Drift			
59		2-Nitropropane	200.000	184.860	7.6	89	0.00	11.38

Continuing Calibration Summary

Job Number: FA55941 **Sample:** VI1686-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56406.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			AvgRF	CCRF	%Dev			
60		4-Methyl-2-pentanone	0.413	0.443	-7.3	101	0.00	11.52
61		trans-1,3-Dichloropropene	0.030	0.032	-6.7	101	0.00	11.93
62		Tetrachloroethene	0.398	0.391	1.8	88	0.00	11.55
			Amount	Calc.	%Drift			
63		Ethyl methacrylate	40.000	38.946	2.6	94	0.00	11.70
			AvgRF	CCRF	%Dev			
64		1,1,2-Trichloroethane	0.290	0.295	-1.7	99	0.00	11.70
65		Dibromochloromethane	0.344	0.351	-2.0	93	0.00	11.86
66		1,3-Dichloropropane	0.583	0.584	-0.2	97	0.00	11.93
67		1,2-Dibromoethane	0.319	0.330	-3.4	96	0.00	12.05
68		2-hexanone	0.342	0.370	-8.2	99	0.00	12.21
69		1-Chlorohexane	0.530	0.526	0.8	95	0.00	12.44
70	C	Ethylbenzene	1.766	1.741	1.4	97	0.00	12.48
71	P	Chlorobenzene	1.005	0.966	3.9	97	0.00	12.47
72		1,1,1,2-Tetrachloroethane	0.310	0.312	-0.6	95	0.00	12.52
73		m,p-Xylene	1.345	1.358	-1.0	97	0.00	12.59
74		o-Xylene	1.349	1.375	-1.9	96	0.00	12.91
75		Styrene	0.948	0.999	-5.4	96	0.00	12.95
			Amount	Calc.	%Drift			
76	P	Bromoform	40.000	37.820	5.4	91	0.00	12.99
			AvgRF	CCRF	%Dev			
77		Isopropylbenzene	1.487	1.519	-2.2	96	0.00	13.13
78	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	98	0.00	14.13
79	S	4-Bromofluorobenzene	0.790	0.784	0.8	97	0.00	13.35
80		cis-1,4-Dichloro-2-butene	0.308	0.321	-4.2	95	0.00	13.38
81		n-Propylbenzene	4.003	4.050	-1.2	97	0.00	13.43
82		Bromobenzene	0.776	0.776	0.0	96	0.00	13.44
83	P	1,1,2,2-Tetrachloroethane	0.874	0.882	-0.9	98	0.00	13.47
84		1,3,5-Trimethylbenzene	2.523	2.607	-3.3	97	0.00	13.55
85		2-Chlorotoluene	2.432	2.447	-0.6	96	0.00	13.67
86		trans-1,4-Dichloro-2-Bute	0.285	0.300	-5.3	94	0.00	13.60
87		1,2,3-Trichloropropane	0.235	0.238	-1.3	96	0.00	13.58
88		Cyclohexanone	0.037	0.038	-2.7	88	0.00	13.62
89		4-Chlorotoluene	2.432	2.447	-0.6	96	0.00	13.67
90		tert-Butylbenzene	1.561	1.588	-1.7	96	0.00	13.79
91		a-Methyl styrene		----------NA----------				
92		1,2,4-Trimethylbenzene	2.609	2.701	-3.5	97	0.00	13.83
			Amount	Calc.	%Drift			
93		Pentachloroethane	40.000	39.631	0.9	106	0.00	13.82
			AvgRF	CCRF	%Dev			
94		sec-Butylbenzene	3.221	3.257	-1.1	96	0.00	13.91
95		4-Isopropyltoluene	2.611	2.679	-2.6	96	0.00	13.99
96		1,3-Dichlorobenzene	1.440	1.433	0.5	97	0.00	14.08
97		1,4-Dichlorobenzene	1.567	1.515	3.3	98	0.00	14.14
98		n-Butylbenzene	1.503	1.550	-3.1	96	0.00	14.28
			Amount	Calc.	%Drift			
99		Benzyl Chloride	40.000	37.220	7.0	92	0.00	14.30
			AvgRF	CCRF	%Dev			
100		1,2-Dichlorobenzene	1.402	1.387	1.1	95	0.00	14.43

Continuing Calibration Summary

Job Number: FA55941 **Sample:** VI1686-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56406.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			Amount	Calc.	%Drift			
101		1,2-Dibromo-3-Chloropropa	40.000	38.166	4.6	92	0.00	14.96
			AvgRF	CCRF	%Dev			
102		Hexachlorobutadiene	0.466	0.456	2.1	93	0.00	15.38
103		1,2,4-Trichlorobenzene	0.931	0.938	-0.8	94	0.00	15.41
			Amount	Calc.	%Drift			
104		Naphthalene	40.000	38.964	2.6	94	0.00	15.63
			AvgRF	CCRF	%Dev			
105		1,2,3-Trichlorobenzene	0.873	0.885	-1.4	95	0.00	15.75
106	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	93	0.00	5.62
			Amount	Calc.	%Drift			
107		Ethanol	800.000	824.060	-3.0	94	0.01	4.23
108		Acrolein	200.000	202.811	-1.4	95	0.00	4.71
			AvgRF	CCRF	%Dev			
109		Tert Butyl Alcohol	1.602	1.589	0.8	91	0.00	5.73
110		Isobutyl alcohol	0.662	0.723	-9.2	95	0.00	9.21
			Amount	Calc.	%Drift			
111		Tert Amyl Alcohol	400.000	413.900	-3.5	95	0.00	9.33
112		1,4-Dioxane	800.000	796.478	0.4	93	0.00	10.55
			AvgRF	CCRF	%Dev			
113		3,3-Dimethyl-1-butanol	1.705	1.950	-14.4	96	0.00	12.20

(#) = Out of Range SPCC's out = 0 CCC's out = 0
I56318.D I-July2518.M Tue Jul 31 07:44:52 2018

MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56368.D
Acq On : 27 Jul 2018 4:58 pm
Operator : ANAJ
Sample : FA55941-1 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 30 06:53:59 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

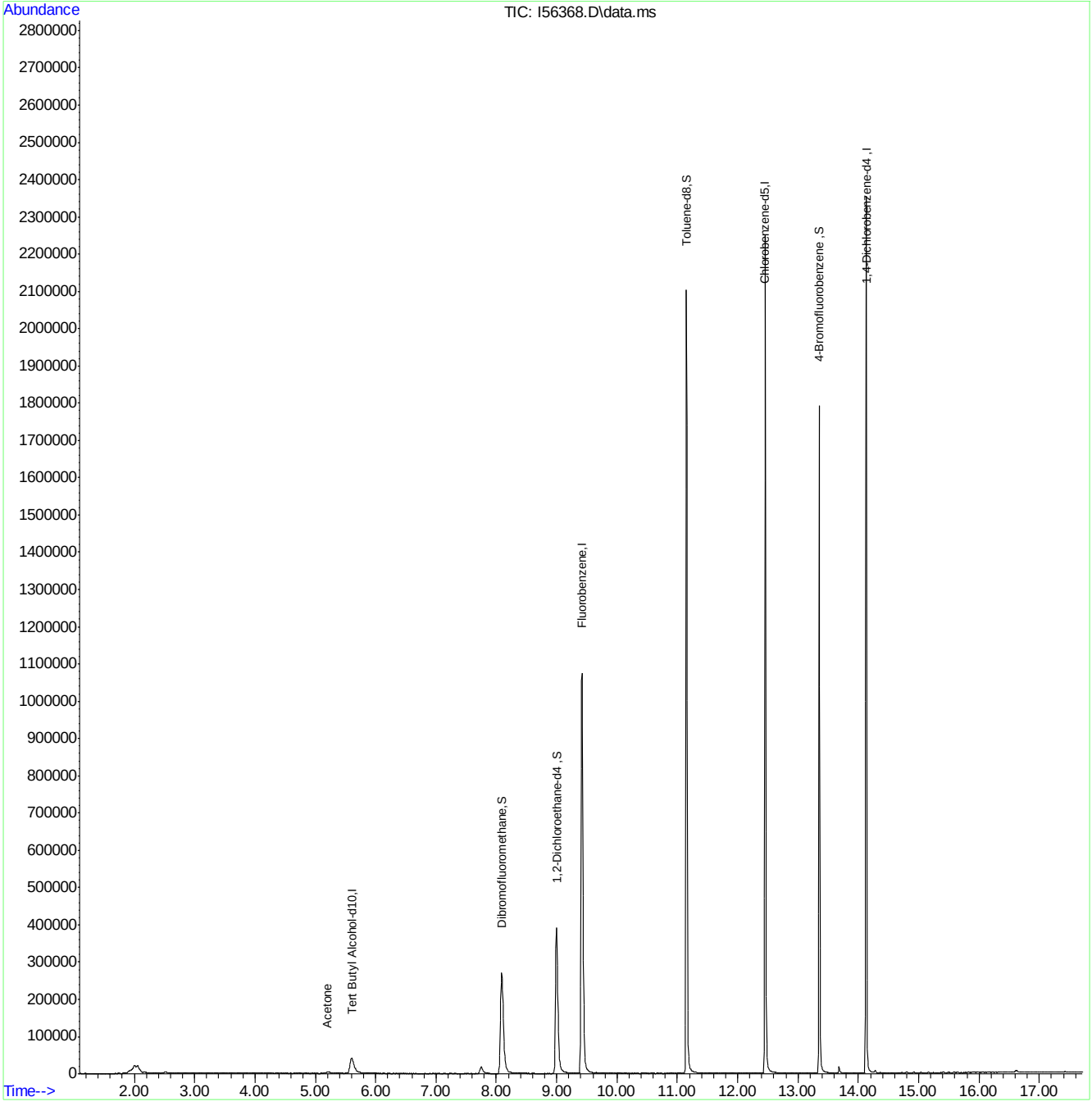
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.420	96	1110213	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	773127	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	394320	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	80163	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.085	113	287220	49.00	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.00%			
46) 1,2-Dichloroethane-d4	9.000	65	410360	51.77	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 103.54%			
57) Toluene-d8	11.152	98	1072804	50.28	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.56%			
79) 4-Bromofluorobenzene	13.353	174	304545	48.90	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.80%			
Target Compounds						Qvalue
17) Acetone	5.196	43	12994	7.05	ug/L	95

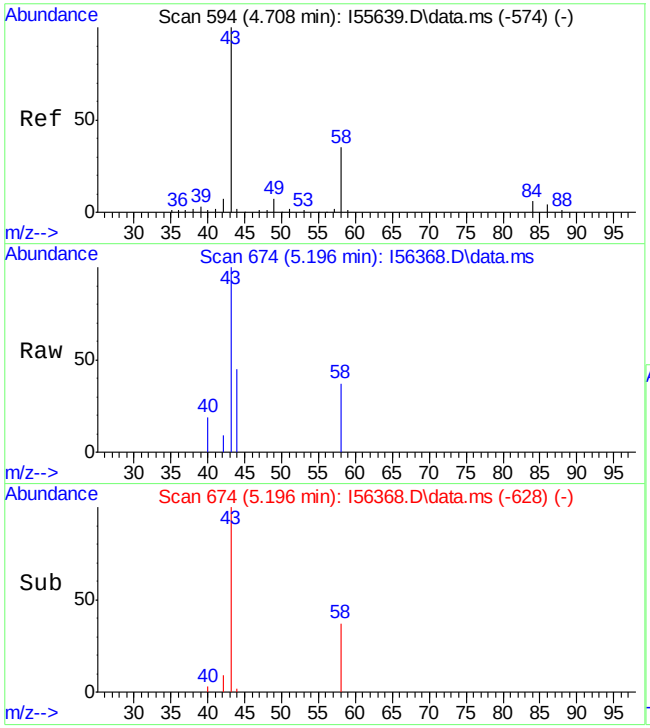
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56368.D
Acq On : 27 Jul 2018 4:58 pm
Operator : ANAJ
Sample : FA55941-1 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 30 06:53:59 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

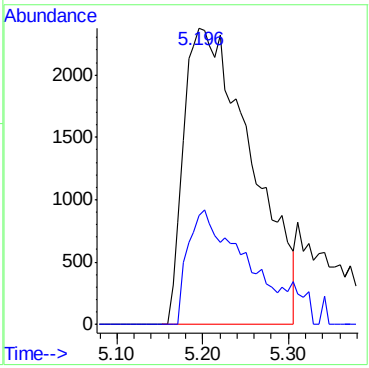




#17
Acetone
Concen: 7.05 ug/L
RT: 5.196 min Scan# 674
Delta R.T. 0.030 min
Lab File: I56368.D
Acq: 27 Jul 2018 4:58 pm

Tgt Ion: 43 Resp: 12994

Ion	Ratio	Lower	Upper
43	100		
58	36.9	4.3	64.3



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56369.D
Acq On : 27 Jul 2018 5:22 pm
Operator : ANAJ
Sample : FA55941-2 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 30 06:54:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

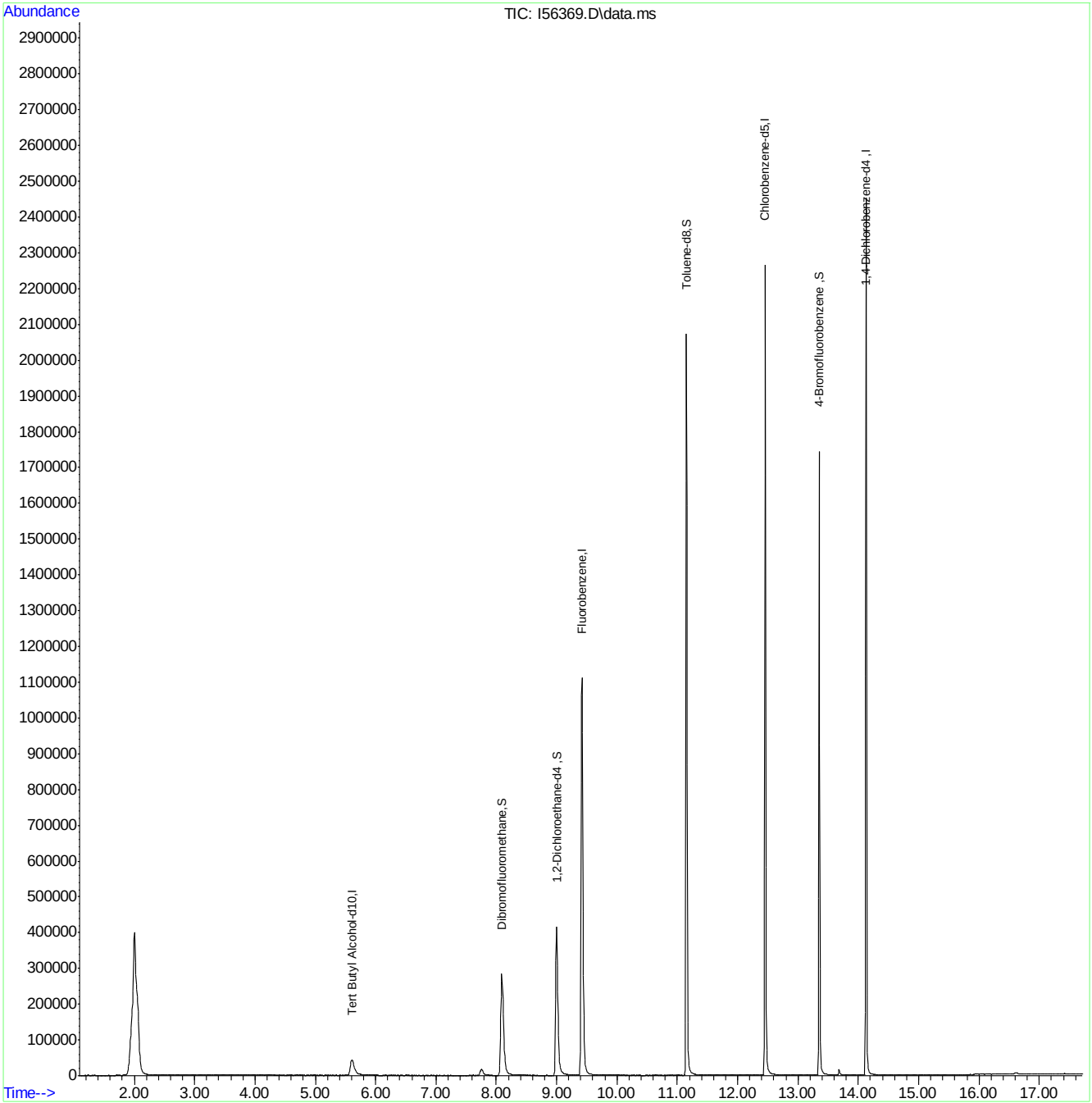
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1103420	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	771857	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	390455	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	82474	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	286500	49.18	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.36%			
46) 1,2-Dichloroethane-d4	9.000	65	406998	51.67	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 103.34%			
57) Toluene-d8	11.152	98	1040145	48.83	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.66%			
79) 4-Bromofluorobenzene	13.353	174	302644	49.08	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.16%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56369.D
Acq On : 27 Jul 2018 5:22 pm
Operator : ANAJ
Sample : FA55941-2 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 30 06:54:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56374.D
Acq On : 27 Jul 2018 7:21 pm
Operator : ANAJ
Sample : FA55941-3 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 30 06:56:47 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

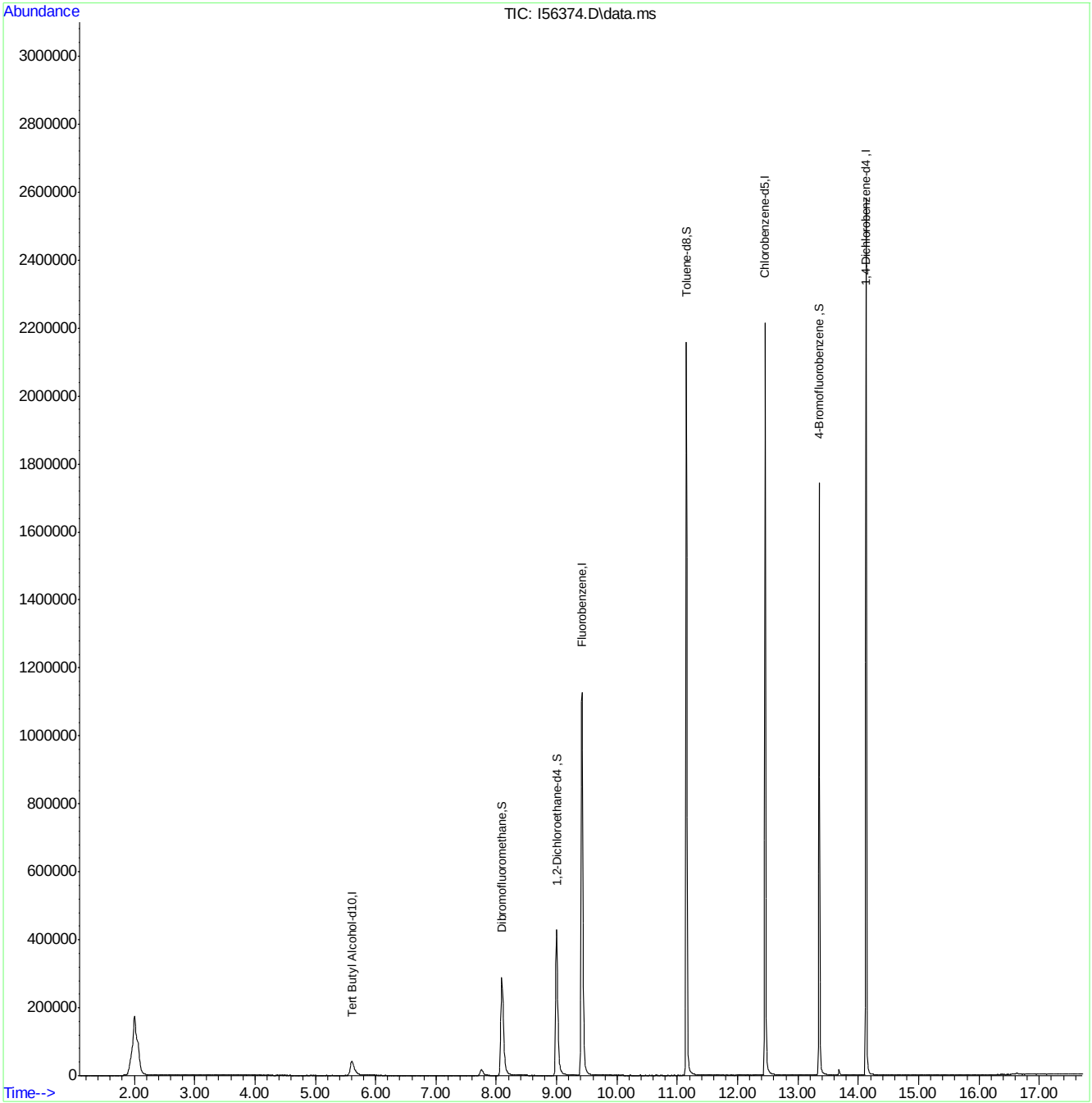
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.420	96	1112479	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	784067	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	398573	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	81920	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.091	113	285677	48.64	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.28%			
46) 1,2-Dichloroethane-d4	9.000	65	405099	51.01	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.02%			
57) Toluene-d8	11.152	98	1063788	49.17	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.34%			
79) 4-Bromofluorobenzene	13.353	174	311727	49.52	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.04%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56374.D
Acq On : 27 Jul 2018 7:21 pm
Operator : ANAJ
Sample : FA55941-3 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 30 06:56:47 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56375.D
Acq On : 27 Jul 2018 7:44 pm
Operator : ANAJ
Sample : FA55941-4 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jul 30 06:56:57 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

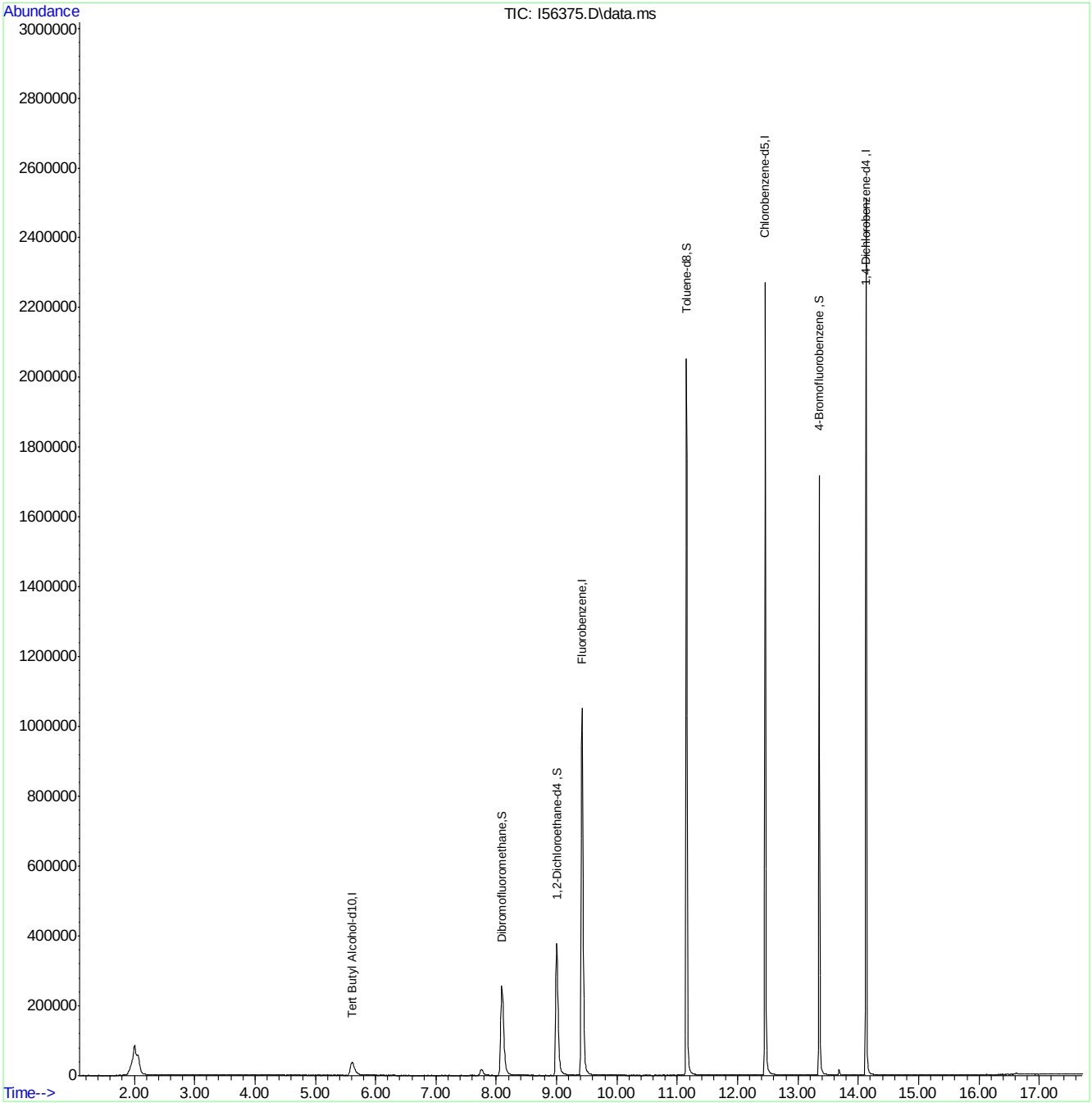
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1101495	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	776003	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	392252	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	78872	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.098	113	278518	47.89	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.78%			
46) 1,2-Dichloroethane-d4	9.000	65	402704	51.21	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.42%			
57) Toluene-d8	11.152	98	1062097	49.60	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.20%			
79) 4-Bromofluorobenzene	13.353	174	304446	49.14	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.28%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56375.D
Acq On : 27 Jul 2018 7:44 pm
Operator : ANAJ
Sample : FA55941-4 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jul 30 06:56:57 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56367.D
Acq On : 27 Jul 2018 4:34 pm
Operator : ANAJ
Sample : FA55941-5 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 27 16:51:50 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

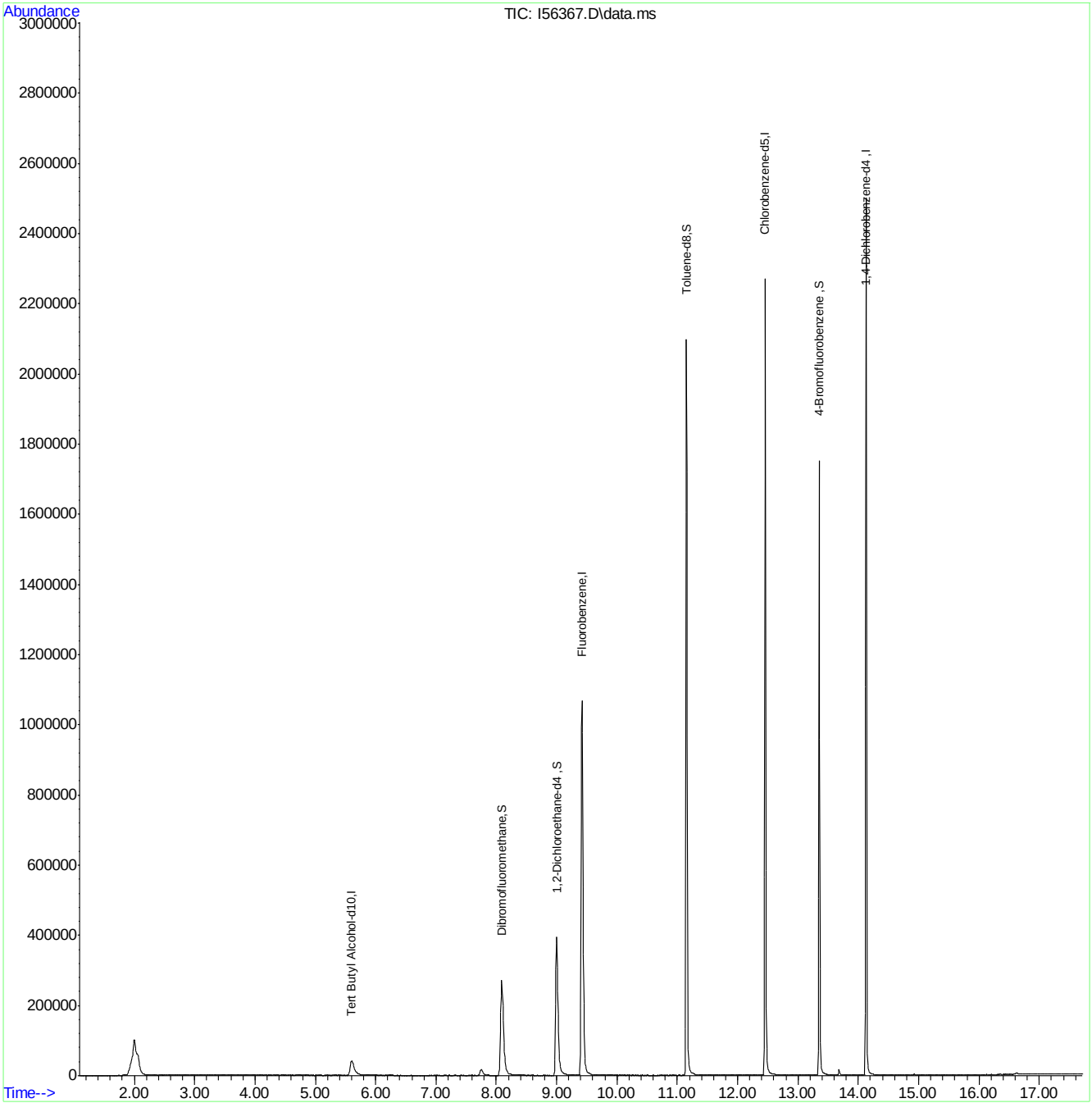
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1109535	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	782241	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	395278	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	80772	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	284399	48.55	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.10%			
46) 1,2-Dichloroethane-d4	9.000	65	409414	51.69	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 103.38%			
57) Toluene-d8	11.152	98	1068097	49.48	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.96%			
79) 4-Bromofluorobenzene	13.353	174	307291	49.22	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.44%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56367.D
Acq On : 27 Jul 2018 4:34 pm
Operator : ANAJ
Sample : FA55941-5 MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 27 16:51:50 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56383.D
Acq On : 30 Jul 2018 9:58 am
Operator : ANAJ
Sample : FA55941-6 MA Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 30 10:16:21 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

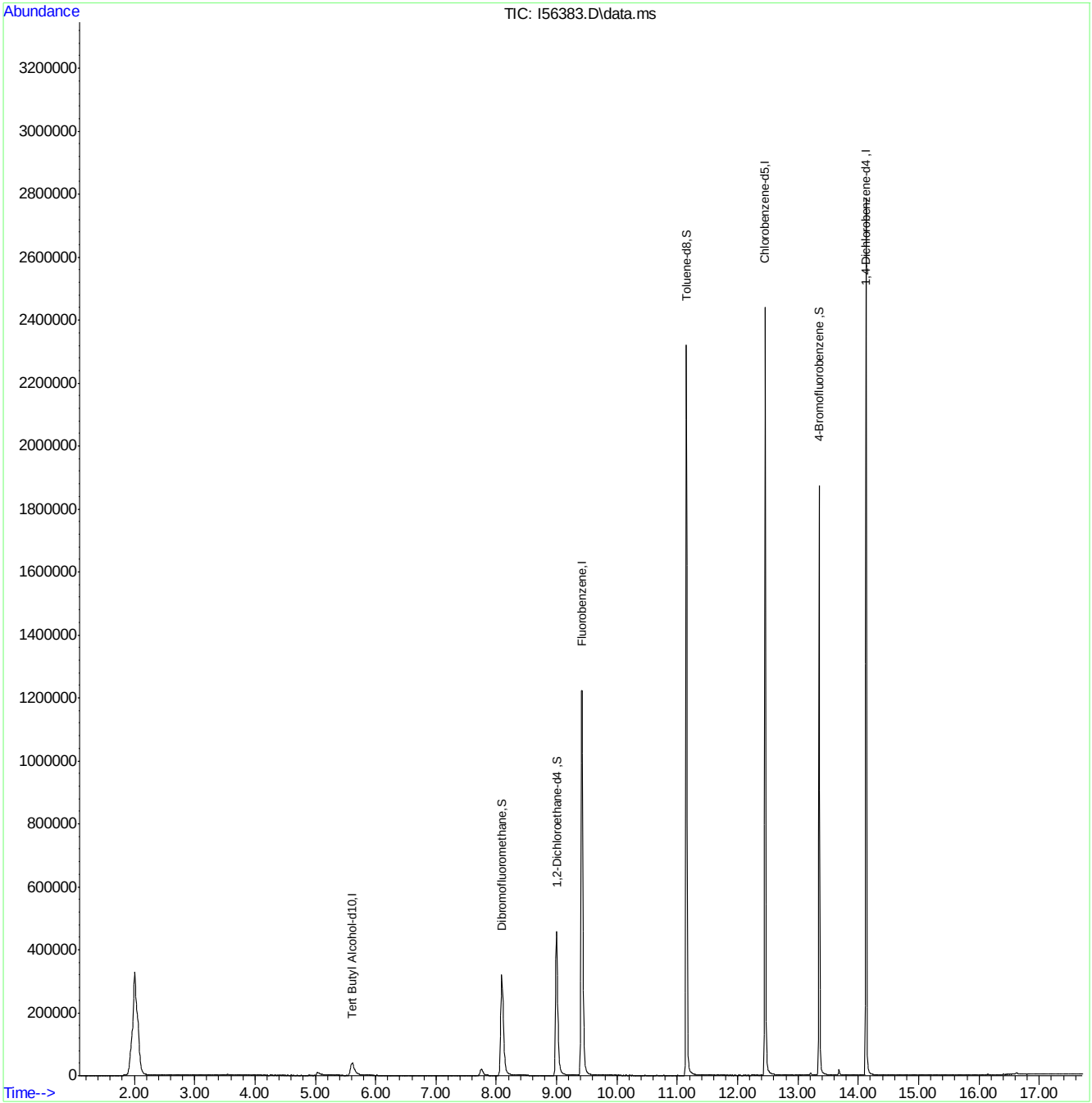
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1241342	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	873346	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	440719	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	80356	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	317761	48.48	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.96%			
46) 1,2-Dichloroethane-d4	9.000	65	443329	50.02	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 100.04%			
57) Toluene-d8	11.152	98	1186703	49.24	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.48%			
79) 4-Bromofluorobenzene	13.353	174	347723	49.95	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.90%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56383.D
Acq On : 30 Jul 2018 9:58 am
Operator : ANAJ
Sample : FA55941-6 MA Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 30 10:16:21 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56384.D
Acq On : 30 Jul 2018 10:22 am
Operator : ANAJ
Sample : FA55941-7 MA Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 30 10:48:28 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

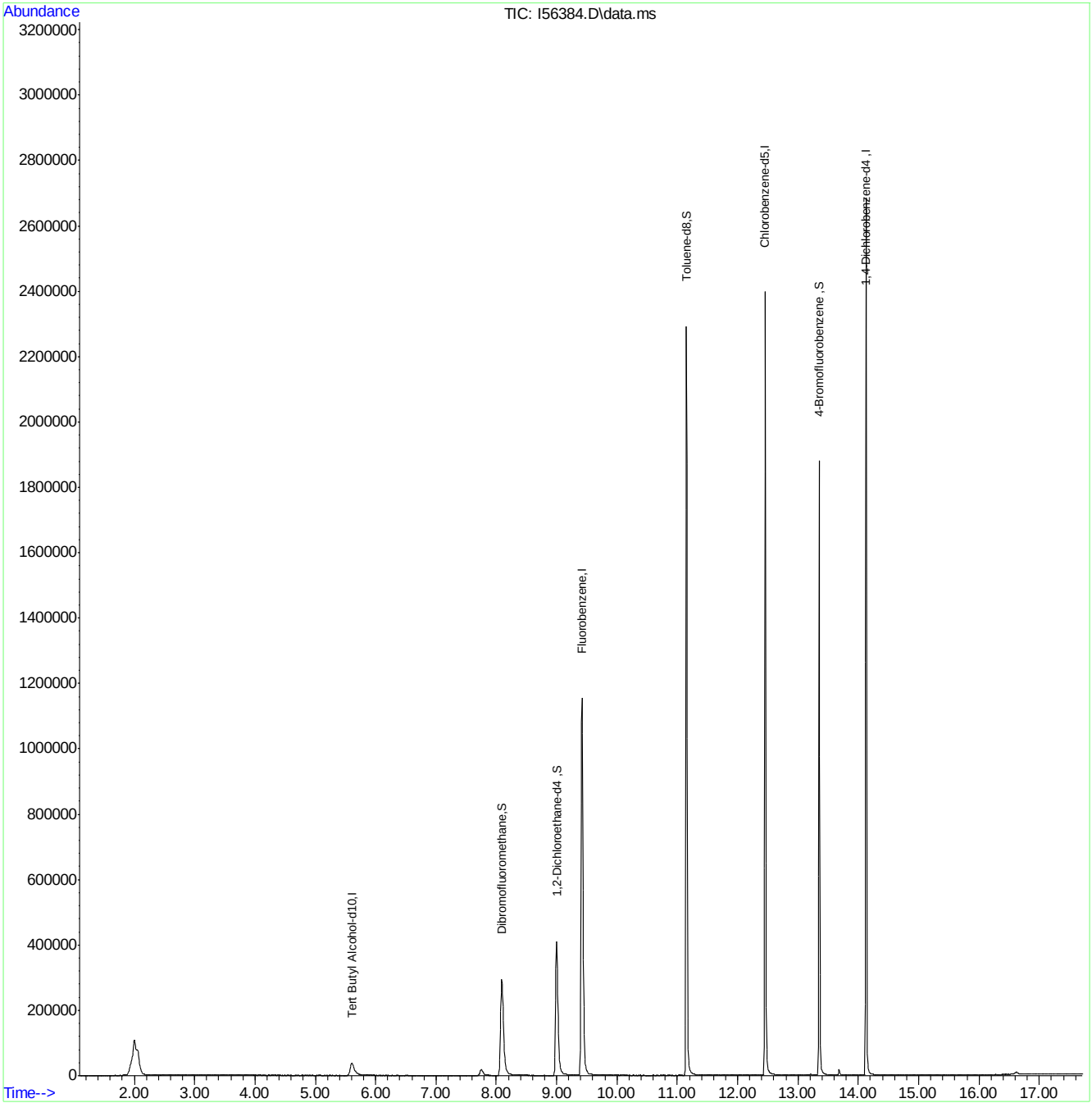
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1214594	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	849135	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	428866	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	81656	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.091	113	312777	48.77	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.54%			
46) 1,2-Dichloroethane-d4	9.000	65	435829	50.26	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 100.52%			
57) Toluene-d8	11.152	98	1162557	49.61	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.22%			
79) 4-Bromofluorobenzene	13.353	174	333873	49.29	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.58%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56384.D
Acq On : 30 Jul 2018 10:22 am
Operator : ANAJ
Sample : FA55941-7 MA Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 30 10:48:28 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56385.D
Acq On : 30 Jul 2018 10:46 am
Operator : ANAJ
Sample : FA55941-8 MA Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 30 11:05:16 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1205191	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	843690	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	423364	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	80750	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	307879	48.39	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.78%			
46) 1,2-Dichloroethane-d4	8.994	65	432646	50.28	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 100.56%			
57) Toluene-d8	11.152	98	1155768	49.64	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.28%			
79) 4-Bromofluorobenzene	13.353	174	333125	49.82	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.64%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

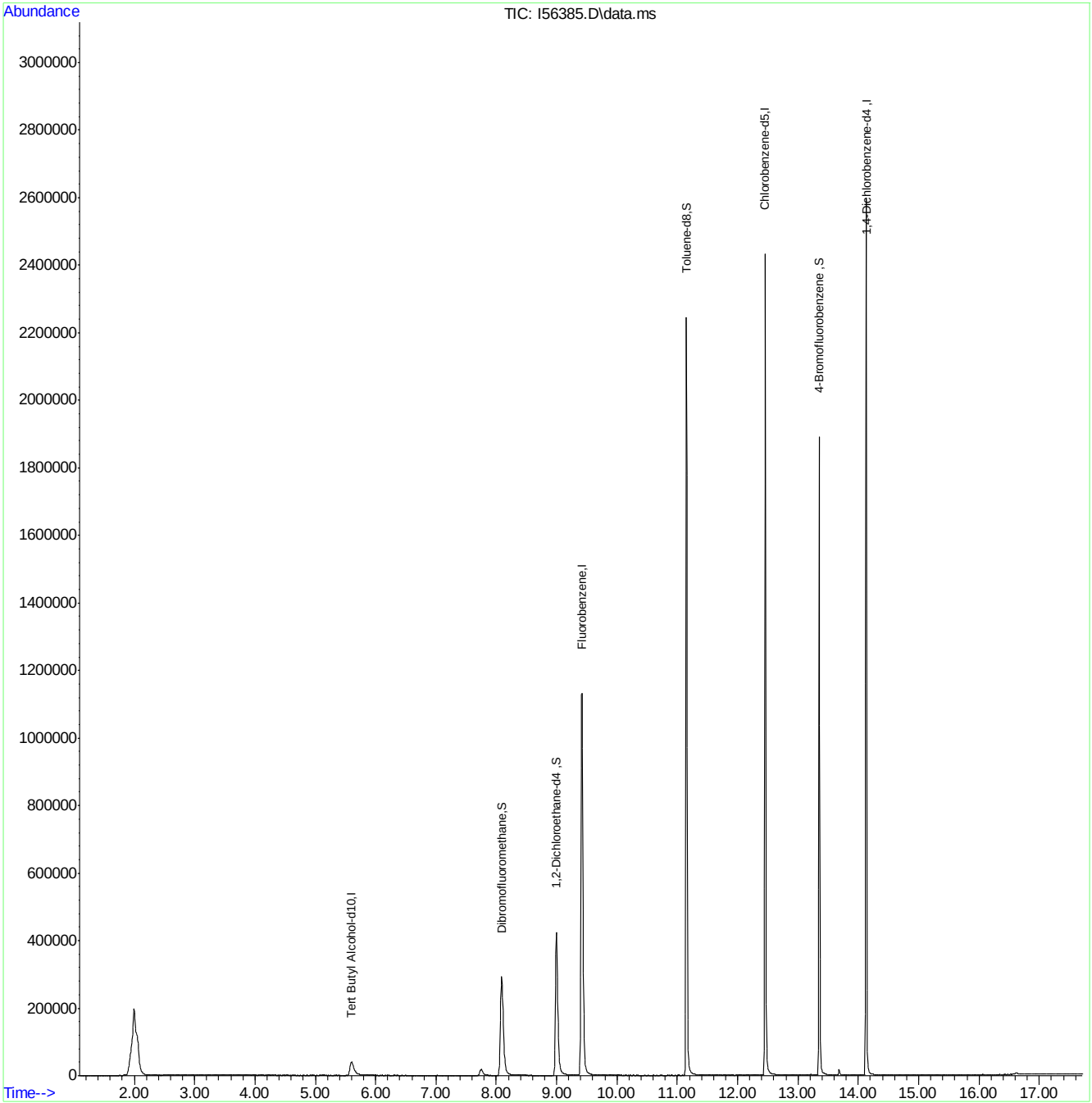
7.1.8

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56385.D
Acq On : 30 Jul 2018 10:46 am
Operator : ANAJ
Sample : FA55941-8 MA Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 30 11:05:16 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56386.D
Acq On : 30 Jul 2018 11:10 am
Operator : ANAJ
Sample : FA55941-9 MA Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 30 11:27:45 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

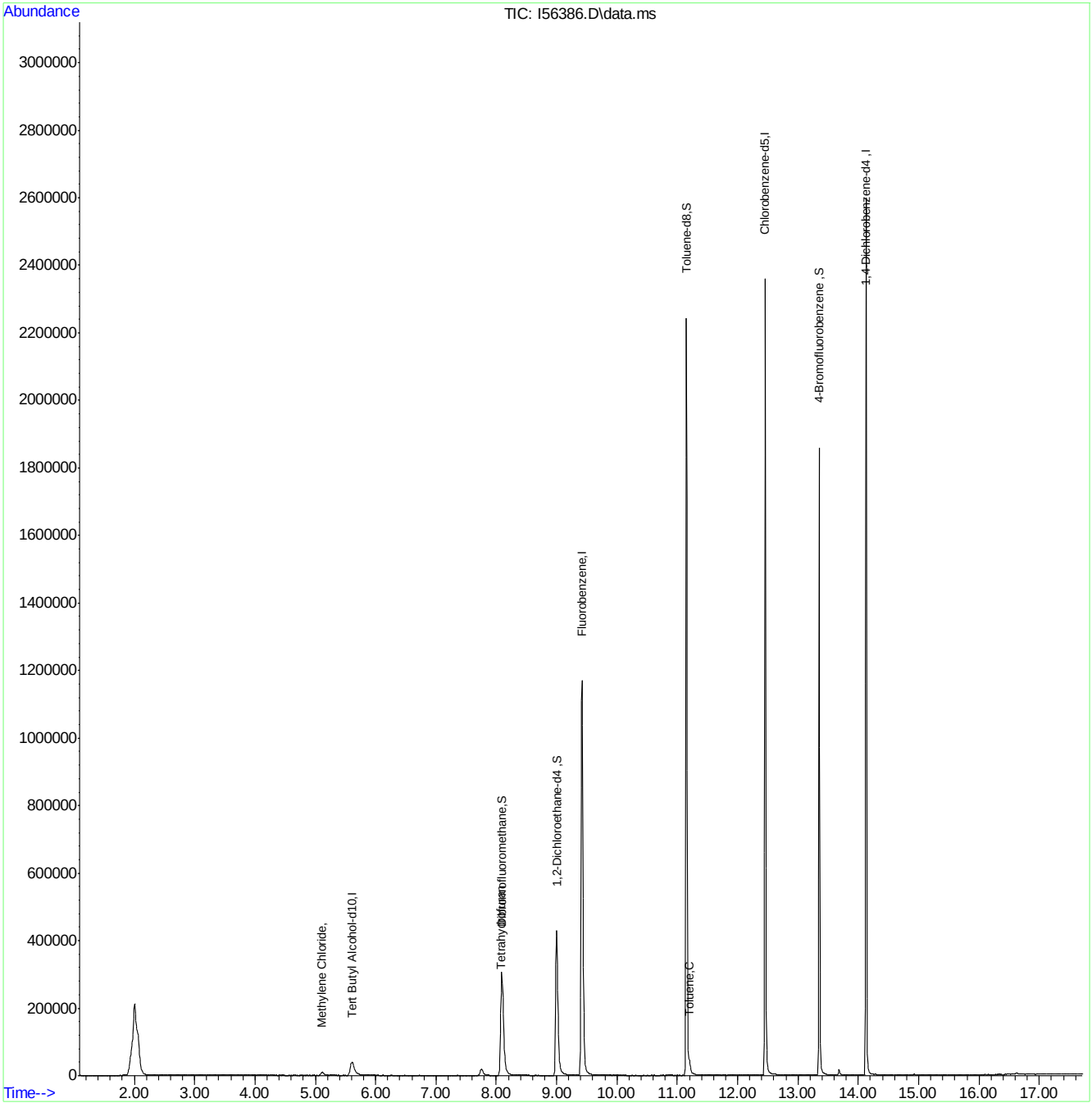
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1199060	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	827672	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	420099	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	80752	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.091	113	307814	48.62	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.24%			
46) 1,2-Dichloroethane-d4	9.000	65	425219	49.67	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 99.34%			
57) Toluene-d8	11.152	98	1132276	49.57	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.14%			
79) 4-Bromofluorobenzene	13.353	174	328113	49.45	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.90%			
Target Compounds						Qvalue
16) Methylene Chloride	5.104	49	13531	1.21	ug/L	88
35) Tetrahydrofuran	8.073	42	8905	2.14	ug/L	85
58) Toluene	11.201	91	20464	0.80	ug/L	94

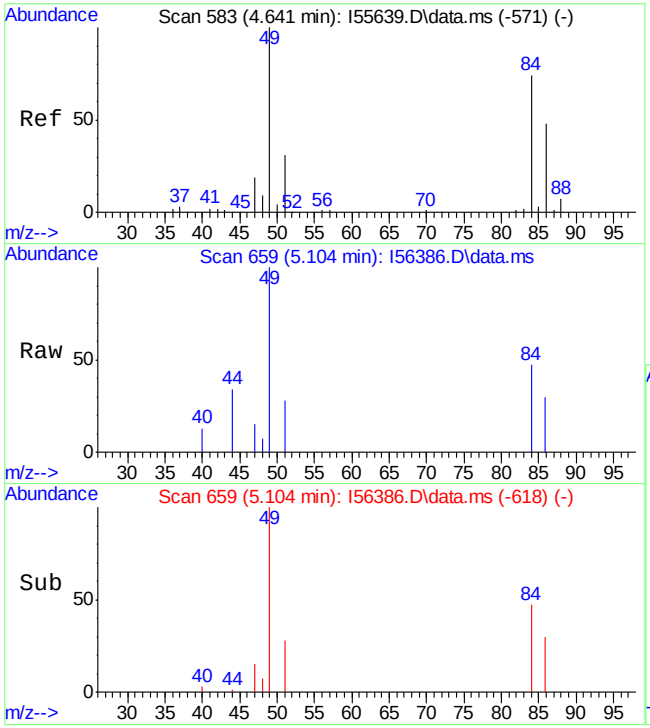
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56386.D
Acq On : 30 Jul 2018 11:10 am
Operator : ANAJ
Sample : FA55941-9 MA Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 30 11:27:45 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

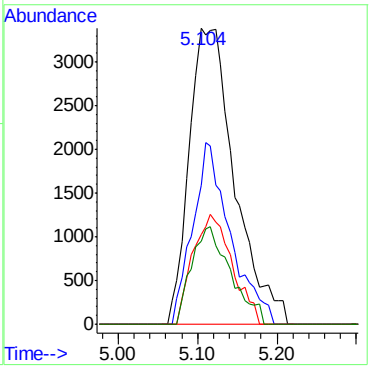


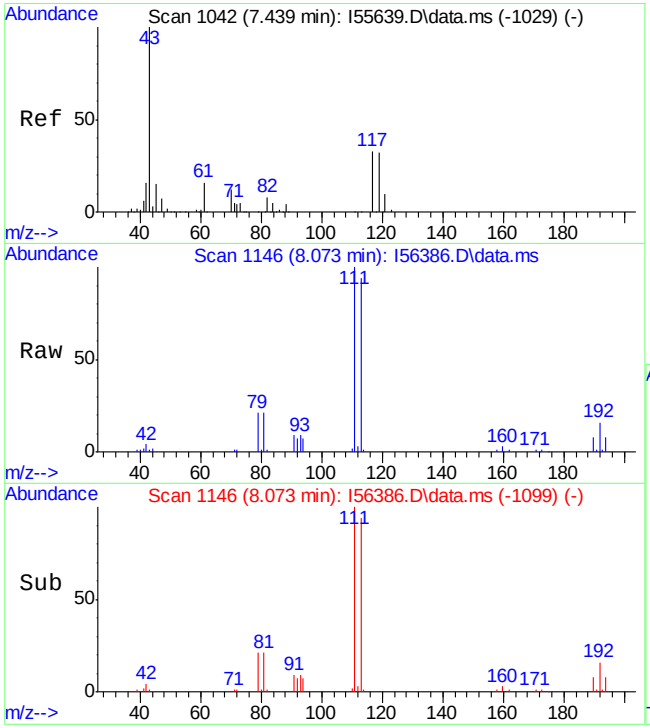


#16
Methylene Chloride
Concen: 1.21 ug/L
RT: 5.104 min Scan# 659
Delta R.T. 0.000 min
Lab File: I56386.D
Acq: 30 Jul 2018 11:10 am

Tgt Ion: 49 Resp: 13531

Ion	Ratio	Lower	Upper
49	100		
84	47.0	27.9	87.9
86	30.3	7.1	67.1
51	28.0	1.7	61.7

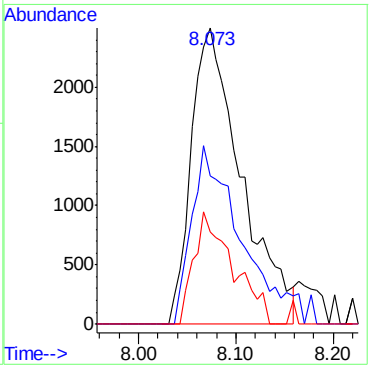


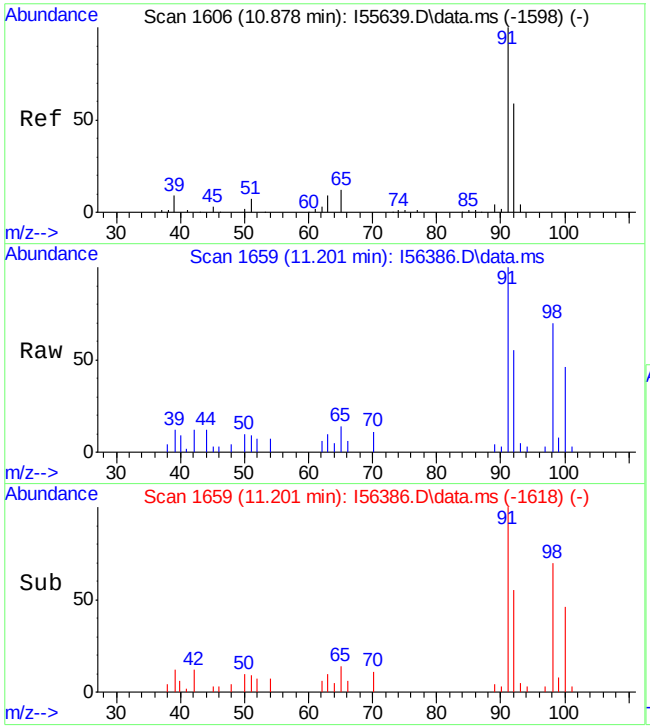


#35
Tetrahydrofuran
Concen: 2.14 ug/L
RT: 8.073 min Scan# 1146
Delta R.T. 0.036 min
Lab File: I56386.D
Acq: 30 Jul 2018 11:10 am

Tgt Ion: 42 Resp: 8905

Ion	Ratio	Lower	Upper
42	100		
41	50.0	20.4	60.4
72	31.0	3.5	43.5

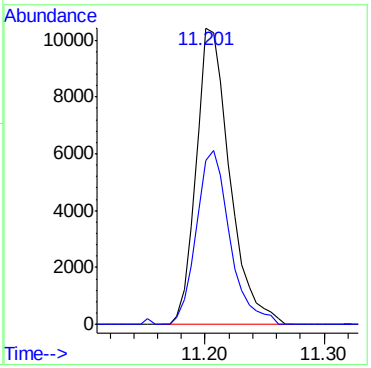




#58
Toluene
Concen: 0.80 ug/L
RT: 11.201 min Scan# 1659
Delta R.T. 0.000 min
Lab File: I56386.D
Acq: 30 Jul 2018 11:10 am

Tgt Ion: 91 Resp: 20464

Ion	Ratio	Lower	Upper
91	100		
92	55.4	29.8	89.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56387.D
Acq On : 30 Jul 2018 11:34 am
Operator : ANAJ
Sample : FA55941-10 MA Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 30 11:57:34 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

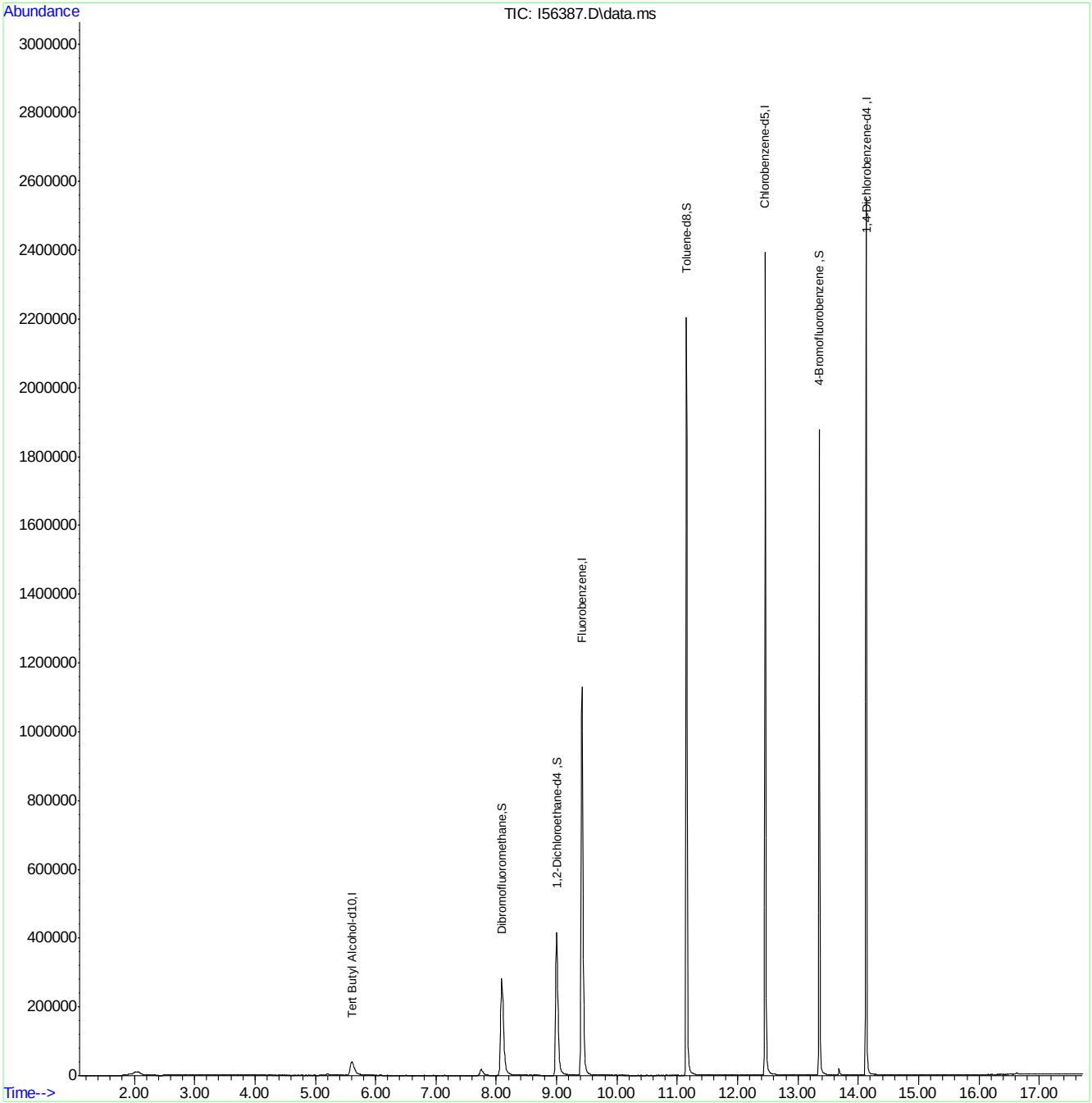
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1169942	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	817861	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	413874	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	82637	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	301719	48.85	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.70%			
46) 1,2-Dichloroethane-d4	9.000	65	422809	50.62	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.24%			
57) Toluene-d8	11.152	98	1121191	49.68	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.36%			
79) 4-Bromofluorobenzene	13.353	174	320644	49.05	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.10%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56387.D
Acq On : 30 Jul 2018 11:34 am
Operator : ANAJ
Sample : FA55941-10 MA Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 30 11:57:34 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56358.D
Acq On : 27 Jul 2018 9:54 am
Operator : ANAJ
Sample : MB MA Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 27 10:14:08 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

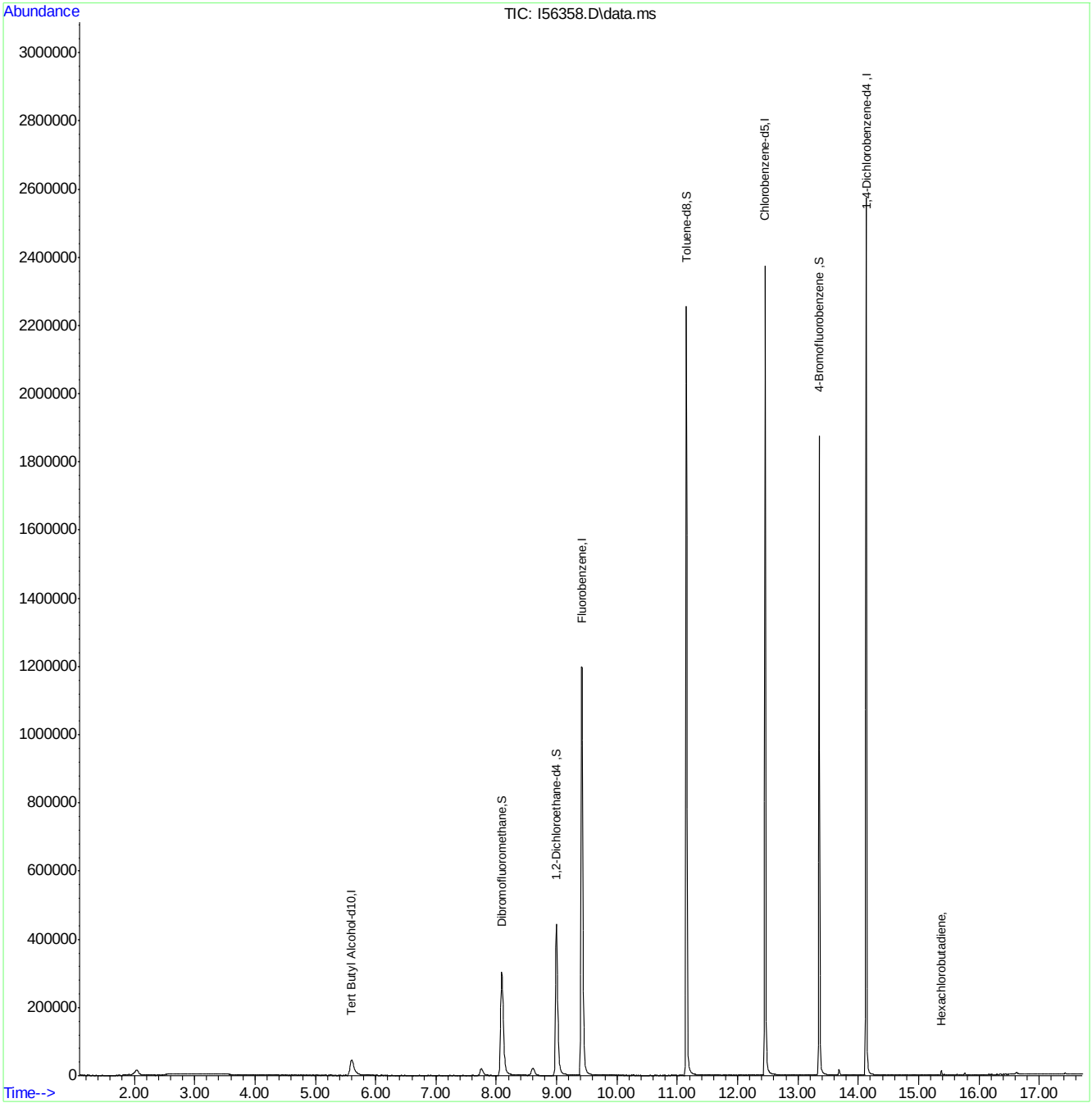
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1198027	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	840362	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	420454	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	94245	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	304628	48.16	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.32%			
46) 1,2-Dichloroethane-d4	8.994	65	428711	50.12	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 100.24%			
57) Toluene-d8	11.152	98	1143399	49.31	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.62%			
79) 4-Bromofluorobenzene	13.353	174	332498	50.07	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.14%			
Target Compounds						Qvalue
102) Hexachlorobutadiene	15.377	225	1776	0.45	ug/L	93

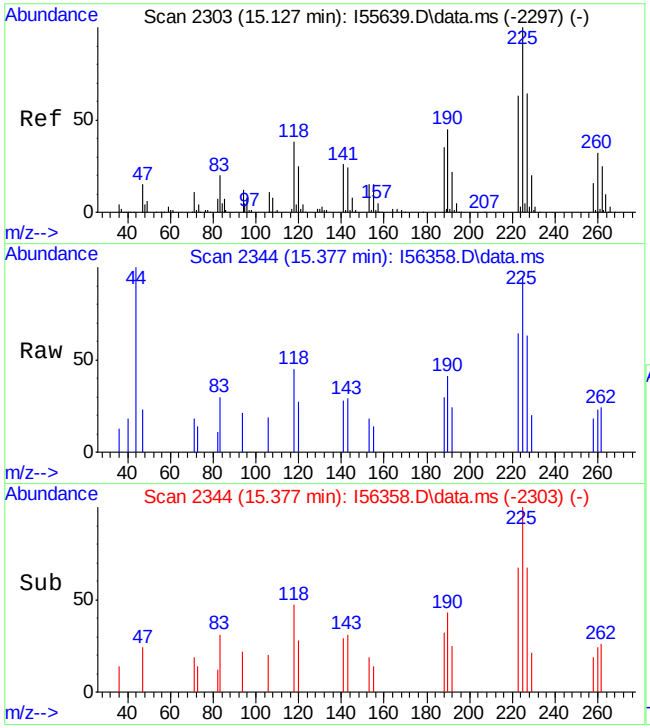
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56358.D
Acq On : 27 Jul 2018 9:54 am
Operator : ANAJ
Sample : MB MA Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 27 10:14:08 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

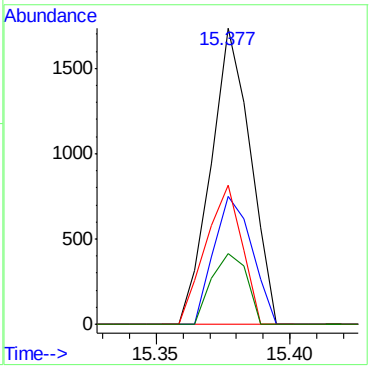




#102
Hexachlorobutadiene
Concen: 0.45 ug/L
RT: 15.377 min Scan# 2344
Delta R.T. 0.000 min
Lab File: I56358.D
Acq: 27 Jul 2018 9:54 am

Tgt Ion:225 Resp: 1776

Ion	Ratio	Lower	Upper
225	100		
190	43.1	18.6	78.6
118	47.1	15.2	75.2
260	23.7	0.0	59.9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56381.D
Acq On : 30 Jul 2018 8:57 am
Operator : ANAJ
Sample : MB MA Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 30 09:27:28 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

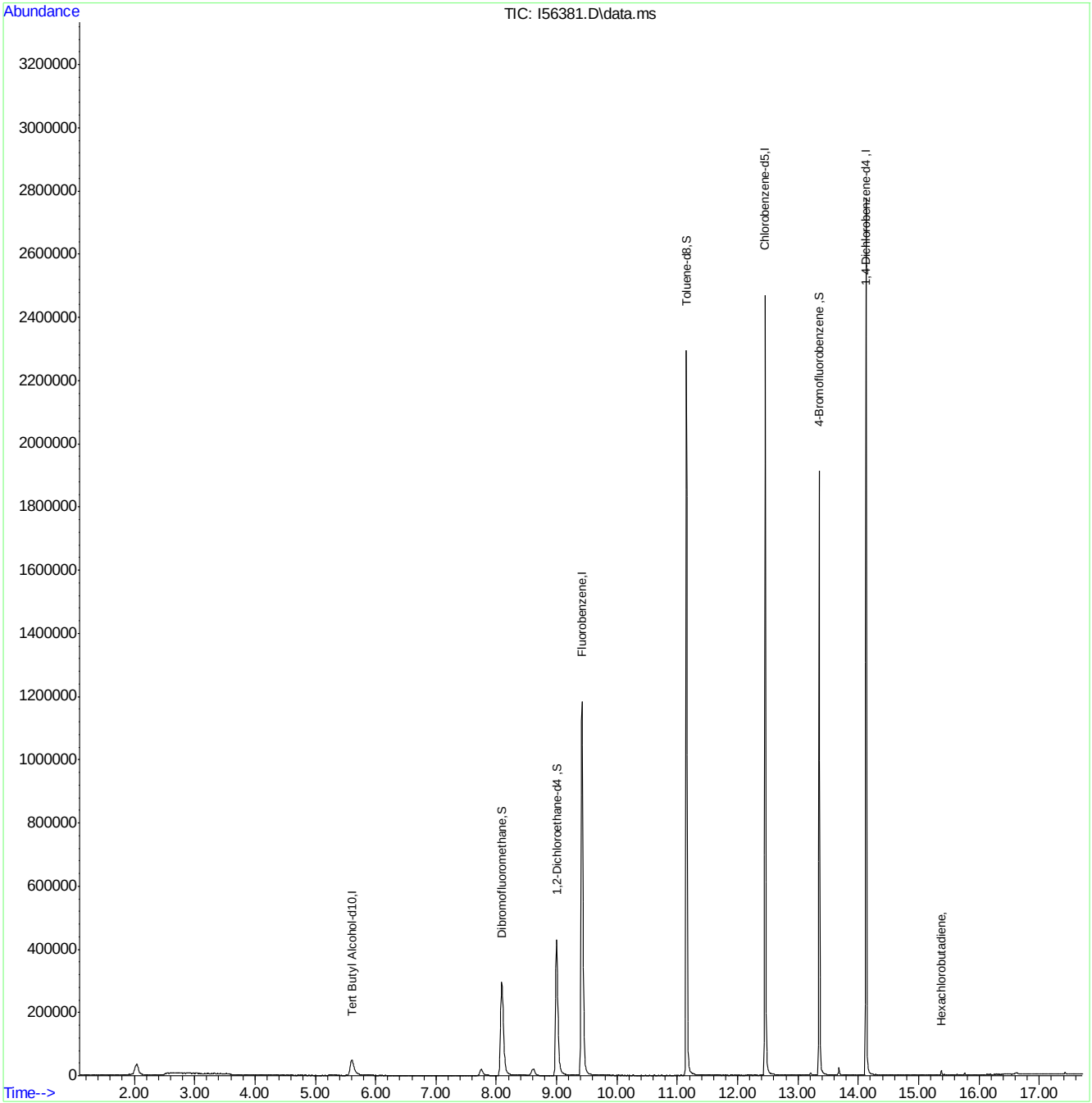
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1240359	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	867259	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	440784	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	102307	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	317259	48.45	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.90%			
46) 1,2-Dichloroethane-d4	9.000	65	441102	49.81	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 99.62%			
57) Toluene-d8	11.152	98	1186284	49.57	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.14%			
79) 4-Bromofluorobenzene	13.353	174	348391	50.04	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.08%			
Target Compounds						Qvalue
102) Hexachlorobutadiene	15.377	225	1888	0.46	ug/L	96

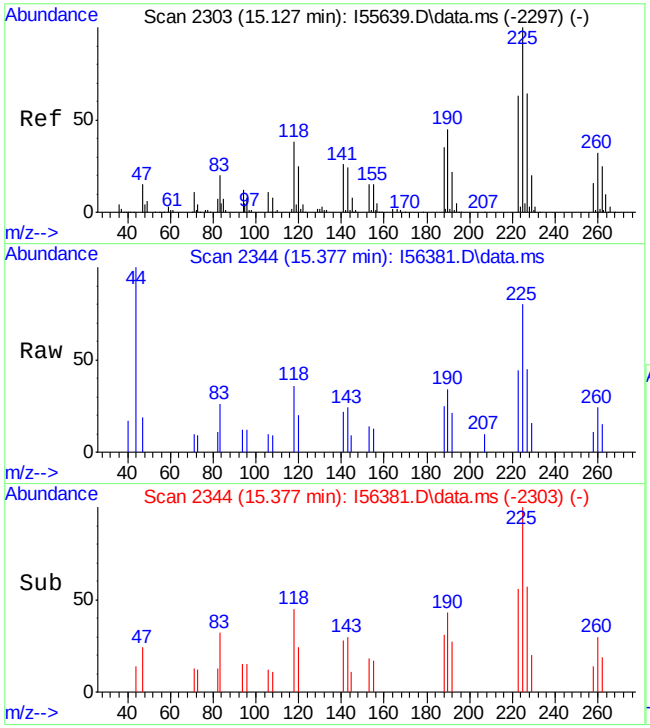
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56381.D
Acq On : 30 Jul 2018 8:57 am
Operator : ANAJ
Sample : MB MA Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 30 09:27:28 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

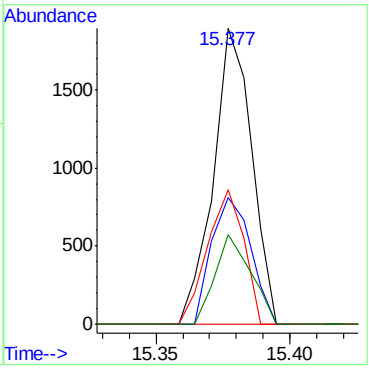




#102
Hexachlorobutadiene
Concen: 0.46 ug/L
RT: 15.377 min Scan# 2344
Delta R.T. 0.000 min
Lab File: I56381.D
Acq: 30 Jul 2018 8:57 am

Tgt Ion:225 Resp: 1888

Ion	Ratio	Lower	Upper
225	100		
190	42.8	18.6	78.6
118	45.4	15.2	75.2
260	30.4	0.0	59.9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56357.D
Acq On : 27 Jul 2018 9:30 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 27 09:49:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.408	96	1193275	50.00	ug/L	-0.01
56) Chlorobenzene-d5	12.450	117	835432	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	428829	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	103713	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.079	113	318651	50.58	ug/L	-0.01
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.16%			
46) 1,2-Dichloroethane-d4	8.994	65	429828	50.46	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 100.92%			
57) Toluene-d8	11.146	98	1147929	49.79	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.58%			
79) 4-Bromofluorobenzene	13.353	174	337583	49.84	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.68%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.251	85	180368	26.54	ug/L	100
3) Chloromethane	2.526	50	215824	23.13	ug/L	99
4) 1,3-Butadiene	2.641	39	92024	18.29	ug/L	99
5) Vinyl Chloride	2.660	62	197742	25.20	ug/L	97
6) Bromomethane	3.105	94	101893	24.80	ug/L	98
7) Chloroethane	3.263	64	56427	23.31	ug/L	98
8) Trichlorofluoromethane	3.507	101	238917	26.50	ug/L	99
9) Ethyl Ether	3.916	59	174150	25.05	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.220	67	217569	26.06	ug/L	99
11) 1,1-Dichloroethene	4.208	61	299243	26.81	ug/L	99
12) Freon 113	4.312	101	145928	23.41	ug/L	98
13) Carbon Disulfide	4.257	76	490233	27.70	ug/L	99
14) Iodomethane	4.422	142	234575	24.53	ug/L	98
15) Allyl chloride	4.921	41	255211	26.59	ug/L	97
16) Methylene Chloride	5.092	49	286244	25.91	ug/L	98
17) Acetone	5.159	43	237928	120.10	ug/L	100
18) Methyl acetate	5.366	43	606259	125.17	ug/L	100
19) trans-1,2-Dichloroethene	5.354	61	292578	26.60	ug/L	99
20) Hexane	5.488	56	222876	26.42	ug/L	97
21) Methyl Tert Butyl Ether	5.549	73	343446	25.10	ug/L	96
22) Acetonitrile	5.885	41	183953	269.74	ug/L	99
23) Di-isopropyl ether	6.177	45	635194	25.84	ug/L	99
24) Chloroprene	6.299	53	302373	26.73	ug/L	99
25) 1,1-Dichloroethane	6.330	63	352487	26.60	ug/L	100
26) Acrylonitrile	6.391	53	351584	123.60	ug/L	99
27) ETBE	6.787	59	532312	26.85	ug/L	100
28) Vinyl acetate	6.763	43	1877211	118.86	ug/L	100
29) cis-1,2-Dichloroethene	7.262	96	164871	25.99	ug/L	99
30) 2,2-Dichloropropane	7.451	77	164419	29.18	ug/L	98
31) Bromochloromethane	7.604	128	78816	25.49	ug/L	98
32) Cyclohexane	7.640	56	392738	26.74	ug/L	98
33) Chloroform	7.762	83	287695	25.22	ug/L	97
34) Ethyl acetate	7.994	43	830199	120.97	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56357.D
Acq On : 27 Jul 2018 9:30 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 27 09:49:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.031	42	63931	15.42	ug/L		97
37) Carbon Tetrachloride	8.012	117	174014	25.35	ug/L		99
38) 1,1,1-Trichloroethane	8.128	97	235336	25.63	ug/L		99
39) 2-Butanone	8.299	43	361813	121.73	ug/L		99
40) 1,1-Dichloropropene	8.354	75	219207	26.96	ug/L		98
41) tert-Butyl formate	8.567	59	442417	191.33	ug/L		94
42) Propionitrile	8.787	54	272689	261.39	ug/L		94
43) Methacrylonitrile	8.829	41	1069117	261.66	ug/L		100
44) Benzene	8.787	78	616469	25.37	ug/L		100
45) TAME	9.018	73	331073	25.00	ug/L		97
47) 1,2-Dichloroethane	9.097	62	257683	24.55	ug/L		100
48) Trichloroethene	9.652	95	165765	25.83	ug/L		99
49) Methylcyclohexane	9.646	83	281918	26.85	ug/L		99
50) Dibromomethane	10.140	93	100587	25.35	ug/L		96
51) 1,2-Dichloropropane	10.244	63	201898	26.00	ug/L		99
52) Bromodichloromethane	10.335	83	198407	25.75	ug/L		100
53) Methyl methacrylate	10.512	41	127590	23.18	ug/L		99
54) 2-Chloroethyl vinyl ether	10.914	63	646960	141.25	ug/L		99
55) cis-1,3-Dichloropropene	10.969	75	230611	23.89	ug/L		97
58) Toluene	11.195	91	653480	25.33	ug/L		98
59) 2-Nitropropane	11.384	41	142562	103.38	ug/L		100
60) 4-Methyl-2-pentanone	11.518	43	849507	123.15	ug/L		98
61) trans-1,3-Dichloropropene	11.926	75	12964	25.61	ug/L		95
62) Tetrachloroethene	11.554	166	173268	26.05	ug/L		97
63) Ethyl methacrylate	11.694	69	177930	24.15	ug/L		92
64) 1,1,2-Trichloroethane	11.701	83	123152	25.44	ug/L		98
65) Dibromochloromethane	11.859	129	147559	25.70	ug/L		100
66) 1,3-Dichloropropane	11.926	76	235750	24.21	ug/L		99
67) 1,2-Dibromoethane	12.054	107	135801	25.46	ug/L		98
68) 2-hexanone	12.207	43	705012	123.30	ug/L		85
69) 1-Chlorohexane	12.438	91	227501	25.70	ug/L		99
70) Ethylbenzene	12.481	91	758289	25.69	ug/L		99
71) Chlorobenzene	12.469	112	415532	24.75	ug/L		97
72) 1,1,1,2-Tetrachloroethane	12.511	131	128473	24.82	ug/L		99
73) m,p-Xylene	12.591	91	1172469	52.16	ug/L		100
74) o-Xylene	12.914	91	588654	26.11	ug/L		99
75) Styrene	12.950	104	421383	26.60	ug/L		99
76) Bromoform	12.987	173	84736	23.74	ug/L		98
77) Isopropylbenzene	13.133	105	690912	27.81	ug/L		100
80) cis-1,4-Dichloro-2-butene	13.377	53	66910	25.36	ug/L		94
81) n-Propylbenzene	13.426	91	891414	25.96	ug/L		96
82) Bromobenzene	13.432	156	166880	25.09	ug/L		97
83) 1,1,2,2-Tetrachloroethane	13.475	83	191462	25.55	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	572581	26.47	ug/L		100
85) 2-Chlorotoluene	13.670	91	533951	25.60	ug/L		99
86) trans-1,4-Dichloro-2-B...	13.590	53	60106	24.60	ug/L	#	81
87) 1,2,3-Trichloropropane	13.578	110	49446	24.50	ug/L		98
88) Cyclohexanone	13.615	55	31575	98.19	ug/L		94
89) 4-Chlorotoluene	13.670	91	533951	25.60	ug/L		99
90) tert-Butylbenzene	13.786	91	345643	25.81	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56357.D
Acq On : 27 Jul 2018 9:30 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 27 09:49:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

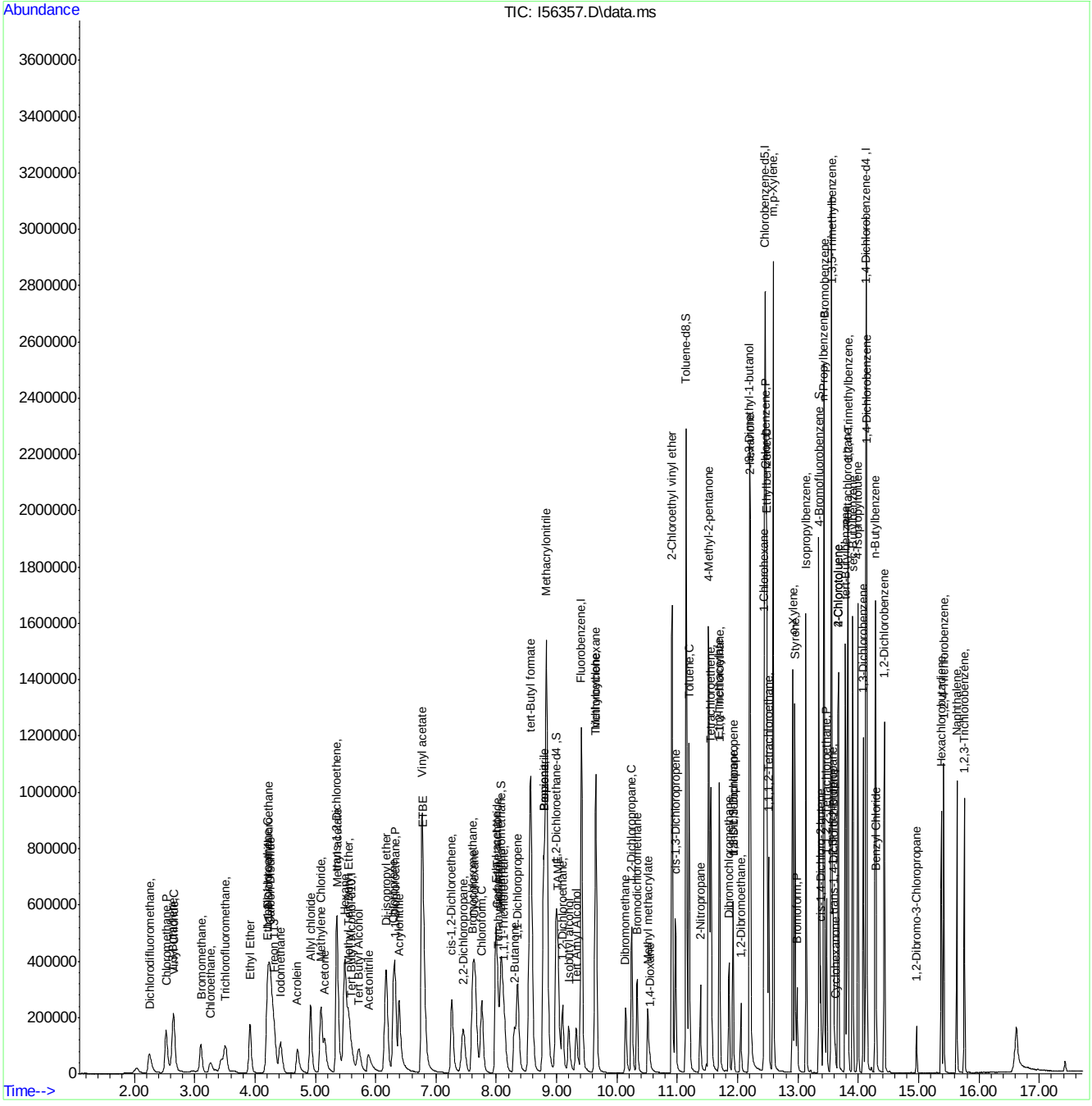
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	1,2,4-Trimethylbenzene	13.828	105	568238	25.40	ug/L		99
93)	Pentachloroethane	13.822	167	83185	24.01	ug/L		97
94)	sec-Butylbenzene	13.907	105	735204	26.62	ug/L		99
95)	4-Isopropyltoluene	13.993	119	599831	26.79	ug/L		100
96)	1,3-Dichlorobenzene	14.084	146	315968	25.58	ug/L		100
97)	1,4-Dichlorobenzene	14.139	146	327127	24.34	ug/L		99
98)	n-Butylbenzene	14.279	92	356908	27.69	ug/L		91
99)	Benzyl Chloride	14.298	126	37019	24.48	ug/L	#	94
100)	1,2-Dichlorobenzene	14.432	146	298992	24.86	ug/L		99
101)	1,2-Dibromo-3-Chloropr...	14.962	75	27822	23.18	ug/L		81
102)	Hexachlorobutadiene	15.377	225	108107	27.06	ug/L		99
103)	1,2,4-Trichlorobenzene	15.413	180	205599	25.76	ug/L		98
104)	Naphthalene	15.633	128	492345	24.13	ug/L		100
105)	1,2,3-Trichlorobenzene	15.761	180	192172	25.67	ug/L		99
107)	Ethanol	4.202	45	39557	511.66	ug/L		94
108)	Acrolein	4.702	56	152829	89.81	ug/L		99
109)	Tert Butyl Alcohol	5.720	59	174013	261.79	ug/L		94
110)	Isobutyl alcohol	9.201	43	133329	485.23	ug/L		98
111)	Tert Amyl Alcohol	9.323	59	101974	235.72	ug/L		95
112)	1,4-Dioxane	10.542	88	31462	469.53	ug/L		98
113)	3,3-Dimethyl-1-butanol	12.194	57	814280	1151.47	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56357.D
Acq On : 27 Jul 2018 9:30 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 27 09:49:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56388.D
Acq On : 30 Jul 2018 11:57 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 30 12:16:15 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.414	96	1193695	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	846693	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	426722	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	84484	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.085	113	319821	50.75	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.50%			
46) 1,2-Dichloroethane-d4	8.994	65	421680	49.48	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 98.96%			
57) Toluene-d8	11.152	98	1153760	49.38	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.76%			
79) 4-Bromofluorobenzene	13.353	174	338175	50.18	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.36%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.245	85	176009	25.89	ug/L	99
3) Chloromethane	2.526	50	216714	23.22	ug/L	99
4) 1,3-Butadiene	2.635	39	154471	30.69	ug/L	96
5) Vinyl Chloride	2.660	62	190141	24.22	ug/L	99
6) Bromomethane	3.105	94	98953	24.08	ug/L	99
7) Chloroethane	3.257	64	57880	24.02	ug/L	95
8) Trichlorofluoromethane	3.507	101	241853	26.82	ug/L	99
9) Ethyl Ether	3.922	59	168729	24.26	ug/L	98
10) 1,2-Dichlorotrifluoroe...	4.226	67	221883	26.57	ug/L	98
11) 1,1-Dichloroethene	4.214	61	297838	26.67	ug/L	99
12) Freon 113	4.312	101	150309	24.10	ug/L	98
13) Carbon Disulfide	4.257	76	470750	26.59	ug/L	99
14) Iodomethane	4.422	142	233657	24.43	ug/L	98
15) Allyl chloride	4.928	41	239749	24.97	ug/L	97
16) Methylene Chloride	5.098	49	294576	26.66	ug/L	99
17) Acetone	5.159	43	215415	108.70	ug/L	99
18) Methyl acetate	5.366	43	539240	111.49	ug/L	98
19) trans-1,2-Dichloroethene	5.354	61	290162	26.37	ug/L	99
20) Hexane	5.494	56	222652	26.38	ug/L	96
21) Methyl Tert Butyl Ether	5.555	73	324930	23.74	ug/L	96
22) Acetonitrile	5.891	41	167966	246.21	ug/L	96
23) Di-isopropyl ether	6.177	45	628125	25.54	ug/L	99
24) Chloroprene	6.305	53	297614	26.30	ug/L	99
25) 1,1-Dichloroethane	6.330	63	355410	26.81	ug/L	99
26) Acrylonitrile	6.397	53	308720	108.90	ug/L	98
27) ETBE	6.799	59	528224	26.64	ug/L	98
28) Vinyl acetate	6.775	43	1745049	110.60	ug/L	99
29) cis-1,2-Dichloroethene	7.262	96	163620	25.79	ug/L	98
30) 2,2-Dichloropropane	7.457	77	168168	29.83	ug/L	99
31) Bromochloromethane	7.610	128	79589	25.74	ug/L	95
32) Cyclohexane	7.640	56	390804	26.60	ug/L	98
33) Chloroform	7.762	83	292012	25.59	ug/L	97
34) Ethyl acetate	8.006	43	737372	107.54	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56388.D
Acq On : 30 Jul 2018 11:57 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 30 12:16:15 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.043	42	97125	23.42	ug/L		94
37) Carbon Tetrachloride	8.018	117	177229	25.81	ug/L		99
38) 1,1,1-Trichloroethane	8.128	97	239027	26.02	ug/L		97
39) 2-Butanone	8.311	43	328932	110.82	ug/L		98
40) 1,1-Dichloropropene	8.360	75	217914	26.79	ug/L		97
41) tert-Butyl formate	8.573	59	449237	193.92	ug/L		99
42) Propionitrile	8.793	54	244698	234.48	ug/L		86
43) Methacrylonitrile	8.835	41	984803	240.94	ug/L		99
44) Benzene	8.793	78	620887	25.55	ug/L		99
45) TAME	9.024	73	324567	24.50	ug/L		94
47) 1,2-Dichloroethane	9.104	62	257765	24.55	ug/L		99
48) Trichloroethene	9.658	95	168385	26.23	ug/L		99
49) Methylcyclohexane	9.646	83	283526	26.99	ug/L		97
50) Dibromomethane	10.146	93	100259	25.26	ug/L		96
51) 1,2-Dichloropropane	10.250	63	202431	26.06	ug/L		98
52) Bromodichloromethane	10.341	83	197821	25.67	ug/L		99
53) Methyl methacrylate	10.518	41	116070	21.14	ug/L		98
54) 2-Chloroethyl vinyl ether	10.914	63	605727	132.20	ug/L		96
55) cis-1,3-Dichloropropene	10.975	75	237008	24.52	ug/L		99
58) Toluene	11.201	91	663477	25.37	ug/L		99
59) 2-Nitropropane	11.384	41	135295	96.98	ug/L		98
60) 4-Methyl-2-pentanone	11.524	43	801597	114.66	ug/L		99
61) trans-1,3-Dichloropropene	11.926	75	12988	25.32	ug/L	#	87
62) Tetrachloroethene	11.554	166	170961	25.36	ug/L		99
63) Ethyl methacrylate	11.701	69	162578	21.83	ug/L		96
64) 1,1,2-Trichloroethane	11.701	83	122235	24.91	ug/L		97
65) Dibromochloromethane	11.859	129	147390	25.33	ug/L		99
66) 1,3-Dichloropropane	11.926	76	234072	23.72	ug/L		98
67) 1,2-Dibromoethane	12.054	107	133858	24.76	ug/L		98
68) 2-hexanone	12.213	43	643536	111.05	ug/L	#	75
69) 1-Chlorohexane	12.438	91	233568	26.03	ug/L		97
70) Ethylbenzene	12.481	91	769840	25.74	ug/L		100
71) Chlorobenzene	12.469	112	420189	24.69	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.517	131	132391	25.24	ug/L		99
73) m,p-Xylene	12.591	91	1191976	52.32	ug/L		99
74) o-Xylene	12.914	91	599458	26.24	ug/L		100
75) Styrene	12.950	104	428468	26.69	ug/L		99
76) Bromoform	12.987	173	81077	22.46	ug/L		98
77) Isopropylbenzene	13.133	105	699553	27.79	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.383	53	58449	22.26	ug/L		96
81) n-Propylbenzene	13.432	91	904062	26.46	ug/L		99
82) Bromobenzene	13.438	156	168328	25.43	ug/L		97
83) 1,1,2,2-Tetrachloroethane	13.475	83	184048	24.68	ug/L		97
84) 1,3,5-Trimethylbenzene	13.554	105	579683	26.93	ug/L		99
85) 2-Chlorotoluene	13.670	91	542656	26.15	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.597	53	56050	23.05	ug/L		93
87) 1,2,3-Trichloropropane	13.578	110	47025	23.41	ug/L		98
88) Cyclohexanone	13.621	55	26568	83.02	ug/L		97
89) 4-Chlorotoluene	13.670	91	542656	26.15	ug/L		100
90) tert-Butylbenzene	13.786	91	349449	26.23	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56388.D
Acq On : 30 Jul 2018 11:57 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 30 12:16:15 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

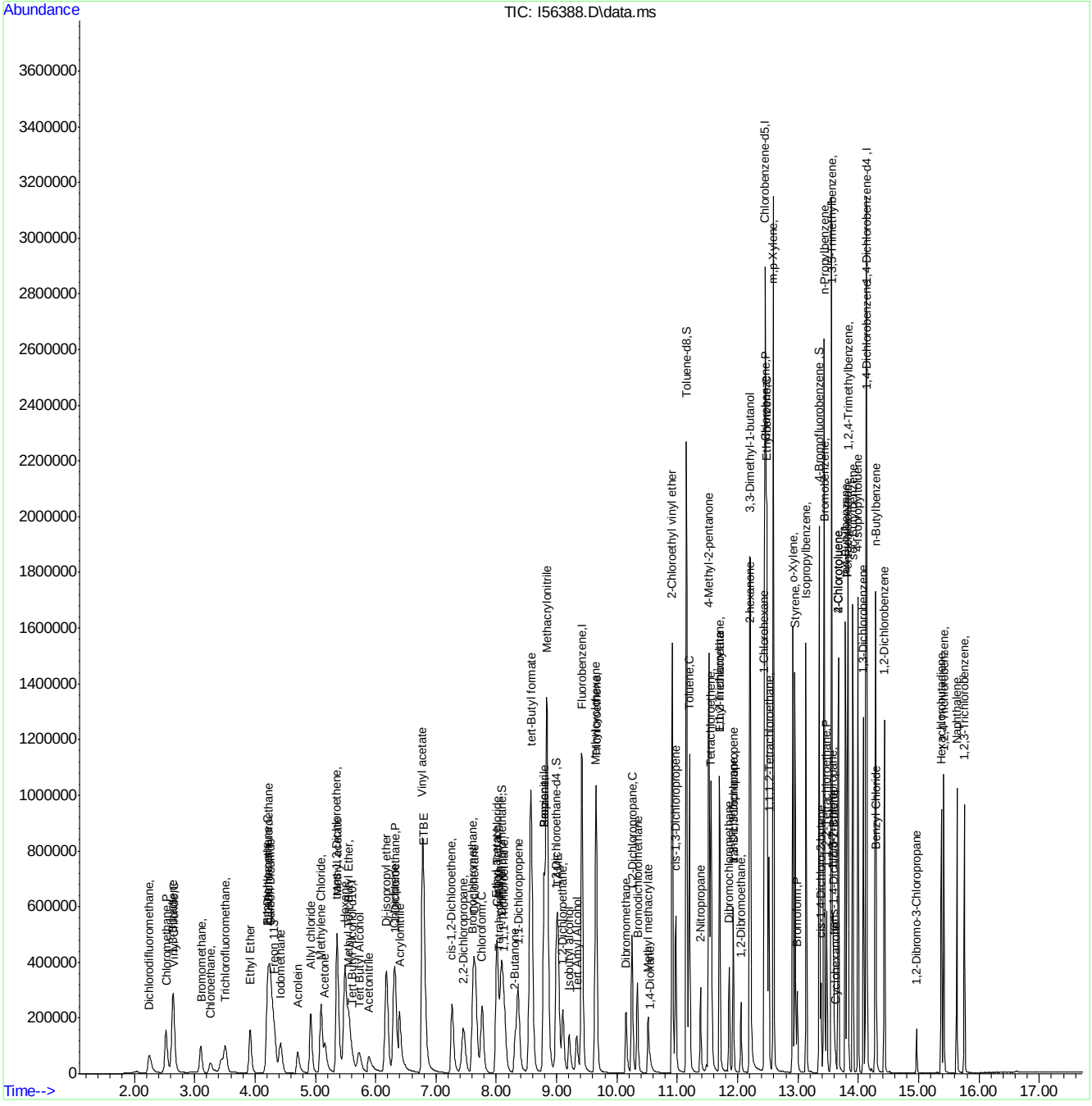
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	573875	25.77	ug/L		99
93) Pentachloroethane	13.822	167	83994	24.34	ug/L		97
94) sec-Butylbenzene	13.907	105	737975	26.85	ug/L		100
95) 4-Isopropyltoluene	13.993	119	606081	27.20	ug/L		99
96) 1,3-Dichlorobenzene	14.084	146	319946	26.03	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	331844	24.81	ug/L		99
98) n-Butylbenzene	14.285	92	354422	27.63	ug/L		100
99) Benzyl Chloride	14.298	126	36425	24.23	ug/L	#	87
100) 1,2-Dichlorobenzene	14.432	146	301709	25.21	ug/L		98
101) 1,2-Dibromo-3-Chloropr...	14.968	75	26045	21.85	ug/L		97
102) Hexachlorobutadiene	15.377	225	107558	27.06	ug/L		99
103) 1,2,4-Trichlorobenzene	15.419	180	206590	26.01	ug/L		96
104) Naphthalene	15.633	128	465108	22.94	ug/L		100
105) 1,2,3-Trichlorobenzene	15.761	180	188933	25.37	ug/L		99
107) Ethanol	4.214	45	31919	506.79	ug/L		98
108) Acrolein	4.708	56	137868	99.52	ug/L		100
109) Tert Butyl Alcohol	5.726	59	153337	283.19	ug/L		94
110) Isobutyl alcohol	9.207	43	111877	499.83	ug/L		99
111) Tert Amyl Alcohol	9.335	59	86396	244.85	ug/L		96
112) 1,4-Dioxane	10.548	88	27351	501.42	ug/L		97
113) 3,3-Dimethyl-1-butanol	12.200	57	706804	1226.98	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56388.D
Acq On : 30 Jul 2018 11:57 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 30 12:16:15 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Evita Martinez
07/30/18 09:03

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56370.D
Acq On : 27 Jul 2018 5:45 pm
Operator : ANAJ
Sample : FA55941-5ms MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 30 06:54:43 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.414	96	1131731	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	801051	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	409193	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	87339	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.085	113	300536	50.30	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.60%			
46) 1,2-Dichloroethane-d4	8.994	65	409484	50.68	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.36%			
57) Toluene-d8	11.152	98	1094044	49.49	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.98%			
79) 4-Bromofluorobenzene	13.353	174	322063	49.83	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.66%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.245	85	163976	25.44	ug/L	98
3) Chloromethane	2.519	50	203892	23.04	ug/L	100
4) 1,3-Butadiene	2.635	39	94445	19.79	ug/L	99
5) Vinyl Chloride	2.654	62	168870	22.69	ug/L	98
6) Bromomethane	3.099	94	89450	22.95	ug/L	99
7) Chloroethane	3.263	64	52117	22.59	ug/L	97
8) Trichlorofluoromethane	3.501	101	227973	26.66	ug/L	98
9) Ethyl Ether	3.922	59	160041	24.27	ug/L	98
10) 1,2-Dichlorotrifluoroe...	4.226	67	205486	25.95	ug/L	98
11) 1,1-Dichloroethene	4.214	61	273819	25.86	ug/L	99
12) Freon 113	4.312	101	140048	23.69	ug/L	98
13) Carbon Disulfide	4.263	76	375783	22.39	ug/L	97
14) Iodomethane	4.422	142	212083	23.39	ug/L	96
15) Allyl chloride	4.921	41	198463	21.80	ug/L	98
16) Methylene Chloride	5.098	49	270903	25.85	ug/L	99
17) Acetone	5.159	43	201114	107.04	ug/L	98
18) Methyl acetate	5.373	43	535111	116.62	ug/L	98
19) trans-1,2-Dichloroethene	5.354	61	264237	25.33	ug/L	100
20) Hexane	5.494	56	209606	26.20	ug/L	97
21) Methyl Tert Butyl Ether	5.549	73	296934	22.88	ug/L	93
22) Acetonitrile	5.885	41	162492	251.23	ug/L	98
23) Di-isopropyl ether	6.177	45	572307	24.55	ug/L	99
24) Chloroprene	6.305	53	265281	24.72	ug/L	100
25) 1,1-Dichloroethane	6.330	63	324083	25.79	ug/L	96
26) Acrylonitrile	6.397	53	304629	113.22	ug/L	99
27) ETBE	6.799	59	478443	25.45	ug/L	99
28) Vinyl acetate	6.775	43	1677189	112.09	ug/L	99
29) cis-1,2-Dichloroethene	7.269	96	147989	24.60	ug/L	97
30) 2,2-Dichloropropane	7.457	77	142346	26.63	ug/L	99
31) Bromochloromethane	7.610	128	73460	25.05	ug/L	97
32) Cyclohexane	7.646	56	362691	26.03	ug/L	98
33) Chloroform	7.762	83	258762	23.92	ug/L	97
34) Ethyl acetate	8.006	43	733067	112.71	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56370.D
Acq On : 27 Jul 2018 5:45 pm
Operator : ANAJ
Sample : FA55941-5ms MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 30 06:54:43 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.037	42	97056	24.69	ug/L		100
37) Carbon Tetrachloride	8.018	117	154730	23.76	ug/L		99
38) 1,1,1-Trichloroethane	8.128	97	212759	24.43	ug/L		97
39) 2-Butanone	8.311	43	322070	114.38	ug/L		97
40) 1,1-Dichloropropene	8.360	75	197356	25.59	ug/L		96
41) tert-Butyl formate	8.579	59	257108	122.24	ug/L	#	87
42) Propionitrile	8.799	54	239847	242.42	ug/L		91
43) Methacrylonitrile	8.835	41	957948	247.20	ug/L		99
44) Benzene	8.793	78	565528	24.54	ug/L		100
45) TAME	9.024	73	287190	22.87	ug/L		91
47) 1,2-Dichloroethane	9.104	62	237244	23.83	ug/L		98
48) Trichloroethene	9.658	95	153918	25.29	ug/L		99
49) Methylcyclohexane	9.652	83	259141	26.02	ug/L		98
50) Dibromomethane	10.152	93	92416	24.56	ug/L		99
51) 1,2-Dichloropropane	10.250	63	186239	25.29	ug/L		98
52) Bromodichloromethane	10.341	83	178525	24.43	ug/L		99
53) Methyl methacrylate	10.518	41	108358	20.82	ug/L		98
55) cis-1,3-Dichloropropene	10.981	75	188791	20.70	ug/L		98
58) Toluene	11.201	91	603778	24.40	ug/L		99
59) 2-Nitropropane	11.384	41	122662	93.03	ug/L		97
60) 4-Methyl-2-pentanone	11.524	43	794865	120.18	ug/L		98
61) trans-1,3-Dichloropropene	11.926	75	12266	25.27	ug/L		92
62) Tetrachloroethene	11.554	166	154763	24.27	ug/L		98
63) Ethyl methacrylate	11.701	69	149769	21.27	ug/L		95
64) 1,1,2-Trichloroethane	11.701	83	116025	24.99	ug/L		96
65) Dibromochloromethane	11.859	129	130000	23.62	ug/L		99
66) 1,3-Dichloropropane	11.926	76	217440	23.29	ug/L		95
67) 1,2-Dibromoethane	12.054	107	123237	24.09	ug/L		100
68) 2-hexanone	12.213	43	641986	117.10	ug/L	#	73
69) 1-Chlorohexane	12.444	91	209133	24.63	ug/L		96
70) Ethylbenzene	12.481	91	696357	24.61	ug/L		100
71) Chlorobenzene	12.469	112	386462	24.01	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.518	131	116724	23.52	ug/L		99
73) m,p-Xylene	12.591	91	1083361	50.26	ug/L		99
74) o-Xylene	12.914	91	536122	24.80	ug/L		99
75) Styrene	12.950	104	384091	25.29	ug/L		99
76) Bromoform	12.987	173	69980	20.55	ug/L		98
77) Isopropylbenzene	13.139	105	631307	26.50	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.383	53	49376	19.61	ug/L		93
81) n-Propylbenzene	13.432	91	817243	24.95	ug/L		99
82) Bromobenzene	13.438	156	154835	24.39	ug/L		98
83) 1,1,2,2-Tetrachloroethane	13.475	83	178673	24.99	ug/L		98
84) 1,3,5-Trimethylbenzene	13.554	105	521616	25.27	ug/L		100
85) 2-Chlorotoluene	13.670	91	490785	24.66	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.597	53	47930	20.55	ug/L		90
87) 1,2,3-Trichloropropane	13.578	110	46423	24.10	ug/L		99
88) Cyclohexanone	13.621	55	29209	95.19	ug/L		96
89) 4-Chlorotoluene	13.670	91	490785	24.66	ug/L		100
90) tert-Butylbenzene	13.786	91	313629	24.55	ug/L		98
92) 1,2,4-Trimethylbenzene	13.828	105	518338	24.28	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56370.D
Acq On : 27 Jul 2018 5:45 pm
Operator : ANAJ
Sample : FA55941-5ms MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 30 06:54:43 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

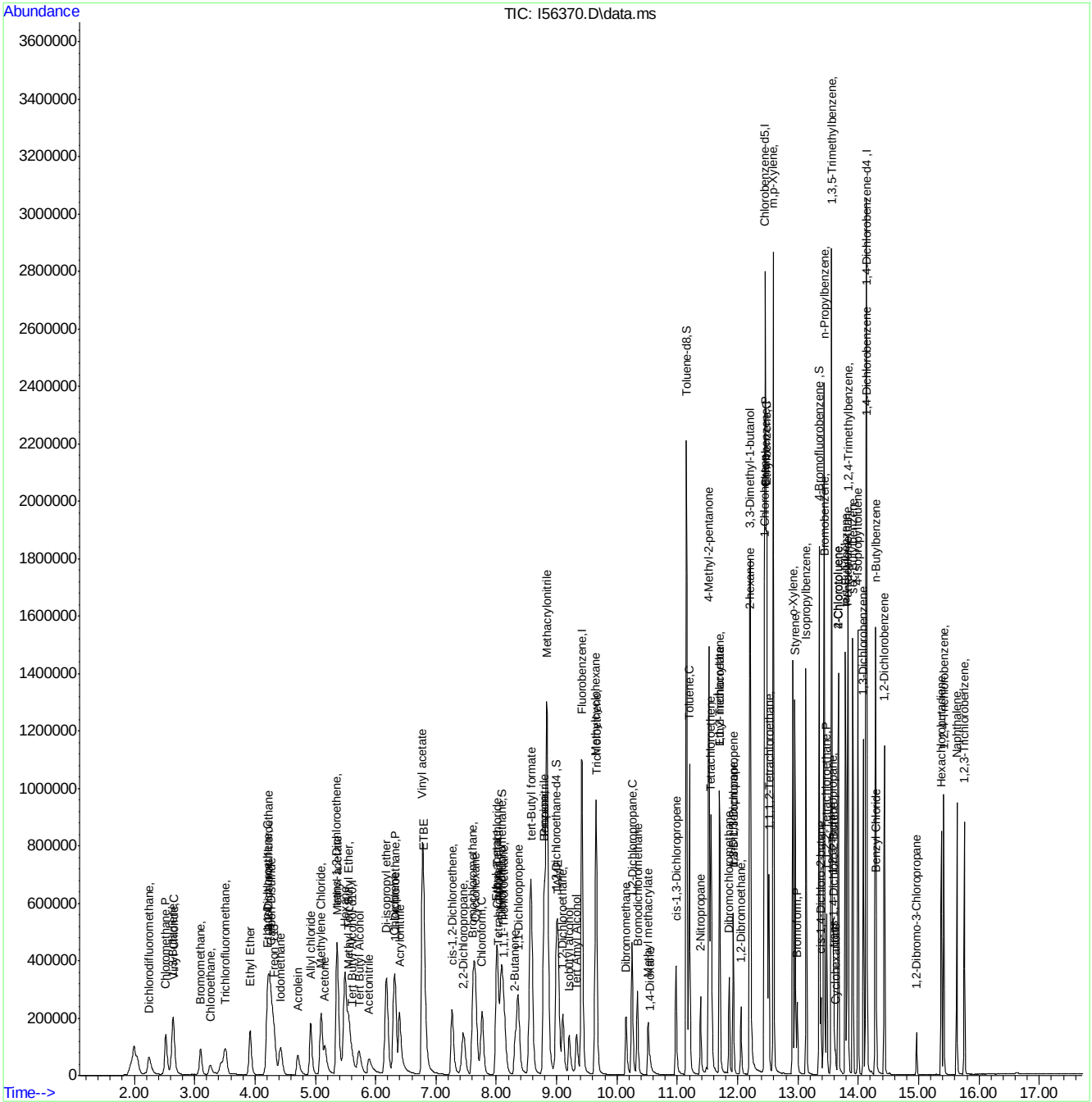
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
93) Pentachloroethane	13.822	167	73316	22.31	ug/L		98
94) sec-Butylbenzene	13.907	105	669488	25.40	ug/L		100
95) 4-Isopropyltoluene	13.993	119	549180	25.70	ug/L		100
96) 1,3-Dichlorobenzene	14.084	146	290220	24.63	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	302906	23.62	ug/L		99
98) n-Butylbenzene	14.285	92	321094	26.10	ug/L		98
99) Benzyl Chloride	14.298	126	30799	21.67	ug/L	#	87
100) 1,2-Dichlorobenzene	14.432	146	273315	23.81	ug/L		98
101) 1,2-Dibromo-3-Chloropr...	14.962	75	24352	21.33	ug/L		76
102) Hexachlorobutadiene	15.377	225	96065	25.20	ug/L		99
103) 1,2,4-Trichlorobenzene	15.413	180	182698	23.99	ug/L		99
104) Naphthalene	15.633	128	437867	22.52	ug/L		99
105) 1,2,3-Trichlorobenzene	15.761	180	171110	23.96	ug/L		99
107) Ethanol	4.202	45	32557m	499.95	ug/L		
108) Acrolein	4.708	56	128985	90.01	ug/L		99
109) Tert Butyl Alcohol	5.726	59	155071	277.03	ug/L		98
110) Isobutyl alcohol	9.207	43	107925	466.41	ug/L		98
111) Tert Amyl Alcohol	9.329	59	83359	229.04	ug/L		86
112) 1,4-Dioxane	10.548	88	26868	476.21	ug/L		94
113) 3,3-Dimethyl-1-butanol	12.200	57	673953	1131.71	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56370.D
Acq On : 27 Jul 2018 5:45 pm
Operator : ANAJ
Sample : FA55941-5ms MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 30 06:54:43 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number: FA55941-5MS
Lab FileID: I56370.D
Injection Time: 07/27/18 17:45

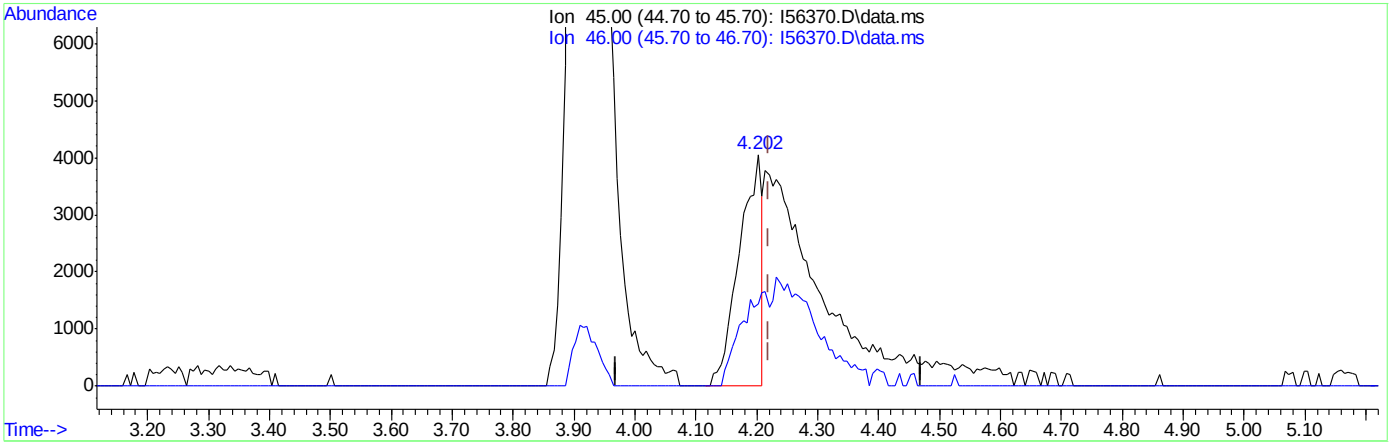
Method: SW846 8260C
Analyst approved: 07/30/18 07:10 Ana Jimenez
Supervisor approved: 07/30/18 09:03 Evita Martinez

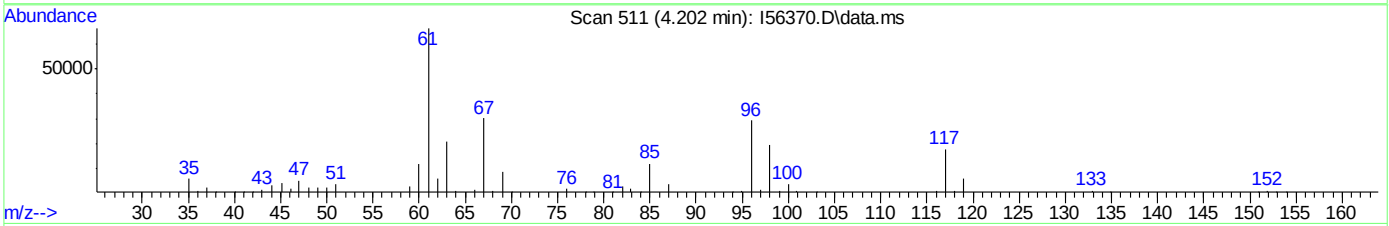
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		4.20	Poor instrument integration

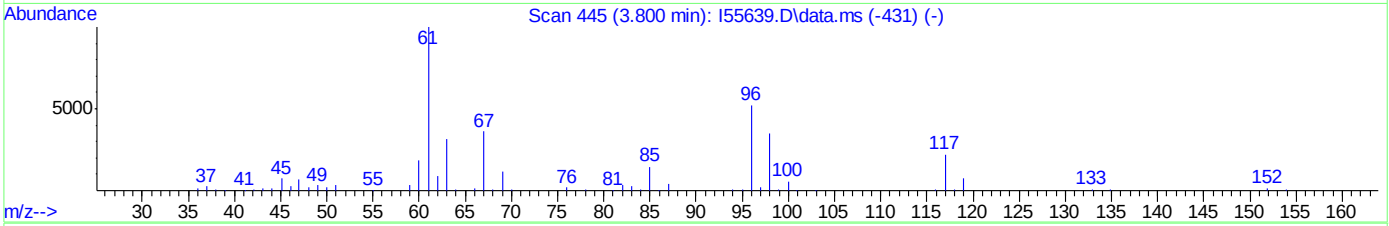
Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56370.D
Acq On : 27 Jul 2018 5:45 pm
Operator : ANAJ
Sample : FA55941-5ms MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 30 06:46:19 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration







TIC: I56370.D\data.ms

(107) Ethanol

4.202min (-0.018) 159.87ug/L

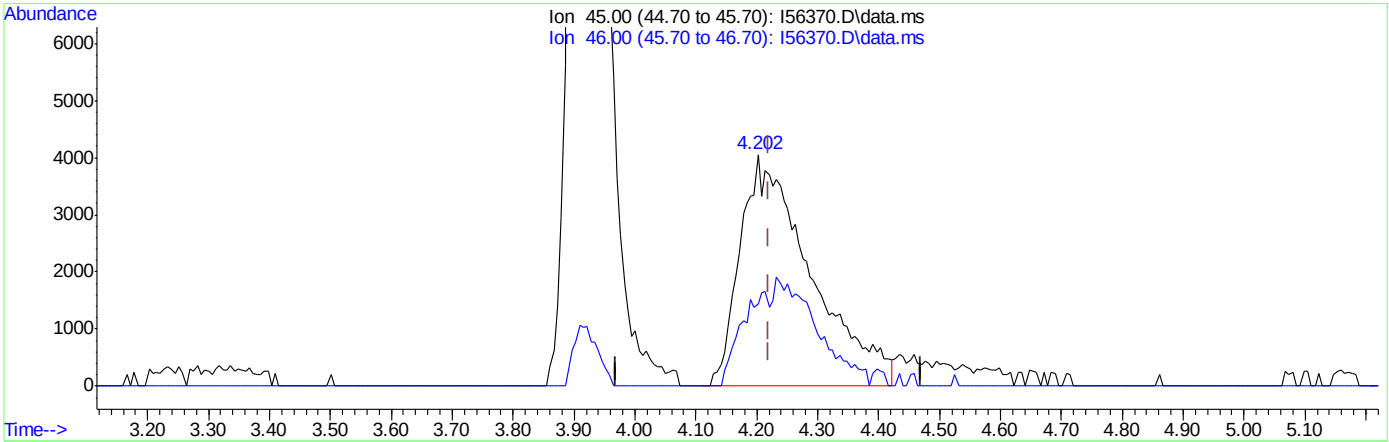
response 10478

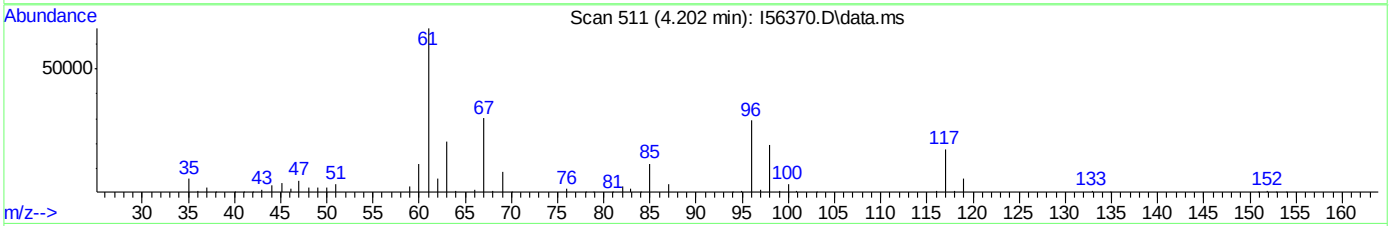
Ion	Exp%	Act%
45.00	100	100
46.00	38.30	35.52
0.00	0.00	0.00
0.00	0.00	0.00

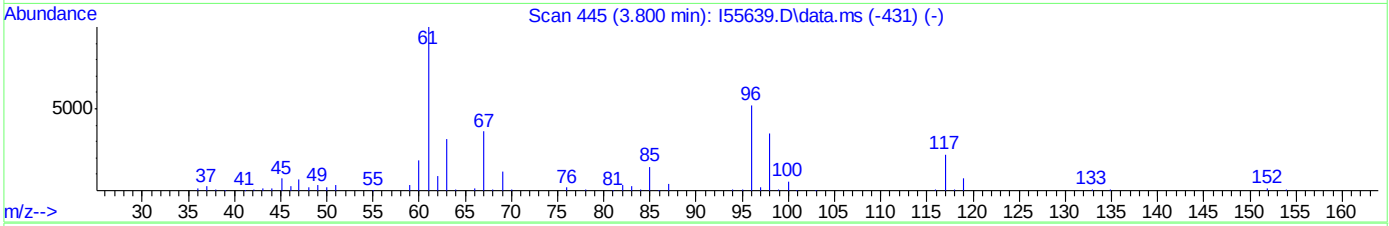
Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56370.D
Acq On : 27 Jul 2018 5:45 pm
Operator : ANAJ
Sample : FA55941-5ms MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 30 06:46:19 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration







TIC: I56370.D\data.ms

(107) Ethanol

4.202min (-0.018) 499.95ug/L m

response 32557

Ion	Exp%	Act%
45.00	100	100
46.00	38.30	35.52
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Evita Martinez 07/30/18 09:03

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56371.D
Acq On : 27 Jul 2018 6:09 pm
Operator : ANAJ
Sample : FA55941-5msd MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 30 06:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1160621	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	816157	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	418002	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.622	65	96925	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.091	113	310947	50.74	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.48%			
46) 1,2-Dichloroethane-d4	9.000	65	420201	50.71	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.42%			
57) Toluene-d8	11.152	98	1120443	49.75	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.50%			
79) 4-Bromofluorobenzene	13.353	174	325844	49.36	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.72%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.251	85	172080	26.03	ug/L	99
3) Chloromethane	2.526	50	208071	22.93	ug/L	99
4) 1,3-Butadiene	2.641	39	97221	19.86	ug/L	98
5) Vinyl Chloride	2.660	62	180322	23.62	ug/L	99
6) Bromomethane	3.105	94	94103	23.55	ug/L	100
7) Chloroethane	3.263	64	55141	23.44	ug/L	98
8) Trichlorofluoromethane	3.513	101	236380	26.96	ug/L	100
9) Ethyl Ether	3.928	59	169025	25.00	ug/L	98
10) 1,2-Dichlorotrifluoroe...	4.232	67	214080	26.36	ug/L	97
11) 1,1-Dichloroethene	4.226	61	289890	26.70	ug/L	98
12) Freon 113	4.318	101	142719	23.54	ug/L	99
13) Carbon Disulfide	4.275	76	401796	23.35	ug/L	100
14) Iodomethane	4.428	142	227938	24.51	ug/L	100
15) Allyl chloride	4.934	41	216938	23.24	ug/L	97
16) Methylene Chloride	5.104	49	283030	26.34	ug/L	97
17) Acetone	5.165	43	217792	113.03	ug/L	99
18) Methyl acetate	5.372	43	568067	120.65	ug/L	99
19) trans-1,2-Dichloroethene	5.360	61	283002	26.45	ug/L	99
20) Hexane	5.494	56	216508	26.39	ug/L	95
21) Methyl Tert Butyl Ether	5.561	73	324790	24.41	ug/L	99
22) Acetonitrile	5.891	41	174196	262.62	ug/L	100
23) Di-isopropyl ether	6.183	45	612648	25.62	ug/L	99
24) Chloroprene	6.305	53	282612	25.68	ug/L	96
25) 1,1-Dichloroethane	6.336	63	342605	26.58	ug/L	99
26) Acrylonitrile	6.403	53	326924	118.32	ug/L	100
27) ETBE	6.799	59	515414	26.73	ug/L	99
28) Vinyl acetate	6.781	43	1793227	116.77	ug/L	100
29) cis-1,2-Dichloroethene	7.268	96	157148	25.47	ug/L	95
30) 2,2-Dichloropropane	7.464	77	154405	28.17	ug/L	99
31) Bromochloromethane	7.616	128	76659	25.49	ug/L	97
32) Cyclohexane	7.653	56	382493	26.77	ug/L	98
33) Chloroform	7.768	83	270905	24.42	ug/L	98
34) Ethyl acetate	8.006	43	783678	117.44	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56371.D
Acq On : 27 Jul 2018 6:09 pm
Operator : ANAJ
Sample : FA55941-5msd MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 30 06:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.043	42	103906	25.77	ug/L		96
37) Carbon Tetrachloride	8.018	117	163047	24.42	ug/L		98
38) 1,1,1-Trichloroethane	8.128	97	224559	25.15	ug/L		97
39) 2-Butanone	8.311	43	346919	120.04	ug/L		99
40) 1,1-Dichloropropene	8.366	75	209474	26.49	ug/L		94
41) tert-Butyl formate	8.579	59	227953	106.70	ug/L	#	87
42) Propionitrile	8.799	54	257377	253.66	ug/L		92
43) Methacrylonitrile	8.841	41	1021625	257.07	ug/L		99
44) Benzene	8.793	78	597109	25.27	ug/L		99
45) TAME	9.030	73	310975	24.15	ug/L		94
47) 1,2-Dichloroethane	9.103	62	253495	24.83	ug/L		98
48) Trichloroethene	9.658	95	161287	25.84	ug/L		99
49) Methylcyclohexane	9.652	83	270857	26.52	ug/L		98
50) Dibromomethane	10.152	93	97410	25.24	ug/L		98
51) 1,2-Dichloropropane	10.250	63	195284	25.86	ug/L		98
52) Bromodichloromethane	10.341	83	187147	24.97	ug/L		99
53) Methyl methacrylate	10.518	41	119572	22.36	ug/L		97
55) cis-1,3-Dichloropropene	10.981	75	201033	21.48	ug/L		96
58) Toluene	11.201	91	632548	25.09	ug/L		100
59) 2-Nitropropane	11.384	41	127403	94.79	ug/L		97
60) 4-Methyl-2-pentanone	11.524	43	849370	126.04	ug/L		97
61) trans-1,3-Dichloropropene	11.926	75	13295	26.89	ug/L		96
62) Tetrachloroethene	11.554	166	161500	24.86	ug/L		99
63) Ethyl methacrylate	11.701	69	166735	23.19	ug/L		96
64) 1,1,2-Trichloroethane	11.701	83	119907	25.35	ug/L		97
65) Dibromochloromethane	11.865	129	136982	24.42	ug/L		99
66) 1,3-Dichloropropane	11.926	76	230745	24.26	ug/L		96
67) 1,2-Dibromoethane	12.054	107	130681	25.08	ug/L		99
68) 2-hexanone	12.213	43	694588	124.35	ug/L	#	75
69) 1-Chlorohexane	12.444	91	219927	25.43	ug/L		96
70) Ethylbenzene	12.481	91	729936	25.32	ug/L		99
71) Chlorobenzene	12.469	112	401682	24.49	ug/L		100
72) 1,1,1,2-Tetrachloroethane	12.517	131	121539	24.04	ug/L		97
73) m,p-Xylene	12.591	91	1133707	51.62	ug/L		99
74) o-Xylene	12.914	91	567062	25.75	ug/L		100
75) Styrene	12.950	104	403809	26.09	ug/L		99
76) Bromoform	12.987	173	74447	21.43	ug/L		99
77) Isopropylbenzene	13.133	105	666306	27.45	ug/L		100
80) cis-1,4-Dichloro-2-butene	13.383	53	53638	20.86	ug/L		93
81) n-Propylbenzene	13.432	91	859730	25.69	ug/L		99
82) Bromobenzene	13.438	156	161467	24.90	ug/L		98
83) 1,1,2,2-Tetrachloroethane	13.475	83	185826	25.44	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	549843	26.07	ug/L		99
85) 2-Chlorotoluene	13.670	91	516706	25.41	ug/L		99
86) trans-1,4-Dichloro-2-B...	13.597	53	51744	21.72	ug/L		90
87) 1,2,3-Trichloropropane	13.578	110	48251	24.52	ug/L		99
88) Cyclohexanone	13.621	55	30488	97.26	ug/L		98
89) 4-Chlorotoluene	13.670	91	516706	25.41	ug/L		99
90) tert-Butylbenzene	13.786	91	331695	25.41	ug/L		98
92) 1,2,4-Trimethylbenzene	13.828	105	543122	24.90	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56371.D
Acq On : 27 Jul 2018 6:09 pm
Operator : ANAJ
Sample : FA55941-5msd MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 30 06:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

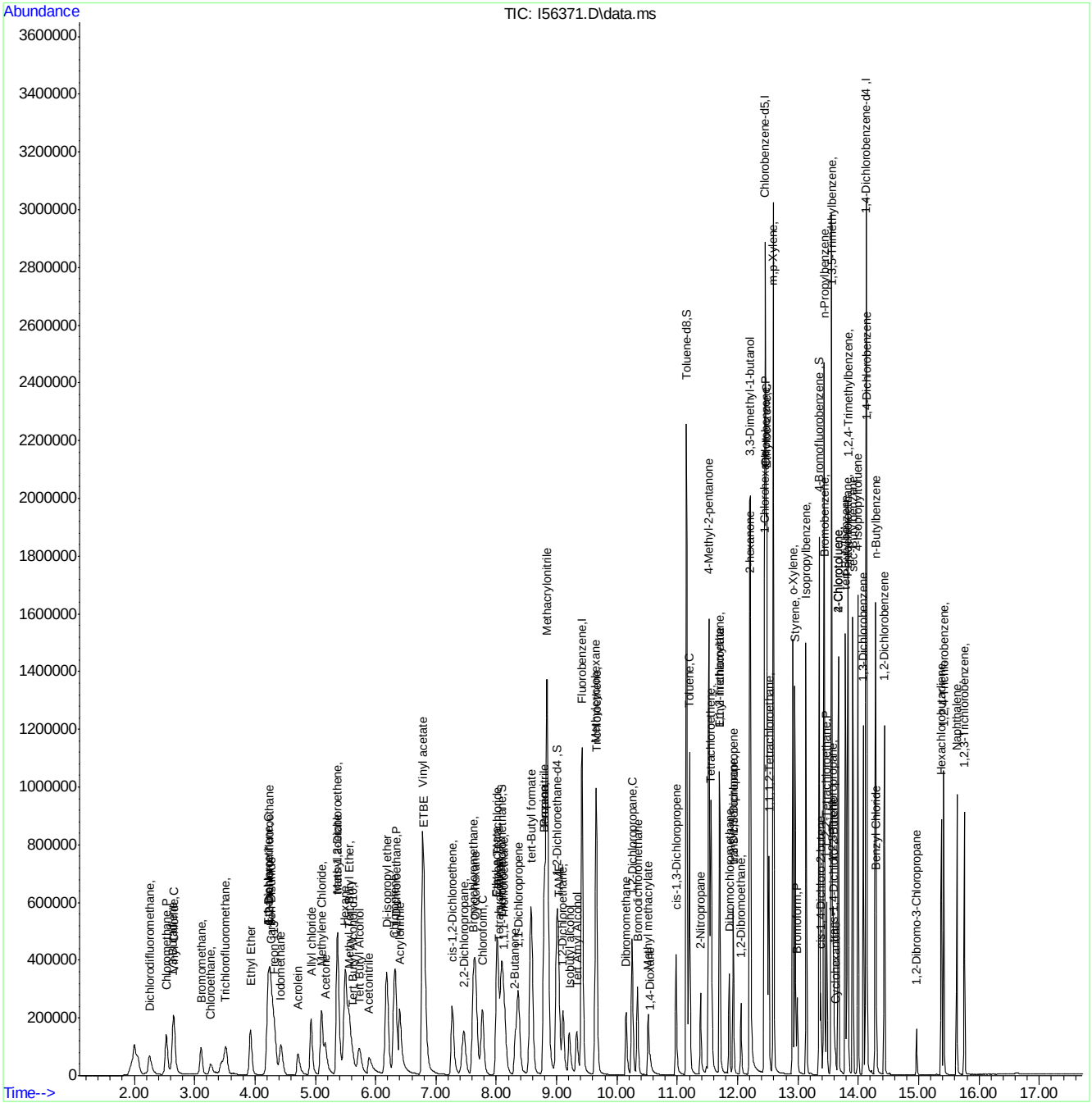
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
93) Pentachloroethane	13.822	167	77371	22.99	ug/L		98
94) sec-Butylbenzene	13.907	105	700213	26.01	ug/L		99
95) 4-Isopropyltoluene	13.993	119	576115	26.40	ug/L		99
96) 1,3-Dichlorobenzene	14.084	146	302898	25.16	ug/L		100
97) 1,4-Dichlorobenzene	14.139	146	317546	24.24	ug/L		99
98) n-Butylbenzene	14.285	92	337711	26.87	ug/L		99
99) Benzyl Chloride	14.298	126	33082	22.66	ug/L	#	87
100) 1,2-Dichlorobenzene	14.432	146	286865	24.47	ug/L		99
101) 1,2-Dibromo-3-Chloropr...	14.962	75	25855	22.14	ug/L		76
102) Hexachlorobutadiene	15.377	225	103002	26.45	ug/L		100
103) 1,2,4-Trichlorobenzene	15.413	180	193258	24.84	ug/L		100
104) Naphthalene	15.633	128	468386	23.57	ug/L		100
105) 1,2,3-Trichlorobenzene	15.761	180	182928	25.07	ug/L		99
107) Ethanol	4.226	45	36522m	505.43	ug/L		
108) Acrolein	4.714	56	141950	89.26	ug/L		96
109) Tert Butyl Alcohol	5.732	59	183135	294.81	ug/L		93
110) Isobutyl alcohol	9.213	43	121717	473.99	ug/L		99
111) Tert Amyl Alcohol	9.335	59	92745	229.61	ug/L		93
112) 1,4-Dioxane	10.548	88	29196	466.20	ug/L		95
113) 3,3-Dimethyl-1-butanol	12.200	57	773302	1170.11	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56371.D
Acq On : 27 Jul 2018 6:09 pm
Operator : ANAJ
Sample : FA55941-5msd MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 30 06:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration



I-July2518.M Mon Jul 30 07:08:11 2018 Page: 4

Manual Integration Approval Summary

Sample Number: FA55941-5MSD
Lab FileID: I56371.D
Injection Time: 07/27/18 18:09

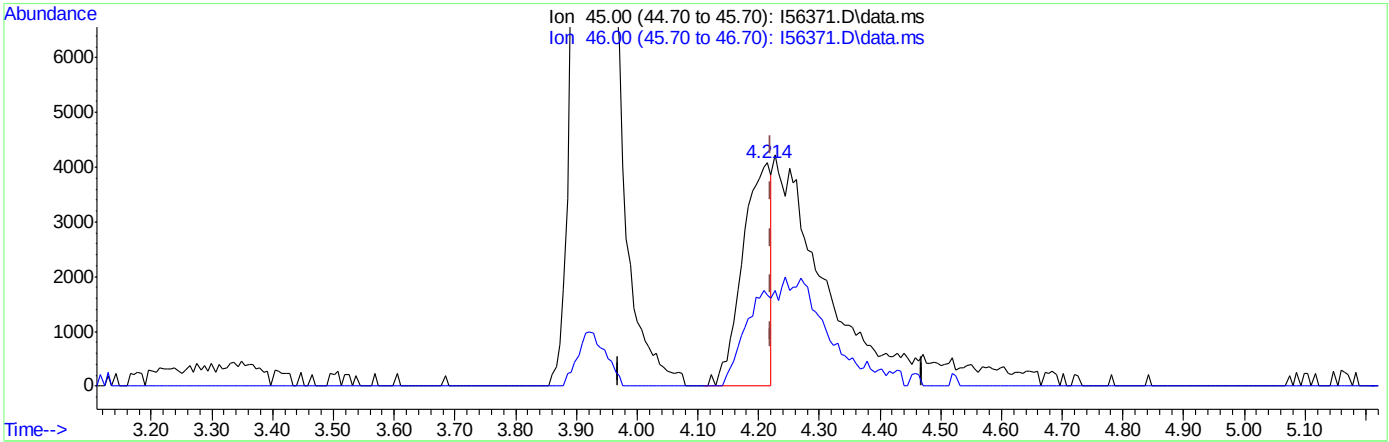
Method: SW846 8260C
Analyst approved: 07/30/18 07:10 Ana Jimenez
Supervisor approved: 07/30/18 09:03 Evita Martinez

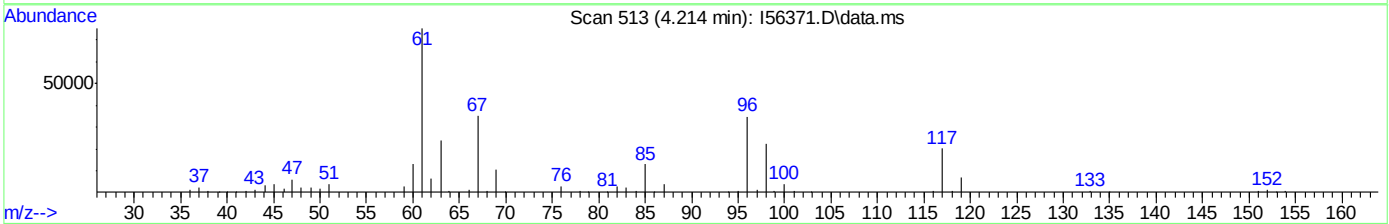
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		4.23	Poor instrument integration

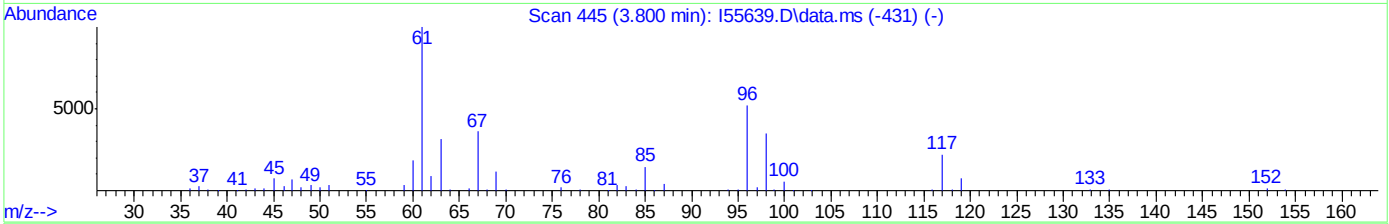
Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56371.D
Acq On : 27 Jul 2018 6:09 pm
Operator : ANAJ
Sample : FA55941-5msd MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 30 06:46:23 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration







TIC: I56371.D\data.ms

(107) Ethanol

4.214min (-0.006) 183.50ug/L

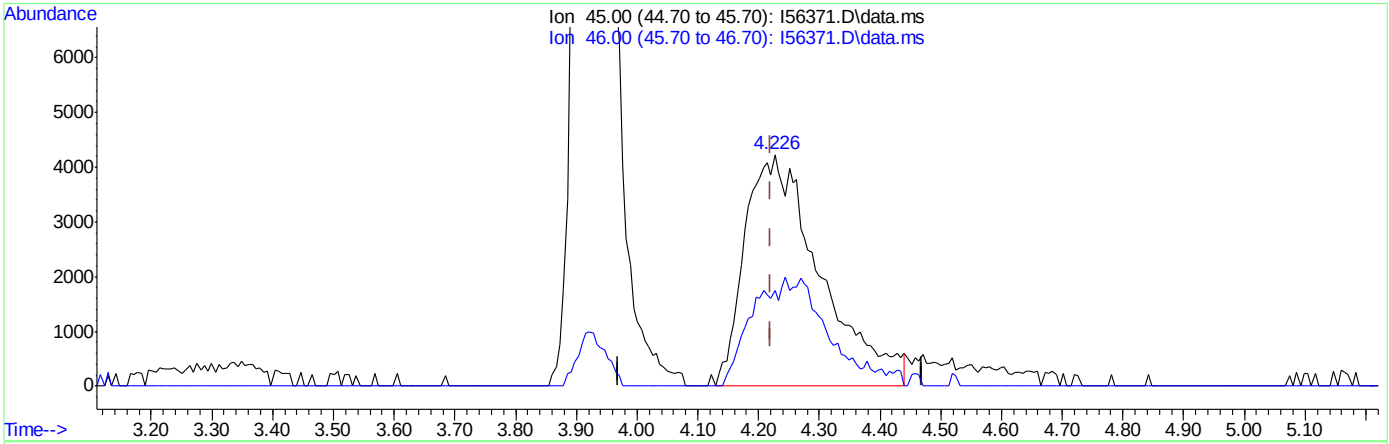
response 13341

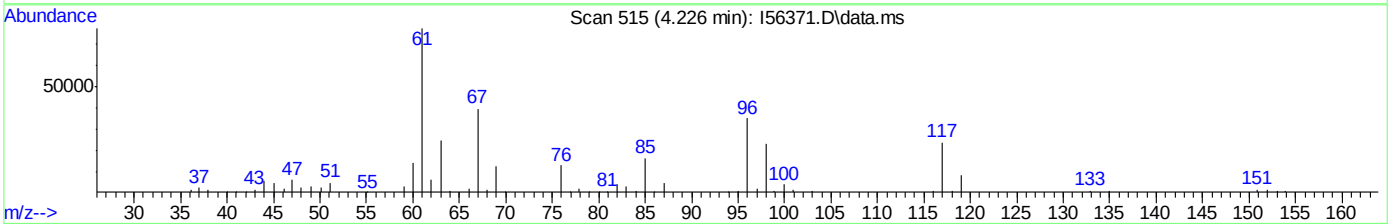
Ion	Exp%	Act%
45.00	100	100
46.00	38.30	40.78
0.00	0.00	0.00
0.00	0.00	0.00

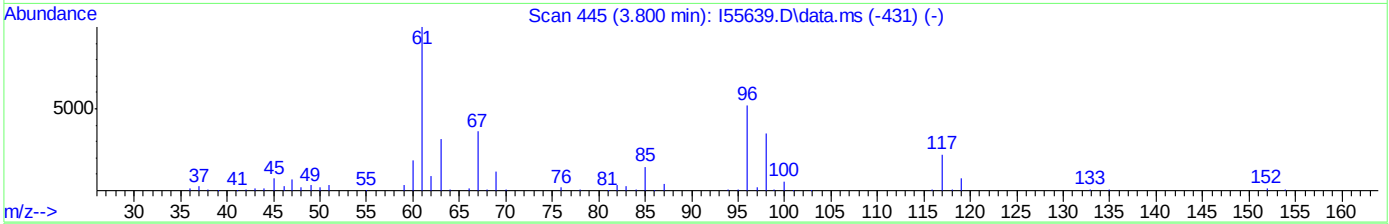
Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56371.D
Acq On : 27 Jul 2018 6:09 pm
Operator : ANAJ
Sample : FA55941-5msd MA Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 30 06:46:23 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration







TIC: I56371.D\data.ms

(107) Ethanol

4.226min (+0.006) 505.43ug/L m

response 36522

Ion	Exp%	Act%
45.00	100	100
46.00	38.30	41.52
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 11:28

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56392.D
Acq On : 30 Jul 2018 1:33 pm
Operator : ANAJ
Sample : FA56212-10ms MA Inst : MSVOA16
Misc : MS40916,VI1686,,,,,
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 30 14:03:21 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.420	96	1180279	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	841294	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	425213	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.622	65	82692	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.091	113	315686	50.66	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.32%			
46) 1,2-Dichloroethane-d4	9.000	65	422086	50.09	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 100.18%			
57) Toluene-d8	11.152	98	1144863	49.31	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.62%			
79) 4-Bromofluorobenzene	13.353	174	334527	49.81	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.62%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	167738	24.95	ug/L	99
3) Chloromethane	2.532	50	209376	22.69	ug/L	100
4) 1,3-Butadiene	2.641	39	143113	28.75	ug/L	99
5) Vinyl Chloride	2.666	62	178622	23.01	ug/L	99
6) Bromomethane	3.111	94	91449	22.50	ug/L	99
7) Chloroethane	3.269	64	58912	24.87	ug/L	96
8) Trichlorofluoromethane	3.513	101	253248	28.40	ug/L	99
9) Ethyl Ether	3.928	59	157323	22.88	ug/L	96
10) 1,2-Dichlorotrifluoroe...	4.239	67	212113	25.69	ug/L	97
11) 1,1-Dichloroethene	4.220	61	281788	25.52	ug/L	99
12) Freon 113	4.318	101	143424	23.26	ug/L	98
13) Carbon Disulfide	4.269	76	423557	24.20	ug/L	98
14) Iodomethane	4.428	142	223105	23.59	ug/L	99
15) Allyl chloride	4.934	41	215172	22.66	ug/L	98
16) Methylene Chloride	5.098	49	277169	25.36	ug/L	98
17) Acetone	5.171	43	192642	98.31	ug/L	98
18) Methyl acetate	5.379	43	508014	106.30	ug/L	99
19) trans-1,2-Dichloroethene	5.360	61	276324	25.39	ug/L	99
20) Hexane	5.494	56	207995	24.93	ug/L	96
21) Methyl Tert Butyl Ether	5.561	73	305997	22.61	ug/L	98
22) Acetonitrile	5.897	41	153128	227.01	ug/L	99
23) Di-isopropyl ether	6.183	45	595932	24.51	ug/L	99
24) Chloroprene	6.311	53	271977	24.31	ug/L	98
25) 1,1-Dichloroethane	6.336	63	337709	25.77	ug/L	99
26) Acrylonitrile	6.403	53	276260	98.82	ug/L	98
27) ETBE	6.805	59	500247	25.51	ug/L	99
28) Vinyl acetate	6.775	43	1569645	100.77	ug/L	99
29) cis-1,2-Dichloroethene	7.275	96	155300	24.75	ug/L	96
30) 2,2-Dichloropropane	7.464	77	159155	28.55	ug/L	99
31) Bromochloromethane	7.616	128	74851	24.48	ug/L	96
32) Cyclohexane	7.646	56	374192	25.75	ug/L	98
33) Chloroform	7.768	83	273101	24.21	ug/L	99
34) Ethyl acetate	8.006	43	668133	98.62	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56392.D
Acq On : 30 Jul 2018 1:33 pm
Operator : ANAJ
Sample : FA56212-10ms MA Inst : MSVOA16
Misc : MS40916,VI1686,,,,,
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 30 14:03:21 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.043	42	90942	22.18	ug/L		91
37) Carbon Tetrachloride	8.018	117	167817	24.71	ug/L		98
38) 1,1,1-Trichloroethane	8.134	97	224694	24.74	ug/L		97
39) 2-Butanone	8.311	43	307358	104.82	ug/L		99
40) 1,1-Dichloropropene	8.360	75	207169	25.76	ug/L		98
41) tert-Butyl formate	8.579	59	344303	153.95	ug/L		98
42) Propionitrile	8.799	54	223299	216.41	ug/L		86
43) Methacrylonitrile	8.841	41	899624	222.60	ug/L		99
44) Benzene	8.793	78	589873	24.55	ug/L		98
45) TAME	9.030	73	304777	23.27	ug/L		95
47) 1,2-Dichloroethane	9.103	62	243771	23.48	ug/L		98
48) Trichloroethene	9.658	95	159933	25.20	ug/L		99
49) Methylcyclohexane	9.652	83	266874	25.69	ug/L		98
50) Dibromomethane	10.146	93	94509	24.08	ug/L		96
51) 1,2-Dichloropropane	10.250	63	191662	24.95	ug/L		98
52) Bromodichloromethane	10.341	83	187710	24.63	ug/L		99
53) Methyl methacrylate	10.518	41	103842	19.18	ug/L		98
55) cis-1,3-Dichloropropene	10.981	75	203760	21.41	ug/L		97
58) Toluene	11.201	91	627569	24.15	ug/L		100
59) 2-Nitropropane	11.384	41	117980	85.37	ug/L		99
60) 4-Methyl-2-pentanone	11.524	43	761990	109.70	ug/L		98
61) trans-1,3-Dichloropropene	11.926	75	12982	25.47	ug/L	#	87
62) Tetrachloroethene	11.554	166	161267	24.08	ug/L		98
63) Ethyl methacrylate	11.701	69	147328	19.96	ug/L		96
64) 1,1,2-Trichloroethane	11.701	83	117064	24.01	ug/L		96
65) Dibromochloromethane	11.859	129	136720	23.65	ug/L		99
66) 1,3-Dichloropropane	11.926	76	221628	22.60	ug/L		97
67) 1,2-Dibromoethane	12.054	107	126761	23.60	ug/L		100
68) 2-hexanone	12.213	43	610842	106.09	ug/L	#	74
69) 1-Chlorohexane	12.444	91	220366	24.72	ug/L		95
70) Ethylbenzene	12.481	91	731727	24.62	ug/L		99
71) Chlorobenzene	12.469	112	402837	23.83	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.517	131	126013	24.18	ug/L		98
73) m,p-Xylene	12.591	91	1136882	50.22	ug/L		99
74) o-Xylene	12.914	91	566243	24.94	ug/L		99
75) Styrene	12.950	104	384984	24.13	ug/L		99
76) Bromoform	12.987	173	74495	20.82	ug/L		98
77) Isopropylbenzene	13.139	105	665559	26.60	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.383	53	52127	19.93	ug/L		95
81) n-Propylbenzene	13.432	91	860450	25.28	ug/L		99
82) Bromobenzene	13.438	156	162355	24.61	ug/L		99
83) 1,1,2,2-Tetrachloroethane	13.475	83	175951	23.68	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	549463	25.61	ug/L		99
85) 2-Chlorotoluene	13.670	91	512441	24.78	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.597	53	51807	21.38	ug/L		92
87) 1,2,3-Trichloropropane	13.578	110	44850	22.41	ug/L		99
88) Cyclohexanone	13.621	55	26727	83.82	ug/L		96
89) 4-Chlorotoluene	13.670	91	512441	24.78	ug/L		100
90) tert-Butylbenzene	13.785	91	332901	25.07	ug/L		98
92) 1,2,4-Trimethylbenzene	13.828	105	544924	24.56	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56392.D
Acq On : 30 Jul 2018 1:33 pm
Operator : ANAJ
Sample : FA56212-10ms MA Inst : MSVOA16
Misc : MS40916,VI1686,,,,,
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 30 14:03:21 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

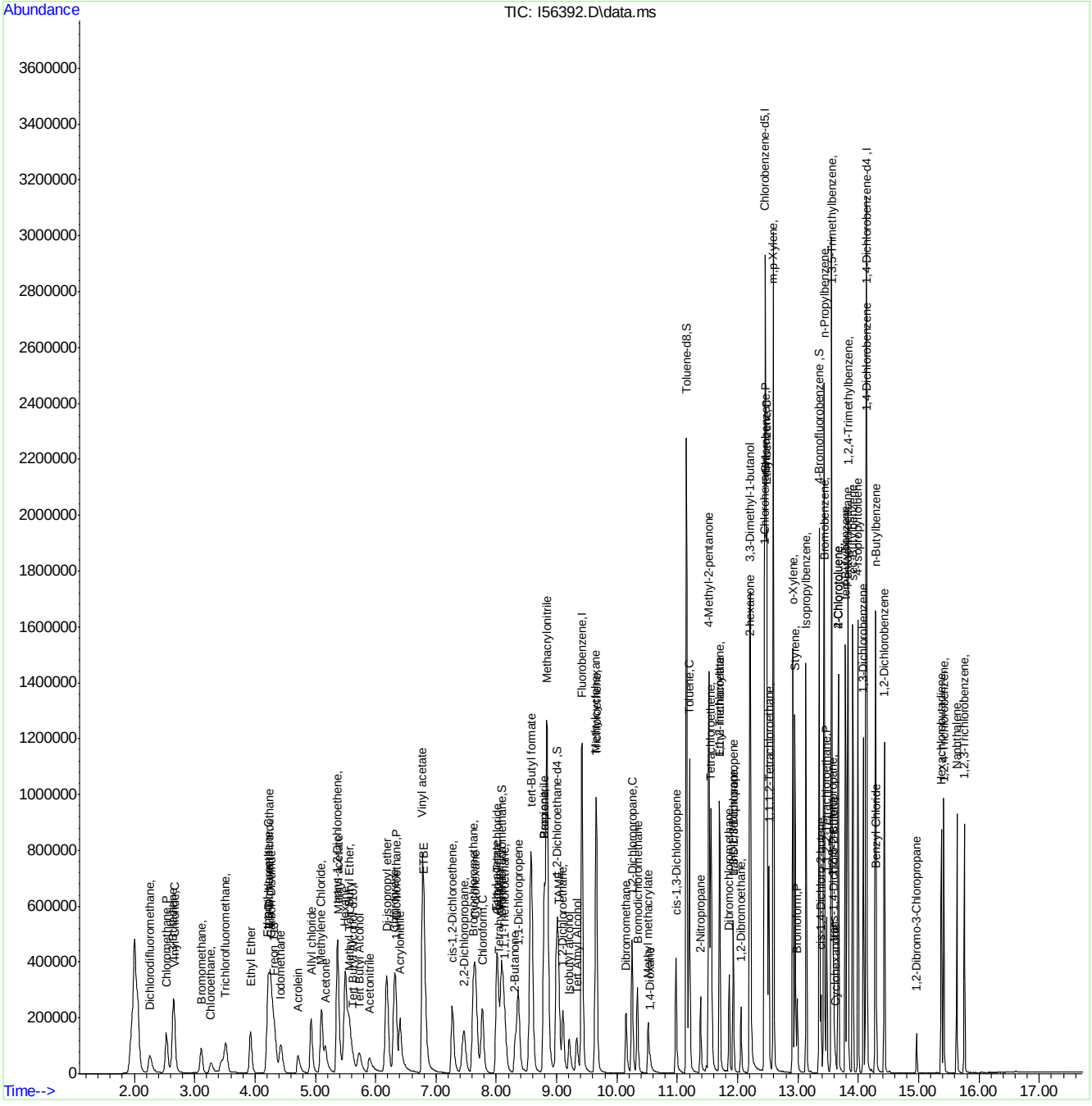
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
93) Pentachloroethane	13.822	167	77660	22.71	ug/L		99
94) sec-Butylbenzene	13.907	105	702909	25.66	ug/L		100
95) 4-Isopropyltoluene	13.993	119	575767	25.93	ug/L		100
96) 1,3-Dichlorobenzene	14.084	146	302698	24.72	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	313971	23.56	ug/L		98
98) n-Butylbenzene	14.285	92	336618	26.33	ug/L		98
99) Benzyl Chloride	14.298	126	33268	22.43	ug/L	#	84
100) 1,2-Dichlorobenzene	14.432	146	284725	23.87	ug/L		98
101) 1,2-Dibromo-3-Chloropr...	14.962	75	23777	20.07	ug/L		77
102) Hexachlorobutadiene	15.377	225	102285	25.82	ug/L		99
103) 1,2,4-Trichlorobenzene	15.419	180	189746	23.97	ug/L		96
104) Naphthalene	15.633	128	429724	21.29	ug/L		99
105) 1,2,3-Trichlorobenzene	15.761	180	176520	23.78	ug/L		98
107) Ethanol	4.214	45	30905m	501.27	ug/L		
108) Acrolein	4.714	56	119799	88.29	ug/L		99
109) Tert Butyl Alcohol	5.726	59	144615	272.87	ug/L		94
110) Isobutyl alcohol	9.207	43	98359	448.96	ug/L		98
111) Tert Amyl Alcohol	9.335	59	78434	227.66	ug/L		91
112) 1,4-Dioxane	10.548	88	26259	491.73	ug/L		94
113) 3,3-Dimethyl-1-butanol	12.200	57	648611	1150.36	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56392.D
Acq On : 30 Jul 2018 1:33 pm
Operator : ANAJ
Sample : FA56212-10ms MA Inst : MSVOA16
Misc : MS40916,VI1686,,,,,
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 30 14:03:21 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Manual Integration Approval Summary

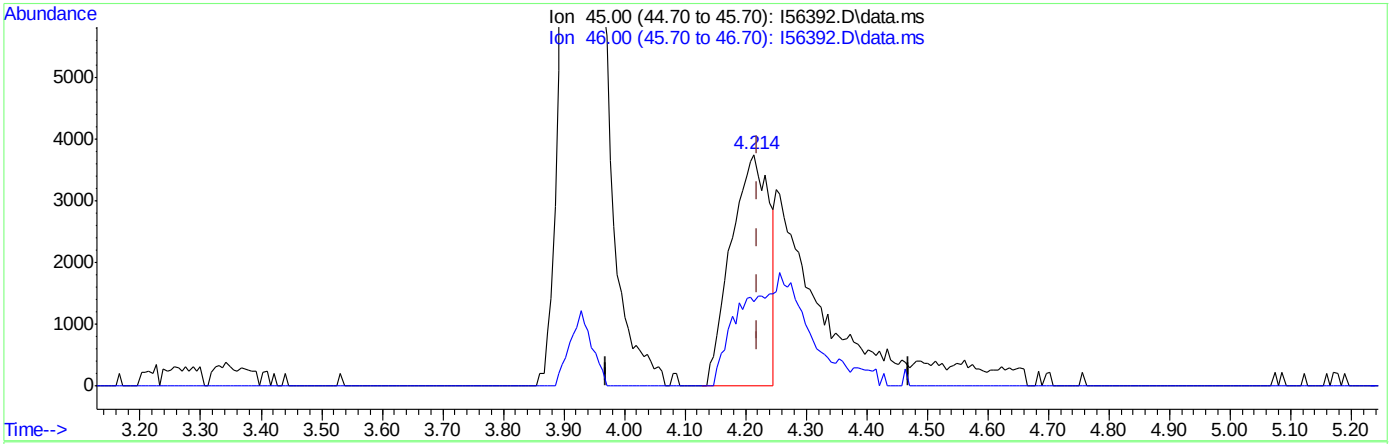
Sample Number: FA56212-10MS
Lab FileID: I56392.D
Injection Time: 07/30/18 13:33
Method: SW846 8260C
Analyst approved: 07/31/18 08:37 Ana Jimenez
Supervisor approved: 07/31/18 11:28 Melissa Mangual

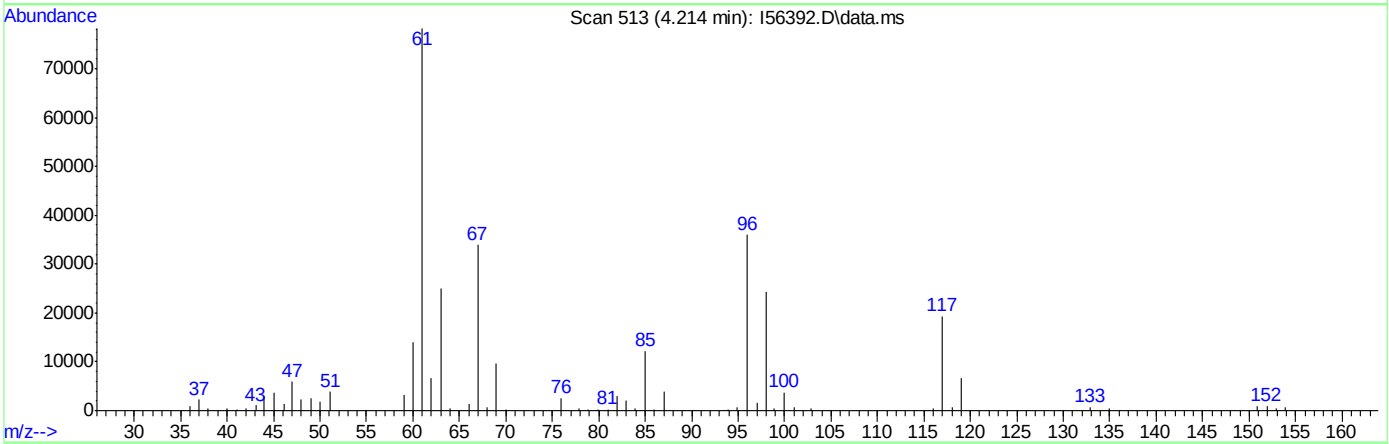
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		4.21	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56392.D
Acq On : 30 Jul 2018 1:33 pm
Operator : ANAJ
Sample : FA56212-10ms MA Inst : MSVOA16
Misc : MS40916,VI1686,,,,,
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 30 14:01:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration





TIC: I56392.D\data.ms

(107) Ethanol

4.214min (-0.006) 264.54ug/L

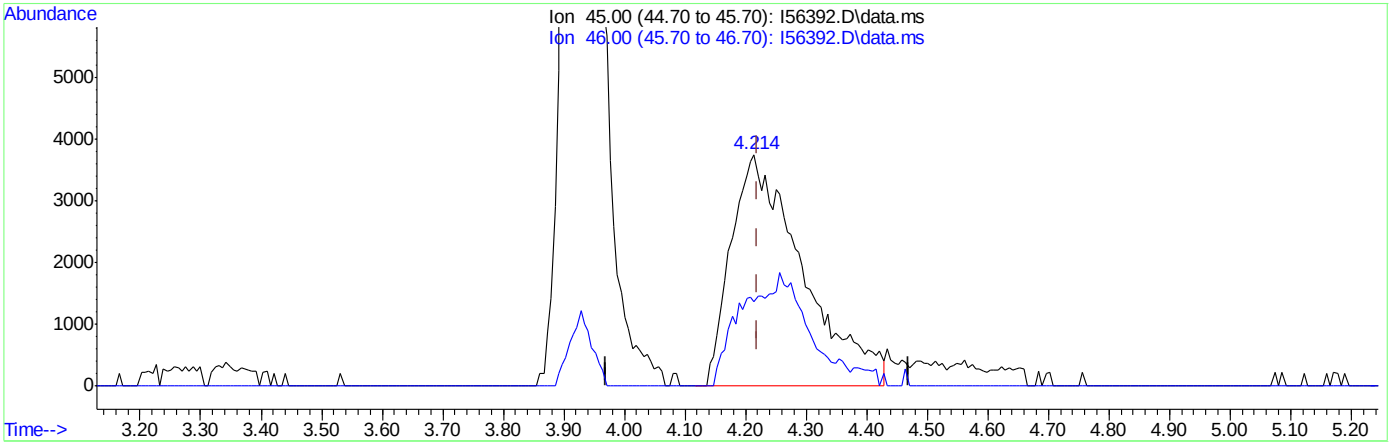
response 16383

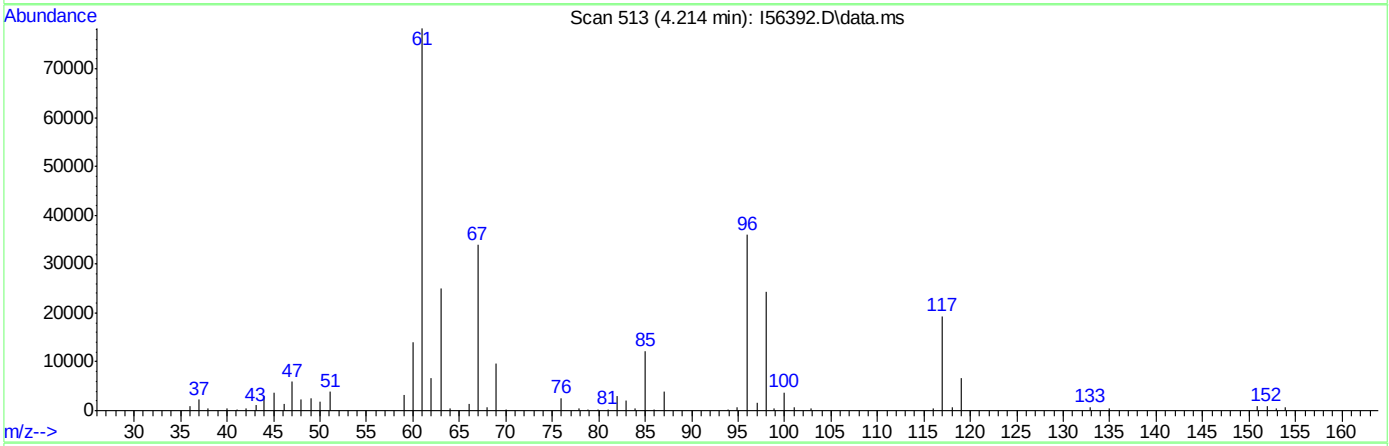
Ion	Exp%	Act%
45.00	100	100
46.00	38.30	36.39
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56392.D
Acq On : 30 Jul 2018 1:33 pm
Operator : ANAJ
Sample : FA56212-10ms MA Inst : MSVOA16
Misc : MS40916,VI1686,,,,,
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 30 14:01:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration





TIC: I56392.D\data.ms

(107) Ethanol

4.214min (-0.006) 501.27ug/L m

response 30905

Ion	Exp%	Act%
45.00	100	100
46.00	38.30	36.39
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56393.D
Acq On : 30 Jul 2018 1:57 pm
Operator : ANAJ
Sample : FA56212-10msd MA Inst : MSVOA16
Misc : MS40916,VI1686,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 30 14:42:25 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1194502	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	847753	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	430033	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	91062	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	318765	50.54	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.08%			
46) 1,2-Dichloroethane-d4	9.000	65	424386	49.77	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 99.54%			
57) Toluene-d8	11.152	98	1151695	49.23	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.46%			
79) 4-Bromofluorobenzene	13.353	174	338630	49.86	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.72%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.251	85	174692	25.68	ug/L	99
3) Chloromethane	2.532	50	214441	22.96	ug/L	99
4) 1,3-Butadiene	2.647	39	150006	29.78	ug/L	98
5) Vinyl Chloride	2.666	62	185830	23.66	ug/L	100
6) Bromomethane	3.111	94	100217	24.37	ug/L	99
7) Chloroethane	3.269	64	60746	25.43	ug/L	96
8) Trichlorofluoromethane	3.525	101	244759	27.12	ug/L	98
9) Ethyl Ether	3.928	59	163604	23.51	ug/L	97
10) 1,2-Dichlorotrifluoroe...	4.233	67	217452	26.02	ug/L	98
11) 1,1-Dichloroethene	4.220	61	293365	26.25	ug/L	99
12) Freon 113	4.324	101	148452	23.79	ug/L	98
13) Carbon Disulfide	4.269	76	437888	24.72	ug/L	99
14) Iodomethane	4.428	142	230717	24.10	ug/L	100
15) Allyl chloride	4.928	41	225360	23.46	ug/L	98
16) Methylene Chloride	5.098	49	284370	25.71	ug/L	97
17) Acetone	5.165	43	201577	101.64	ug/L	100
18) Methyl acetate	5.373	43	536337	110.83	ug/L	99
19) trans-1,2-Dichloroethene	5.360	61	285674	25.94	ug/L	98
20) Hexane	5.501	56	215324	25.50	ug/L	98
21) Methyl Tert Butyl Ether	5.555	73	327382	23.90	ug/L	90
22) Acetonitrile	5.891	41	165038	241.76	ug/L	97
23) Di-isopropyl ether	6.183	45	620017	25.20	ug/L	100
24) Chloroprene	6.311	53	280692	24.79	ug/L	99
25) 1,1-Dichloroethane	6.336	63	347956	26.23	ug/L	98
26) Acrylonitrile	6.403	53	303323	106.98	ug/L	99
27) ETBE	6.805	59	526159	26.52	ug/L	100
28) Vinyl acetate	6.781	43	1676455	106.25	ug/L	100
29) cis-1,2-Dichloroethene	7.269	96	160600	25.29	ug/L	98
30) 2,2-Dichloropropane	7.464	77	168895	29.94	ug/L	100
31) Bromochloromethane	7.616	128	77110	24.92	ug/L	98
32) Cyclohexane	7.646	56	388365	26.41	ug/L	98
33) Chloroform	7.768	83	280988	24.61	ug/L	99
34) Ethyl acetate	8.012	43	720519	105.03	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56393.D
Acq On : 30 Jul 2018 1:57 pm
Operator : ANAJ
Sample : FA56212-10msd MA Inst : MSVOA16
Misc : MS40916,VI1686,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 30 14:42:25 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.043	42	95642	23.05	ug/L		99
37) Carbon Tetrachloride	8.024	117	173758	25.28	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	234353	25.50	ug/L		98
39) 2-Butanone	8.317	43	318664	107.34	ug/L		98
40) 1,1-Dichloropropene	8.366	75	212285	26.08	ug/L		96
41) tert-Butyl formate	8.579	59	321390	142.94	ug/L		97
42) Propionitrile	8.799	54	240903	230.69	ug/L		89
43) Methacrylonitrile	8.841	41	957259	234.04	ug/L		100
44) Benzene	8.793	78	607472	24.98	ug/L		99
45) TAME	9.030	73	322031	24.29	ug/L		95
47) 1,2-Dichloroethane	9.104	62	251494	23.94	ug/L		100
48) Trichloroethene	9.658	95	164122	25.55	ug/L		99
49) Methylcyclohexane	9.652	83	280142	26.65	ug/L		99
50) Dibromomethane	10.152	93	96740	24.36	ug/L		99
51) 1,2-Dichloropropane	10.250	63	199388	25.65	ug/L		98
52) Bromodichloromethane	10.341	83	194488	25.22	ug/L		99
53) Methyl methacrylate	10.518	41	113479	20.67	ug/L		98
55) cis-1,3-Dichloropropene	10.981	75	214578	22.25	ug/L		100
58) Toluene	11.201	91	648833	24.78	ug/L		99
59) 2-Nitropropane	11.384	41	123536	88.63	ug/L		96
60) 4-Methyl-2-pentanone	11.524	43	786578	112.37	ug/L		99
61) trans-1,3-Dichloropropene	11.932	75	13434	26.16	ug/L		96
62) Tetrachloroethene	11.560	166	165123	24.47	ug/L		95
63) Ethyl methacrylate	11.701	69	159216	21.37	ug/L		97
64) 1,1,2-Trichloroethane	11.701	83	122322	24.90	ug/L		96
65) Dibromochloromethane	11.865	129	140733	24.16	ug/L		99
66) 1,3-Dichloropropane	11.932	76	232909	23.57	ug/L		99
67) 1,2-Dibromoethane	12.054	107	130331	24.08	ug/L		99
68) 2-hexanone	12.213	43	633184	109.13	ug/L	#	76
69) 1-Chlorohexane	12.444	91	228470	25.43	ug/L		96
70) Ethylbenzene	12.481	91	755325	25.22	ug/L		99
71) Chlorobenzene	12.469	112	415381	24.38	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.517	131	128820	24.53	ug/L		96
73) m,p-Xylene	12.591	91	1174771	51.50	ug/L		99
74) o-Xylene	12.914	91	584902	25.57	ug/L		99
75) Styrene	12.950	104	397372	24.72	ug/L		99
76) Bromoform	12.987	173	77587	21.49	ug/L		98
77) Isopropylbenzene	13.139	105	690018	27.37	ug/L		100
80) cis-1,4-Dichloro-2-butene	13.383	53	54723	20.69	ug/L		95
81) n-Propylbenzene	13.432	91	882641	25.64	ug/L		100
82) Bromobenzene	13.438	156	167034	25.04	ug/L		98
83) 1,1,2,2-Tetrachloroethane	13.475	83	182617	24.30	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	567805	26.17	ug/L		99
85) 2-Chlorotoluene	13.670	91	533723	25.52	ug/L		99
86) trans-1,4-Dichloro-2-B...	13.597	53	52527	21.43	ug/L		92
87) 1,2,3-Trichloropropane	13.578	110	47535	23.48	ug/L		99
88) Cyclohexanone	13.621	55	28714	89.04	ug/L		97
89) 4-Chlorotoluene	13.670	91	533723	25.52	ug/L		99
90) tert-Butylbenzene	13.786	91	344380	25.65	ug/L		98
92) 1,2,4-Trimethylbenzene	13.828	105	563716	25.12	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56393.D
Acq On : 30 Jul 2018 1:57 pm
Operator : ANAJ
Sample : FA56212-10msd MA Inst : MSVOA16
Misc : MS40916,VI1686,,,,,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 30 14:42:25 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

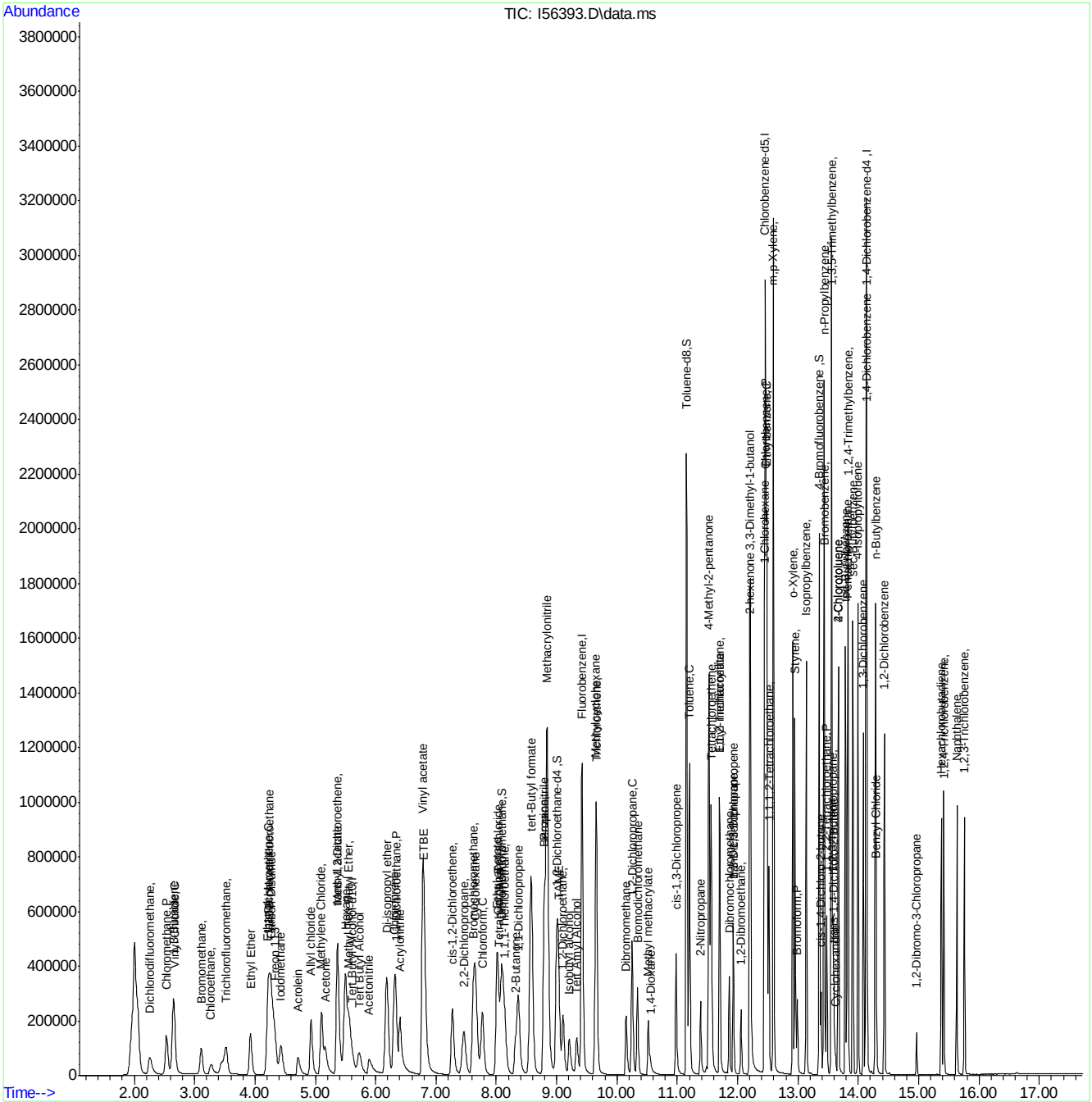
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) Pentachloroethane	13.822	167	82079	23.65	ug/L	98
94) sec-Butylbenzene	13.907	105	727209	26.25	ug/L	100
95) 4-Isopropyltoluene	13.993	119	597935	26.63	ug/L	100
96) 1,3-Dichlorobenzene	14.084	146	313364	25.30	ug/L	99
97) 1,4-Dichlorobenzene	14.139	146	329014	24.41	ug/L	99
98) n-Butylbenzene	14.285	92	351181	27.16	ug/L	98
99) Benzyl Chloride	14.298	126	36214	23.94	ug/L	94
100) 1,2-Dichlorobenzene	14.432	146	296550	24.59	ug/L	98
101) 1,2-Dibromo-3-Chloropr...	14.968	75	25391	21.16	ug/L	96
102) Hexachlorobutadiene	15.377	225	107386	26.80	ug/L	98
103) 1,2,4-Trichlorobenzene	15.419	180	200589	25.06	ug/L	96
104) Naphthalene	15.633	128	460455	22.54	ug/L	100
105) 1,2,3-Trichlorobenzene	15.761	180	186000	24.78	ug/L	99
107) Ethanol	4.214	45	30645	450.93	ug/L	96
108) Acrolein	4.714	56	123923	82.91	ug/L	97
109) Tert Butyl Alcohol	5.726	59	168598	288.88	ug/L	96
110) Isobutyl alcohol	9.207	43	108096	448.05	ug/L	100
111) Tert Amyl Alcohol	9.329	59	86124	227.03	ug/L	98
112) 1,4-Dioxane	10.554	88	27271	463.47	ug/L	97
113) 3,3-Dimethyl-1-butanol	12.200	57	702661	1131.68	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56393.D
Acq On : 30 Jul 2018 1:57 pm
Operator : ANAJ
Sample : FA56212-10msd MA Inst : MSVOA16
Misc : MS40916,VI1686,,,,,
ALS Vial : 12 Sample Multiplier: 1

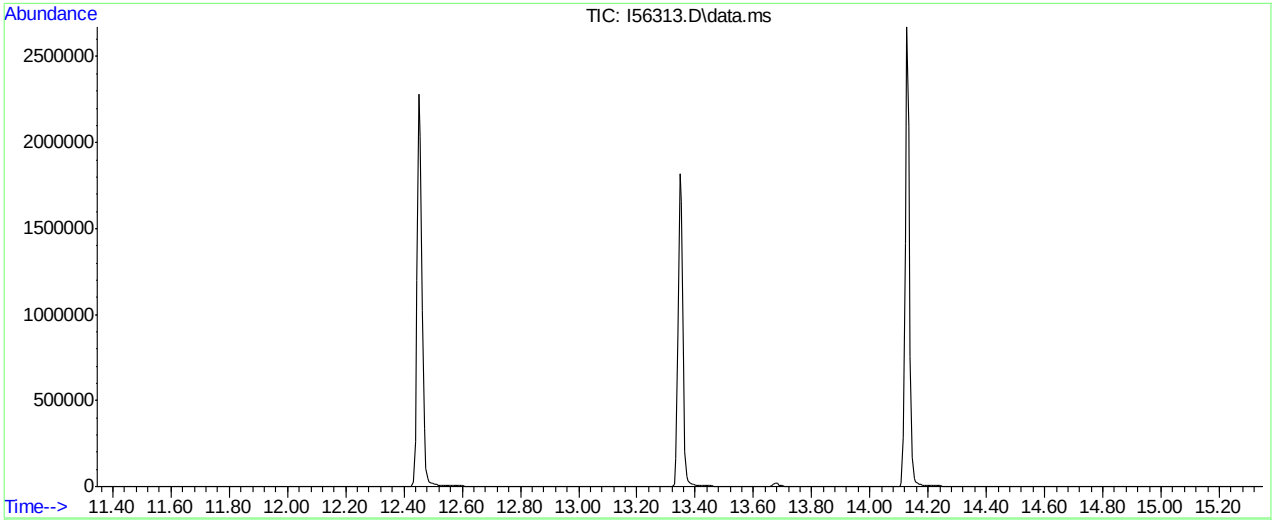
Quant Time: Jul 30 14:42:25 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Methods: SW-846 8260B

Data File : C:\msdchem\2\DATA\072518\I56313.D Vial: 1
Acq On : 25 Jul 2018 2:36 pm Operator: ANAJ
Sample : BFB Inst : MSVOA16
Misc : MS40872,VI1683,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B



AutoFind: Scans 2010, 2011, 2012; Background Corrected with Scan 2005

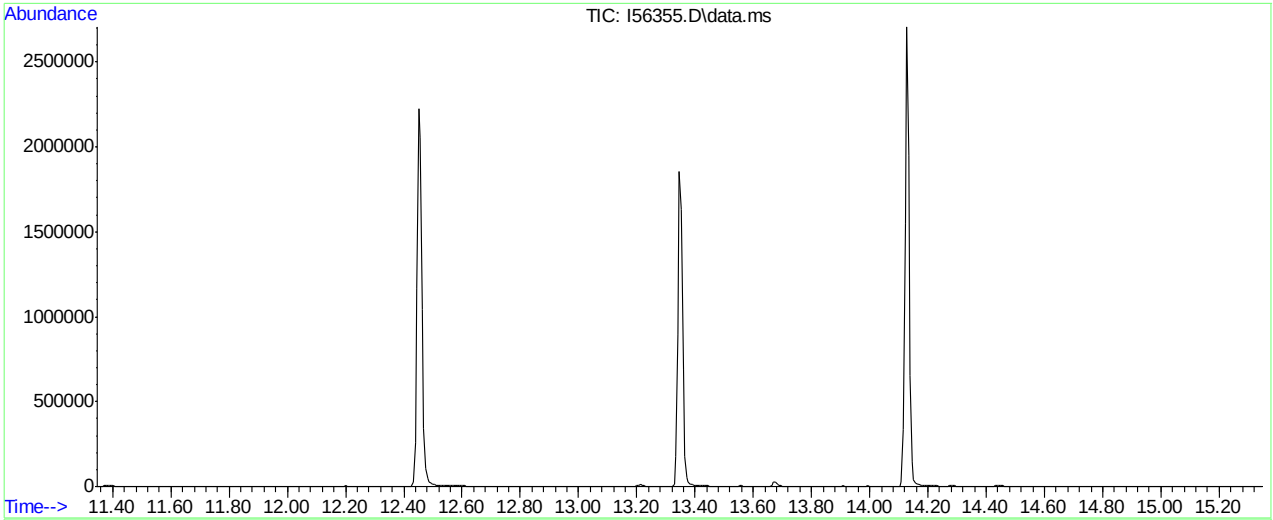
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.9	74779	PASS
75	95	30	60	50.4	151371	PASS
95	95	100	100	100.0	300437	PASS
96	95	5	9	7.1	21401	PASS
173	174	0.00	2	0.8	1809	PASS
174	95	50	100	71.9	215941	PASS
175	174	5	9	7.2	15559	PASS
176	174	95	101	96.1	207501	PASS
177	176	5	9	6.6	13778	PASS

I56313.D I-July2518.M Thu Jul 26 07:51:42 2018

Methods: SW-846 8260B

Data File : C:\msdchem\2\DATA\072718\I56355.D Vial: 1
Acq On : 27 Jul 2018 8:25 am Operator: ANAJ
Sample : BFB Inst : MSVOA16
Misc : MS40895,VI1685,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B



AutoFind: Scans 2010, 2011, 2012; Background Corrected with Scan 2005

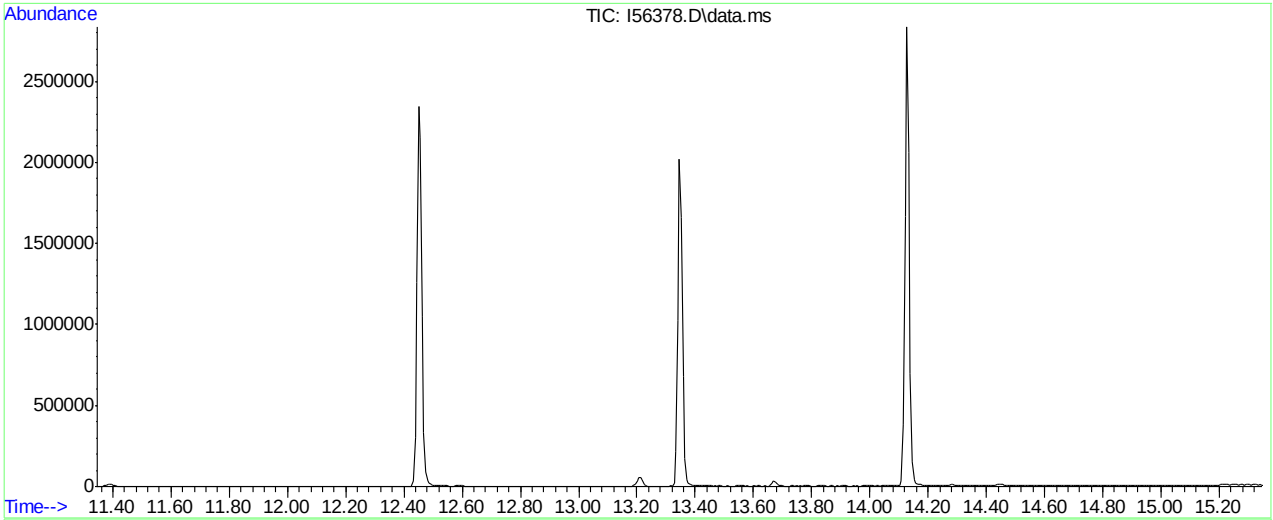
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.3	75584	PASS
75	95	30	60	50.7	151317	PASS
95	95	100	100	100.0	298347	PASS
96	95	5	9	6.9	20582	PASS
173	174	0.00	2	0.8	1647	PASS
174	95	50	100	72.9	217544	PASS
175	174	5	9	7.3	15969	PASS
176	174	95	101	96.5	209861	PASS
177	176	5	9	6.6	13887	PASS

I56355.D I-July2518.M Fri Jul 27 08:44:09 2018

Methods: SW-846 8260B

Data File : C:\msdchem\2\DATA\073018\I56378.D Vial: 1
Acq On : 30 Jul 2018 7:37 am Operator: ANAJ
Sample : BFB Inst : MSVOA16
Misc : MS40907,VI1686,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B



AutoFind: Scans 2010, 2011, 2012; Background Corrected with Scan 2005

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.7	79512	PASS
75	95	30	60	50.5	162320	PASS
95	95	100	100	100.0	321408	PASS
96	95	5	9	6.8	21878	PASS
173	174	0.00	2	0.8	1956	PASS
174	95	50	100	73.4	235960	PASS
175	174	5	9	7.3	17265	PASS
176	174	95	101	96.5	227595	PASS
177	176	5	9	6.6	15097	PASS

I56378.D I-July2518.M Mon Jul 30 08:05:12 2018

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:49:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.414	96	1178758	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	823712	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	417514	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	81030	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.079	113	303832	47.18	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.36%			
46) 1,2-Dichloroethane-d4	8.994	65	423388	51.55	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 103.10%			
57) Toluene-d8	11.152	98	1135661	50.58	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 101.16%			
79) 4-Bromofluorobenzene	13.353	174	321741	46.88	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 93.76%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.263	85	6470	1.01	ug/L	91
3) Chloromethane	2.538	50	10356	1.77	ug/L	89
4) 1,3-Butadiene	2.647	39	5718	1.40	ug/L	84
5) Vinyl Chloride	2.666	62	8002	1.41	ug/L	93
6) Bromomethane	3.111	94	5059	1.52	ug/L	86
7) Chloroethane	3.275	64	4608	2.20	ug/L	89
8) Trichlorofluoromethane	3.519	101	9819m	1.29	ug/L	
9) Ethyl Ether	3.928	59	6761	1.16	ug/L	92
10) 1,2-Dichlorotrifluoroe...	4.232	67	8233	1.05	ug/L	92
11) 1,1-Dichloroethene	4.214	61	11083	1.06	ug/L	98
12) Freon 113	4.318	101	6220	0.98	ug/L	91
13) Carbon Disulfide	4.275	76	16288	0.95	ug/L	96
14) Iodomethane	4.428	142	9590	0.95	ug/L	98
15) Allyl chloride	4.927	41	8131	1.15	ug/L	92
16) Methylene Chloride	5.104	49	16395	1.69	ug/L	93
17) Acetone	5.202	43	9056	4.83	ug/L	94
18) Methyl acetate	5.409	43	12443	2.65	ug/L	97
19) trans-1,2-Dichloroethene	5.372	61	10229	1.00	ug/L	95
20) Hexane	5.494	56	8830	1.28	ug/L #	84
21) Methyl Tert Butyl Ether	5.561	73	12273	0.88	ug/L	90
23) Di-isopropyl ether	6.177	45	22633	1.14	ug/L	92
24) Chloroprene	6.311	53	9155	0.84	ug/L	91
25) 1,1-Dichloroethane	6.336	63	13170	1.08	ug/L	100
26) Acrylonitrile	6.500	53	2477	0.94	ug/L	80
27) ETBE	6.811	59	16309	0.85	ug/L	94
28) Vinyl acetate	6.817	43	42549	8.47	ug/L	88
29) cis-1,2-Dichloroethene	7.287	96	5482	0.87	ug/L	86
30) 2,2-Dichloropropane	7.457	77	4643	1.37	ug/L	88
31) Bromochloromethane	7.640	128	2625	0.83	ug/L	93
32) Cyclohexane	7.653	56	13529	1.07	ug/L	97
33) Chloroform	7.768	83	12358	1.13	ug/L	78
34) Ethyl acetate	8.037	43	15723	2.64	ug/L	98
35) Tetrahydrofuran	8.067	42	3178	0.83	ug/L #	75

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:49:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) Carbon Tetrachloride	8.024	117	6369	0.86	ug/L		87
38) 1,1,1-Trichloroethane	8.128	97	8558	0.91	ug/L		92
39) 2-Butanone	8.366	43	8037	3.00	ug/L		94
40) 1,1-Dichloropropene	8.366	75	7136	0.91	ug/L		92
41) tert-Butyl formate	8.573	59	16754	14.35	ug/L	#	17
42) Propionitrile	8.829	54	7933	10.70	ug/L	#	1
43) Methacrylonitrile	8.854	41	36482	11.52	ug/L		87
44) Benzene	8.805	78	24872	1.09	ug/L		89
45) TAME	9.024	73	10724	0.79	ug/L	#	65
47) 1,2-Dichloroethane	9.116	62	10596	1.07	ug/L		95
48) Trichloroethene	9.664	95	6279	0.97	ug/L		96
49) Methylcyclohexane	9.646	83	10061	1.05	ug/L		94
50) Dibromomethane	10.164	93	3576	0.89	ug/L		96
51) 1,2-Dichloropropane	10.256	63	7237	1.01	ug/L		88
52) Bromodichloromethane	10.341	83	6682	0.89	ug/L		97
53) Methyl methacrylate	10.548	41	2970	0.61	ug/L	#	86
54) 2-Chloroethyl vinyl ether	10.932	63	16313	3.06	ug/L		96
55) cis-1,3-Dichloropropene	10.987	75	6614	0.76	ug/L		92
58) Toluene	11.201	91	26702	1.08	ug/L		97
59) 2-Nitropropane	11.384	41	4288	3.95	ug/L		88
60) 4-Methyl-2-pentanone	11.530	43	34107	6.52	ug/L		95
62) Tetrachloroethene	11.560	166	6197	0.67	ug/L		95
63) Ethyl methacrylate	11.713	69	3966	0.58	ug/L	#	77
64) 1,1,2-Trichloroethane	11.707	83	4441	0.92	ug/L		89
65) Dibromochloromethane	11.865	129	4260	0.72	ug/L		97
66) 1,3-Dichloropropane	11.932	76	9210	0.98	ug/L		96
67) 1,2-Dibromoethane	12.066	107	4403	0.79	ug/L		95
68) 2-hexanone	12.219	43	28428	6.33	ug/L		77
69) 1-Chlorohexane	12.444	91	8783	1.07	ug/L	#	53
70) Ethylbenzene	12.481	91	29467	1.01	ug/L		98
71) Chlorobenzene	12.469	112	18043	1.09	ug/L		96
72) 1,1,1,2-Tetrachloroethane	12.517	131	4460	0.83	ug/L		83
73) m,p-Xylene	12.591	91	41920	1.97	ug/L		100
74) o-Xylene	12.914	91	19271	0.88	ug/L		98
75) Styrene	12.956	104	11657	0.72	ug/L		96
76) Bromoform	12.993	173	2477	0.70	ug/L		95
77) Isopropylbenzene	13.139	105	20667	0.85	ug/L		94
80) cis-1,4-Dichloro-2-butene	13.383	53	2223	1.15	ug/L	#	65
81) n-Propylbenzene	13.432	91	31826	1.04	ug/L		98
82) Bromobenzene	13.438	156	6239	0.96	ug/L		92
83) 1,1,2,2-Tetrachloroethane	13.475	83	7208	1.01	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	18018	0.90	ug/L		97
85) 2-Chlorotoluene	13.670	91	19216	0.94	ug/L		96
86) trans-1,4-Dichloro-2-B...	13.603	53	1852	0.98	ug/L	#	50
87) 1,2,3-Trichloropropane	13.578	110	1743	0.87	ug/L		95
88) Cyclohexanone	13.621	55	1169	4.81	ug/L		84
89) 4-Chlorotoluene	13.670	91	19216	0.99	ug/L		96
90) tert-Butylbenzene	13.785	91	11910	0.97	ug/L		92
92) 1,2,4-Trimethylbenzene	13.828	105	18251	0.88	ug/L		94
93) Pentachloroethane	13.822	167	2770	0.71	ug/L		93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:49:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

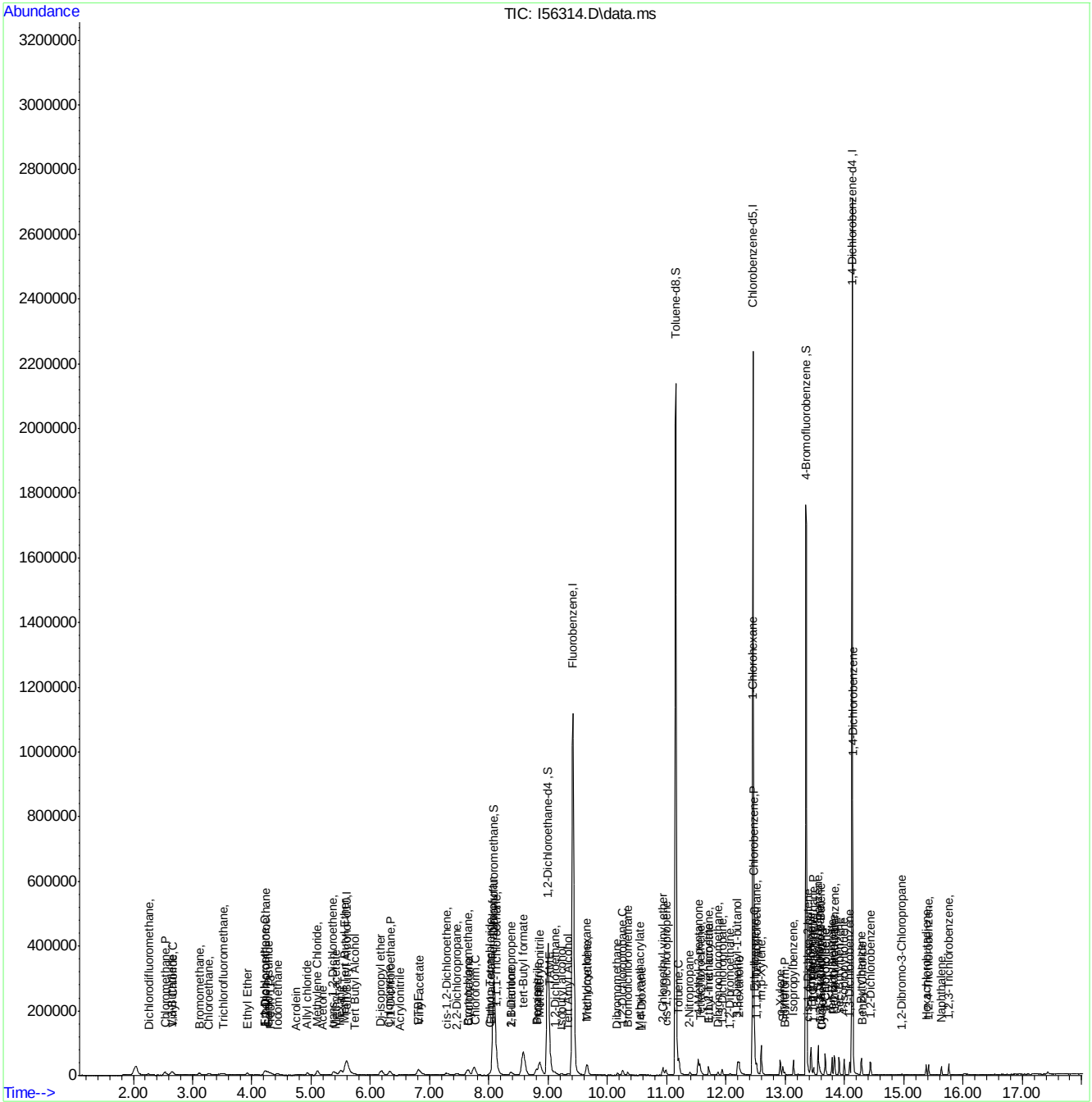
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
94) sec-Butylbenzene	13.907	105	24167	0.96	ug/L		99
95) 4-Isopropyltoluene	13.993	119	18302	0.89	ug/L		99
96) 1,3-Dichlorobenzene	14.084	146	11857	0.99	ug/L		94
97) 1,4-Dichlorobenzene	14.139	146	14115m	1.10	ug/L		
98) n-Butylbenzene	14.285	92	10587	0.91	ug/L		99
99) Benzyl Chloride	14.298	126	504	0.74	ug/L	#	85
100) 1,2-Dichlorobenzene	14.438	146	11416	0.96	ug/L		95
101) 1,2-Dibromo-3-Chloropr...	14.962	75	806	0.69	ug/L		77
102) Hexachlorobutadiene	15.377	225	3778	0.95	ug/L		97
103) 1,2,4-Trichlorobenzene	15.419	180	6838	0.84	ug/L		95
104) Naphthalene	15.633	128	12522	0.61	ug/L		100
105) 1,2,3-Trichlorobenzene	15.761	180	6652	0.84	ug/L		99
107) Ethanol	4.214	45	312m	6.57	ug/L		
108) Acrolein	4.738	56	1981	2.15	ug/L		88
109) Tert Butyl Alcohol	5.738	59	5186	9.77	ug/L	#	57
110) Isobutyl alcohol	9.231	43	4204	25.03	ug/L		89
111) Tert Amyl Alcohol	9.341	59	2488	7.90	ug/L		86
112) 1,4-Dioxane	10.579	88	386m	7.69	ug/L		
113) 3,3-Dimethyl-1-butanol	12.194	57	26739	59.13	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:49:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

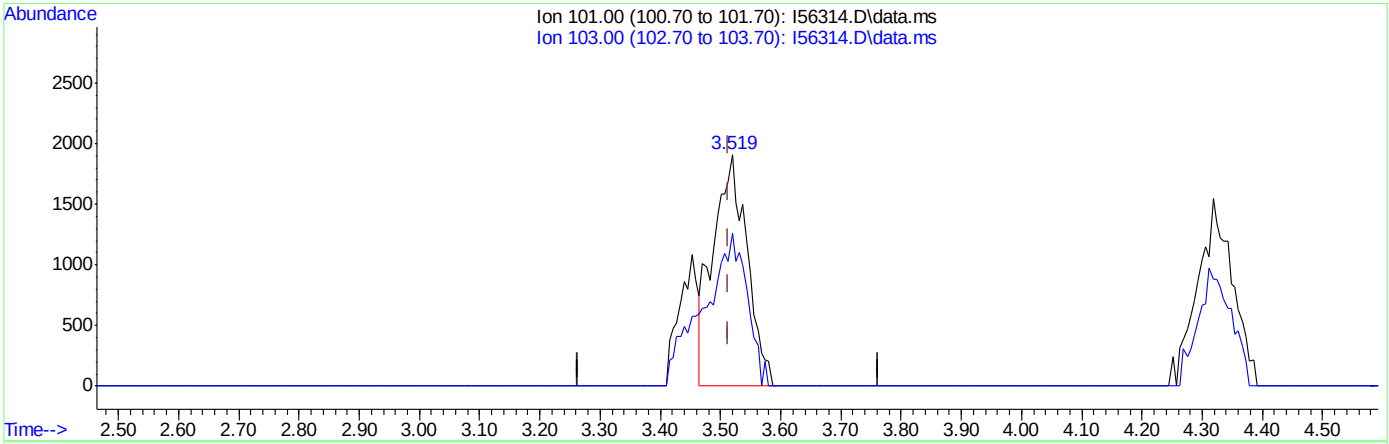
Sample Number: VI1683-IC1683
Lab FileID: I56314.D
Injection Time: 07/25/18 15:14
Method: SW846 8260B
Analyst approved: 07/26/18 08:26 Ana Jimenez
Supervisor approved: 07/31/18 15:11 Melissa Mangual

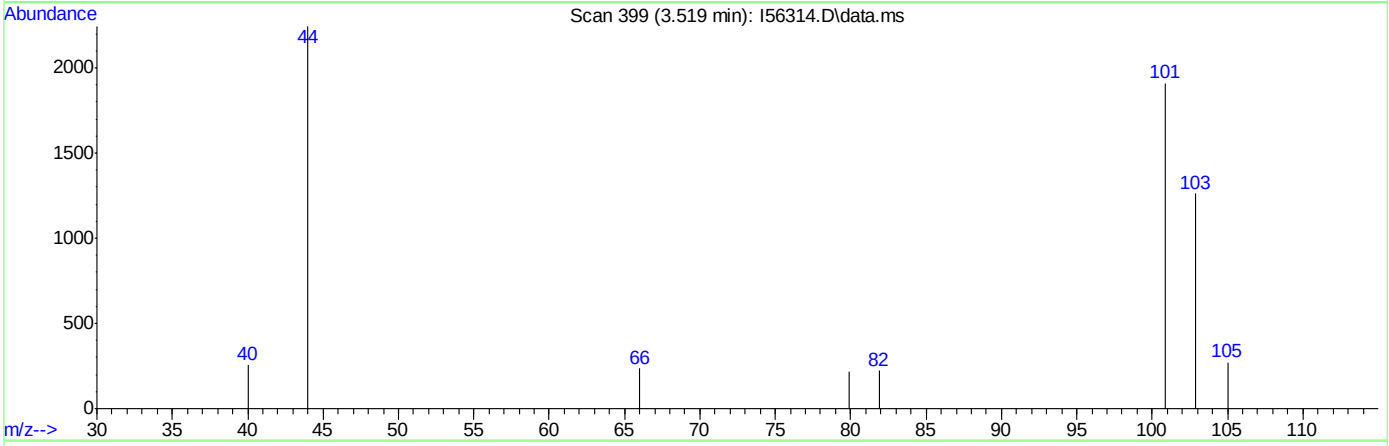
Parameter	CAS	Sig#	R.T. (min.)	Reason
Trichlorofluoromethane	75-69-4		3.52	Split peak
Ethyl Alcohol	64-17-5		4.21	Missed peak
1,4-Dioxane	123-91-1		10.58	Missed peak
1,4-Dichlorobenzene	106-46-7		14.14	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(8) Trichlorofluoromethane ( )

3.519min (+0.006) 0.98ug/L

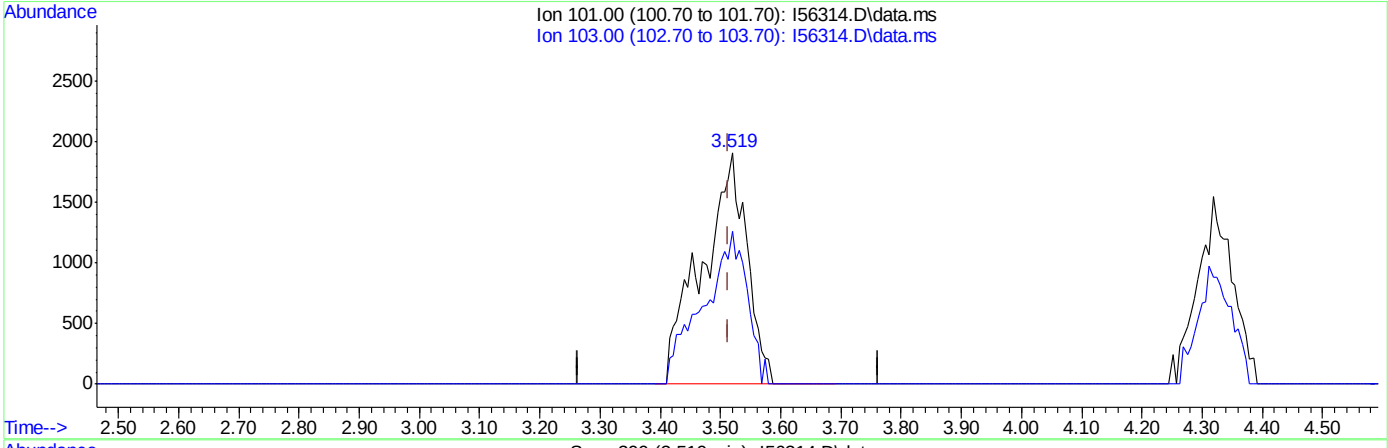
response 7458

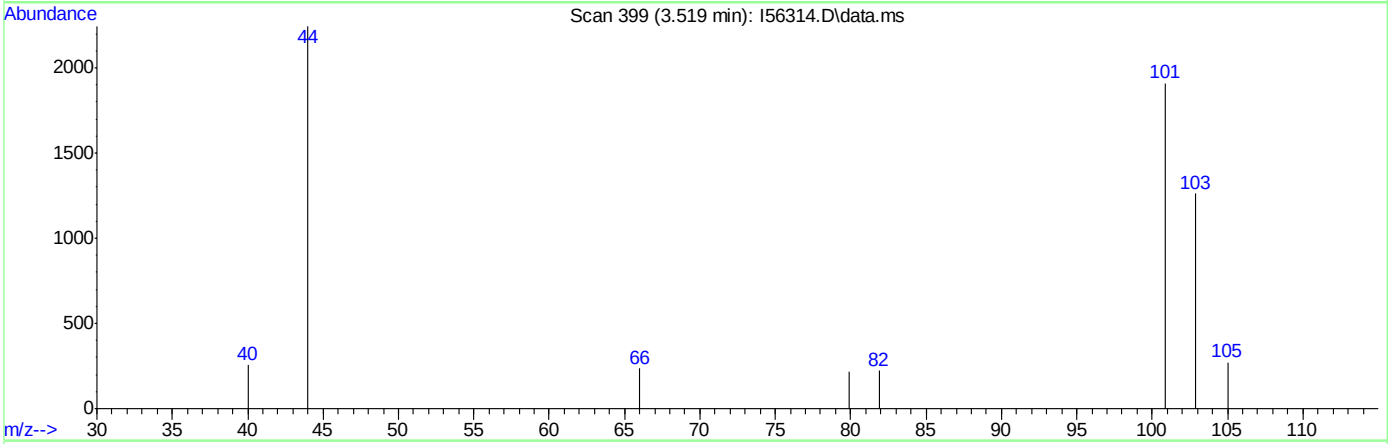
Ion	Exp%	Act%
101.00	100	100
103.00	63.30	66.07
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(8) Trichlorofluoromethane ( )

3.519min (+0.006) 1.29ug/L m

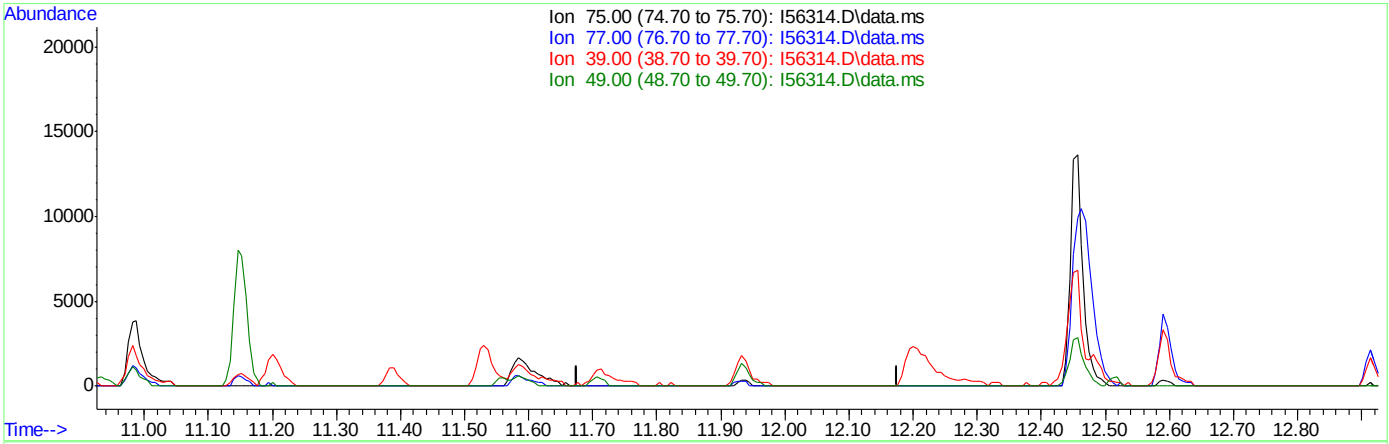
response 9819

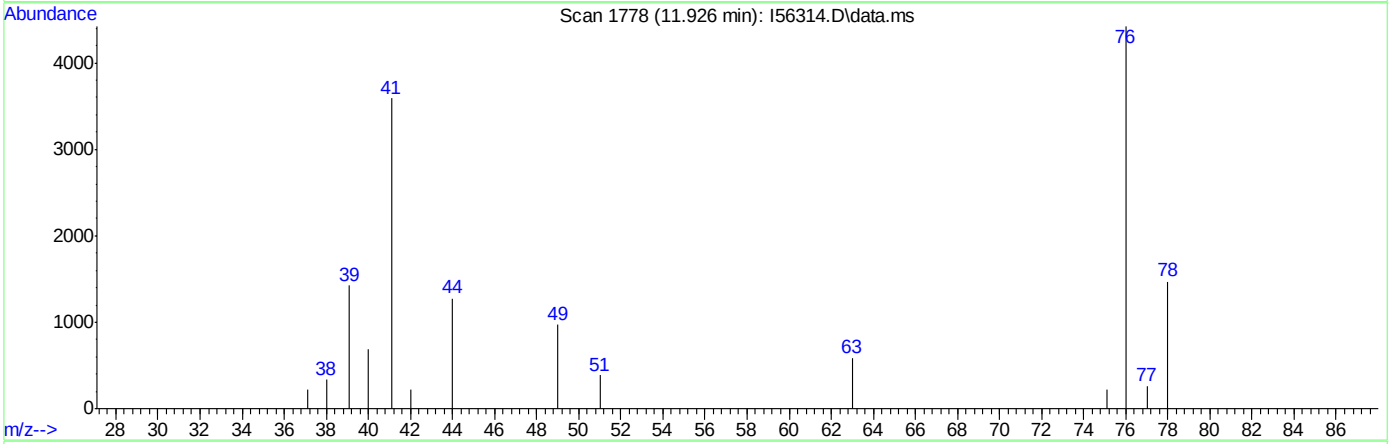
Ion	Exp%	Act%
101.00	100	100
103.00	63.30	66.07
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(61) trans-1,3-Dichloropropene

11.926min (-11.926) 0.00ug/L

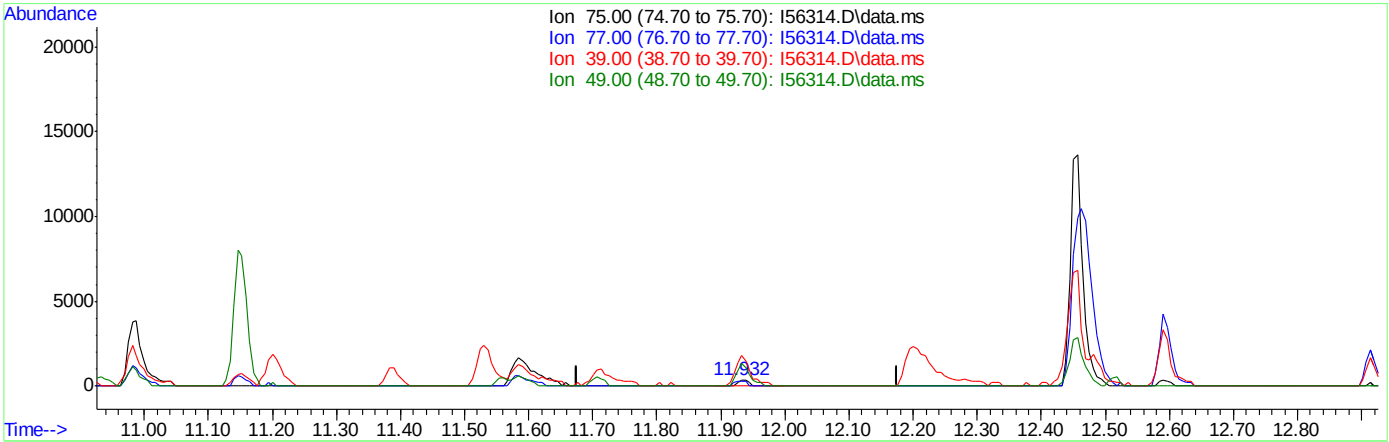
response 0

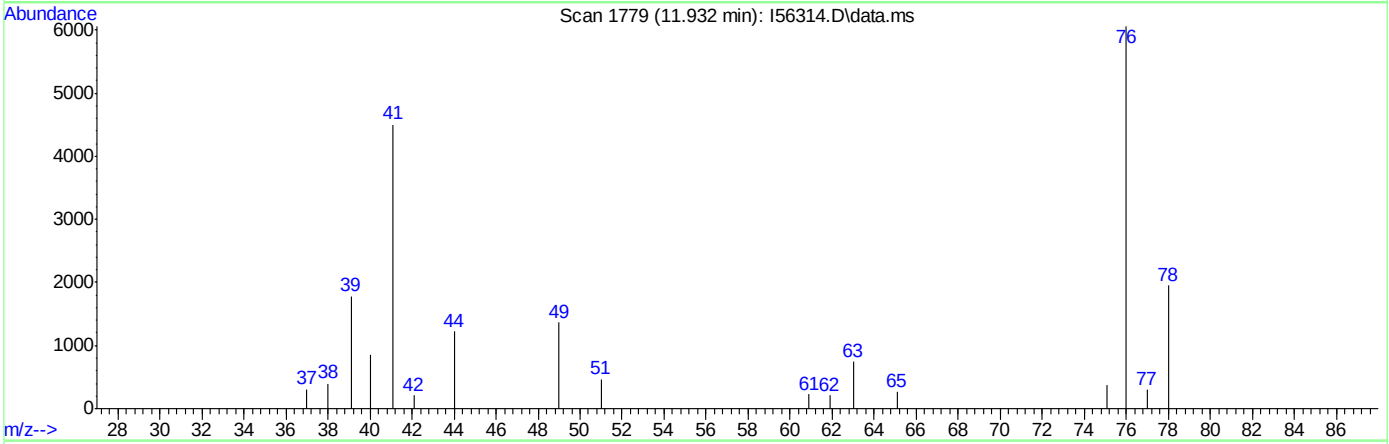
Ion	Exp%	Act%
75.00	100	0.00
77.00	103.00	0.00#
39.00	522.70	0.00#
49.00	420.40	0.00#

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(61) trans-1,3-Dichloropropene

11.932min (+0.006) 0.16ug/L m

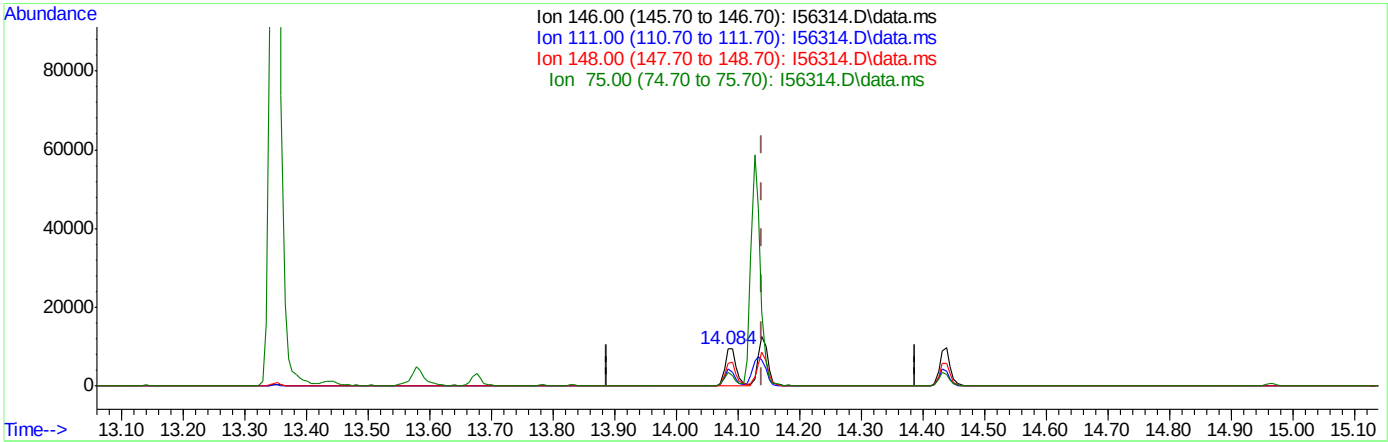
response 428

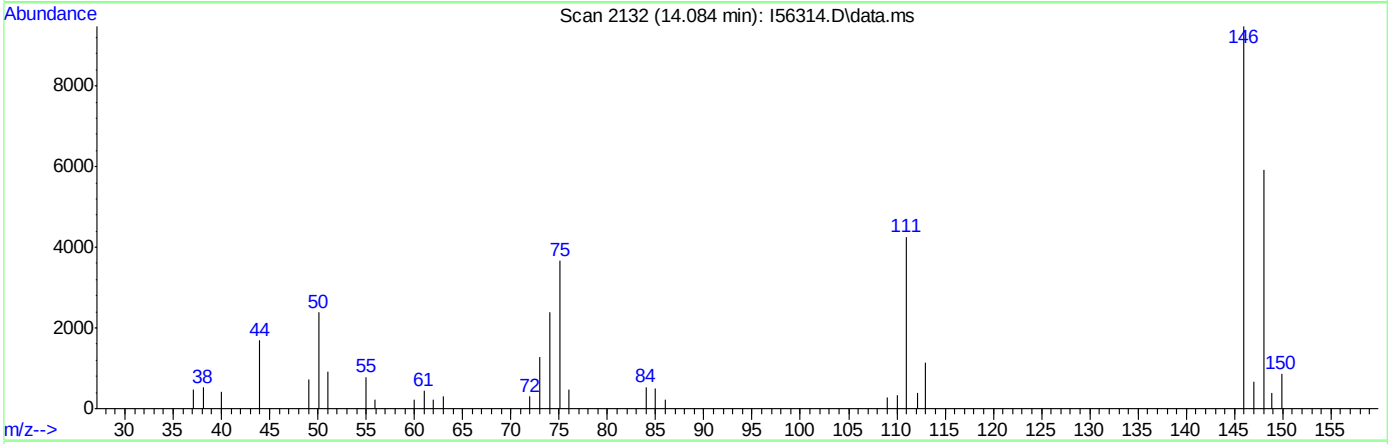
Ion	Exp%	Act%
75.00	100	100
77.00	103.00	78.25
39.00	522.70	472.94#
49.00	420.40	362.07#

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(97) 1,4-Dichlorobenzene

14.084min (-0.055) 0.92ug/L

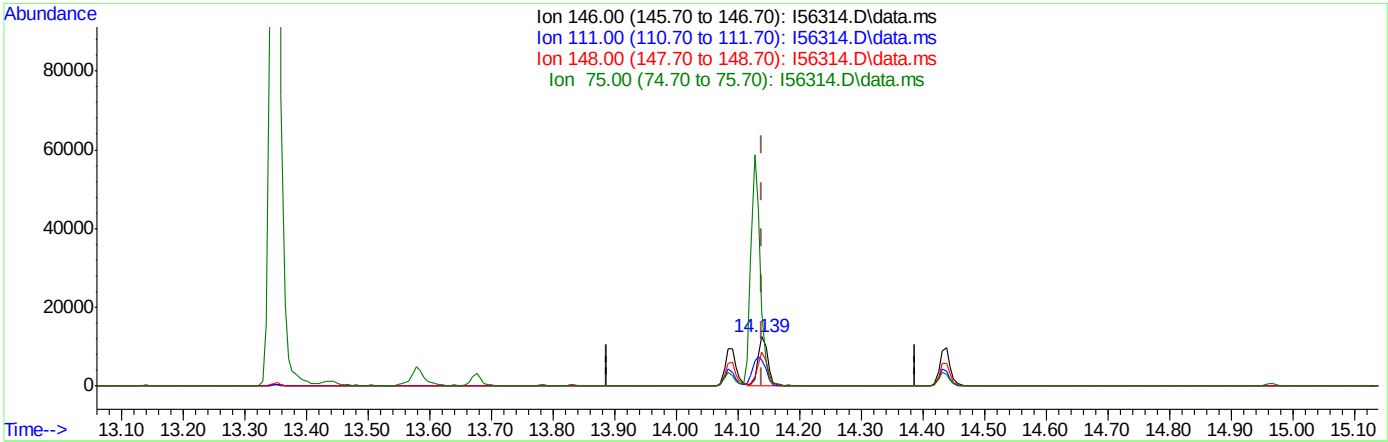
response 11857

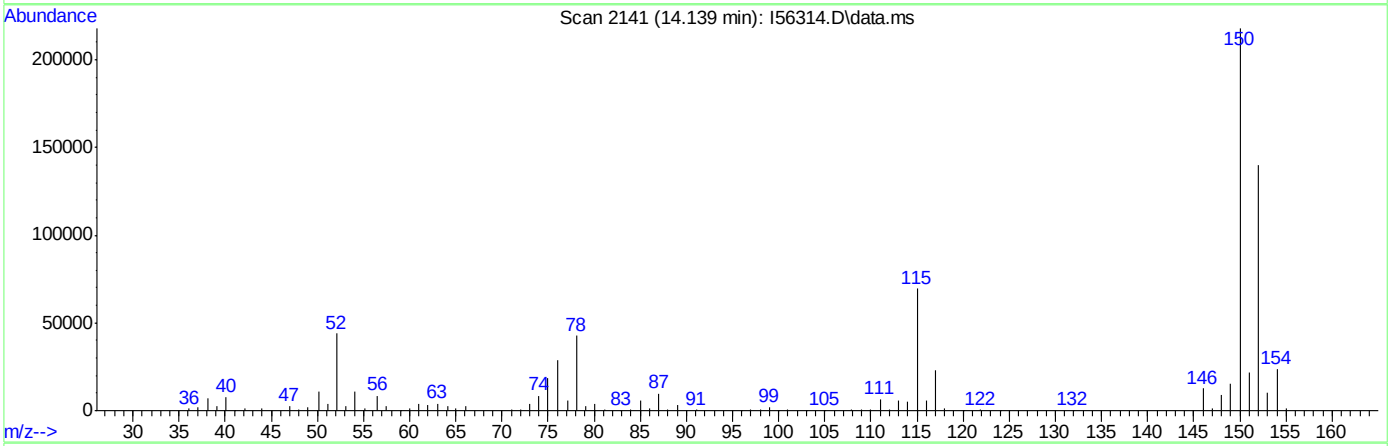
Ion	Exp%	Act%
146.00	100	100
111.00	40.90	44.88
148.00	63.00	62.35
75.00	35.90	38.59

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(97) 1,4-Dichlorobenzene

14.139min (+0.000) 1.10ug/L m

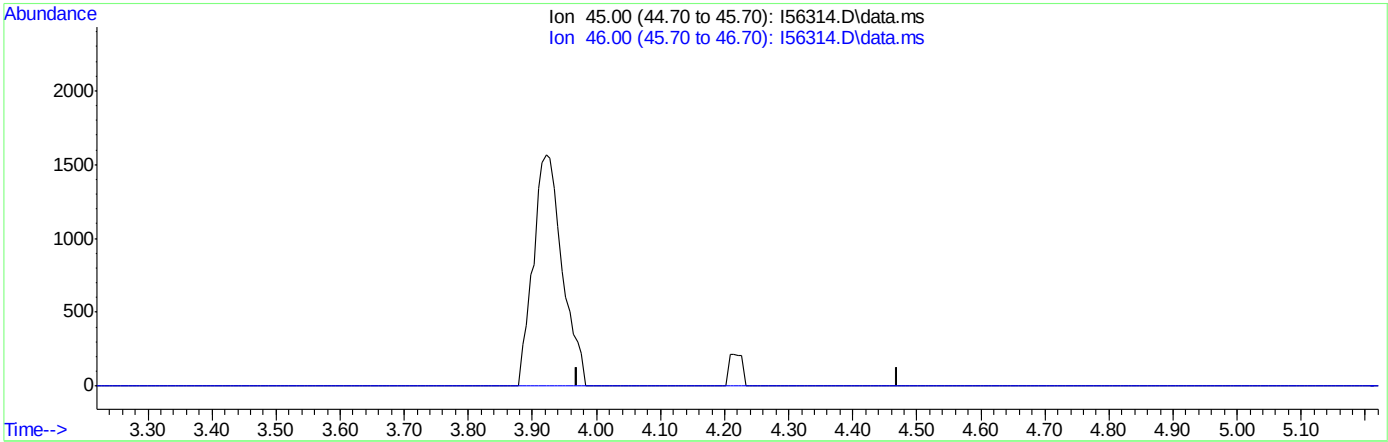
response 14115

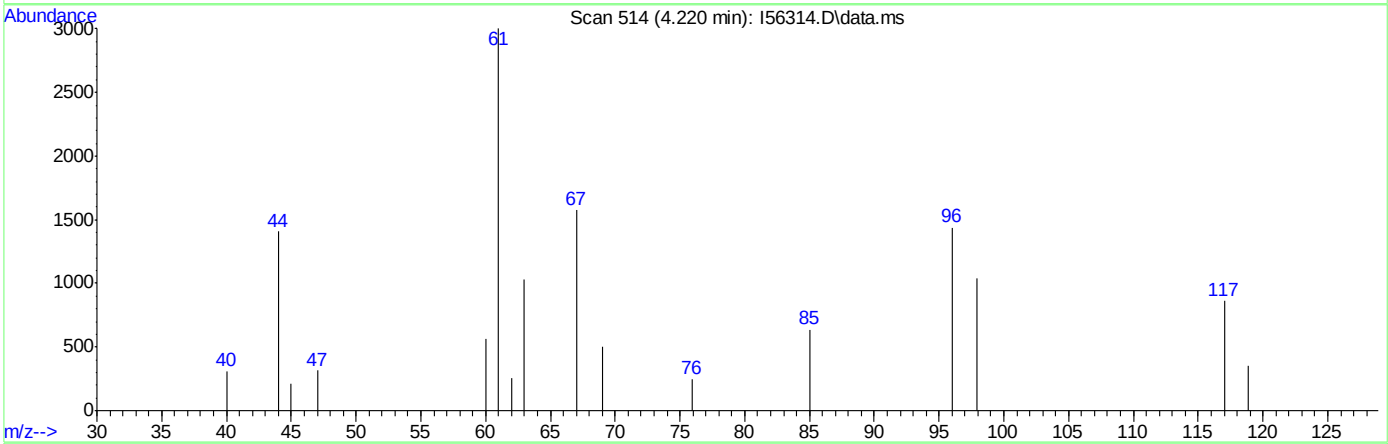
Ion	Exp%	Act%
146.00	100	100
111.00	40.90	52.06
148.00	63.00	69.44
75.00	35.90	150.46#

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(107) Ethanol

4.220min (-4.220) 0.00ug/L

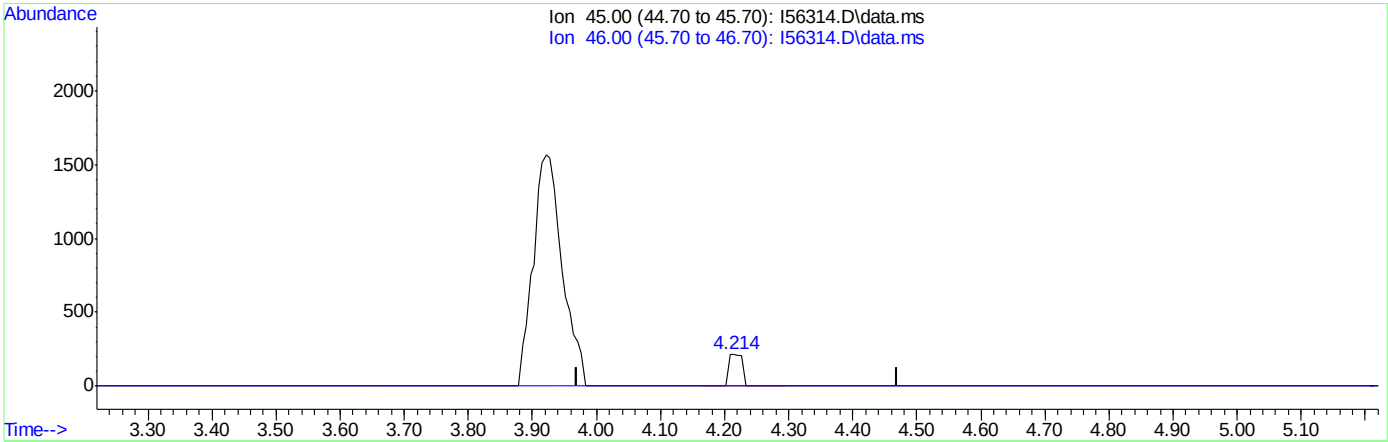
response 0

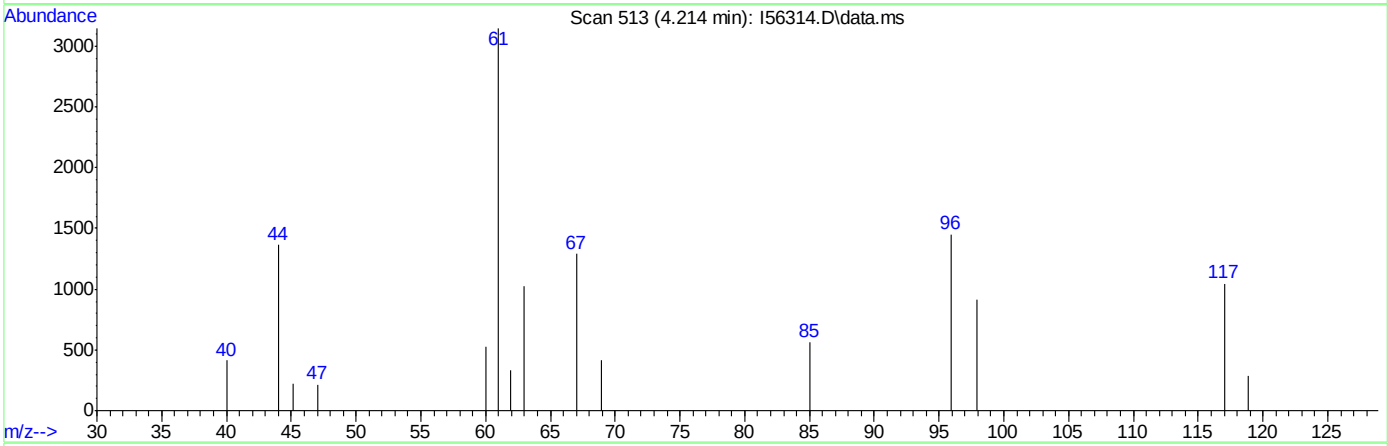
Ion	Exp%	Act%
45.00	100	0.00
46.00	35.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(107) Ethanol

4.214min (-0.006) 6.57ug/L m

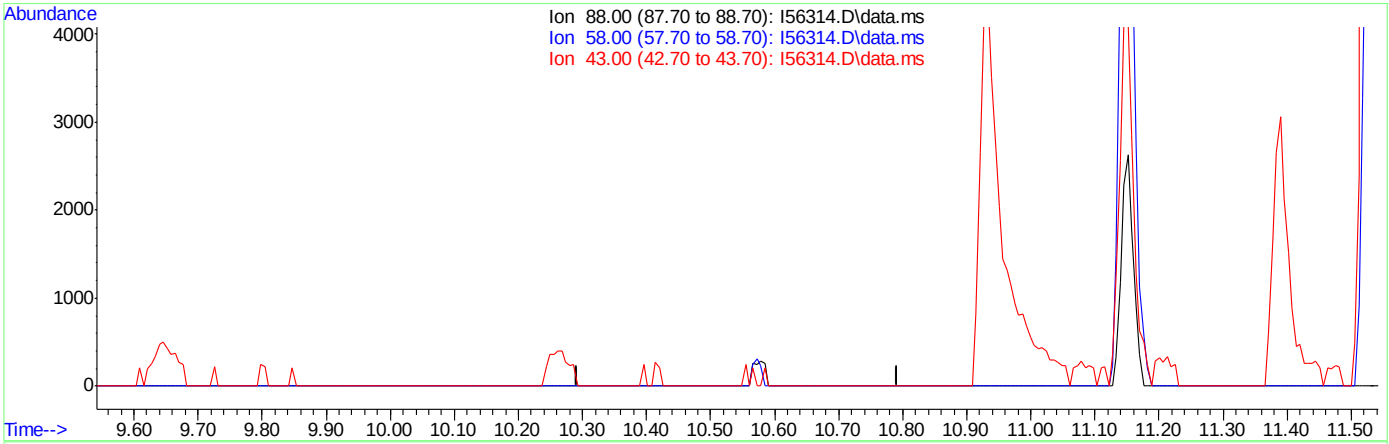
response 312

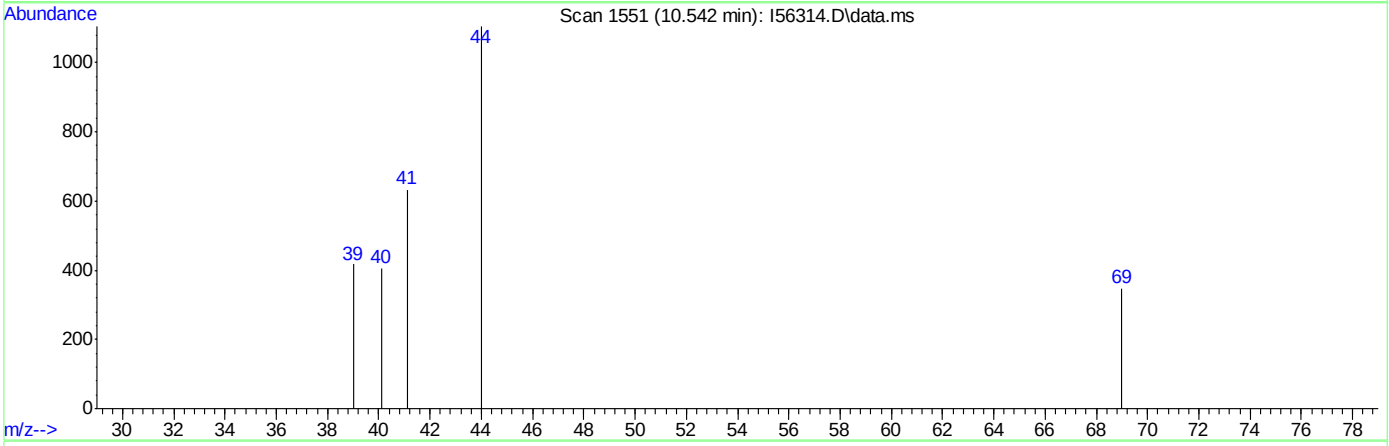
Ion	Exp%	Act%
45.00	100	100
46.00	35.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(112) 1,4-Dioxane

10.542min (-10.542) 0.00ug/L

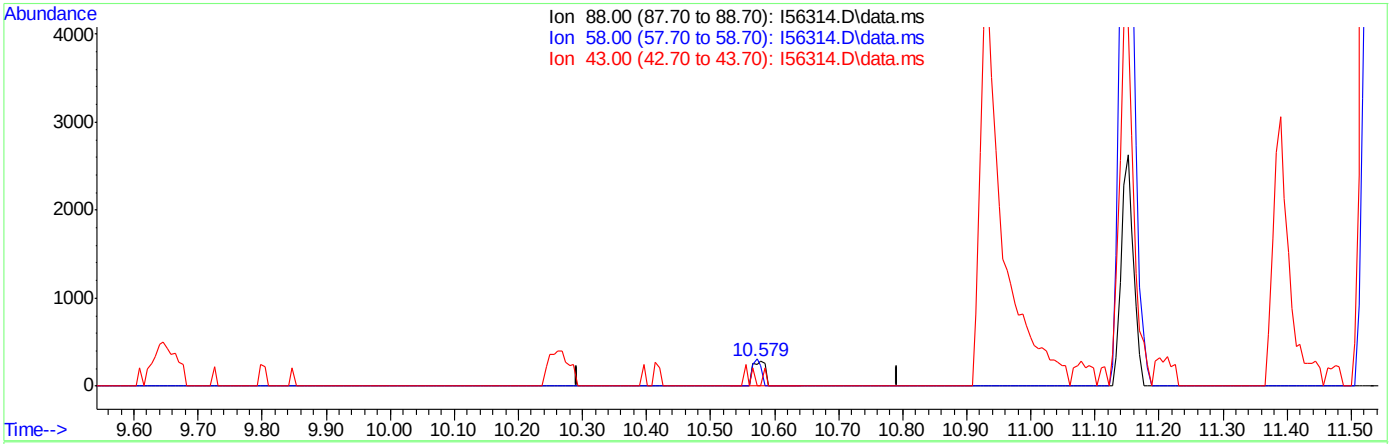
response 0

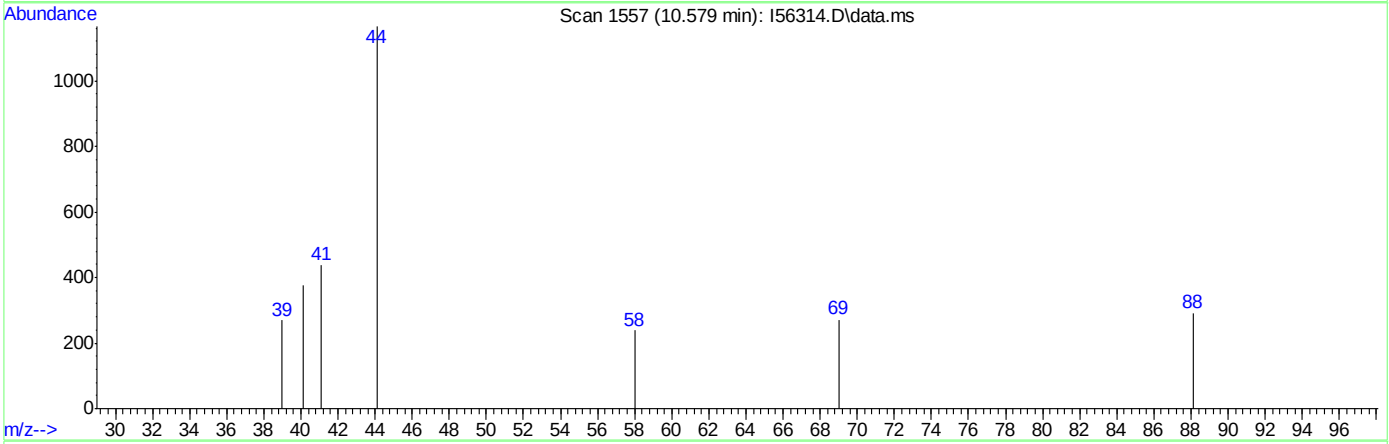
Ion	Exp%	Act%
88.00	100	0.00
58.00	90.10	0.00#
43.00	34.60	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(112) 1,4-Dioxane

10.579min (+0.037) 7.69ug/L m

response 386

Ion	Exp%	Act%
88.00	100	100
58.00	90.10	82.13
43.00	34.60	0.00#
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:53:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.414	96	1174301	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	820971	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	420628	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	87673	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.085	113	302635	47.17	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.34%			
46) 1,2-Dichloroethane-d4	8.994	65	423232	51.72	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 103.44%			
57) Toluene-d8	11.152	98	1128905	50.44	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.88%			
79) 4-Bromofluorobenzene	13.353	174	326886	47.27	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.54%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.245	85	36189	5.66	ug/L	97
3) Chloromethane	2.525	50	49045	8.44	ug/L	98
4) 1,3-Butadiene	2.641	39	23478	5.78	ug/L	97
5) Vinyl Chloride	2.654	62	38854	6.87	ug/L	97
6) Bromomethane	3.105	94	21605	6.51	ug/L	95
7) Chloroethane	3.263	64	19183	9.42	ug/L	96
8) Trichlorofluoromethane	3.507	101	49582m	6.53	ug/L	
9) Ethyl Ether	3.922	59	33369	5.72	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.226	67	42909	5.47	ug/L	98
11) 1,1-Dichloroethene	4.220	61	53914	5.17	ug/L	97
12) Freon 113	4.318	101	32228	5.11	ug/L	93
13) Carbon Disulfide	4.263	76	83280	4.85	ug/L	97
14) Iodomethane	4.428	142	46277	4.60	ug/L	97
15) Allyl chloride	4.927	41	45160	6.40	ug/L	99
16) Methylene Chloride	5.098	49	59817	6.19	ug/L	97
17) Acetone	5.171	43	46414	24.97	ug/L	100
18) Methyl acetate	5.385	43	89659	19.26	ug/L	97
19) trans-1,2-Dichloroethene	5.360	61	52638	5.15	ug/L	97
20) Hexane	5.501	56	43867	6.40	ug/L	97
21) Methyl Tert Butyl Ether	5.549	73	63365	4.55	ug/L	95
22) Acetonitrile	5.927	41	27632	41.56	ug/L	99
23) Di-isopropyl ether	6.183	45	114930	5.79	ug/L	100
24) Chloroprene	6.311	53	51892	4.79	ug/L	97
25) 1,1-Dichloroethane	6.336	63	65042	5.37	ug/L	99
26) Acrylonitrile	6.427	53	46411	17.70	ug/L	96
27) ETBE	6.799	59	90663	4.73	ug/L	97
28) Vinyl acetate	6.787	43	309659	54.66	ug/L	85
29) cis-1,2-Dichloroethene	7.281	96	30784	4.91	ug/L	96
30) 2,2-Dichloropropane	7.457	77	24335	6.75	ug/L	98
31) Bromochloromethane	7.622	128	14916	4.72	ug/L	93
32) Cyclohexane	7.646	56	72666	5.78	ug/L	97
33) Chloroform	7.768	83	56462	5.20	ug/L	96
34) Ethyl acetate	8.012	43	140470	23.78	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:53:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.049	42	19250	5.09	ug/L		92
37) Carbon Tetrachloride	8.018	117	33200	4.50	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	43324	4.63	ug/L		98
39) 2-Butanone	8.329	43	56839	21.38	ug/L		97
40) 1,1-Dichloropropene	8.366	75	38852	4.95	ug/L		96
41) tert-Butyl formate	8.573	59	86111	66.05	ug/L	#	77
42) Propionitrile	8.805	54	48038	65.05	ug/L	#	1
43) Methacrylonitrile	8.841	41	205491	65.16	ug/L		98
44) Benzene	8.793	78	120244	5.28	ug/L		92
45) TAME	9.030	73	59527	4.41	ug/L		87
47) 1,2-Dichloroethane	9.103	62	52471	5.29	ug/L		99
48) Trichloroethene	9.658	95	31438	4.86	ug/L		98
49) Methylcyclohexane	9.652	83	50753	5.30	ug/L		96
50) Dibromomethane	10.158	93	18826	4.68	ug/L		96
51) 1,2-Dichloropropane	10.250	63	37354	5.24	ug/L		94
52) Bromodichloromethane	10.341	83	35181	4.72	ug/L		97
53) Methyl methacrylate	10.524	41	18906	3.89	ug/L		96
54) 2-Chloroethyl vinyl ether	10.920	63	103489	19.65	ug/L		97
55) cis-1,3-Dichloropropene	10.975	75	39389	4.50	ug/L		95
58) Toluene	11.201	91	125814	5.12	ug/L		98
59) 2-Nitropropane	11.384	41	24476	22.45	ug/L		97
60) 4-Methyl-2-pentanone	11.524	43	163864	31.44	ug/L		96
61) trans-1,3-Dichloropropene	11.926	75	2346	0.88	ug/L		93
62) Tetrachloroethene	11.554	166	32804	3.59	ug/L		97
63) Ethyl methacrylate	11.701	69	28466	4.15	ug/L	#	81
64) 1,1,2-Trichloroethane	11.701	83	23759	4.91	ug/L		95
65) Dibromochloromethane	11.865	129	26229	4.39	ug/L		99
66) 1,3-Dichloropropane	11.932	76	47108	5.05	ug/L		97
67) 1,2-Dibromoethane	12.060	107	24427	4.41	ug/L		98
68) 2-hexanone	12.213	43	136039	30.40	ug/L		84
69) 1-Chlorohexane	12.438	91	42077	5.14	ug/L		91
70) Ethylbenzene	12.481	91	145187	5.01	ug/L		99
71) Chlorobenzene	12.469	112	84152	5.09	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.517	131	24290	4.51	ug/L		100
73) m,p-Xylene	12.591	91	222431	10.48	ug/L		100
74) o-Xylene	12.914	91	106558	4.86	ug/L		99
75) Styrene	12.950	104	73864	4.55	ug/L		96
76) Bromoform	12.987	173	14480	4.05	ug/L		98
77) Isopropylbenzene	13.139	105	119732	4.92	ug/L		98
80) cis-1,4-Dichloro-2-butene	13.383	53	11645	5.89	ug/L		80
81) n-Propylbenzene	13.432	91	166867	5.39	ug/L		99
82) Bromobenzene	13.438	156	32353	4.94	ug/L		97
83) 1,1,2,2-Tetrachloroethane	13.475	83	37069	5.15	ug/L		97
84) 1,3,5-Trimethylbenzene	13.554	105	103578	5.15	ug/L		99
85) 2-Chlorotoluene	13.670	91	100346	4.88	ug/L		98
86) trans-1,4-Dichloro-2-B...	13.597	53	10530	5.49	ug/L	#	40
87) 1,2,3-Trichloropropane	13.578	110	10362	5.13	ug/L		97
88) Cyclohexanone	13.621	55	7399	30.23	ug/L		96
89) 4-Chlorotoluene	13.670	91	100346	5.16	ug/L		99
90) tert-Butylbenzene	13.785	91	63472	5.11	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:53:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

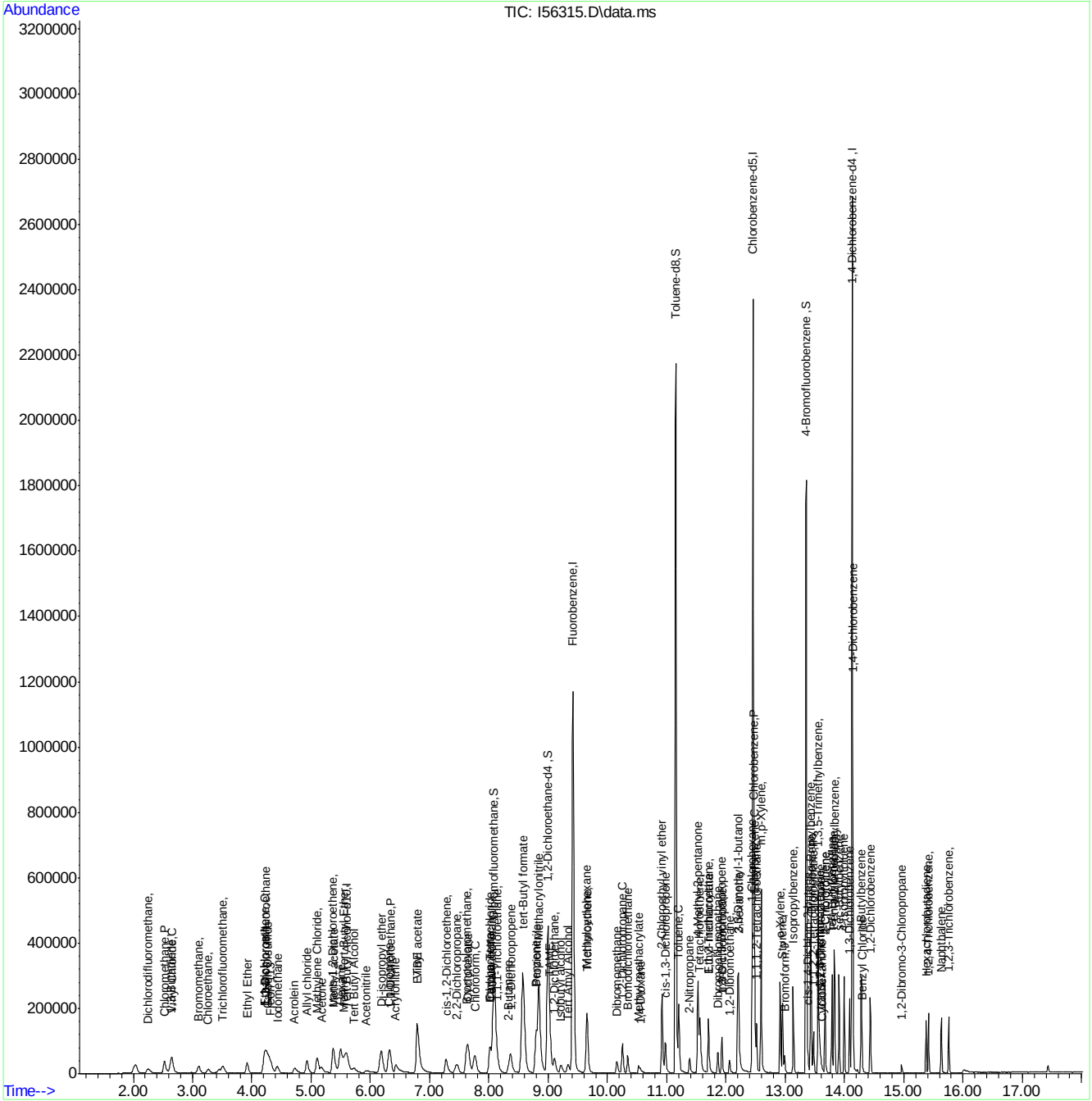
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	107541	5.15	ug/L		96
93) Pentachloroethane	13.822	167	15492	3.96	ug/L		87
94) sec-Butylbenzene	13.907	105	133807	5.29	ug/L		99
95) 4-Isopropyltoluene	13.993	119	105730	5.08	ug/L		99
96) 1,3-Dichlorobenzene	14.084	146	58728	4.87	ug/L		98
97) 1,4-Dichlorobenzene	14.139	146	66431	5.13	ug/L		89
98) n-Butylbenzene	14.285	92	59516	5.08	ug/L		95
99) Benzyl Chloride	14.298	126	4194	5.44	ug/L	#	43
100) 1,2-Dichlorobenzene	14.432	146	57770	4.81	ug/L		97
101) 1,2-Dibromo-3-Chloropr...	14.968	75	4634	3.90	ug/L		88
102) Hexachlorobutadiene	15.377	225	18366	4.56	ug/L		97
103) 1,2,4-Trichlorobenzene	15.419	180	35906	4.36	ug/L		95
104) Naphthalene	15.633	128	80065	3.85	ug/L		99
105) 1,2,3-Trichlorobenzene	15.761	180	34036	4.25	ug/L		98
107) Ethanol	4.220	45	6295m	122.47	ug/L		
108) Acrolein	4.714	56	32275	32.38	ug/L		94
109) Tert Butyl Alcohol	5.720	59	26996	47.00	ug/L		92
110) Isobutyl alcohol	9.213	43	19745	108.64	ug/L		95
111) Tert Amyl Alcohol	9.335	59	14861	43.64	ug/L	#	78
112) 1,4-Dioxane	10.554	88	4632	85.44	ug/L		95
113) 3,3-Dimethyl-1-butanol	12.200	57	139946	286.02	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:53:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number: VI1683-IC1683
Lab FileID: I56315.D
Injection Time: 07/25/18 15:37

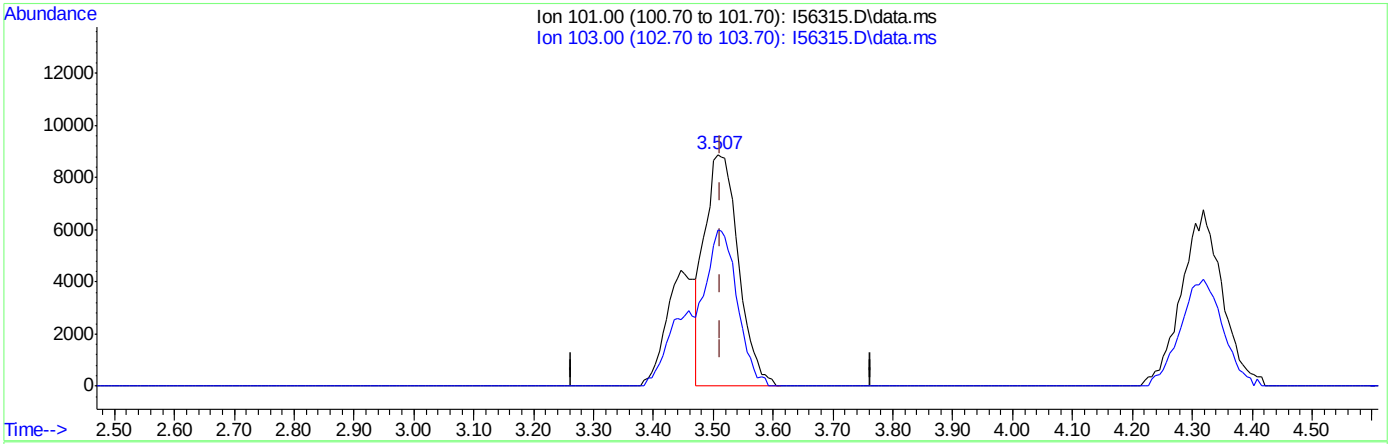
Method: SW846 8260B
Analyst approved: 07/26/18 08:26 Ana Jimenez
Supervisor approved: 07/31/18 15:11 Melissa Mangual

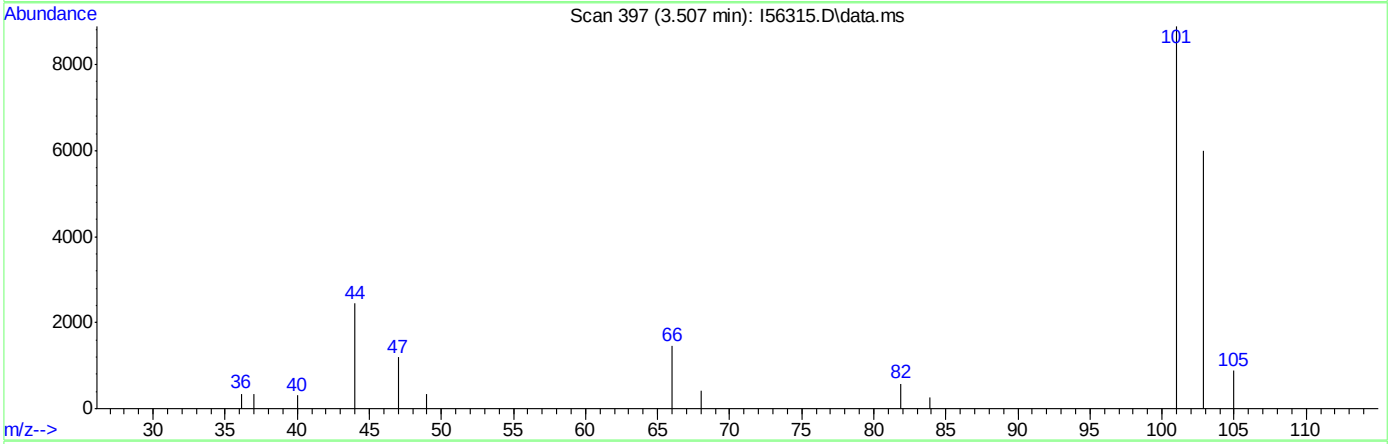
Parameter	CAS	Sig#	R.T. (min.)	Reason
Trichlorofluoromethane	75-69-4		3.51	Split peak
Ethyl Alcohol	64-17-5		4.22	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:26:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56315.D\data.ms

(8) Trichlorofluoromethane ( )

3.507min (-0.006) 4.59ug/L

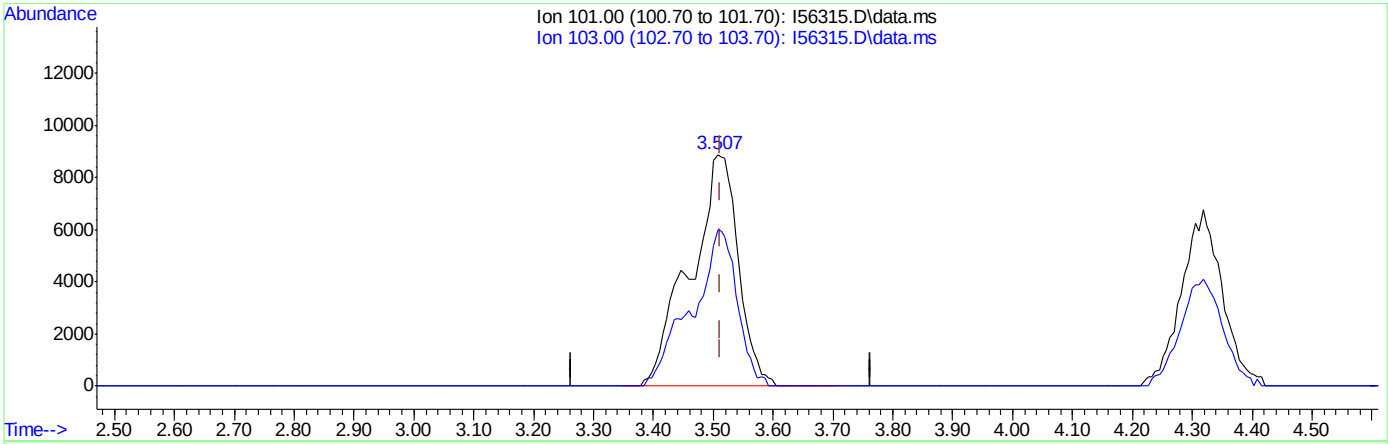
response 34888

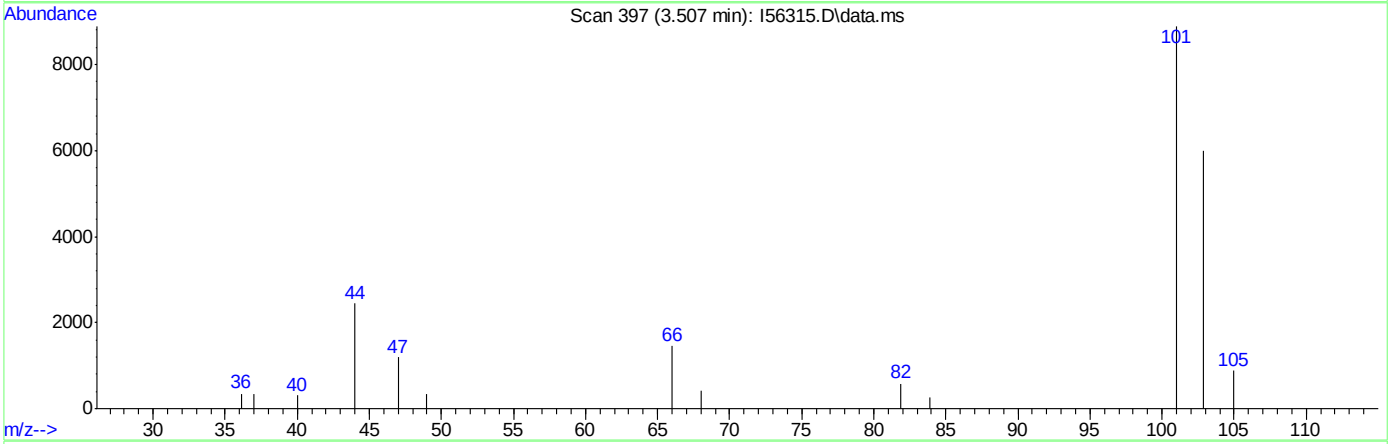
Ion	Exp%	Act%
101.00	100	100
103.00	63.30	67.57
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:26:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56315.D\data.ms

(8) Trichlorofluoromethane ( )

3.507min (-0.006) 6.53ug/L m

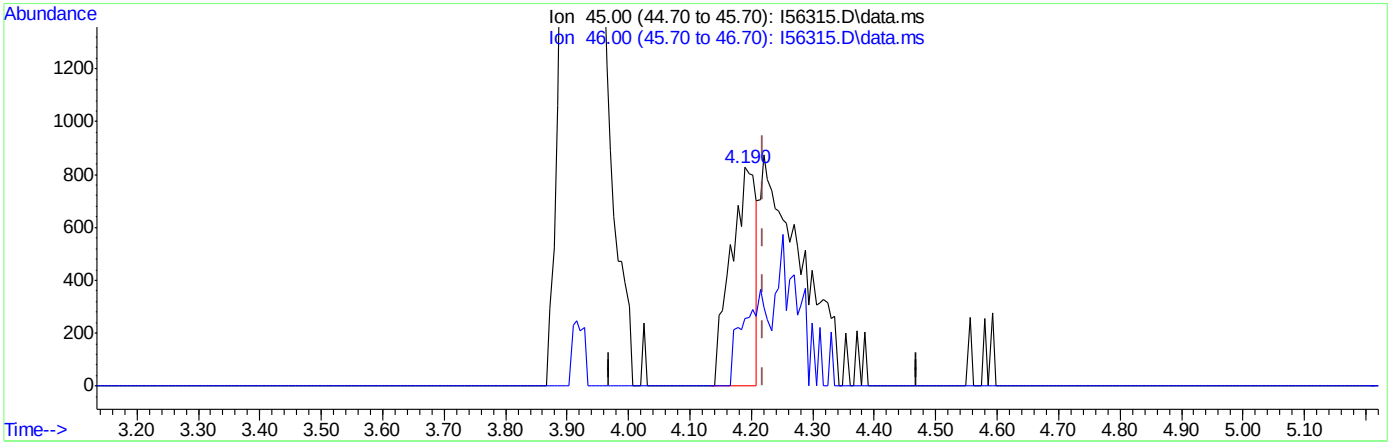
response 49582

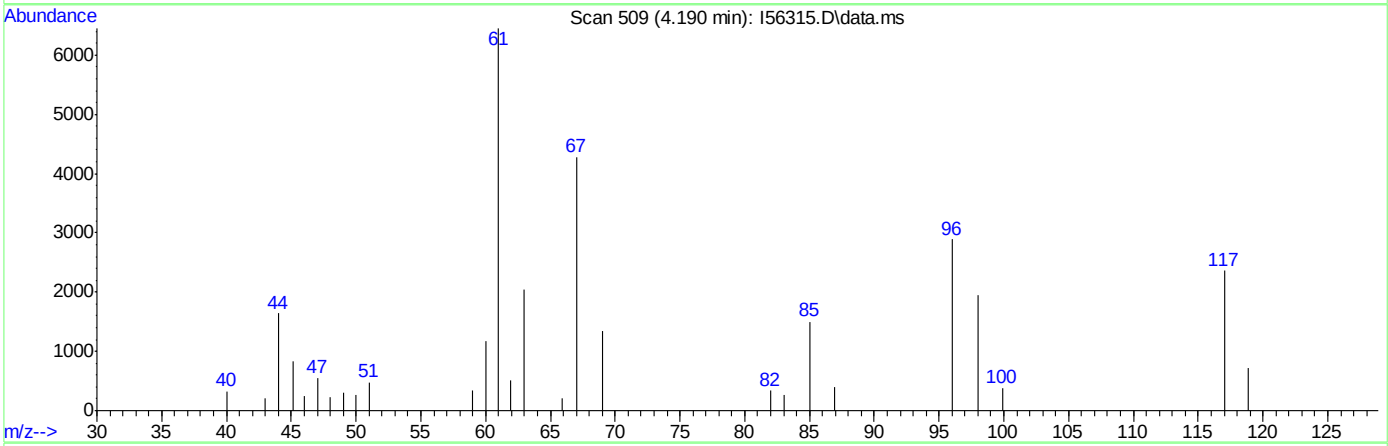
Ion	Exp%	Act%
101.00	100	100
103.00	63.30	67.57
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:26:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56315.D\data.ms

(107) Ethanol

4.190min (-0.030) 45.47ug/L

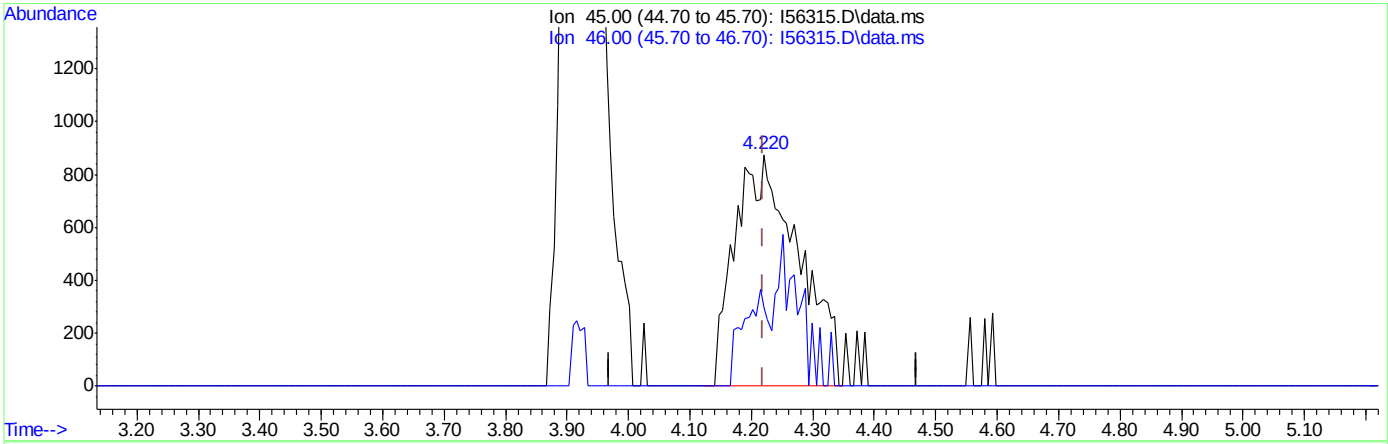
response 2337

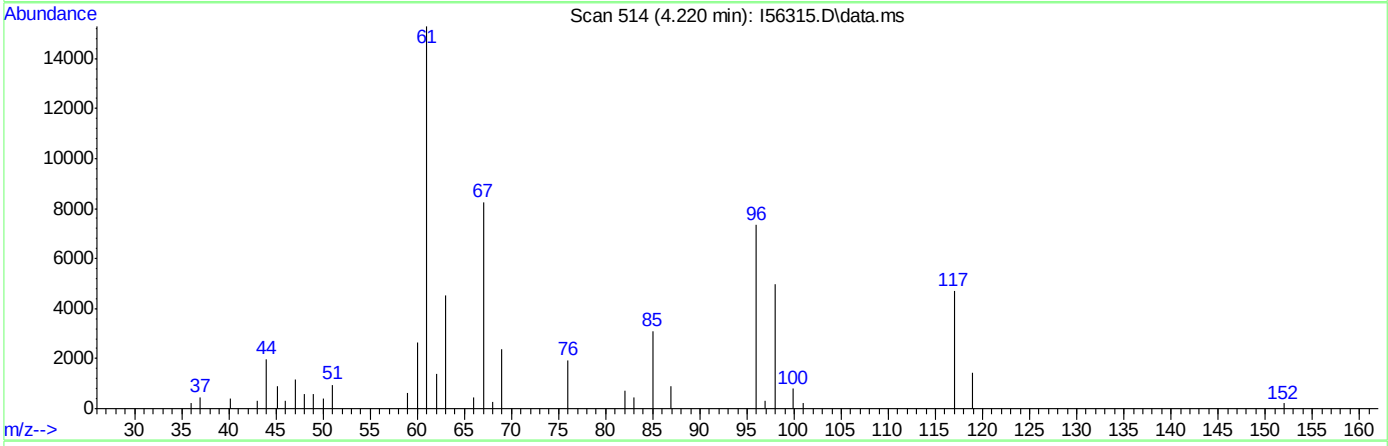
Ion	Exp%	Act%
45.00	100	100
46.00	35.80	30.83
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:26:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56315.D\data.ms

(107) Ethanol

4.220min (+0.000) 122.47ug/L m

response 6295

Ion	Exp%	Act%
45.00	100	100
46.00	35.80	34.13
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:54:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1188171	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	827532	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	421155	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	93674	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	311075	47.92	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.84%			
46) 1,2-Dichloroethane-d4	8.994	65	425687	51.42	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.84%			
57) Toluene-d8	11.152	98	1146655	50.83	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 101.66%			
79) 4-Bromofluorobenzene	13.353	174	329891	47.65	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.30%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	65368	10.09	ug/L	94
3) Chloromethane	2.526	50	92568	15.74	ug/L	99
4) 1,3-Butadiene	2.635	39	42842	10.44	ug/L	96
5) Vinyl Chloride	2.660	62	72171	12.61	ug/L	98
6) Bromomethane	3.105	94	41522	12.37	ug/L	97
7) Chloroethane	3.269	64	32912	16.38	ug/L	95
8) Trichlorofluoromethane	3.513	101	88783	11.55	ug/L	99
9) Ethyl Ether	3.916	59	68894	11.68	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.227	67	79625	10.04	ug/L	93
11) 1,1-Dichloroethene	4.214	61	104999	9.95	ug/L	96
12) Freon 113	4.318	101	59534	9.33	ug/L	97
13) Carbon Disulfide	4.269	76	162464	9.27	ug/L	98
14) Iodomethane	4.428	142	89357	8.78	ug/L	99
15) Allyl chloride	4.928	41	89012	12.48	ug/L	98
16) Methylene Chloride	5.098	49	115428	11.80	ug/L	97
17) Acetone	5.165	43	95675	51.23	ug/L	100
18) Methyl acetate	5.373	43	212277	45.41	ug/L	98
19) trans-1,2-Dichloroethene	5.361	61	104902	10.15	ug/L	99
20) Hexane	5.495	56	82394	11.88	ug/L	99
21) Methyl Tert Butyl Ether	5.556	73	129199	9.17	ug/L	97
22) Acetonitrile	5.909	41	58883	88.49	ug/L	96
23) Di-isopropyl ether	6.184	45	232647	11.58	ug/L	99
24) Chloroprene	6.305	53	104050	9.52	ug/L	97
25) 1,1-Dichloroethane	6.336	63	127861	10.43	ug/L	99
26) Acrylonitrile	6.415	53	116807	44.09	ug/L	99
27) ETBE	6.799	59	189060	9.75	ug/L	99
28) Vinyl acetate	6.781	43	702335	108.00	ug/L	83
29) cis-1,2-Dichloroethene	7.275	96	61351	9.67	ug/L	99
30) 2,2-Dichloropropane	7.458	77	48978	12.54	ug/L	97
31) Bromochloromethane	7.622	128	29943	9.37	ug/L	96
32) Cyclohexane	7.641	56	140021	11.00	ug/L	95
33) Chloroform	7.769	83	108530	9.89	ug/L	97
34) Ethyl acetate	8.012	43	312124	52.66	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:54:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.049	42	42685	11.23	ug/L		96
37) Carbon Tetrachloride	8.019	117	63111	8.45	ug/L		98
38) 1,1,1-Trichloroethane	8.134	97	85033	8.97	ug/L		97
39) 2-Butanone	8.317	43	132290	49.51	ug/L		97
40) 1,1-Dichloropropene	8.366	75	76533	9.61	ug/L		98
41) tert-Butyl formate	8.573	59	191740	128.56	ug/L		91
42) Propionitrile	8.805	54	104197	139.45	ug/L	#	1
43) Methacrylonitrile	8.842	41	412253	129.19	ug/L		100
44) Benzene	8.793	78	234317	10.18	ug/L		96
45) TAME	9.024	73	123033	9.01	ug/L		93
47) 1,2-Dichloroethane	9.104	62	102766	10.25	ug/L		99
48) Trichloroethene	9.658	95	61269	9.37	ug/L		98
49) Methylcyclohexane	9.646	83	99174	10.23	ug/L		96
50) Dibromomethane	10.152	93	38503	9.47	ug/L		97
51) 1,2-Dichloropropane	10.250	63	74627	10.35	ug/L		96
52) Bromodichloromethane	10.341	83	72742	9.64	ug/L		97
53) Methyl methacrylate	10.524	41	45204	9.21	ug/L		96
54) 2-Chloroethyl vinyl ether	10.920	63	226330	42.92	ug/L		96
55) cis-1,3-Dichloropropene	10.975	75	83293	9.32	ug/L		96
58) Toluene	11.201	91	246293	9.94	ug/L		99
59) 2-Nitropropane	11.384	41	57350	51.64	ug/L		93
60) 4-Methyl-2-pentanone	11.524	43	340691	64.85	ug/L		98
61) trans-1,3-Dichloropropene	11.926	75	5255	1.91	ug/L	#	91
62) Tetrachloroethene	11.554	166	64653	7.07	ug/L		98
63) Ethyl methacrylate	11.701	69	61488	8.84	ug/L		91
64) 1,1,2-Trichloroethane	11.707	83	48277	9.90	ug/L		95
65) Dibromochloromethane	11.865	129	54367	8.95	ug/L		97
66) 1,3-Dichloropropane	11.932	76	94499	10.06	ug/L		99
67) 1,2-Dibromoethane	12.060	107	51606	9.25	ug/L		97
68) 2-hexanone	12.213	43	283655	62.89	ug/L		85
69) 1-Chlorohexane	12.444	91	82389	9.98	ug/L		96
70) Ethylbenzene	12.481	91	281342	9.64	ug/L		99
71) Chlorobenzene	12.469	112	160825	9.65	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.518	131	48327	8.91	ug/L		97
73) m,p-Xylene	12.591	91	431764	20.18	ug/L		99
74) o-Xylene	12.914	91	215543	9.76	ug/L		99
75) Styrene	12.950	104	149578	9.10	ug/L		97
76) Bromoform	12.987	173	30841	8.44	ug/L		98
77) Isopropylbenzene	13.139	105	237557	9.64	ug/L		100
80) cis-1,4-Dichloro-2-butene	13.383	53	22995	11.45	ug/L		86
81) n-Propylbenzene	13.432	91	325205	10.50	ug/L		98
82) Bromobenzene	13.438	156	62714	9.57	ug/L		100
83) 1,1,2,2-Tetrachloroethane	13.475	83	71819	9.96	ug/L		98
84) 1,3,5-Trimethylbenzene	13.554	105	206149	10.23	ug/L		99
85) 2-Chlorotoluene	13.670	91	195726	9.50	ug/L		98
86) trans-1,4-Dichloro-2-B...	13.597	53	22971	11.78	ug/L	#	55
87) 1,2,3-Trichloropropane	13.578	110	19202	9.50	ug/L		94
88) Cyclohexanone	13.621	55	15216	62.08	ug/L		97
89) 4-Chlorotoluene	13.670	91	195726	10.05	ug/L		99
90) tert-Butylbenzene	13.786	91	125125	10.06	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:54:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

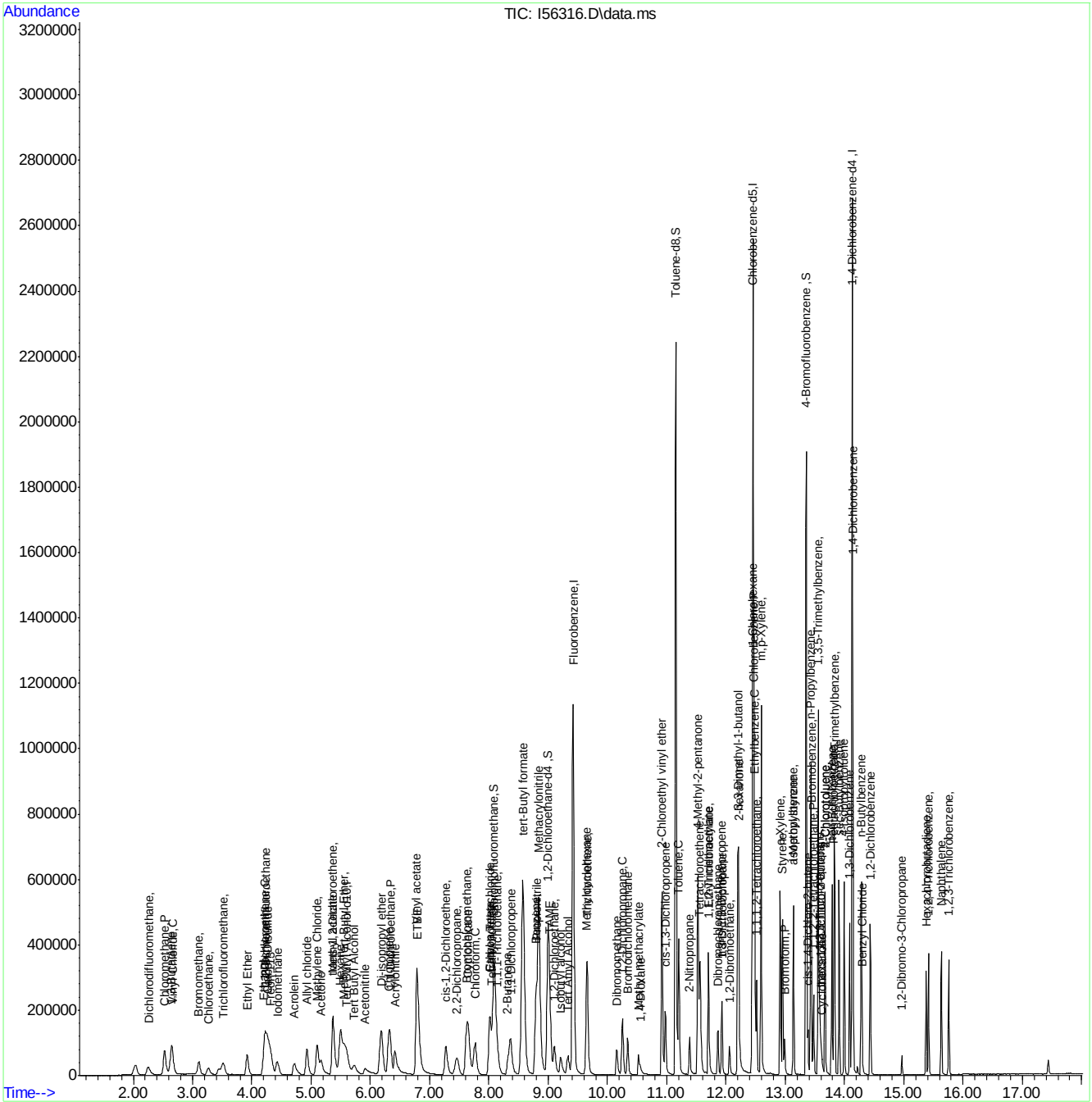
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
91) a-Methyl styrene	13.133	118	1605	20.99	ug/L	#	1
92) 1,2,4-Trimethylbenzene	13.828	105	214701	10.26	ug/L		97
93) Pentachloroethane	13.822	167	30638	7.83	ug/L		90
94) sec-Butylbenzene	13.908	105	261171	10.31	ug/L		99
95) 4-Isopropyltoluene	13.993	119	211670	10.15	ug/L		98
96) 1,3-Dichlorobenzene	14.084	146	116318	9.63	ug/L		98
97) 1,4-Dichlorobenzene	14.139	146	128277	9.89	ug/L		94
98) n-Butylbenzene	14.286	92	119746	10.22	ug/L		94
99) Benzyl Chloride	14.298	126	9746	11.10	ug/L	#	47
100) 1,2-Dichlorobenzene	14.432	146	112915	9.40	ug/L		98
101) 1,2-Dibromo-3-Chloropr...	14.968	75	9836	8.20	ug/L		86
102) Hexachlorobutadiene	15.377	225	35925	8.92	ug/L		96
103) 1,2,4-Trichlorobenzene	15.420	180	73365	8.91	ug/L		95
104) Naphthalene	15.633	128	174701	8.40	ug/L		99
105) 1,2,3-Trichlorobenzene	15.761	180	70673	8.82	ug/L		98
107) Ethanol	4.202	45	14189m	258.36	ug/L		
108) Acrolein	4.708	56	71951	67.56	ug/L		99
109) Tert Butyl Alcohol	5.726	59	59835	97.50	ug/L		92
110) Isobutyl alcohol	9.213	43	44980	231.62	ug/L		99
111) Tert Amyl Alcohol	9.329	59	34243	94.11	ug/L		90
112) 1,4-Dioxane	10.555	88	10606	183.47	ug/L		91
113) 3,3-Dimethyl-1-butanol	12.201	57	298636	571.24	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:54:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

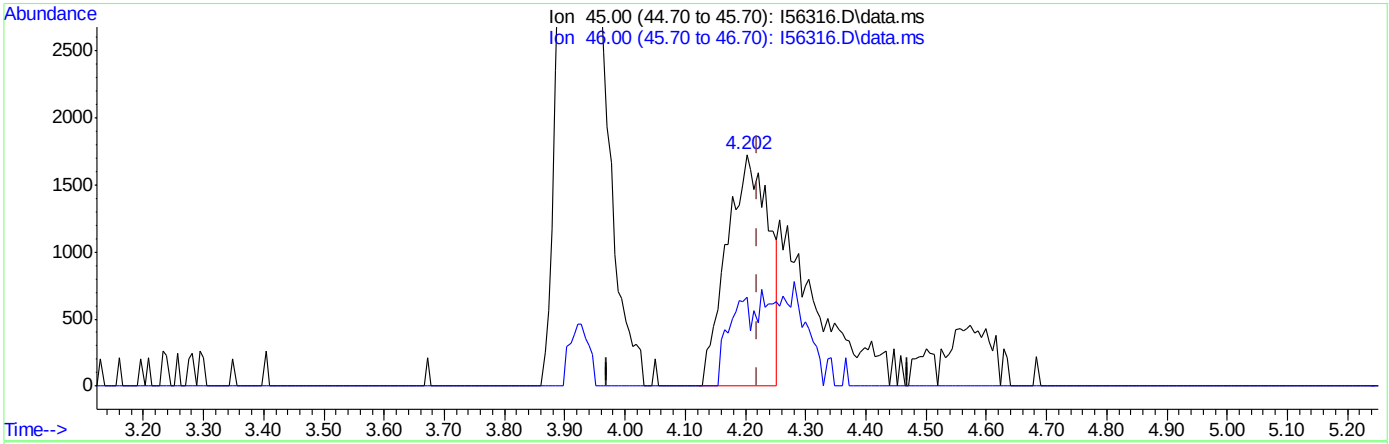
Sample Number: VI1683-IC1683
Lab FileID: I56316.D
Injection Time: 07/25/18 16:01
Method: SW846 8260B
Analyst approved: 07/26/18 08:26 Ana Jimenez
Supervisor approved: 07/31/18 15:11 Melissa Mangual

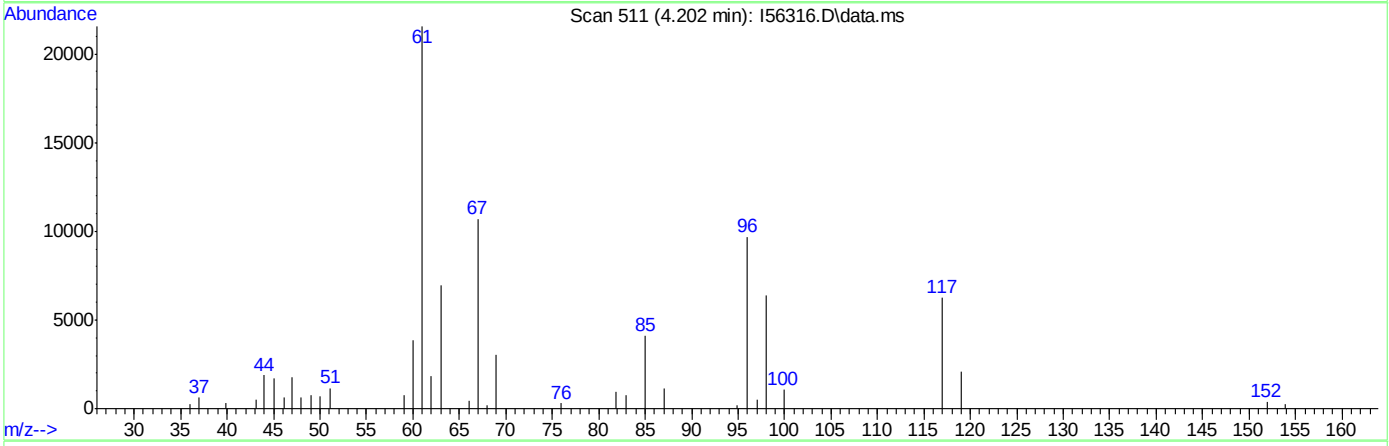
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		4.20	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:26:05 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56316.D\data.ms

(107) Ethanol

4.202min (-0.018) 151.55ug/L

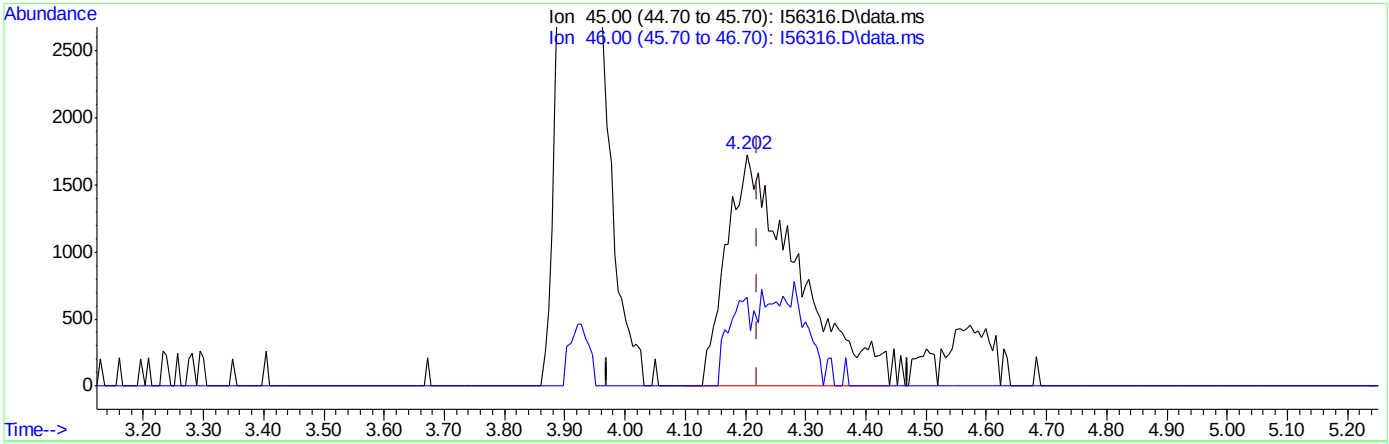
response 8323

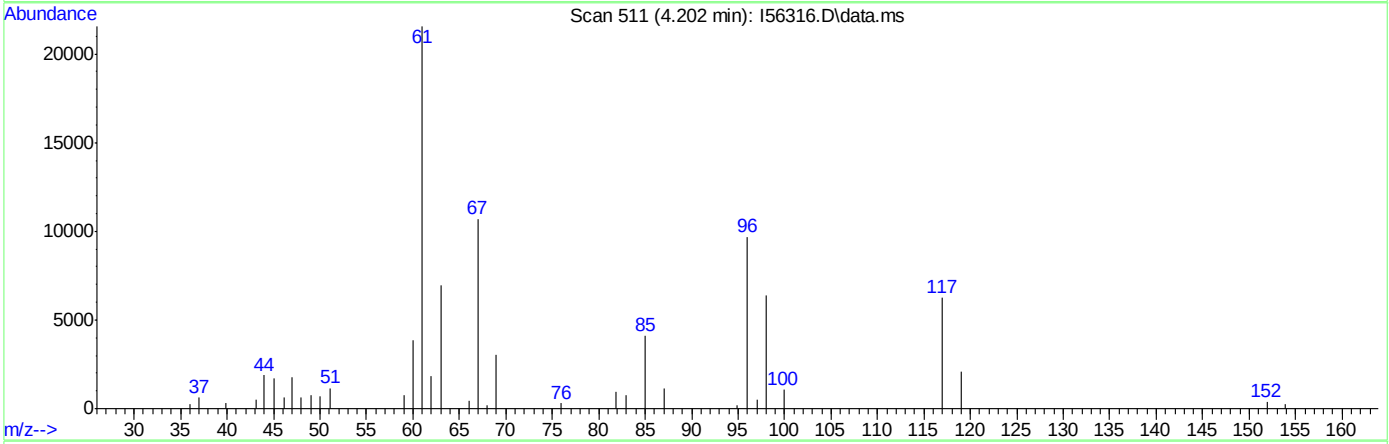
Ion	Exp%	Act%
45.00	100	100
46.00	35.80	38.45
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:26:05 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56316.D\data.ms

(107) Ethanol

4.202min (-0.018) 258.36ug/L m

response 14189

Ion	Exp%	Act%
45.00	100	100
46.00	35.80	38.45
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 08:04:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1187789	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	833915	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	422900	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	95487	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	315544	48.62	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.24%			
46) 1,2-Dichloroethane-d4	8.994	65	423727	51.20	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.40%			
57) Toluene-d8	11.152	98	1144174	50.33	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.66%			
79) 4-Bromofluorobenzene	13.353	174	336250	48.37	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.74%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	171014	26.32	ug/L	95
3) Chloromethane	2.532	50	228004	38.77	ug/L	100
4) 1,3-Butadiene	2.641	39	118335	29.08	ug/L	96
5) Vinyl Chloride	2.666	62	194288	33.96	ug/L	100
6) Bromomethane	3.105	94	96545	28.76	ug/L	99
7) Chloroethane	3.269	64	60507	32.00	ug/L	97
8) Trichlorofluoromethane	3.513	101	236325	30.75	ug/L	98
9) Ethyl Ether	3.922	59	175010	29.67	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.239	67	210096	26.49	ug/L	99
11) 1,1-Dichloroethene	4.220	61	279025	26.44	ug/L	97
12) Freon 113	4.318	101	155288	24.36	ug/L	98
13) Carbon Disulfide	4.269	76	444363	24.70	ug/L	98
14) Iodomethane	4.434	142	238944	23.49	ug/L	99
15) Allyl chloride	4.928	41	244771	34.32	ug/L	98
16) Methylene Chloride	5.104	49	278989	28.54	ug/L	100
17) Acetone	5.165	43	252625	138.61	ug/L	100
18) Methyl acetate	5.373	43	607770	133.42	ug/L	99
19) trans-1,2-Dichloroethene	5.360	61	277830	26.88	ug/L	99
20) Hexane	5.495	56	214757	30.98	ug/L	98
21) Methyl Tert Butyl Ether	5.555	73	347014	24.65	ug/L	98
22) Acetonitrile	5.891	41	179052	282.01	ug/L	100
23) Di-isopropyl ether	6.183	45	630130	31.36	ug/L	98
24) Chloroprene	6.305	53	295165	27.39	ug/L	99
25) 1,1-Dichloroethane	6.336	63	329776	26.91	ug/L	99
26) Acrylonitrile	6.397	53	350191	132.74	ug/L	99
27) ETBE	6.805	59	514679	26.55	ug/L	99
28) Vinyl acetate	6.775	43	1973067	236.24	ug/L	82
29) cis-1,2-Dichloroethene	7.269	96	161786	25.51	ug/L	95
30) 2,2-Dichloropropane	7.458	77	142755	30.38	ug/L	98
31) Bromochloromethane	7.610	128	78826	24.66	ug/L	97
32) Cyclohexane	7.653	56	377491	29.66	ug/L	100
33) Chloroform	7.768	83	278697	25.40	ug/L	98
34) Ethyl acetate	8.000	43	864970	150.14	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 08:04:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.037	42	110528m	29.77	ug/L		
37) Carbon Tetrachloride	8.024	117	172593	23.10	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	231376	24.43	ug/L		97
39) 2-Butanone	8.311	43	368463	141.13	ug/L		100
40) 1,1-Dichloropropene	8.360	75	210697	26.16	ug/L		99
41) tert-Butyl formate	8.579	59	573132	294.26	ug/L	#	80
42) Propionitrile	8.793	54	278427m	372.74	ug/L		
43) Methacrylonitrile	8.835	41	1072501	336.21	ug/L		99
44) Benzene	8.793	78	606413	26.35	ug/L		100
45) TAME	9.030	73	342268	25.08	ug/L		97
47) 1,2-Dichloroethane	9.104	62	262623	26.20	ug/L		99
48) Trichloroethene	9.658	95	161835	24.75	ug/L		99
49) Methylcyclohexane	9.652	83	266657	27.51	ug/L		98
50) Dibromomethane	10.146	93	101719	25.02	ug/L		99
51) 1,2-Dichloropropane	10.250	63	198340	27.51	ug/L		98
52) Bromodichloromethane	10.341	83	198642	26.35	ug/L		99
53) Methyl methacrylate	10.512	41	132963	27.38	ug/L		98
54) 2-Chloroethyl vinyl ether	10.914	63	613040	120.50	ug/L		97
55) cis-1,3-Dichloropropene	10.975	75	241610	26.22	ug/L		99
58) Toluene	11.201	91	644416	25.80	ug/L		100
59) 2-Nitropropane	11.384	41	173832	150.08	ug/L		98
60) 4-Methyl-2-pentanone	11.524	43	891306	168.36	ug/L		98
61) trans-1,3-Dichloropropene	11.926	75	13809	4.65	ug/L		97
62) Tetrachloroethene	11.554	166	173745	19.40	ug/L		99
63) Ethyl methacrylate	11.701	69	181372	25.40	ug/L		90
64) 1,1,2-Trichloroethane	11.701	83	125040	25.45	ug/L		97
65) Dibromochloromethane	11.859	129	151361	24.08	ug/L		98
66) 1,3-Dichloropropane	11.926	76	249441	26.35	ug/L		97
67) 1,2-Dibromoethane	12.054	107	140147	24.93	ug/L		97
68) 2-hexanone	12.207	43	749583	164.91	ug/L		97
69) 1-Chlorohexane	12.438	91	217455	26.14	ug/L		99
70) Ethylbenzene	12.481	91	748561	25.44	ug/L		99
71) Chlorobenzene	12.469	112	415841	24.76	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.518	131	133450	24.41	ug/L		99
73) m,p-Xylene	12.591	91	1155600	53.60	ug/L		100
74) o-Xylene	12.914	91	588232	26.42	ug/L		99
75) Styrene	12.950	104	420727	25.04	ug/L		99
76) Bromoform	12.987	173	89793	23.35	ug/L		99
77) Isopropylbenzene	13.133	105	649513	25.78	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.377	53	67861	31.92	ug/L		85
81) n-Propylbenzene	13.432	91	879177	28.26	ug/L		99
82) Bromobenzene	13.438	156	166446	25.30	ug/L		99
83) 1,1,2,2-Tetrachloroethane	13.475	83	189353	26.15	ug/L		100
84) 1,3,5-Trimethylbenzene	13.554	105	560790	27.72	ug/L		100
85) 2-Chlorotoluene	13.670	91	524217	25.35	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.597	53	65548	31.94	ug/L	#	65
87) 1,2,3-Trichloropropane	13.578	110	51940	25.58	ug/L		97
88) Cyclohexanone	13.621	55	43986	178.72	ug/L		98
89) 4-Chlorotoluene	13.670	91	524217	26.80	ug/L		100
90) tert-Butylbenzene	13.786	91	339960	27.22	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 08:04:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

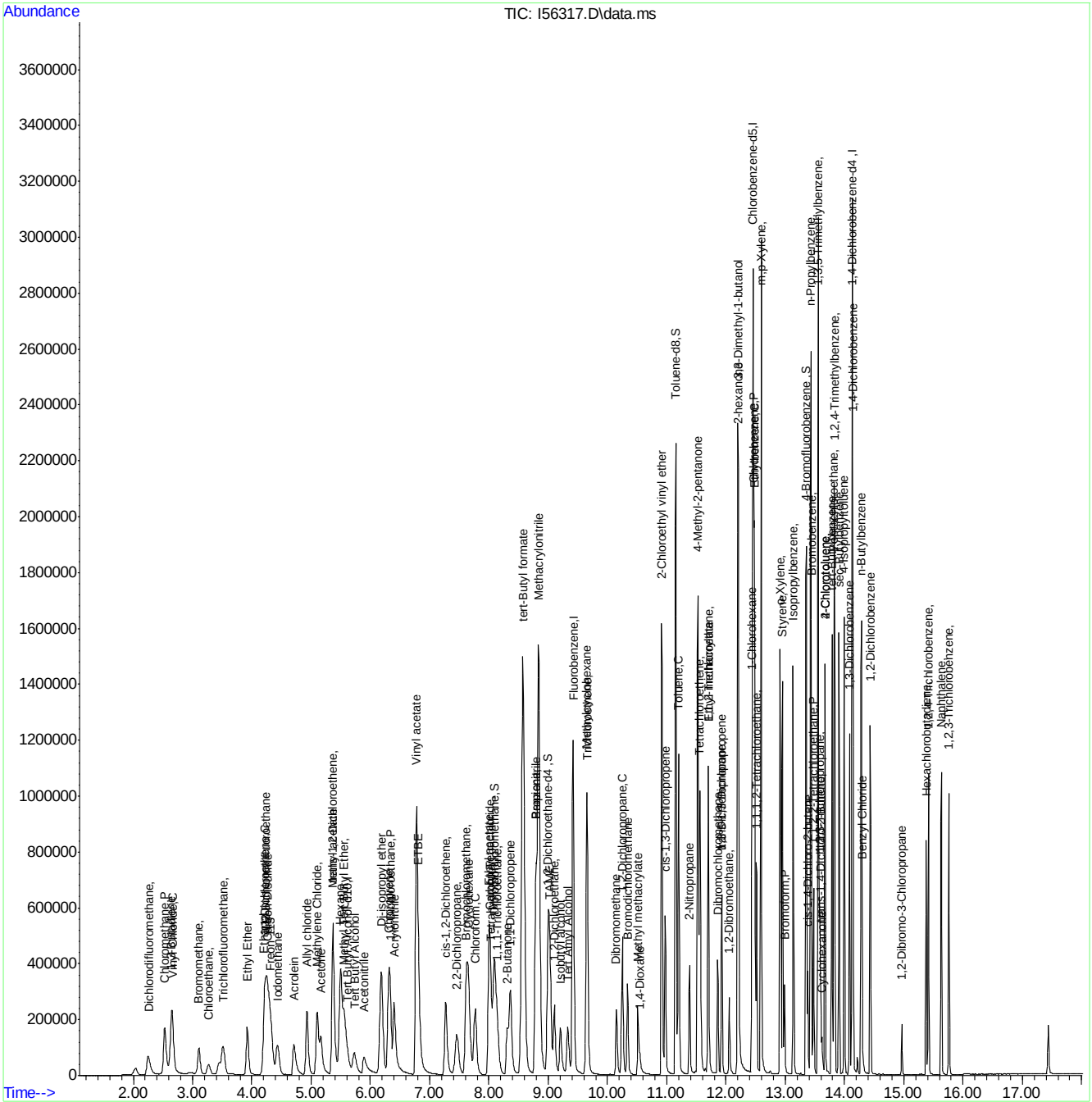
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	577530	27.49	ug/L		97
93) Pentachloroethane	13.822	167	86505	22.08	ug/L		87
94) sec-Butylbenzene	13.908	105	708570	27.84	ug/L		100
95) 4-Isopropyltoluene	13.993	119	580069	27.71	ug/L		100
96) 1,3-Dichlorobenzene	14.084	146	309758	25.53	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	331259	25.44	ug/L		99
98) n-Butylbenzene	14.285	92	333353	28.33	ug/L		92
99) Benzyl Chloride	14.298	126	36846	29.89	ug/L	#	25
100) 1,2-Dichlorobenzene	14.432	146	302159	25.04	ug/L		98
101) 1,2-Dibromo-3-Chloropr...	14.968	75	29930	24.11	ug/L		88
102) Hexachlorobutadiene	15.377	225	99788	24.67	ug/L		99
103) 1,2,4-Trichlorobenzene	15.413	180	203788	24.63	ug/L		99
104) Naphthalene	15.633	128	506198	24.23	ug/L		100
105) 1,2,3-Trichlorobenzene	15.761	180	188794	23.46	ug/L		97
107) Ethanol	4.208	45	35828	639.98	ug/L		92
108) Acrolein	4.708	56	195542	180.13	ug/L		99
109) Tert Butyl Alcohol	5.732	59	158363	253.14	ug/L		88
110) Isobutyl alcohol	9.207	43	134984	681.90	ug/L		97
111) Tert Amyl Alcohol	9.329	59	104219	280.99	ug/L		99
112) 1,4-Dioxane	10.548	88	32745	559.90	ug/L		94
113) 3,3-Dimethyl-1-butanol	12.201	57	854393	1603.28	ug/L		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 08:04:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

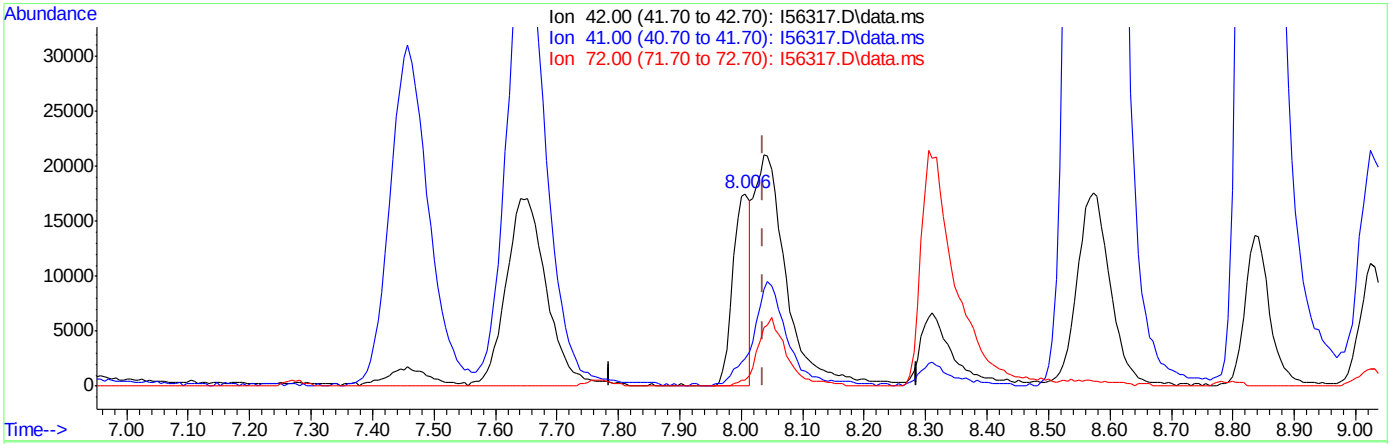
Sample Number: VI1683-IC1683
Lab FileID: I56317.D
Injection Time: 07/25/18 16:25
Method: SW846 8260B
Analyst approved: 07/26/18 08:26 Ana Jimenez
Supervisor approved: 07/31/18 15:11 Melissa Mangual

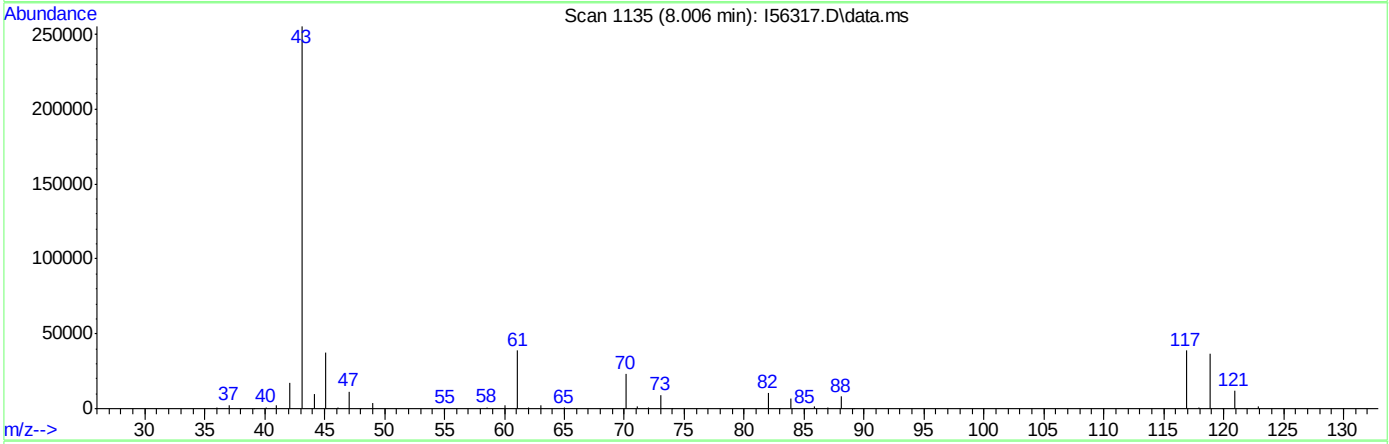
Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrahydrofuran	109-99-9		8.04	Missed peak
Propionitrile	107-12-0		8.79	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 07:54:55 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56317.D\data.ms

(35) Tetrahydrofuran

8.006min (-0.030) 8.74ug/L

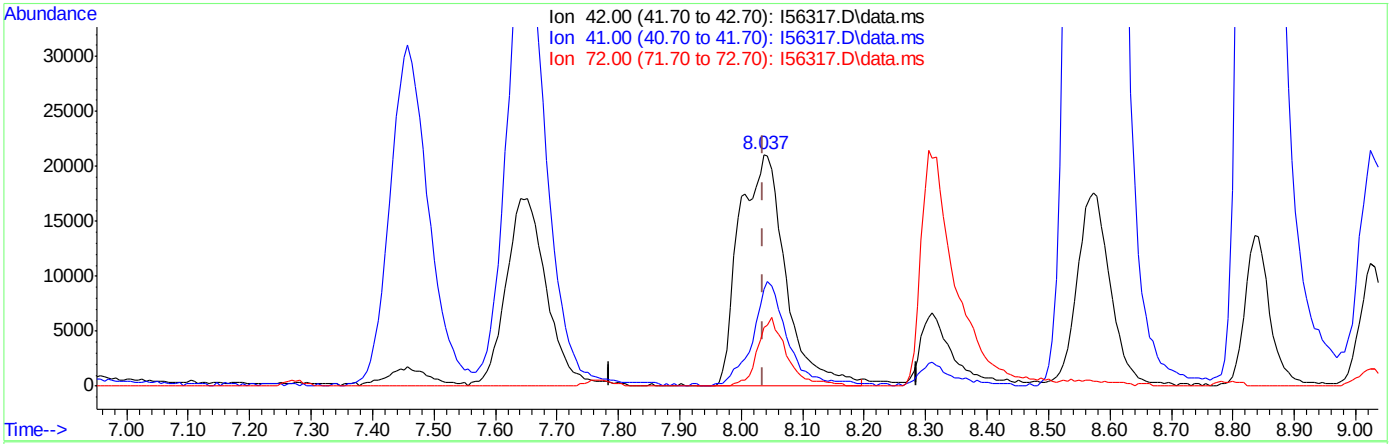
response 33296

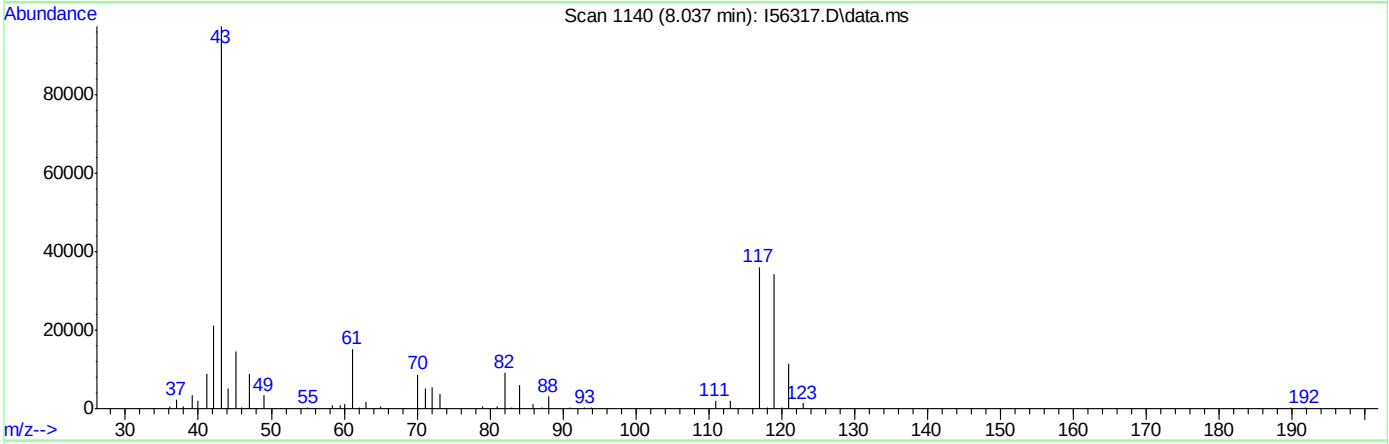
Ion	Exp%	Act%
42.00	100	100
41.00	43.50	14.08#
72.00	26.50	2.93#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 07:54:55 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56317.D\data.ms

(35) Tetrahydrofuran

8.037min (+0.000) 29.77ug/L m

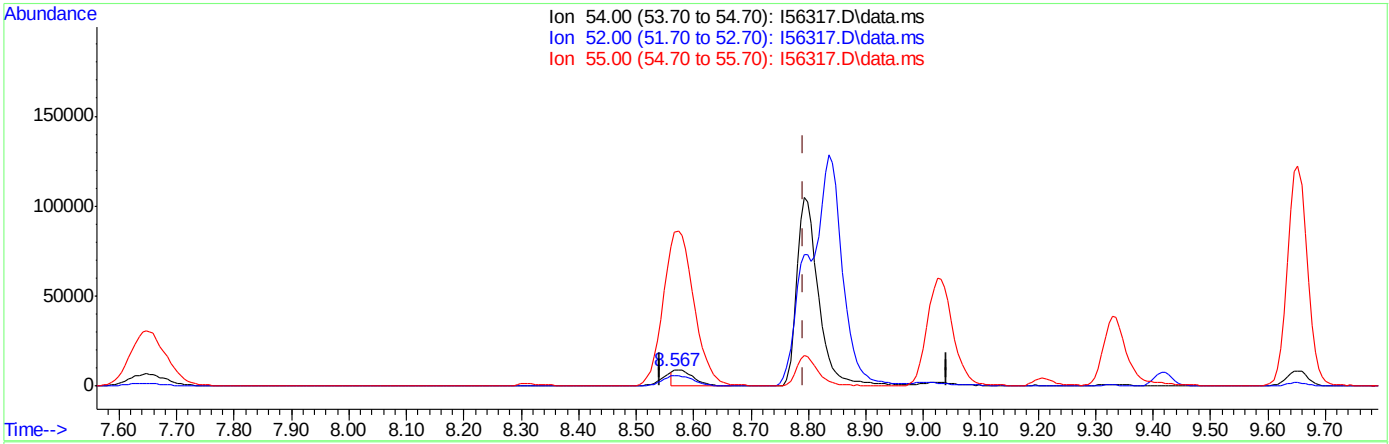
response 110528

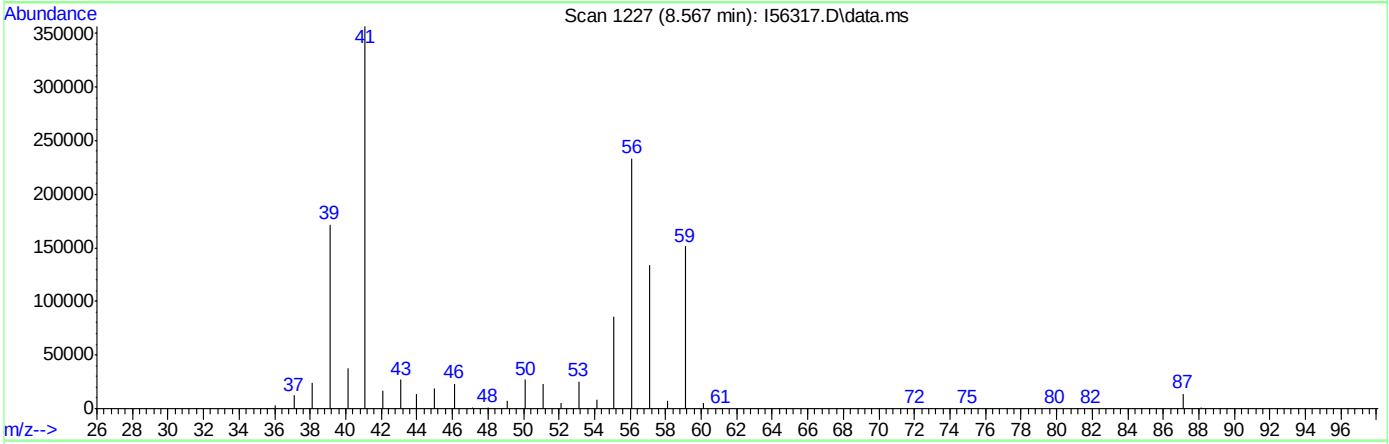
Ion	Exp%	Act%
42.00	100	100
41.00	43.50	41.79
72.00	26.50	25.42
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 07:54:55 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56317.D\data.ms

(42) Propionitrile

8.567min (-0.225) 28.82ug/L

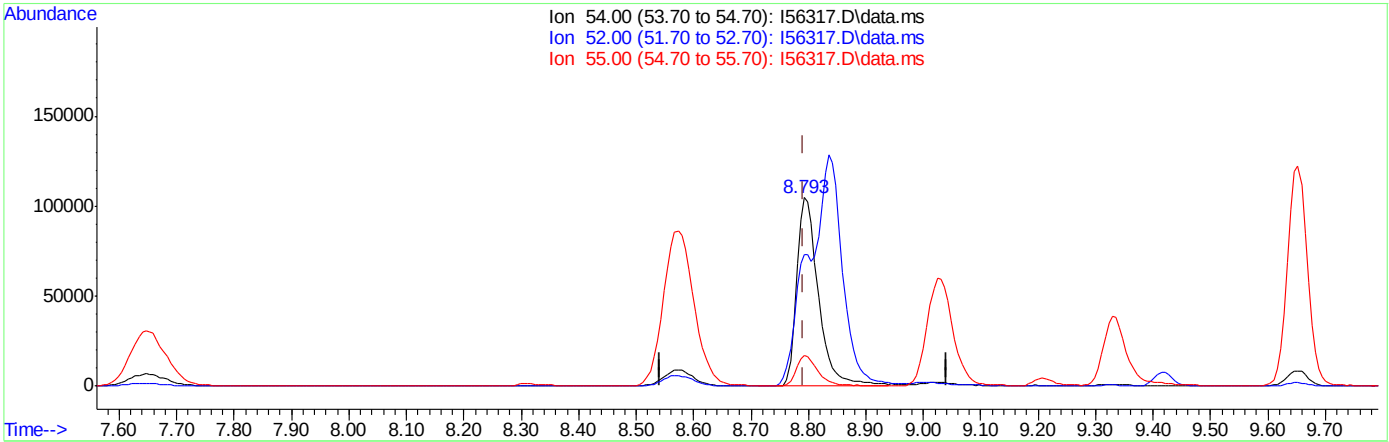
response 21529

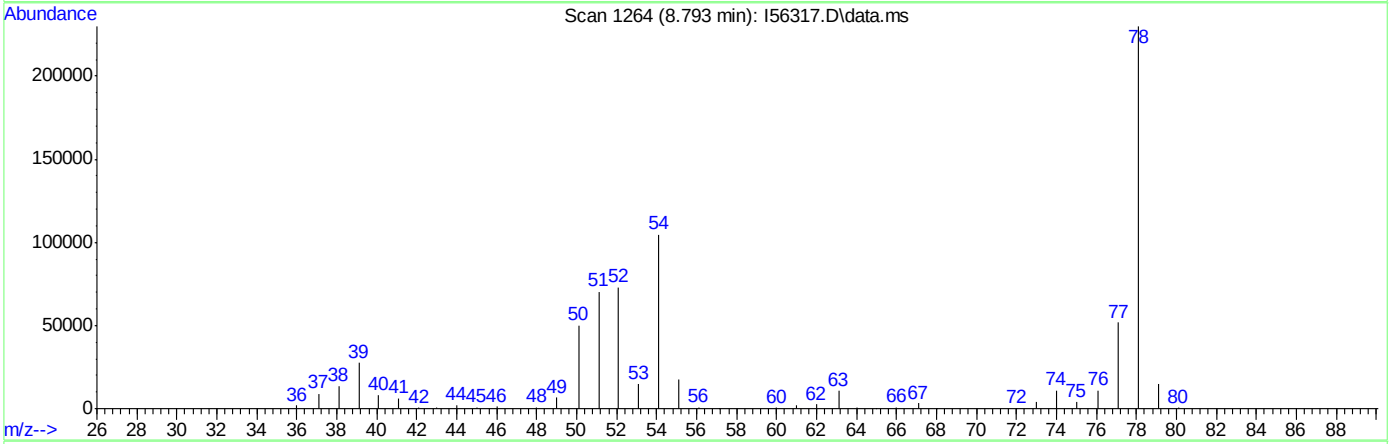
Ion	Exp%	Act%
54.00	100	100
52.00	72.00	62.57
55.00	936.40	944.20
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 07:54:55 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56317.D\data.ms

(42) Propionitrile

8.793min (+0.001) 372.74ug/L m

response 278427

Ion	Exp%	Act%
54.00	100	100
52.00	72.00	69.88
55.00	936.40	16.59#
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.420	96	1197770	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	847395	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	427469	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.622	65	101391	250.00	ug/L	0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.091	113	320406	48.96	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.92%			
46) 1,2-Dichloroethane-d4	9.000	65	426438	51.10	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.20%			
57) Toluene-d8	11.152	98	1161852	50.30	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.60%			
79) 4-Bromofluorobenzene	13.353	174	339161	48.26	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.52%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	269748	41.02	ug/L	99
3) Chloromethane	2.538	50	349931	59.01	ug/L	100
4) 1,3-Butadiene	2.647	39	207338	51.00	ug/L	94
5) Vinyl Chloride	2.672	62	316050	54.79	ug/L	99
6) Bromomethane	3.111	94	152715	45.12	ug/L	98
7) Chloroethane	3.275	64	80260	44.26	ug/L	95
8) Trichlorofluoromethane	3.519	101	341564	44.07	ug/L	100
9) Ethyl Ether	3.928	59	282284	47.46	ug/L	100
10) 1,2-Dichlorotrifluoroe...	4.239	67	333047	41.64	ug/L	99
11) 1,1-Dichloroethene	4.226	61	455426	42.79	ug/L	98
12) Freon 113	4.324	101	251148	39.06	ug/L	99
13) Carbon Disulfide	4.275	76	737059	39.62	ug/L	98
14) Iodomethane	4.434	142	385865	37.61	ug/L	99
15) Allyl chloride	4.934	41	406190	56.48	ug/L	100
16) Methylene Chloride	5.104	49	443311	44.97	ug/L	98
17) Acetone	5.165	43	426831	238.88	ug/L	99
18) Methyl acetate	5.372	43	1005514	224.94	ug/L	100
19) trans-1,2-Dichloroethene	5.360	61	453662	43.53	ug/L	99
20) Hexane	5.500	56	334136	47.80	ug/L	97
21) Methyl Tert Butyl Ether	5.561	73	571827	40.28	ug/L	95
22) Acetonitrile	5.885	41	302092	498.44	ug/L	98
23) Di-isopropyl ether	6.183	45	1019299	50.31	ug/L	100
24) Chloroprene	6.311	53	483479	45.10	ug/L	98
25) 1,1-Dichloroethane	6.336	63	532201	43.07	ug/L	100
26) Acrylonitrile	6.397	53	598041	225.71	ug/L	99
27) ETBE	6.799	59	843810	43.17	ug/L	99
28) Vinyl acetate	6.775	43	3172433	326.06	ug/L	82
29) cis-1,2-Dichloroethene	7.275	96	260142	40.68	ug/L	99
30) 2,2-Dichloropropane	7.464	77	238030	44.35	ug/L	97
31) Bromochloromethane	7.616	128	127605	39.59	ug/L	96
32) Cyclohexane	7.646	56	606813	47.29	ug/L	98
33) Chloroform	7.774	83	447448	40.43	ug/L	98
34) Ethyl acetate	8.000	43	1401056	248.30	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.037	42	178761	48.90	ug/L		95
37) Carbon Tetrachloride	8.024	117	282742	37.53	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	381586	39.95	ug/L		99
39) 2-Butanone	8.311	43	618739	241.07	ug/L		99
40) 1,1-Dichloropropene	8.366	75	339085	41.32	ug/L		99
41) tert-Butyl formate	8.579	59	1052189	442.70	ug/L	#	70
42) Propionitrile	8.793	54	460083	610.80	ug/L	#	1
43) Methacrylonitrile	8.841	41	1714141	532.88	ug/L		99
44) Benzene	8.793	78	962873	41.49	ug/L		99
45) TAME	9.030	73	565392	41.09	ug/L		95
47) 1,2-Dichloroethane	9.103	62	415956	41.15	ug/L		99
48) Trichloroethene	9.658	95	258338	39.18	ug/L		99
49) Methylcyclohexane	9.652	83	431420	44.14	ug/L		97
50) Dibromomethane	10.146	93	162965	39.75	ug/L		99
51) 1,2-Dichloropropane	10.250	63	317247	43.64	ug/L		99
52) Bromodichloromethane	10.341	83	321893	42.34	ug/L		99
53) Methyl methacrylate	10.512	41	229558	47.41	ug/L		100
54) 2-Chloroethyl vinyl ether	10.914	63	1009003	204.72	ug/L		99
55) cis-1,3-Dichloropropene	10.975	75	398548	41.74	ug/L		99
58) Toluene	11.201	91	1020914	40.22	ug/L		99
59) 2-Nitropropane	11.383	41	289107	238.42	ug/L		98
60) 4-Methyl-2-pentanone	11.524	43	1439325	267.56	ug/L		99
61) trans-1,3-Dichloropropene	11.926	75	21044	6.65	ug/L		98
62) Tetrachloroethene	11.554	166	292334	33.20	ug/L		97
63) Ethyl methacrylate	11.701	69	307851	41.67	ug/L		91
64) 1,1,2-Trichloroethane	11.701	83	195905	39.24	ug/L		99
65) Dibromochloromethane	11.859	129	248456	37.99	ug/L		99
66) 1,3-Dichloropropane	11.926	76	397819	41.36	ug/L		98
67) 1,2-Dibromoethane	12.054	107	226316	39.62	ug/L		100
68) 2-hexanone	12.207	43	1224604	265.13	ug/L		88
69) 1-Chlorohexane	12.438	91	366183	43.33	ug/L		99
70) Ethylbenzene	12.481	91	1182795	39.56	ug/L		99
71) Chlorobenzene	12.469	112	655881	38.43	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.517	131	216200	38.92	ug/L		99
73) m,p-Xylene	12.591	91	1846344	84.27	ug/L		100
74) o-Xylene	12.914	91	942734	41.67	ug/L		99
75) Styrene	12.950	104	683982	39.55	ug/L		99
76) Bromoform	12.987	173	149177	36.75	ug/L		99
77) Isopropylbenzene	13.133	105	1043689	40.25	ug/L		100
80) cis-1,4-Dichloro-2-butene	13.377	53	113292	50.37	ug/L		91
81) n-Propylbenzene	13.432	91	1393875	44.32	ug/L		100
82) Bromobenzene	13.438	156	268764	40.42	ug/L		99
83) 1,1,2,2-Tetrachloroethane	13.475	83	300838	41.11	ug/L		98
84) 1,3,5-Trimethylbenzene	13.554	105	899266	43.97	ug/L		99
85) 2-Chlorotoluene	13.670	91	847092	40.52	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.596	53	106216	49.25	ug/L	#	67
87) 1,2,3-Trichloropropane	13.578	110	82561	40.23	ug/L		98
88) Cyclohexanone	13.621	55	71672	288.10	ug/L		99
89) 4-Chlorotoluene	13.670	91	847092	42.84	ug/L		100
90) tert-Butylbenzene	13.785	91	552121	43.73	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

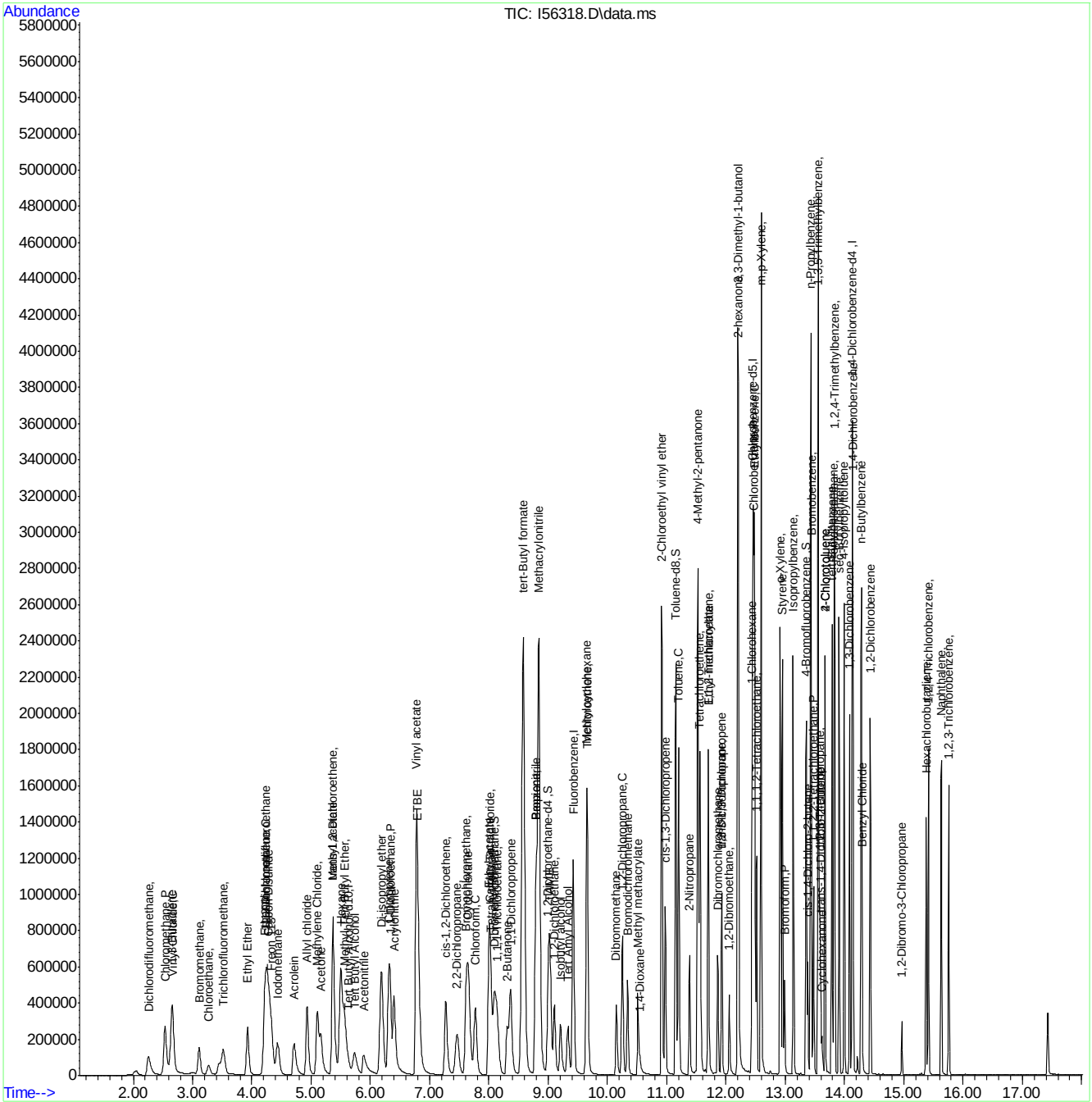
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	929216	43.76	ug/L		96
93) Pentachloroethane	13.822	167	132556	33.57	ug/L	#	86
94) sec-Butylbenzene	13.907	105	1137301	44.21	ug/L		99
95) 4-Isopropyltoluene	13.993	119	936301	44.25	ug/L		100
96) 1,3-Dichlorobenzene	14.084	146	495696	40.42	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	518535	39.40	ug/L		98
98) n-Butylbenzene	14.285	92	541621	45.53	ug/L		91
99) Benzyl Chloride	14.298	126	63928	42.86	ug/L	#	23
100) 1,2-Dichlorobenzene	14.432	146	485102	39.77	ug/L		99
101) 1,2-Dibromo-3-Chloropr...	14.968	75	49793	38.65	ug/L		86
102) Hexachlorobutadiene	15.377	225	163234	39.92	ug/L		99
103) 1,2,4-Trichlorobenzene	15.413	180	334178	39.96	ug/L		99
104) Naphthalene	15.633	128	836749	39.62	ug/L		100
105) 1,2,3-Trichlorobenzene	15.761	180	310052	38.11	ug/L		99
107) Ethanol	4.220	45	61069m	1027.33	ug/L		
108) Acrolein	4.708	56	327318	283.97	ug/L		99
109) Tert Butyl Alcohol	5.732	59	262125	394.61	ug/L		89
110) Isobutyl alcohol	9.207	43	227223	1081.02	ug/L		98
111) Tert Amyl Alcohol	9.335	59	174704	443.60	ug/L		92
112) 1,4-Dioxane	10.548	88	51803	838.89	ug/L		100
113) 3,3-Dimethyl-1-butanol	12.200	57	1518899	2684.27	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

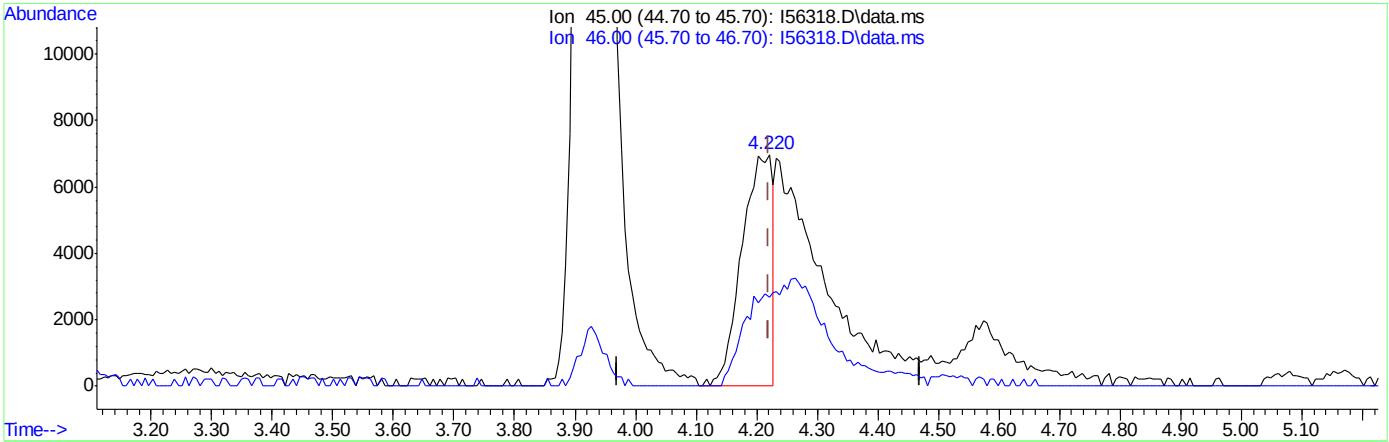
Sample Number: VI1683-ICC1683
Lab FileID: I56318.D
Injection Time: 07/25/18 16:49
Method: SW846 8260B
Analyst approved: 07/26/18 08:26 Ana Jimenez
Supervisor approved: 07/31/18 15:11 Melissa Mangual

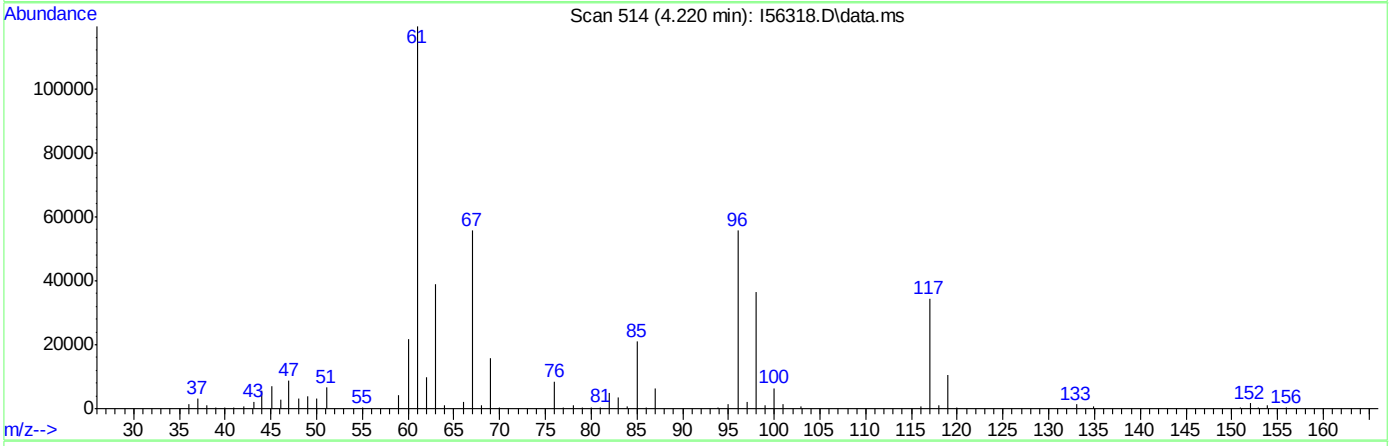
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		4.22	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:26:11 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56318.D\data.ms

(107) Ethanol

4.220min (+0.000) 408.87ug/L

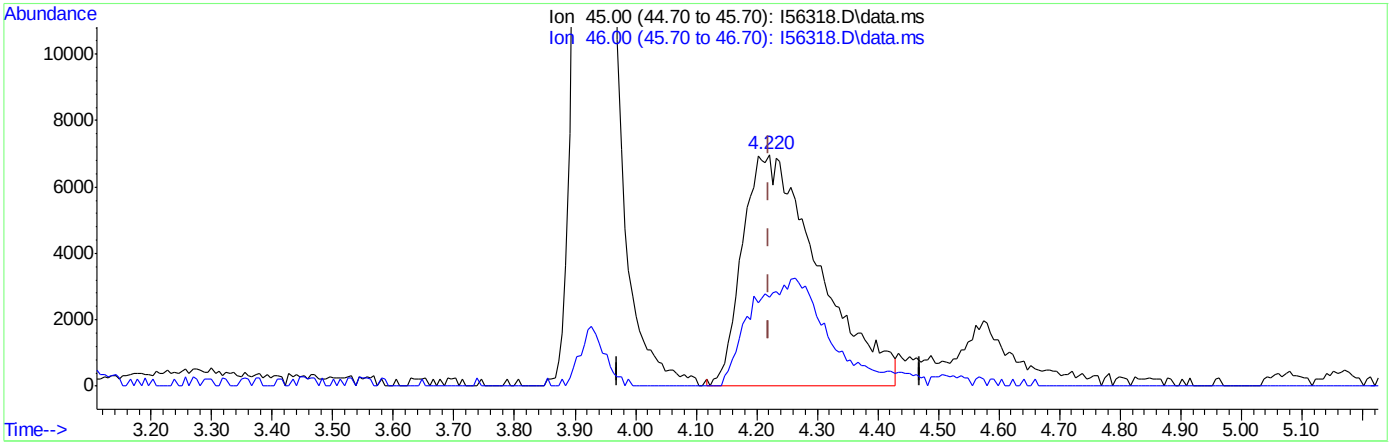
response 24305

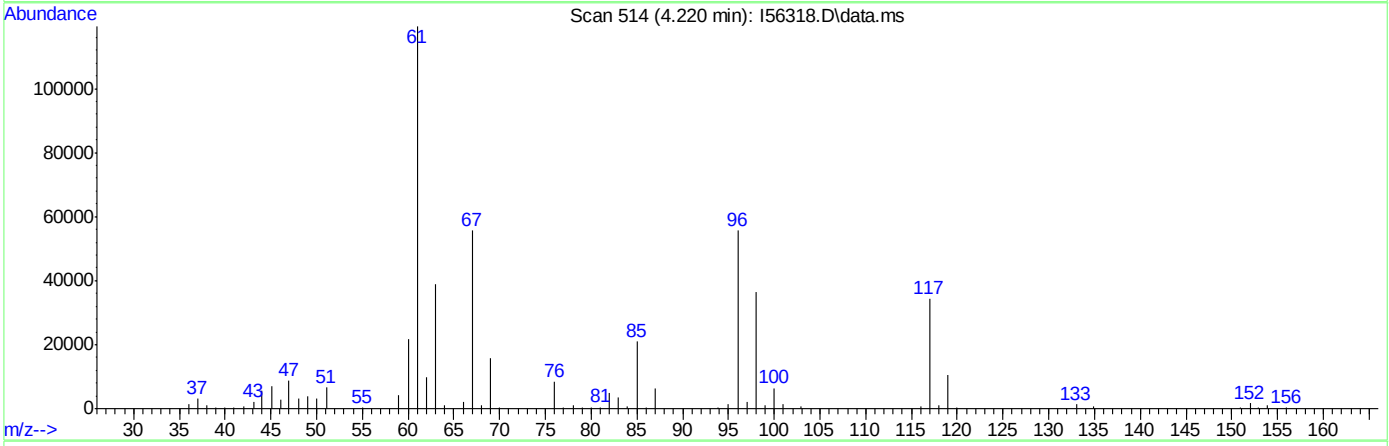
Ion	Exp%	Act%
45.00	100	100
46.00	35.80	38.35
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:26:11 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56318.D\data.ms

(107) Ethanol

4.220min (+0.000) 1027.33ug/L m

response 61069

Ion	Exp%	Act%
45.00	100	100
46.00	35.80	38.35
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56319.D
Acq On : 25 Jul 2018 5:13 pm
Operator : ANAJ
Sample : IC1683-6 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 26 07:55:30 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.420	96	1224599	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	846332	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	431455	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.629	65	104360	250.00	ug/L	0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.091	113	328966	49.17	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.34%			
46) 1,2-Dichloroethane-d4	9.000	65	433000	50.75	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.50%			
57) Toluene-d8	11.152	98	1178592	51.09	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 102.18%			
79) 4-Bromofluorobenzene	13.353	174	346477	48.85	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.70%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.245	85	478777	70.72	ug/L	99
3) Chloromethane	2.525	50	638582	105.32	ug/L	99
4) 1,3-Butadiene	2.635	39	365929	89.53	ug/L	92
5) Vinyl Chloride	2.654	62	563354	95.52	ug/L	99
6) Bromomethane	3.099	94	269900	78.00	ug/L	98
7) Chloroethane	3.263	64	120640	74.48	ug/L	99
8) Trichlorofluoromethane	3.507	101	603719	76.20	ug/L	98
9) Ethyl Ether	3.928	59	499406	82.13	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.226	67	593249	72.55	ug/L	100
11) 1,1-Dichloroethene	4.214	61	810388	74.47	ug/L	99
12) Freon 113	4.312	101	437798	66.60	ug/L	98
13) Carbon Disulfide	4.263	76	1336507	67.19	ug/L	97
14) Iodomethane	4.428	142	694313	66.20	ug/L	99
15) Allyl chloride	4.927	41	742762	101.01	ug/L	98
16) Methylene Chloride	5.098	49	775679	76.96	ug/L	99
17) Acetone	5.159	43	724826	418.16	ug/L	99
18) Methyl acetate	5.372	43	1778172	412.37	ug/L	100
19) trans-1,2-Dichloroethene	5.354	61	814355	76.42	ug/L	100
20) Hexane	5.488	56	575133	80.47	ug/L	97
21) Methyl Tert Butyl Ether	5.555	73	1031337	71.06	ug/L	93
22) Acetonitrile	5.872	41	524607	963.28	ug/L	98
23) Di-isopropyl ether	6.183	45	1842203	88.94	ug/L	99
24) Chloroprene	6.305	53	894794	84.19	ug/L	99
25) 1,1-Dichloroethane	6.336	63	955250	75.61	ug/L	99
26) Acrylonitrile	6.391	53	1081784	402.45	ug/L	99
27) ETBE	6.799	59	1527729	76.45	ug/L	99
28) Vinyl acetate	6.769	43	5972626	485.03	ug/L	82
29) cis-1,2-Dichloroethene	7.262	96	474654	72.60	ug/L	97
30) 2,2-Dichloropropane	7.457	77	461854	69.51	ug/L	97
31) Bromochloromethane	7.610	128	234260	71.10	ug/L	97
32) Cyclohexane	7.646	56	1066819	81.31	ug/L	98
33) Chloroform	7.768	83	804052	71.06	ug/L	99
34) Ethyl acetate	8.000	43	2508134	465.20	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56319.D
Acq On : 25 Jul 2018 5:13 pm
Operator : ANAJ
Sample : IC1683-6 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 26 07:55:30 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.031	42	312046	87.84	ug/L		97
37) Carbon Tetrachloride	8.018	117	513266	66.64	ug/L		99
38) 1,1,1-Trichloroethane	8.128	97	687462	70.40	ug/L		99
39) 2-Butanone	8.305	43	1099000	441.64	ug/L		100
40) 1,1-Dichloropropene	8.360	75	612051	71.45	ug/L		100
41) tert-Butyl formate	8.579	59	2186678	694.91	ug/L	#	59
42) Propionitrile	8.793	54	792266	1028.75	ug/L	#	1
43) Methacrylonitrile	8.841	41	2903377	882.81	ug/L		100
44) Benzene	8.793	78	1730232	72.92	ug/L		98
45) TAME	9.030	73	1038671	73.83	ug/L		92
47) 1,2-Dichloroethane	9.097	62	746020	72.19	ug/L		100
48) Trichloroethene	9.652	95	466943	69.26	ug/L		99
49) Methylcyclohexane	9.652	83	765287	76.59	ug/L		98
50) Dibromomethane	10.146	93	295867	70.59	ug/L		99
51) 1,2-Dichloropropane	10.250	63	574917	77.35	ug/L		98
52) Bromodichloromethane	10.335	83	594004	76.41	ug/L		99
53) Methyl methacrylate	10.512	41	427905	88.49	ug/L		99
54) 2-Chloroethyl vinyl ether	10.914	63	1820584	398.95	ug/L		99
55) cis-1,3-Dichloropropene	10.975	75	736071	71.67	ug/L		99
58) Toluene	11.201	91	1838665	72.53	ug/L		99
59) 2-Nitropropane	11.384	41	524282	409.61	ug/L		100
60) 4-Methyl-2-pentanone	11.524	43	2434277	453.08	ug/L		99
61) trans-1,3-Dichloropropene	11.926	75	35835	10.44	ug/L		94
62) Tetrachloroethene	11.554	166	455454	54.62	ug/L		99
63) Ethyl methacrylate	11.694	69	557630	73.07	ug/L		98
64) 1,1,2-Trichloroethane	11.701	83	348360	69.86	ug/L		97
65) Dibromochloromethane	11.859	129	450988	65.95	ug/L		99
66) 1,3-Dichloropropane	11.926	76	702765	73.15	ug/L		99
67) 1,2-Dibromoethane	12.054	107	402856	70.62	ug/L		100
68) 2-hexanone	12.207	43	1991904	431.79	ug/L		86
69) 1-Chlorohexane	12.438	91	639739	75.79	ug/L		97
70) Ethylbenzene	12.481	91	2127699	71.25	ug/L		100
71) Chlorobenzene	12.469	112	1167793	68.50	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.517	131	392553	70.76	ug/L		99
73) m,p-Xylene	12.591	91	3263546	149.15	ug/L		100
74) o-Xylene	12.914	91	1691717	74.87	ug/L		100
75) Styrene	12.950	104	1239350	69.89	ug/L		100
76) Bromoform	12.987	173	272167	62.63	ug/L		99
77) Isopropylbenzene	13.133	105	1871091	70.38	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.377	53	206019	83.96	ug/L		98
81) n-Propylbenzene	13.432	91	2463023	77.60	ug/L		100
82) Bromobenzene	13.438	156	480641	71.61	ug/L		100
83) 1,1,2,2-Tetrachloroethane	13.475	83	524113	70.95	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	1604360	77.73	ug/L		99
85) 2-Chlorotoluene	13.670	91	1520360	72.06	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.596	53	188173	80.85	ug/L	#	71
87) 1,2,3-Trichloropropane	13.578	110	143737	69.39	ug/L		99
88) Cyclohexanone	13.621	55	122017	485.94	ug/L		99
89) 4-Chlorotoluene	13.670	91	1520360	76.18	ug/L		100
90) tert-Butylbenzene	13.785	91	987701	77.52	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56319.D
Acq On : 25 Jul 2018 5:13 pm
Operator : ANAJ
Sample : IC1683-6 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 26 07:55:30 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

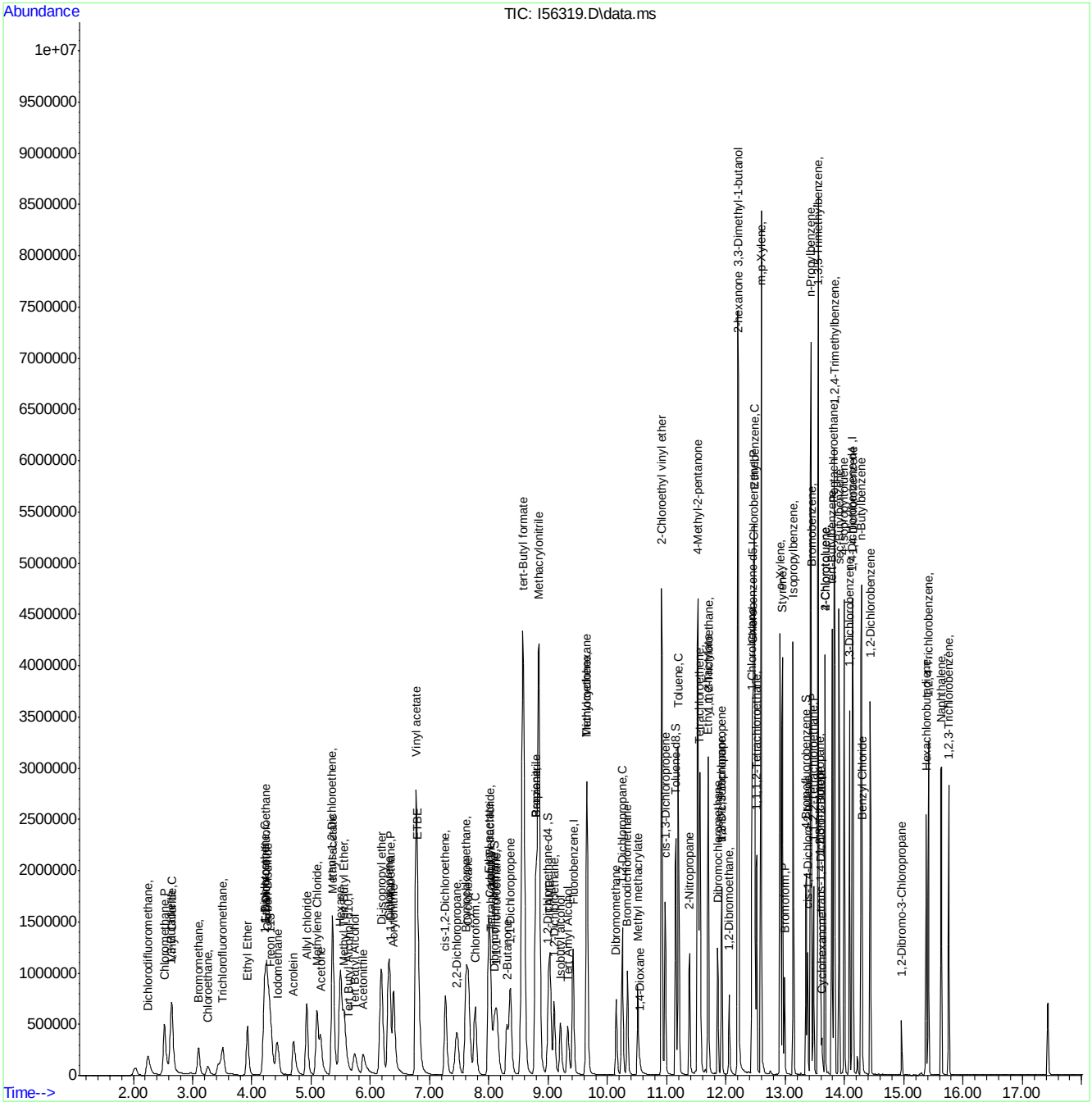
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	1661547	77.53	ug/L		95
93) Pentachloroethane	13.822	167	296615	75.14	ug/L		90
94) sec-Butylbenzene	13.907	105	2010682	77.45	ug/L		100
95) 4-Isopropyltoluene	13.993	119	1669243	78.16	ug/L		100
96) 1,3-Dichlorobenzene	14.084	146	889902	71.90	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	929666	69.98	ug/L		100
98) n-Butylbenzene	14.285	92	972263	80.98	ug/L		89
99) Benzyl Chloride	14.298	126	136916	68.59	ug/L	#	14
100) 1,2-Dichlorobenzene	14.432	146	866226	70.36	ug/L		99
101) 1,2-Dibromo-3-Chloropr...	14.962	75	90286	66.16	ug/L		98
102) Hexachlorobutadiene	15.377	225	293701	71.16	ug/L		98
103) 1,2,4-Trichlorobenzene	15.413	180	603152	71.47	ug/L		99
104) Naphthalene	15.633	128	1489773	69.90	ug/L		99
105) 1,2,3-Trichlorobenzene	15.761	180	553877	67.45	ug/L		98
107) Ethanol	4.226	45	105813	1729.38	ug/L		84
108) Acrolein	4.702	56	597961	504.01	ug/L		99
109) Tert Butyl Alcohol	5.732	59	462996	677.17	ug/L		91
110) Isobutyl alcohol	9.207	43	413139	1909.61	ug/L		99
111) Tert Amyl Alcohol	9.329	59	321485	793.08	ug/L		87
112) 1,4-Dioxane	10.542	88	92069	1467.19	ug/L		98
113) 3,3-Dimethyl-1-butanol	12.200	57	2553858	4384.89	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56319.D
Acq On : 25 Jul 2018 5:13 pm
Operator : ANAJ
Sample : IC1683-6 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 26 07:55:30 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56320.D
Acq On : 25 Jul 2018 5:36 pm
Operator : ANAJ
Sample : IC1683-7 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 26 07:55:44 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1232467	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	858751	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	436199	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.641	65	108370	250.00	ug/L	0.03
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	331321	49.21	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.42%			
46) 1,2-Dichloroethane-d4	9.000	65	436917	50.88	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.76%			
57) Toluene-d8	11.152	98	1187898	50.75	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 101.50%			
79) 4-Bromofluorobenzene	13.353	174	351289	48.99	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.98%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	707171	103.00	ug/L	97
3) Chloromethane	2.532	50	908453	148.88	ug/L	100
4) 1,3-Butadiene	2.648	39	552419	137.16	ug/L	93
5) Vinyl Chloride	2.666	62	843597	142.12	ug/L	100
6) Bromomethane	3.111	94	375809	107.91	ug/L	99
7) Chloroethane	3.263	64	169374	Below Cal		98
8) Trichlorofluoromethane	3.507	101	802507	100.64	ug/L	99
9) Ethyl Ether	3.934	59	734158	119.96	ug/L	98
10) 1,2-Dichlorotrifluoroe...	4.245	67	867100	105.36	ug/L	99
11) 1,1-Dichloroethene	4.227	61	1196010	109.21	ug/L	99
12) Freon 113	4.318	101	642357	97.10	ug/L	99
13) Carbon Disulfide	4.269	76	1995351	95.40	ug/L	98
14) Iodomethane	4.434	142	1029666	97.55	ug/L	99
15) Allyl chloride	4.928	41	1089264	147.19	ug/L	99
16) Methylene Chloride	5.104	49	1122934	110.70	ug/L	99
17) Acetone	5.171	43	1059505	653.63	ug/L	100
18) Methyl acetate	5.379	43	2628095	656.91	ug/L	99
19) trans-1,2-Dichloroethene	5.360	61	1200134	111.90	ug/L	99
20) Hexane	5.495	56	823054	114.43	ug/L	97
21) Methyl Tert Butyl Ether	5.562	73	1543794	105.68	ug/L	88
22) Acetonitrile	5.879	41	760844	2031.60	ug/L	97
23) Di-isopropyl ether	6.190	45	2693986	129.23	ug/L	99
24) Chloroprene	6.305	53	1298270	125.52	ug/L	99
25) 1,1-Dichloroethane	6.342	63	1400311	110.13	ug/L	99
26) Acrylonitrile	6.397	53	1608693	599.88	ug/L	99
27) ETBE	6.805	59	2259030	112.33	ug/L	99
28) Vinyl acetate	6.775	43	8609915	606.07	ug/L	82
29) cis-1,2-Dichloroethene	7.269	96	706773	107.42	ug/L	98
30) 2,2-Dichloropropane	7.464	77	701077	91.18	ug/L	99
31) Bromochloromethane	7.610	128	344761	103.97	ug/L	97
32) Cyclohexane	7.653	56	1566277	118.62	ug/L	98
33) Chloroform	7.769	83	1179958	103.62	ug/L	98
34) Ethyl acetate	8.006	43	3663144	741.04	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56320.D
Acq On : 25 Jul 2018 5:36 pm
Operator : ANAJ
Sample : IC1683-7 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 26 07:55:44 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.037	42	450535	134.38	ug/L		95
37) Carbon Tetrachloride	8.025	117	764304	98.60	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	1021781	103.97	ug/L		98
39) 2-Butanone	8.305	43	1624568	697.10	ug/L		100
40) 1,1-Dichloropropene	8.360	75	896617	101.90	ug/L		99
41) tert-Butyl formate	8.585	59	3518374	921.93	ug/L	#	51
42) Propionitrile	8.799	54	1145494	1477.92	ug/L	#	1
43) Methacrylonitrile	8.848	41	4101548	1239.16	ug/L		100
44) Benzene	8.799	78	2529606	105.92	ug/L		99
45) TAME	9.030	73	1558344	110.07	ug/L		89
47) 1,2-Dichloroethane	9.104	62	1079954	103.83	ug/L		100
48) Trichloroethene	9.658	95	679644	100.17	ug/L		100
49) Methylcyclohexane	9.652	83	1129016	112.27	ug/L		100
50) Dibromomethane	10.146	93	433432	102.75	ug/L		98
51) 1,2-Dichloropropane	10.250	63	833327	111.40	ug/L		99
52) Bromodichloromethane	10.341	83	872487	111.52	ug/L		99
53) Methyl methacrylate	10.512	41	628034	132.38	ug/L		98
54) 2-Chloroethyl vinyl ether	10.920	63	2574820	646.50	ug/L		97
55) cis-1,3-Dichloropropene	10.975	75	1091557	100.76	ug/L		100
58) Toluene	11.201	91	2687927	104.49	ug/L		99
59) 2-Nitropropane	11.384	41	781511	572.43	ug/L		99
60) 4-Methyl-2-pentanone	11.524	43	3451137	633.05	ug/L		98
61) trans-1,3-Dichloropropene	11.926	75	53831	14.30	ug/L		98
62) Tetrachloroethene	11.554	166	665687	85.38	ug/L		99
63) Ethyl methacrylate	11.695	69	826075	103.37	ug/L		95
64) 1,1,2-Trichloroethane	11.701	83	506205	100.05	ug/L		98
65) Dibromochloromethane	11.859	129	667147	92.25	ug/L		98
66) 1,3-Dichloropropane	11.926	76	1026474	105.30	ug/L		99
67) 1,2-Dibromoethane	12.054	107	598015	103.31	ug/L		99
68) 2-hexanone	12.207	43	2739987	585.37	ug/L	#	75
69) 1-Chlorohexane	12.444	91	968975	113.13	ug/L		87
70) Ethylbenzene	12.481	91	3042980	100.43	ug/L		100
71) Chlorobenzene	12.469	112	1702800	98.44	ug/L		98
72) 1,1,1,2-Tetrachloroethane	12.518	131	582940	103.56	ug/L		99
73) m,p-Xylene	12.591	91	4678317	210.71	ug/L		99
74) o-Xylene	12.914	91	2481112	108.22	ug/L		99
75) Styrene	12.950	104	1823224	98.88	ug/L		99
76) Bromoform	12.987	173	409499	87.29	ug/L		98
77) Isopropylbenzene	13.133	105	2718592	98.41	ug/L		100
80) cis-1,4-Dichloro-2-butene	13.377	53	299940	113.46	ug/L		98
81) n-Propylbenzene	13.432	91	3550764	110.65	ug/L		100
82) Bromobenzene	13.438	156	697657	102.82	ug/L		100
83) 1,1,2,2-Tetrachloroethane	13.475	83	764362	102.35	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	2313858	110.88	ug/L		99
85) 2-Chlorotoluene	13.670	91	2215879	103.88	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.597	53	277072	110.92	ug/L	#	72
87) 1,2,3-Trichloropropane	13.578	110	208803	99.70	ug/L		99
88) Cyclohexanone	13.621	55	171147	674.19	ug/L		98
89) 4-Chlorotoluene	13.670	91	2215879	109.82	ug/L		100
90) tert-Butylbenzene	13.786	91	1439893	111.78	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56320.D
Acq On : 25 Jul 2018 5:36 pm
Operator : ANAJ
Sample : IC1683-7 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 26 07:55:44 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

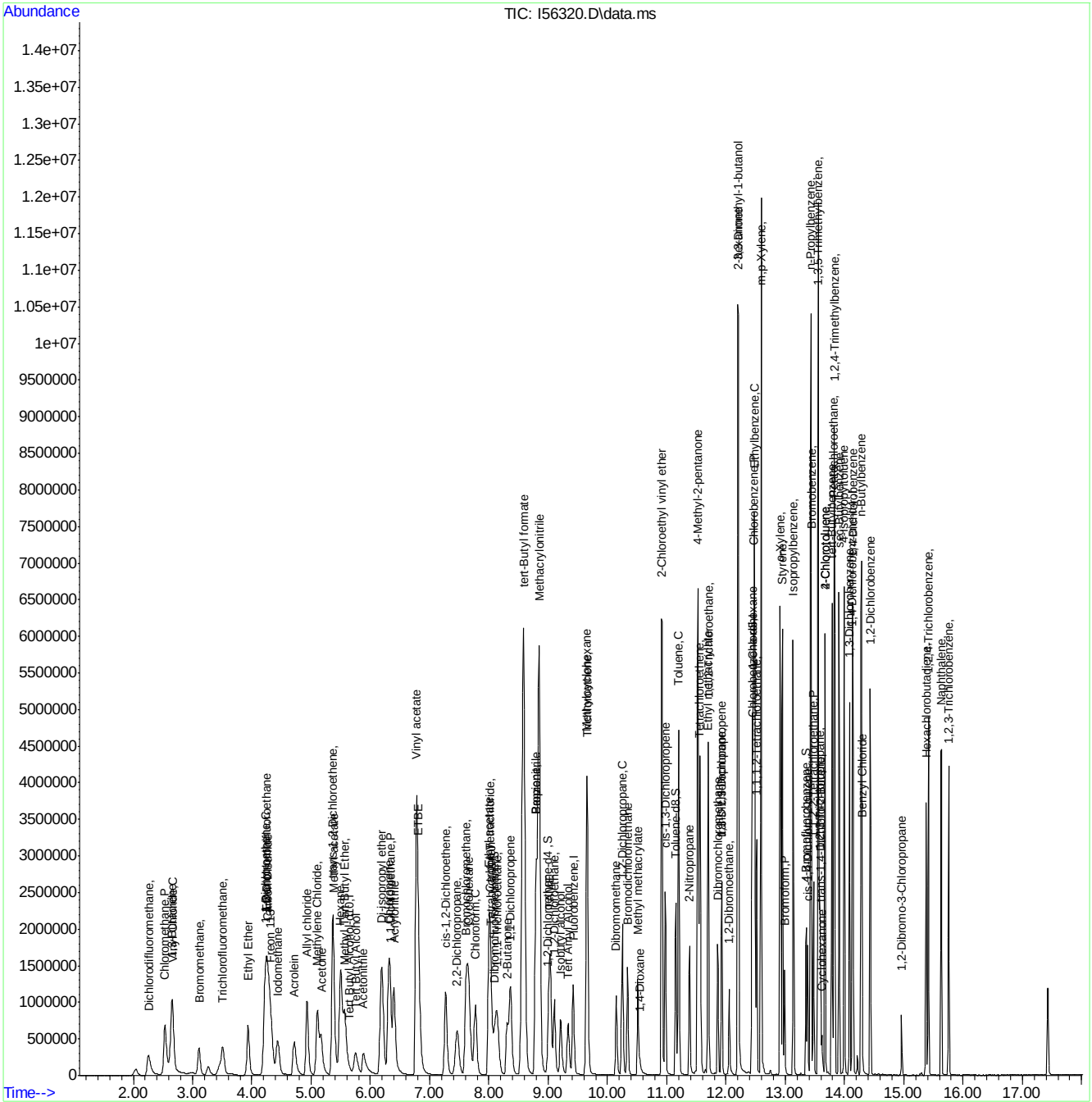
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	2418470	111.63	ug/L		95
93) Pentachloroethane	13.822	167	436498	110.27	ug/L		91
94) sec-Butylbenzene	13.908	105	2934202	111.79	ug/L		100
95) 4-Isopropyltoluene	13.993	119	2452650	113.59	ug/L		99
96) 1,3-Dichlorobenzene	14.084	146	1304168	104.22	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	1357681	101.09	ug/L		99
98) n-Butylbenzene	14.286	92	1437223	118.41	ug/L		86
99) Benzyl Chloride	14.298	126	214134	88.88	ug/L	#	11
100) 1,2-Dichlorobenzene	14.432	146	1268430	101.90	ug/L		99
101) 1,2-Dibromo-3-Chloropr...	14.962	75	135864	94.00	ug/L		97
102) Hexachlorobutadiene	15.377	225	444555	106.54	ug/L		97
103) 1,2,4-Trichlorobenzene	15.413	180	900091	105.49	ug/L		99
104) Naphthalene	15.633	128	2206265	102.39	ug/L		99
105) 1,2,3-Trichlorobenzene	15.761	180	827018	99.62	ug/L		99
107) Ethanol	4.251	45	157460	2478.27	ug/L		76
108) Acrolein	4.714	56	865143	702.23	ug/L		99
109) Tert Butyl Alcohol	5.751	59	702491	989.44	ug/L		87
110) Isobutyl alcohol	9.207	43	616018	2741.99	ug/L		98
111) Tert Amyl Alcohol	9.335	59	502512	1193.79	ug/L		82
112) 1,4-Dioxane	10.542	88	135779	2111.55	ug/L		96
113) 3,3-Dimethyl-1-butanol	12.201	57	3645623	6027.80	ug/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56320.D
Acq On : 25 Jul 2018 5:36 pm
Operator : ANAJ
Sample : IC1683-7 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 26 07:55:44 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56322.D
Acq On : 25 Jul 2018 6:24 pm
Operator : ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 26 08:16:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1242489	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	877903	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	445362	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.617	65	107505	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	327577	49.94	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.88%			
46) 1,2-Dichloroethane-d4	8.994	65	438822	49.47	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 98.94%			
57) Toluene-d8	11.152	98	1207197	49.83	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.66%			
79) 4-Bromofluorobenzene	13.353	174	355689	50.57	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.14%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.251	85	294585	41.63	ug/L	98
3) Chloromethane	2.526	50	348861	35.91	ug/L	99
4) 1,3-Butadiene	2.635	39	178528	34.07	ug/L	100
5) Vinyl Chloride	2.660	62	317837	38.90	ug/L	100
6) Bromomethane	3.099	94	170621	39.88	ug/L	99
7) Chloroethane	3.257	64	76077	32.09	ug/L	96
8) Trichlorofluoromethane	3.507	101	386725	41.20	ug/L	100
9) Ethyl Ether	3.922	59	295338	40.80	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.233	67	351269	40.41	ug/L	98
11) 1,1-Dichloroethene	4.214	61	487365	41.93	ug/L	99
12) Freon 113	4.312	101	234919	36.19	ug/L	98
13) Carbon Disulfide	4.257	76	812538	44.10	ug/L	100
14) Iodomethane	4.422	142	406797	40.86	ug/L	99
15) Allyl chloride	4.922	41	400834	40.11	ug/L	99
16) Methylene Chloride	5.098	49	476113	41.56	ug/L	99
17) Acetone	5.159	43	417475	202.38	ug/L	99
18) Methyl acetate	5.367	43	1054675	206.88	ug/L	100
19) trans-1,2-Dichloroethene	5.354	61	473951	41.38	ug/L	100
20) Hexane	5.495	56	337981	38.47	ug/L	97
21) Methyl Tert Butyl Ether	5.549	73	618137	43.39	ug/L	98
22) Acetonitrile	5.885	41	313270	441.17	ug/L	97
23) Di-isopropyl ether	6.177	45	1092178	42.67	ug/L	99
24) Chloroprene	6.305	53	481281	40.86	ug/L	98
25) 1,1-Dichloroethane	6.336	63	580119	42.05	ug/L	98
26) Acrylonitrile	6.391	53	621391	205.47	ug/L	100
27) ETBE	6.799	59	924736	44.80	ug/L	99
28) Vinyl acetate	6.769	43	3241476	194.77	ug/L	100
29) cis-1,2-Dichloroethene	7.263	96	277497	42.02	ug/L	100
30) 2,2-Dichloropropane	7.452	77	257056	43.81	ug/L	98
31) Bromochloromethane	7.610	128	134427	41.76	ug/L	94
32) Cyclohexane	7.647	56	628227	41.07	ug/L	99
33) Chloroform	7.762	83	471687	39.71	ug/L	99
34) Ethyl acetate	8.000	43	1453732	202.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56322.D
Acq On : 25 Jul 2018 6:24 pm
Operator : ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 26 08:16:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) Tetrahydrofuran	8.031	42	185588	43.00	ug/L	97
37) Carbon Tetrachloride	8.018	117	275699	38.57	ug/L	99
38) 1,1,1-Trichloroethane	8.128	97	384959	40.27	ug/L	99
39) 2-Butanone	8.305	43	658339	209.89	ug/L	100
40) 1,1-Dichloropropene	8.360	75	355841	42.03	ug/L	98
41) tert-Butyl formate	8.573	59	757194	296.14	ug/L	96
42) Propionitrile	8.793	54	463846	427.02	ug/L	95
43) Methacrylonitrile	8.835	41	1750209	411.39	ug/L	100
44) Benzene	8.793	78	1023642	40.46	ug/L	99
45) TAME	9.024	73	604203	43.82	ug/L	98
47) 1,2-Dichloroethane	9.104	62	438151	40.09	ug/L	99
48) Trichloroethene	9.658	95	271719	40.67	ug/L	98
49) Methylcyclohexane	9.652	83	457891	41.88	ug/L	99
50) Dibromomethane	10.146	93	173646	42.03	ug/L	99
51) 1,2-Dichloropropane	10.250	63	339735	42.02	ug/L	99
52) Bromodichloromethane	10.335	83	343984	42.88	ug/L	99
53) Methyl methacrylate	10.512	41	234100	39.89	ug/L	99
54) 2-Chloroethyl vinyl ether	10.914	63	1125015	235.89	ug/L	100
55) cis-1,3-Dichloropropene	10.975	75	405251	39.54	ug/L	99
58) Toluene	11.201	91	1090858	40.23	ug/L	100
59) 2-Nitropropane	11.384	41	264269	178.79	ug/L	100
60) 4-Methyl-2-pentanone	11.524	43	1525686	210.48	ug/L	99
61) trans-1,3-Dichloropropene	11.926	75	22728	42.73	ug/L	96
62) Tetrachloroethene	11.554	166	273646	39.15	ug/L	98
63) Ethyl methacrylate	11.701	69	326019	41.23	ug/L	99
64) 1,1,2-Trichloroethane	11.701	83	213172	41.90	ug/L	99
65) Dibromochloromethane	11.859	129	263760	43.72	ug/L	100
66) 1,3-Dichloropropane	11.926	76	412281	40.29	ug/L	99
67) 1,2-Dibromoethane	12.054	107	239989	42.81	ug/L	100
68) 2-hexanone	12.207	43	1254491	208.79	ug/L	95
69) 1-Chlorohexane	12.438	91	385550	41.44	ug/L	98
70) Ethylbenzene	12.481	91	1257384	40.54	ug/L	99
71) Chlorobenzene	12.469	112	700795	39.72	ug/L	99
72) 1,1,1,2-Tetrachloroethane	12.518	131	224787	41.33	ug/L	99
73) m,p-Xylene	12.591	91	1968051	83.31	ug/L	100
74) o-Xylene	12.914	91	1012204	42.73	ug/L	99
75) Styrene	12.950	104	742335	44.59	ug/L	99
76) Bromoform	12.987	173	156265	40.60	ug/L	99
77) Isopropylbenzene	13.133	105	1167078	44.71	ug/L	100
80) cis-1,4-Dichloro-2-butene	13.377	53	108376	39.56	ug/L	96
81) n-Propylbenzene	13.432	91	1477044	41.43	ug/L	100
82) Bromobenzene	13.438	156	288838	41.81	ug/L	98
83) 1,1,2,2-Tetrachloroethane	13.475	83	332841	42.77	ug/L	99
84) 1,3,5-Trimethylbenzene	13.554	105	971531	43.24	ug/L	100
85) 2-Chlorotoluene	13.670	91	909011	41.96	ug/L	100
86) trans-1,4-Dichloro-2-B...	13.597	53	101595	40.03	ug/L	100
87) 1,2,3-Trichloropropane	13.578	110	88474	42.21	ug/L	98
88) Cyclohexanone	13.621	55	57595	172.45	ug/L	98
89) 4-Chlorotoluene	13.670	91	909011	41.96	ug/L	99
90) tert-Butylbenzene	13.786	91	581012	41.78	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56322.D
Acq On : 25 Jul 2018 6:24 pm
Operator : ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 26 08:16:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

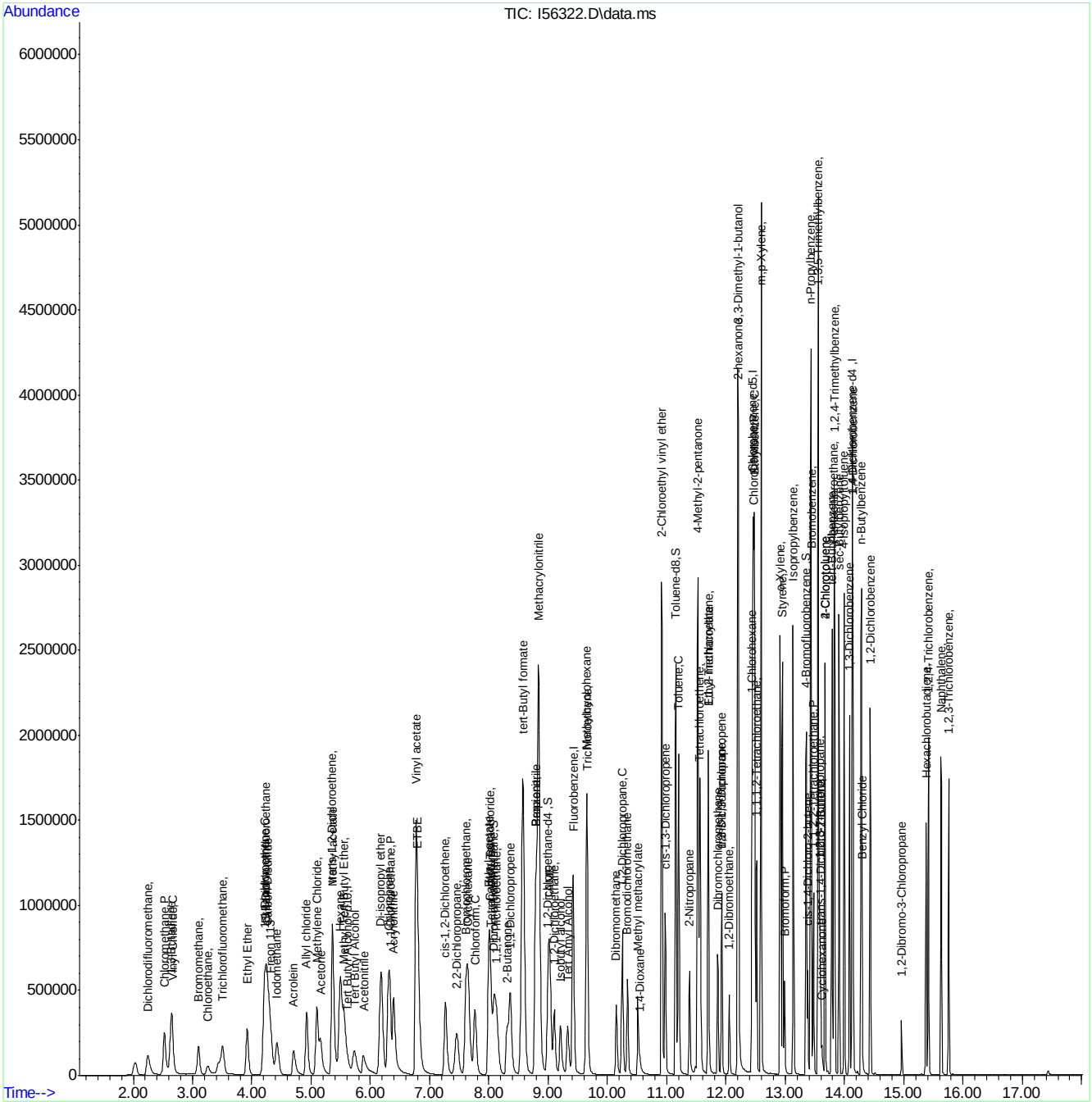
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	970686	41.77	ug/L	100
93) Pentachloroethane	13.822	167	151026	39.86	ug/L	98
94) sec-Butylbenzene	13.908	105	1207326	42.09	ug/L	99
95) 4-Isopropyltoluene	13.993	119	1012141	43.53	ug/L	99
96) 1,3-Dichlorobenzene	14.084	146	542908	42.33	ug/L	100
97) 1,4-Dichlorobenzene	14.139	146	558805	40.03	ug/L	98
98) n-Butylbenzene	14.286	92	584452	43.65	ug/L	98
99) Benzyl Chloride	14.298	126	66339	39.16	ug/L	97
100) 1,2-Dichlorobenzene	14.432	146	516357	41.34	ug/L	99
101) 1,2-Dibromo-3-Chloropr...	14.962	75	51874	40.58	ug/L	85
102) Hexachlorobutadiene	15.377	225	175673	42.34	ug/L	98
103) 1,2,4-Trichlorobenzene	15.413	180	363080	43.80	ug/L	99
104) Naphthalene	15.627	128	901875	41.94	ug/L	100
105) 1,2,3-Trichlorobenzene	15.755	180	333802	42.94	ug/L	95
107) Ethanol	4.227	45	65250	819.00	ug/L	92
108) Acrolein	4.702	56	266623	151.69	ug/L	99
109) Tert Butyl Alcohol	5.732	59	316687	459.63	ug/L	98
110) Isobutyl alcohol	9.207	43	240694	845.07	ug/L	99
111) Tert Amyl Alcohol	9.329	59	191455	416.24	ug/L	98
112) 1,4-Dioxane	10.548	88	56767	823.33	ug/L	97
113) 3,3-Dimethyl-1-butanol	12.201	57	1495112	2039.66	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56322.D
Acq On : 25 Jul 2018 6:24 pm
Operator : ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 26 08:16:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56356.D
Acq On : 27 Jul 2018 8:49 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 27 09:16:46 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1141426	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	807815	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	414777	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.616	65	92605	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.085	113	304141	50.47	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.94%			
46) 1,2-Dichloroethane-d4	9.000	65	408571	50.14	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 100.28%			
57) Toluene-d8	11.152	98	1100606	49.37	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.74%			
79) 4-Bromofluorobenzene	13.353	174	328270	50.11	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.22%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.251	85	247252	38.04	ug/L	100
3) Chloromethane	2.532	50	334030	37.43	ug/L	99
4) 1,3-Butadiene	2.641	39	179901	37.38	ug/L	99
5) Vinyl Chloride	2.666	62	295258	39.33	ug/L	99
6) Bromomethane	3.111	94	146542	37.29	ug/L	99
7) Chloroethane	3.269	64	76999	36.52	ug/L	95
8) Trichlorofluoromethane	3.513	101	332777	38.59	ug/L	100
9) Ethyl Ether	3.922	59	268605	40.39	ug/L	98
10) 1,2-Dichlorotrifluoroe...	4.239	67	327337	40.99	ug/L	99
11) 1,1-Dichloroethene	4.220	61	437737	41.00	ug/L	99
12) Freon 113	4.312	101	242637	40.69	ug/L	98
13) Carbon Disulfide	4.269	76	708970	41.89	ug/L	98
14) Iodomethane	4.428	142	366461	40.07	ug/L	100
15) Allyl chloride	4.928	41	379463	41.33	ug/L	98
16) Methylene Chloride	5.098	49	434373	41.27	ug/L	99
17) Acetone	5.159	43	412243	217.54	ug/L	98
18) Methyl acetate	5.373	43	958368	204.69	ug/L	99
19) trans-1,2-Dichloroethene	5.354	61	435435	41.38	ug/L	99
20) Hexane	5.495	56	322301	39.94	ug/L	99
21) Methyl Tert Butyl Ether	5.555	73	533886	40.80	ug/L	95
22) Acetonitrile	5.885	41	296497	454.52	ug/L	99
23) Di-isopropyl ether	6.183	45	982385	41.78	ug/L	99
24) Chloroprene	6.305	53	444893	41.11	ug/L	98
25) 1,1-Dichloroethane	6.336	63	510852	40.30	ug/L	100
26) Acrylonitrile	6.391	53	569700	205.08	ug/L	100
27) ETBE	6.799	59	830624	43.81	ug/L	99
28) Vinyl acetate	6.775	43	3150263	205.70	ug/L	100
29) cis-1,2-Dichloroethene	7.262	96	247541	40.80	ug/L	98
30) 2,2-Dichloropropane	7.458	77	242059	44.91	ug/L	100
31) Bromochloromethane	7.610	128	123596	41.80	ug/L	99
32) Cyclohexane	7.647	56	587310	41.80	ug/L	97
33) Chloroform	7.768	83	423122	38.78	ug/L	95
34) Ethyl acetate	8.000	43	1344336	203.31	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56356.D
Acq On : 27 Jul 2018 8:49 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 27 09:16:46 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.031	42	171405	43.23	ug/L		95
37) Carbon Tetrachloride	8.018	117	272582	41.51	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	363691	41.41	ug/L		99
39) 2-Butanone	8.305	43	590041	204.93	ug/L		98
40) 1,1-Dichloropropene	8.360	75	321138	41.29	ug/L		98
41) tert-Butyl formate	8.573	59	1209775	469.64	ug/L		91
42) Propionitrile	8.793	54	435766	436.69	ug/L		98
43) Methacrylonitrile	8.835	41	1645794	421.09	ug/L		99
44) Benzene	8.793	78	917721	39.49	ug/L		98
45) TAME	9.030	73	543037	42.87	ug/L		99
47) 1,2-Dichloroethane	9.104	62	397344	39.58	ug/L		99
48) Trichloroethene	9.658	95	244755	39.88	ug/L		99
49) Methylcyclohexane	9.652	83	409928	40.81	ug/L		99
50) Dibromomethane	10.146	93	157380	41.47	ug/L		97
51) 1,2-Dichloropropane	10.250	63	303283	40.83	ug/L		98
52) Bromodichloromethane	10.341	83	307266	41.69	ug/L		99
53) Methyl methacrylate	10.512	41	216974	40.22	ug/L		98
54) 2-Chloroethyl vinyl ether	10.914	63	978934	223.43	ug/L		99
55) cis-1,3-Dichloropropene	10.975	75	382597	40.58	ug/L		100
58) Toluene	11.201	91	984196	39.45	ug/L		100
59) 2-Nitropropane	11.384	41	274654	200.79	ug/L		99
60) 4-Methyl-2-pentanone	11.524	43	1402599	210.29	ug/L		99
61) trans-1,3-Dichloropropene	11.926	75	20714	42.32	ug/L	#	87
62) Tetrachloroethene	11.554	166	250720	38.99	ug/L		99
63) Ethyl methacrylate	11.695	69	283494	39.06	ug/L		89
64) 1,1,2-Trichloroethane	11.701	83	191114	40.82	ug/L		98
65) Dibromochloromethane	11.859	129	236993	42.69	ug/L		100
66) 1,3-Dichloropropane	11.926	76	381623	40.53	ug/L		99
67) 1,2-Dibromoethane	12.054	107	216471	41.97	ug/L		99
68) 2-hexanone	12.207	43	1169548	211.54	ug/L		91
69) 1-Chlorohexane	12.438	91	338272	39.51	ug/L		98
70) Ethylbenzene	12.481	91	1143318	40.06	ug/L		99
71) Chlorobenzene	12.469	112	634704	39.10	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.518	131	205580	41.08	ug/L		98
73) m,p-Xylene	12.591	91	1763126	81.11	ug/L		99
74) o-Xylene	12.914	91	900083	41.29	ug/L		100
75) Styrene	12.950	104	650816	42.49	ug/L		100
76) Bromoform	12.987	173	142322	40.21	ug/L		99
77) Isopropylbenzene	13.133	105	997328	41.52	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.377	53	109594	42.95	ug/L		96
81) n-Propylbenzene	13.426	91	1352802	40.74	ug/L		96
82) Bromobenzene	13.438	156	259813	40.38	ug/L		99
83) 1,1,2,2-Tetrachloroethane	13.475	83	289613	39.96	ug/L		97
84) 1,3,5-Trimethylbenzene	13.554	105	865165	41.34	ug/L		99
85) 2-Chlorotoluene	13.670	91	813166	40.31	ug/L		99
86) trans-1,4-Dichloro-2-B...	13.591	53	104003	44.00	ug/L	#	75
87) 1,2,3-Trichloropropane	13.578	110	79116	40.52	ug/L		98
88) Cyclohexanone	13.621	55	71525	229.95	ug/L		99
89) 4-Chlorotoluene	13.670	91	813166	40.31	ug/L		99
90) tert-Butylbenzene	13.786	91	527311	40.71	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56356.D
Acq On : 27 Jul 2018 8:49 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 27 09:16:46 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

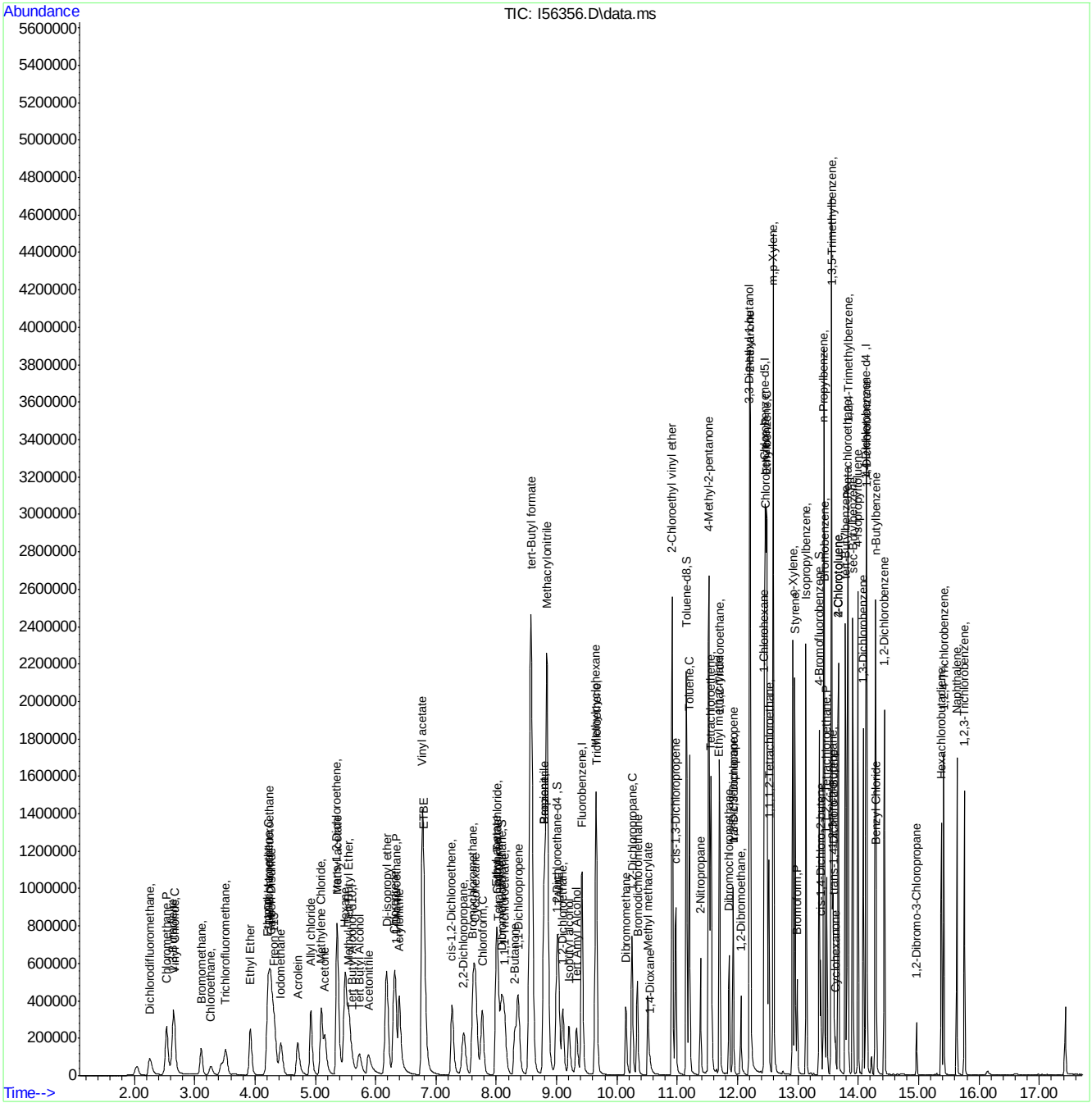
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	894495	41.33	ug/L		100
93) Pentachloroethane	13.822	167	143807	40.65	ug/L		98
94) sec-Butylbenzene	13.908	105	1091655	40.86	ug/L		99
95) 4-Isopropyltoluene	13.993	119	899259	41.52	ug/L		100
96) 1,3-Dichlorobenzene	14.084	146	477828	40.00	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	502027	38.61	ug/L		99
98) n-Butylbenzene	14.285	92	525049	42.11	ug/L		98
99) Benzyl Chloride	14.298	126	65750	41.24	ug/L	#	91
100) 1,2-Dichlorobenzene	14.432	146	464188	39.90	ug/L		99
101) 1,2-Dibromo-3-Chloropr...	14.962	75	47022	39.55	ug/L		82
102) Hexachlorobutadiene	15.377	225	154495	39.98	ug/L		99
103) 1,2,4-Trichlorobenzene	15.413	180	319448	41.38	ug/L		99
104) Naphthalene	15.633	128	796034	39.82	ug/L		100
105) 1,2,3-Trichlorobenzene	15.761	180	297595	41.10	ug/L		100
107) Ethanol	4.214	45	58605	854.53	ug/L		93
108) Acrolein	4.708	56	319211	211.56	ug/L		99
109) Tert Butyl Alcohol	5.732	59	241341	406.63	ug/L		95
110) Isobutyl alcohol	9.207	43	213711	871.06	ug/L		100
111) Tert Amyl Alcohol	9.329	59	164819	416.00	ug/L		99
112) 1,4-Dioxane	10.548	88	49132	827.32	ug/L		96
113) 3,3-Dimethyl-1-butanol	12.194	57	1395605	2210.25	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56356.D
Acq On : 27 Jul 2018 8:49 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40895,VI1685,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 27 09:16:46 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56376.D
Acq On : 27 Jul 2018 8:08 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 30 06:51:43 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1141769	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	805903	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	413011	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.623	65	94281	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	306404	50.83	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.66%			
46) 1,2-Dichloroethane-d4	9.000	65	414865	50.90	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.80%			
57) Toluene-d8	11.152	98	1099861	49.46	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.92%			
79) 4-Bromofluorobenzene	13.353	174	322175	49.39	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.78%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	237394	36.51	ug/L	97
3) Chloromethane	2.532	50	314868	35.27	ug/L	99
4) 1,3-Butadiene	2.641	39	174159	36.17	ug/L	98
5) Vinyl Chloride	2.660	62	284685	37.91	ug/L	98
6) Bromomethane	3.111	94	139549	35.50	ug/L	98
7) Chloroethane	3.269	64	74577	34.95	ug/L	95
8) Trichlorofluoromethane	3.507	101	350110	40.58	ug/L	96
9) Ethyl Ether	3.928	59	262777	39.50	ug/L	97
10) 1,2-Dichlorotrifluoroe...	4.239	67	316928	39.67	ug/L	98
11) 1,1-Dichloroethene	4.220	61	419819	39.31	ug/L	99
12) Freon 113	4.324	101	231824	38.87	ug/L	99
13) Carbon Disulfide	4.269	76	681988	40.28	ug/L	98
14) Iodomethane	4.428	142	354236	38.72	ug/L	98
15) Allyl chloride	4.928	41	374718	40.80	ug/L	97
16) Methylene Chloride	5.104	49	439867	41.78	ug/L	97
17) Acetone	5.165	43	402155	212.15	ug/L	99
18) Methyl acetate	5.373	43	969856	207.02	ug/L	99
19) trans-1,2-Dichloroethene	5.360	61	430439	40.89	ug/L	99
20) Hexane	5.501	56	312921	38.76	ug/L	98
21) Methyl Tert Butyl Ether	5.556	73	522486	39.91	ug/L	91
22) Acetonitrile	5.885	41	300375	460.33	ug/L	98
23) Di-isopropyl ether	6.183	45	982083	41.75	ug/L	99
24) Chloroprene	6.305	53	452199	41.77	ug/L	97
25) 1,1-Dichloroethane	6.336	63	513149	40.47	ug/L	98
26) Acrylonitrile	6.397	53	581322	208.99	ug/L	99
27) ETBE	6.799	59	817519	43.10	ug/L	99
28) Vinyl acetate	6.775	43	3190146	208.16	ug/L	99
29) cis-1,2-Dichloroethene	7.269	96	247682	40.81	ug/L	96
30) 2,2-Dichloropropane	7.464	77	220753	40.94	ug/L	99
31) Bromochloromethane	7.610	128	122603	41.45	ug/L	96
32) Cyclohexane	7.653	56	569898	40.55	ug/L	99
33) Chloroform	7.769	83	422863	38.74	ug/L	97
34) Ethyl acetate	8.000	43	1377493	208.18	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56376.D
Acq On : 27 Jul 2018 8:08 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 30 06:51:43 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) Tetrahydrofuran	8.037	42	174884	44.09	ug/L	96
37) Carbon Tetrachloride	8.025	117	250285	38.10	ug/L	99
38) 1,1,1-Trichloroethane	8.134	97	351314	39.99	ug/L	97
39) 2-Butanone	8.305	43	594109	206.24	ug/L	98
40) 1,1-Dichloropropene	8.366	75	315443	40.54	ug/L	98
41) tert-Butyl formate	8.579	59	1176515	459.06	ug/L	91
42) Propionitrile	8.793	54	442986	443.79	ug/L	99
43) Methacrylonitrile	8.841	41	1677368	429.04	ug/L	99
44) Benzene	8.799	78	919404	39.55	ug/L	97
45) TAME	9.030	73	529591	41.80	ug/L	96
47) 1,2-Dichloroethane	9.104	62	402663	40.10	ug/L	99
48) Trichloroethene	9.658	95	247410	40.30	ug/L	98
49) Methylcyclohexane	9.652	83	394213	39.24	ug/L	98
50) Dibromomethane	10.146	93	155124	40.86	ug/L	98
51) 1,2-Dichloropropane	10.250	63	305540	41.12	ug/L	97
52) Bromodichloromethane	10.341	83	297997	40.42	ug/L	99
53) Methyl methacrylate	10.512	41	215918	40.03	ug/L	97
54) 2-Chloroethyl vinyl ether	10.914	63	979035	223.39	ug/L	98
55) cis-1,3-Dichloropropene	10.975	75	366672	38.96	ug/L	98
58) Toluene	11.201	91	975655	39.20	ug/L	99
59) 2-Nitropropane	11.384	41	245924	181.13	ug/L	99
60) 4-Methyl-2-pentanone	11.524	43	1421538	213.63	ug/L	98
61) trans-1,3-Dichloropropene	11.926	75	21128	43.27	ug/L	91
62) Tetrachloroethene	11.554	166	258816	40.34	ug/L	99
63) Ethyl methacrylate	11.701	69	281181	38.85	ug/L	97
64) 1,1,2-Trichloroethane	11.701	83	191115	40.92	ug/L	98
65) Dibromochloromethane	11.859	129	225857	40.78	ug/L	100
66) 1,3-Dichloropropane	11.926	76	379410	40.39	ug/L	97
67) 1,2-Dibromoethane	12.054	107	213932	41.57	ug/L	100
68) 2-hexanone	12.207	43	1197491	217.11	ug/L	95
69) 1-Chlorohexane	12.438	91	340116	39.82	ug/L	96
70) Ethylbenzene	12.481	91	1118767	39.30	ug/L	99
71) Chlorobenzene	12.469	112	626577	38.69	ug/L	99
72) 1,1,1,2-Tetrachloroethane	12.518	131	197011	39.46	ug/L	98
73) m,p-Xylene	12.591	91	1747729	80.59	ug/L	100
74) o-Xylene	12.914	91	895503	41.18	ug/L	99
75) Styrene	12.950	104	648048	42.41	ug/L	99
76) Bromoform	12.987	173	132154	37.58	ug/L	99
77) Isopropylbenzene	13.133	105	986191	41.15	ug/L	100
80) cis-1,4-Dichloro-2-butene	13.377	53	105159	41.39	ug/L	95
81) n-Propylbenzene	13.432	91	1335117	40.38	ug/L	100
82) Bromobenzene	13.438	156	255515	39.88	ug/L	98
83) 1,1,2,2-Tetrachloroethane	13.475	83	287600	39.85	ug/L	98
84) 1,3,5-Trimethylbenzene	13.554	105	854181	40.99	ug/L	99
85) 2-Chlorotoluene	13.670	91	809644	40.30	ug/L	100
86) trans-1,4-Dichloro-2-B...	13.597	53	101224	43.01	ug/L	95
87) 1,2,3-Trichloropropane	13.578	110	79943	41.12	ug/L	100
88) Cyclohexanone	13.621	55	67098	216.64	ug/L	98
89) 4-Chlorotoluene	13.670	91	809644	40.30	ug/L	100
90) tert-Butylbenzene	13.786	91	522884	40.55	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56376.D
Acq On : 27 Jul 2018 8:08 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 30 06:51:43 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

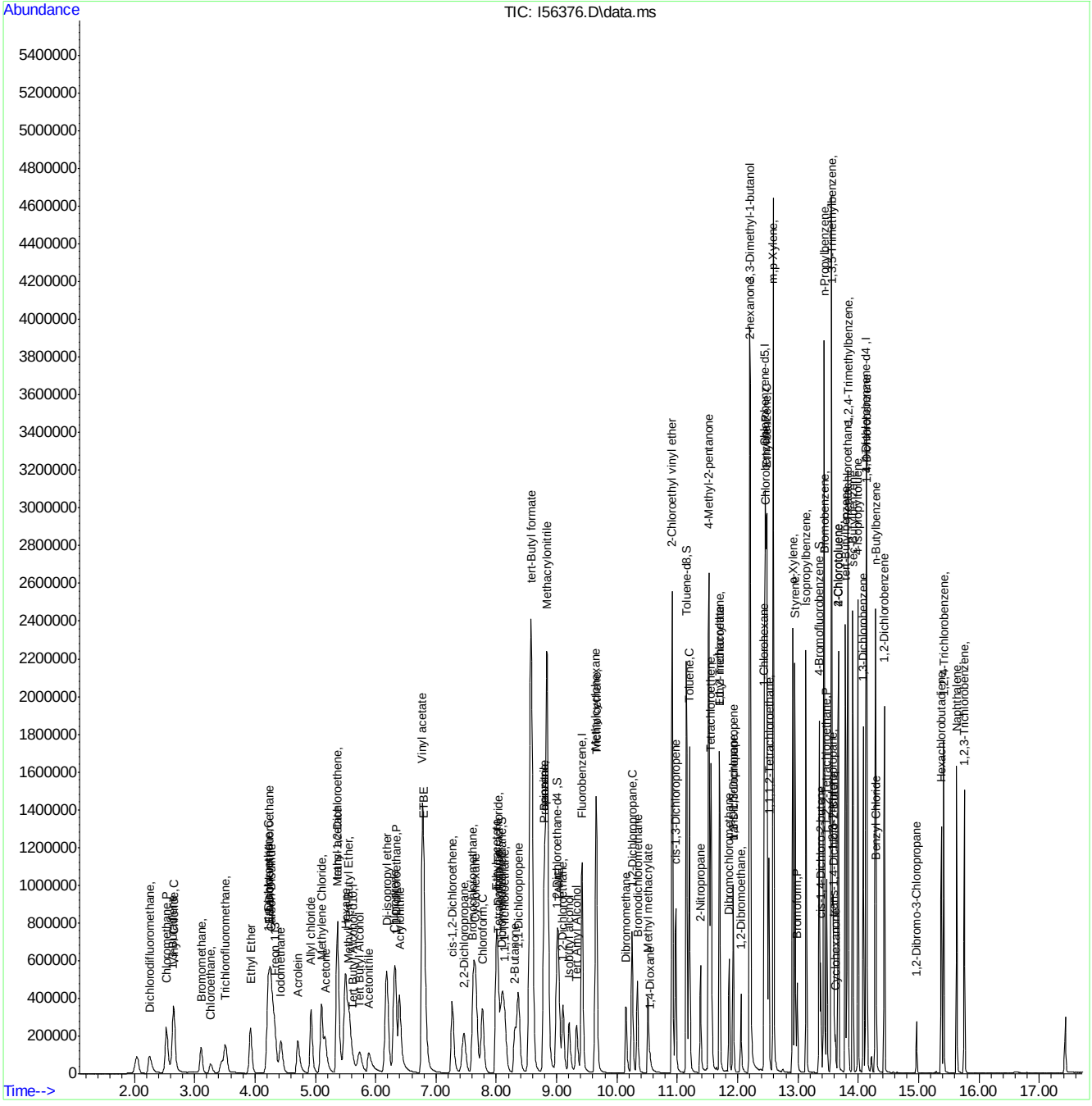
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	884491	41.04	ug/L		100
93) Pentachloroethane	13.822	167	129128	37.08	ug/L		97
94) sec-Butylbenzene	13.908	105	1071664	40.28	ug/L		99
95) 4-Isopropyltoluene	13.993	119	878960	40.76	ug/L		100
96) 1,3-Dichlorobenzene	14.084	146	474618	39.90	ug/L		100
97) 1,4-Dichlorobenzene	14.139	146	500256	38.64	ug/L		99
98) n-Butylbenzene	14.286	92	510740	41.14	ug/L		98
99) Benzyl Chloride	14.298	126	57533	37.01	ug/L	#	94
100) 1,2-Dichlorobenzene	14.432	146	460590	39.76	ug/L		99
101) 1,2-Dibromo-3-Chloropr...	14.962	75	44449	37.65	ug/L		84
102) Hexachlorobutadiene	15.377	225	150633	39.15	ug/L		99
103) 1,2,4-Trichlorobenzene	15.413	180	312755	40.68	ug/L		99
104) Naphthalene	15.633	128	788390	39.61	ug/L		99
105) 1,2,3-Trichlorobenzene	15.761	180	291340	40.41	ug/L		100
107) Ethanol	4.239	45	55755	797.66	ug/L		87
108) Acrolein	4.708	56	310363	201.92	ug/L		99
109) Tert Butyl Alcohol	5.732	59	237185	392.53	ug/L		95
110) Isobutyl alcohol	9.207	43	216339	866.10	ug/L		99
111) Tert Amyl Alcohol	9.329	59	165880	411.49	ug/L		96
112) 1,4-Dioxane	10.548	88	48313	798.59	ug/L		95
113) 3,3-Dimethyl-1-butanol	12.201	57	1435008	2232.25	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072718\
Data File : I56376.D
Acq On : 27 Jul 2018 8:08 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40907,VI1685,,,,,
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 30 06:51:43 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56379.D
Acq On : 30 Jul 2018 8:01 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 08:20:13 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.415	96	1187158	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	842663	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	434674	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	104226	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.085	113	317492	50.65	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.30%			
46) 1,2-Dichloroethane-d4	8.994	65	421758	49.76	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 99.52%			
57) Toluene-d8	11.152	98	1149739	49.44	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.88%			
79) 4-Bromofluorobenzene	13.353	174	344175	50.13	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.26%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.251	85	234005	34.61	ug/L	99
3) Chloromethane	2.526	50	338376	36.45	ug/L	99
4) 1,3-Butadiene	2.635	39	181015	36.16	ug/L	99
5) Vinyl Chloride	2.660	62	294377	37.70	ug/L	100
6) Bromomethane	3.105	94	142006	34.74	ug/L	98
7) Chloroethane	3.263	64	78149	35.32	ug/L	98
8) Trichlorofluoromethane	3.507	101	345726	38.54	ug/L	99
9) Ethyl Ether	3.916	59	276116	39.92	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.233	67	324741	39.10	ug/L	99
11) 1,1-Dichloroethene	4.214	61	444312	40.01	ug/L	99
12) Freon 113	4.312	101	243831	39.32	ug/L	99
13) Carbon Disulfide	4.269	76	729037	41.41	ug/L	100
14) Iodomethane	4.428	142	380562	40.00	ug/L	99
15) Allyl chloride	4.921	41	404748	42.39	ug/L	98
16) Methylene Chloride	5.098	49	442374	40.40	ug/L	99
17) Acetone	5.153	43	418087	212.12	ug/L	100
18) Methyl acetate	5.367	43	972859	199.91	ug/L	99
19) trans-1,2-Dichloroethene	5.348	61	445159	40.67	ug/L	98
20) Hexane	5.488	56	319245	38.04	ug/L	99
21) Methyl Tert Butyl Ether	5.549	73	580273	42.63	ug/L	96
22) Acetonitrile	5.873	41	296358	436.81	ug/L	99
23) Di-isopropyl ether	6.177	45	1020038	41.71	ug/L	100
24) Chloroprene	6.299	53	464801	41.30	ug/L	98
25) 1,1-Dichloroethane	6.330	63	528355	40.08	ug/L	100
26) Acrylonitrile	6.391	53	582736	201.85	ug/L	100
27) ETBE	6.793	59	882374	44.74	ug/L	99
28) Vinyl acetate	6.769	43	3300394	207.15	ug/L	99
29) cis-1,2-Dichloroethene	7.262	96	258443	40.96	ug/L	98
30) 2,2-Dichloropropane	7.458	77	270373	48.23	ug/L	100
31) Bromochloromethane	7.604	128	128659	41.83	ug/L	95
32) Cyclohexane	7.647	56	586500	40.13	ug/L	99
33) Chloroform	7.762	83	442900	39.03	ug/L	97
34) Ethyl acetate	8.000	43	1371479	199.49	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56379.D
Acq On : 30 Jul 2018 8:01 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 08:20:13 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.031	42	172112	41.74	ug/L		97
37) Carbon Tetrachloride	8.012	117	297525	43.56	ug/L		98
38) 1,1,1-Trichloroethane	8.128	97	380686	41.67	ug/L		99
39) 2-Butanone	8.305	43	594726	198.78	ug/L		99
40) 1,1-Dichloropropene	8.360	75	327440	40.48	ug/L		99
41) tert-Butyl formate	8.573	59	1431969	520.91	ug/L	#	80
42) Propionitrile	8.787	54	439912	423.86	ug/L		98
43) Methacrylonitrile	8.835	41	1663300	409.18	ug/L		100
44) Benzene	8.787	78	944798	39.09	ug/L		98
45) TAME	9.024	73	581529	44.14	ug/L		96
47) 1,2-Dichloroethane	9.098	62	409536	39.22	ug/L		99
48) Trichloroethene	9.652	95	255650	40.05	ug/L		98
49) Methylcyclohexane	9.646	83	416203	39.84	ug/L		99
50) Dibromomethane	10.146	93	162086	41.06	ug/L		99
51) 1,2-Dichloropropane	10.250	63	313534	40.59	ug/L		99
52) Bromodichloromethane	10.335	83	325444	42.46	ug/L		100
53) Methyl methacrylate	10.512	41	220657	39.38	ug/L		99
54) 2-Chloroethyl vinyl ether	10.914	63	987709	216.75	ug/L		99
55) cis-1,3-Dichloropropene	10.975	75	410946	41.84	ug/L		99
58) Toluene	11.201	91	1013305	38.93	ug/L		100
59) 2-Nitropropane	11.384	41	304714	212.88	ug/L		99
60) 4-Methyl-2-pentanone	11.524	43	1380506	198.41	ug/L		99
61) trans-1,3-Dichloropropene	11.926	75	22218	43.52	ug/L		97
62) Tetrachloroethene	11.554	166	253223	37.75	ug/L		98
63) Ethyl methacrylate	11.695	69	294384	38.89	ug/L		91
64) 1,1,2-Trichloroethane	11.701	83	197370	40.42	ug/L		99
65) Dibromochloromethane	11.859	129	251509	43.43	ug/L		99
66) 1,3-Dichloropropane	11.926	76	390507	39.76	ug/L		99
67) 1,2-Dibromoethane	12.054	107	225009	41.82	ug/L		99
68) 2-hexanone	12.207	43	1159289	201.01	ug/L		91
69) 1-Chlorohexane	12.438	91	349738	39.16	ug/L		99
70) Ethylbenzene	12.481	91	1177460	39.55	ug/L		99
71) Chlorobenzene	12.469	112	655155	38.69	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.518	131	222674	42.65	ug/L		99
73) m,p-Xylene	12.591	91	1822041	80.36	ug/L		100
74) o-Xylene	12.914	91	930841	40.94	ug/L		99
75) Styrene	12.950	104	677274	42.39	ug/L		99
76) Bromoform	12.987	173	156819	42.34	ug/L		99
77) Isopropylbenzene	13.133	105	1038563	41.45	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.377	53	115547	43.21	ug/L		91
81) n-Propylbenzene	13.426	91	1381501	39.70	ug/L		96
82) Bromobenzene	13.432	156	269569	39.98	ug/L		100
83) 1,1,2,2-Tetrachloroethane	13.475	83	298371	39.28	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	891127	40.64	ug/L		99
85) 2-Chlorotoluene	13.670	91	844662	39.95	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.591	53	107660	43.46	ug/L	#	74
87) 1,2,3-Trichloropropane	13.578	110	81495	39.83	ug/L		97
88) Cyclohexanone	13.621	55	76976	236.15	ug/L		98
89) 4-Chlorotoluene	13.670	91	844662	39.95	ug/L		100
90) tert-Butylbenzene	13.786	91	544545	40.12	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56379.D
Acq On : 30 Jul 2018 8:01 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 08:20:13 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

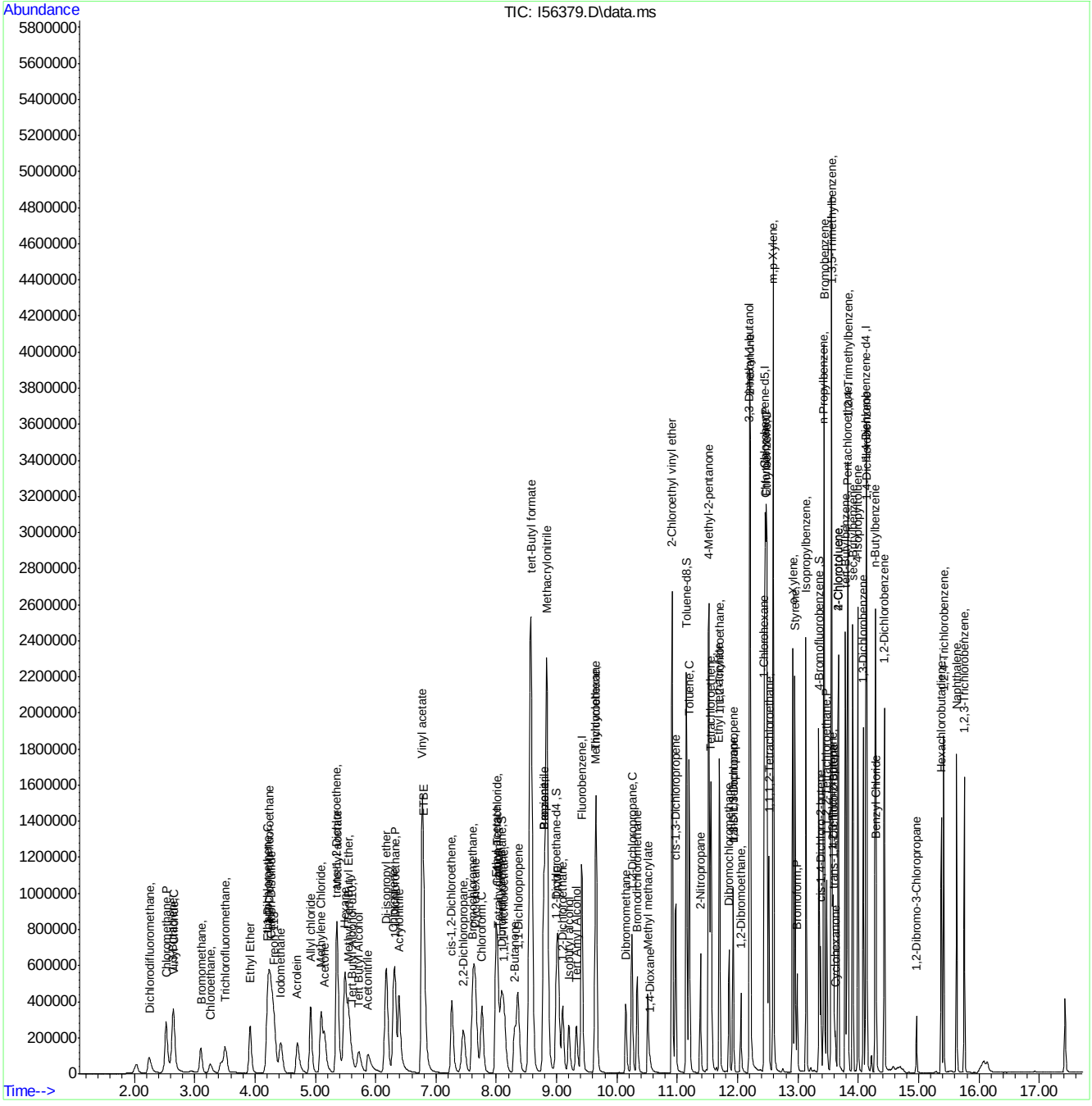
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	1,2,4-Trimethylbenzene	13.828	105	926758	40.86	ug/L		99
93)	Pentachloroethane	13.822	167	164363	43.89	ug/L		97
94)	sec-Butylbenzene	13.908	105	1114142	39.79	ug/L		99
95)	4-Isopropyltoluene	13.993	119	921420	40.60	ug/L		99
96)	1,3-Dichlorobenzene	14.084	146	499351	39.89	ug/L		99
97)	1,4-Dichlorobenzene	14.139	146	521329	38.26	ug/L		99
98)	n-Butylbenzene	14.279	92	543516	41.59	ug/L		94
99)	Benzyl Chloride	14.298	126	81277	47.26	ug/L	#	78
100)	1,2-Dichlorobenzene	14.432	146	482666	39.59	ug/L		99
101)	1,2-Dibromo-3-Chloropr...	14.962	75	51256	41.05	ug/L		88
102)	Hexachlorobutadiene	15.377	225	163002	40.25	ug/L		99
103)	1,2,4-Trichlorobenzene	15.413	180	337038	41.66	ug/L		98
104)	Naphthalene	15.627	128	839574	40.07	ug/L		99
105)	1,2,3-Trichlorobenzene	15.755	180	309717	40.82	ug/L		97
107)	Ethanol	4.208	45	61680	798.23	ug/L		99
108)	Acrolein	4.702	56	317914	186.94	ug/L		98
109)	Tert Butyl Alcohol	5.720	59	268223	401.54	ug/L		96
110)	Isobutyl alcohol	9.201	43	217466	787.54	ug/L		98
111)	Tert Amyl Alcohol	9.329	59	177206	398.37	ug/L		90
112)	1,4-Dioxane	10.548	88	49801	743.79	ug/L		96
113)	3,3-Dimethyl-1-butanol	12.194	57	1388172	1953.35	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56379.D
Acq On : 30 Jul 2018 8:01 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40907,VI1686,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 08:20:13 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 11:33

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56406.D
Acq On : 30 Jul 2018 7:06 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40916,VI1686,,,,,
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jul 31 07:44:31 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1152534	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	823043	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	417479	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.616	65	93830	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	309083	50.79	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.58%			
46) 1,2-Dichloroethane-d4	9.000	65	420829	51.14	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.28%			
57) Toluene-d8	11.152	98	1122890	49.44	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.88%			
79) 4-Bromofluorobenzene	13.353	174	327333	49.64	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.28%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.251	85	220298	33.56	ug/L	99
3) Chloromethane	2.526	50	319448	35.45	ug/L	98
4) 1,3-Butadiene	2.641	39	172557	35.50	ug/L	99
5) Vinyl Chloride	2.660	62	284742	37.57	ug/L	100
6) Bromomethane	3.105	94	141049	35.54	ug/L	100
7) Chloroethane	3.263	64	77474	36.34	ug/L	96
8) Trichlorofluoromethane	3.513	101	365782	42.01	ug/L	100
9) Ethyl Ether	3.922	59	271566	40.44	ug/L	95
10) 1,2-Dichlorotrifluoroe...	4.233	67	329522	40.86	ug/L	98
11) 1,1-Dichloroethene	4.220	61	430078	39.89	ug/L	99
12) Freon 113	4.318	101	234677	38.98	ug/L	97
13) Carbon Disulfide	4.263	76	688818	40.30	ug/L	98
14) Iodomethane	4.428	142	358033	38.77	ug/L	99
15) Allyl chloride	4.928	41	387832	41.84	ug/L	97
16) Methylene Chloride	5.104	49	461330	43.43	ug/L	97
17) Acetone	5.159	43	401886	210.03	ug/L	98
18) Methyl acetate	5.373	43	965031	204.15	ug/L	99
19) trans-1,2-Dichloroethene	5.354	61	437922	41.21	ug/L	98
20) Hexane	5.501	56	315720	38.75	ug/L	96
21) Methyl Tert Butyl Ether	5.555	73	528017	39.96	ug/L	93
22) Acetonitrile	5.885	41	302068	458.60	ug/L	100
23) Di-isopropyl ether	6.183	45	997066	42.00	ug/L	99
24) Chloroprene	6.305	53	470797	43.09	ug/L	99
25) 1,1-Dichloroethane	6.336	63	521773	40.77	ug/L	97
26) Acrylonitrile	6.397	53	584722	208.29	ug/L	100
27) ETBE	6.799	59	840424	43.90	ug/L	99
28) Vinyl acetate	6.775	43	3254935	210.33	ug/L	99
29) cis-1,2-Dichloroethene	7.269	96	250758	40.93	ug/L	98
30) 2,2-Dichloropropane	7.458	77	222594	40.90	ug/L	100
31) Bromochloromethane	7.610	128	124250	41.61	ug/L	95
32) Cyclohexane	7.647	56	580665	40.93	ug/L	98
33) Chloroform	7.768	83	437495	39.71	ug/L	99
34) Ethyl acetate	8.006	43	1389497	208.03	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56406.D
Acq On : 30 Jul 2018 7:06 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40916,VI1686,,,,,
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jul 31 07:44:31 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.037	42	176286	44.03	ug/L		98
37) Carbon Tetrachloride	8.018	117	262044	39.52	ug/L		98
38) 1,1,1-Trichloroethane	8.134	97	360461	40.65	ug/L		97
39) 2-Butanone	8.311	43	594113	204.37	ug/L		97
40) 1,1-Dichloropropene	8.366	75	320728	40.84	ug/L		96
41) tert-Butyl formate	8.573	59	1298867	493.41	ug/L	#	88
42) Propionitrile	8.793	54	449664	446.28	ug/L		96
43) Methacrylonitrile	8.841	41	1718350	435.42	ug/L		100
44) Benzene	8.793	78	933423	39.78	ug/L		97
45) TAME	9.024	73	536869	41.98	ug/L		96
47) 1,2-Dichloroethane	9.104	62	409304	40.38	ug/L		99
48) Trichloroethene	9.658	95	250410	40.40	ug/L		98
49) Methylcyclohexane	9.652	83	401816	39.62	ug/L		99
50) Dibromomethane	10.146	93	158932	41.47	ug/L		97
51) 1,2-Dichloropropane	10.250	63	310593	41.41	ug/L		98
52) Bromodichloromethane	10.341	83	306013	41.12	ug/L		99
53) Methyl methacrylate	10.512	41	218588	40.14	ug/L		97
54) 2-Chloroethyl vinyl ether	10.914	63	994026	224.69	ug/L		98
55) cis-1,3-Dichloropropene	10.975	75	378623	39.81	ug/L		98
58) Toluene	11.201	91	994084	39.11	ug/L		98
59) 2-Nitropropane	11.384	41	256570	184.86	ug/L		98
60) 4-Methyl-2-pentanone	11.524	43	1457930	214.54	ug/L		99
61) trans-1,3-Dichloropropene	11.926	75	21314	42.74	ug/L	#	90
62) Tetrachloroethene	11.554	166	257425	39.29	ug/L		99
63) Ethyl methacrylate	11.701	69	287935	38.95	ug/L		96
64) 1,1,2-Trichloroethane	11.701	83	193965	40.67	ug/L		99
65) Dibromochloromethane	11.859	129	231298	40.90	ug/L		100
66) 1,3-Dichloropropane	11.926	76	384492	40.08	ug/L		97
67) 1,2-Dibromoethane	12.054	107	217184	41.33	ug/L		100
68) 2-hexanone	12.207	43	1216707	216.00	ug/L		97
69) 1-Chlorohexane	12.444	91	346107	39.68	ug/L		95
70) Ethylbenzene	12.481	91	1146395	39.43	ug/L		100
71) Chlorobenzene	12.469	112	636061	38.46	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.518	131	205227	40.25	ug/L		99
73) m,p-Xylene	12.591	91	1788086	80.74	ug/L		99
74) o-Xylene	12.914	91	905430	40.77	ug/L		100
75) Styrene	12.950	104	658042	42.17	ug/L		99
76) Bromoform	12.987	173	135886	37.82	ug/L		100
77) Isopropylbenzene	13.133	105	1000287	40.87	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.377	53	107089	41.70	ug/L		98
81) n-Propylbenzene	13.432	91	1352580	40.47	ug/L		100
82) Bromobenzene	13.438	156	259322	40.04	ug/L		100
83) 1,1,2,2-Tetrachloroethane	13.475	83	294612	40.38	ug/L		98
84) 1,3,5-Trimethylbenzene	13.554	105	870643	41.34	ug/L		99
85) 2-Chlorotoluene	13.670	91	817304	40.25	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.597	53	100274	42.15	ug/L		98
87) 1,2,3-Trichloropropane	13.578	110	79483	40.45	ug/L		98
88) Cyclohexanone	13.621	55	63187	201.83	ug/L		98
89) 4-Chlorotoluene	13.670	91	817304	40.25	ug/L		100
90) tert-Butylbenzene	13.786	91	530490	40.70	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56406.D
Acq On : 30 Jul 2018 7:06 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40916,VI1686,,,,,
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jul 31 07:44:31 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

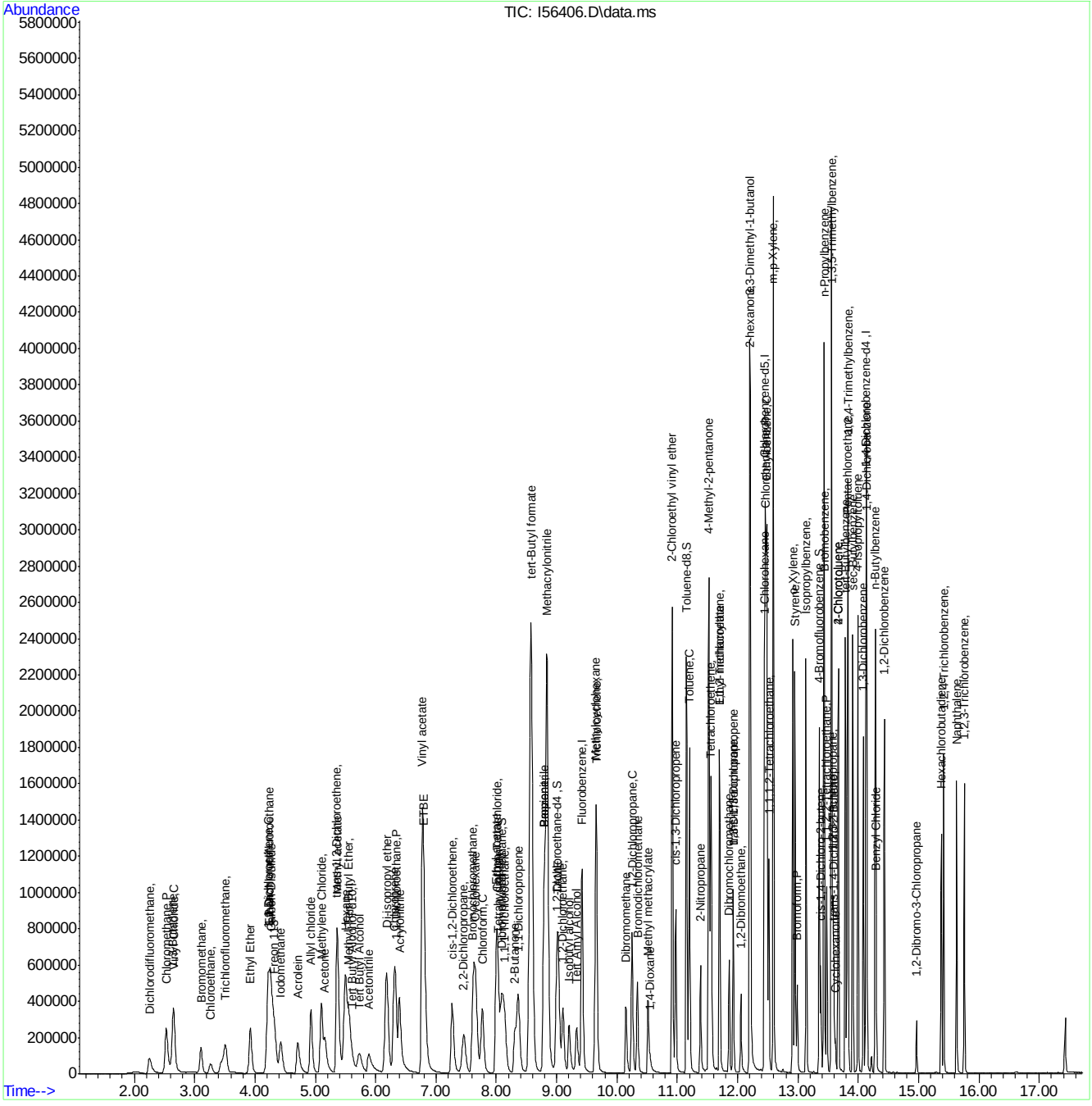
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	902065	41.41	ug/L		100
93) Pentachloroethane	13.822	167	140640	39.63	ug/L		99
94) sec-Butylbenzene	13.908	105	1087747	40.45	ug/L		100
95) 4-Isopropyltoluene	13.993	119	894578	41.04	ug/L		100
96) 1,3-Dichlorobenzene	14.084	146	478535	39.80	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	506015	38.67	ug/L		99
98) n-Butylbenzene	14.279	92	517631	41.24	ug/L		93
99) Benzyl Chloride	14.298	126	58541	37.22	ug/L	#	93
100) 1,2-Dichlorobenzene	14.432	146	463104	39.55	ug/L		98
101) 1,2-Dibromo-3-Chloropr...	14.962	75	45577	38.17	ug/L		83
102) Hexachlorobutadiene	15.377	225	152278	39.15	ug/L		98
103) 1,2,4-Trichlorobenzene	15.413	180	313212	40.31	ug/L		99
104) Naphthalene	15.633	128	783448	38.96	ug/L		100
105) 1,2,3-Trichlorobenzene	15.755	180	295698	40.58	ug/L		96
107) Ethanol	4.233	45	57296m	824.06	ug/L		
108) Acrolein	4.708	56	310218	202.81	ug/L		98
109) Tert Butyl Alcohol	5.732	59	238556	396.69	ug/L		97
110) Isobutyl alcohol	9.207	43	216963	872.77	ug/L		98
111) Tert Amyl Alcohol	9.329	59	166108	413.90	ug/L		99
112) 1,4-Dioxane	10.548	88	47957	796.48	ug/L		96
113) 3,3-Dimethyl-1-butanol	12.201	57	1464062	2288.40	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56406.D
Acq On : 30 Jul 2018 7:06 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40916,VI1686,,,,,
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jul 31 07:44:31 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration



Manual Integration Approval Summary

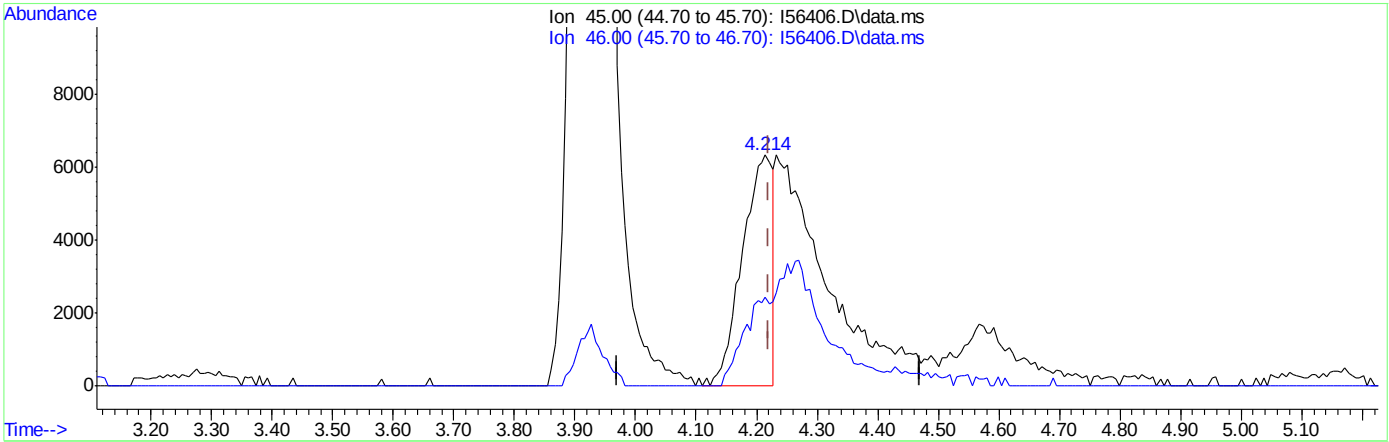
Sample Number: VI1686-ECC1683
Lab FileID: I56406.D
Injection Time: 07/30/18 19:06
Method: SW846 8260B
Analyst approved: 07/31/18 08:36 Ana Jimenez
Supervisor approved: 07/31/18 11:33 Melissa Mangual

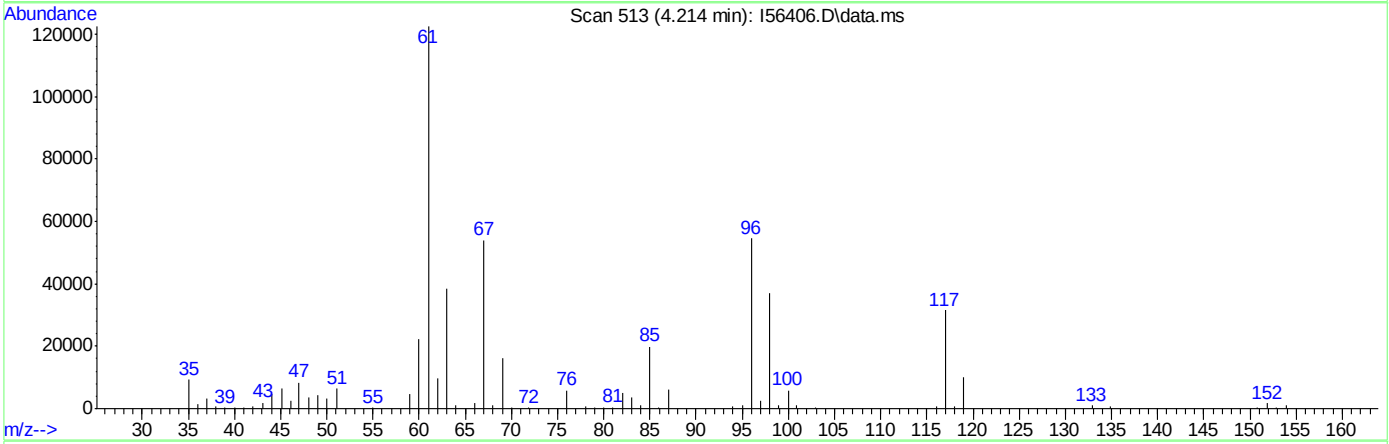
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		4.23	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56406.D
Acq On : 30 Jul 2018 7:06 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40916,VI1686,,,,,
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jul 31 07:08:49 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration





TIC: I56406.D\data.ms

(107) Ethanol

4.214min (-0.006) 311.95ug/L

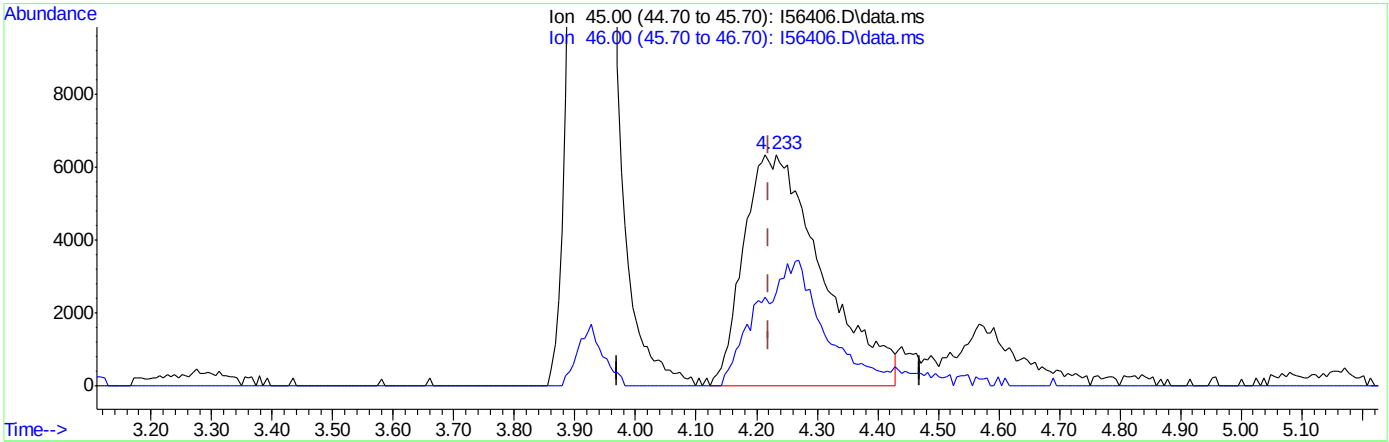
response 21902

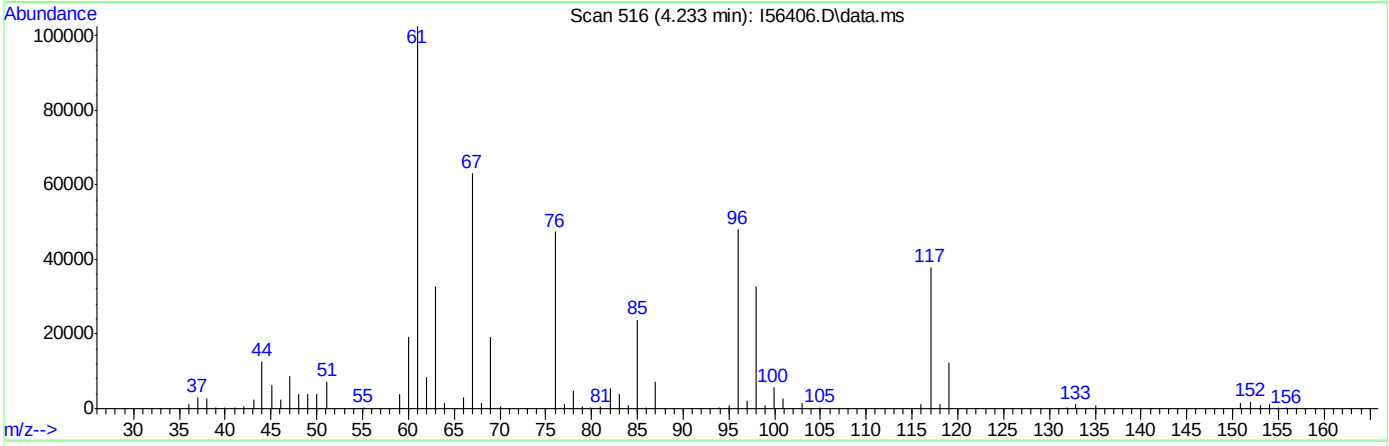
Ion	Exp%	Act%
45.00	100	100
46.00	38.30	38.60
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\073018\
Data File : I56406.D
Acq On : 30 Jul 2018 7:06 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40916,VI1686,,,,,
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jul 31 07:08:49 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration





TIC: I56406.D\data.ms

(107) Ethanol

4.233min (+0.012) 824.06ug/L m

response 57296

Ion	Exp%	Act%
45.00	100	100
46.00	38.30	40.31
0.00	0.00	0.00
0.00	0.00	0.00

SGS-ORLANDO ANALYSIS LOG

MSVOA16-I-ANALYSIS LOG

DATE:	7/25/2018
COLUMN TYPE:	RTXVMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA4-B
PURGE PRESSURE:	6.7psi
PURGE VOLUME:	5mL
ANALYST:	ANAJ

METHODS:*	8260
METHOD FILE:	I-July2518.M
CALIB. DATE:	7/252018
EM VOLTAGE:	1624V
BFB RESPONSE	2063466
RUN ID	***VI1683***

BFB: V23957
ICAL/CC: V23908, V23907, V23864
V23865,V23860,V23859,V23874,V23909
ISTD/SURR: V23957
ICV/QC: V23905,V23863, V23828
V23924, V23872, V23921, V23852,
V23853, V23910

PH LOT: 1/12pH:230814
0/3pH:200416
KI PAPER LOT: 06517
SAMPLE ID VERIFIED BY:
ANAJ
DATE VERIFIED: 07/25/2018

Data File	Sample ID	DIL.	VIAL #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONAL, PEAK #	PH	CL ?	RR	COMMENTS
I56313	BFB	N/A	N/A	w	1	8260		N/A	N/A		✓ Passed (AF)
I56314	IC1683-1	N/A	N/A	w	1	8260	7SP,61MP,97MP,107MP,112MP	N/A	N/A		✓ Passed 10mL(IC2)-->50mL
I56315	IC1683-2	N/A	N/A	w	2	8260	7SP , 107PII	N/A	N/A		✓ Passed 5uL-->100mL
I56316	IC1683-3	N/A	N/A	w	3	8260		N/A	N/A		✓ Passed 5uL-->50mL
I56317	IC1683-4	N/A	N/A	w	4	8260	35MP, 42MP	N/A	N/A		✓ Passed 12.5uL-->50mL
I56318	ICC1683-5	N/A	N/A	w	5	8260		N/A	N/A		✓ Passed 20uL-->50mL
I56319	IC1683-6	N/A	N/A	w	6	8260		N/A	N/A		✓ Passed 35uL-->50mL
I56320	IC1683-7	N/A	N/A	w	7	8260		N/A	N/A		✓ Passed 50uL-->50mL
I56321	Blank	N/A	N/A	w	8	8260		N/A	N/A		✓
I56322	ICV1683-5	N/A	N/A	w	9	8260		N/A	N/A		✓ Passed 25uL-->50mL
I56323	BS	N/A	N/A	w	10	8260		N/A	N/A		✓ Passed 12.5uL-->40mL
I56324	MB	N/A	N/A	w	11	8260		N/A	N/A		✓ Hexachlorobutadiene

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

Manual Integration Rational SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument

Analyst's Signature:

SGS -ORLANDO

MSVOA16-I-ANALYSIS LOG

DATE:	7/27/2018
COLUMN TYPE:	RTXVMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA4-B
PURGE PRESSURE:	6.7psi
PURGE VOLUME:	5mL
ANALYST:	ANAJ

METHODS:*	8260
METHOD FILE:	I-July2518.M
CALIB. DATE:	7/252018
EM VOLTAGE:	1624V
BFB RESPONSE	2032885
RUN ID	***VI1685***

BFB:	V23957
ICAL/CC:	V23908, V23907, V23864
	V23865,V23860,V23859,V23874,V23909
ISTD/SURR:	V23957
ICV/QC:	V23905,V23863, V23828
	V23924, V23872, V23921, V23852,
	V23853, V23910

PH LOT: 1/12pH:230814
0/3pH:200416
KI PAPER LOT: 06517
SAMPLE ID VERIFIED BY:
ANAJ
DATE VERIFIED: 07/30/2018

Data File	Sample ID	DIL.	VIAL #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONAL, PEAK #	PH	CL ?	RR	COMMENTS
I56355	BFB	N/A	N/A	w	1	8260		N/A	N/A		✓ Passed (AF)
I56356	CC1683-5	N/A	N/A	w	1	8260		N/A	N/A		✓ Passed 20uL-->50mL
I56357	BS	N/A	N/A	w	2	8260		N/A	N/A		✓ Passed 12.5uL-->40mL
I56358	MB	N/A	N/A	w	3	8260		N/A	N/A		✓ Hexachlorobutadiene
I56359	FA55914-1	1x	2	w	1	8260		1	N		✓ ND
I56360	FA55914-2	1x	1	w	2	8260		1	N		✓ ND
I56361	FA55914-3	1x	1	w	3	8260		1	N		✓ ND
I56362	FA55914-4	1x	1	w	4	8260		1	N		✓ ND
I56363	FA55914-5	1x	1	w	5	8260		1	N		✓
I56364	FA55914-7	1x	1	w	6	8260		1	N		✓
I56365	FA55914-9	1x	1	w	7	8260		1	N		✓
I56366	FA55914-10	1x	1	w	8	8260		1	N		✓ ND
I56367	FA55941-5	1x	1	w	9	8260		1	N		✓ ND
I56368	FA55941-1	1x	1	w	10	8260		1	N		✓ ND
I56369	FA55941-2	1x	1	w	11	8260		1	N		✓ ND
I56370	FA55941-5ms	1x	2	w	12	8260	107PII	1	N		✓ Passed 12.5uL-->40mL
I56371	FA55941-5msd	1x	3	w	13	8260	107PII	1	N		✓ Passed 12.5uL-->40mL
I56372	FA56019-9,5x	5x	3	w	14	8260		1	N	**10x**	✓ 10mL-->50mL,E!combine
I56373	FA56019-10	1x	2	w	15	8260		1	N	**1x**	✓ ND
I56374	FA55941-3	1x	1	w	16	8260		1	N		✓ ND
I56375	FA55941-4	1x	1	w	17	8260		1	N		✓ ND
I56376	FA55941-6	1x	1	w	18	8260		1	N		✓ ND
I56377	ECC1683-5	N/A	N/A	w	19	8260		N/A	N/A		✓ Passed 20uL-->50mL

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

Manual Integration Rational SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument

Analyst's Signature: _____

SGS -ORLANDO MSVOA16-I-ANALYSIS LOG

DATE:	7/31/2018
COLUMN TYPE:	RTXVMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA4-B
PURGE PRESSURE:	6.7psi
PURGE VOLUME:	5mL
ANALYST:	ANAJ

METHODS:*	8260
METHOD FILE:	I-July2518.M
CALIB. DATE:	7/252018
EM VOLTAGE:	1624V
BFB RESPONSE	2140269
RUN ID	***VI1686***

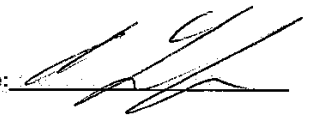
BFB: V23957
ICAL/CC: V23908, V23907, V23864
V23865,V23860,V23859,V23874,V23909
ISTD/SURR: V23957
ICV/QC: V23905,V23863, V23828
V23924, V23872, V23921, V23852,
V23853, V23975

PH LOT: 1/12pH:230814
0/3pH:200416
KI PAPER LOT: 06517
SAMPLE ID VERIFIED BY:
ANAJ
DATE VERIFIED: 07/31/2018

Data File	Sample ID	DIL.	VIAL #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONAL, PEAK #	PH	CL ?	RR	COMMENTS
I56378	BFB	N/A	N/A	w	1	8260		N/A	N/A		✓ Passed (AF)
I56379	CC1683-5	N/A	N/A	w	1	8260		N/A	N/A		✓ Passed 20uL-->50mL
I56380	BS	N/A	N/A	w	2	8260		N/A	N/A		✓ Passed 12.5uL-->40mL
I56381	MB	N/A	N/A	w	3	8260		N/A	N/A		✓ Hexachlorobutadiene
I56382	FA56019-10	10x	3	w	1	8260		1	N		☒ ND
I56383	FA55941-6	1x	1	w	2	8260		1	N		✓ ND
I56384	FA55941-7	1x	1	w	3	8260		1	N		✓ ND
I56385	FA55941-8	1x	1	w	4	8260		1	N		✓ ND
I56386	FA55941-9	1x	1	w	5	8260		1	N		✓
I56387	FA55941-10	1x	1	w	6	8260		1	N		✓ ND
I56388	BS	N/A	N/A	w	7	8260	New 1,3-butadiene mix	N/A	N/A		✓ Passed 12.5uL-->40mL
I56389	FA56019-9	10x	3	w	8	8260	Already used vial. Headspace.	1	N		✓ 5mL-->50mL,E!combine
I56390	FA56212-10	1x	1	w	9	8260		1	N		✓ ND
I56391	FA56212-1	1x	2	w	10	8260		1	N		✓
I56392	FA56212-10ms	1x	2	w	11	8260	107PII	1	N		✓ Passed 12.5uL-->40mL
I56393	FA56212-10msd	1x	3	w	12	8260		1	N		✓ Passed 12.5uL-->40mL
I56394	FA56212-2	1x	1	w	13	8260		1	N		✓
I56395	FA56212-3	1x	1	w	14	8260		1	N		✓
I56396	FA56212-4	1x	1	w	15	8260		1	N		✓
I56397	FA56212-5	1x	2	w	16	8260		1	N		✓ ND
I56398	FA56212-6	1x	1	w	17	8260		1	N		✓ ND
I56399	FA56212-7,hs	1x	1	w	18	8260	All vials with headspace. 07/06/18	1	N		✓ ND
I56400	FA56212-8	1x	2	w	19	8260		1	N		✓ ND
I56401	FA56212-9	1x	1	w	20	8260		1	N		✓ ND
I56402	FA56212-11,5x	5x	1	w	21	8260		1	N	1x	✓ 10mL-->50mL
I56403	FA56212-12,5x	5x	2	w	22	8260		1	N	1x	✓ 10mL-->50mL
I56404	FA56212-13	1x	1	w	23	8260		1	N		✓
I56405	FA56212-14	1x	1	w	24	8260		1	N		✓ ND
I56406	ECC1683-5	N/A	N/A	w	25	8260	107PII	N/A	N/A		✓ Passed 20uL-->50mL

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

Manual Integration Rational SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument

Analyst's Signature: 

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71008-MB	BB060342.D	1	07/24/18	WH	07/23/18	OP71008	GBB1754

The QC reported here applies to the following samples: **Method:** SW846 8330A

FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5, FA55941-6, FA55941-7, FA55941-8, FA55941-9

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	0.20	0.080	ug/l	
121-82-4	RDX	ND	0.20	0.080	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	0.20	0.080	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.080	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
98-95-3	Nitrobenzene	ND	0.20	0.097	ug/l	
88-72-2	o-Nitrotoluene	ND	0.20	0.080	ug/l	
99-08-1	m-Nitrotoluene	ND	0.20	0.080	ug/l	
99-99-0	p-Nitrotoluene	ND	0.20	0.080	ug/l	
479-45-8	Tetryl	ND	0.20	0.080	ug/l	
99-35-4	1,3,5-Trinitrobenzene	ND	0.20	0.099	ug/l	
118-96-7	2,4,6-Trinitrotoluene	ND	0.20	0.080	ug/l	
78-11-5	PETN	ND	2.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
610-39-9	3,4-Dinitrotoluene	87%	70-136%

Blank Spike Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71008-BS	BB060343.D	1	07/24/18	WH	07/23/18	OP71008	GBB1754

The QC reported here applies to the following samples: **Method:** SW846 8330A

FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5, FA55941-6, FA55941-7, FA55941-8, FA55941-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
2691-41-0	HMX	5	4.4	88	77-144
121-82-4	RDX	5	4.9	98	77-125
99-65-0	1,3-Dinitrobenzene	5	4.7	94	79-122
606-20-2	2,6-Dinitrotoluene	5	5.1	102	81-131
121-14-2	2,4-Dinitrotoluene	5	4.6	92	80-123
35572-78-2	2-amino-4,6-Dinitrotoluene	5	4.3	86	81-120
19406-51-0	4-amino-2,6-Dinitrotoluene	5	5.1	102	79-119
98-95-3	Nitrobenzene	5	4.6	92	78-130
88-72-2	o-Nitrotoluene	5	5.1	102	76-131
99-08-1	m-Nitrotoluene	5	4.9	98	78-122
99-99-0	p-Nitrotoluene	5	4.7	94	79-124
479-45-8	Tetryl	5	5.2	104	65-124
99-35-4	1,3,5-Trinitrobenzene	5	4.8	96	79-128
118-96-7	2,4,6-Trinitrotoluene	5	5.4	108	72-112
78-11-5	PETN	25	27.3	109	73-145

CAS No.	Surrogate Recoveries	BSP	Limits
610-39-9	3,4-Dinitrotoluene	91%	70-136%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71008-MS	BB060355.D	1	07/24/18	WH	07/23/18	OP71008	GBB1754
OP71008-MSD	BB060356.D	1	07/24/18	WH	07/23/18	OP71008	GBB1754
FA55941-5	BB060348.D	1	07/24/18	WH	07/23/18	OP71008	GBB1754

The QC reported here applies to the following samples: **Method:** SW846 8330A

FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5, FA55941-6, FA55941-7, FA55941-8, FA55941-9

CAS No.	Compound	FA55941-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
2691-41-0	HMX	0.19	U	9.62	8.3	86	9.62	8.2	85	1	77-144/21
121-82-4	RDX	0.19	U	9.62	9.2	96	9.62	9.2	96	0	77-125/19
99-65-0	1,3-Dinitrobenzene	0.19	U	9.62	9.0	94	9.62	8.9	93	1	79-122/17
606-20-2	2,6-Dinitrotoluene	0.19	U	9.62	9.8	102	9.62	9.5	99	3	81-131/17
121-14-2	2,4-Dinitrotoluene	0.19	U	9.62	8.7	90	9.62	8.9	93	2	80-123/19
35572-78-2	2-amino-4,6-Dinitrotoluene	0.19	U	9.62	8.0	83	9.62	8.2	85	2	81-120/19
19406-51-0	4-amino-2,6-Dinitrotoluene	0.19	U	9.62	9.3	97	9.62	9.5	99	2	79-119/20
98-95-3	Nitrobenzene	0.19	U	9.62	8.7	90	9.62	8.7	90	0	78-130/19
88-72-2	o-Nitrotoluene	0.19	U	9.62	9.7	101	9.62	9.7	101	0	76-131/20
99-08-1	m-Nitrotoluene	0.19	U	9.62	9.6	100	9.62	9.0	94	6	78-122/18
99-99-0	p-Nitrotoluene	0.19	U	9.62	9.2	96	9.62	8.8	92	4	79-124/18
479-45-8	Tetryl	0.19	U	9.62	7.9	82	9.62	8.0	83	1	65-124/20
99-35-4	1,3,5-Trinitrobenzene	0.19	U	9.62	9.3	97	9.62	9.0	94	3	79-128/16
118-96-7	2,4,6-Trinitrotoluene	0.19	U	9.62	10.6	110	9.62	9.9	103	7	72-112/16
78-11-5	PETN	1.9	U	48.1	50.5	105	48.1	51.7	108	2	73-145/18

CAS No.	Surrogate Recoveries	MS	MSD	FA55941-5	Limits
610-39-9	3,4-Dinitrotoluene	89%	89%	87%	70-136%

* = Outside of Control Limits.

Surrogate Recovery Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Method: SW846 8330A **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
FA55941-1	BB060344.D	86
FA55941-2	BB060345.D	81
FA55941-3	BB060346.D	78
FA55941-4	BB060347.D	80
FA55941-5	BB060348.D	87
FA55941-6	BB060349.D	79
FA55941-7	BB060350.D	89
FA55941-8	BB060351.D	85
FA55941-9	BB060354.D	80
OP71008-BS	BB060343.D	91
OP71008-MB	BB060342.D	87
OP71008-MS	BB060355.D	89
OP71008-MSD	BB060356.D	89

Surrogate Compounds	Recovery Limits
S1 = 3,4-Dinitrotoluene	70-136%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Check Std:	GBB1754-CC1748	**Injection Date:**	07/24/18
Lab File ID:	BB060341.D	**Injection Time:**	12:57
Instrument ID:	GCBB	**Method:**	SW846 8330A

	S1 [a] **RT**
Check Std	10.78

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
OP71008-MB	BB060342.D	07/24/18	13:47	10.76
OP71008-BS	BB060343.D	07/24/18	14:17	10.77
FA55941-1	BB060344.D	07/24/18	14:47	10.76
FA55941-2	BB060345.D	07/24/18	15:17	10.76
FA55941-3	BB060346.D	07/24/18	15:47	10.77
FA55941-4	BB060347.D	07/24/18	16:17	10.80
FA55941-5	BB060348.D	07/24/18	16:47	10.75
FA55941-6	BB060349.D	07/24/18	17:17	10.79
FA55941-7	BB060350.D	07/24/18	17:47	10.80
FA55941-8	BB060351.D	07/24/18	18:17	10.80

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Check Std:	GBB1754-CC1748	**Injection Date:**	07/24/18
Lab File ID:	BB060352.D	**Injection Time:**	18:47
Instrument ID:	GCBB	**Method:**	SW846 8330A

	S1 [a] RT	S1 [b] RT
Check Std	10.78	10.78

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
FA55941-9	BB060354.D	07/24/18	19:47		10.77
OP71008-MS	BB060355.D	07/24/18	20:17		10.75
OP71008-MSD	BB060356.D	07/24/18	20:47		10.74
ZZZZZZ	BB060357.D	07/24/18	21:17		10.73
ZZZZZZ	BB060358.D	07/24/18	21:46		10.72
GBB1754-ECC1748	BB060359.D	07/24/18	22:16	10.74	10.74

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

Initial Calibration Summary

Job Number: FA55941 **Sample:** GBB1748-ICC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060205.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Response Factor Report G1315B

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Initial Calibration

Calibration Files
20 =BB060200.D 50 =BB060201.D 100 =BB060202.D 200 =BB060203.D
500 =BB060204.D 1000=BB060205.D 2000=BB060206.D

	Compound	20	50	100	200	500	1000	2000	Avg	%RSD
1)	TNX	5.295	5.051	4.969	5.069	5.080	5.067	5.053	5.083 E3	1.98
2)	HMX	2.484	2.057	1.890	1.838	1.733	1.747	1.742	1.927 E3	14.06
3)	DNX	3.927	3.622	2.937	2.775	2.576	2.600	2.628	3.009 E3	18.09
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 2600.86703 *A + 0.01241 *A^2									
4)	MNX	3.466	2.711	3.128	2.801	2.713	2.681	2.679	2.883 E3	10.48
5)	RDX	2.297	2.322	1.865	1.972	2.053	1.965	1.960	2.062 E3	8.63
6)	1,3,5-Trinitroben	6.046	4.471	3.918	4.301	4.303	4.294	4.257	4.513 E3	15.43
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 4317.79032 *A + -0.03008 *A^2									
7)	1,3-Dinitrobenzen	6.788	5.975	5.491	5.524	5.575	5.535	5.519	5.772 E3	8.29
8)	3,5-Dinitroanilin	6.758	4.775	4.938	4.827	4.725	4.629	4.667	5.046 E3	15.10
	---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000									
	Response Ratio = 0.00000 + 4672.73046 *A + -0.00479 *A^2									
9)	Nitrobenzene	4.849	3.909	3.358	3.652	3.505	3.385	3.399	3.722 E3	14.33
10)	Nitroglycerin								0.000	-1.00
11)	Tetryl	2.648	3.342	2.989	2.741	2.671	2.570	2.549	2.787 E3	10.23
12)	2,4,6-Trinitrotol	5.074	3.801	3.556	3.503	3.527	3.401	3.371	3.748 E3	16.05
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 3493.30846 *A + -0.06229 *A^2									
13)	2-Amino-4,6-Dinit	4.336	4.347	3.690	3.820	3.721	3.651	3.655	3.889 E3	8.09
14)	4-Amino-2,6-Dinit	2.789	3.023	2.450	2.614	2.701	2.556	2.541	2.668 E3	7.20
15)S	3,4-Dinitrotoluen	3.656	3.489	2.435	2.599	2.653	2.562	2.558	2.850 E3	17.55
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998									
	Response Ratio = 0.00000 + 2611.53715 *A + -0.02783 *A^2									
16)	2,4-Dinitrotoluen	6.845	5.928	4.990	5.145	5.249	5.046	5.030	5.462 E3	12.63
17)	2,6-Dinitrotoluen	5.453	3.245	3.017	2.989	3.142	3.109	3.067	3.432 E3	26.09
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 3142.71234 *A + -0.03778 *A^2									
18)	o-Nitrotoluene	1.847	2.623	2.737	2.326	2.401	2.354	2.351	2.377 E3	11.83
19)	p-Nitrotoluene	3.980	4.501	3.946	3.740	3.750	3.781	3.805	3.929 E3	6.85
20)	m-Nitrotoluene	7.319	5.252	4.193	3.746	3.633	3.465	3.561	4.453 E3	31.58
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997									
	Response Ratio = 0.00000 + 3528.47663 *A + 0.01265 *A^2									
21)	PETN								0.000	-1.00

Signal #2

1)	TNX	8.181	7.928	7.721	7.945	7.868	7.812	7.724	7.883 E3	2.01
2)	HMX	5.227	7.103	5.019	5.432	4.864	4.810	4.875	5.333 E3	15.22

8.6.1

8

Initial Calibration Summary

Job Number: FA55941 **Sample:** GBB1748-ICC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060205.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

```
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9997
              Response Ratio = 0.00000 + 4861.72975 *A + 0.00342 *A^2

 3)  DNX               5.026 5.117 4.322 4.702 4.164 4.210 4.225 4.538 E3   8.96
 4)  MNX               5.295 4.049 4.174 4.122 4.172 4.205 4.149 4.309 E3  10.15
 5)  RDX               4.300 3.451 3.289 3.373 3.179 3.162 3.128 3.412 E3  12.00
 6)  1,3,5-Trinitroben 9.403 8.377 8.009 8.039 8.183 8.184 8.206 8.343 E3   5.79
 7)  1,3-Dinitrobenzen 7.071 4.624 4.056 3.703 3.934 3.857 3.751 4.428 E3  27.22
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 3961.91891 *A + -0.10522 *A^2

 8)  3,5-Dinitroanilin 1.225 0.822 0.844 0.831 0.799 0.779 0.792 0.870 E4  18.17
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 7857.34507 *A + 0.02741 *A^2

 9)  Nitrobenzene      5.654 3.892 3.296 3.386 3.370 3.206 3.258 3.723 E3  23.68
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 3267.05430 *A + -0.00707 *A^2

10)  Nitroglycerin     1.394 1.334 1.256 1.270 1.303 1.288 1.287 1.304 E3   3.56
11)  Tetryl            7.190 3.467 3.958 3.796 4.008 4.001 4.075 4.356 E3  29.07
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 3934.44421 *A + 0.07034 *A^2

12)  2,4,6-Trinitrotol 6.385 3.801 3.631 3.908 3.988 4.071 4.086 4.267 E3  22.20
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 3999.71030 *A + 0.04469 *A^2

13)  2-Amino-4,6-Dinit 5.904 4.281 4.606 4.707 5.266 5.325 5.484 5.082 E3  11.19
14)  4-Amino-2,6-Dinit 5.187 3.451 3.951 4.505 5.057 5.059 5.266 4.639 E3  15.11
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 4833.55467 *A + 0.21739 *A^2

15)S 3,4-Dinitrotoluen 4.178 3.553 3.371 3.694 4.020 4.299 4.527 3.949 E3  10.69
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 3941.90916 *A + 0.29547 *A^2

16)  2,4-Dinitrotoluen 2.226 2.919 3.150 2.810 3.034 3.053 3.104 2.900 E3  10.98
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 2989.77647 *A + 0.05753 *A^2

17)  2,6-Dinitrotoluen 5.506 4.092 4.121 3.576 3.819 3.923 4.035 4.153 E3  15.06
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 3777.35270 *A + 0.12957 *A^2

18)  o-Nitrotoluene          2.638 3.639 3.081 3.407 3.313 3.270 3.225 E3  10.56
19)  p-Nitrotoluene          3.923 3.943 3.298 3.414 3.193 3.228 3.500 E3   9.82
20)  m-Nitrotoluene          3.679 2.948 3.257 3.943 3.889 3.959 3.613 E3  11.59
21)  PETN             1.548 1.393 1.410 1.425 1.427 1.415 1.429 1.435 E3   3.58
-------------------------------------------------------------------------------
(#) = Out of Range

          8330B_0707PLUS.M        Mon Jul 09 11:02:38 2018
```

8.6.1

8

Initial Calibration Verification

Job Number: FA55941 **Sample:** GBB1748-ICV1748
Account: EAENYS EA Engineering **Lab FileID:** BB060207.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	888.280	11.2	89	0.00	1.10- 1.70
2	HMX	1000.000	1043.978	-4.4	115	0.00	1.24- 1.84
		Amount	Calc.	%Drift			
3	DNX	1000.000	965.091	3.5	97	0.00	1.49- 2.09
		Amount	Calc.	%Drift			
4	MNX	1000.000	908.873	9.1	98	0.00	2.09- 2.69
5	RDX	1000.000	1088.039	-8.8	114	0.00	2.62- 3.42
		Amount	Calc.	%Drift			
6	1,3,5-Trinitrobenzene	1000.000	1122.936	-12.3	112	0.00	4.42- 5.22
		Amount	Calc.	%Drift			
7	1,3-Dinitrobenzene	1000.000	1067.478	-6.7	111	0.00	5.65- 6.45
		Amount	Calc.	%Drift			
8	3,5-Dinitroaniline	1000.000	933.611	6.6	94	0.00	6.00- 6.80
		Amount	Calc.	%Drift			
9	Nitrobenzene	1000.000	1003.720	-0.4	110	0.00	7.29- 8.09
10	Nitroglycerin		----------NA----------				
11	Tetryl		----------NA----------				
		Amount	Calc.	%Drift			
12	2,4,6-Trinitrotoluene		----------NA----------				
		Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotoluen		----------NA----------				
14	4-Amino-2,6-Dinitrotoluen		----------NA----------				
		Amount	Calc.	%Drift			
15 S	3,4-Dinitrotoluene		----------NA----------				
		Amount	Calc.	%Drift			
16	2,4-Dinitrotoluene	1000.000	1020.089	-2.0	110	-0.02	11.68-12.48
		Amount	Calc.	%Drift			
17	2,6-Dinitrotoluene		----------NA----------				
		Amount	Calc.	%Drift			

Initial Calibration Verification

Job Number: FA55941 **Sample:** GBB1748-ICV1748
Account: EAENYS EA Engineering **Lab FileID:** BB060207.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

18	o-Nitrotoluene	1000.000	1120.494	-12.0	113	-0.02	15.43-16.30
19	p-Nitrotoluene	1000.000	1066.427	-6.6	111	-0.02	15.91-16.91
		Amount	Calc.	%Drift			
20	m-Nitrotoluene			NA			
		Amount	Calc.	%Drift			
21	PETN			NA			

***** Signal #2 *****

1	TNX	1000.000	881.147	11.9	89	0.00	1.10- 1.70
		Amount	Calc.	%Drift			
2	HMX	1000.000	1137.187	-13.7	115	0.00	1.24- 1.84
		Amount	Calc.	%Drift			
3	DNX	1000.000	889.408	11.1	96	0.00	1.49- 2.09
4	MNX	1000.000	939.824	6.0	96	0.00	2.09- 2.69
5	RDX	1000.000	1056.691	-5.7	114	0.00	2.62- 3.42
6	1,3,5-Trinitrobenzene	1000.000	1101.772	-10.2	112	0.00	4.42- 5.22
		Amount	Calc.	%Drift			
7	1,3-Dinitrobenzene	1000.000	1117.069	-11.7	111	0.00	5.65- 6.45
8	3,5-Dinitroaniline	1000.000	945.674	5.4	96	0.00	6.00- 6.80
9	Nitrobenzene	1000.000	1112.210	-11.2	113	-0.01	7.29- 8.09
		Amount	Calc.	%Drift			
10	Nitroglycerin	5000.000	4813.802	3.7	97	0.00	8.53- 9.53
		Amount	Calc.	%Drift			
11	Tetryl			NA			
12	2,4,6-Trinitrotoluene			NA			
		Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotoluen			NA			
		Amount	Calc.	%Drift			
14	4-Amino-2,6-Dinitrotoluen			NA			
15 S	3,4-Dinitrotoluene			NA			
16	2,4-Dinitrotoluene	1000.000	1133.416	-13.3	113	-0.02	11.68-12.48
17	2,6-Dinitrotoluene			NA			
		Amount	Calc.	%Drift			
18	o-Nitrotoluene	1000.000	1116.301	-11.6	109	-0.01	15.30-16.30
19	p-Nitrotoluene	1000.000	1019.236	-1.9	112	-0.02	15.91-16.91
20	m-Nitrotoluene			NA			
21	PETN	5000.000	5002.949	-0.1	101	0.00	18.30-19.50

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB060205.D 8330B_0707PLUS.M Mon Jul 09 11:17:48 2018

Initial Calibration Verification

Job Number: FA55941 **Sample:** GBB1748-ICV1748
Account: EAENYS EA Engineering **Lab FileID:** BB060208.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1A.ch
Acq On : 06-Jul-2018, 19:32:55 Operator: kismetl
Sample : icv1748-1000 spk Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX		----------NA----------				
2	HMX		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
3	DNX		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
4	MNX		----------NA----------				
5	RDX		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
6	1,3,5-Trinitrobenzene		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
7	1,3-Dinitrobenzene		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
8	3,5-Dinitroaniline		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
9	Nitrobenzene		----------NA----------				
10	Nitroglycerin		----------NA----------				
11	Tetryl	1000.000	982.234	1.8	107	0.00	9.15- 9.95
	----------	Amount	Calc.	%Drift	----------		
12	2,4,6-Trinitrotoluene	1000.000	1000.138	-0.0	101	0.00	9.63-10.43
	----------	Amount	Calc.	%Drift	----------		
13	2-Amino-4,6-Dinitrotol	1000.000	913.856	8.6	97	0.00	10.03-10.83
14	4-Amino-2,6-Dinitrotol	1000.000	994.624	0.5	104	0.00	10.52-11.32
	----------	Amount	Calc.	%Drift	----------		
15 S	3,4-Dinitrotoluene		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
16	2,4-Dinitrotoluene		----------NA----------				
	----------	Amount	Calc.	%Drift	----------		
17	2,6-Dinitrotoluene	1000.000	958.888	4.1	96	-0.02	12.12-12.92
	----------	Amount	Calc.	%Drift	----------		

Initial Calibration Verification

Job Number: FA55941 **Sample:** GBB1748-ICV1748
Account: EAENYS EA Engineering **Lab FileID:** BB060208.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

18	o-Nitrotoluene		----------NA----------				
19	p-Nitrotoluene		----------NA----------				
		Amount	Calc.	%Drift			
20	m-Nitrotoluene	1000.000	956.540	4.3	98	0.00	16.88-17.88
		Amount	Calc.	%Drift			
21	PETN		----------NA----------				
*****	Signal #2 *****						
1	TNX		----------NA----------				
		Amount	Calc.	%Drift			
2	HMX		----------NA----------				
		Amount	Calc.	%Drift			
3	DNX		----------NA----------				
4	MNX		----------NA----------				
5	RDX		----------NA----------				
6	1,3,5-Trinitrobenzene		----------NA----------				
		Amount	Calc.	%Drift			
7	1,3-Dinitrobenzene		----------NA----------				
8	3,5-Dinitroaniline		----------NA----------				
9	Nitrobenzene		----------NA----------				
		Amount	Calc.	%Drift			
10	Nitroglycerin		----------NA----------				
		Amount	Calc.	%Drift			
11	Tetryl	1000.000	1095.709	-9.6	110	0.00	9.15- 9.95
12	2,4,6-Trinitrotoluene	1000.000	1053.616	-5.4	105	0.00	9.63-10.43
		Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotol	1000.000	1033.000	-3.3	99	0.00	10.04-10.84
		Amount	Calc.	%Drift			
14	4-Amino-2,6-Dinitrotol	1000.000	1058.821	-5.9	106	0.00	10.53-11.33
15 S	3,4-Dinitrotoluene		----------NA----------				
16	2,4-Dinitrotoluene		----------NA----------				
17	2,6-Dinitrotoluene	1000.000	1024.395	-2.4	102	0.00	12.13-12.93
		Amount	Calc.	%Drift			
18	o-Nitrotoluene		----------NA----------				
19	p-Nitrotoluene		----------NA----------				
20	m-Nitrotoluene	1000.000	1002.550	-0.3	93	0.00	16.88-17.88
21	PETN		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB060205.D 8330B_0707PLUS.M Mon Jul 09 11:16:37 2018

Continuing Calibration Summary

Job Number: FA55941 **Sample:** GBB1754-CC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060341.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1A.ch
Acq On : 24-Jul-2018, 12:57:10 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	960.319	4.0	96	0.00	0.98- 1.58
2	HMX	1000.000	890.253	11.0	98	0.00	1.11- 1.71
	----------	Amount	Calc.	%Drift	----------		
3	DNX	1000.000	944.348	5.6	95	0.00	1.34- 1.94
	----------	Amount	Calc.	%Drift	----------		
4	MNX	1000.000	907.491	9.3	98	0.00	1.90- 2.50
5	RDX	1000.000	956.597	4.3	100	0.00	2.39- 3.19
	----------	Amount	Calc.	%Drift	----------		
6	1,3,5-Trinitrobenzene	1000.000	986.871	1.3	99	0.02	4.15- 4.95
	----------	Amount	Calc.	%Drift	----------		
7	1,3-Dinitrobenzene	1000.000	932.790	6.7	97	0.00	5.33- 6.13
	----------	Amount	Calc.	%Drift	----------		
8	3,5-Dinitroaniline	1000.000	983.267	1.7	99	0.00	5.63- 6.43
	----------	Amount	Calc.	%Drift	----------		
9	Nitrobenzene	1000.000	887.332	11.3	98	0.00	6.86- 7.66
10	Nitroglycerin	----------NA----------					
11	Tetryl	1000.000	849.565	15.0#	92	0.00	8.70- 9.50
	----------	Amount	Calc.	%Drift	----------		
12	2,4,6-Trinitrotoluene	1000.000	963.911	3.6	97	0.00	9.18- 9.98
	----------	Amount	Calc.	%Drift	----------		
13	2-Amino-4,6-Dinitrotol	1000.000	933.911	6.6	99	0.00	9.37-10.17
14	4-Amino-2,6-Dinitrotol	1000.000	993.861	0.6	104	0.00	9.84-10.64
	----------	Amount	Calc.	%Drift	----------		
15 S	3,4-Dinitrotoluene	1000.000	958.440	4.2	97	0.00	10.38-11.18
	----------	Amount	Calc.	%Drift	----------		
16	2,4-Dinitrotoluene	1000.000	920.747	7.9	100	0.00	11.05-11.85
	----------	Amount	Calc.	%Drift	----------		
17	2,6-Dinitrotoluene	1000.000	991.293	0.9	99	0.00	11.48-12.28
	----------	Amount	Calc.	%Drift	----------		

Continuing Calibration Summary

Job Number: FA55941 **Sample:** GBB1754-CC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060341.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

18	o-Nitrotoluene	1000.000	955.729	4.4	97	0.00	14.72-15.60
19	p-Nitrotoluene	1000.000	929.653	7.0	97	0.00	15.20-16.20
		Amount	Calc.	%Drift			
20	m-Nitrotoluene	1000.000	965.078	3.5	99	0.00	16.18-17.18
		Amount	Calc.	%Drift			
21	PETN		----------NA----------				
*****	Signal #2 *****						
1	TNX	1000.000	951.681	4.8	96	0.00	0.98- 1.58
		Amount	Calc.	%Drift			
2	HMX	1000.000	968.803	3.1	98	0.00	1.11- 1.71
		Amount	Calc.	%Drift			
3	DNX	1000.000	871.074	12.9	94	0.00	1.34- 1.94
4	MNX	1000.000	948.521	5.1	97	0.00	1.90- 2.50
5	RDX	1000.000	916.228	8.4	99	0.00	2.39- 3.19
6	1,3,5-Trinitrobenzene	1000.000	984.246	1.6	100	0.00	4.17- 4.97
		Amount	Calc.	%Drift			
7	1,3-Dinitrobenzene	1000.000	961.393	3.9	96	0.00	5.33- 6.13
8	3,5-Dinitroaniline	1000.000	984.138	1.6	100	0.00	5.63- 6.43
9	Nitrobenzene	1000.000	992.060	0.8	101	0.00	6.86- 7.66
		Amount	Calc.	%Drift			
10	Nitroglycerin	5000.000	4789.376	4.2	97	0.00	8.18- 9.18
		Amount	Calc.	%Drift			
11	Tetryl	1000.000	958.424	4.2	96	0.00	8.70- 9.50
12	2,4,6-Trinitrotoluene	1000.000	916.522	8.3	91	0.00	9.18- 9.98
		Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotol	1000.000	1130.780	-13.1	108	0.00	9.38-10.18
		Amount	Calc.	%Drift			
14	4-Amino-2,6-Dinitrotol	1000.000	1033.139	-3.3	103	0.00	9.85-10.65
15 S	3,4-Dinitrotoluene	1000.000	983.923	1.6	97	0.00	10.37-11.17
16	2,4-Dinitrotoluene	1000.000	1003.802	-0.4	100	0.00	11.05-11.85
17	2,6-Dinitrotoluene	1000.000	966.094	3.4	96	0.00	11.48-12.28
		Amount	Calc.	%Drift			
18	o-Nitrotoluene	1000.000	1011.688	-1.2	98	0.00	14.60-15.60
19	p-Nitrotoluene	1000.000	901.434	9.9	99	0.00	15.21-16.21
20	m-Nitrotoluene	1000.000	1065.038	-6.5	99	0.00	16.18-17.18
21	PETN	5000.000	4780.845	4.4	97	0.00	18.14-19.34

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB060205.D 8330B_0707PLUS.M Thu Jul 26 16:01:31 2018

Continuing Calibration Summary

Job Number: FA55941 **Sample:** GBB1754-CC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060352.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060352.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060352.D\dad1A.ch
Acq On : 24-Jul-2018, 18:47:13 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	959.528	4.0	96	0.00	0.98- 1.58
2	HMX	1000.000	898.317	10.2	99	0.00	1.11- 1.71
	----------	Amount	Calc.	%Drift	----------		
3	DNX	1000.000	947.733	5.2	95	0.00	1.34- 1.94
	----------	Amount	Calc.	%Drift	----------		
4	MNX	1000.000	907.579	9.2	98	0.00	1.90- 2.50
5	RDX	1000.000	939.668	6.0	99	0.01	2.39- 3.19
	----------	Amount	Calc.	%Drift	----------		
6	1,3,5-Trinitrobenzene	1000.000	983.233	1.7	98	0.02	4.15- 4.95
	----------	Amount	Calc.	%Drift	----------		
7	1,3-Dinitrobenzene	1000.000	921.887	7.8	96	0.00	5.33- 6.13
	----------	Amount	Calc.	%Drift	----------		
8	3,5-Dinitroaniline	1000.000	984.677	1.5	99	0.00	5.63- 6.43
	----------	Amount	Calc.	%Drift	----------		
9	Nitrobenzene	1000.000	891.106	10.9	98	0.00	6.86- 7.66
10	Nitroglycerin	----------NA----------					
11	Tetryl	1000.000	850.923	14.9	92	0.00	8.70- 9.50
	----------	Amount	Calc.	%Drift	----------		
12	2,4,6-Trinitrotoluene	1000.000	946.934	5.3	96	0.00	9.18- 9.98
	----------	Amount	Calc.	%Drift	----------		
13	2-Amino-4,6-Dinitrotol	1000.000	922.666	7.7	98	-0.01	9.37-10.17
14	4-Amino-2,6-Dinitrotol	1000.000	1012.048	-1.2	106	0.01	9.84-10.64
	----------	Amount	Calc.	%Drift	----------		
15 S	3,4-Dinitrotoluene	1000.000	935.436	6.5	94	0.00	10.38-11.18
	----------	Amount	Calc.	%Drift	----------		
16	2,4-Dinitrotoluene	1000.000	897.118	10.3	97	0.00	11.05-11.85
	----------	Amount	Calc.	%Drift	----------		
17	2,6-Dinitrotoluene	1000.000	966.580	3.3	97	0.00	11.48-12.28
	----------	Amount	Calc.	%Drift	----------		

Continuing Calibration Summary

Job Number: FA55941 **Sample:** GBB1754-CC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060352.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

18	o-Nitrotoluene	1000.000	994.805	0.5	100	0.00	14.72-15.60
19	p-Nitrotoluene	1000.000	955.489	4.5	99	0.00	15.20-16.20
		Amount	Calc.	%Drift			
20	m-Nitrotoluene	1000.000	980.213	2.0	100	0.00	16.18-17.18
		Amount	Calc.	%Drift			
21	PETN		----------NA----------				
*****	Signal #2 *****						
1	TNX	1000.000	959.927	4.0	97	0.00	0.98- 1.58
		Amount	Calc.	%Drift			
2	HMX	1000.000	994.172	0.6	101	0.00	1.11- 1.71
		Amount	Calc.	%Drift			
3	DNX	1000.000	890.252	11.0	96	0.00	1.34- 1.94
4	MNX	1000.000	941.083	5.9	96	0.00	1.90- 2.50
5	RDX	1000.000	905.750	9.4	98	0.01	2.39- 3.19
6	1,3,5-Trinitrobenzene	1000.000	982.582	1.7	100	0.00	4.17- 4.97
		Amount	Calc.	%Drift			
7	1,3-Dinitrobenzene	1000.000	951.313	4.9	95	0.00	5.33- 6.13
8	3,5-Dinitroaniline	1000.000	1001.058	-0.1	101	0.00	5.63- 6.43
9	Nitrobenzene	1000.000	967.175	3.3	98	0.00	6.86- 7.66
		Amount	Calc.	%Drift			
10	Nitroglycerin	5000.000	4706.718	5.9	95	0.00	8.18- 9.18
		Amount	Calc.	%Drift			
11	Tetryl	1000.000	952.021	4.8	95	0.00	8.70- 9.50
12	2,4,6-Trinitrotoluene	1000.000	924.267	7.6	92	0.06	9.18- 9.98
		Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotol	1000.000	1085.446	-8.5	104	0.00	9.38-10.18
		Amount	Calc.	%Drift			
14	4-Amino-2,6-Dinitrotol	1000.000	1041.744	-4.2	104	0.00	9.85-10.65
15 S	3,4-Dinitrotoluene	1000.000	982.378	1.8	97	0.00	10.37-11.17
16	2,4-Dinitrotoluene	1000.000	991.588	0.8	99	0.00	11.05-11.85
17	2,6-Dinitrotoluene	1000.000	969.987	3.0	97	0.00	11.48-12.28
		Amount	Calc.	%Drift			
18	o-Nitrotoluene	1000.000	960.838	3.9	94	0.00	14.60-15.60
19	p-Nitrotoluene	1000.000	906.543	9.3	99	0.00	15.21-16.21
20	m-Nitrotoluene	1000.000	1032.327	-3.2	96	0.00	16.18-17.18
21	PETN	5000.000	4724.808	5.5	96	0.00	18.14-19.34

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB060205.D 8330B_0707PLUS.M Thu Jul 26 16:01:32 2018

Continuing Calibration Summary

Job Number: FA55941 **Sample:** GBB1754-ECC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060359.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060359.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060359.D\dad1A.ch
Acq On : 24-Jul-2018, 22:16:59 Operator: williamh
Sample : ecc1748-1000 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	951.351	4.9	95	0.00	0.98- 1.58
2	HMX	1000.000	881.588	11.8	97	0.00	1.11- 1.71
	----------	Amount	Calc.	%Drift	----------		
3	DNX	1000.000	935.357	6.5	94	0.00	1.34- 1.94
	----------	Amount	Calc.	%Drift	----------		
4	MNX	1000.000	895.247	10.5	96	0.00	1.90- 2.50
5	RDX	1000.000	923.223	7.7	97	0.00	2.39- 3.19
	----------	Amount	Calc.	%Drift	----------		
6	1,3,5-Trinitrobenzene	1000.000	953.045	4.7	95	0.00	4.15- 4.95
	----------	Amount	Calc.	%Drift	----------		
7	1,3-Dinitrobenzene	1000.000	919.696	8.0	96	0.00	5.33- 6.13
	----------	Amount	Calc.	%Drift	----------		
8	3,5-Dinitroaniline	1000.000	982.406	1.8	99	0.00	5.63- 6.43
	----------	Amount	Calc.	%Drift	----------		
9	Nitrobenzene	1000.000	893.547	10.6	98	-0.01	6.86- 7.66
10	Nitroglycerin	----------NA----------					
11	Tetryl	1000.000	829.181	17.1#	90	-0.02	8.70- 9.50
	----------	Amount	Calc.	%Drift	----------		
12	2,4,6-Trinitrotoluene	1000.000	958.623	4.1	97	-0.03	9.18- 9.98
	----------	Amount	Calc.	%Drift	----------		
13	2-Amino-4,6-Dinitrotol	1000.000	907.318	9.3	97	-0.03	9.37-10.17
14	4-Amino-2,6-Dinitrotol	1000.000	999.676	0.0	104	-0.02	9.84-10.64
	----------	Amount	Calc.	%Drift	----------		
15 S	3,4-Dinitrotoluene	1000.000	954.864	4.5	96	-0.03	10.38-11.18
	----------	Amount	Calc.	%Drift	----------		
16	2,4-Dinitrotoluene	1000.000	902.960	9.7	98	-0.03	11.05-11.85
	----------	Amount	Calc.	%Drift	----------		
17	2,6-Dinitrotoluene	1000.000	990.125	1.0	99	-0.04	11.48-12.28
	----------	Amount	Calc.	%Drift	----------		

Continuing Calibration Summary

Job Number: FA55941 **Sample:** GBB1754-ECC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060359.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

18	o-Nitrotoluene	1000.000	972.859	2.7	98	-0.02	14.72-15.60
19	p-Nitrotoluene	1000.000	956.082	4.4	99	-0.03	15.20-16.20
		Amount	Calc.	%Drift			
20	m-Nitrotoluene	1000.000	974.035	2.6	100	-0.03	16.18-17.18
		Amount	Calc.	%Drift			
21	PETN			NA			
*****	Signal #2 *****						
1	TNX	1000.000	942.322	5.8	95	0.00	0.98- 1.58
		Amount	Calc.	%Drift			
2	HMX	1000.000	962.659	3.7	97	0.00	1.11- 1.71
		Amount	Calc.	%Drift			
3	DNX	1000.000	860.951	13.9	93	0.00	1.34- 1.94
4	MNX	1000.000	936.252	6.4	96	0.00	1.90- 2.50
5	RDX	1000.000	906.201	9.4	98	0.00	2.39- 3.19
6	1,3,5-Trinitrobenzene	1000.000	978.948	2.1	100	0.00	4.17- 4.97
		Amount	Calc.	%Drift			
7	1,3-Dinitrobenzene	1000.000	930.650	6.9	93	-0.01	5.33- 6.13
8	3,5-Dinitroaniline	1000.000	989.539	1.0	100	0.00	5.63- 6.43
9	Nitrobenzene	1000.000	969.376	3.1	99	-0.01	6.86- 7.66
		Amount	Calc.	%Drift			
10	Nitroglycerin	5000.000	4689.528	6.2	95	-0.02	8.18- 9.18
		Amount	Calc.	%Drift			
11	Tetryl	1000.000	947.219	5.3	95	-0.02	8.70- 9.50
12	2,4,6-Trinitrotoluene	1000.000	929.979	7.0	92	-0.02	9.18- 9.98
		Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotol	1000.000	1093.008	-9.3	104	-0.03	9.38-10.18
		Amount	Calc.	%Drift			
14	4-Amino-2,6-Dinitrotol	1000.000	1036.624	-3.7	104	-0.02	9.85-10.65
15 S	3,4-Dinitrotoluene	1000.000	977.576	2.2	96	-0.03	10.37-11.17
16	2,4-Dinitrotoluene	1000.000	994.783	0.5	99	-0.04	11.05-11.85
17	2,6-Dinitrotoluene	1000.000	947.668	5.2	94	-0.03	11.48-12.28
		Amount	Calc.	%Drift			
18	o-Nitrotoluene	1000.000	921.867	7.8	90	-0.02	14.60-15.60
19	p-Nitrotoluene	1000.000	910.191	9.0	100	-0.03	15.21-16.21
20	m-Nitrotoluene	1000.000	1071.543	-7.2	100	-0.03	16.18-17.18
21	PETN	5000.000	4736.427	5.3	96	-0.03	18.14-19.34

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB060205.D 8330B_0707PLUS.M Thu Jul 26 16:01:33 2018

GC/LC Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060344.D\dad1B.ch Vial: 75
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060344.D\dad1A.ch
Acq On : 24-Jul-2018, 14:47:21 Operator: williamh
Sample : FA55941-1 Inst : G1315B
Misc : OP71008,gbb1754,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:15 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.76	10.77	1120001	1928619	430.845	472.524
	Spiked Amount 500.000	Range 70 - 136		Recovery =		86.17%	94.50%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D.	N.D.
3)	DNX	0.00	0.00	0	0	N.D.	N.D.
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	0.00	0.00	0	0	N.D.	N.D.
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D.	N.D.
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D.	N.D.
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D.	N.D.
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D.	N.D.
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

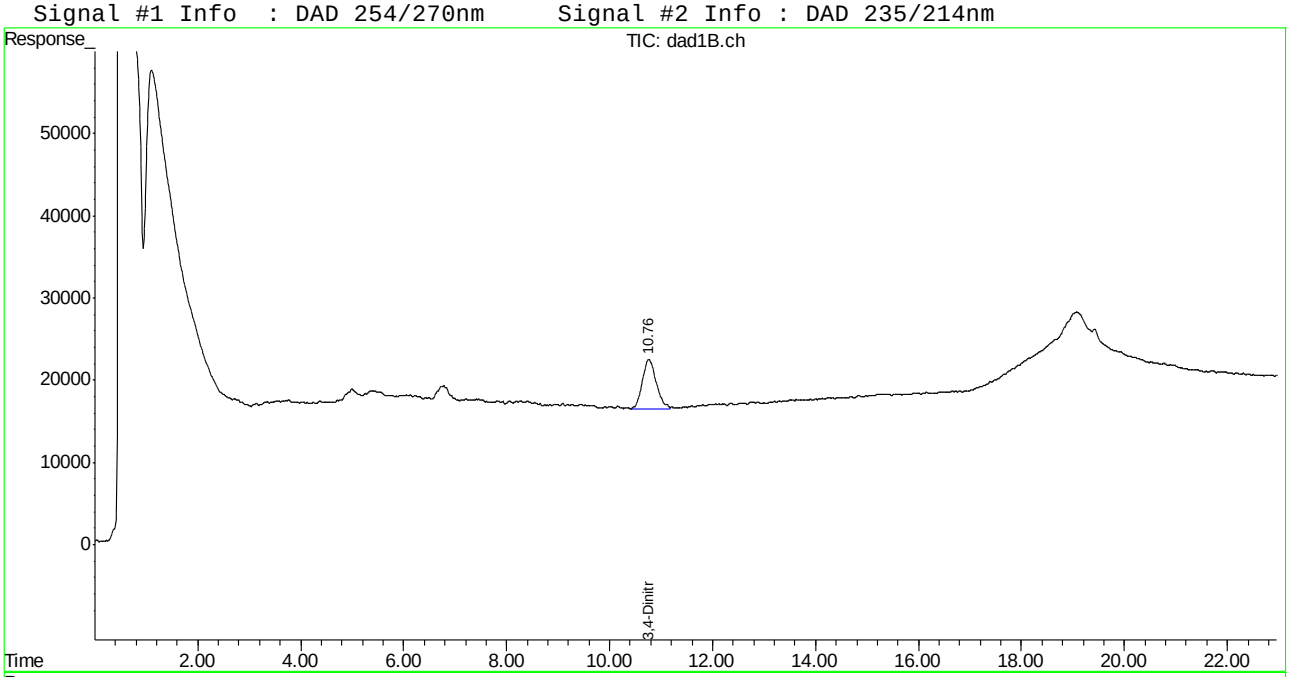
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060344.D 8330B_0707PLUS.M Thu Jul 26 16:02:16 2018 Page 1

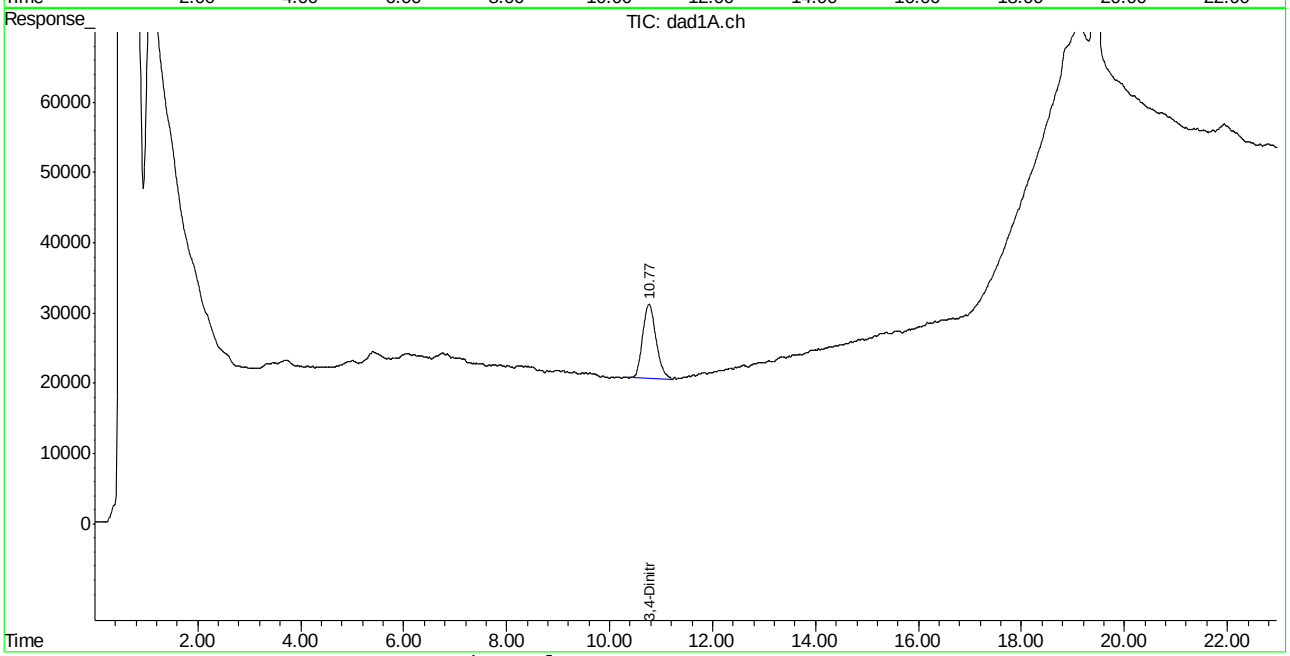
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060344.D\dad1B.ch Vial: 75
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060344.D\dad1A.ch
Acq On : 24-Jul-2018, 14:47:21 Operator: williamh
Sample : FA55941-1 Inst : G1315B
Misc : OP71008,gbb1754,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 15:36 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060345.D\dad1B.ch Vial: 76
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060345.D\dad1A.ch
Acq On : 24-Jul-2018, 15:17:21 Operator: williamh
Sample : FA55941-2 Inst : G1315B
Misc : OP71008,gbb1754,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:16 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.76	10.77	1047836	1913448	402.964	468.929
	Spiked Amount 500.000	Range 70 - 136		Recovery =		80.59%	93.79%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D.	N.D.
2)	HMX	0.00	0.00	0	0	N.D.	N.D.
3)	DNX	0.00	0.00	0	0	N.D.	N.D.
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D.	N.D.
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D.	N.D.
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

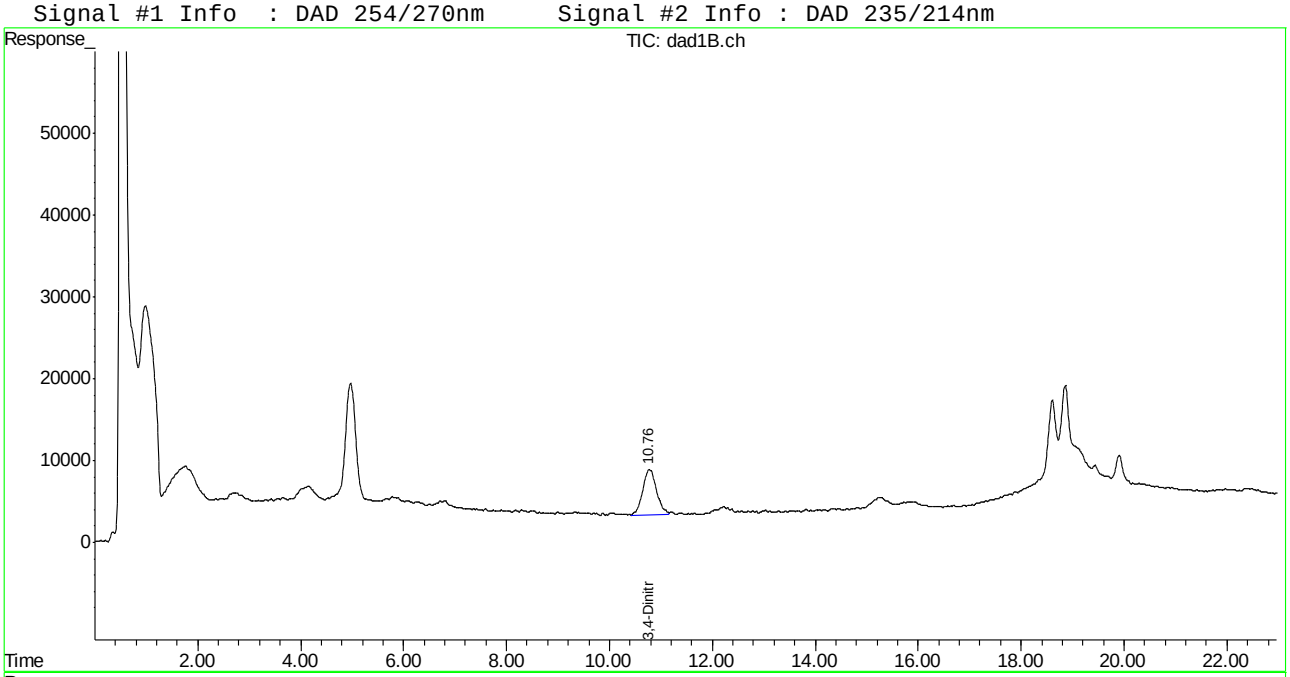
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060345.D 8330B_0707PLUS.M Fri Jul 27 15:24:37 2018 Page 1

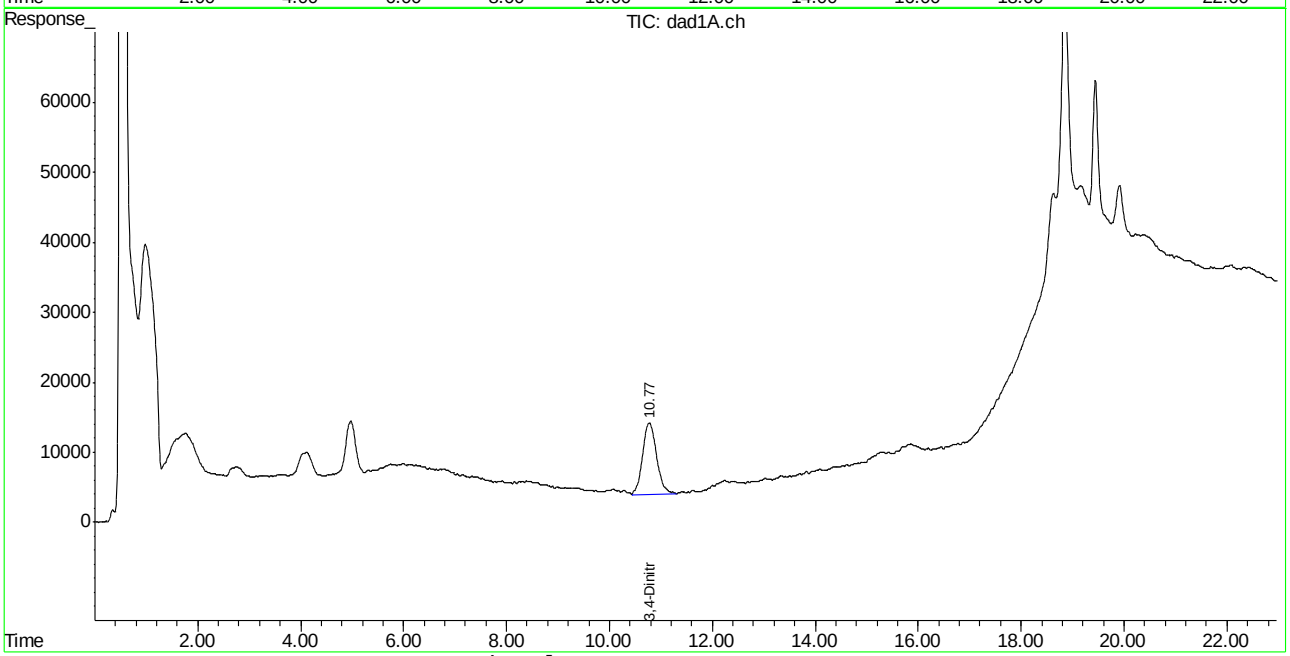
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060345.D\dad1B.ch Vial: 76
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060345.D\dad1A.ch
Acq On : 24-Jul-2018, 15:17:21 Operator: williamh
Sample : FA55941-2 Inst : G1315B
Misc : OP71008,gbb1754,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 27 15:24 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/27/18 15:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060346.D\dad1B.ch Vial: 77
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060346.D\dad1A.ch
Acq On : 24-Jul-2018, 15:47:22 Operator: williamh
Sample : FA55941-3 Inst : G1315B
Misc : OP71008,gbb1754,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:17 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.77	10.78	1013324	1772951	389.636m	435.550m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		77.93%	87.11%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

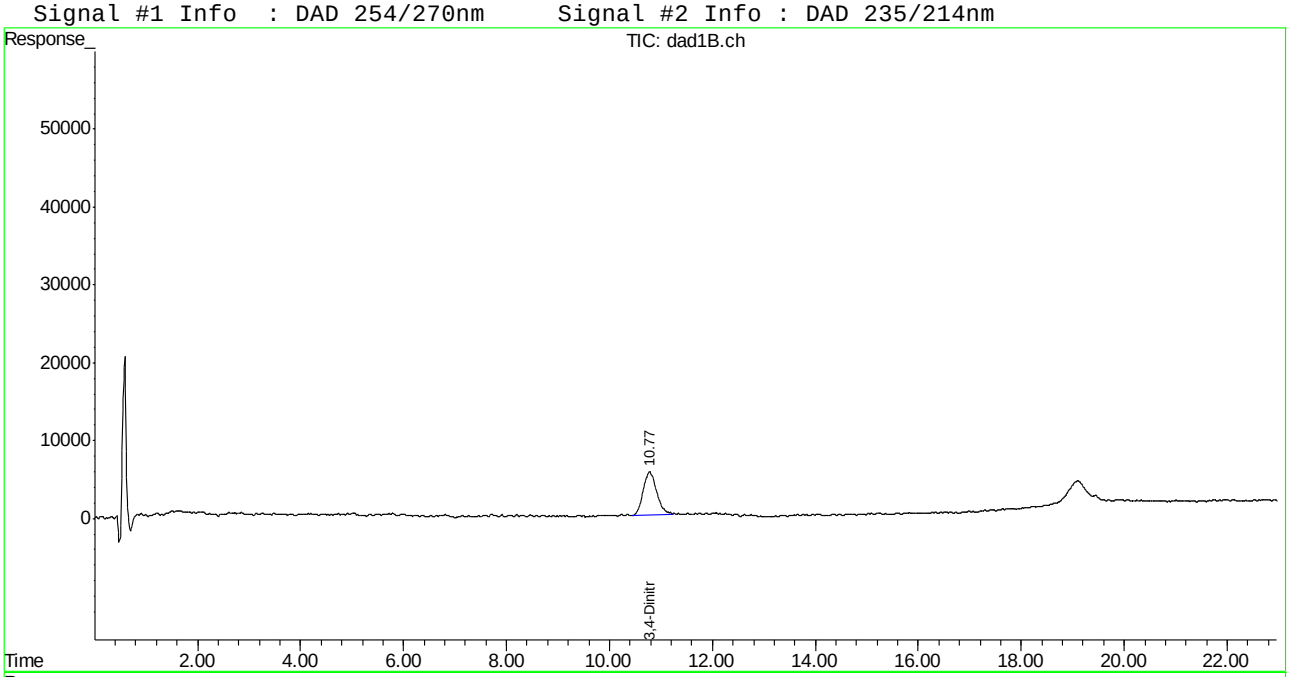
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060346.D 8330B_0707PLUS.M Thu Jul 26 16:22:13 2018 Page 1

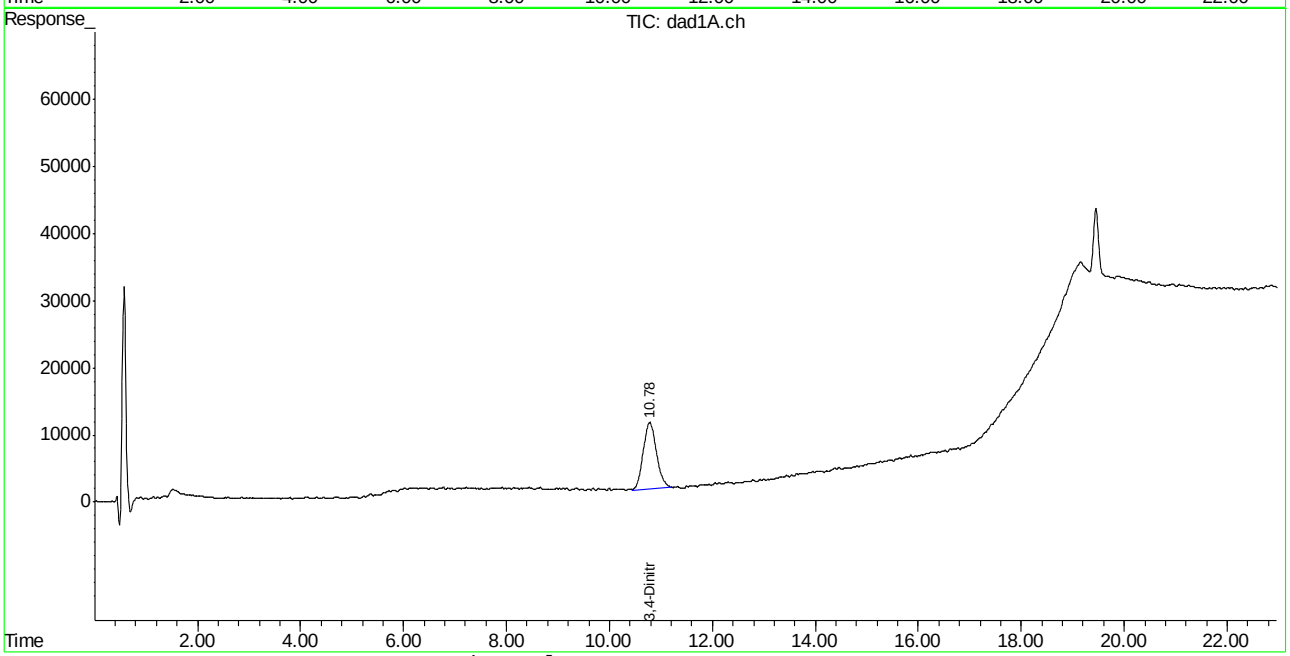
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060346.D\dad1B.ch Vial: 77
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060346.D\dad1A.ch
Acq On : 24-Jul-2018, 15:47:22 Operator: williamh
Sample : FA55941-3 Inst : G1315B
Misc : OP71008,gbb1754,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 16:22 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

Sample Number: FA55941-3
Lab FileID: BB060346.D
Injection Time: 07/24/18 15:47

Method: SW846 8330A
Analyst approved: 07/26/18 17:05 Mike Eger
Supervisor approved: 07/27/18 15:26 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
3,4-Dinitrotoluene	610-39-9	1	10.77	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	10.78	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/27/18 15:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060347.D\dad1B.ch Vial: 78
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060347.D\dad1A.ch
Acq On : 24-Jul-2018, 16:17:25 Operator: williamh
Sample : FA55941-4 Inst : G1315B
Misc : OP71008,gbb1754,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:18 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.80	10.78	1040123	1855889	399.985m	455.274
	Spiked Amount 500.000	Range 70 - 136		Recovery =		80.00%	91.05%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

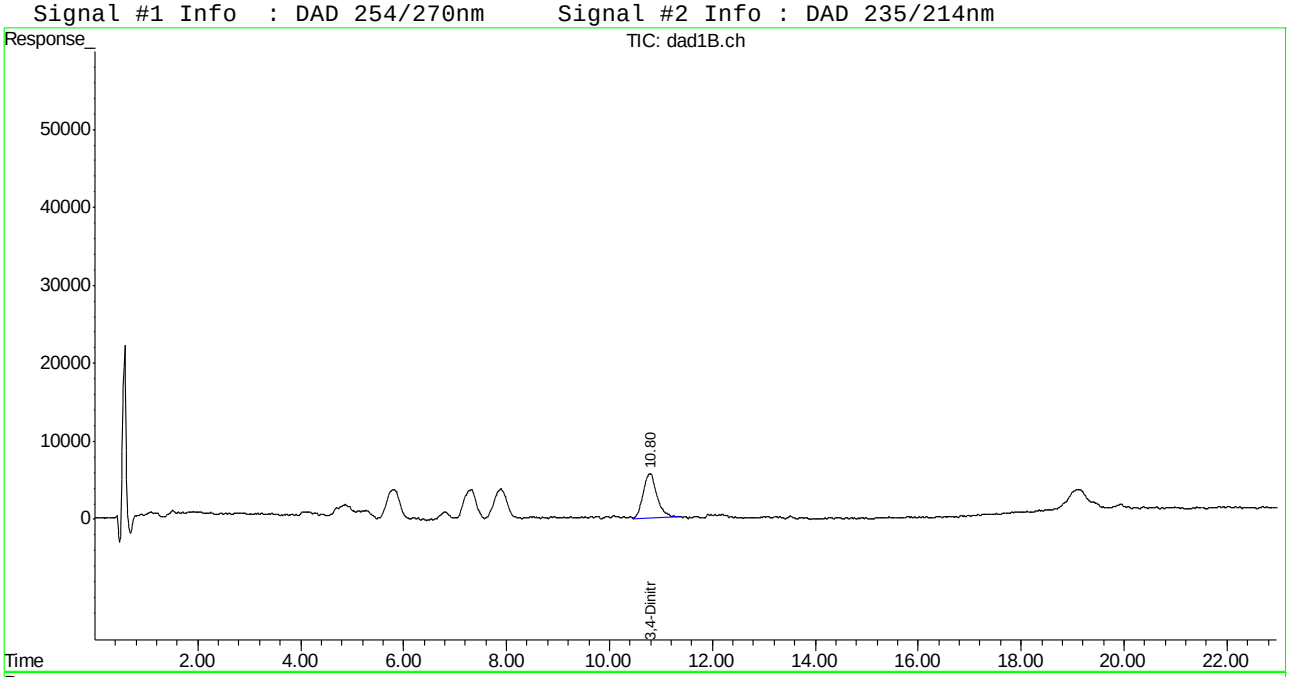
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060347.D 8330B_0707PLUS.M Fri Jul 27 15:24:49 2018 Page 1

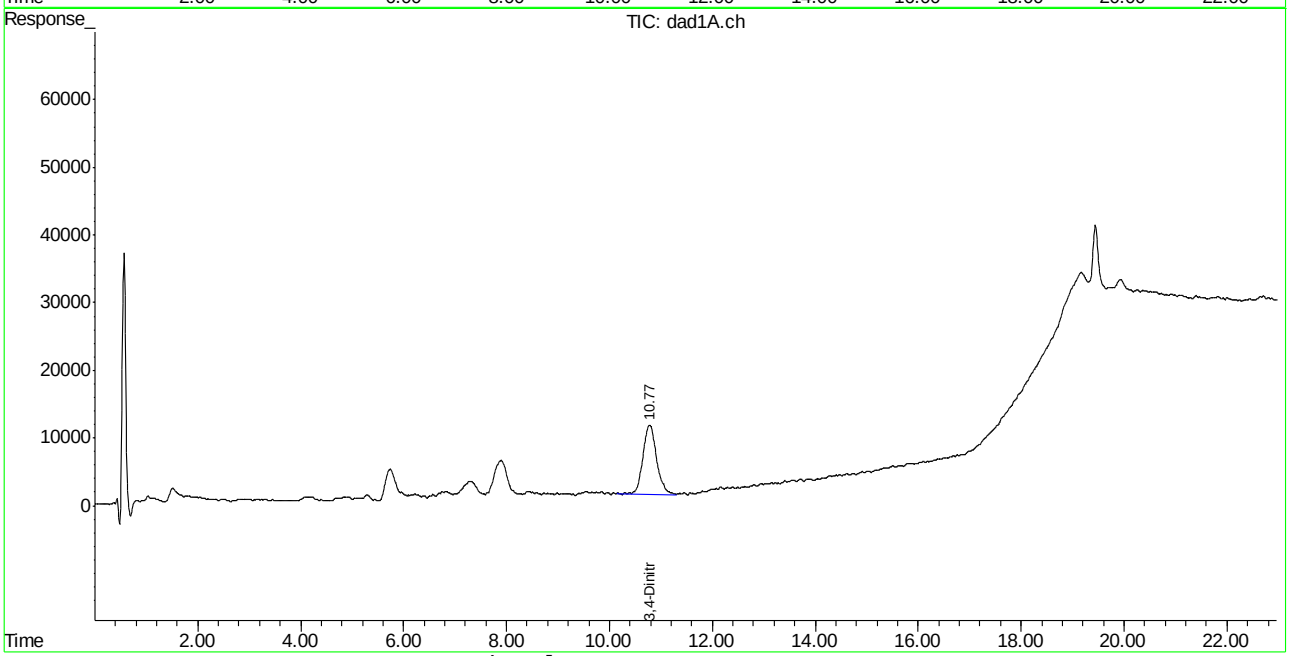
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060347.D\dad1B.ch Vial: 78
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060347.D\dad1A.ch
Acq On : 24-Jul-2018, 16:17:25 Operator: williamh
Sample : FA55941-4 Inst : G1315B
Misc : OP71008,gbb1754,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 27 15:24 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

Sample Number: FA55941-4
Lab FileID: BB060347.D
Injection Time: 07/24/18 16:17

Method: SW846 8330A
Analyst approved: 07/27/18 15:26 Natasha Gumtie
Supervisor approved: 07/27/18 15:26 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
3,4-Dinitrotoluene	610-39-9	1	10.80	Poorly defined baseline

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060348.D\dad1B.ch Vial: 79
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060348.D\dad1A.ch
Acq On : 24-Jul-2018, 16:47:25 Operator: williamh
Sample : FA55941-5 Inst : G1315B
Misc : OP71008,gbb1754,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:19 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.75	10.75	1133129	2005796	435.918	490.784
	Spiked Amount 500.000	Range 70 - 136		Recovery =		87.18%	98.16%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D.	N.D.
2)	HMX	0.00	0.00	0	0	N.D.	N.D.
3)	DNX	0.00	0.00	0	0	N.D.	N.D.
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	0.00	0.00	0	0	N.D.	N.D.
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D.	N.D.
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D.	N.D.
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D.	N.D.
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D.	N.D.
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	0.00	0.00	0	0	N.D.	N.D.

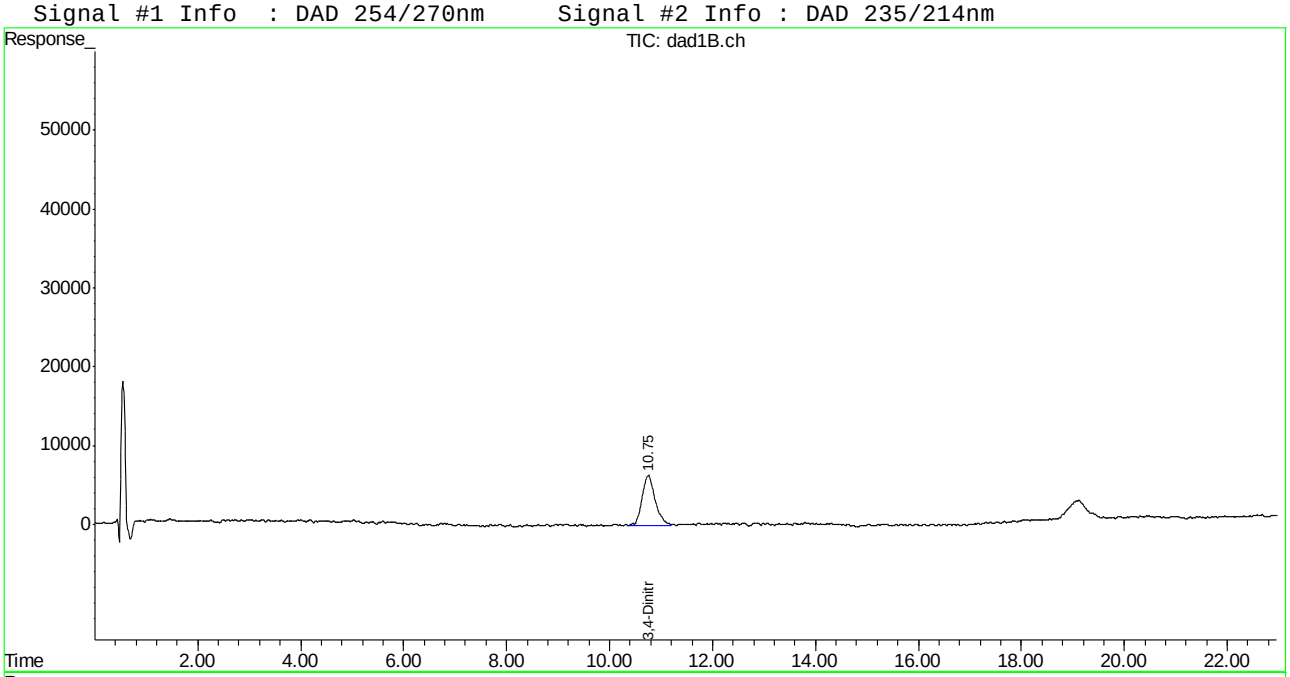
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060348.D 8330B_0707PLUS.M Thu Jul 26 16:02:20 2018 Page 1

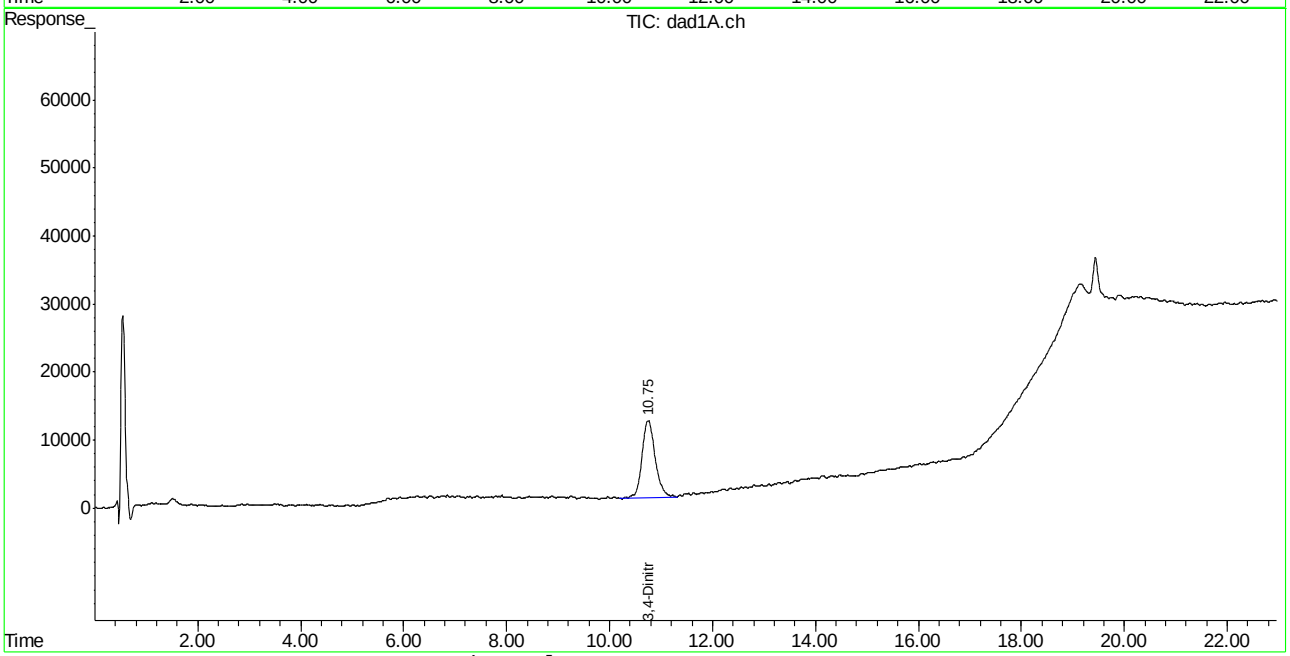
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060348.D\dad1B.ch Vial: 79
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060348.D\dad1A.ch
Acq On : 24-Jul-2018, 16:47:25 Operator: williamh
Sample : FA55941-5 Inst : G1315B
Misc : OP71008,gbb1754,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 15:54 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060349.D\dad1B.ch Vial: 80
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060349.D\dad1A.ch
Acq On : 24-Jul-2018, 17:17:21 Operator: williamh
Sample : FA55941-6 Inst : G1315B
Misc : OP71008,gbb1754,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:20 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.79	10.79	1027686	1723042	395.182	423.655
	Spiked Amount 500.000	Range 70 - 136		Recovery =		79.04%	84.73%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D.	N.D.

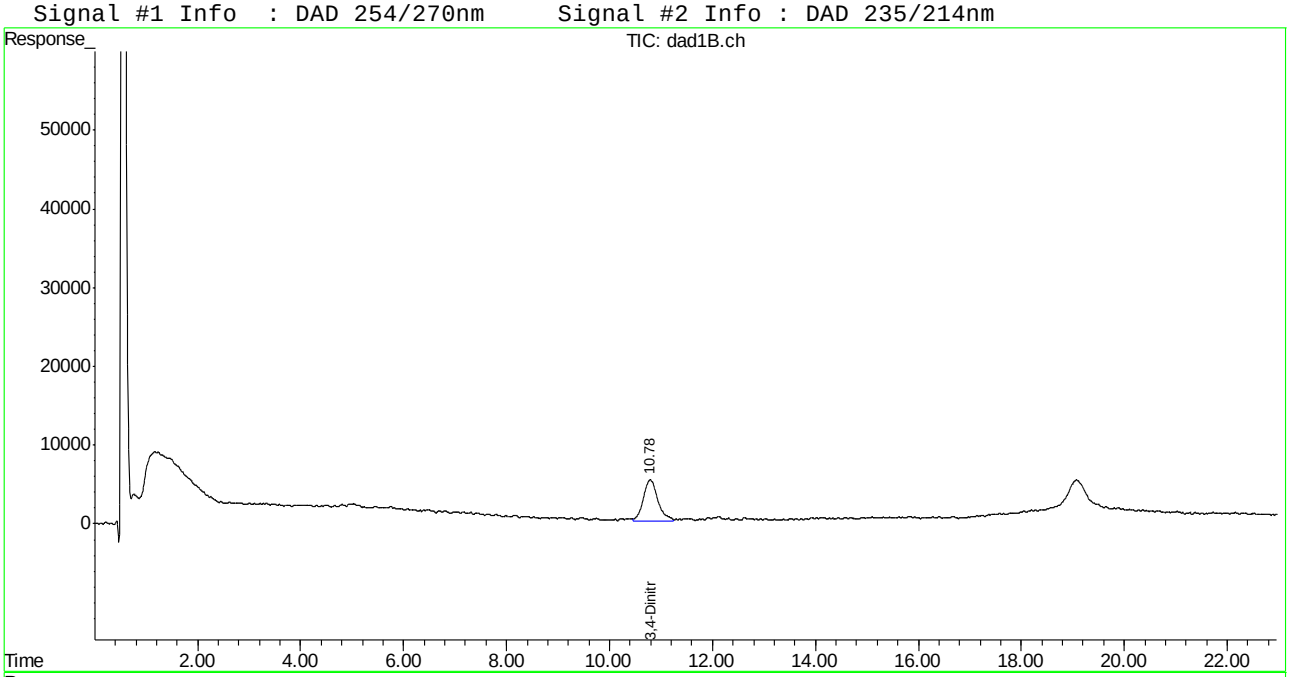
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060349.D 8330B_0707PLUS.M Thu Jul 26 16:02:21 2018 Page 1

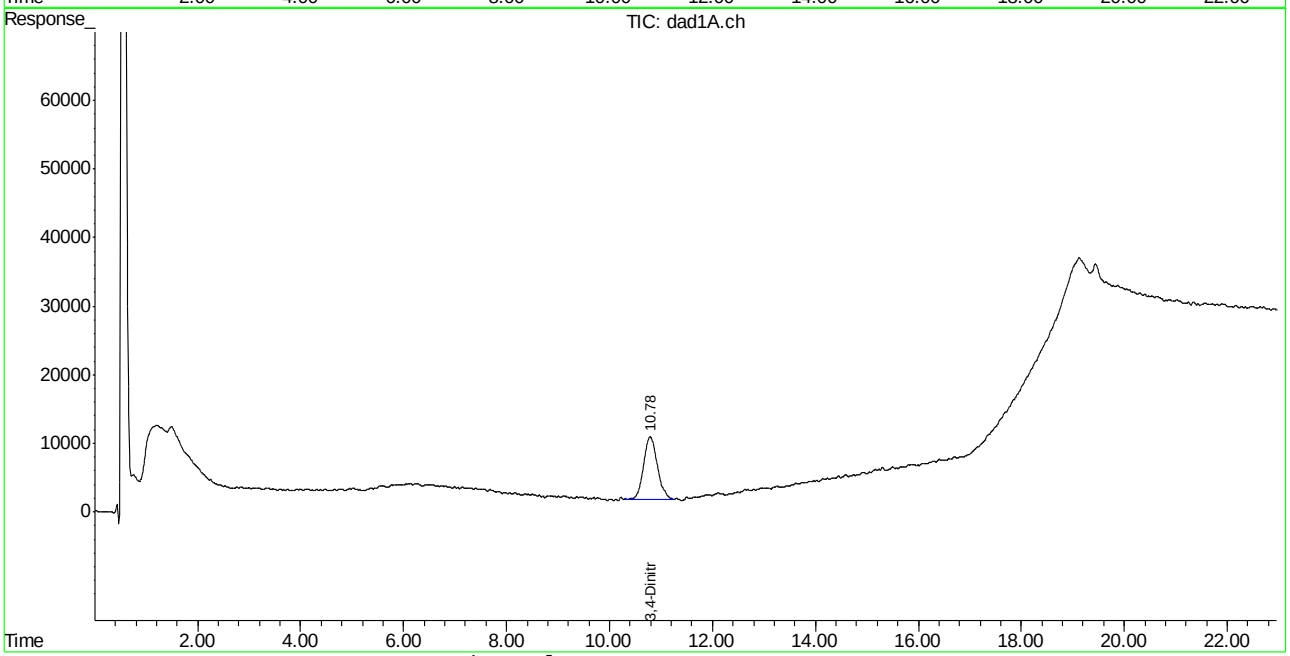
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060349.D\dad1B.ch Vial: 80
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060349.D\dad1A.ch
Acq On : 24-Jul-2018, 17:17:21 Operator: williamh
Sample : FA55941-6 Inst : G1315B
Misc : OP71008,gbb1754,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 15:54 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060350.D\dad1B.ch Vial: 81
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060350.D\dad1A.ch
Acq On : 24-Jul-2018, 17:47:21 Operator: williamh
Sample : FA55941-7 Inst : G1315B
Misc : OP71008,gbb1754,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:21 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.80	10.80	1150890	1802880	442.784	442.674
	Spiked Amount 500.000	Range 70 - 136		Recovery =		88.56%	88.53%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D.	N.D.
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	0.00	0.00	0	0	N.D.	N.D.
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D.	N.D.
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D.	N.D.
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D.	N.D.
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

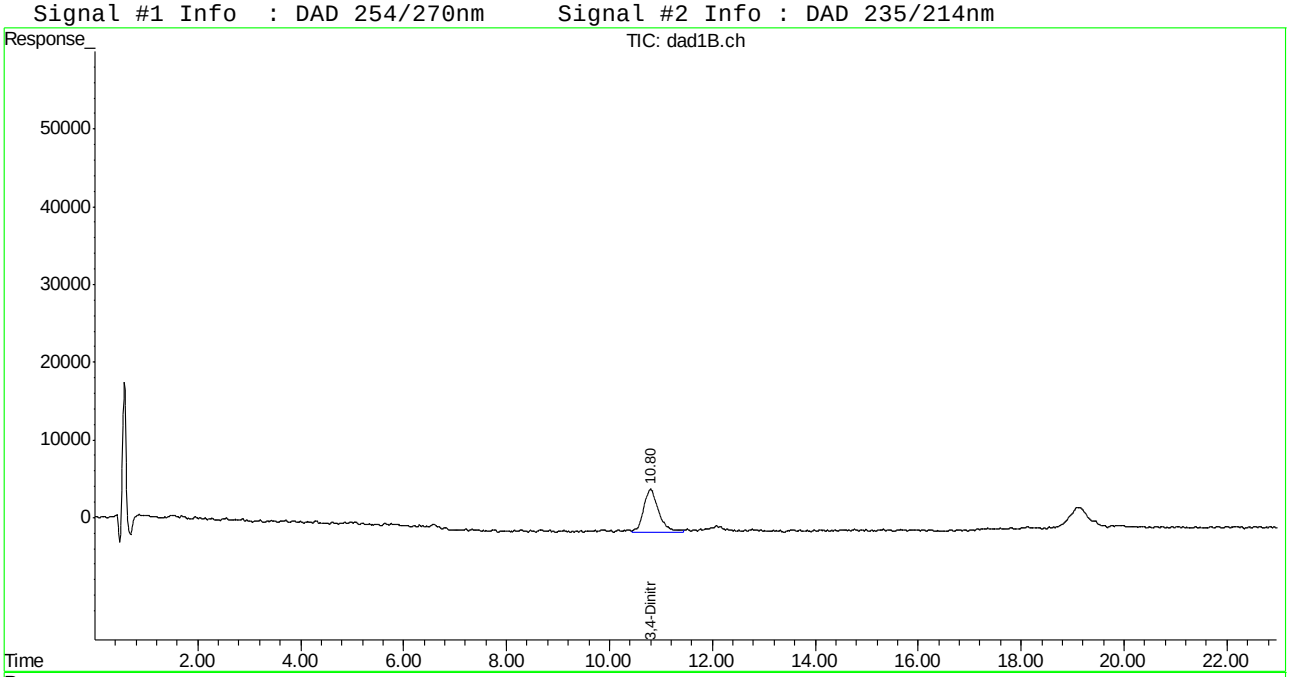
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060350.D 8330B_0707PLUS.M Thu Jul 26 16:02:22 2018 Page 1

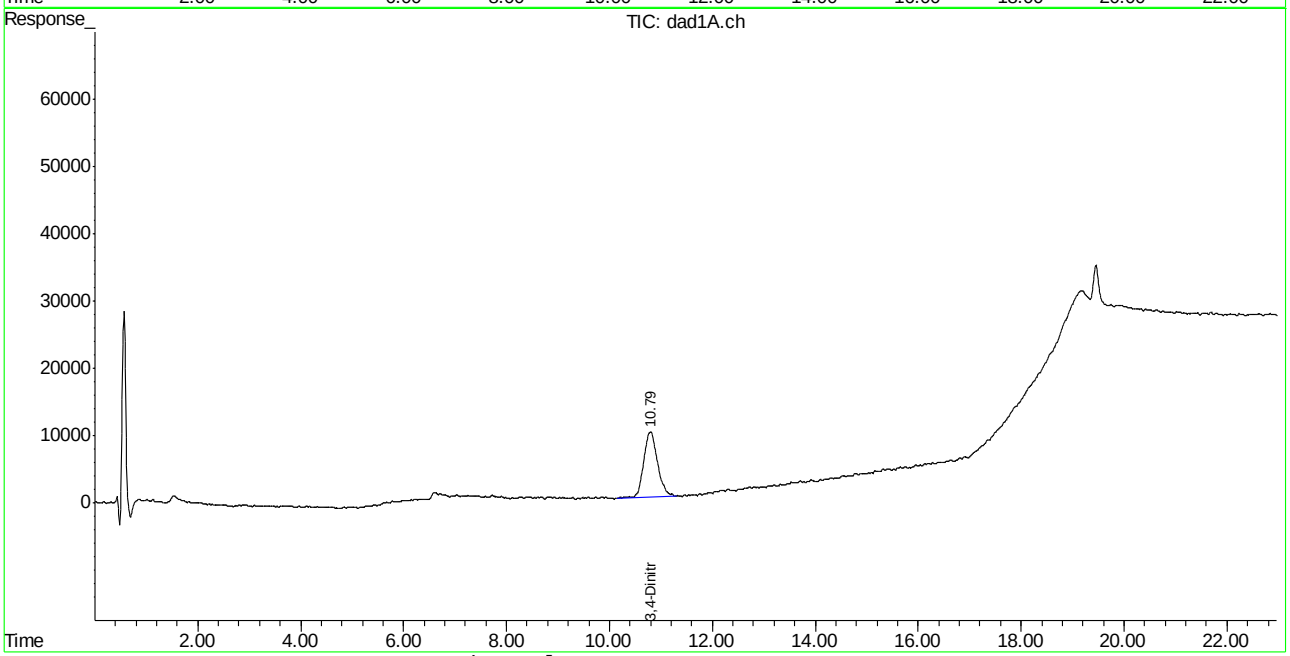
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060350.D\dad1B.ch Vial: 81
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060350.D\dad1A.ch
Acq On : 24-Jul-2018, 17:47:21 Operator: williamh
Sample : FA55941-7 Inst : G1315B
Misc : OP71008,gbb1754,1060,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 15:55 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060351.D\dad1B.ch Vial: 82
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060351.D\dad1A.ch
Acq On : 24-Jul-2018, 18:17:17 Operator: williamh
Sample : FA55941-8 Inst : G1315B
Misc : OP71008,gbb1754,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:22 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.80	10.80	1102846	1792593	424.215	440.226
	Spiked Amount 500.000	Range 70 - 136		Recovery =		84.84%	88.05%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

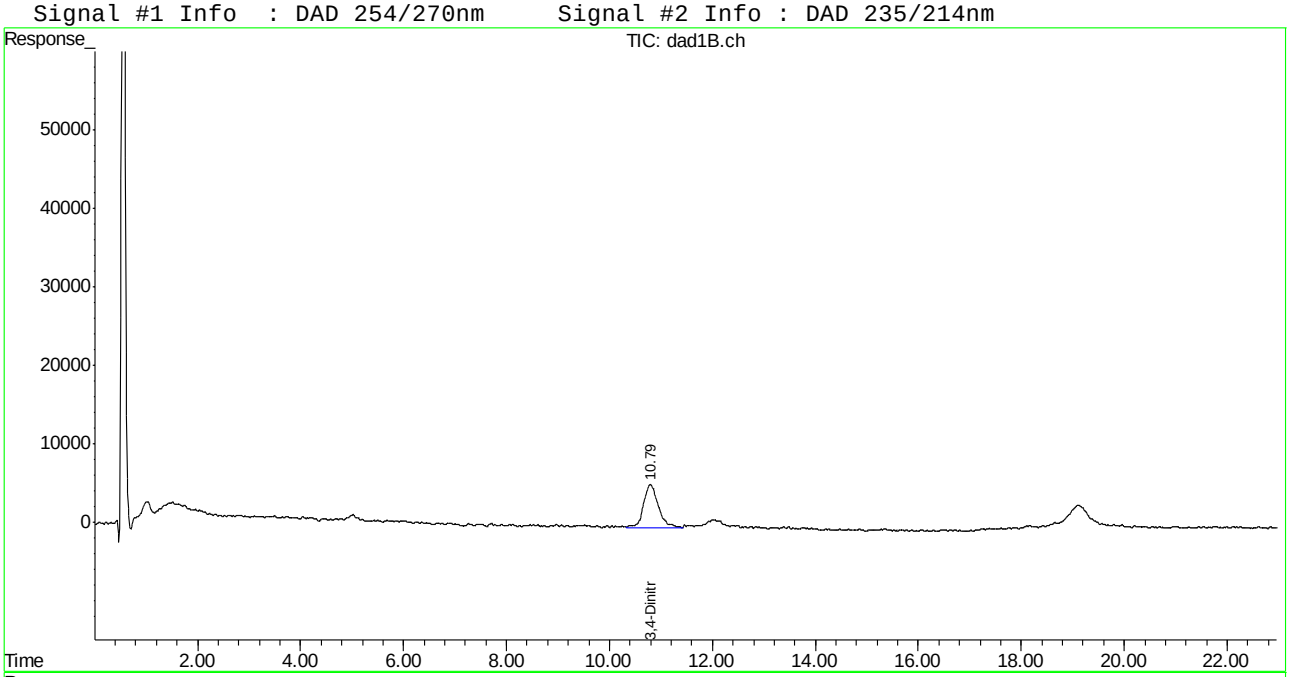
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060351.D 8330B_0707PLUS.M Thu Jul 26 16:02:23 2018 Page 1

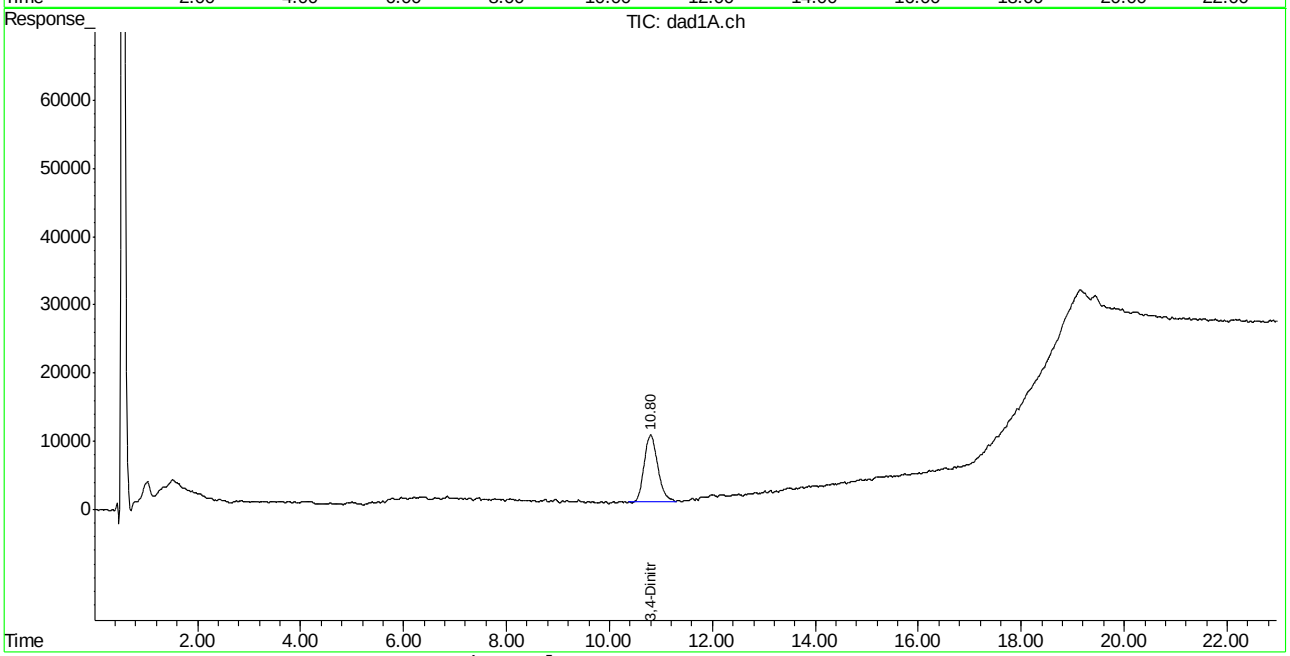
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060351.D\dad1B.ch Vial: 82
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060351.D\dad1A.ch
Acq On : 24-Jul-2018, 18:17:17 Operator: williamh
Sample : FA55941-8 Inst : G1315B
Misc : OP71008,gbb1754,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 15:55 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060354.D\dad1B.ch Vial: 83
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060354.D\dad1A.ch
Acq On : 24-Jul-2018, 19:47:09 Operator: williamh
Sample : FA55941-9 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:25 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	10.77	10.76	1036145	1902108	398.449	466.241
Spiked Amount 500.000	Range 70 - 136		Recovery =		79.69%	93.25%
Target Compounds						
1) TNX	0.00	0.00	0	0	N.D. d	N.D. d
2) HMX	0.00	0.00	0	0	N.D. d	N.D. d
3) DNX	0.00	0.00	0	0	N.D. d	N.D. d
4) MNX	0.00	0.00	0	0	N.D. d	N.D. d
5) RDX	0.00	0.00	0	0	N.D. d	N.D. d
6) 1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7) 1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8) 3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9) Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10) Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11) Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12) 2,4,6-Trinitroto	0.00	0.00	0	0	N.D.	N.D.
13) 2-Amino-4,6-Dini	0.00	0.00	0	0	N.D.	N.D.
14) 4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16) 2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17) 2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18) o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19) p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20) m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21) PETN	0.00	0.00	0	0	N.D. d	N.D. d

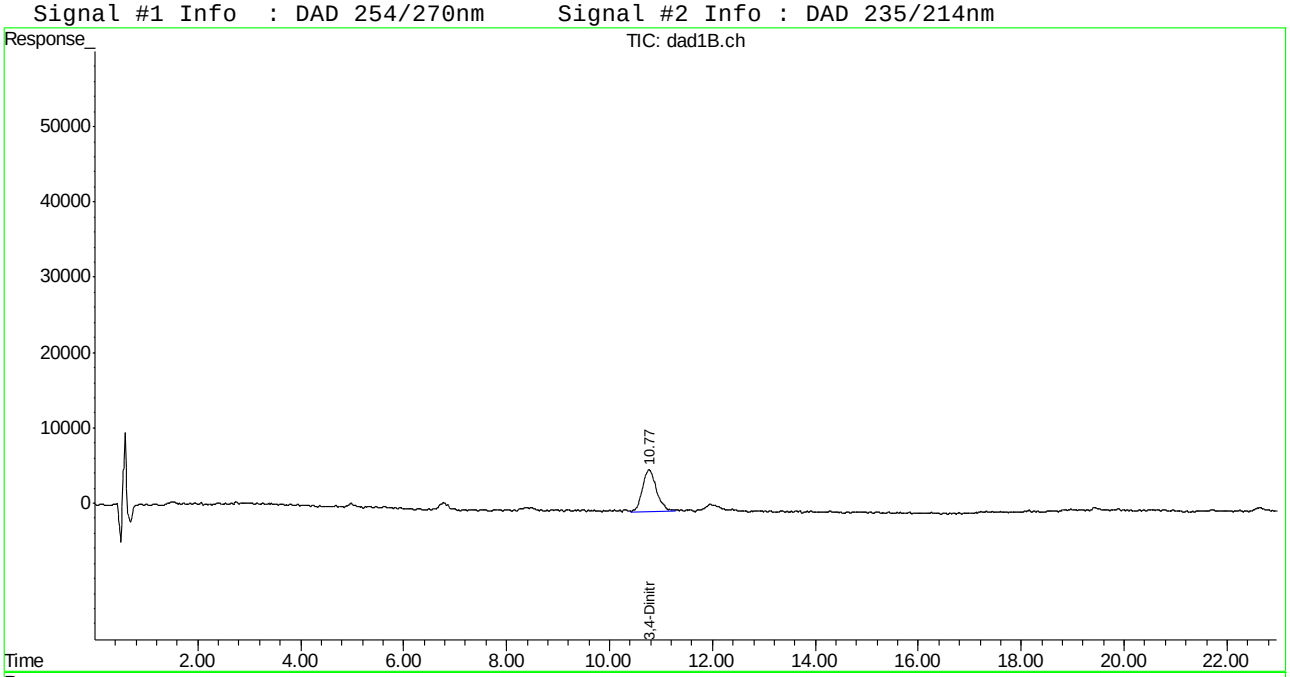
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060354.D 8330B_0707PLUS.M Thu Jul 26 16:02:26 2018 Page 1

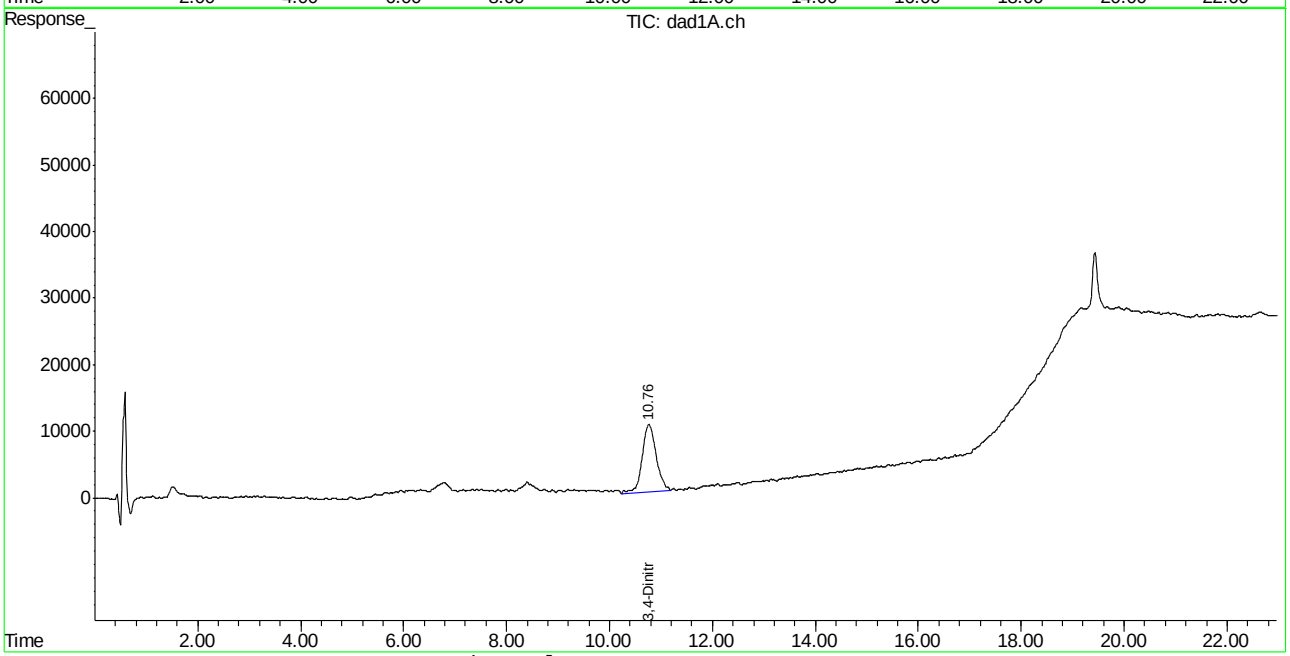
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060354.D\dad1B.ch Vial: 83
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060354.D\dad1A.ch
Acq On : 24-Jul-2018, 19:47:09 Operator: williamh
Sample : FA55941-9 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 15:57 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060342.D\dad1B.ch Vial: 73
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060342.D\dad1A.ch
Acq On : 24-Jul-2018, 13:47:22 Operator: williamh
Sample : op71008-mb Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:13 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.76	10.76	1130654	1906615	434.962	467.310
	Spiked Amount 500.000	Range 70 - 136		Recovery =		86.99%	93.46%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	0.00	0.00	0	0	N.D.	N.D.
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D.	N.D.
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D.	N.D.
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	0.00	0.00	0	0	N.D. d	N.D.

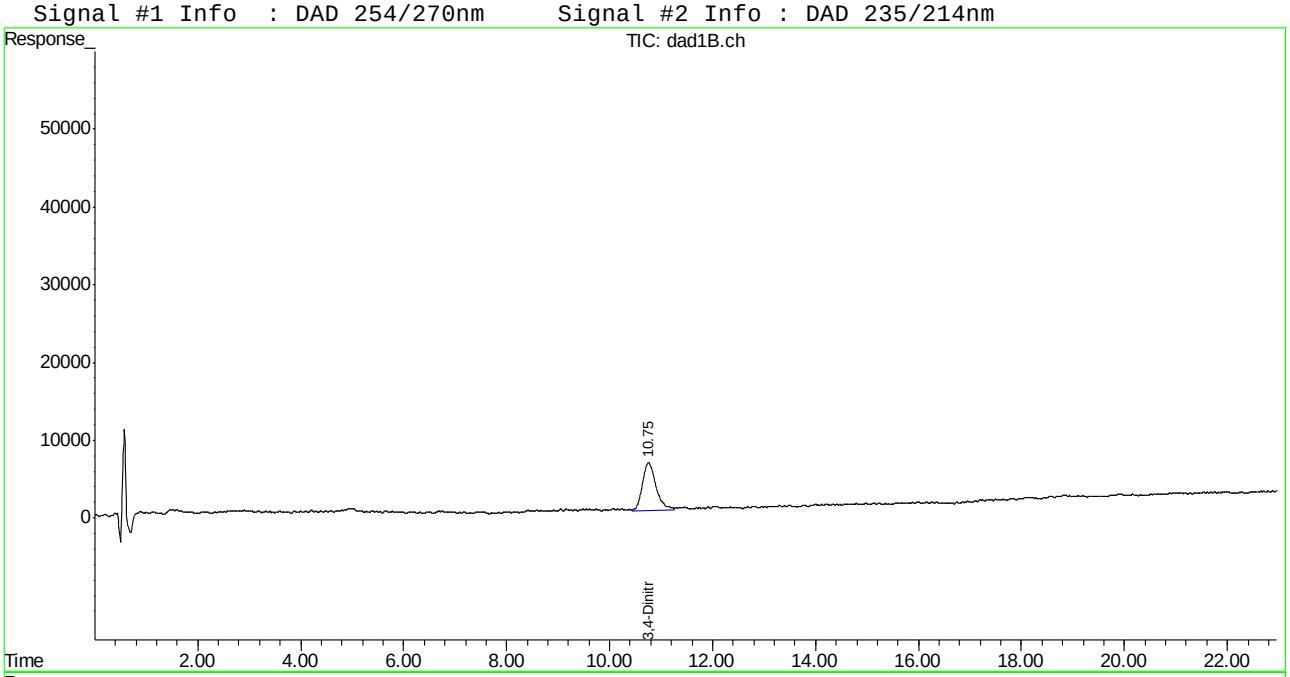
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060342.D 8330B_0707PLUS.M Thu Jul 26 16:02:14 2018 Page 1

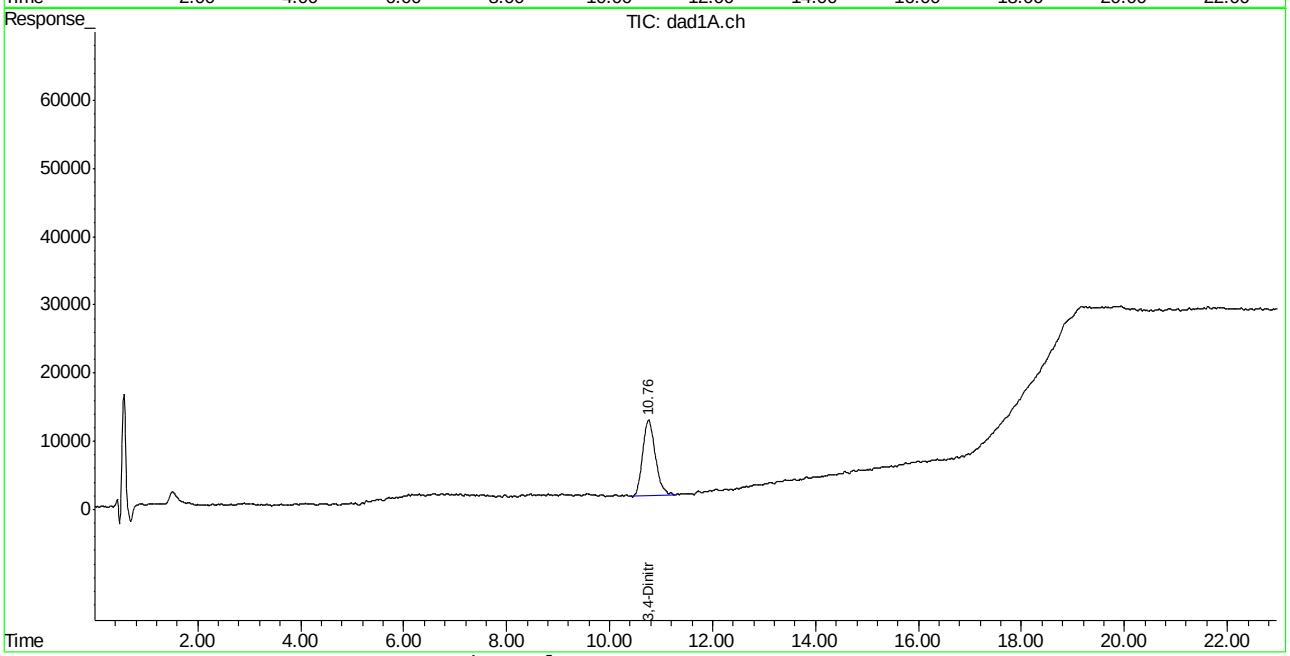
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060342.D\dad1B.ch Vial: 73
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060342.D\dad1A.ch
Acq On : 24-Jul-2018, 13:47:22 Operator: williamh
Sample : op71008-mb Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 15:34 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/27/18 15:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060343.D\dad1B.ch Vial: 74
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060343.D\dad1A.ch
Acq On : 24-Jul-2018, 14:17:23 Operator: williamh
Sample : op71008-BS Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:14 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.77	10.76	1181802	1836563	454.735	450.683
	Spiked Amount 500.000	Range 70 - 136		Recovery =		90.95%	90.14%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.42	1.42	848516	2325516	440.289	478.170
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.79	2.79	1020241	1546252	494.777	453.211
6)	1,3,5-Trinitrobe	4.56	4.56	2048431	4085047	475.995	489.644
7)	1,3-Dinitrobenze	5.73	5.73	2709618	1845140	469.405	471.626
8)	3,5-Dinitroanili	6.02	6.02	2241768	3791632	479.992	481.749
9)	Nitrobenzene	7.25	7.26	1701958	1649228	457.211	505.358
10)	Nitroglycerin	0.00	8.68	0	3401170	N.D. d	2607.282
11)	Tetryl	9.10	9.10	1454068	2299216	521.692	578.400
12)	2,4,6-Trinitroto	9.57	9.60	1859410	2241501	537.428m	556.950
13)	2-Amino-4,6-Dini	9.70	9.75	1687792	2797064	434.031m	550.393
14)	4-Amino-2,6-Dini	10.23	10.23	1348378	2555396	505.470	516.672
16)	2,4-Dinitrotolue	11.43	11.44	2510313	1446121	459.614	479.269
17)	2,6-Dinitrotolue	11.88	11.88	1588243	1852829	508.481	482.523
18)	o-Nitrotoluene	15.08	15.10	1212503	1577946	510.101	489.347m
19)	p-Nitrotoluene	15.69	15.69	1844951	1558909	469.586	445.430
20)	m-Nitrotoluene	16.66	16.66	1726176	1913316	488.358	529.607
21)	PETN	0.00	18.73	0	3917955	N.D.	2729.675m#

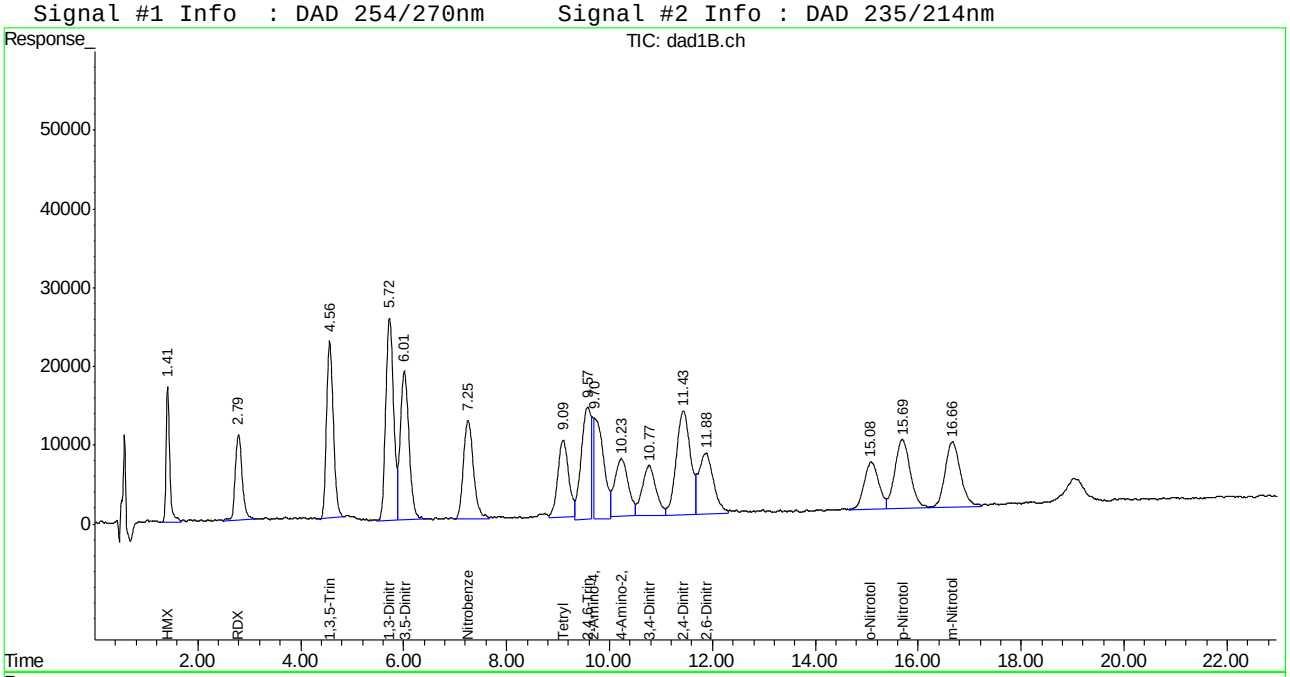
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060343.D 8330B_0707PLUS.M Thu Jul 26 16:02:15 2018 Page 1

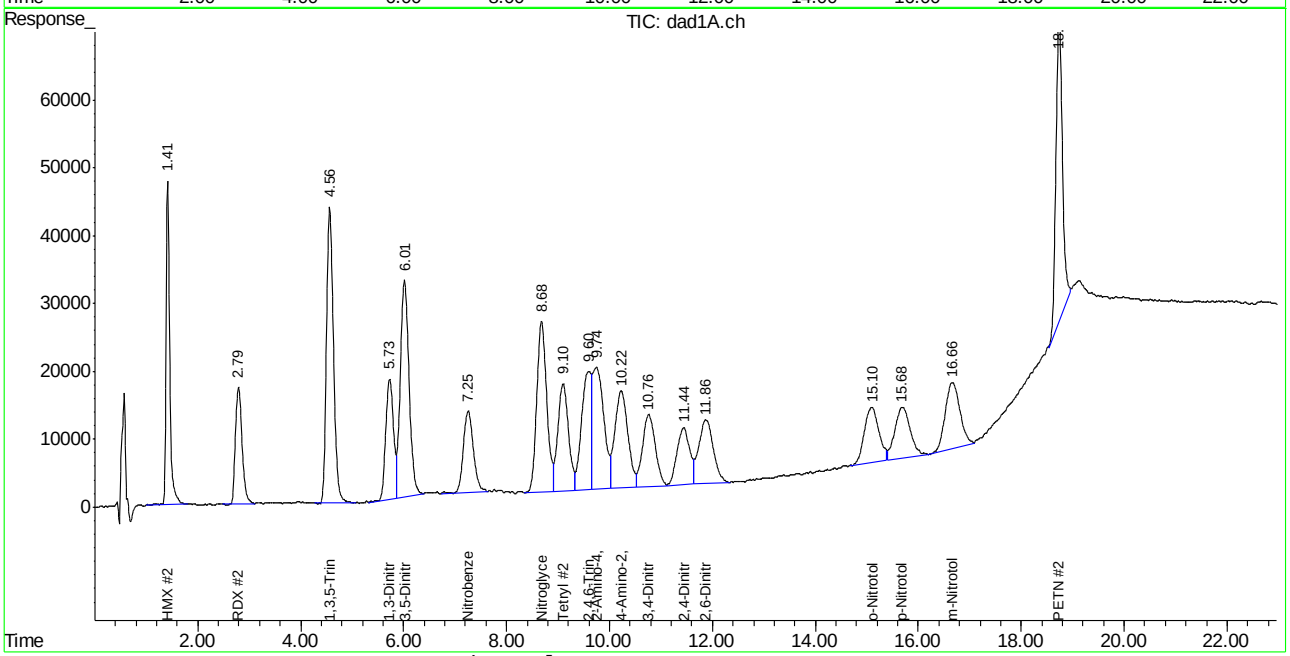
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060343.D\dad1B.ch Vial: 74
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060343.D\dad1A.ch
Acq On : 24-Jul-2018, 14:17:23 Operator: williamh
Sample : op71008-BS Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 15:35 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

Sample Number: OP71008-BS
Lab FileID: BB060343.D
Injection Time: 07/24/18 14:17

Method: SW846 8330A
Analyst approved: 07/26/18 17:05 Mike Eger
Supervisor approved: 07/27/18 15:26 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
2,4,6-Trinitrotoluene	118-96-7	1	9.57	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	9.70	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.10	Poor instrument integration
PETN	78-11-5	2	18.73	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/27/18 15:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060355.D\dad1B.ch Vial: 84
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060355.D\dad1A.ch
Acq On : 24-Jul-2018, 20:17:05 Operator: williamh
Sample : op71008-MS Inst : G1315B
Misc : OP71008,gbb1754,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:26 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.75	10.74	1153828	1800754	443.919	442.168
	Spiked Amount 500.000	Range 70 - 136		Recovery =		88.78%	88.43%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.42	1.42	828970	2286305	430.147	470.110
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.79	2.79	990472	1516812	480.340	444.582
6)	1,3,5-Trinitrobe	4.55	4.55	2089180	3967157	485.496	475.514
7)	1,3-Dinitrobenze	5.72	5.72	2704514	1727713	468.521	441.251
8)	3,5-Dinitroanili	6.01	6.01	2166388	3717076	463.844	472.292
9)	Nitrobenzene	7.25	7.24	1682012	1668289	451.853	511.206
10)	Nitroglycerin	0.00	8.67	0	3516467	N.D. d	2695.666
11)	Tetryl	9.07	9.07	1146187	1835753	411.230	462.756
12)	2,4,6-Trinitroto	9.55	9.59	1914069	2309135	553.385m	573.649
13)	2-Amino-4,6-Dini	9.67	9.73	1619833	2639142	416.554m	519.318
14)	4-Amino-2,6-Dini	10.20	10.21	1291470	2492201	484.137	504.172
16)	2,4-Dinitrotolue	11.42	11.41	2476273	1394534	453.382	462.321
17)	2,6-Dinitrotolue	11.84	11.85	1589995	1807435	509.045	470.887
18)	o-Nitrotoluene	15.08	15.07	1197055	1644591	503.602	510.015
19)	p-Nitrotoluene	15.67	15.68	1871605	1565956	476.370	447.444
20)	m-Nitrotoluene	16.65	16.65	1761681	1874443	498.384	518.847
21)	PETN	0.00	18.72	0	3766608	N.D. d	2624.230m

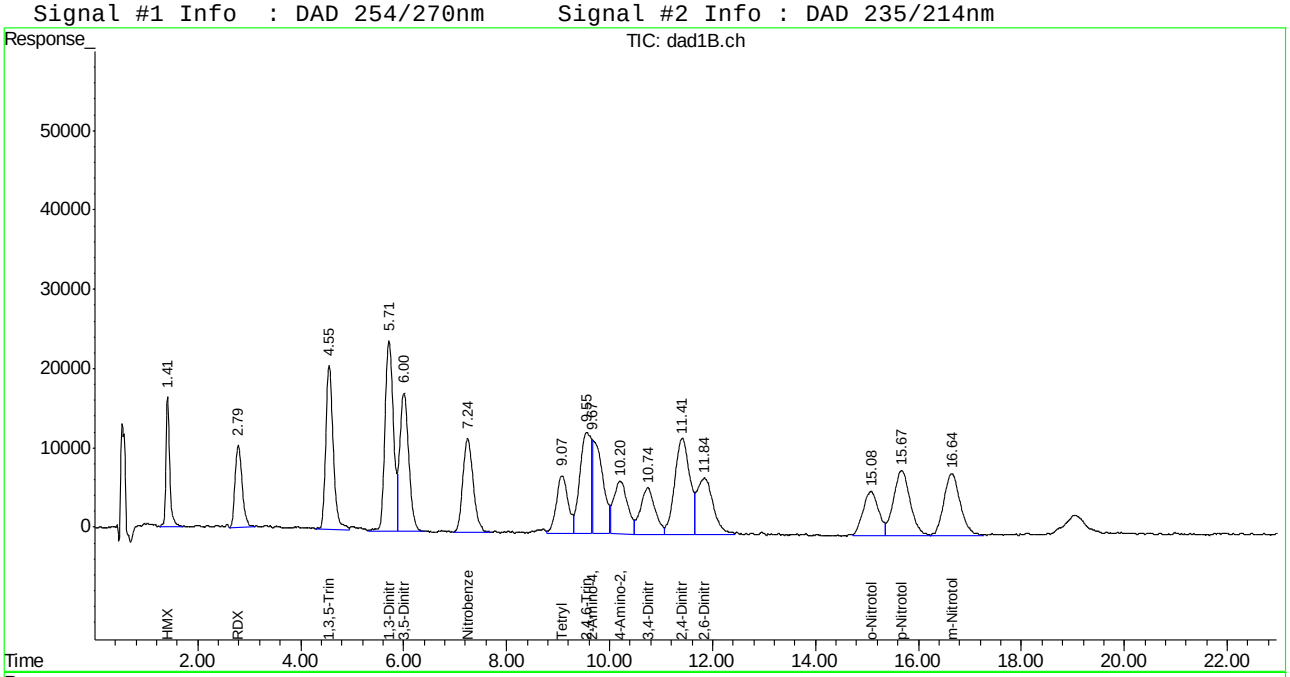
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060355.D 8330B_0707PLUS.M Thu Jul 26 16:02:27 2018 Page 1

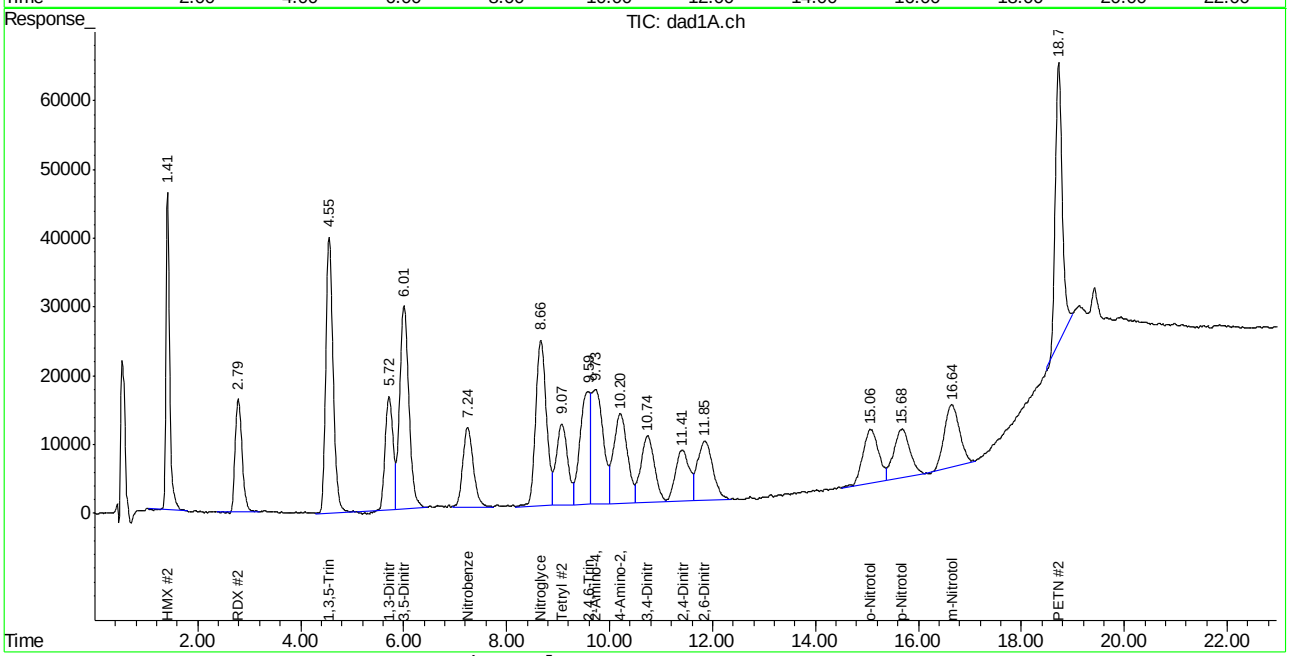
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060355.D\dad1B.ch Vial: 84
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060355.D\dad1A.ch
Acq On : 24-Jul-2018, 20:17:05 Operator: williamh
Sample : op71008-MS Inst : G1315B
Misc : OP71008,gbb1754,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 15:58 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

Sample Number:	OP71008-MS	**Method:**	SW846 8330A
Lab FileID:	BB060355.D	**Analyst approved:**	07/26/18 17:05 Mike Eger
Injection Time:	07/24/18 20:17	**Supervisor approved:**	07/27/18 15:26 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
2,4,6-Trinitrotoluene	118-96-7	1	9.55	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	9.67	Poor instrument integration
PETN	78-11-5	2	18.72	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/27/18 15:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060356.D\dad1B.ch Vial: 85
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060356.D\dad1A.ch
Acq On : 24-Jul-2018, 20:47:03 Operator: williamh
Sample : op71008-MSD Inst : G1315B
Misc : OP71008,gbb1754,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:27 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.74	10.74	1153460	1858393	443.777	455.868
	Spiked Amount 500.000	Range 70 - 136		Recovery =		88.76%	91.17%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.41	1.41	824937	2366634	428.054	486.622
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	2.79	2.79	986637	1549972	478.480	454.302
6)	1,3,5-Trinitrobe	4.55	4.55	2018265	4007677	468.962	480.370
7)	1,3-Dinitrobenze	5.72	5.72	2679756	1856571	464.232	474.585
8)	3,5-Dinitroanili	6.01	6.01	2204766	3970848	472.065	504.480
9)	Nitrobenzene	7.25	7.24	1686097	1607853	452.951	492.667m
10)	Nitroglycerin	0.00	8.67	0	3579479	N.D. d	2743.970
11)	Tetryl	9.08	9.08	1161485	1852124	416.719	466.849
12)	2,4,6-Trinitroto	9.57	9.59	1787762	2244021	516.525m	557.572
13)	2-Amino-4,6-Dini	9.67	9.71	1666707	2714383	428.609m	534.123
14)	4-Amino-2,6-Dini	10.22	10.21	1323401	2516102	496.107	508.901
16)	2,4-Dinitrotolue	11.41	11.41	2523402	1425095	462.010	472.363
17)	2,6-Dinitrotolue	11.83	11.85	1540190	1885231	493.005	490.824
18)	o-Nitrotoluene	15.08	15.06	1197483	1592859	503.782	493.972m
19)	p-Nitrotoluene	15.67	15.68	1801045	1589947	458.411	454.299
20)	m-Nitrotoluene	16.65	16.65	1660899	1902702	469.921	526.669
21)	PETN	0.00	18.72	0	3855961	N.D. d	2686.483m

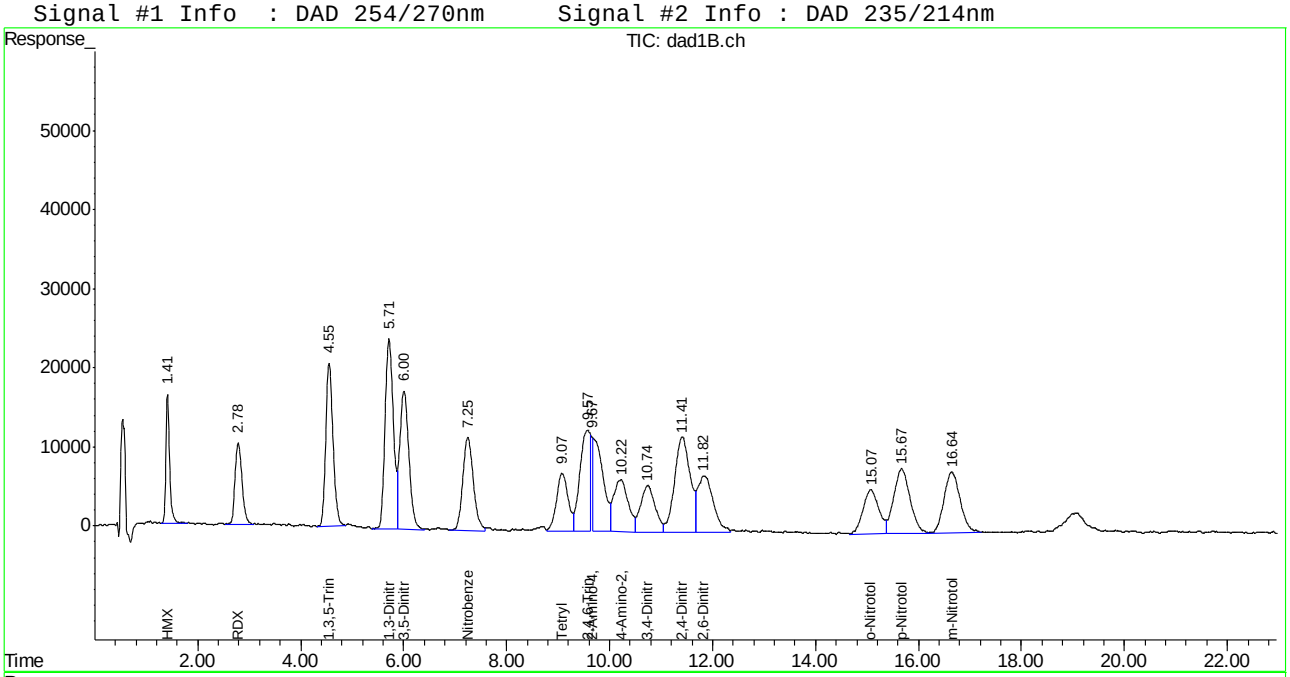
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060356.D 8330B_0707PLUS.M Thu Jul 26 16:02:28 2018 Page 1

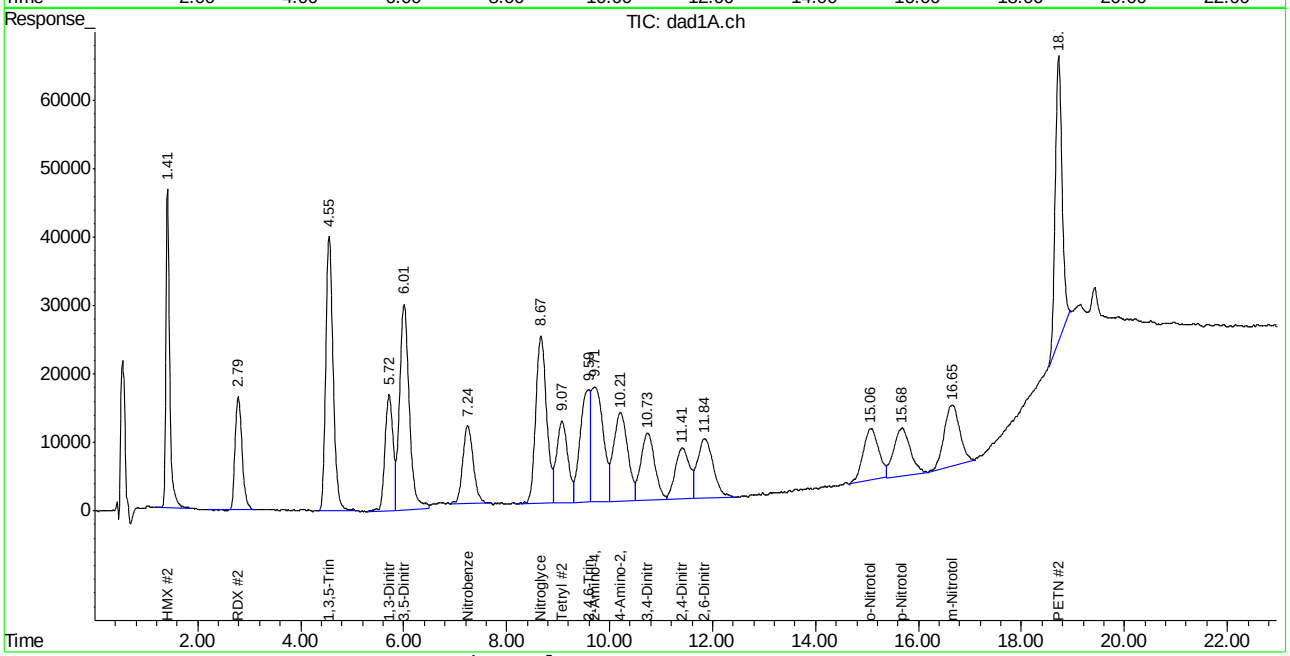
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060356.D\dad1B.ch Vial: 85
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060356.D\dad1A.ch
Acq On : 24-Jul-2018, 20:47:03 Operator: williamh
Sample : op71008-MSD Inst : G1315B
Misc : OP71008,gbb1754,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 16:00 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

Sample Number: OP71008-MSD
Lab FileID: BB060356.D
Injection Time: 07/24/18 20:47
Method: SW846 8330A
Analyst approved: 07/26/18 17:05 Mike Eger
Supervisor approved: 07/27/18 15:26 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Nitrobenzene	98-95-3	2	7.24	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	9.57	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	9.67	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.06	Poor instrument integration
PETN	78-11-5	2	18.72	Poor instrument integration

Manual Integrations APPROVED
(compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:27 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.44	11.44	73123	83553	29.384	19.865m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		5.88%#	3.97%#
	Target Compounds						
1)	TNX	1.40	1.40	105908	163610	21.638	21.435
2)	HMX	1.55	1.55	49679	104548	27.483	21.128
3)	DNX	1.80	1.79	78544	100526	25.540	19.827m
4)	MNX	2.40	2.40	69325	105898	22.185	22.460m
5)	RDX	3.03	3.04	45945	86009	23.641m	26.376m
6)	1,3,5-Trinitrobe	4.84	4.83	120926	188051	27.751m	22.941m
7)	1,3-Dinitrobenze	6.07	6.06	135770	141420	23.292m	36.692m#
8)	3,5-Dinitroanili	6.42	6.42	135157	245029	28.906	31.343
9)	Nitrobenzene	7.73	7.69	96978	113083	25.916m	35.981m
10)	Nitroglycerin	0.00	9.04	0	139364	N.D. d	109.066m
11)	Tetryl	9.50	9.54	52961	143805	17.896m	34.742m#
12)	2,4,6-Trinitroto	10.07	10.03	101487	127709	25.910m	29.865m
13)	2-Amino-4,6-Dini	10.45	10.46	86714	118088	23.221m	21.088m
14)	4-Amino-2,6-Dini	10.99	11.01	55774	103732	21.156m	19.461m
16)	2,4-Dinitrotolue	12.09	12.09	136897	44517	26.386m	14.109m#
17)	2,6-Dinitrotolue	12.55	12.56	109062	110117	37.119m	29.843m
18)	o-Nitrotoluene	15.86	0.00	36949	0	14.299	N.D. #
19)	p-Nitrotoluene	16.44	0.00	79601	0	19.919	N.D. #
20)	m-Nitrotoluene	17.44	0.00	146388	0	42.953	N.D. #
21)	PETN	0.00	18.93	0	154833	N.D. d	117.496m

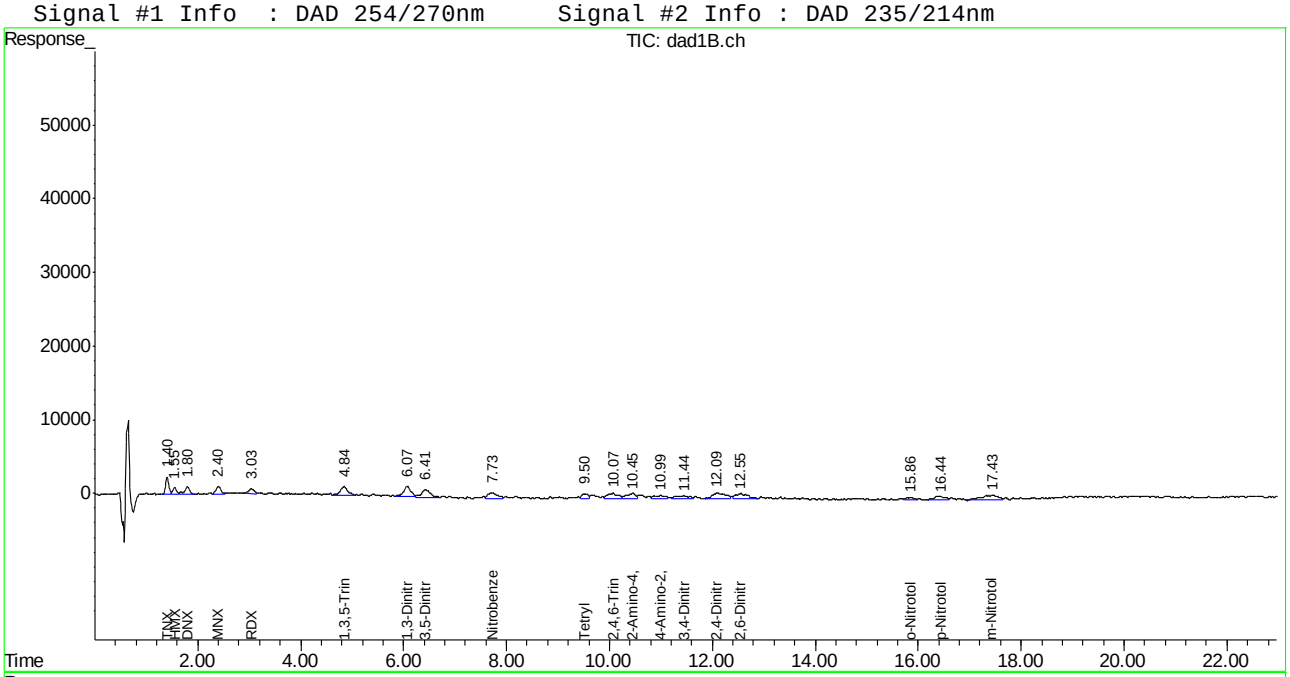
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060200.D 8330B_0707PLUS.M Mon Jul 09 10:55:16 2018 Page 1

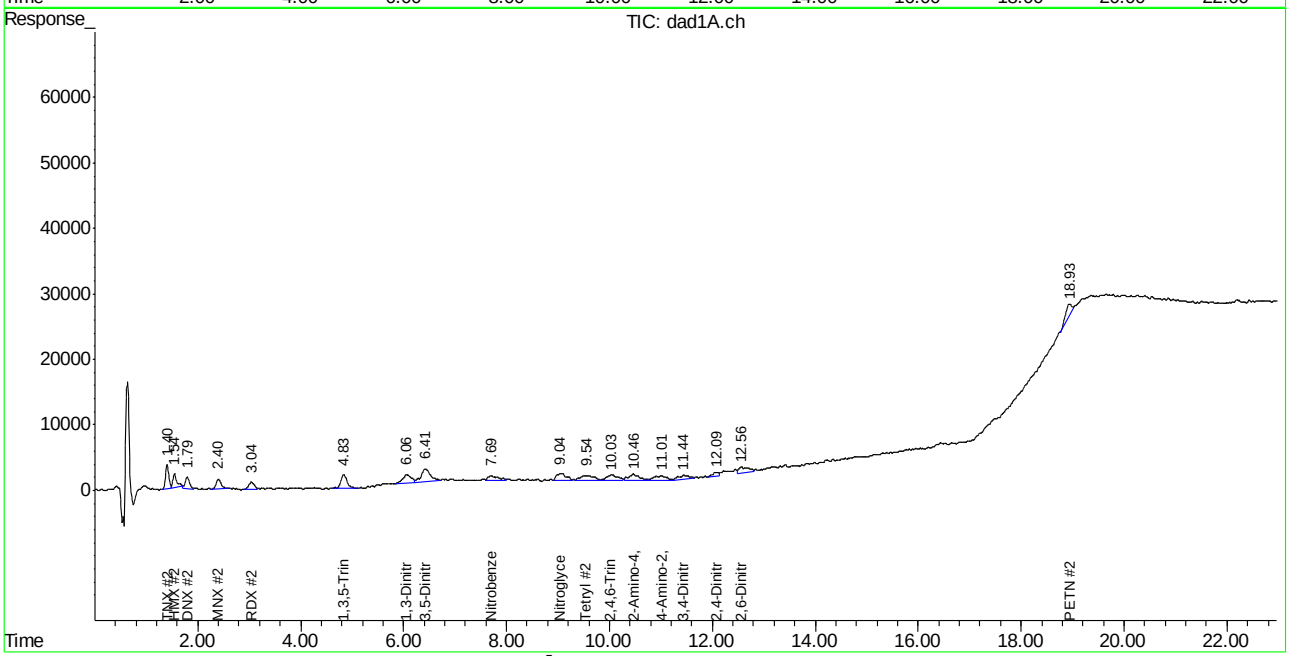
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:05 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

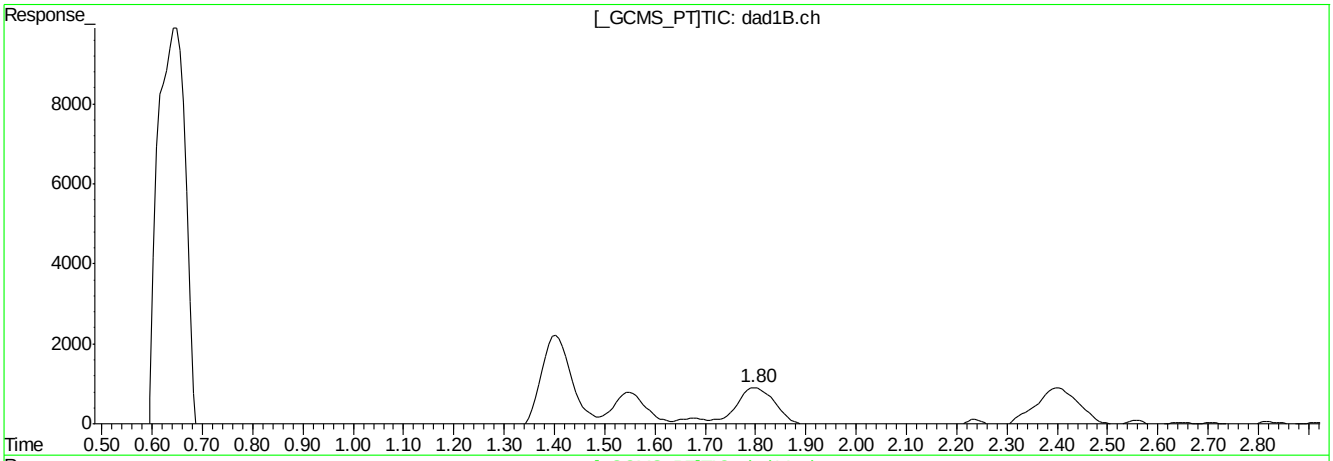
Sample Number: GBB1748-IC1748
Lab FileID: BB060200.D
Injection Time: 07/06/18 15:33
Method: SW846 8330A
Analyst approved: 07/09/18 11:23 William Hustedde
Supervisor approved: 07/09/18 16:15 Mike Eger

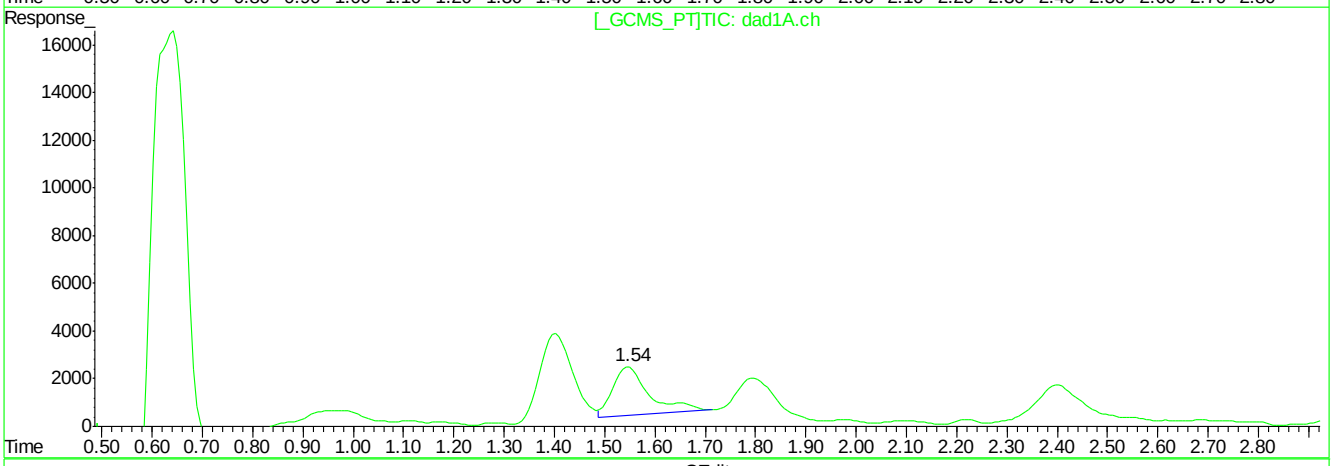
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		2	1.79	Poor instrument integration
MNX		2	2.40	Poor instrument integration
RDX	121-82-4	1	3.03	Poor instrument integration
RDX	121-82-4	2	3.04	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.83	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.84	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.06	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	6.07	Poor instrument integration
Nitrobenzene	98-95-3	2	7.69	Poor instrument integration
Nitrobenzene	98-95-3	1	7.73	Poor instrument integration
Nitroglycerine	55-63-0	2	9.04	Poor instrument integration
Tetryl	479-45-8	1	9.50	Poor instrument integration
Tetryl	479-45-8	2	9.54	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	10.03	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	10.07	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.45	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.46	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.99	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	11.01	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	11.44	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	12.09	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	12.09	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.55	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	12.56	Poor instrument integration
PETN	78-11-5	2	18.93	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.80min 25.540ppb

response 78544

(3) DNX #2

1.55min 20.620ppb

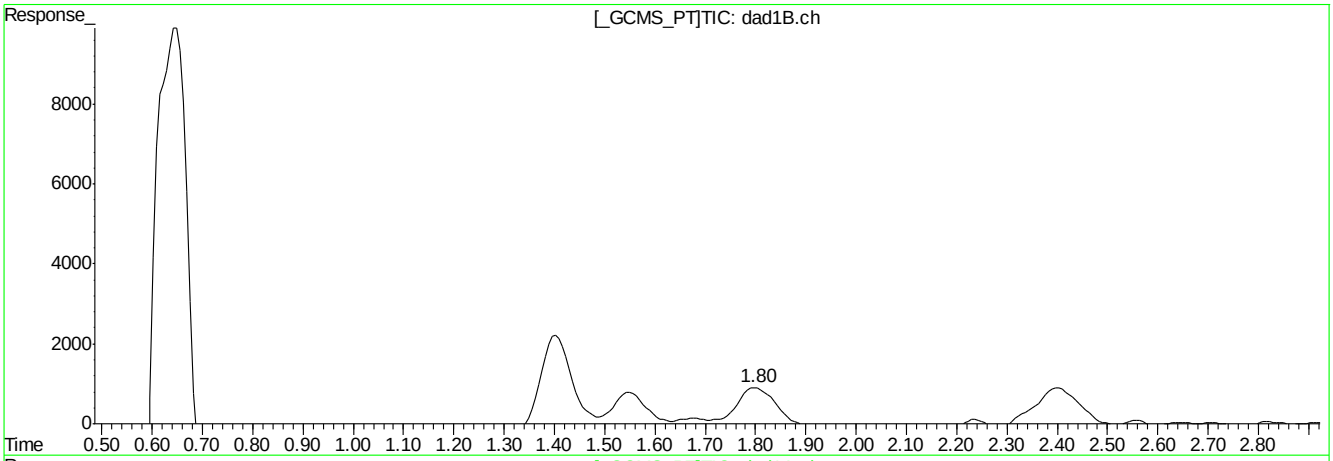
response 104548

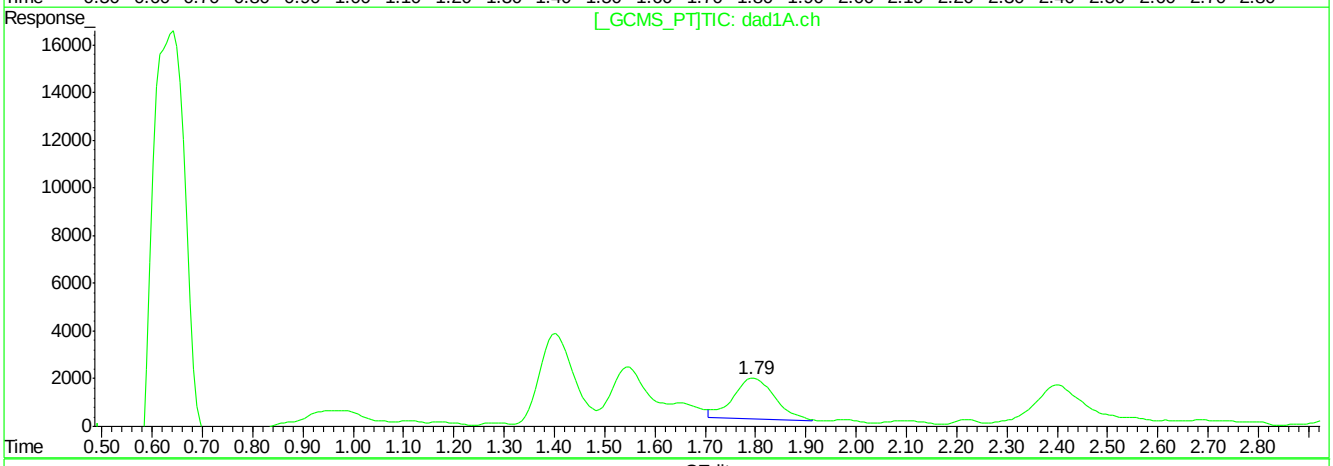
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:39:58 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.80min 25.540ppb

response 78544

(3) DNX #2

1.79min 19.827ppb m

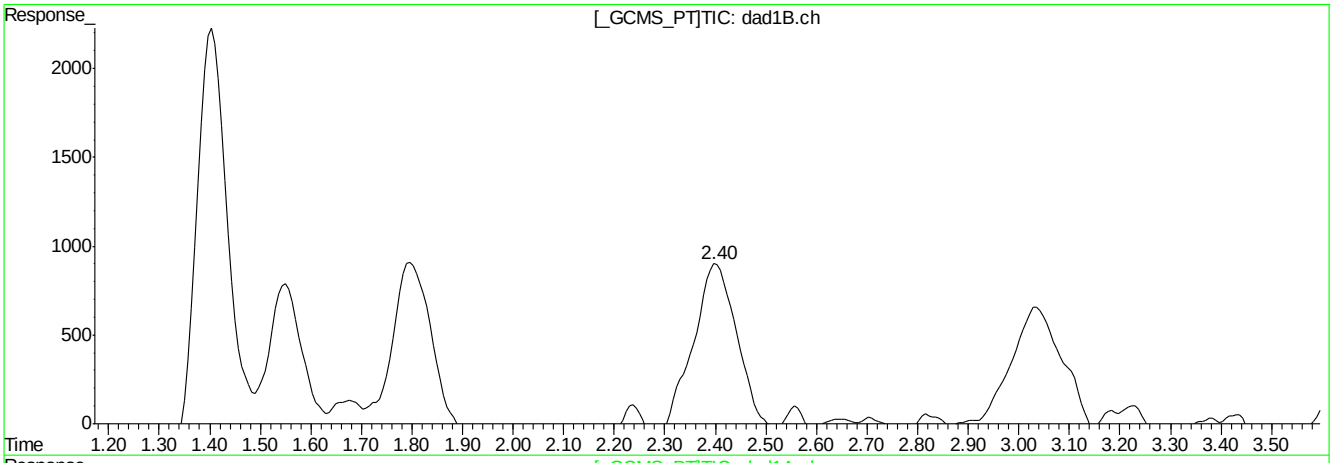
response 100526

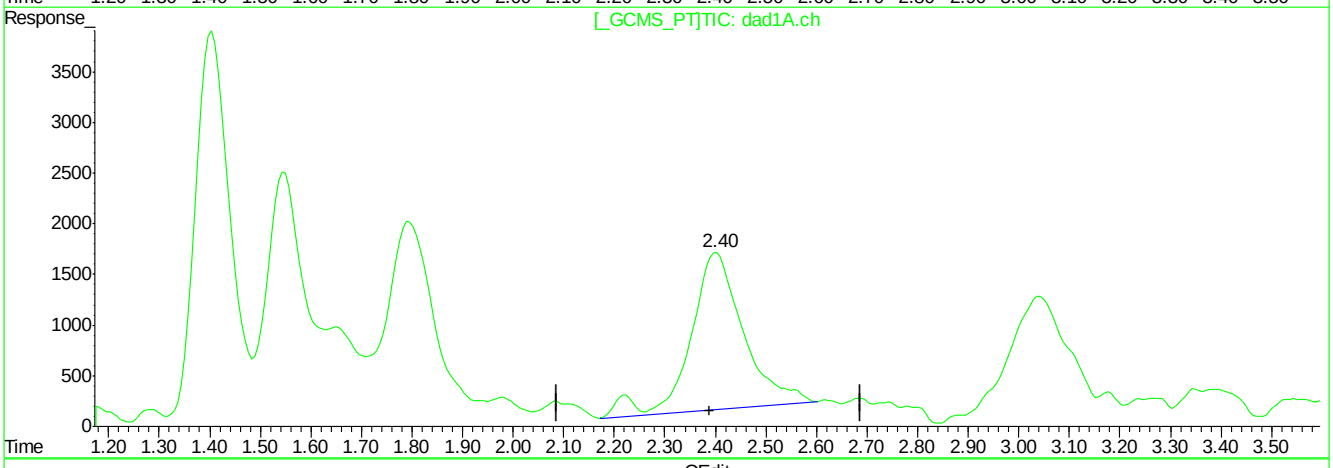
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:40:09 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.40min 22.185ppb

response 69325

(4) MNX #2

2.40min 24.066ppb

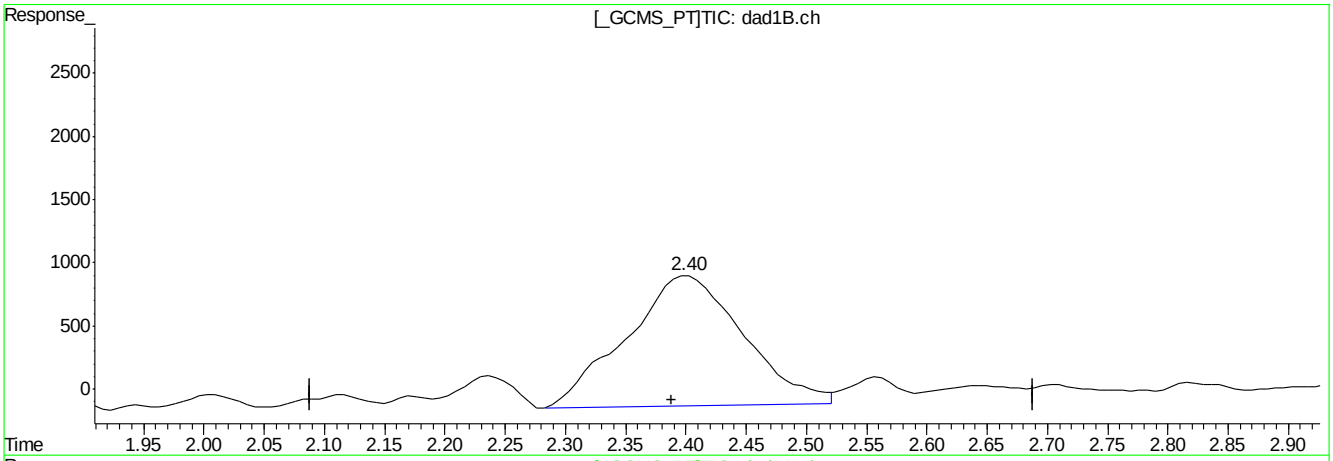
response 113473

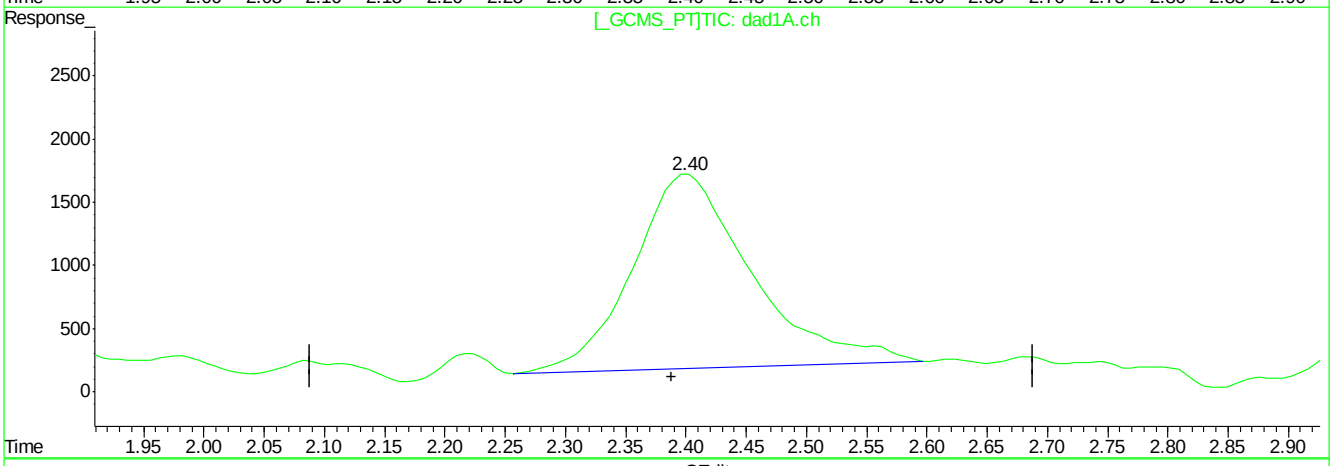
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:40:18 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.40min 22.185ppb

response 69325

(4) MNX #2

2.40min 22.460ppb m

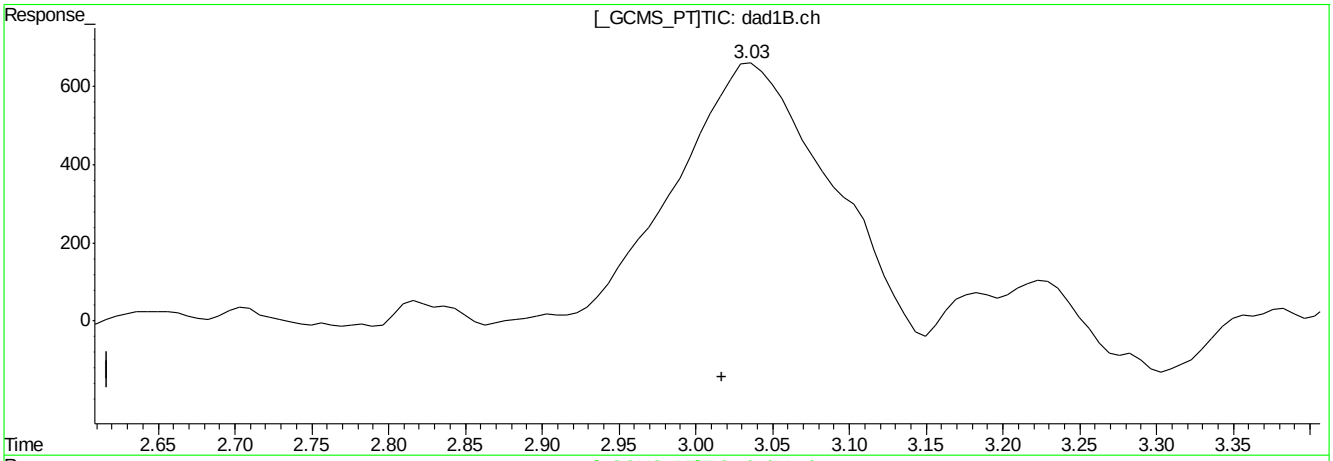
response 105898

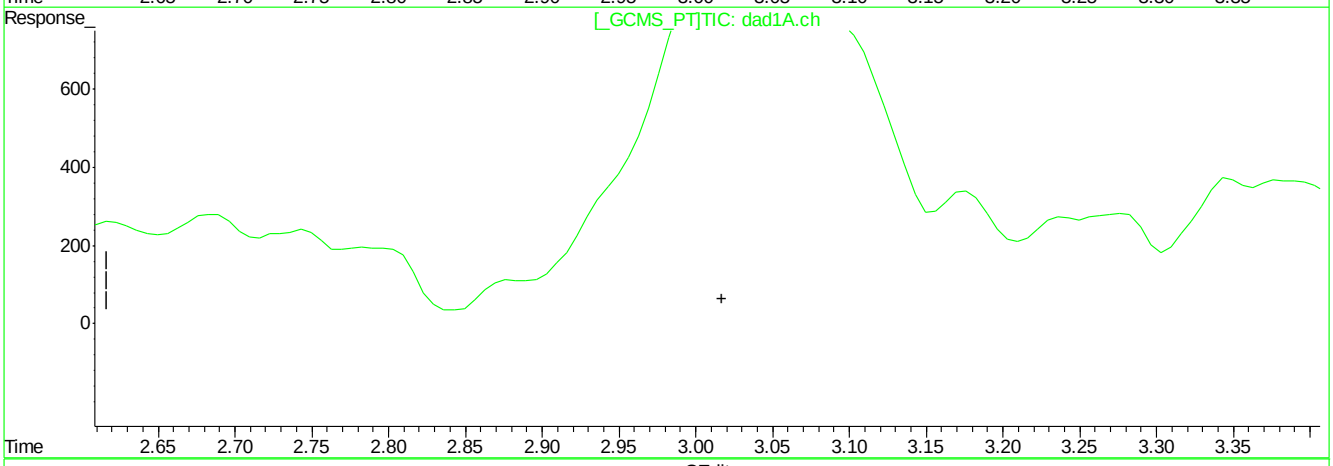
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:40:26 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.04min 35.814ppb

response 69624

(5) RDX #2

0.00min 0.000ppb

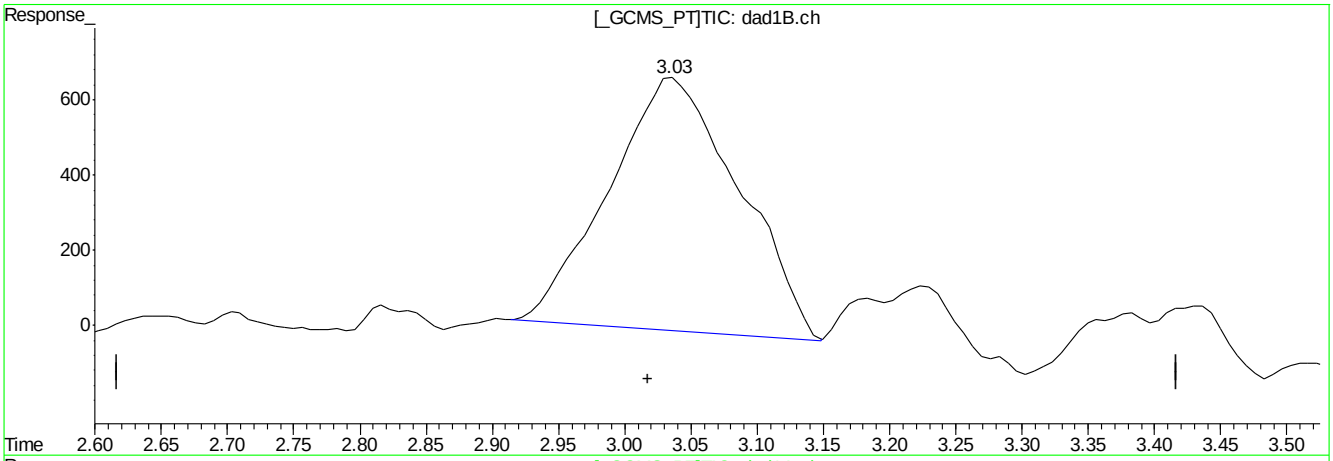
response 0

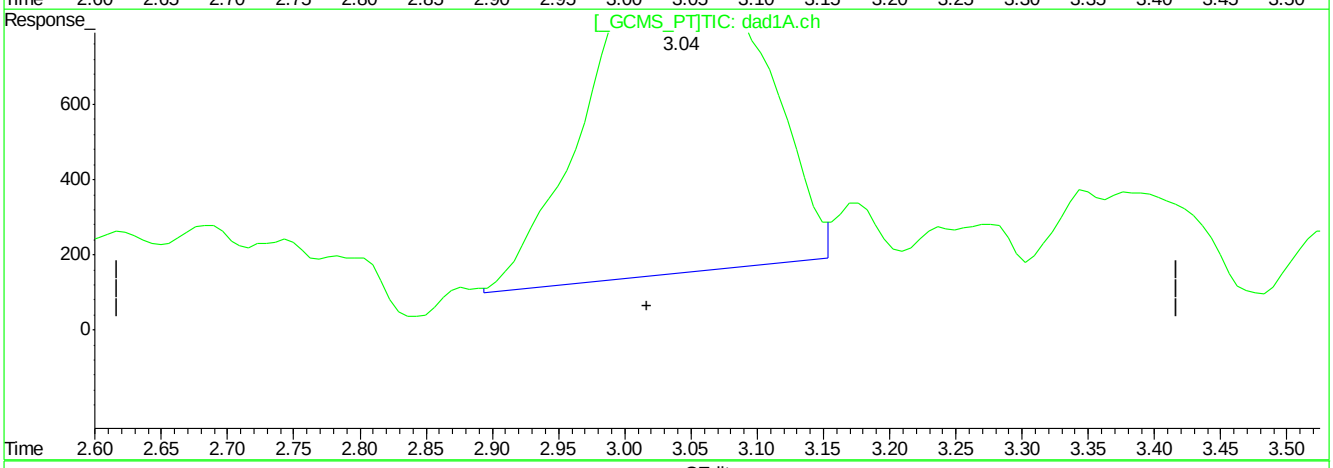
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:40:33 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.03min 23.641ppb m

response 45945

(5) RDX #2

3.04min 26.376ppb m

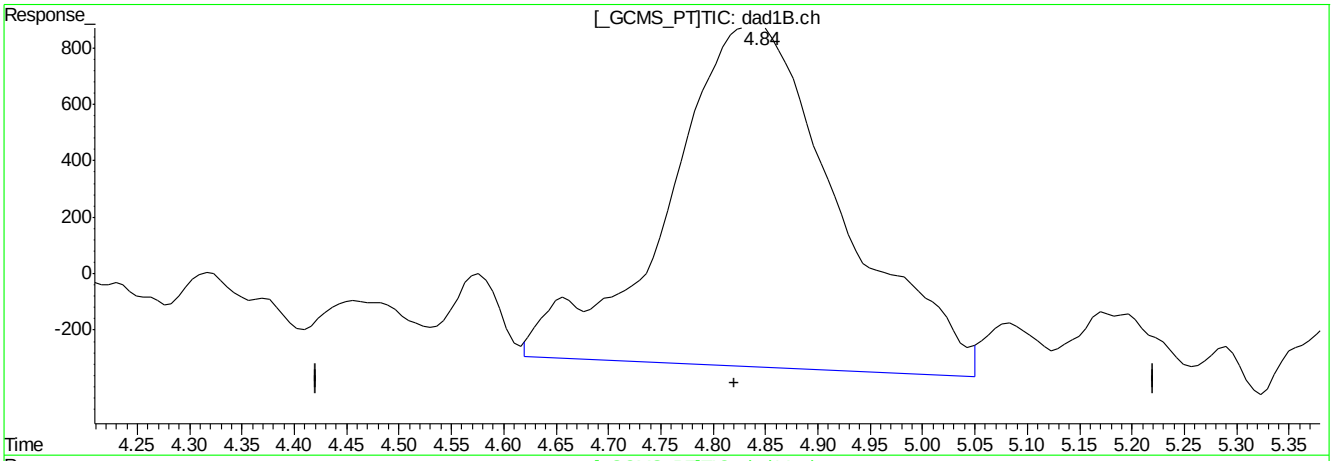
response 86009

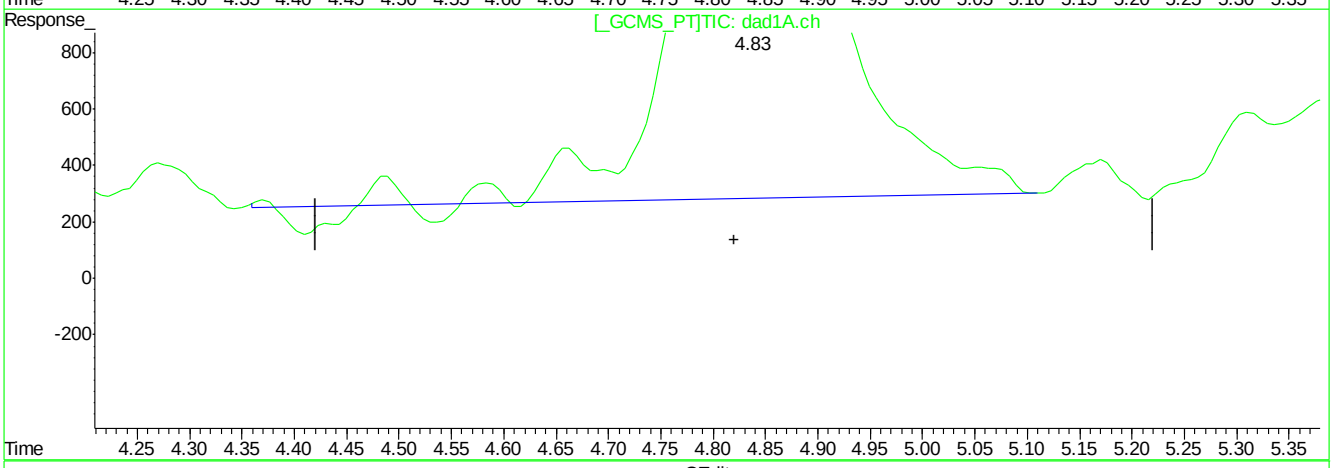
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:40:53 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.84min 31.656ppb

response 137939

(6) 1,3,5-Trinitrobenzene #2

4.84min 22.571ppb

response 185021

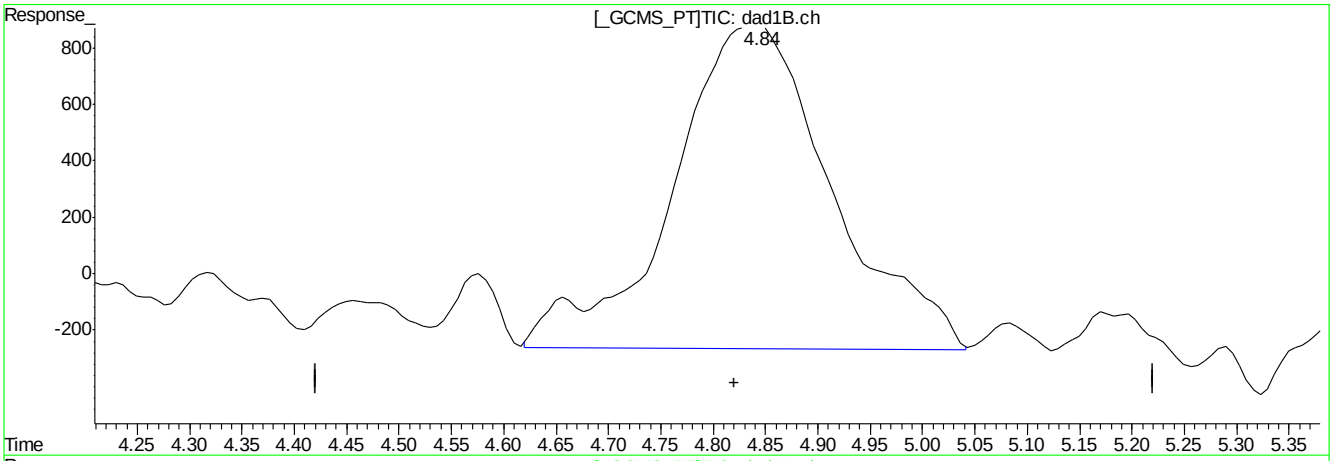
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:40:59 2018

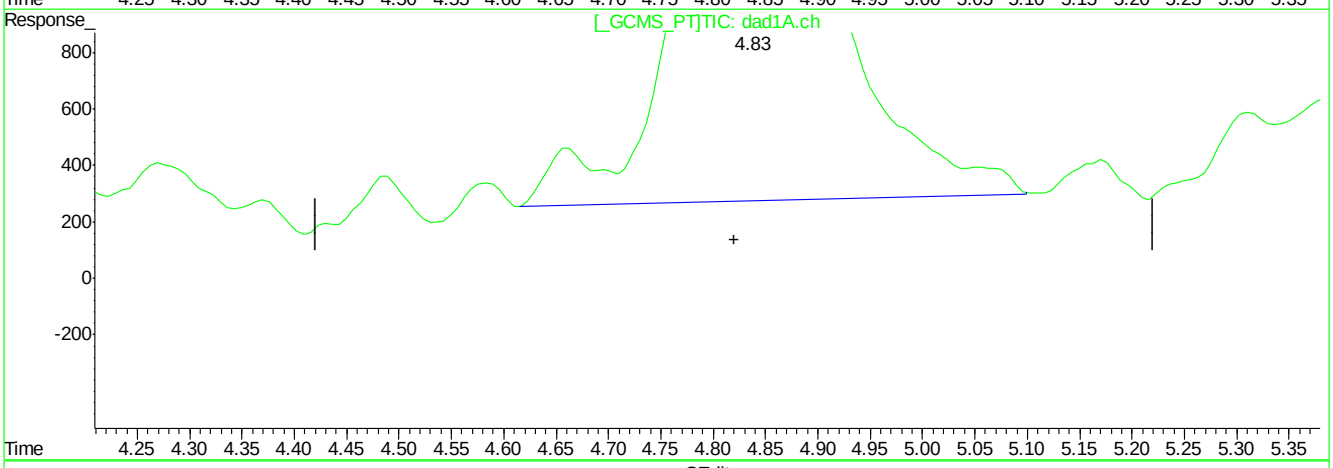
BB060200.D edits: 1,3,5-Trinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.84min 27.751ppb m

response 120926

(6) 1,3,5-Trinitrobenzene #2

4.83min 22.941ppb m

response 188051

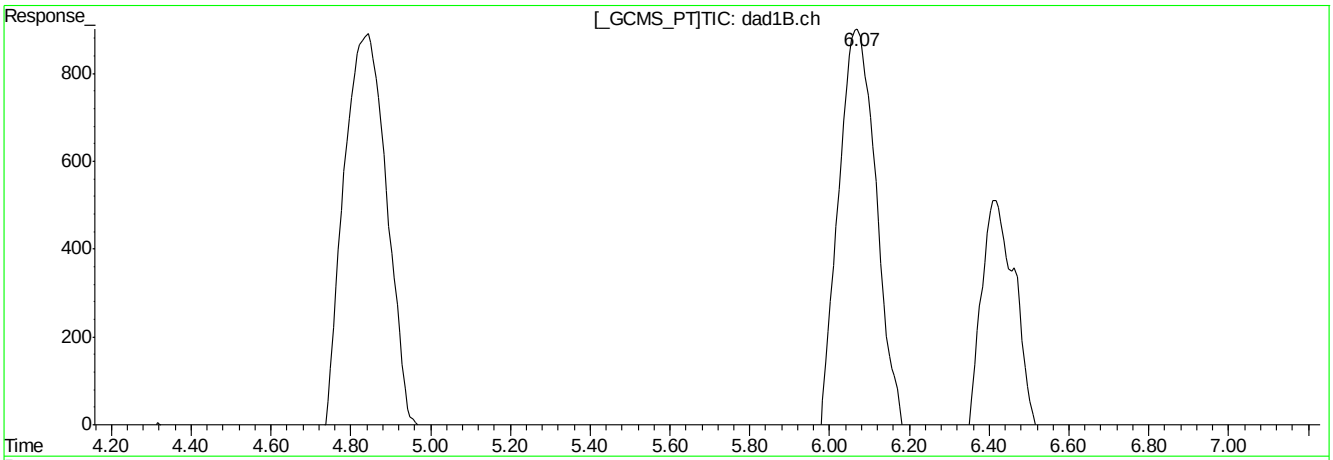
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:41:09 2018

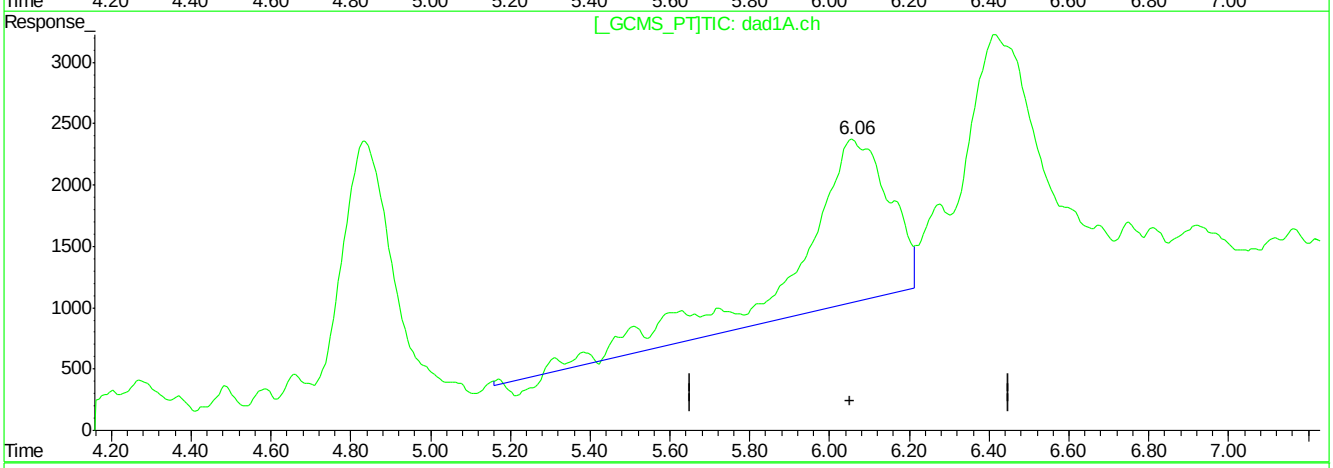
BB060200.D edits: 1,3,5-Trinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.07min 26.459ppb

response 154231

(7) 1,3-Dinitrobenzene #2

6.06min 53.131ppb

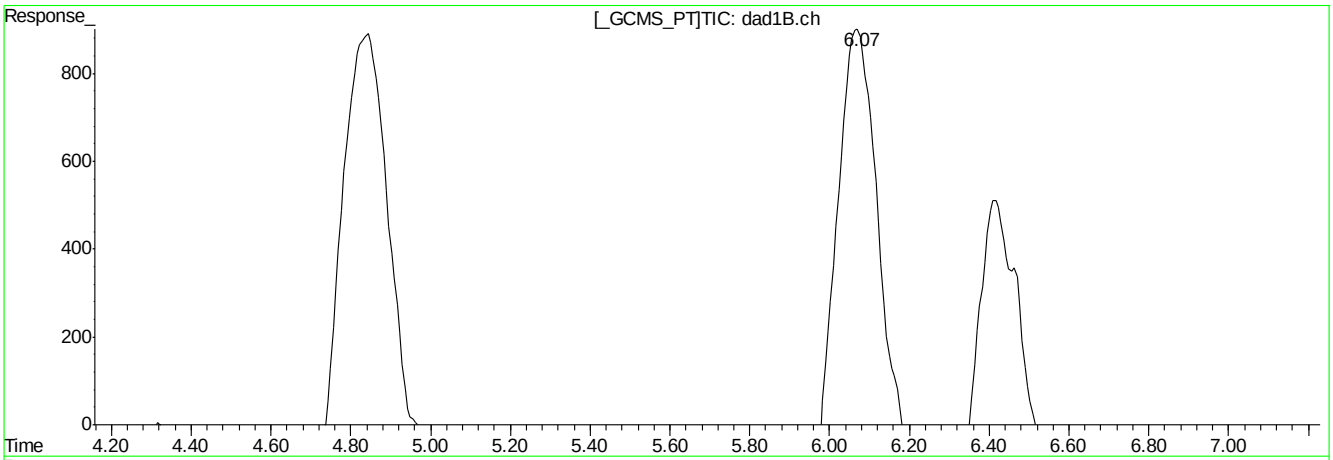
response 204736

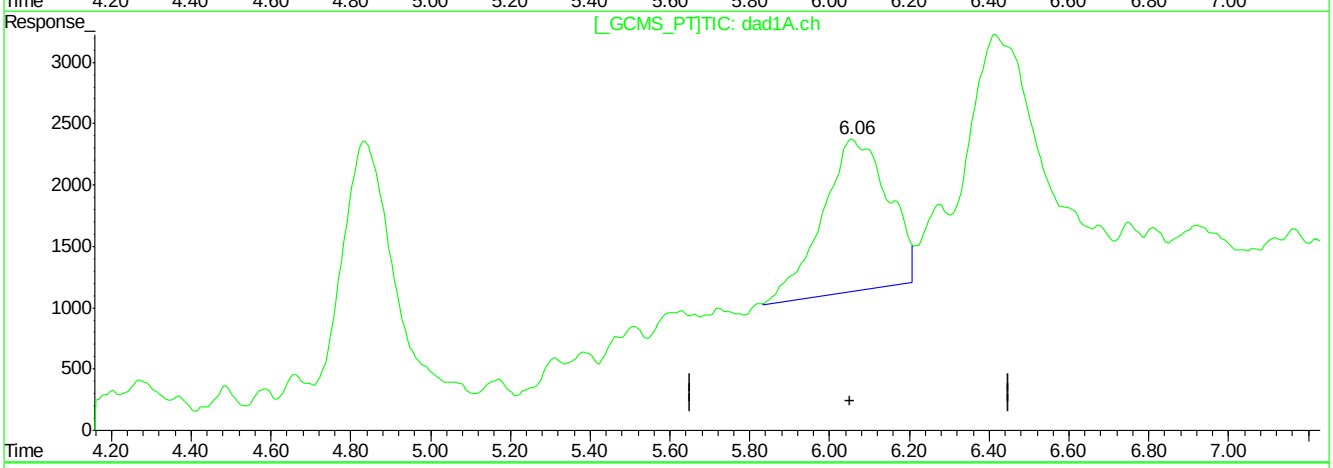
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:41:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.07min 26.459ppb

response 154231

(7) 1,3-Dinitrobenzene #2

6.06min 36.692ppb m

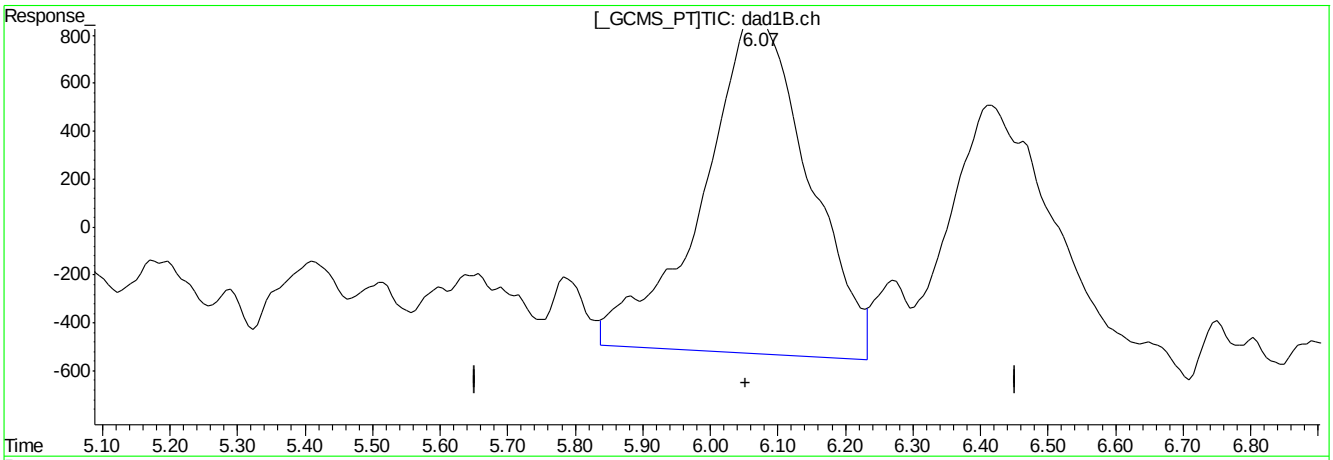
response 141420

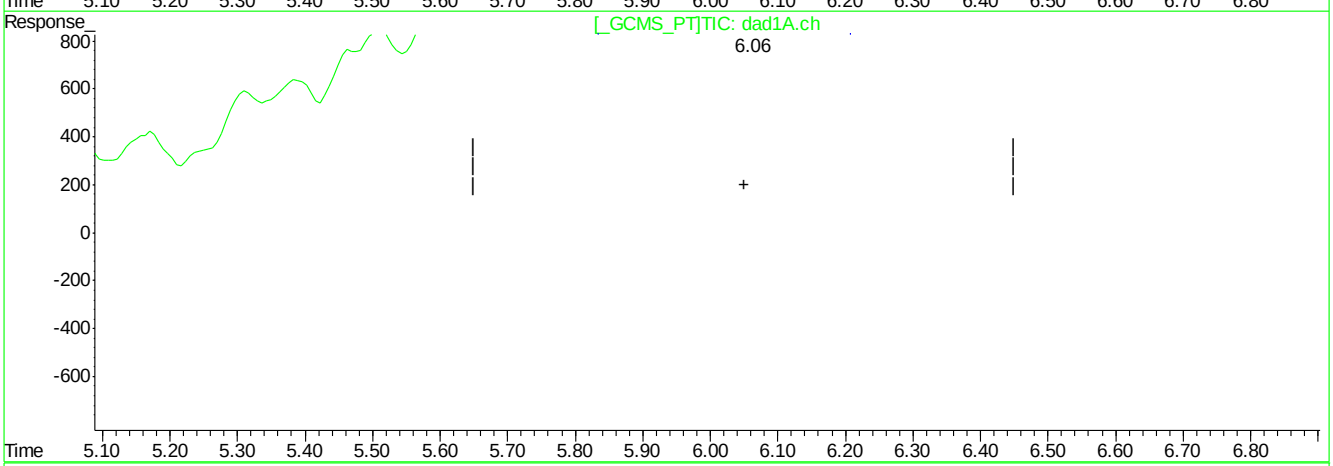
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:41:43 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.07min 26.459ppb

response 154231

(7) 1,3-Dinitrobenzene #2

6.06min 36.692ppb m

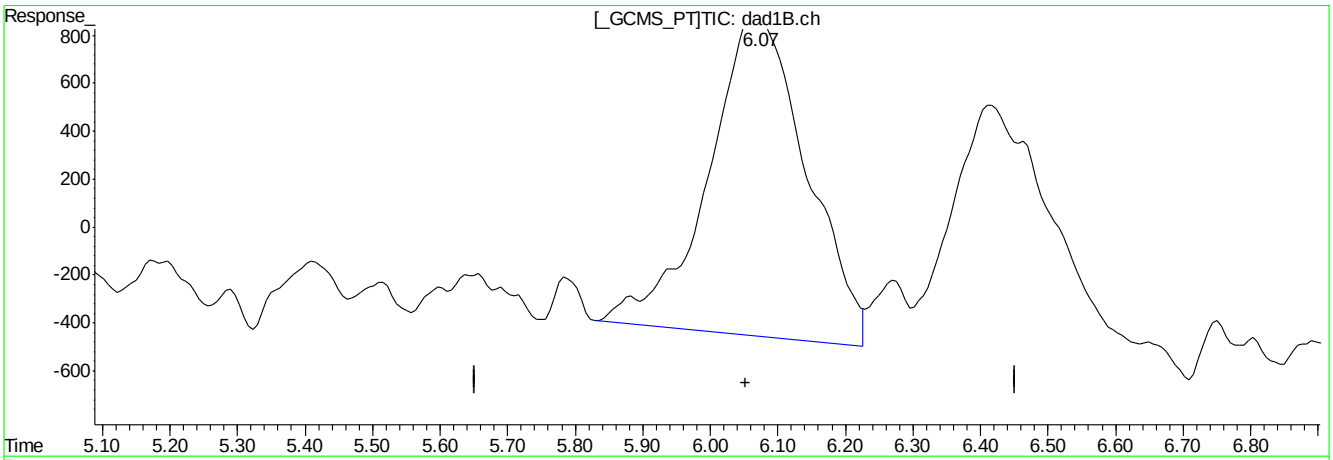
response 141420

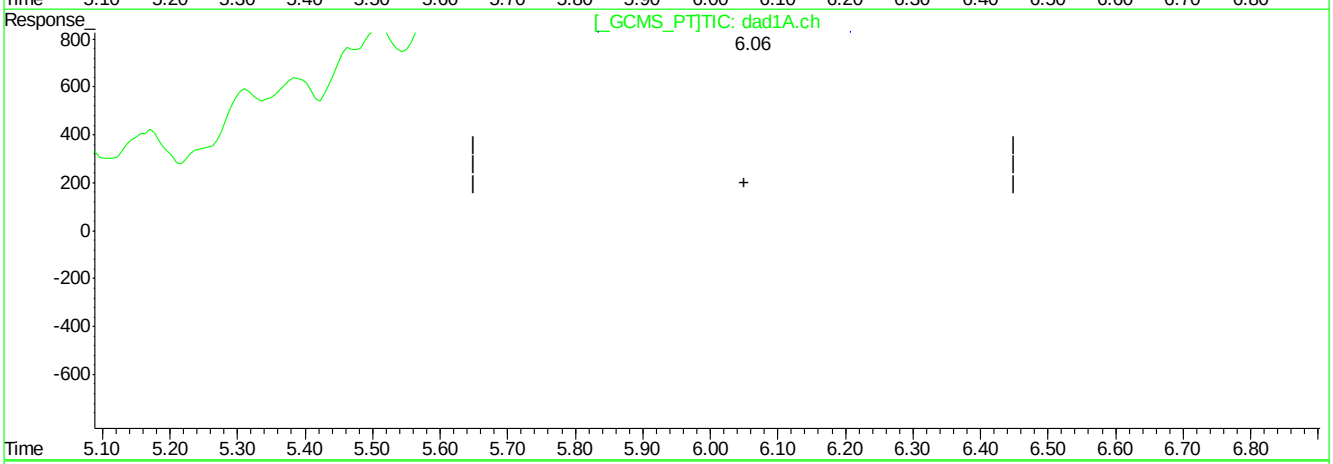
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:41:46 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.07min 23.292ppb m

response 135770

(7) 1,3-Dinitrobenzene #2

6.06min 36.692ppb m

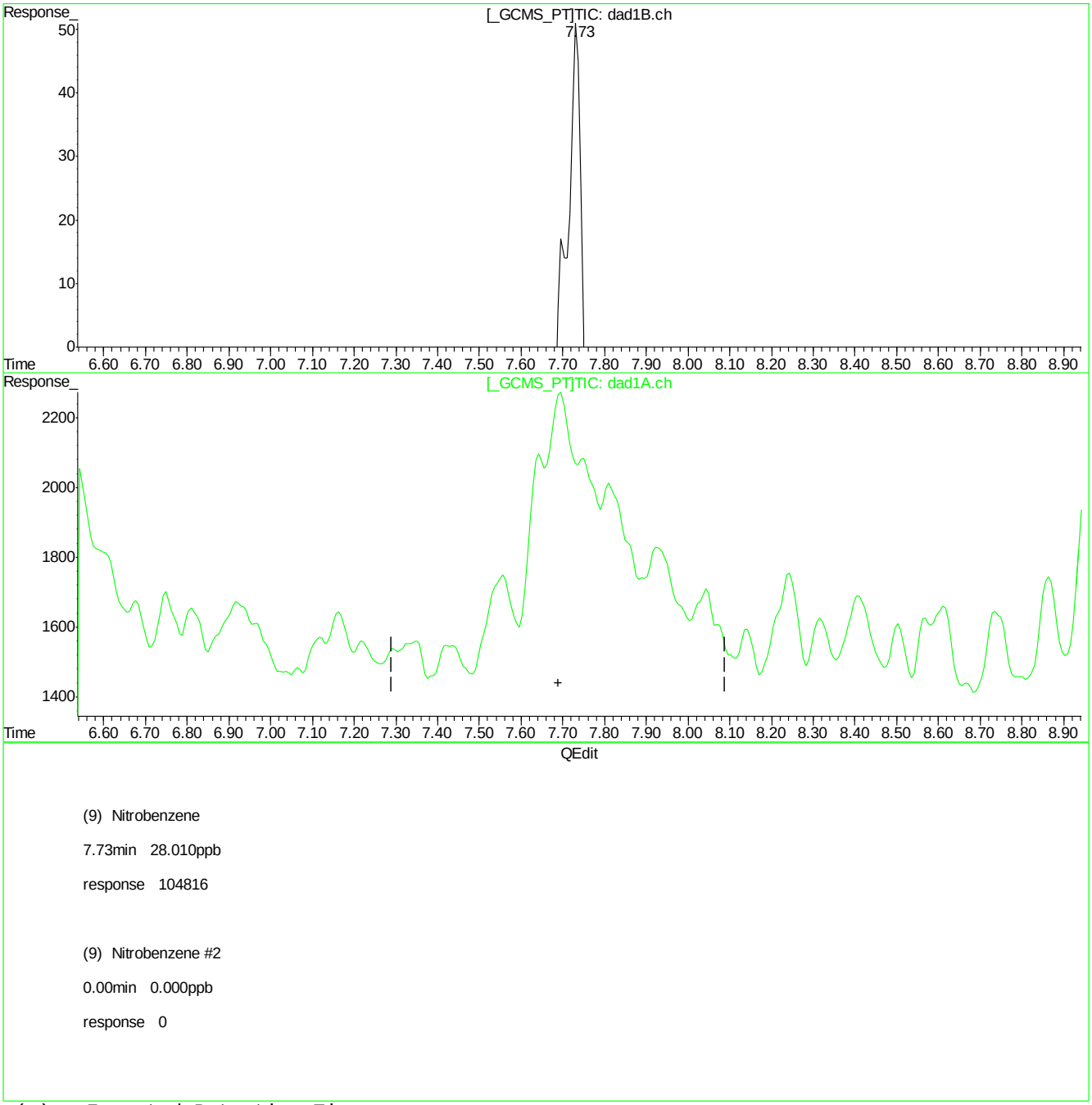
response 141420

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:41:54 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(9) Nitrobenzene

7.73min 28.010ppb

response 104816

(9) Nitrobenzene #2

0.00min 0.000ppb

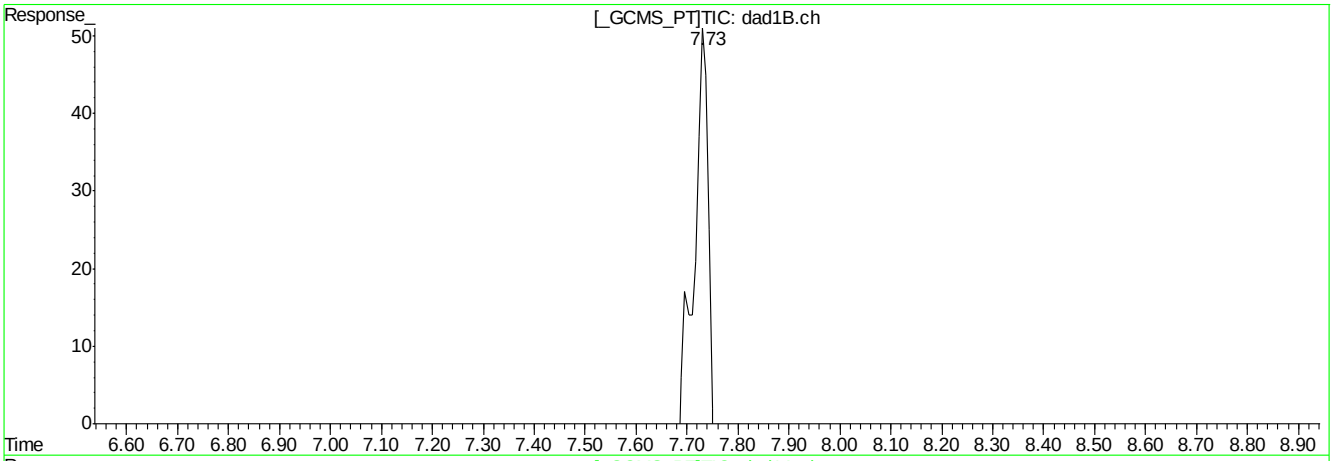
response 0

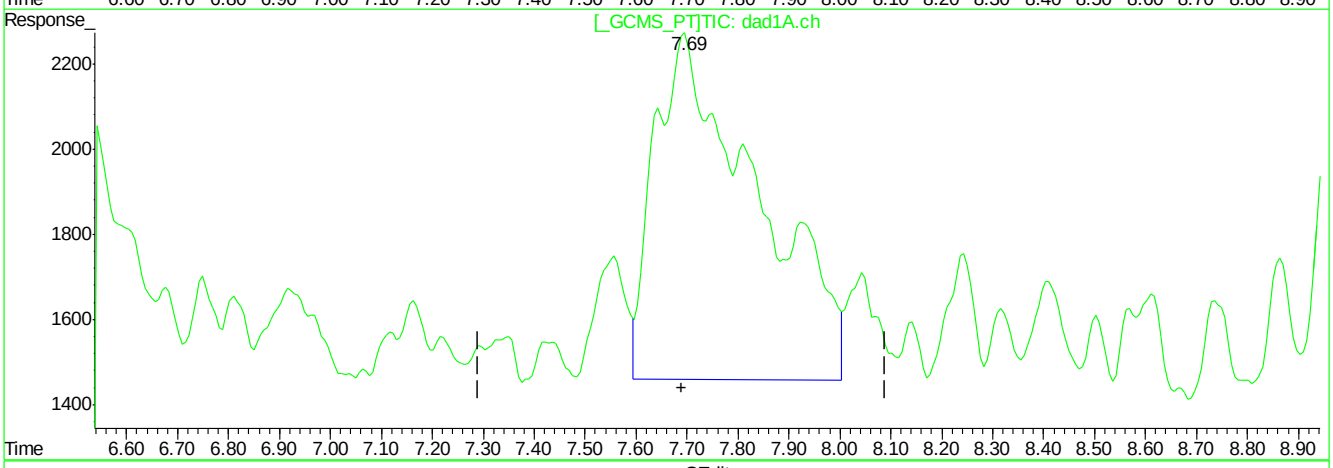
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:05 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.73min 28.010ppb

response 104816

(9) Nitrobenzene #2

7.69min 35.981ppb m

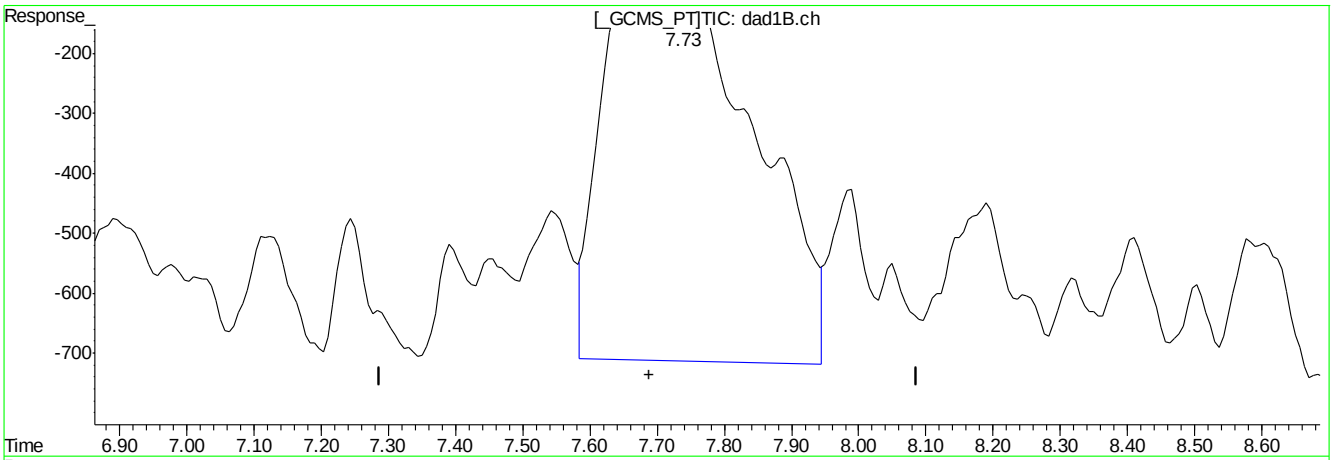
response 113083

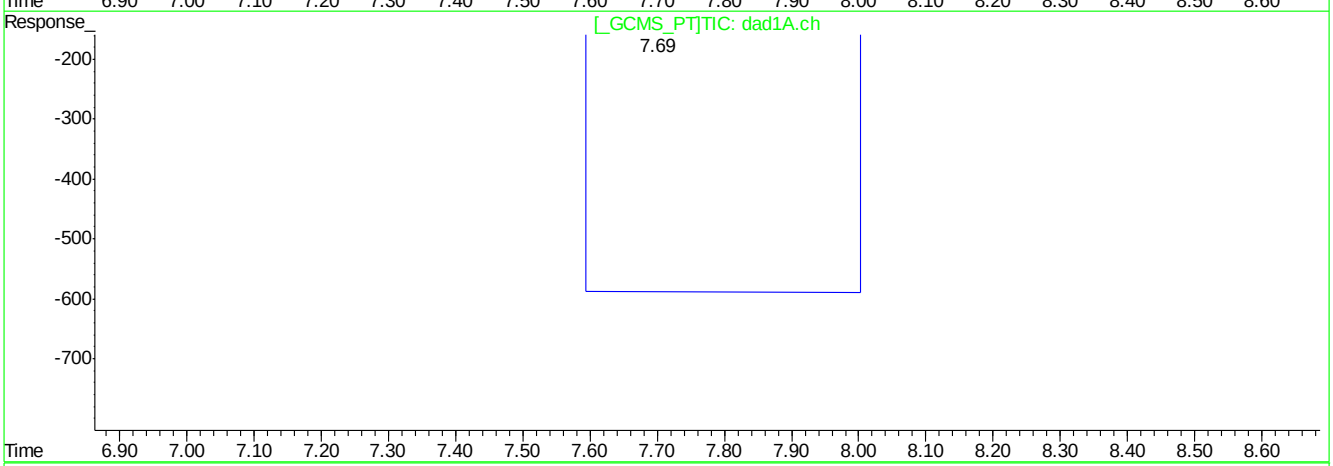
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:13 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.73min 28.010ppb

response 104816

(9) Nitrobenzene #2

7.69min 35.981ppb m

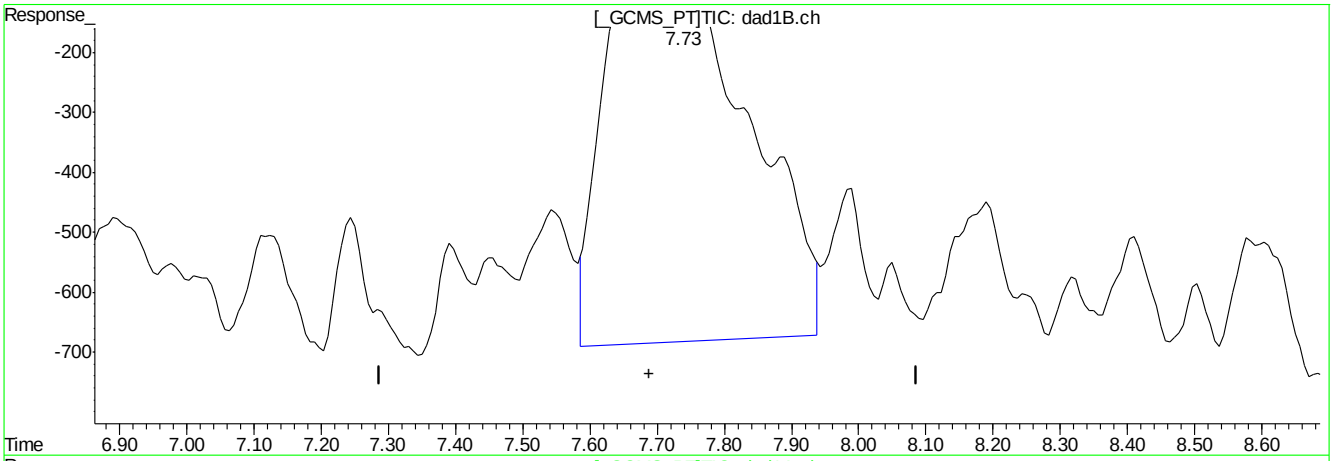
response 113083

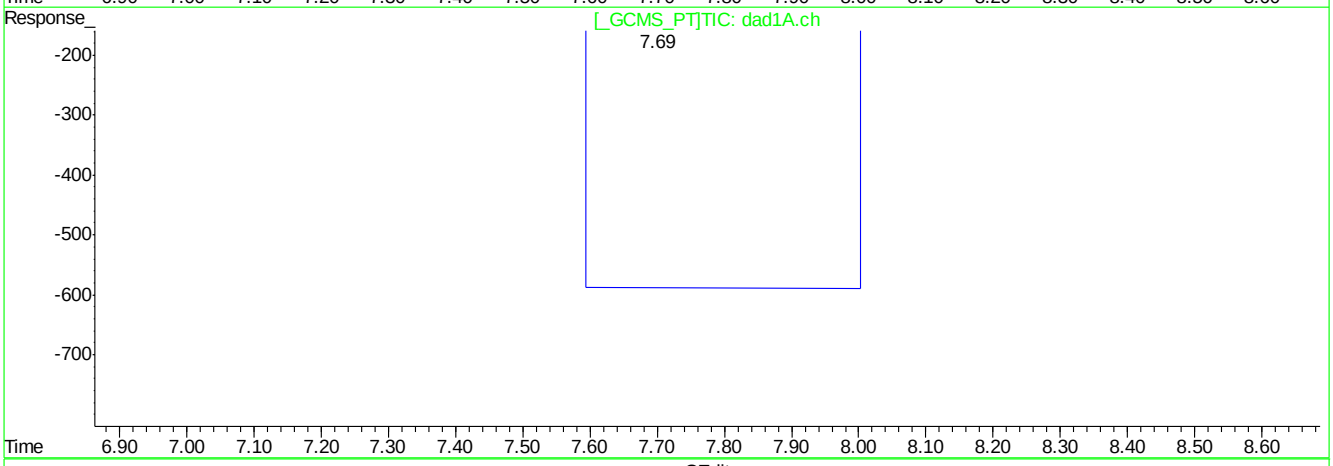
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:19 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.73min 25.916ppb m

response 96978

(9) Nitrobenzene #2

7.69min 35.981ppb m

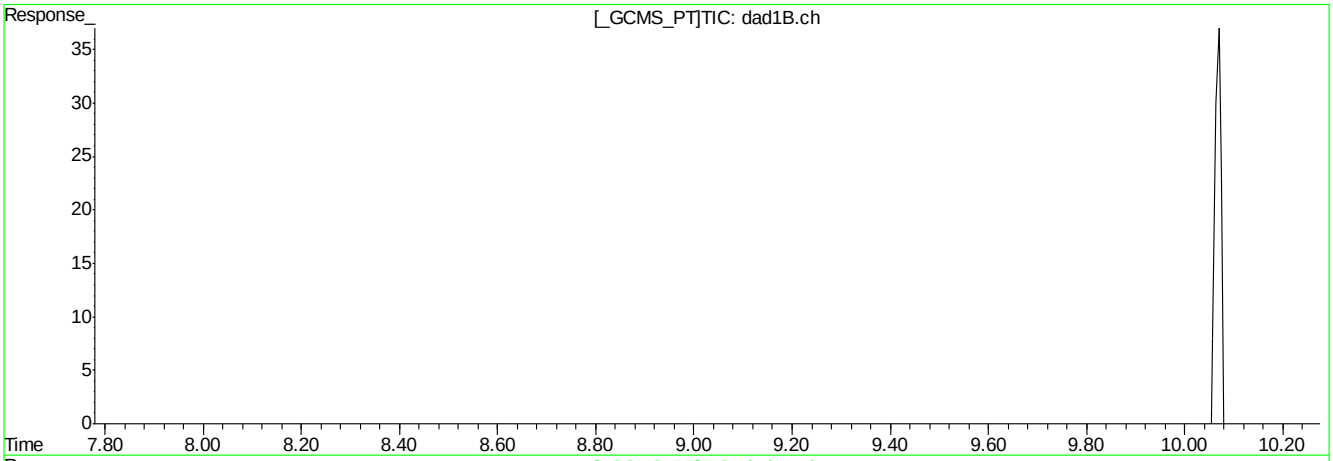
response 113083

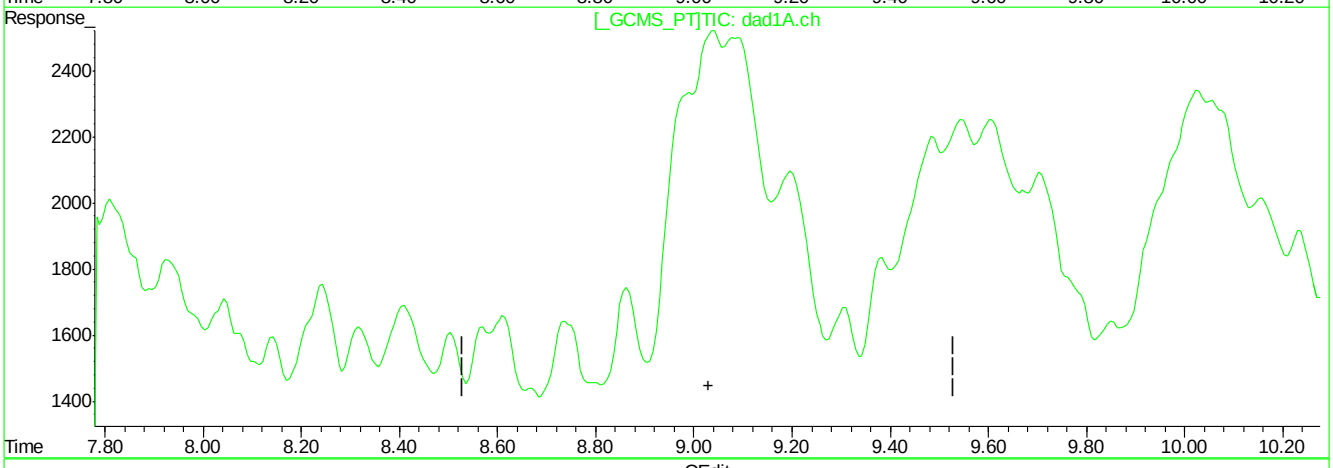
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:24 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

9.02min 0.000ppb

response 21201

(10) Nitroglycerin #2

0.00min 0.000ppb

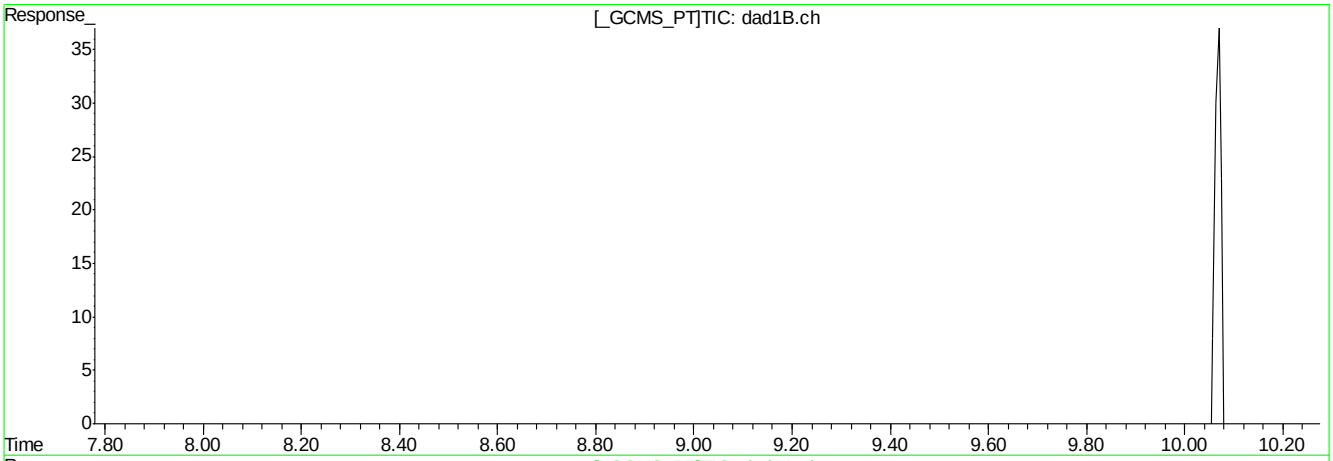
response 0

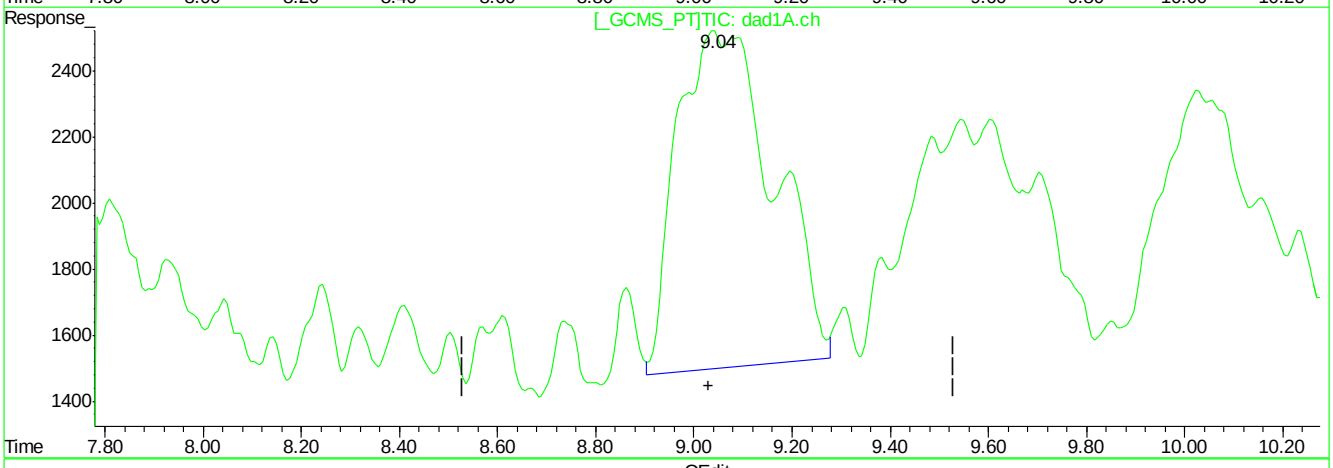
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:29 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

9.02min 0.000ppb

response 21201

(10) Nitroglycerin #2

9.04min 109.066ppb m

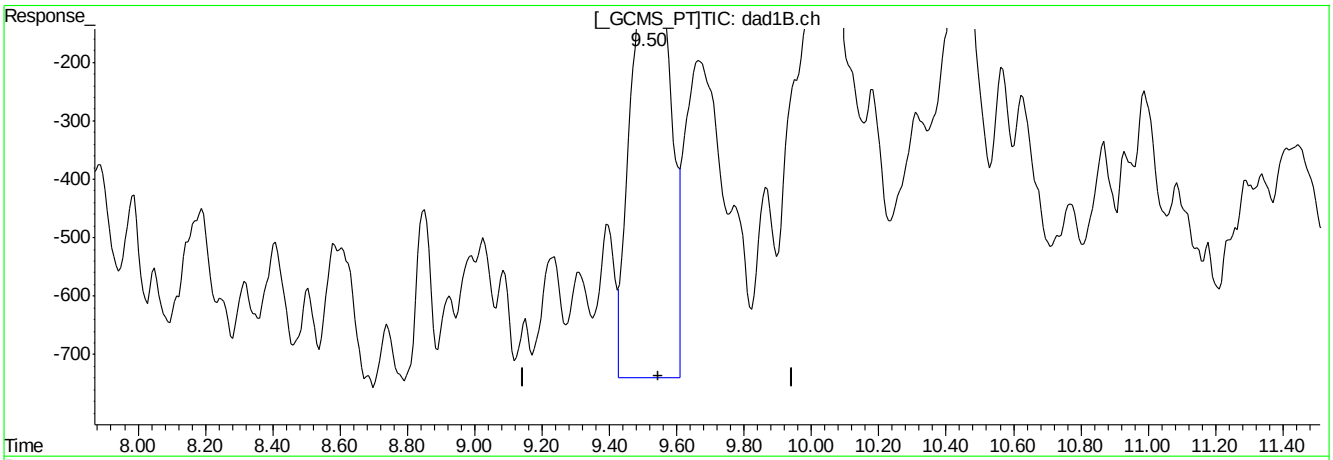
response 139364

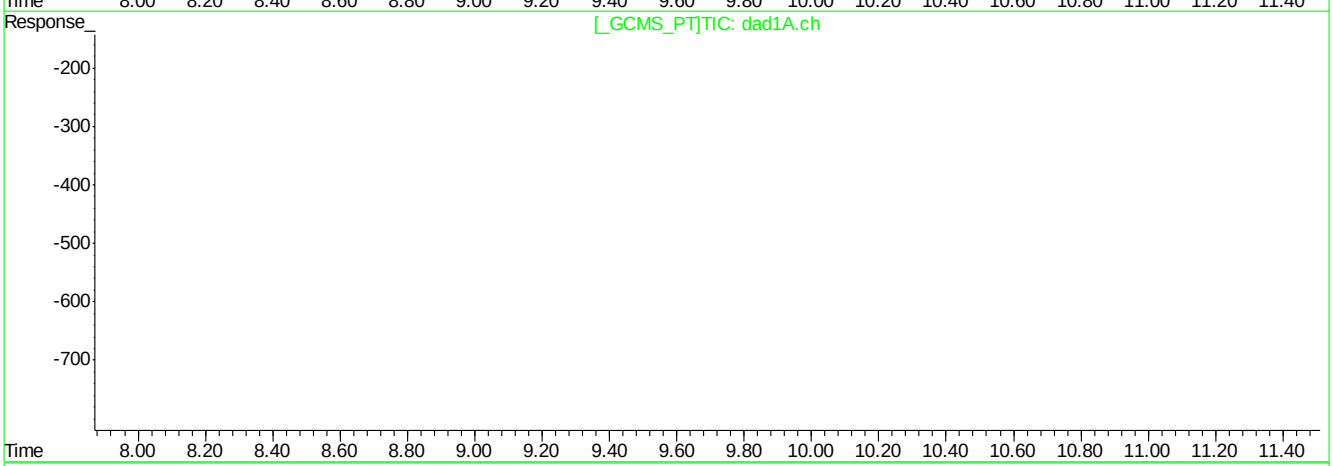
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:34 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.51min 18.826ppb

response 55716

(11) Tetryl #2

0.00min 0.000ppb

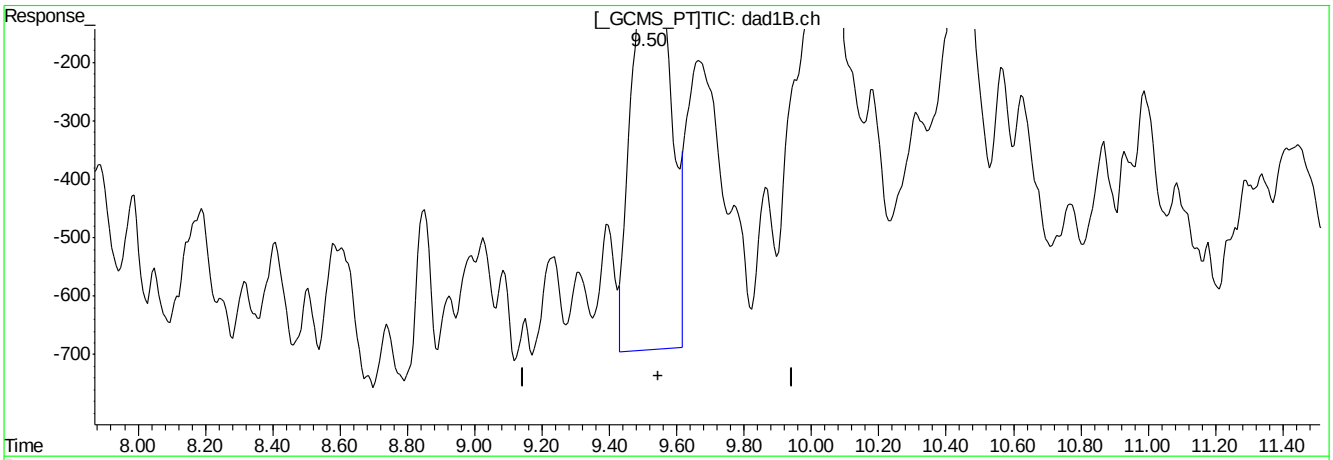
response 0

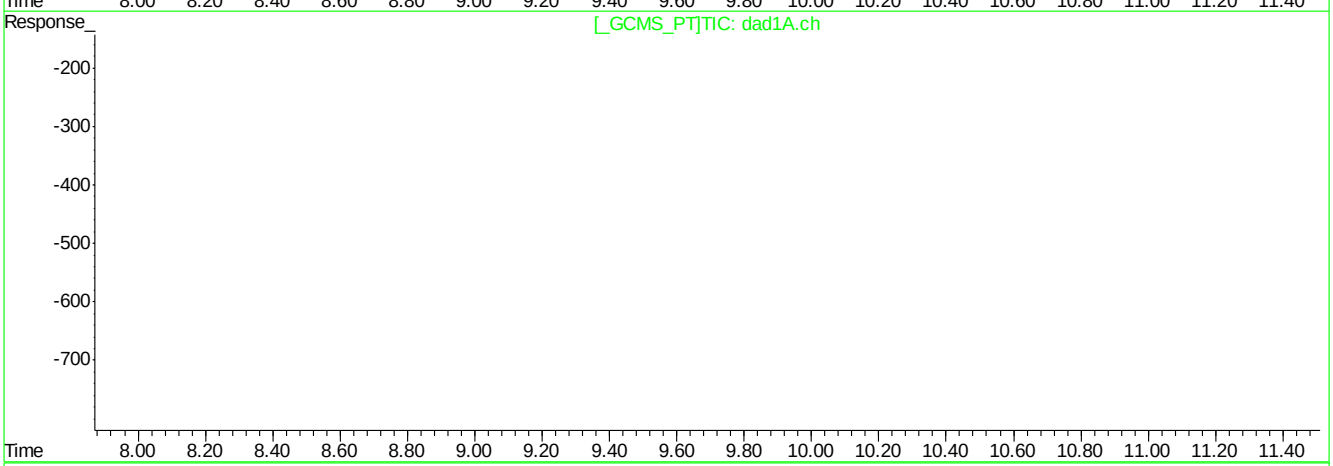
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:53 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.50min 17.896ppb m

response 52961

(11) Tetryl #2

0.00min 0.000ppb

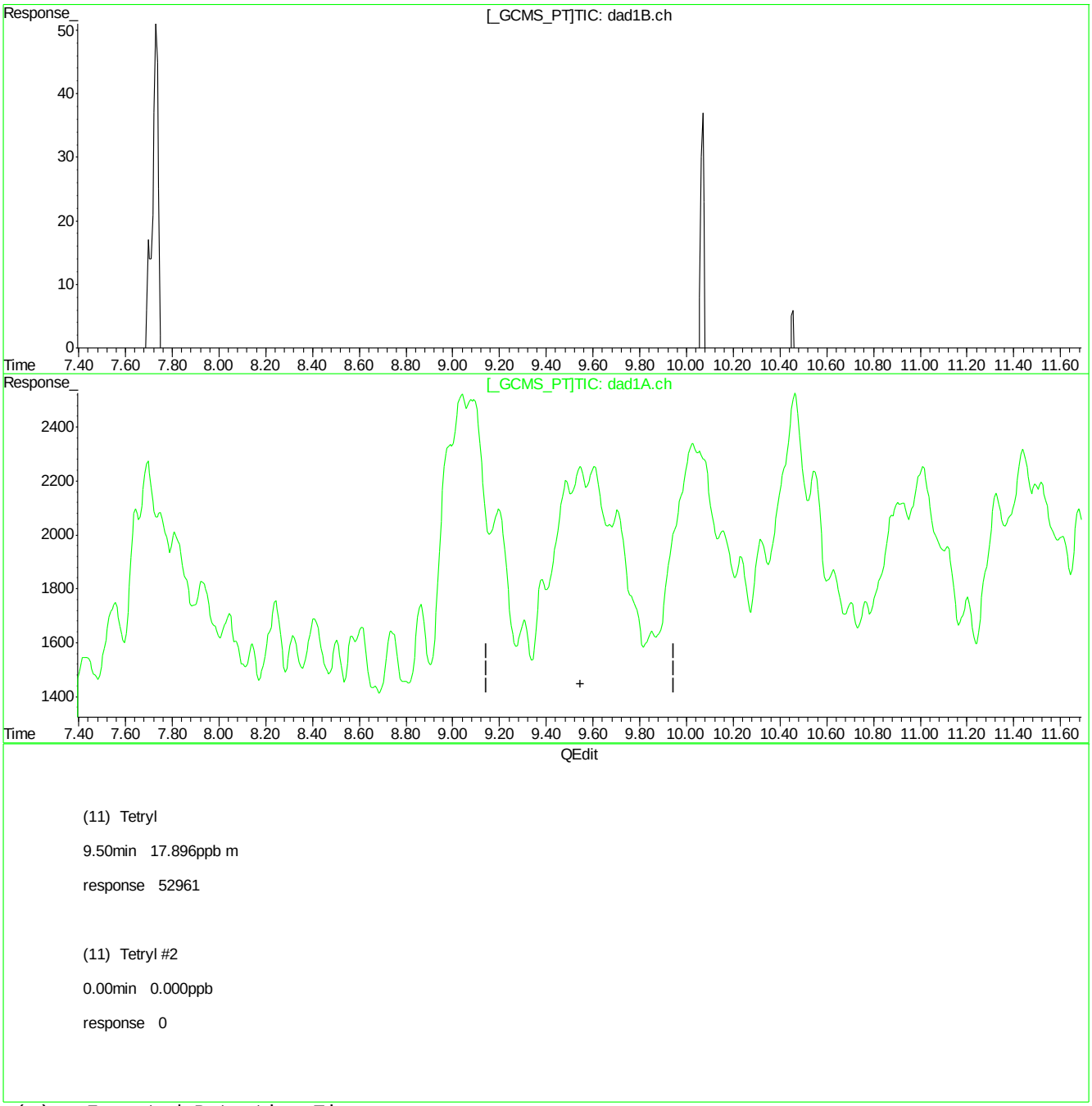
response 0

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:43:11 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration

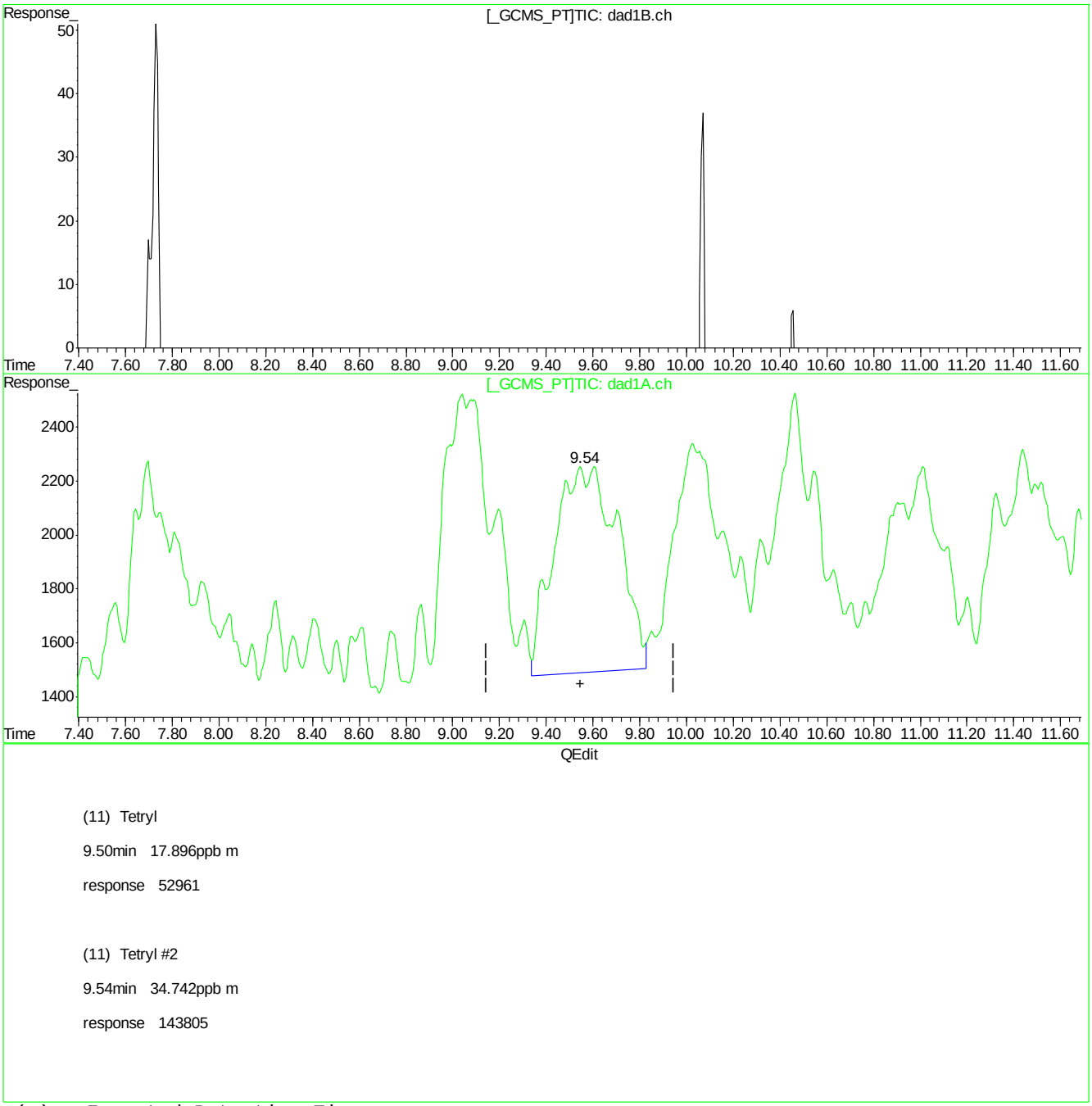


(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:43:17 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(11) Tetryl

9.50min 17.896ppb m

response 52961

(11) Tetryl #2

9.54min 34.742ppb m

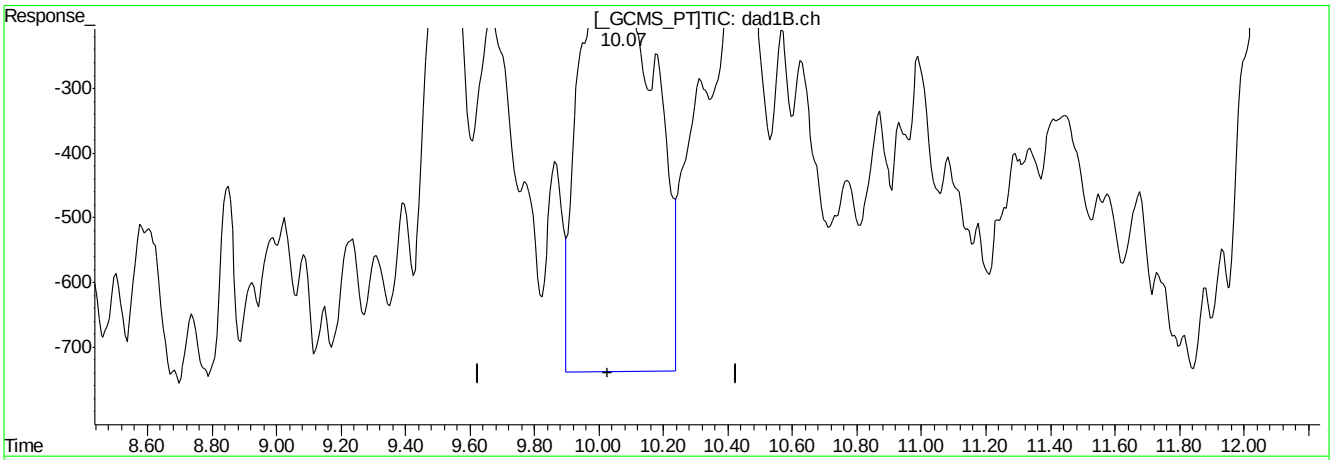
response 143805

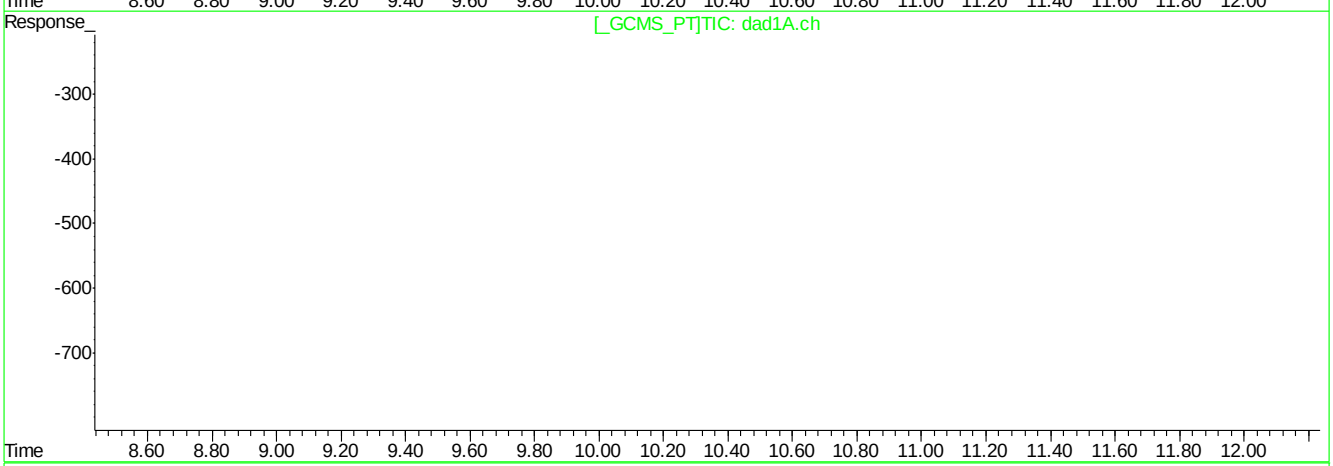
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:43:35 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.07min 26.985ppb

response 105697

(12) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb

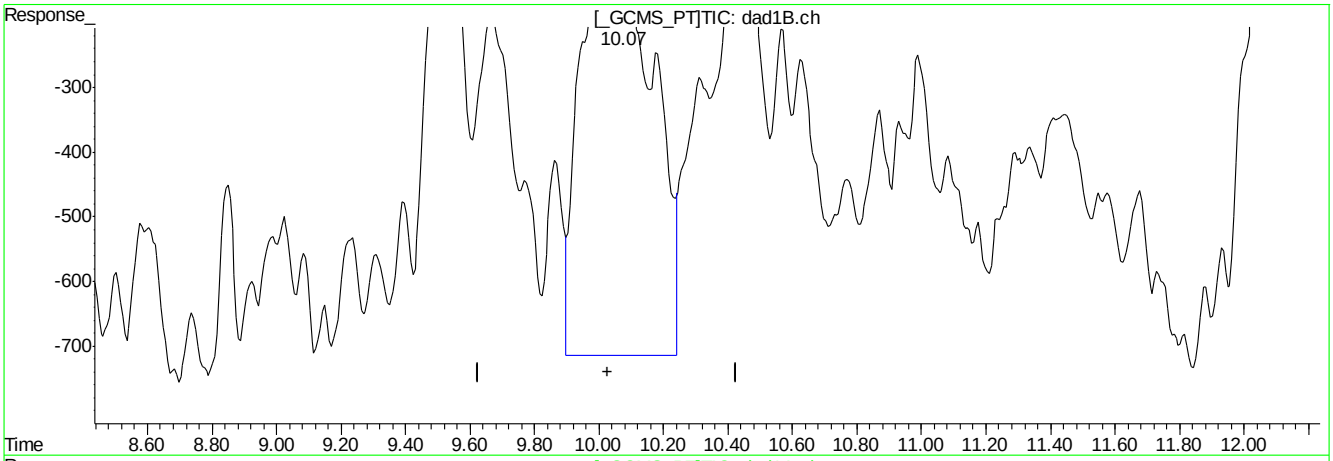
response 0

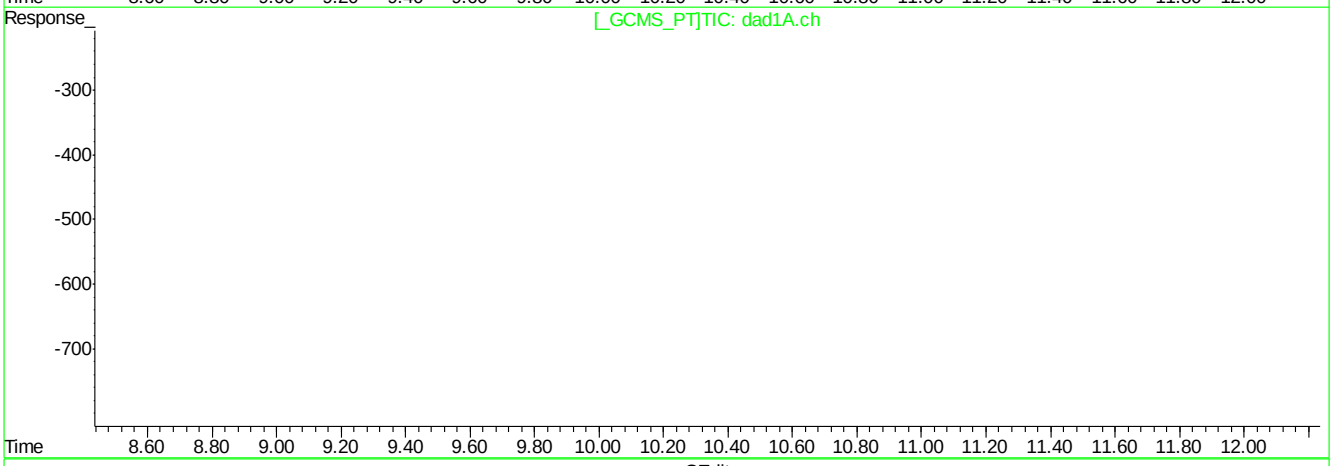
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:44:16 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.07min 25.910ppb m

response 101487

(12) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb

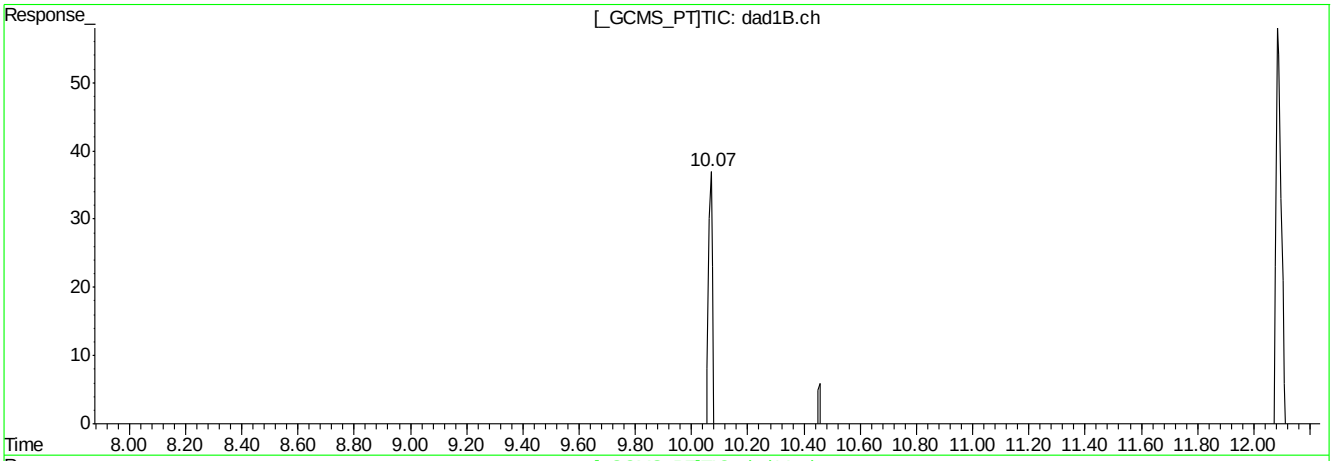
response 0

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:44:28 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

10.07min 25.910ppb m

response 101487

(12) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb

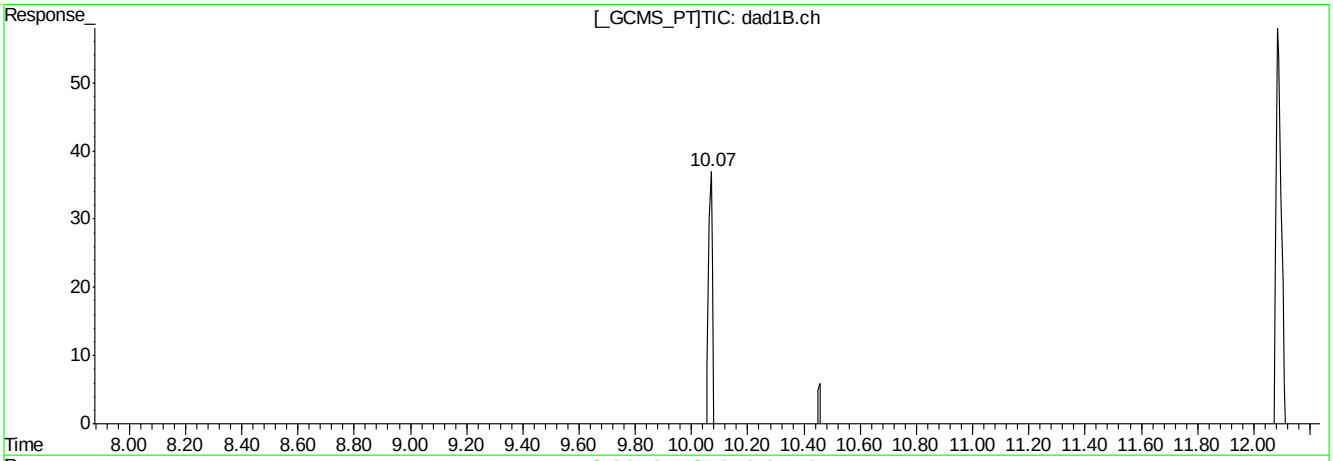
response 0

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:44:39 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

10.07min 25.910ppb m

response 101487

(12) 2,4,6-Trinitrotoluene #2

10.03min 29.865ppb m

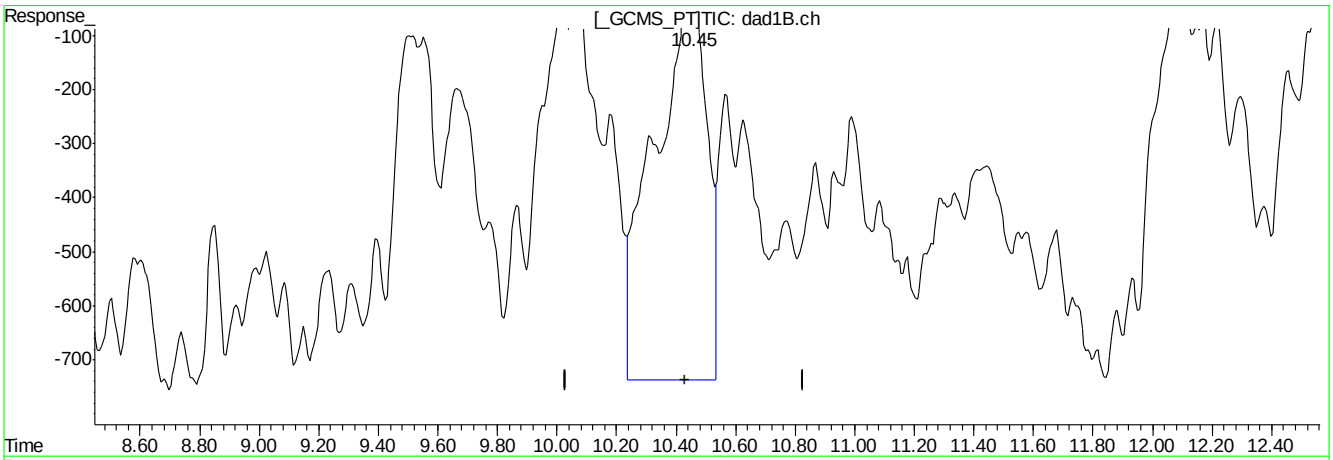
response 127709

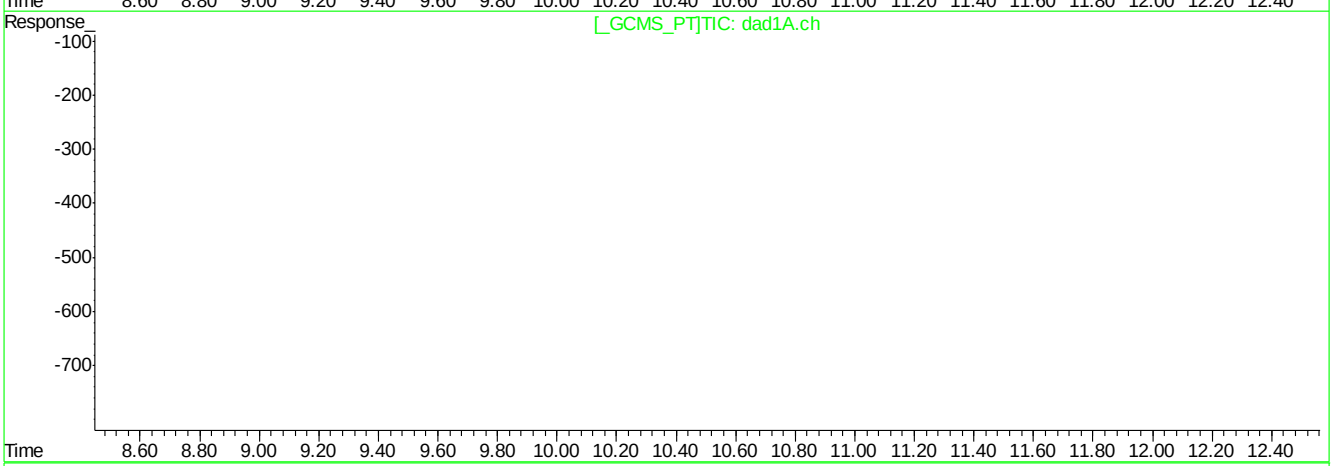
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:45:05 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.45min 23.334ppb

response 87134

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

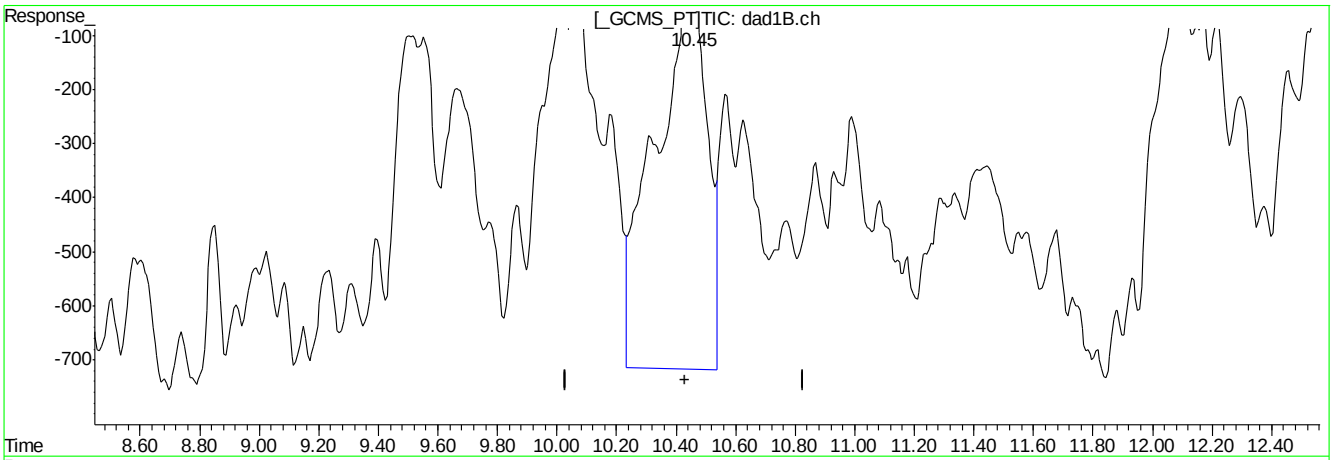
response 0

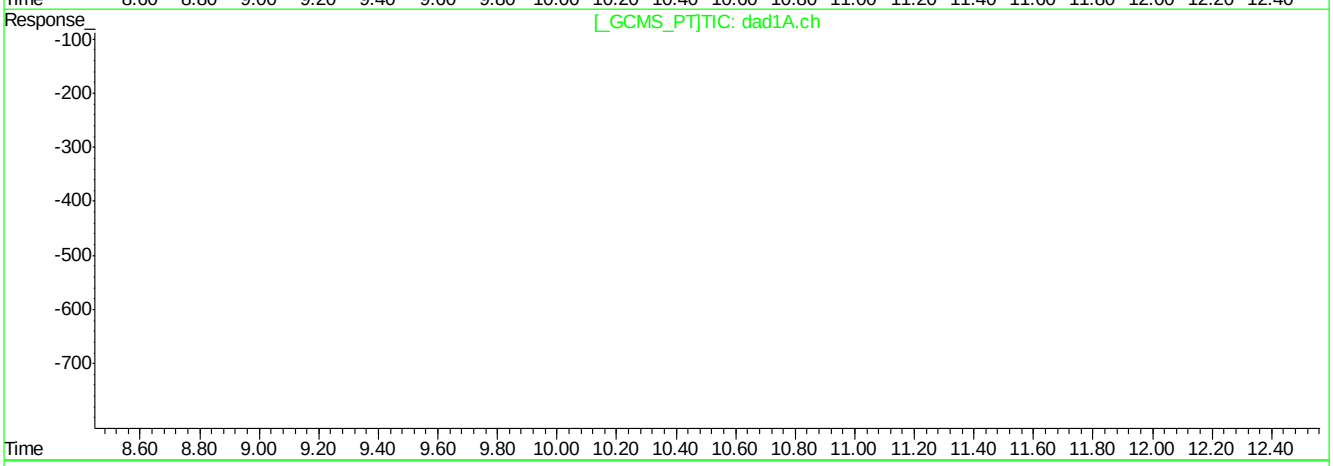
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:45:24 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.45min 23.221ppb m

response 86714

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

response 0

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:45:42 2018

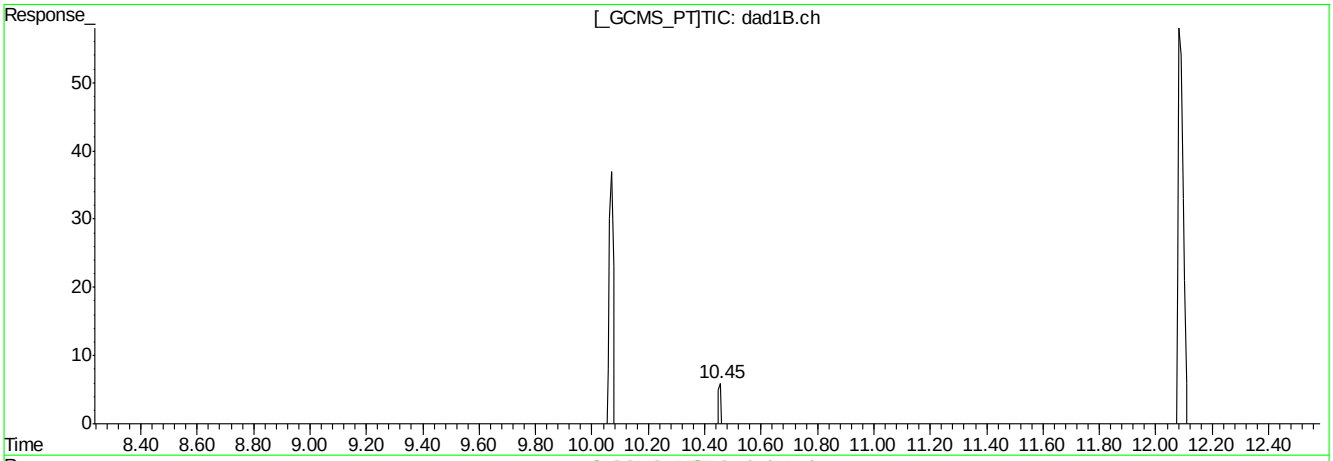
9.5.1.29

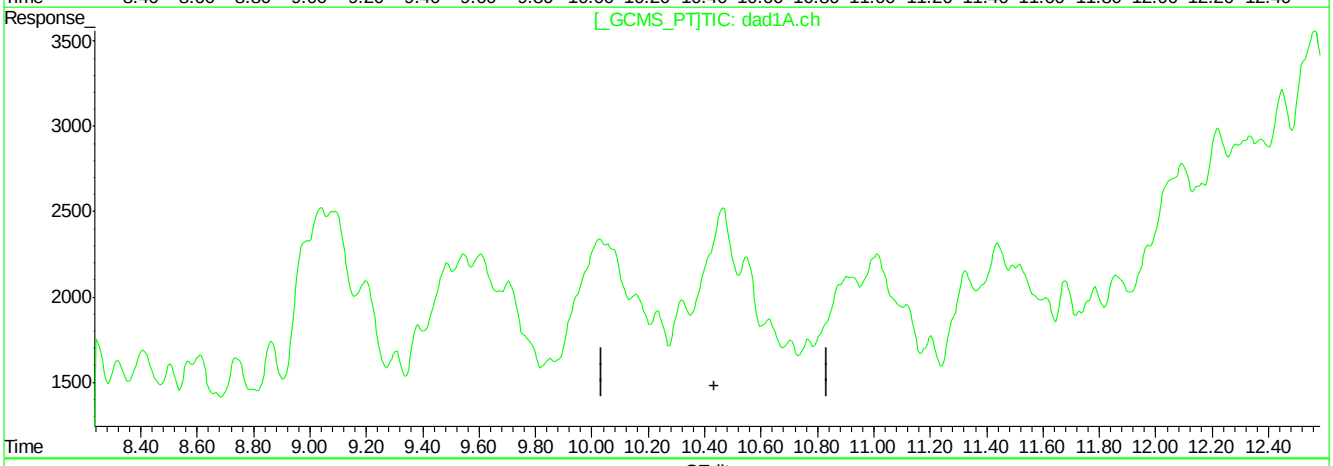
9

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.45min 23.221ppb m

response 86714

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

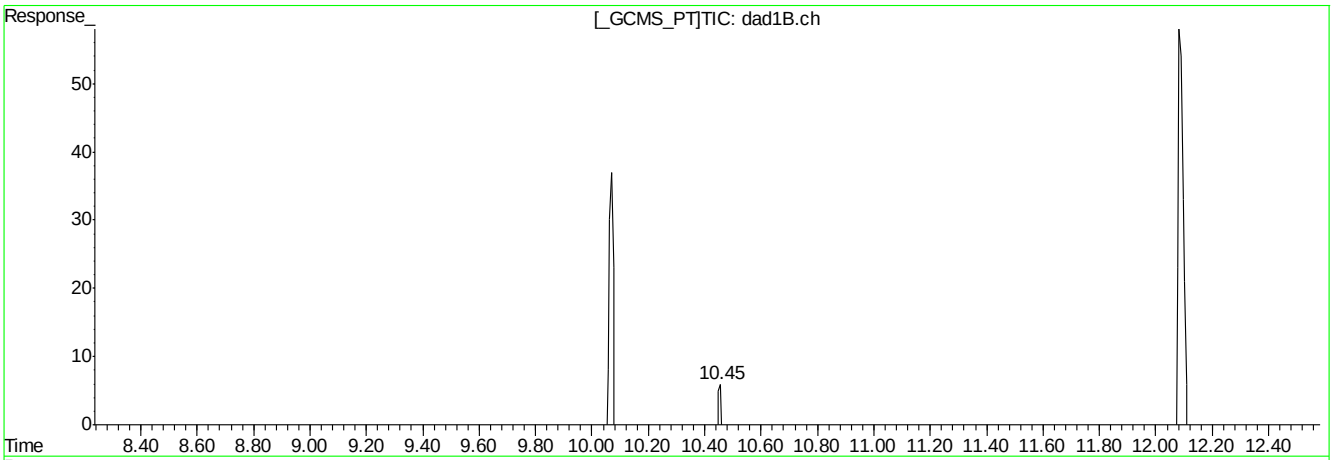
response 0

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:45:50 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.45min 23.221ppb m

response 86714

(13) 2-Amino-4,6-Dinitrotoluene #2

10.46min 21.088ppb m

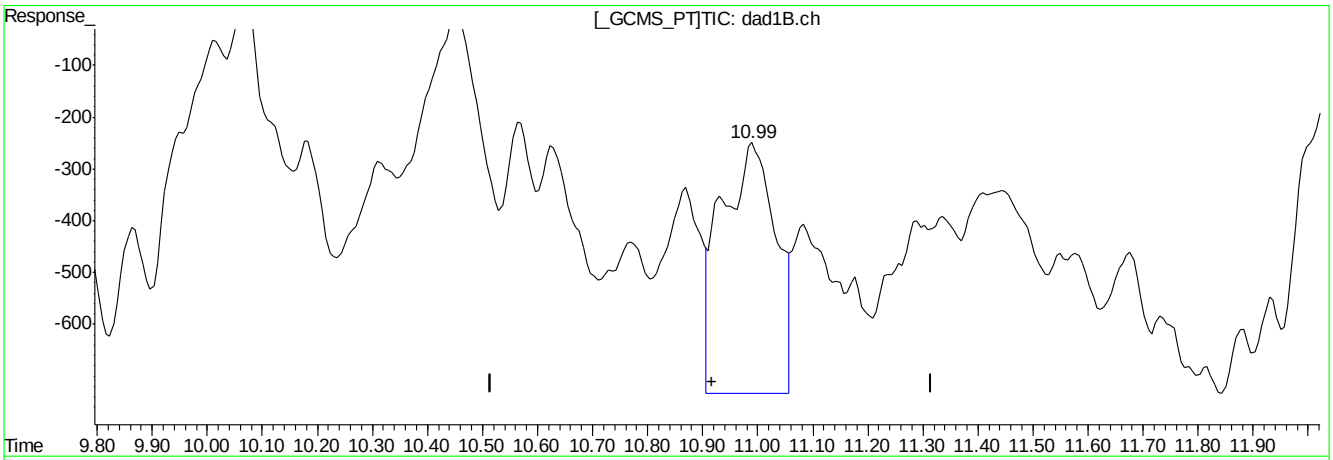
response 118088

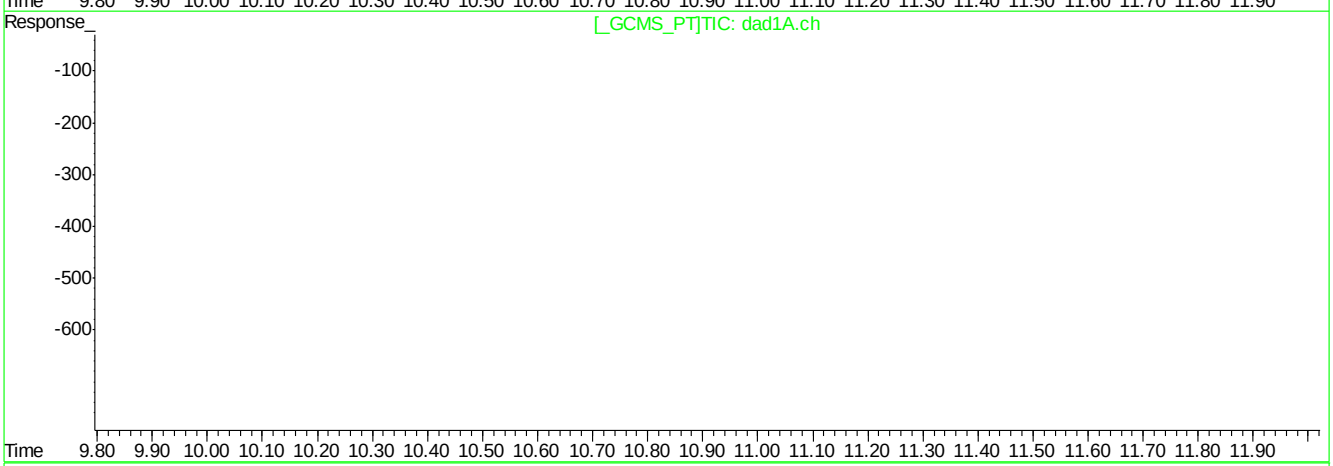
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:45:58 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.99min 12.661ppb

response 33371

(14) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb

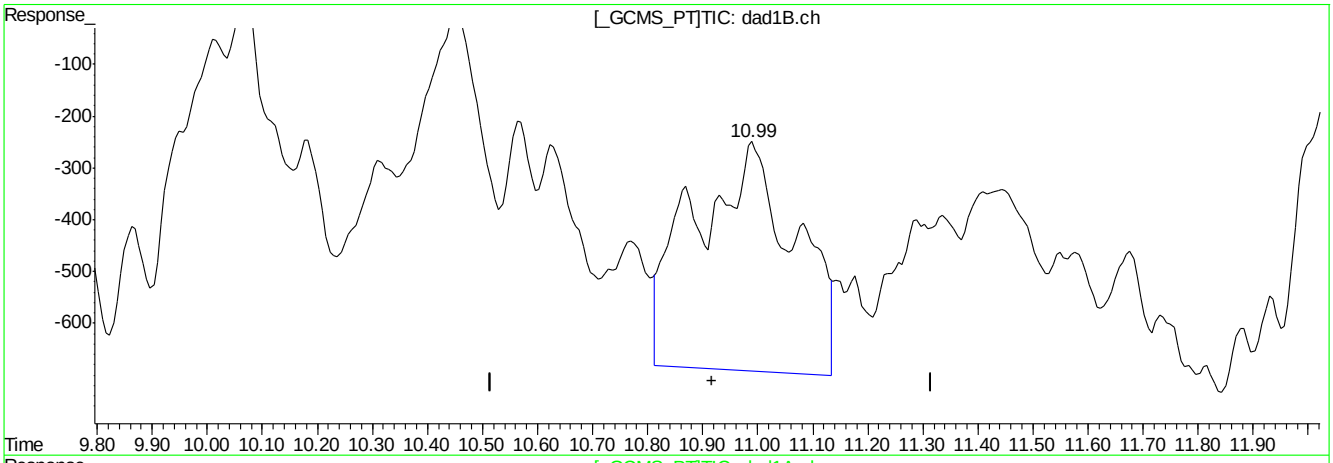
response 0

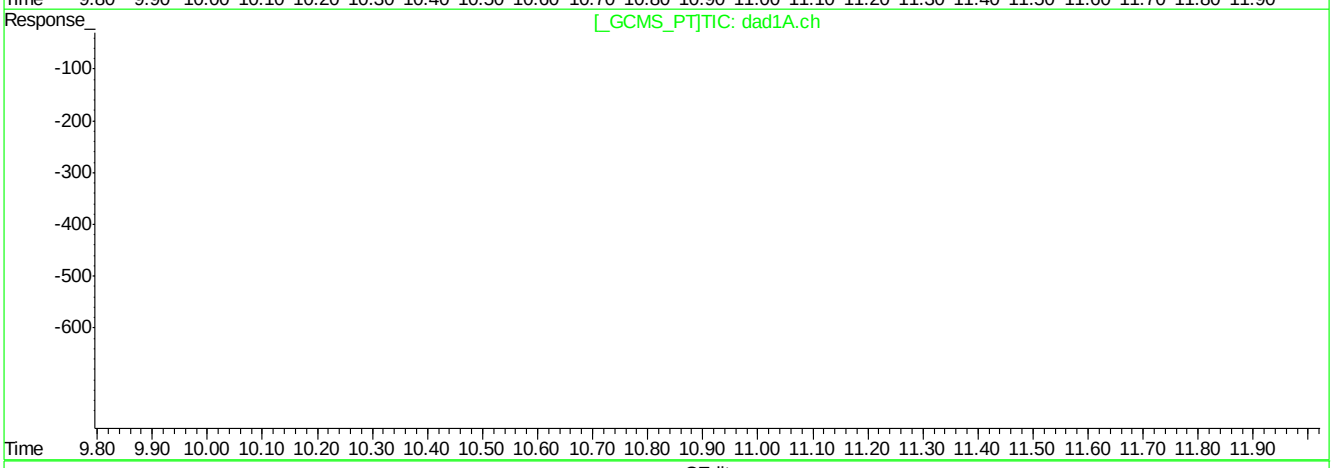
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:46:14 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.99min 21.156ppb m

response 55774

(14) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb

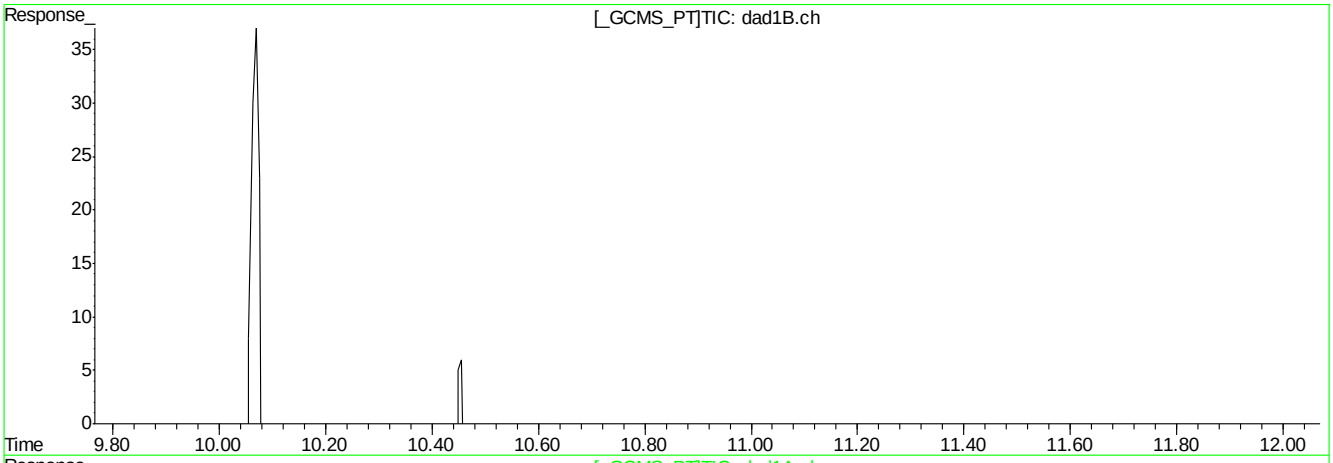
response 0

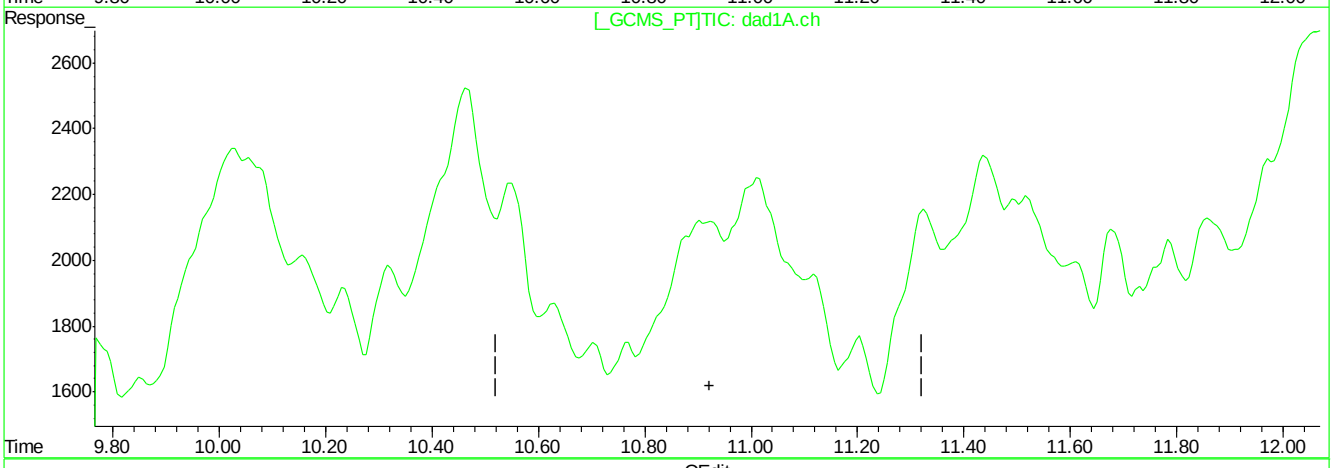
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:46:28 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.99min 21.156ppb m

response 55774

(14) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb

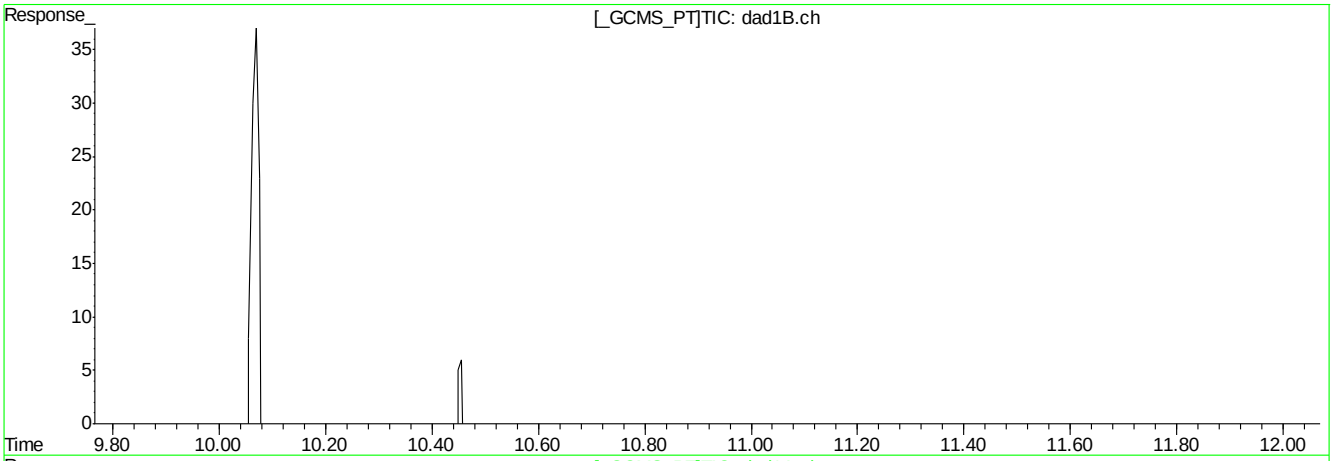
response 0

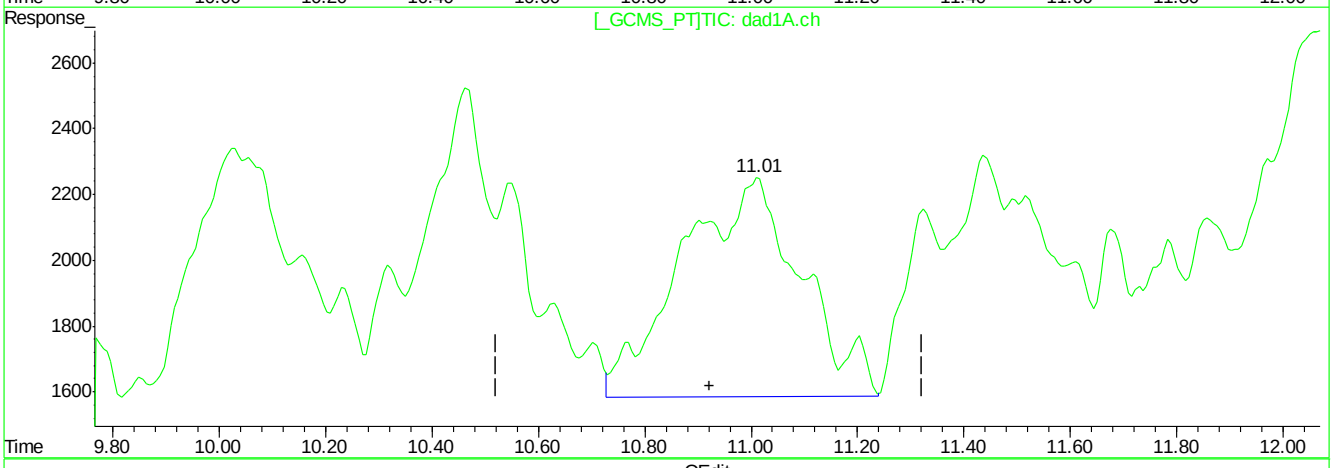
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:46:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.99min 21.156ppb m

response 55774

(14) 4-Amino-2,6-Dinitrotoluene #2

11.01min 19.461ppb m

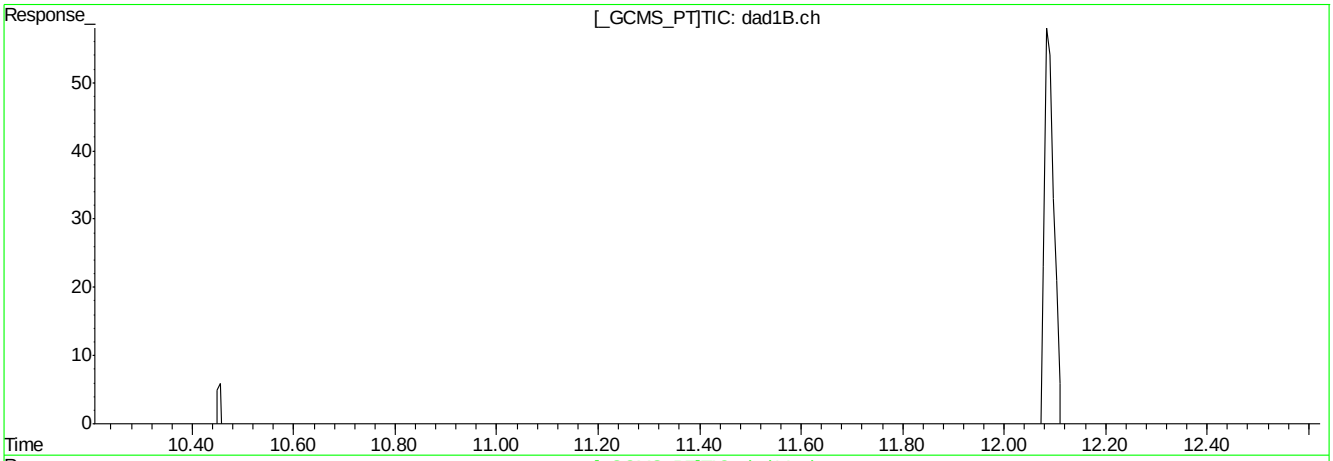
response 103732

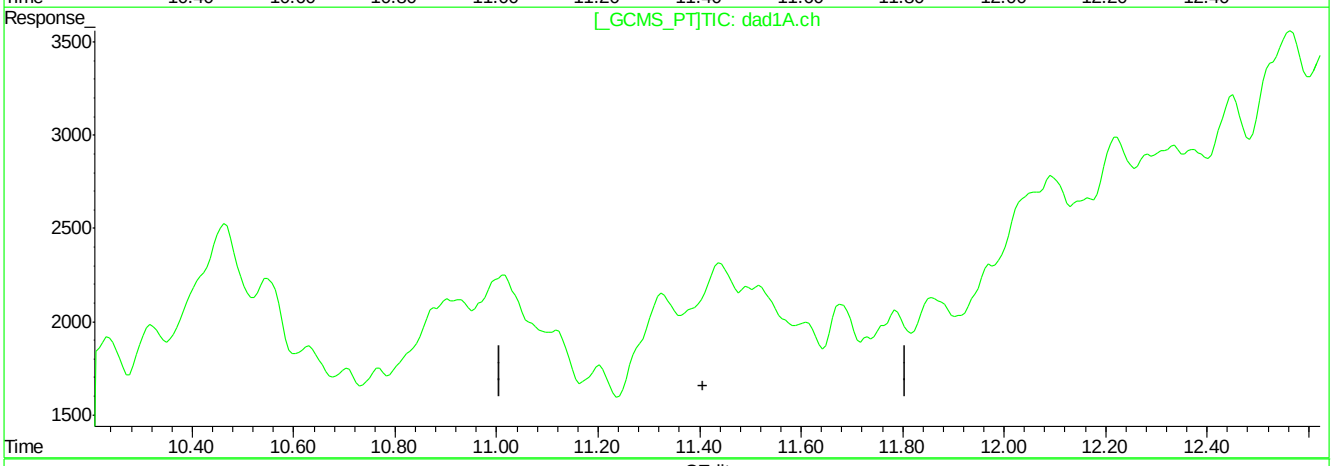
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:46:40 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.44min 29.384ppb

response 73123

(15) 3,4-Dinitrotoluene #2 (S)

0.00min 0.000ppb

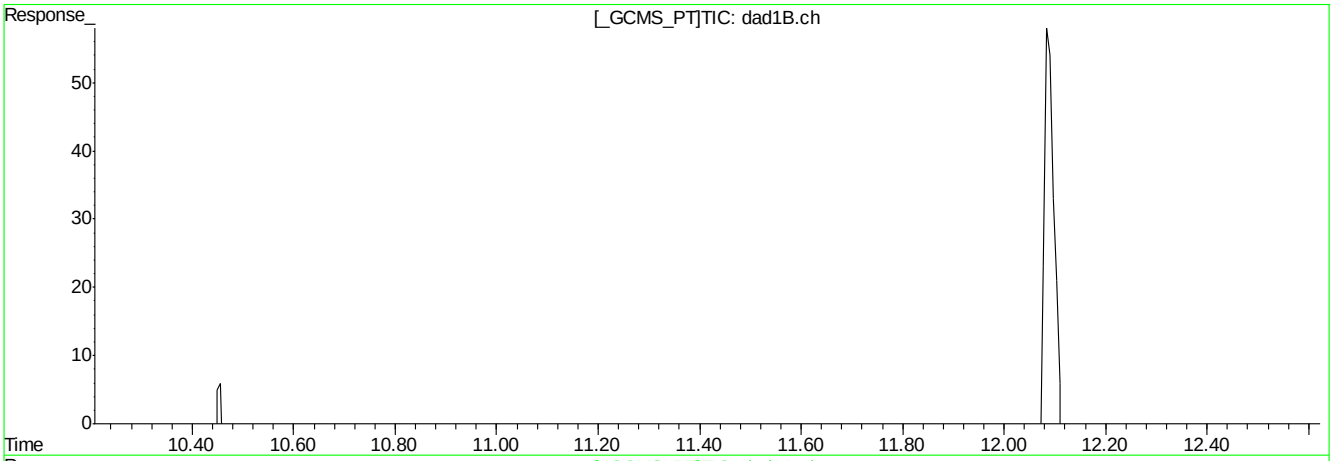
response 0

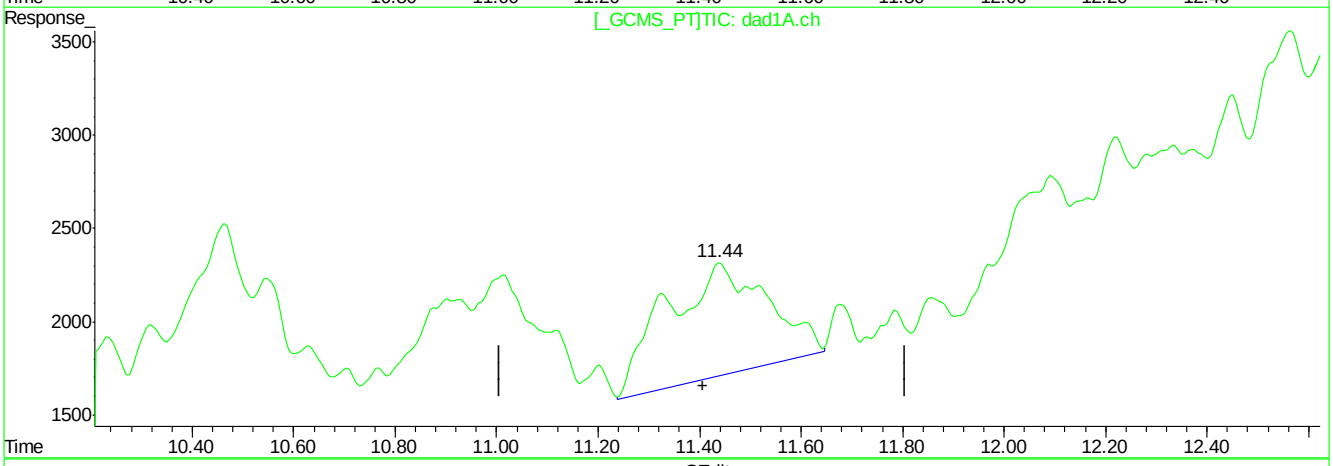
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:46:54 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.44min 29.384ppb

response 73123

(15) 3,4-Dinitrotoluene #2 (S)

11.44min 19.865ppb m

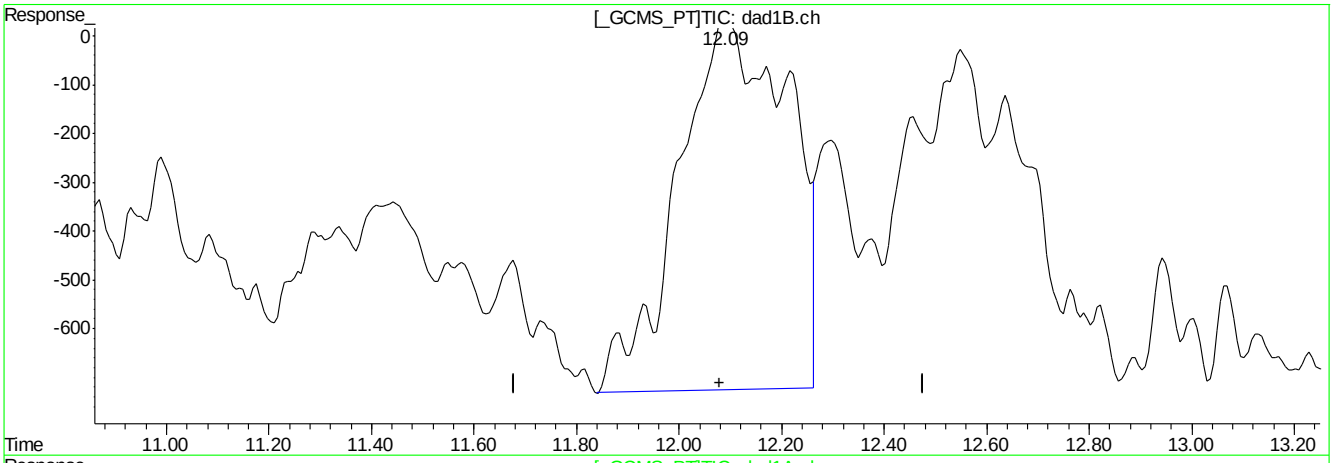
response 83553

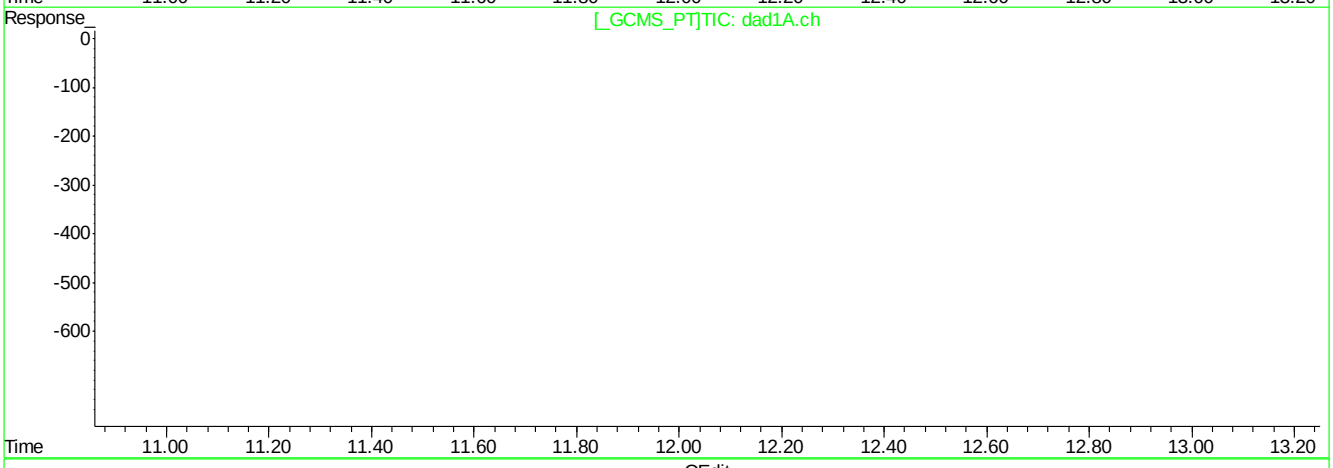
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:46:59 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.09min 21.712ppb

response 112648

(16) 2,4-Dinitrotoluene #2

0.00min 0.000ppb

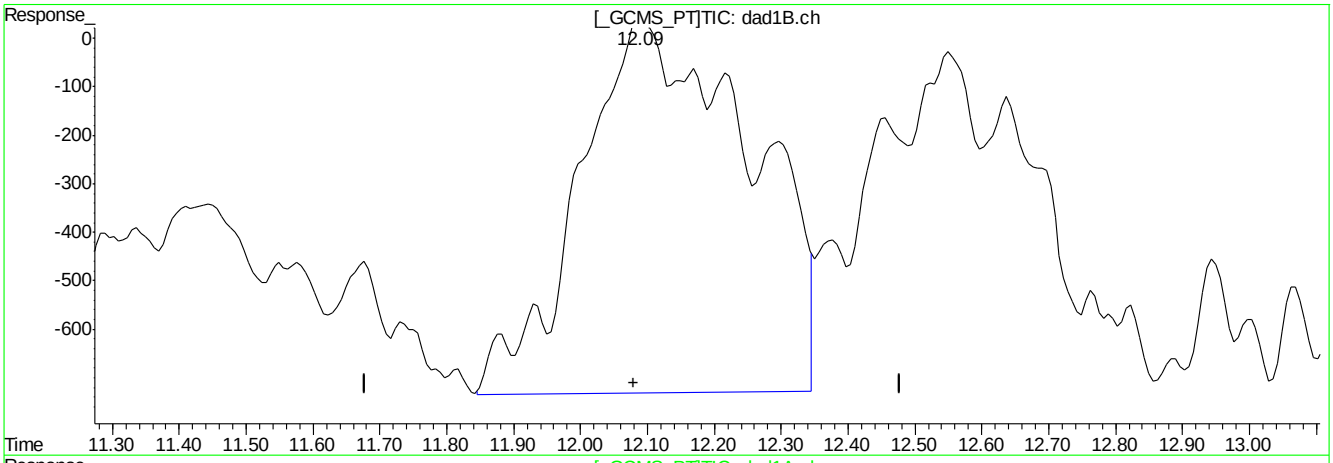
response 0

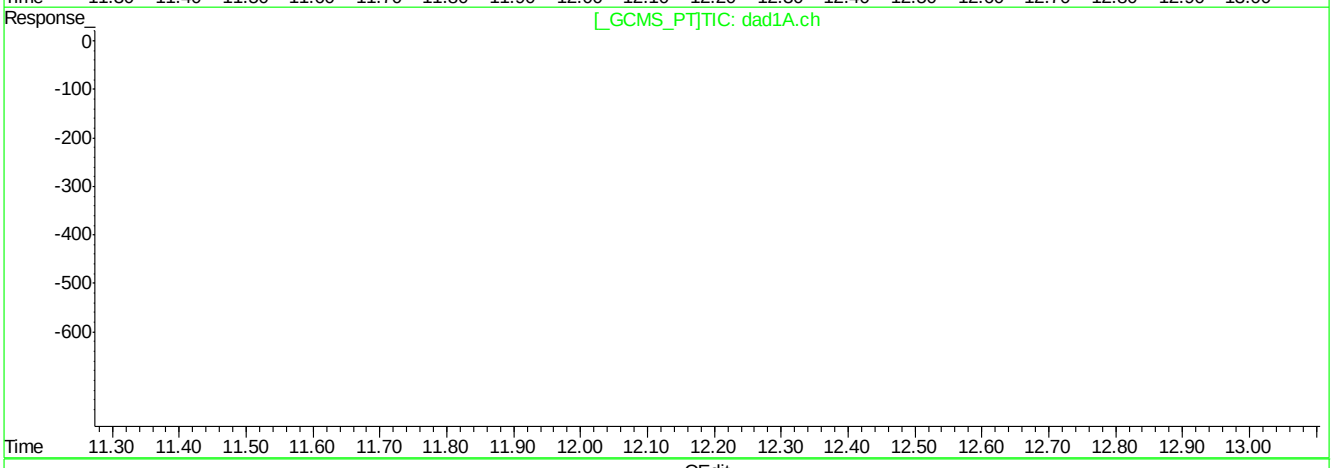
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:47:07 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.09min 26.386ppb m

response 136897

(16) 2,4-Dinitrotoluene #2

0.00min 0.000ppb

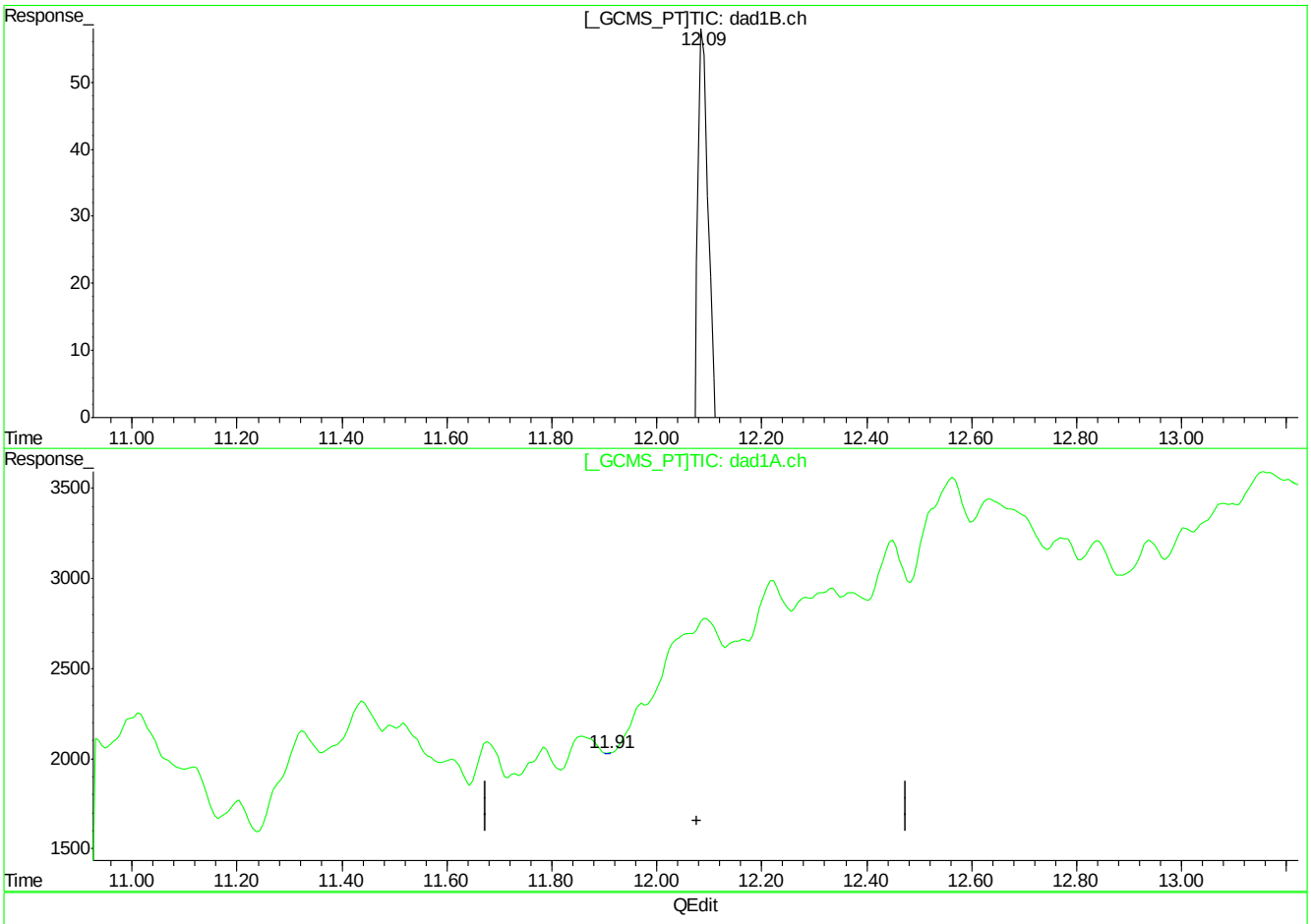
response 0

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:47:24 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(16) 2,4-Dinitrotoluene

12.09min 26.386ppb m

response 136897

(16) 2,4-Dinitrotoluene #2

11.91min 0.010ppb m

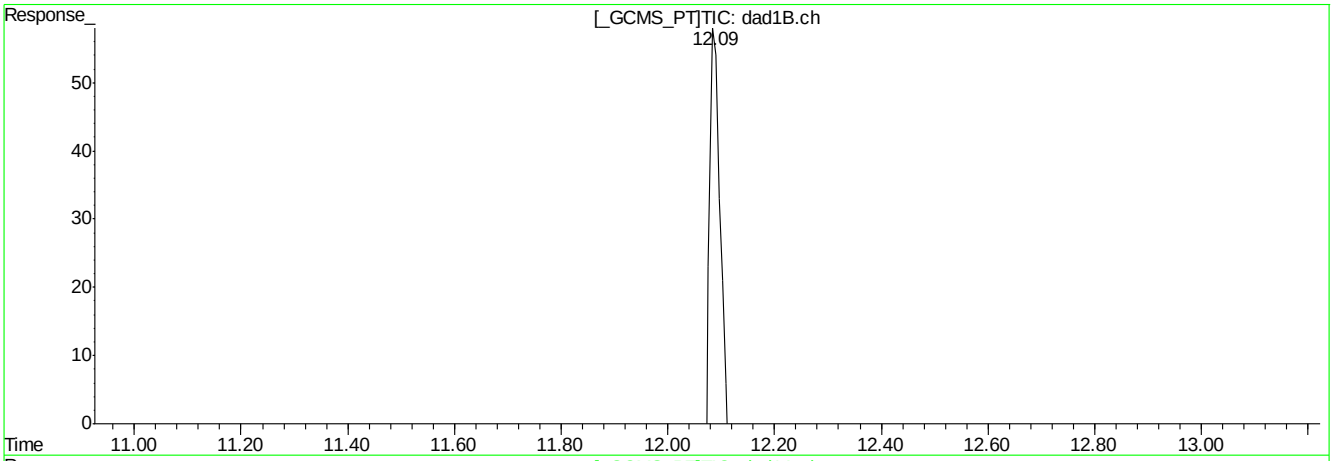
response 31

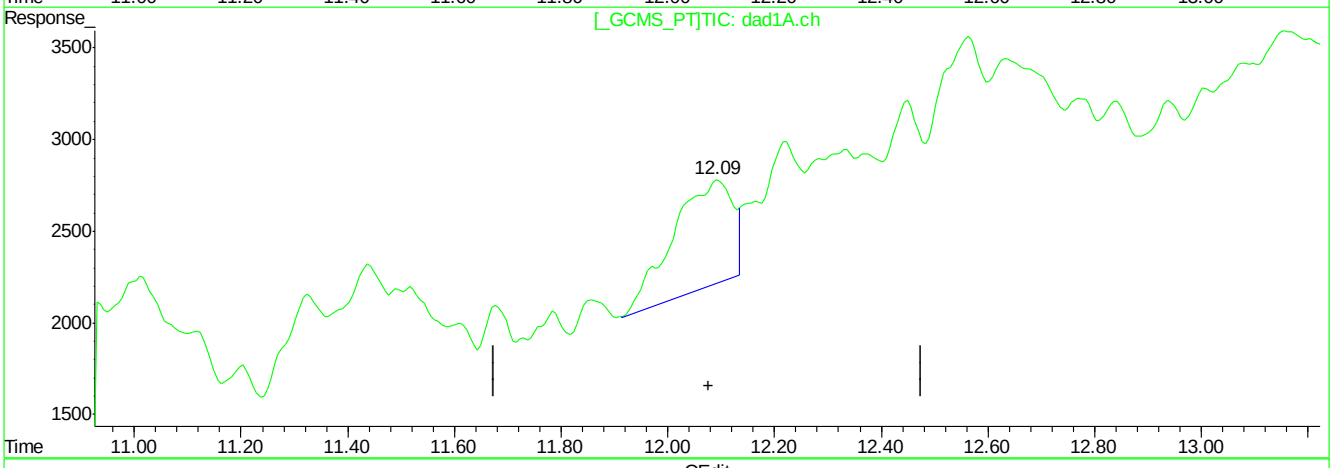
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:47:40 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.09min 26.386ppb m

response 136897

(16) 2,4-Dinitrotoluene #2

12.09min 14.109ppb m

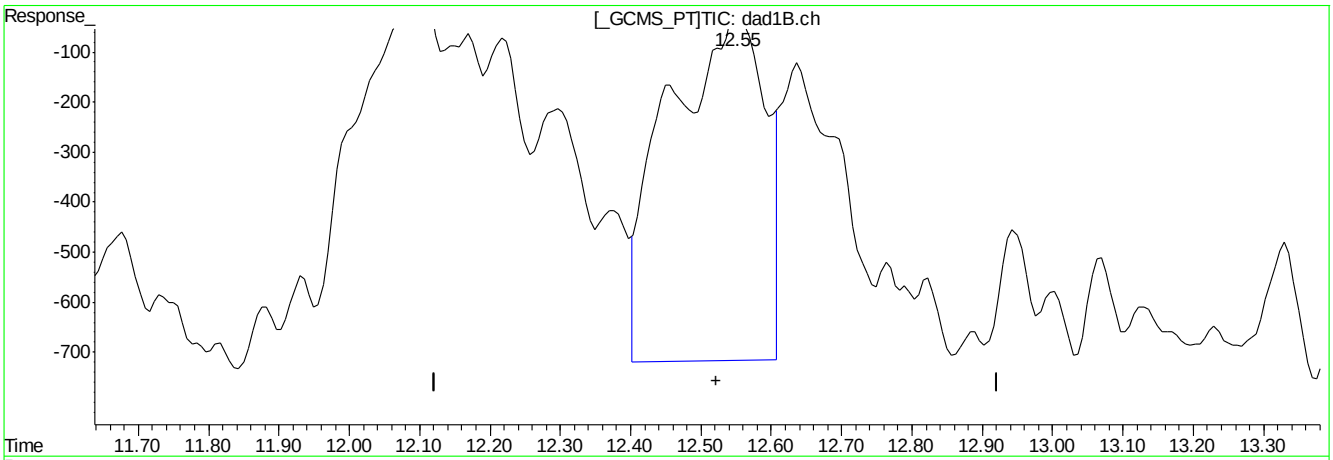
response 44517

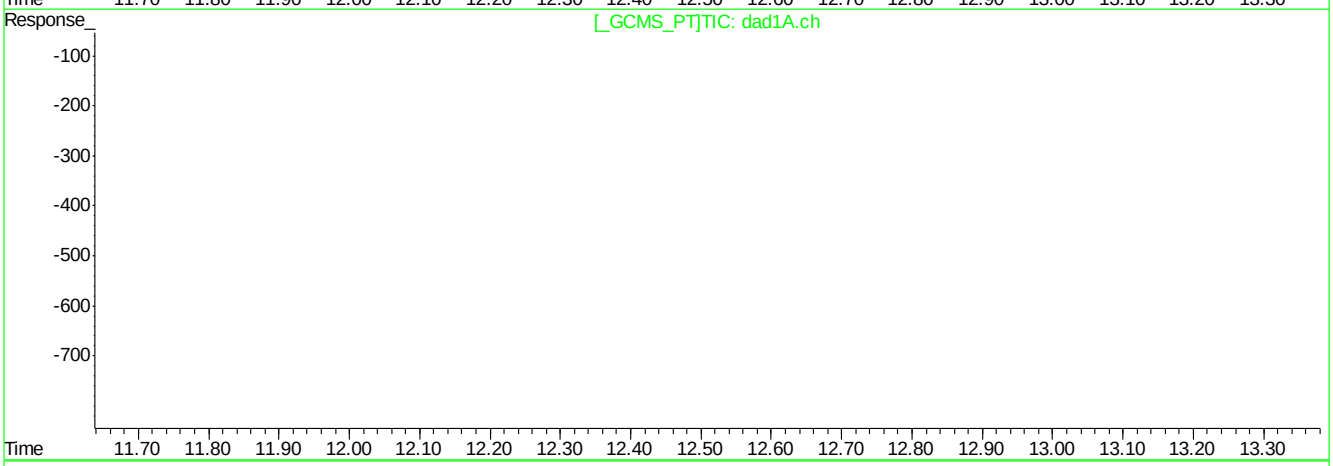
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:47:51 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 22.343ppb

response 65628

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

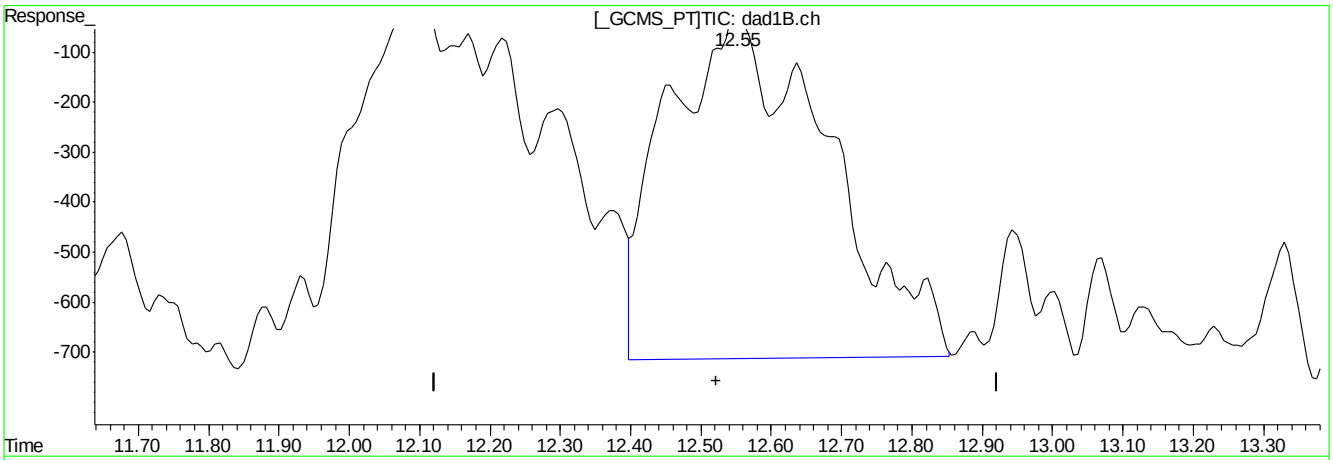
response 0

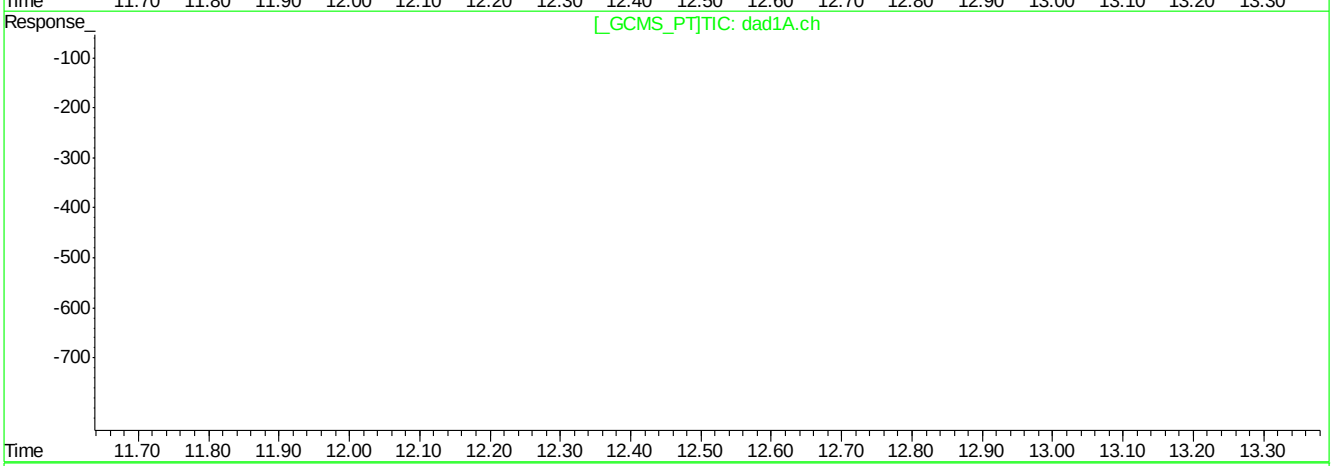
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:47:59 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 37.119ppb m

response 109062

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

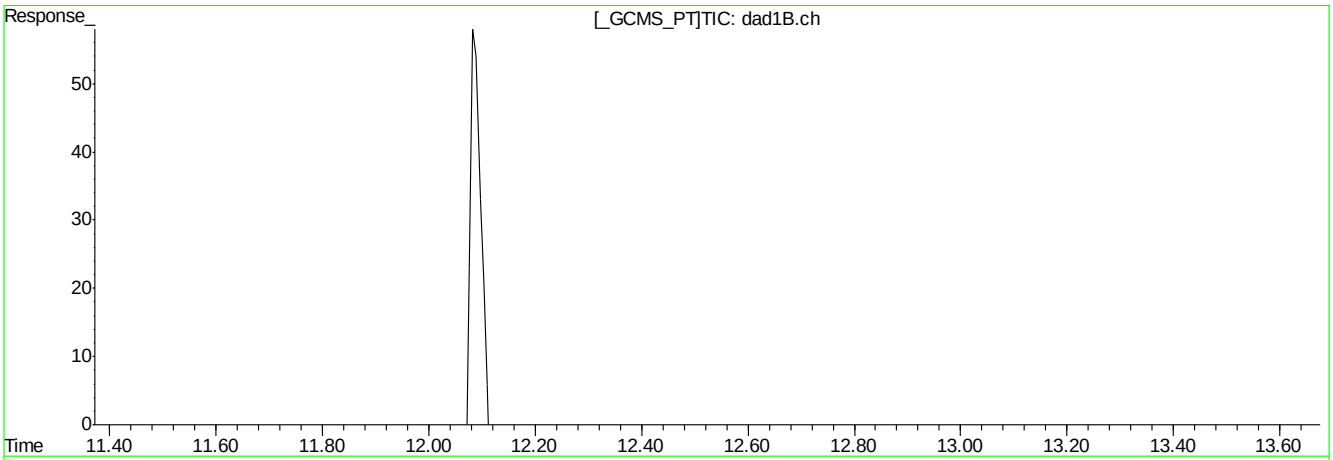
response 0

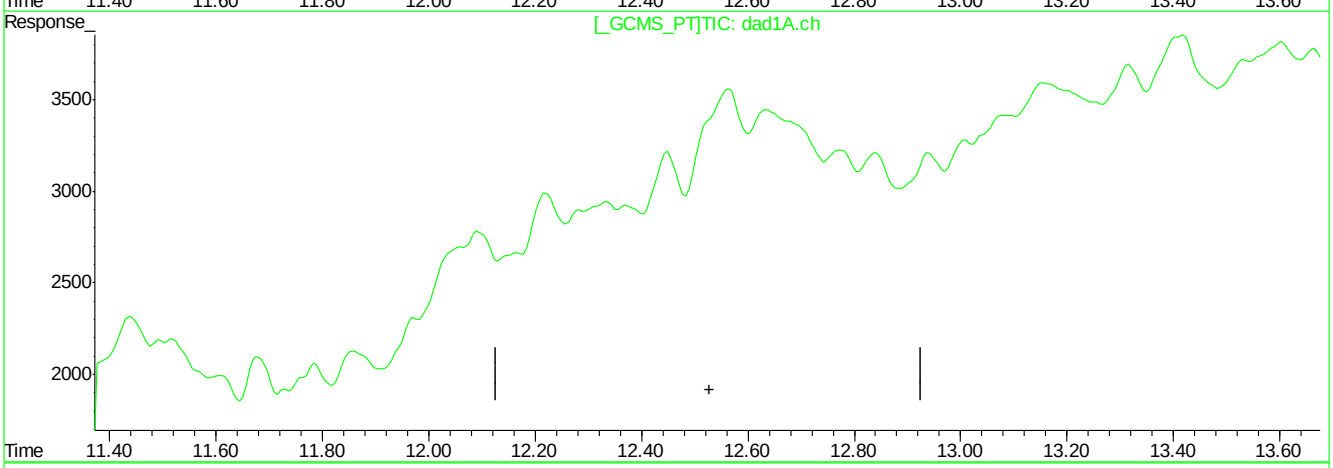
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:48:06 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 37.119ppb m

response 109062

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

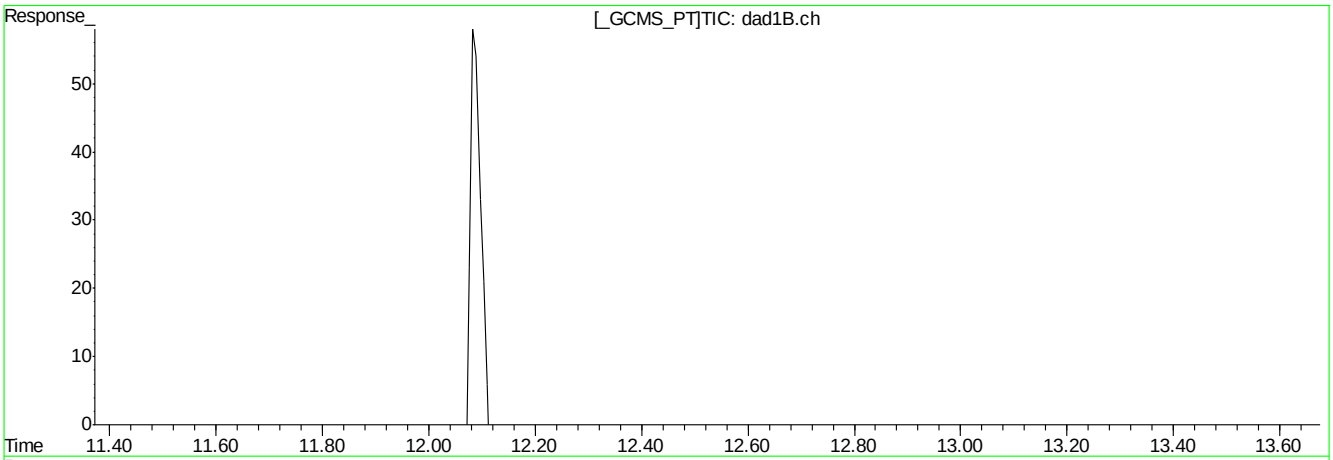
response 0

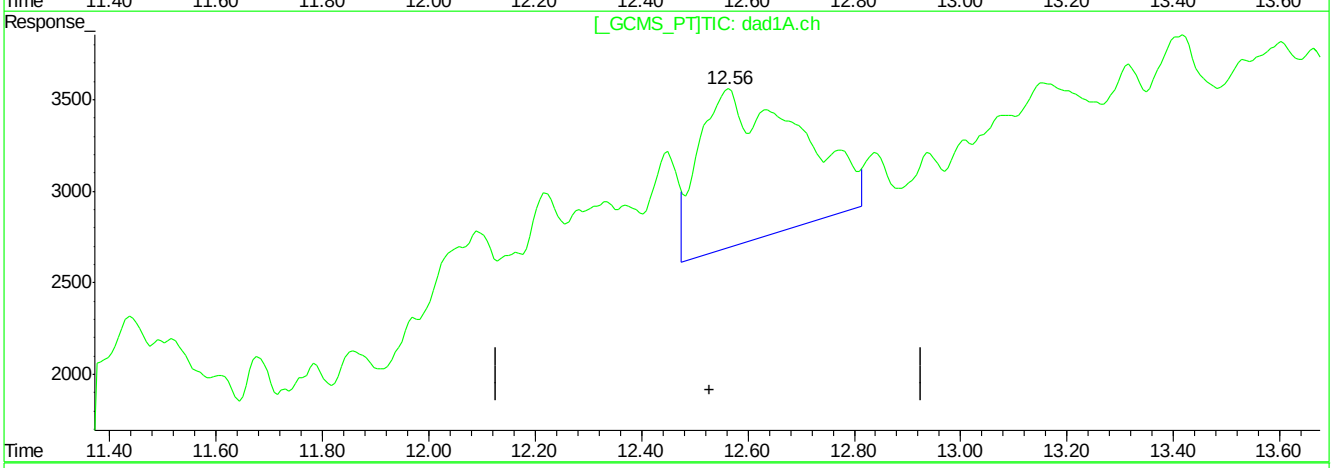
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:48:10 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 37.119ppb m

response 109062

(17) 2,6-Dinitrotoluene #2

12.56min 29.843ppb m

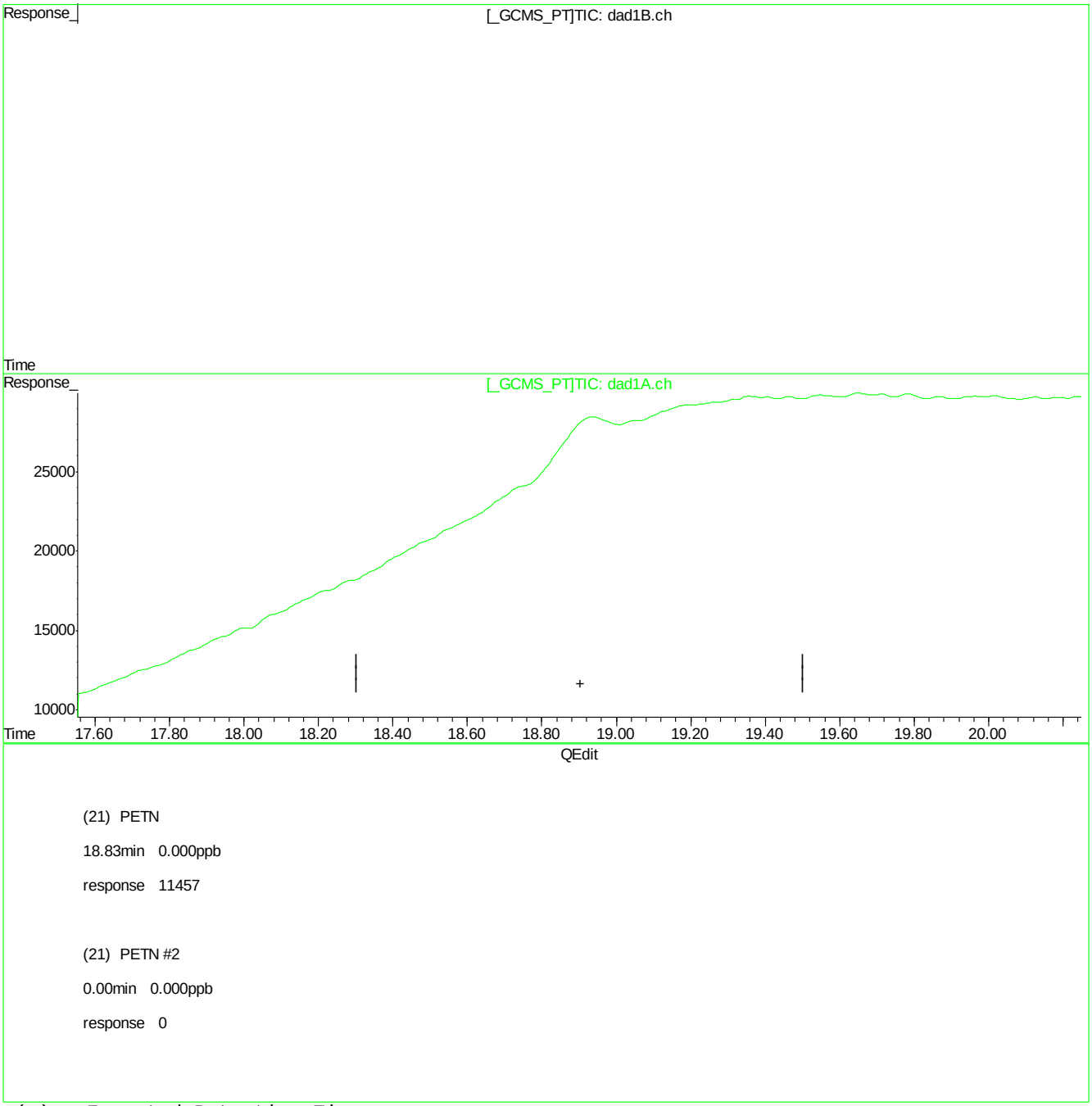
response 110117

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:48:19 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration

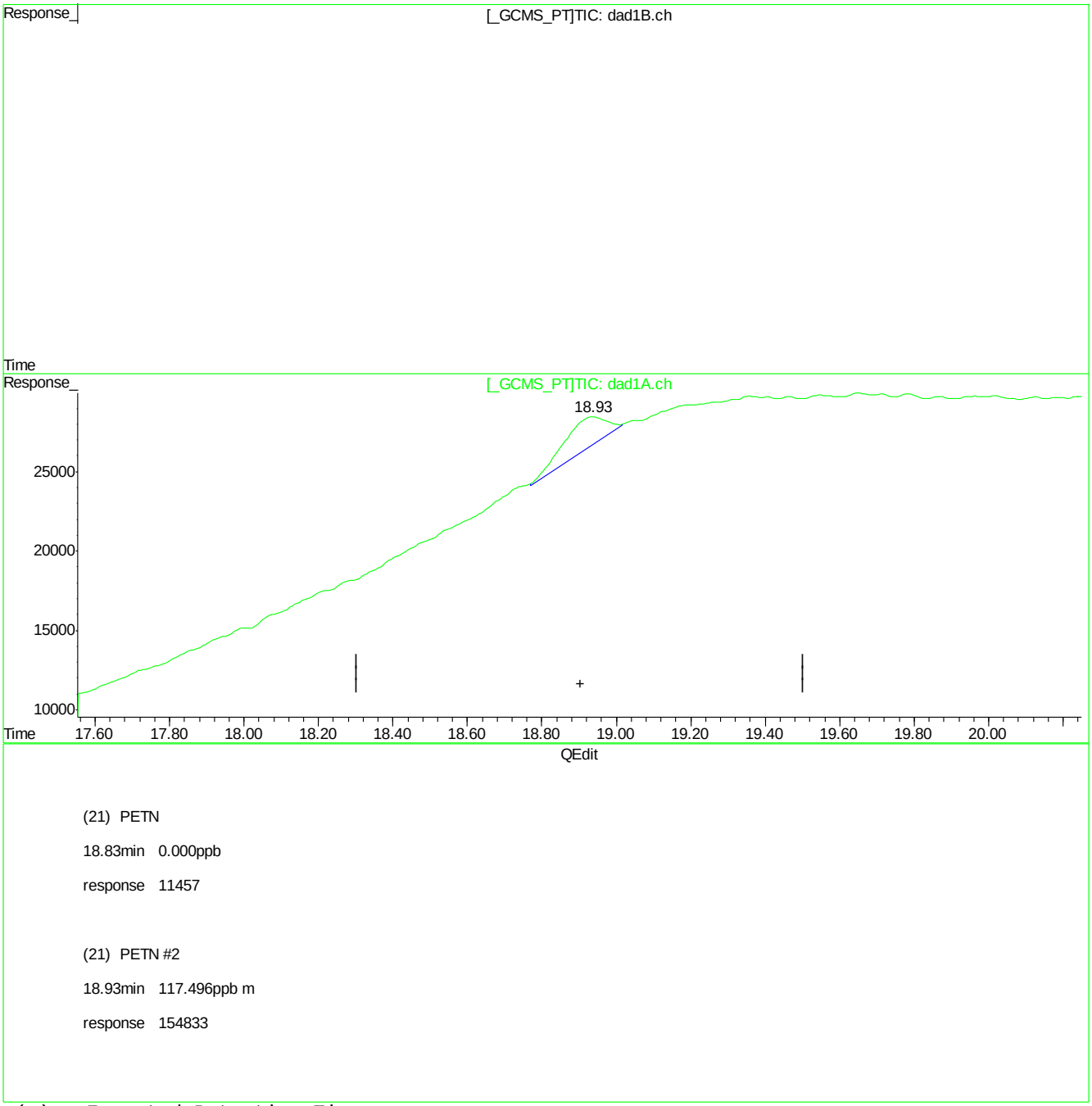


(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:48:36 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(21) PETN

18.83min 0.000ppb

response 11457

(21) PETN #2

18.93min 117.496ppb m

response 154833

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:48:41 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:28 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.40	11.46	174462	177673	70.107m	42.241m
Spiked Amount	500.000	Range	70 - 136	Recovery	=	14.02%#	8.45%#
	Target Compounds						
1)	TNX	1.40	1.40	252540	396416	51.598	51.934
2)	HMX	1.55	1.55	102831	355134	56.888	71.768
3)	DNX	1.80	1.80	181106	255850	58.889	50.462
4)	MNX	2.40	2.40	135560	202448	43.381m	42.937m
5)	RDX	3.03	3.03	116121	172551	59.698m	52.915
6)	1,3,5-Trinitrobe	4.82	4.83	223552	418867	51.303m	51.098m
7)	1,3-Dinitrobenze	6.08	6.08	298753	231193	51.253	60.002m
8)	3,5-Dinitroanili	6.42	6.42	238749	410785	51.061	52.545
9)	Nitrobenzene	7.71	7.74	195457	194582	52.232m	61.874m
10)	Nitroglycerin	0.00	9.07	0	333501	N.D. d	260.996
11)	Tetryl	9.53	9.56	167113	173340	56.468m	41.877m
12)	2,4,6-Trinitroto	10.06	10.07	190062	190046	48.523m	44.442m
13)	2-Amino-4,6-Dini	10.44	10.46	217365	214056	58.208m	38.227m
14)	4-Amino-2,6-Dini	10.93	10.92	151170	172539	57.302m	32.370m#
16)	2,4-Dinitrotolue	12.09	12.13	296379	145969	57.126m	46.262m
17)	2,6-Dinitrotolue	12.55	12.55	162232	204595	55.194m	55.448m
18)	o-Nitrotoluene	15.79	15.79	131134	131880	50.748m	39.593m
19)	p-Nitrotoluene	16.45	16.45	225031	196142	56.312	61.939m
20)	m-Nitrotoluene	17.39	17.61	262604	183968	76.996	52.216m
21)	PETN	0.00	18.91	0	348156	N.D. d	264.200m

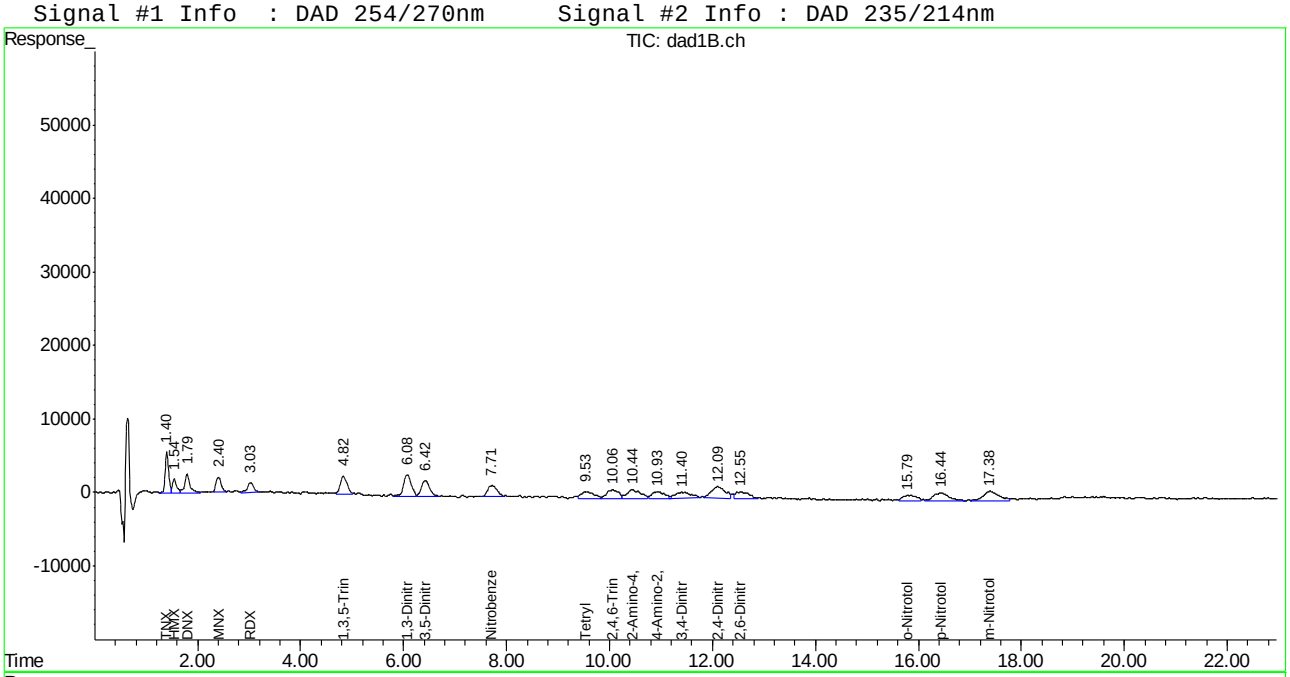
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060201.D 8330B_0707PLUS.M Mon Jul 09 11:20:49 2018 Page 1

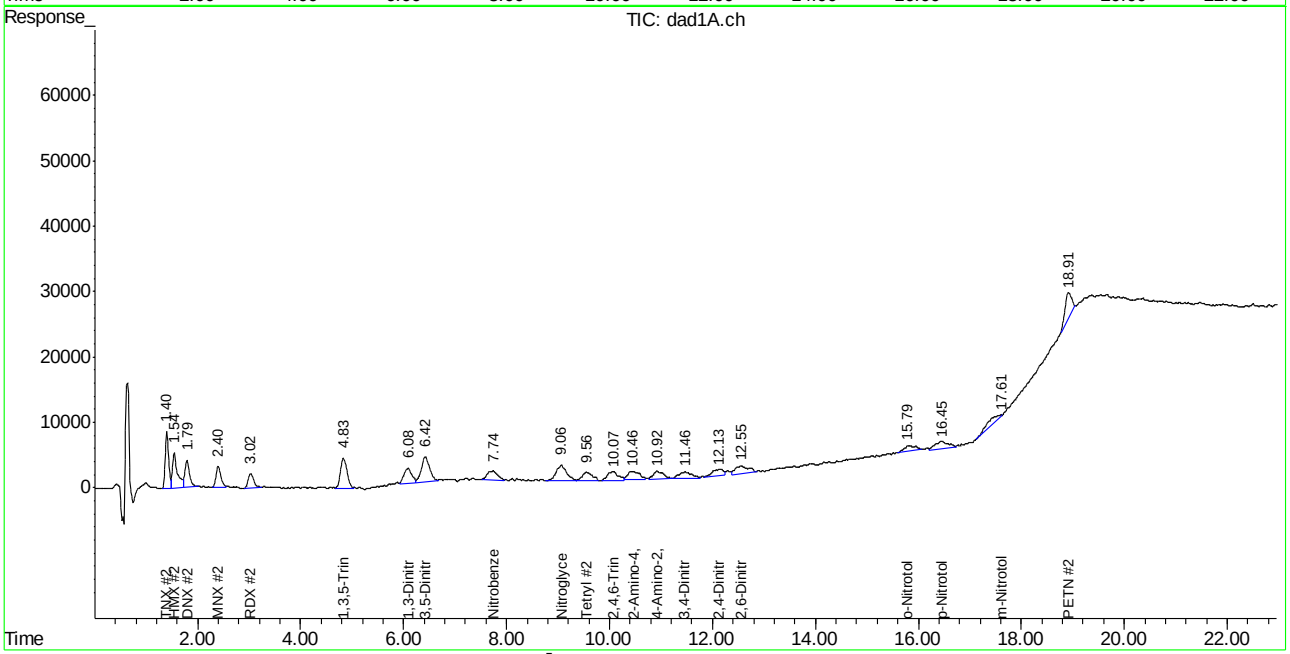
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:06 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

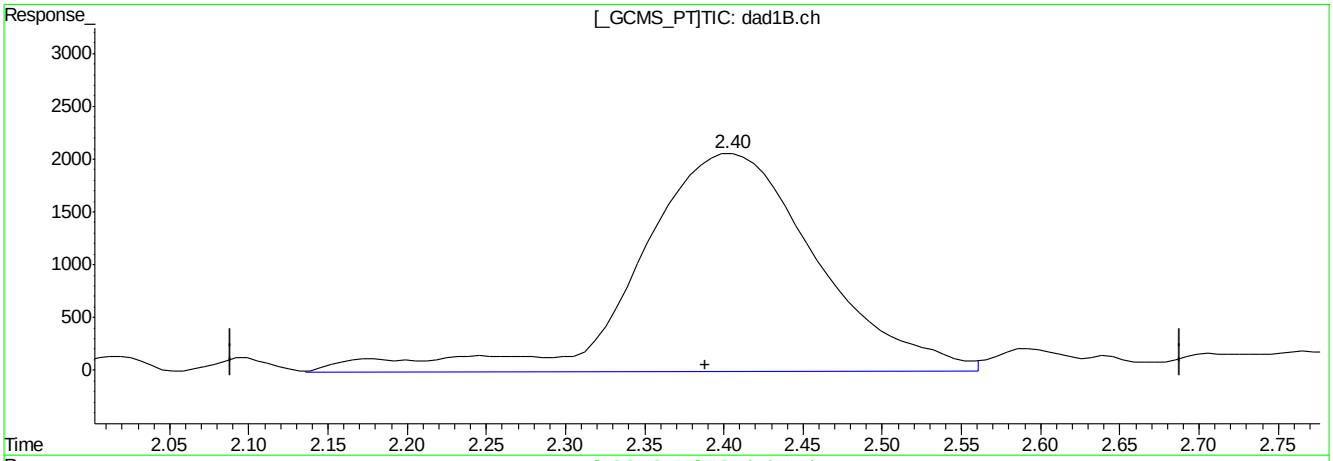
Sample Number: GBB1748-IC1748 **Method:** SW846 8330A
Lab FileID: BB060201.D **Analyst approved:** 07/09/18 11:23 William Hustedde
Injection Time: 07/06/18 16:03 **Supervisor approved:** 07/09/18 16:15 Mike Eger

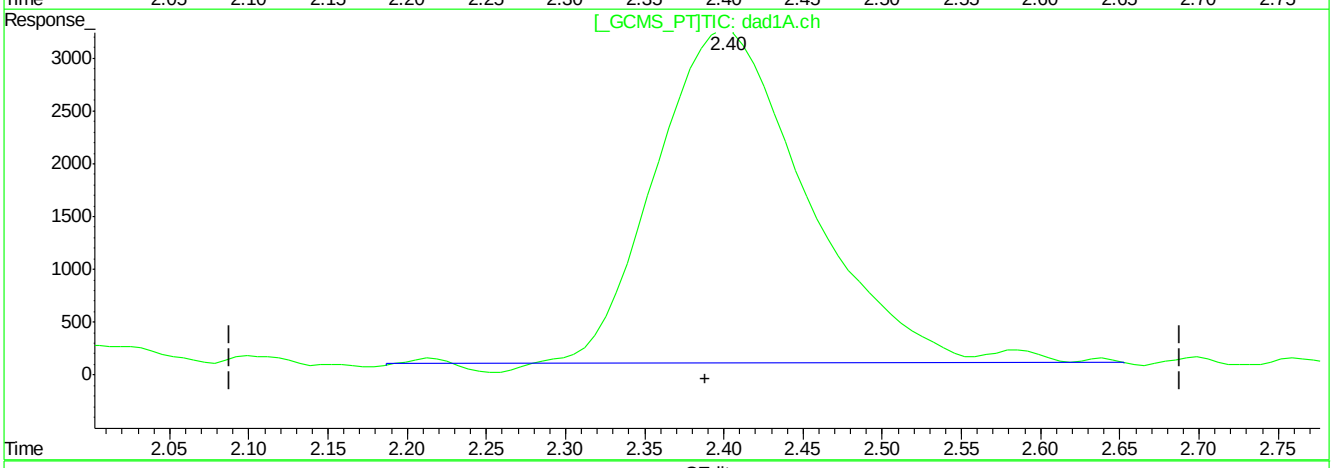
Parameter	CAS	Sig#	R.T. (min.)	Reason
MNX		1	2.40	Poor instrument integration
MNX		2	2.40	Poor instrument integration
RDX	121-82-4	1	3.03	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.82	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.83	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.08	Poor instrument integration
Nitrobenzene	98-95-3	1	7.71	Poor instrument integration
Nitrobenzene	98-95-3	2	7.74	Poor instrument integration
Tetryl	479-45-8	1	9.53	Poor instrument integration
Tetryl	479-45-8	2	9.56	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	10.06	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	10.07	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.44	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.46	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	10.92	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.93	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.40	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	11.46	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	12.09	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	12.13	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.55	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	12.55	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.79	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.79	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.45	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.61	Poor instrument integration
PETN	78-11-5	2	18.91	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.41min 52.344ppb

response 163569

(4) MNX #2

2.40min 44.216ppb

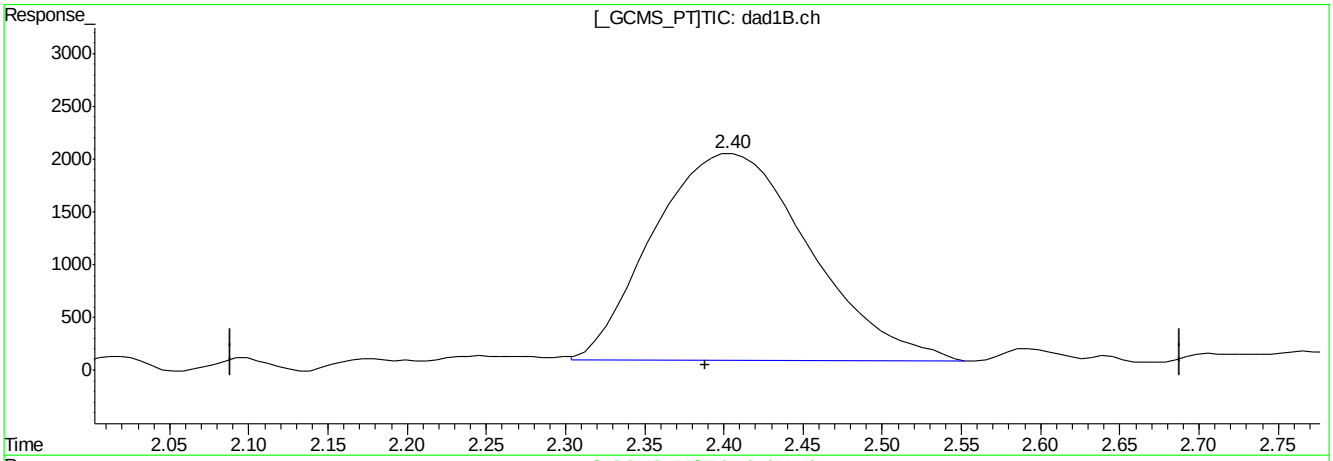
response 208479

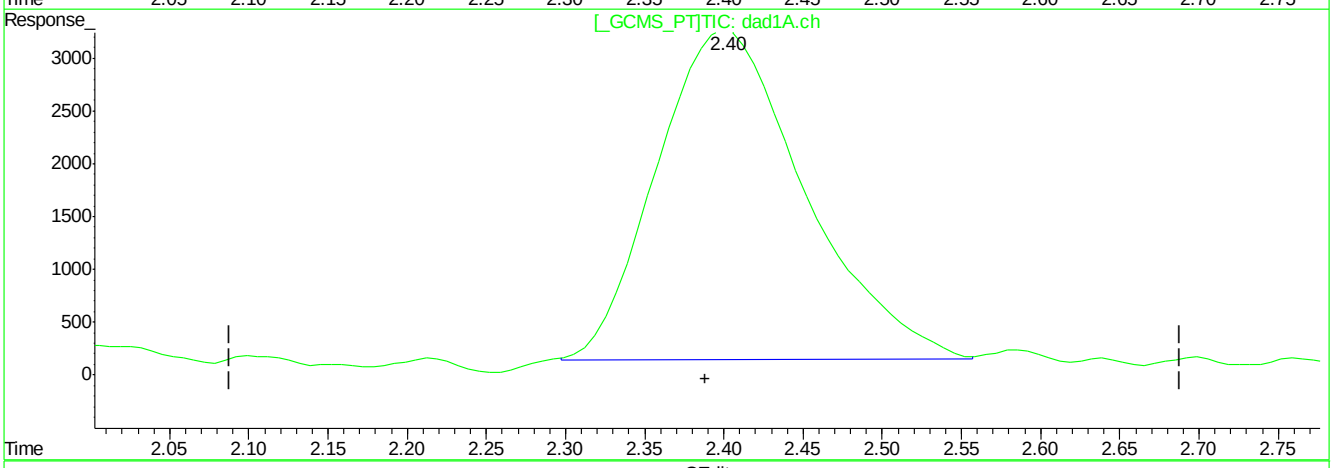
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:24:44 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.40min 43.381ppb m

response 135560

(4) MNX #2

2.40min 42.937ppb m

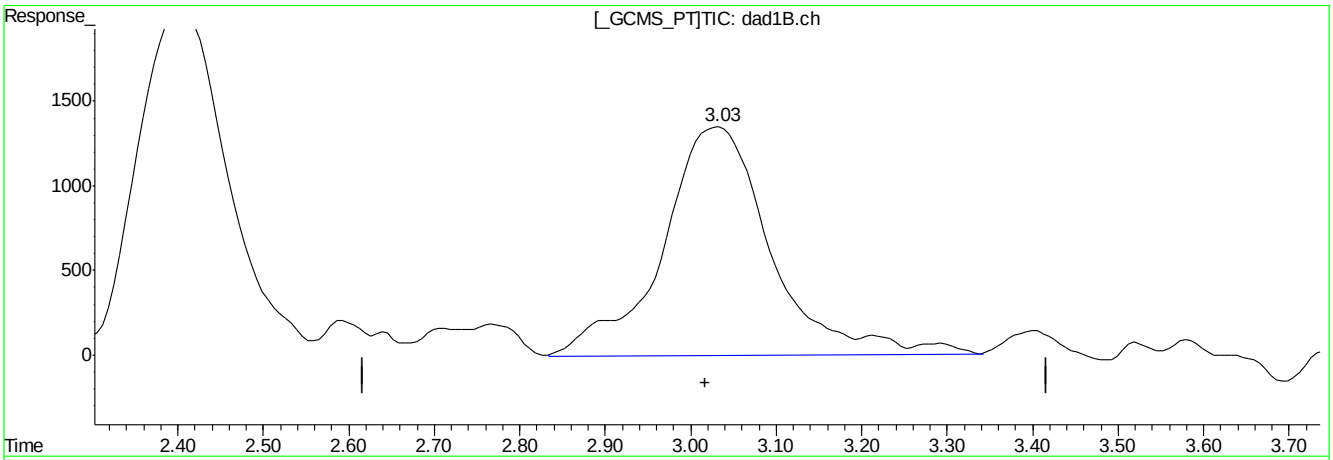
response 202448

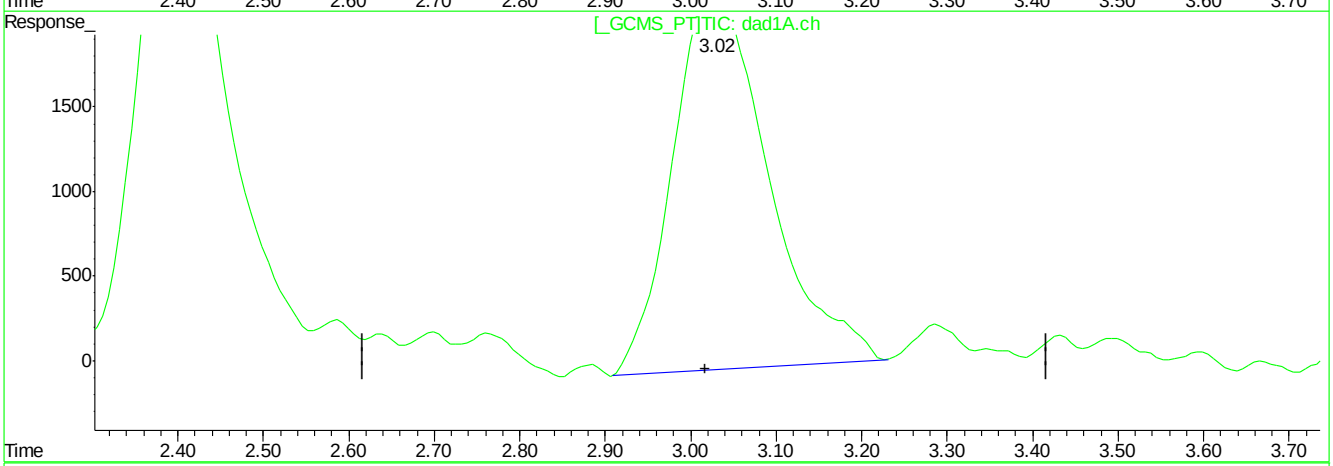
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:24:51 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.03min 61.540ppb

response 119710

(5) RDX #2

3.03min 52.915ppb

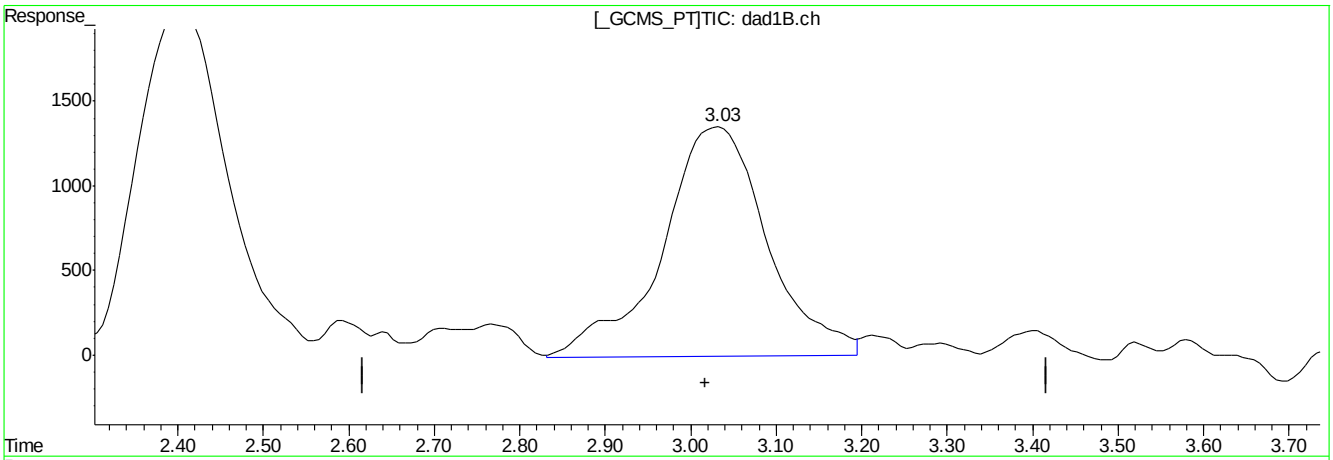
response 172551

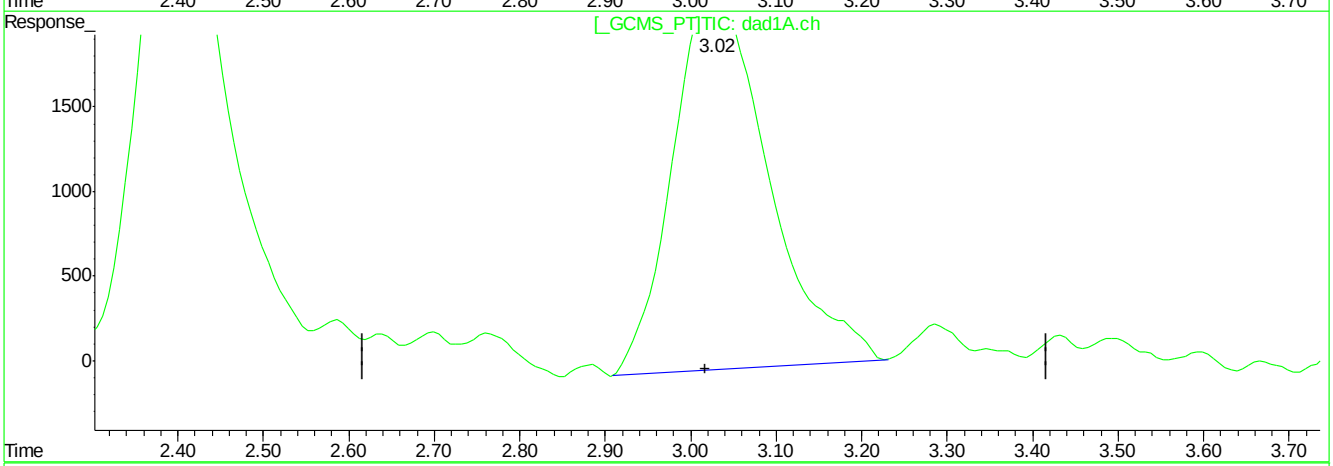
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:24:58 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.03min 59.698ppb m

response 116121

(5) RDX #2

3.03min 52.915ppb

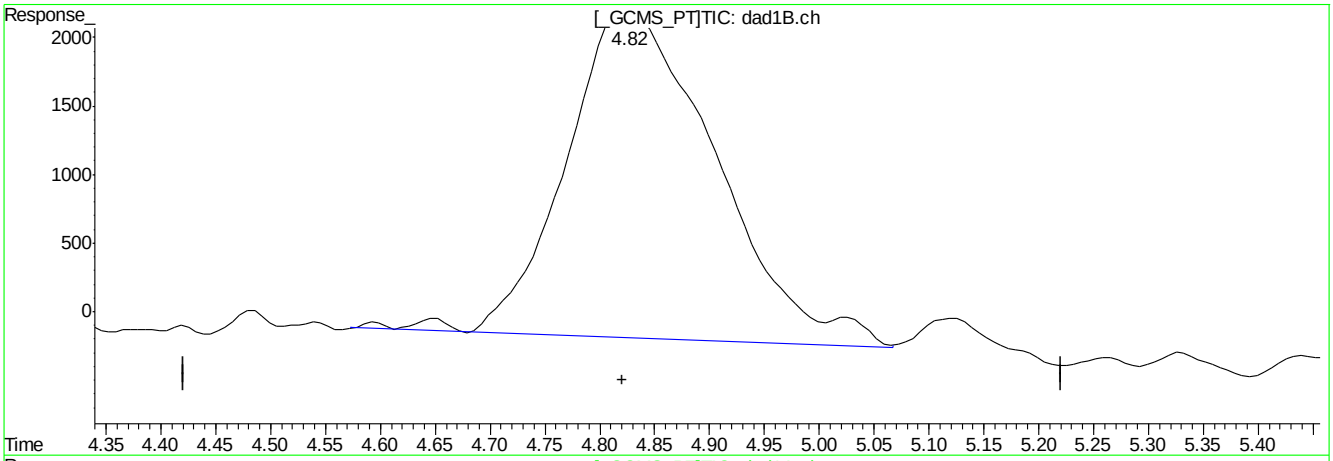
response 172551

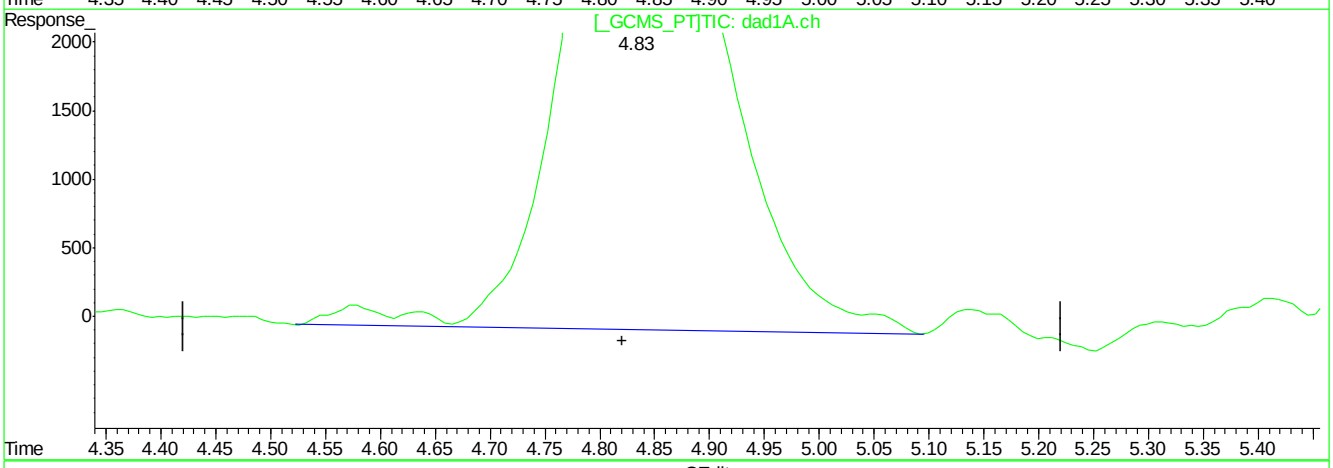
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:05 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.83min 52.479ppb

response 228678

(6) 1,3,5-Trinitrobenzene #2

4.83min 52.151ppb

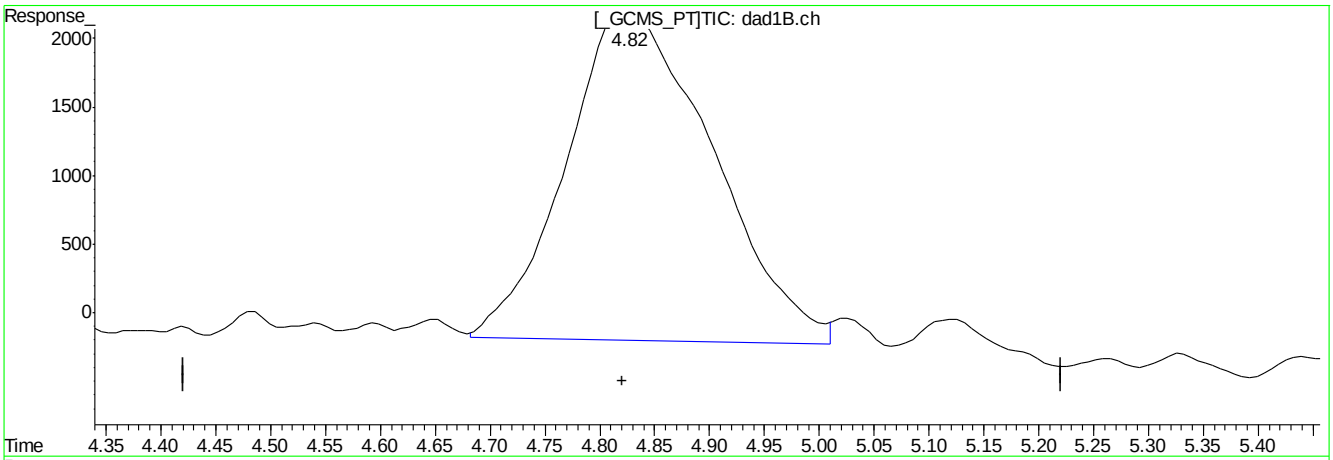
response 427502

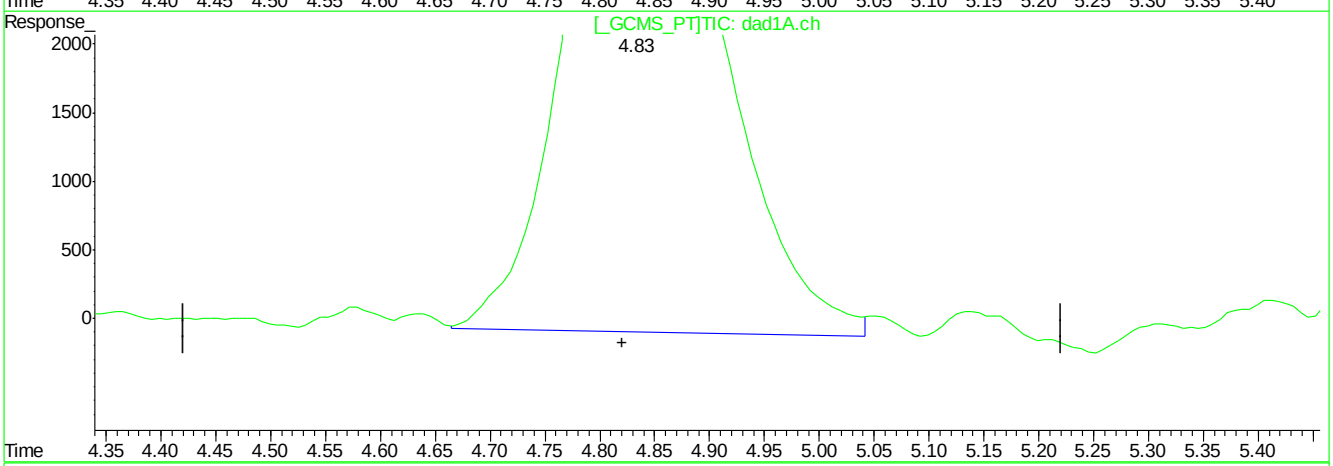
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:10 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.82min 51.303ppb m

response 223552

(6) 1,3,5-Trinitrobenzene #2

4.83min 51.098ppb m

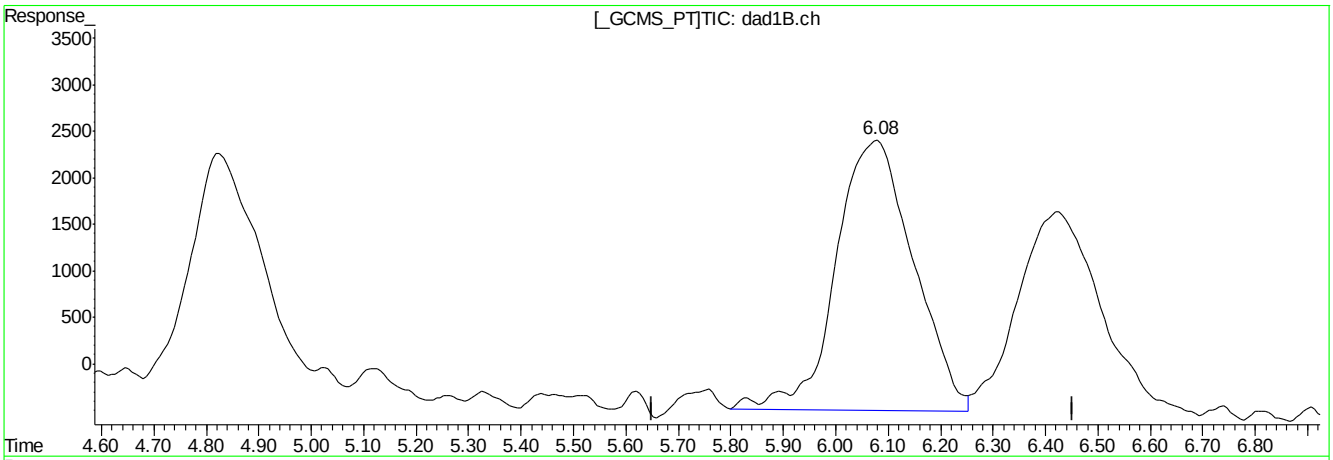
response 418867

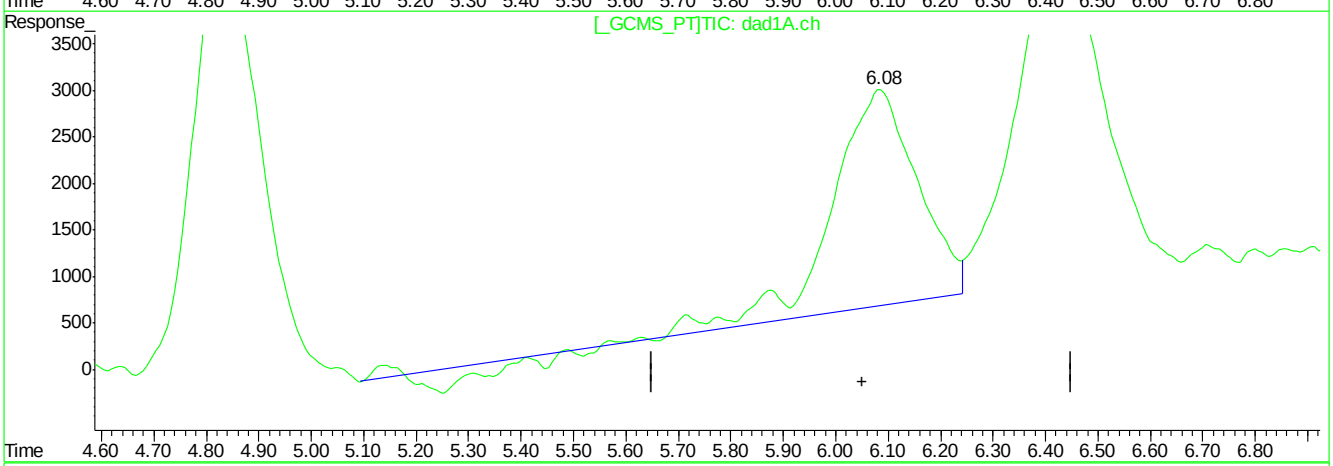
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:17 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.08min 51.253ppb

response 298753

(7) 1,3-Dinitrobenzene #2

6.09min 64.575ppb

response 248799

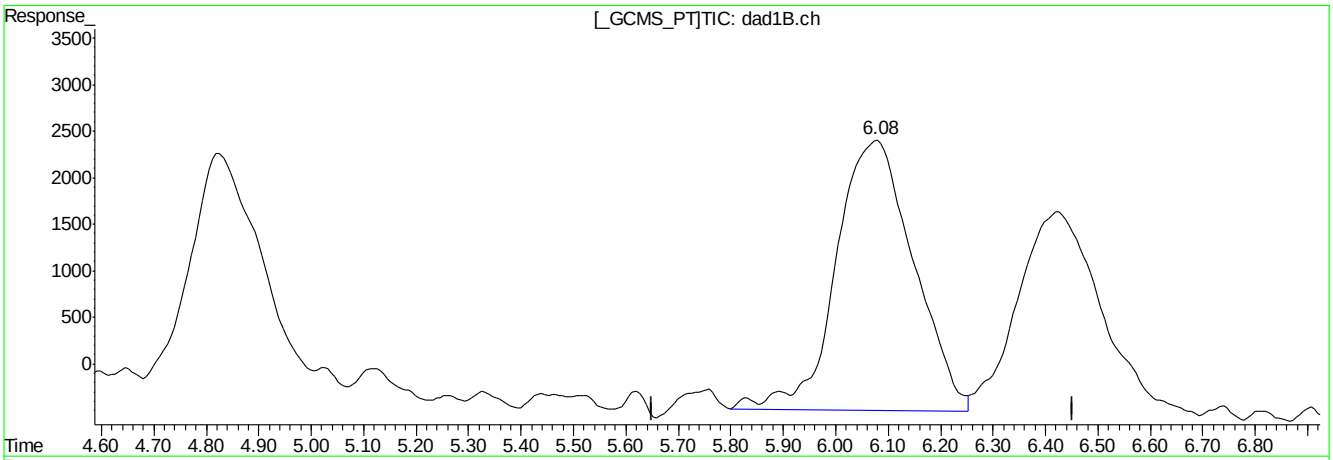
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:32 2018

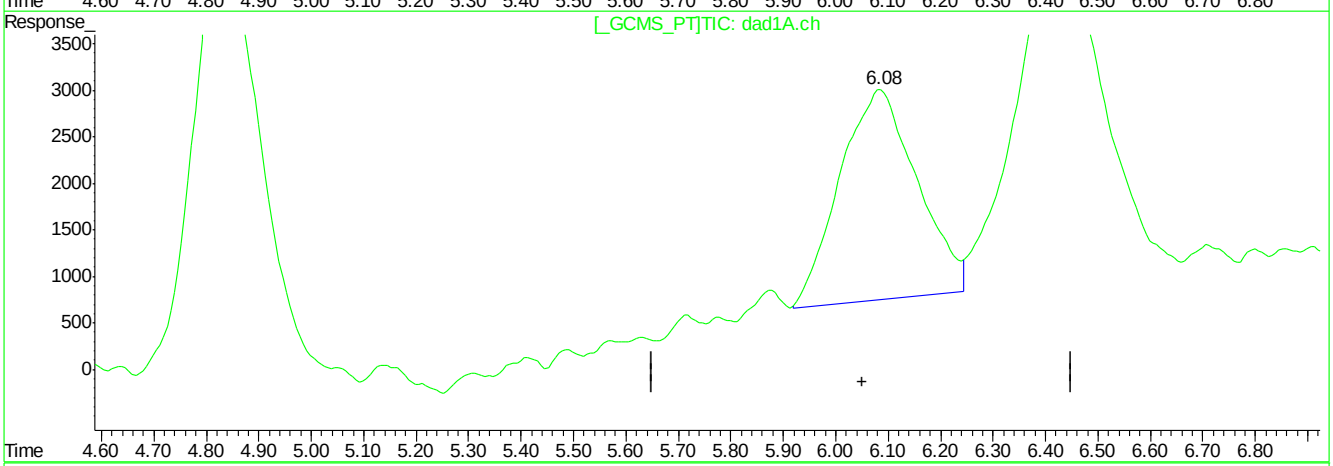
BB060201.D edits: 1,3-Dinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.08min 51.253ppb

response 298753

(7) 1,3-Dinitrobenzene #2

6.08min 60.002ppb m

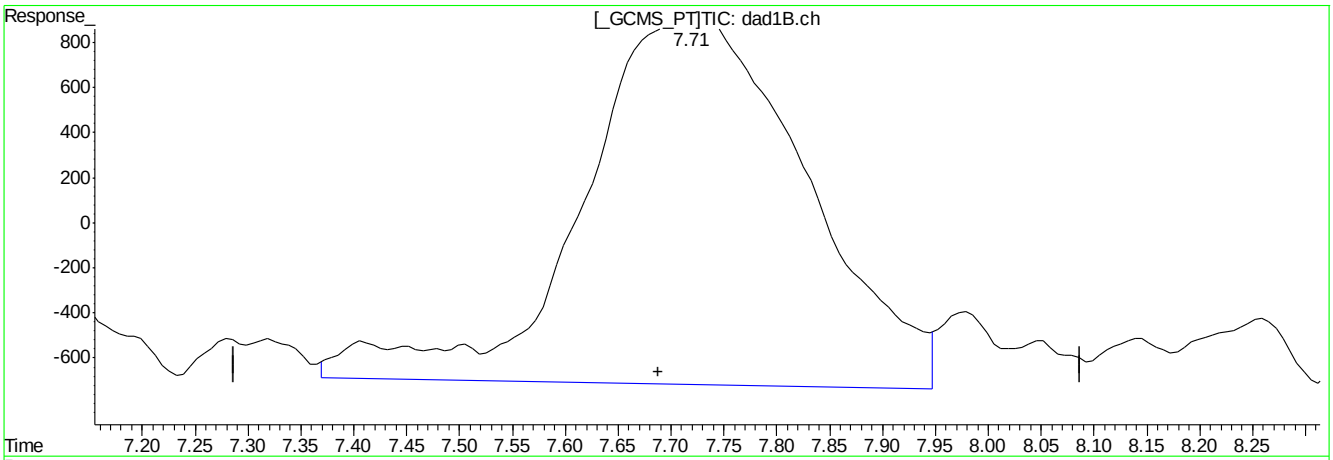
response 231193

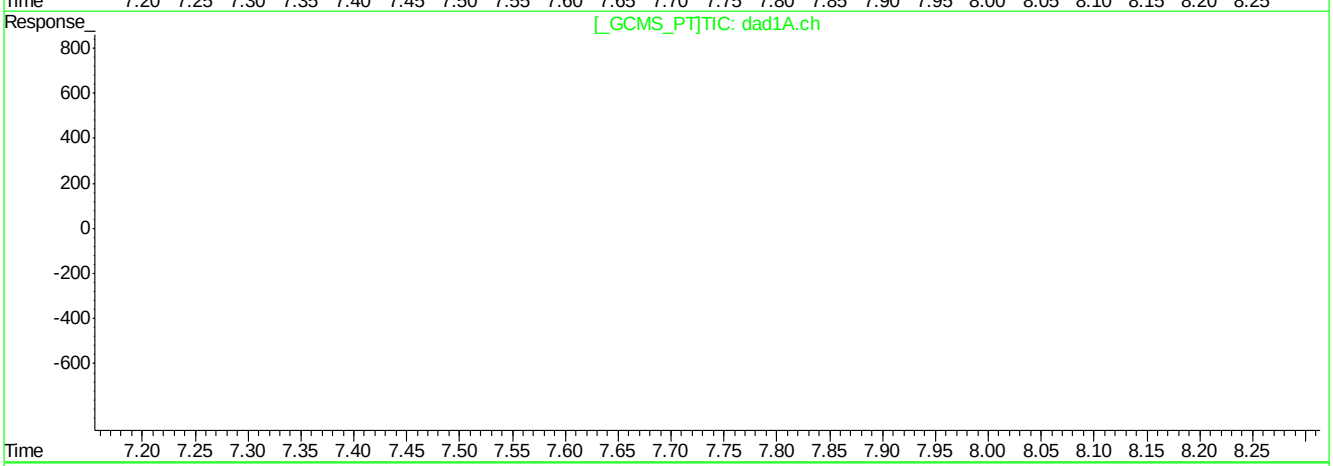
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:38 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.72min 64.155ppb

response 240073

(9) Nitrobenzene #2

0.00min 0.000ppb

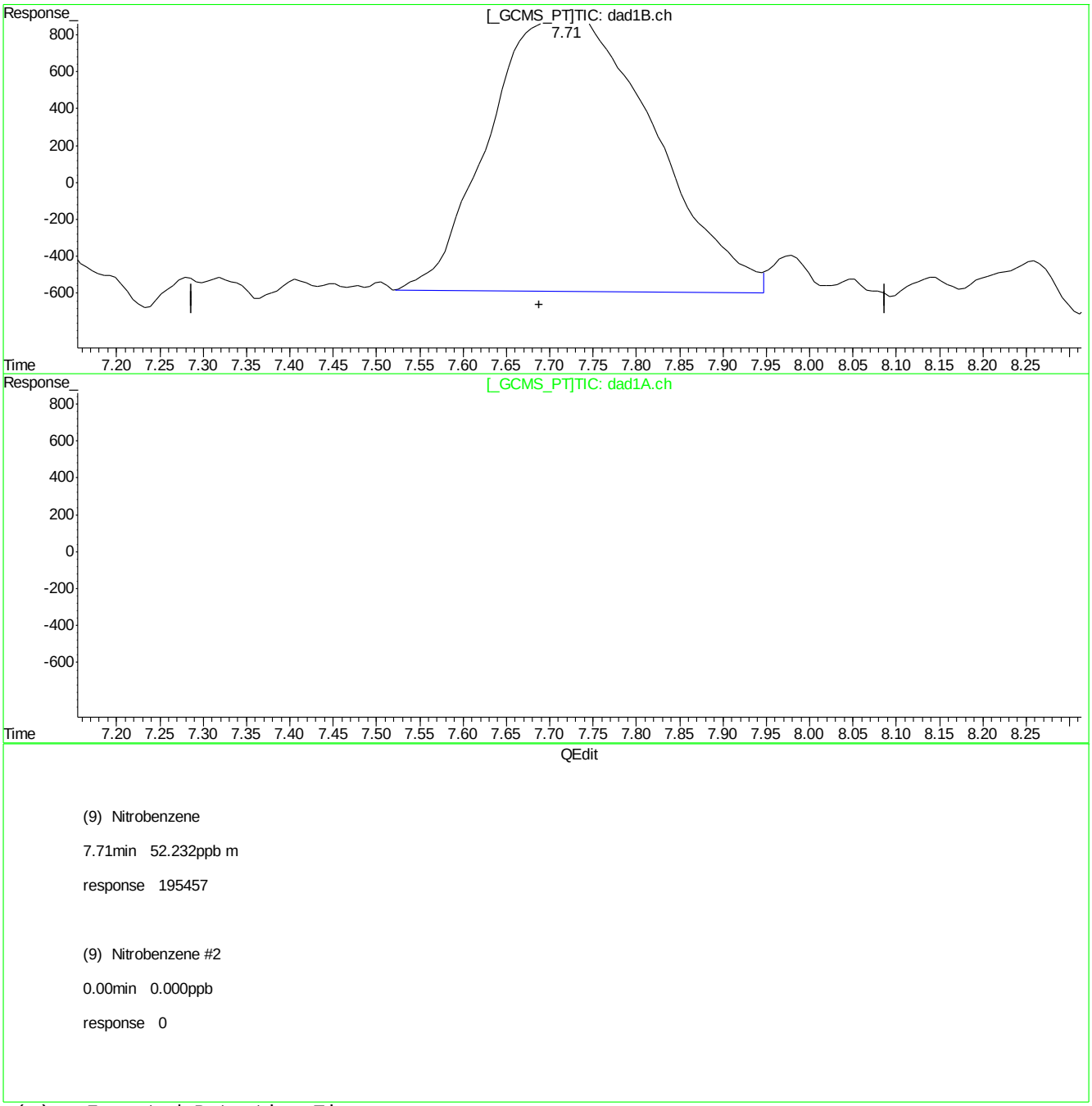
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:47 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration

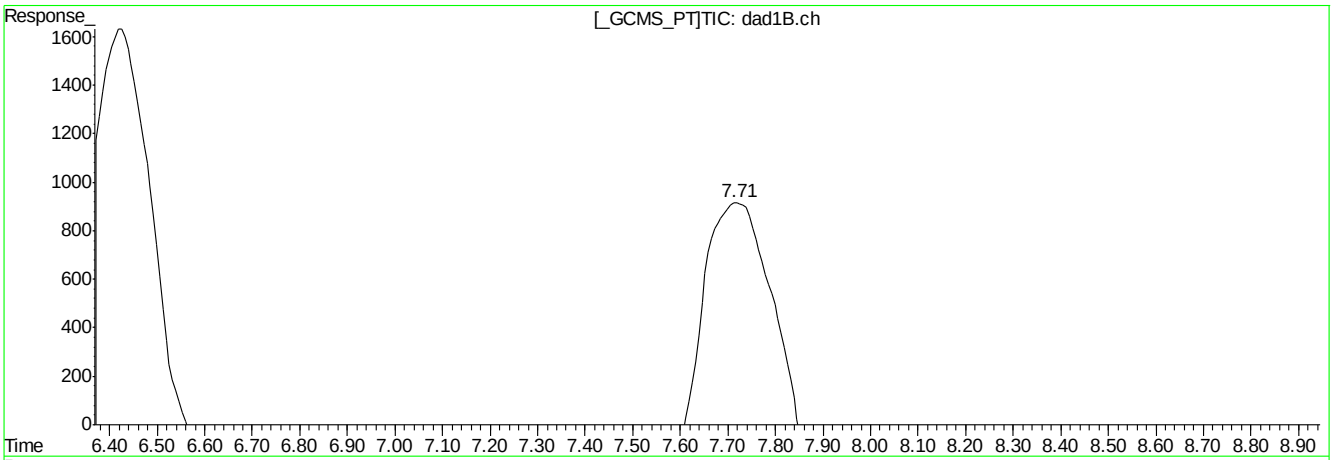


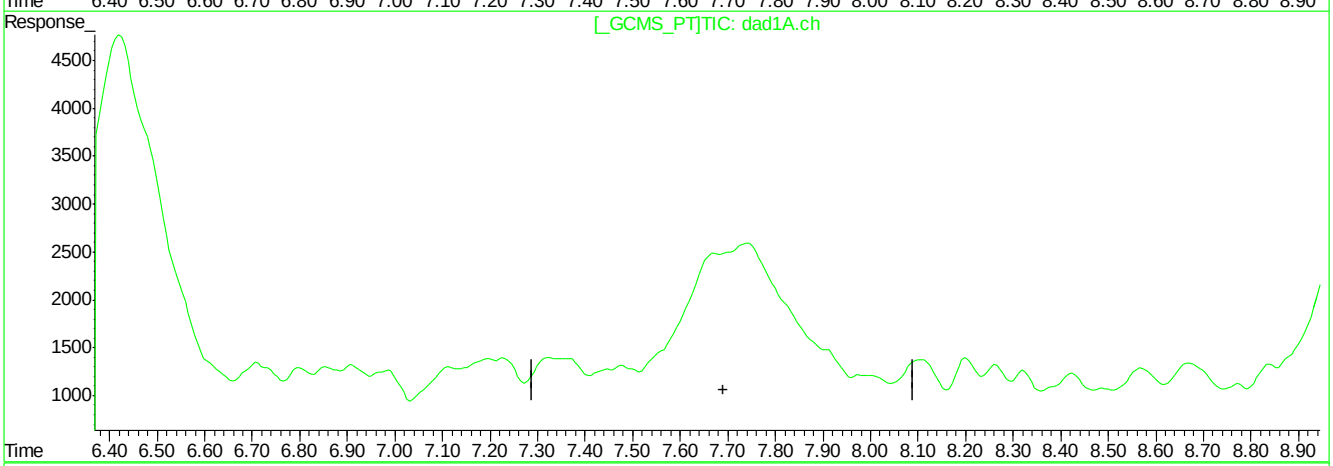
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:55 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.71min 52.232ppb m

response 195457

(9) Nitrobenzene #2

0.00min 0.000ppb

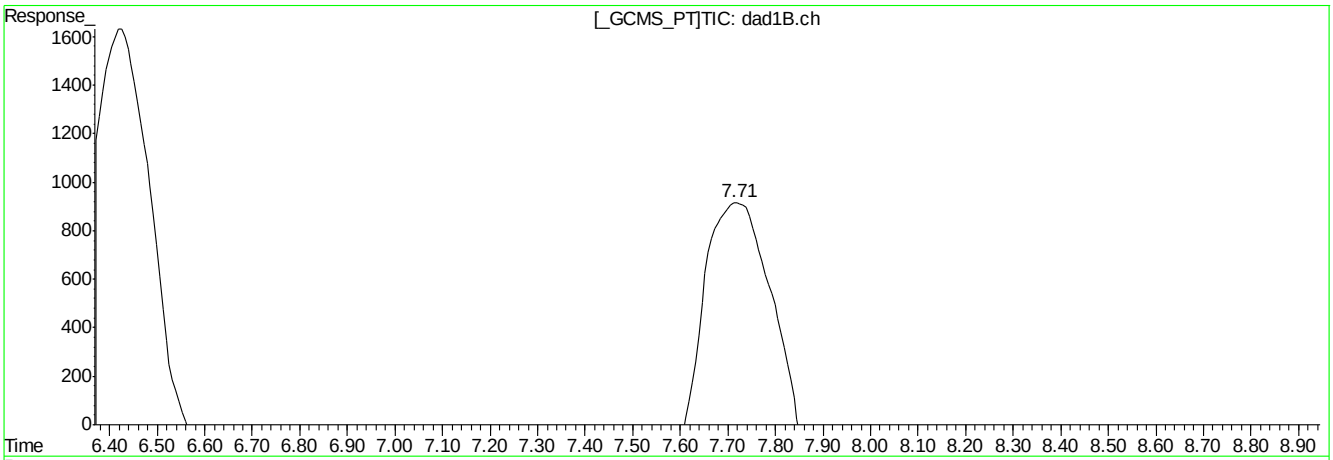
response 0

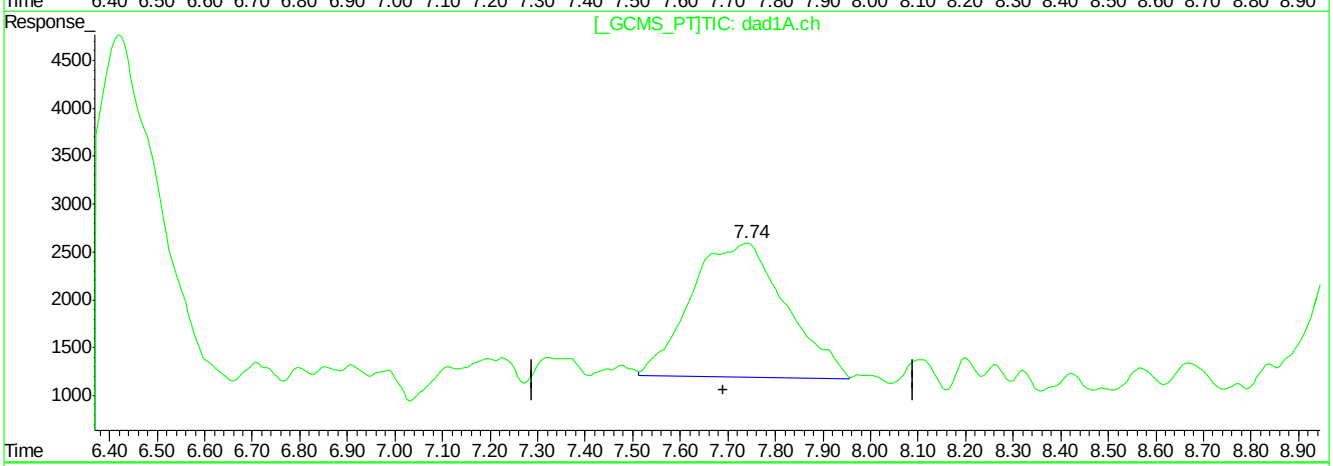
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:26:00 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.71min 52.232ppb m

response 195457

(9) Nitrobenzene #2

7.74min 61.874ppb m

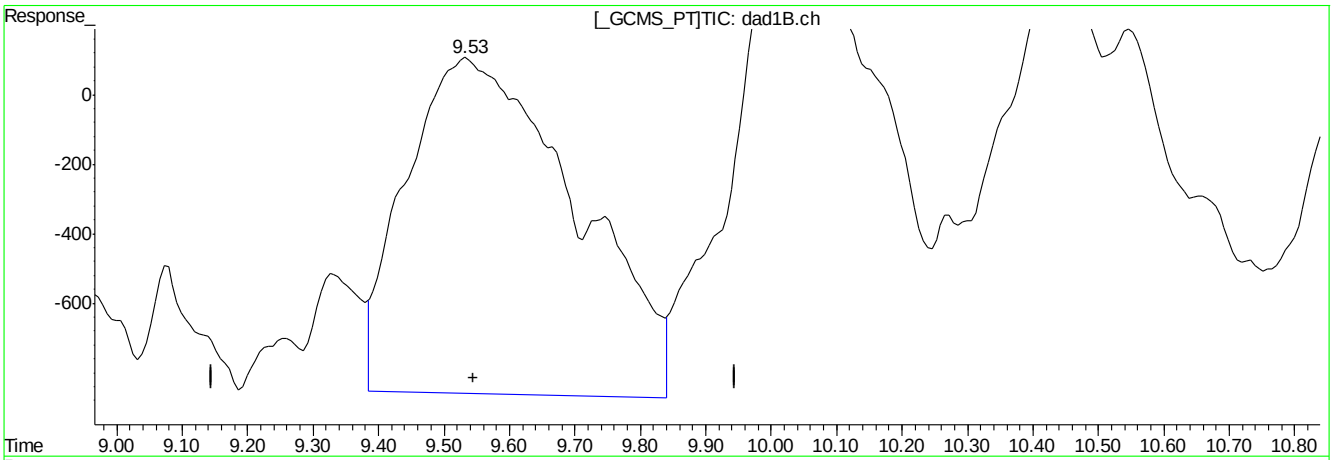
response 194582

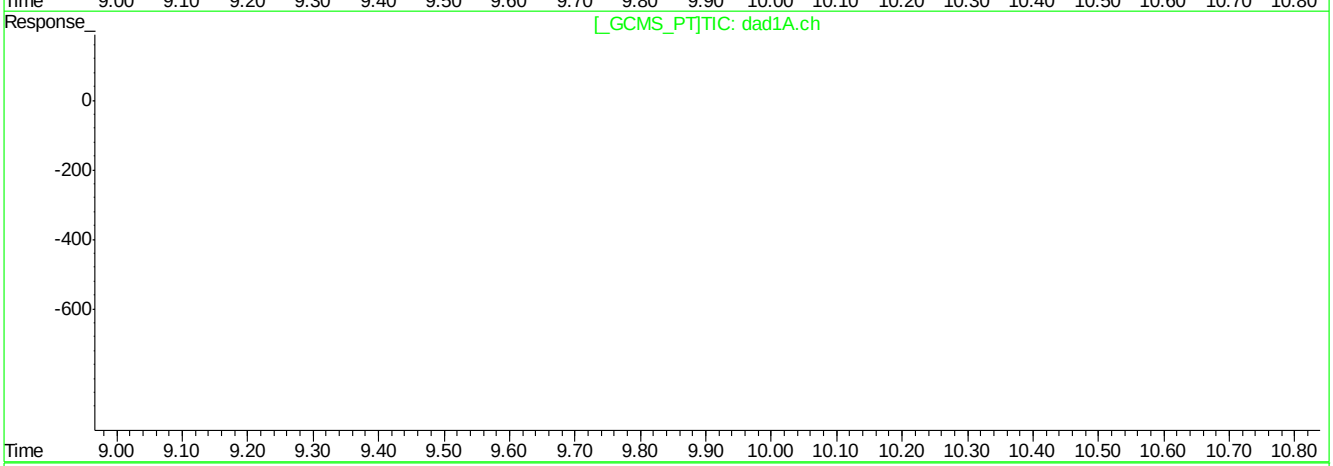
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:26:05 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.53min 58.985ppb

response 174562

(11) Tetryl #2

0.00min 0.000ppb

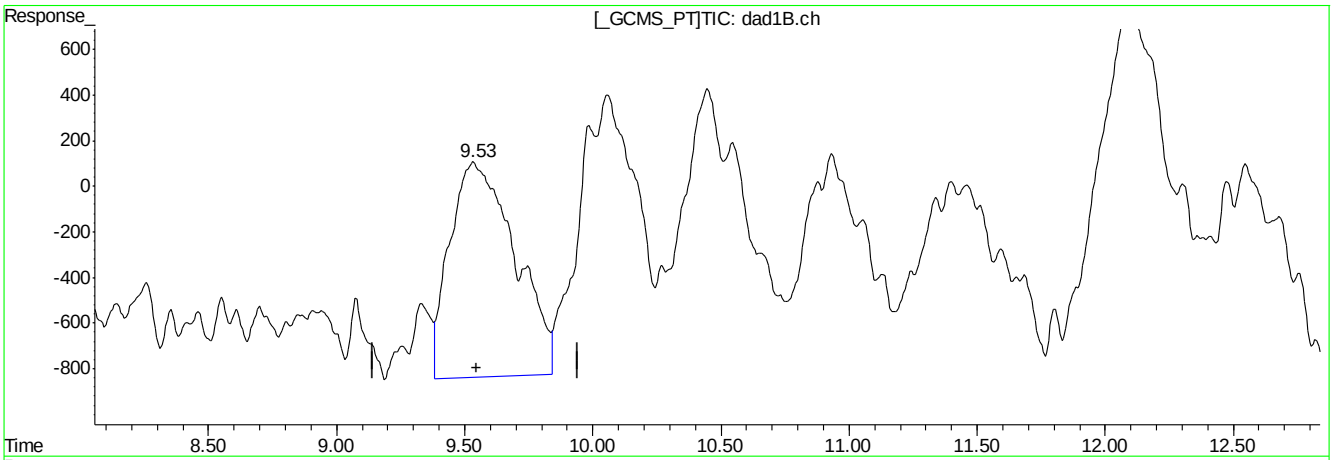
response 0

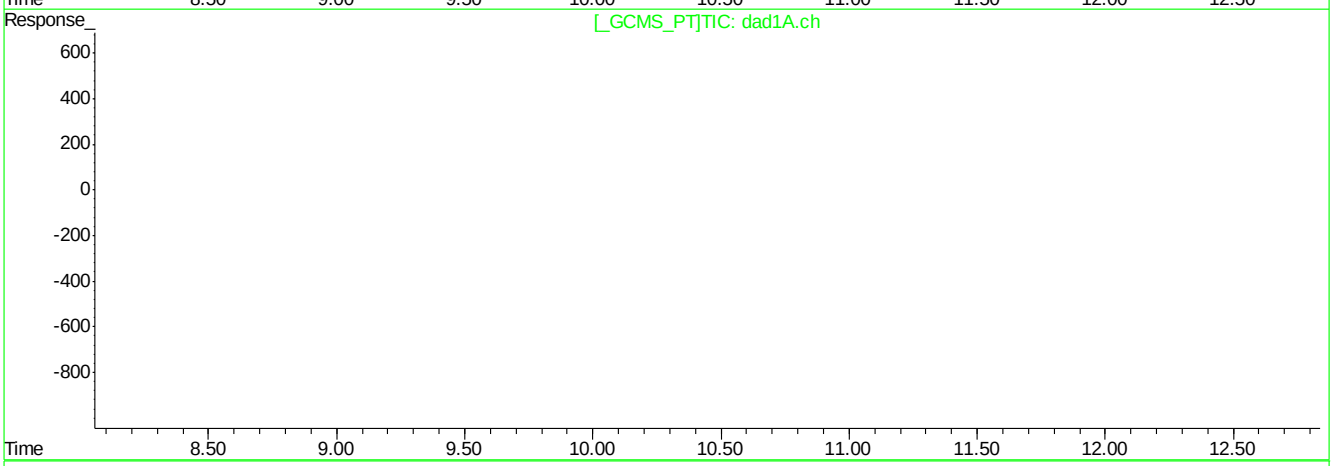
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:26:21 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.53min 56.468ppb m

response 167113

(11) Tetryl #2

0.00min 0.000ppb

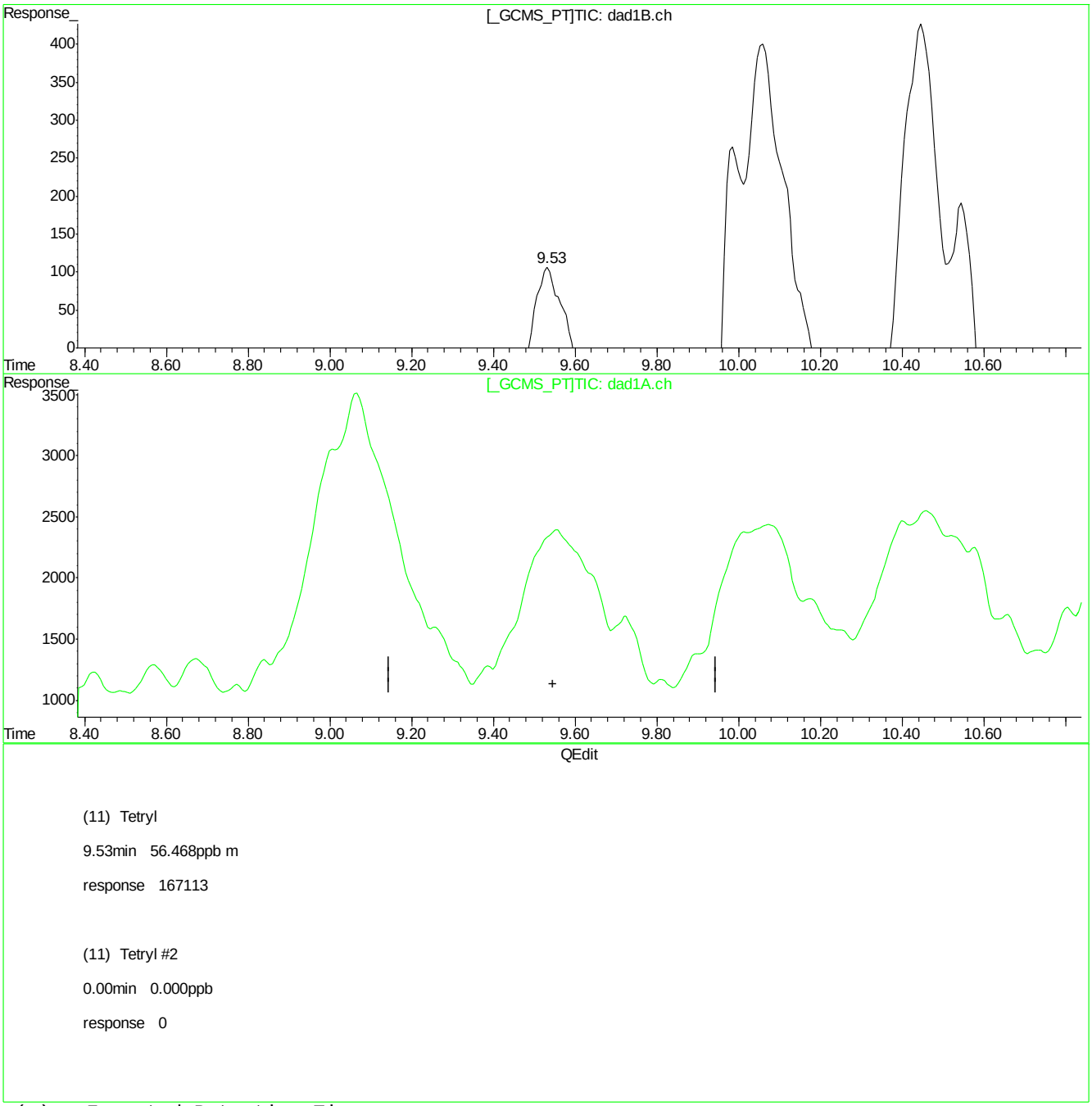
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:26:39 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(11) Tetryl

9.53min 56.468ppb m

response 167113

(11) Tetryl #2

0.00min 0.000ppb

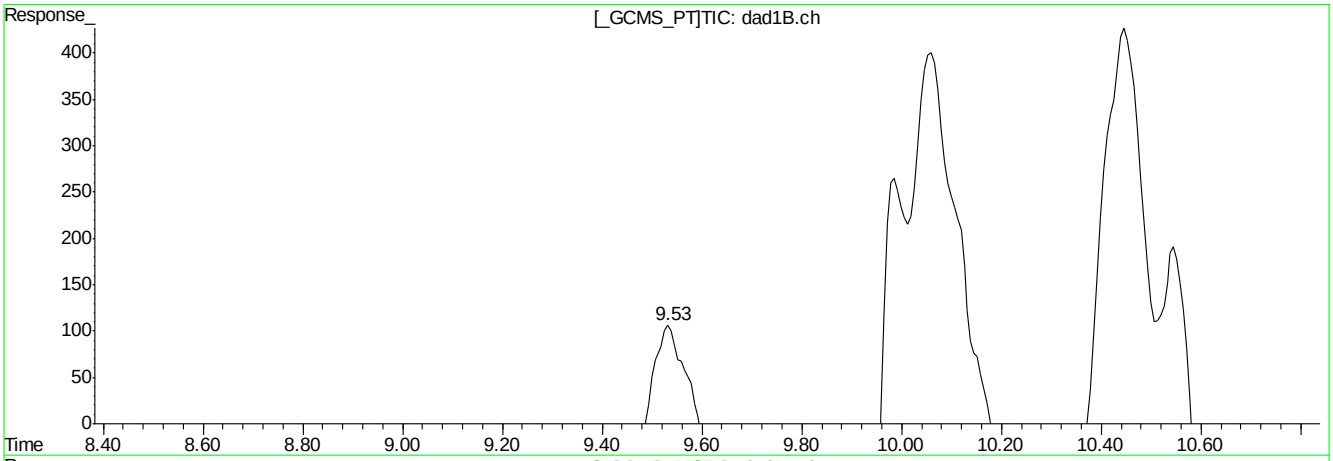
response 0

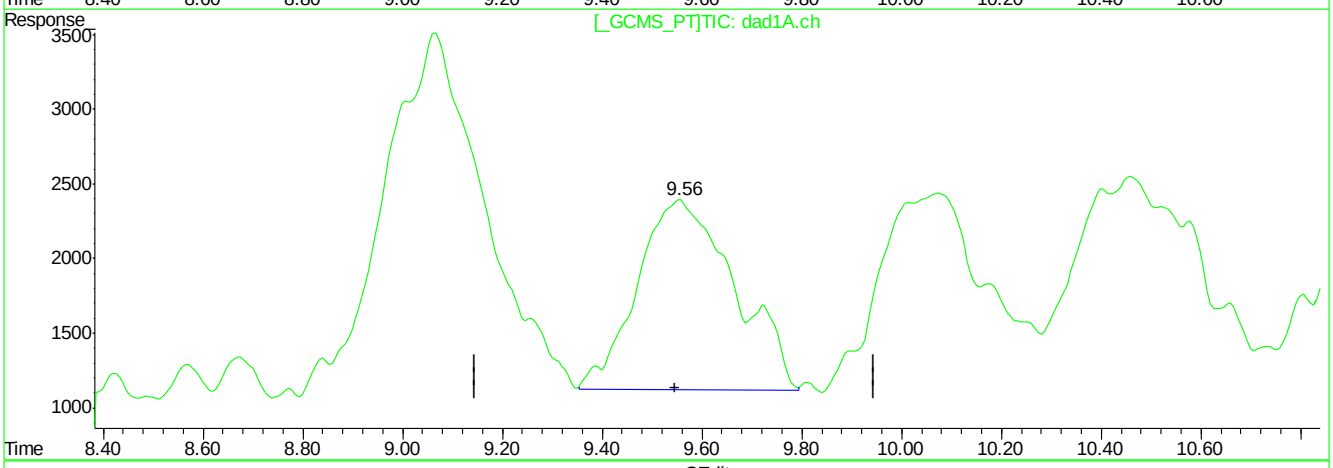
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:26:44 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.53min 56.468ppb m

response 167113

(11) Tetryl #2

9.56min 41.877ppb m

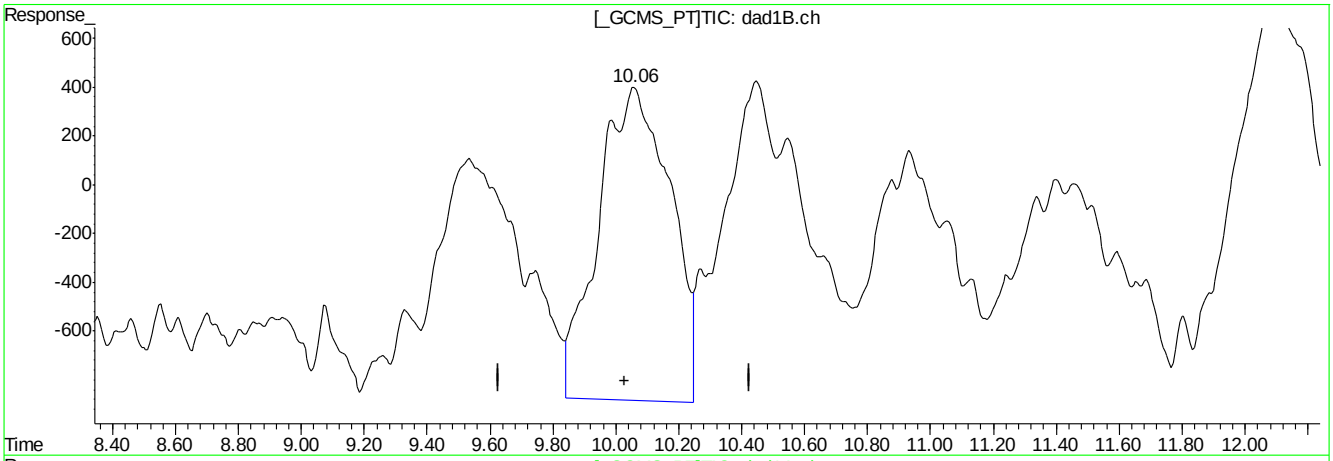
response 173340

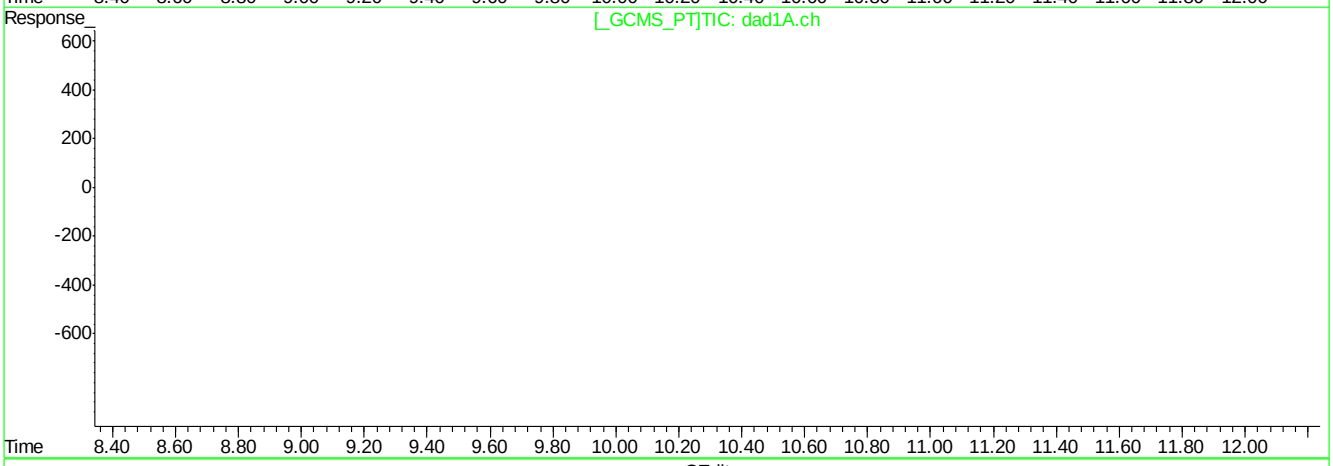
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:26:48 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.06min 51.873ppb

response 203183

(12) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb

response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:27:04 2018

9.5.2.18

9

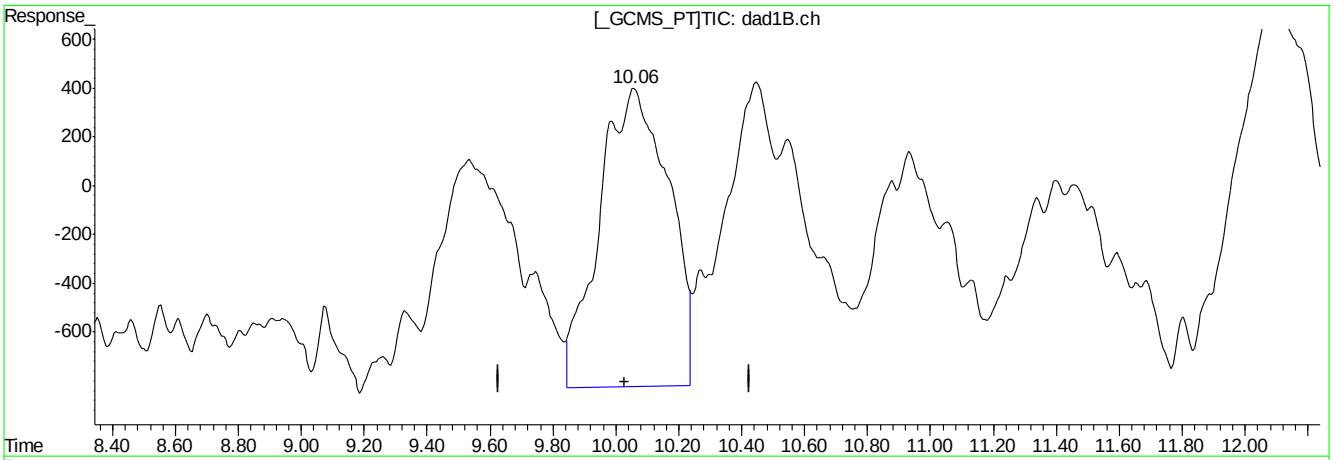
FA55941

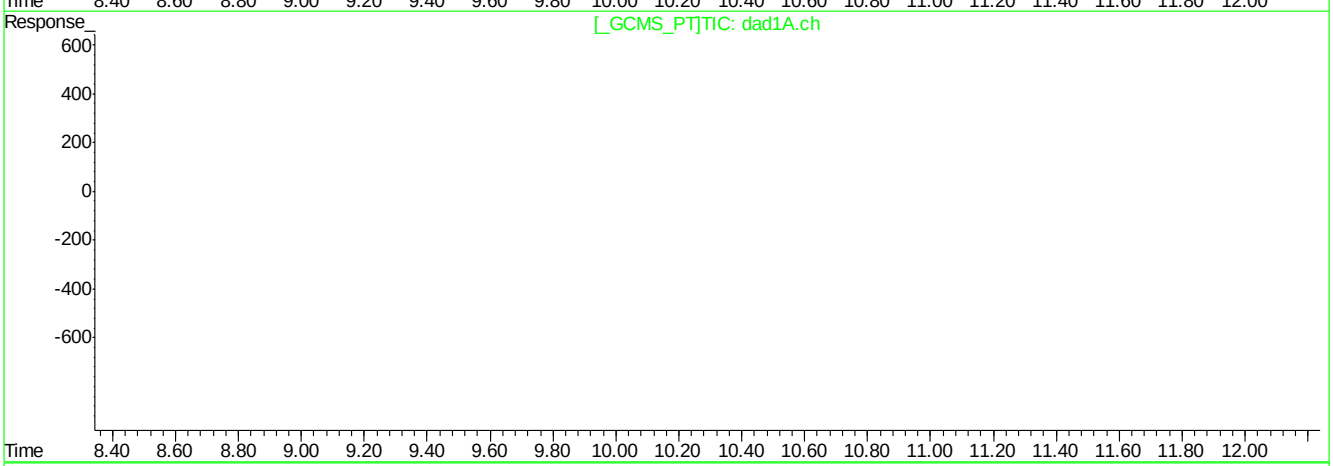
BB060201.D edits: 2,4,6-Trinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.06min 47.790ppb m

response 187189

(12) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb

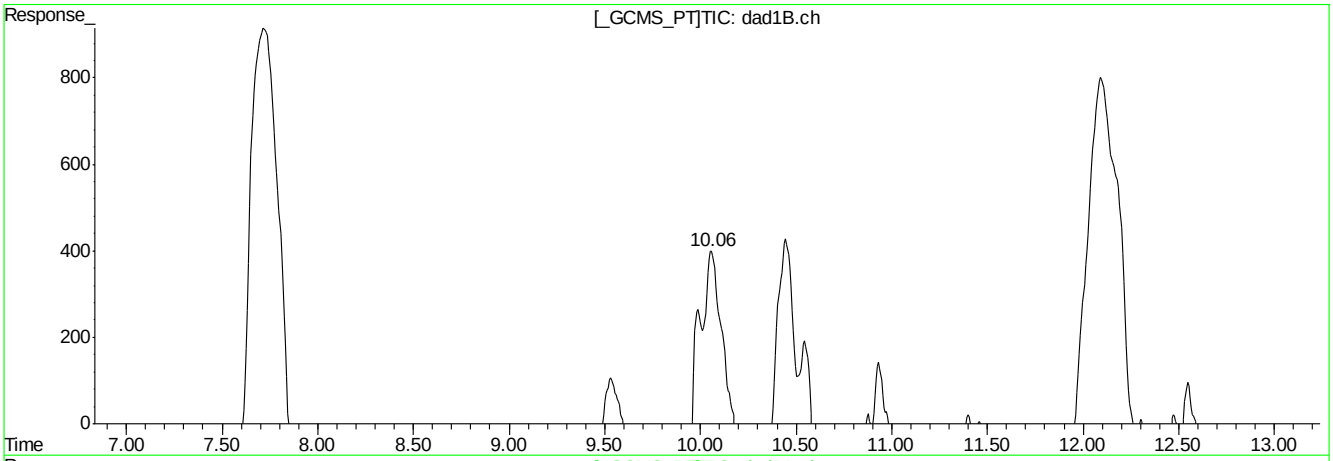
response 0

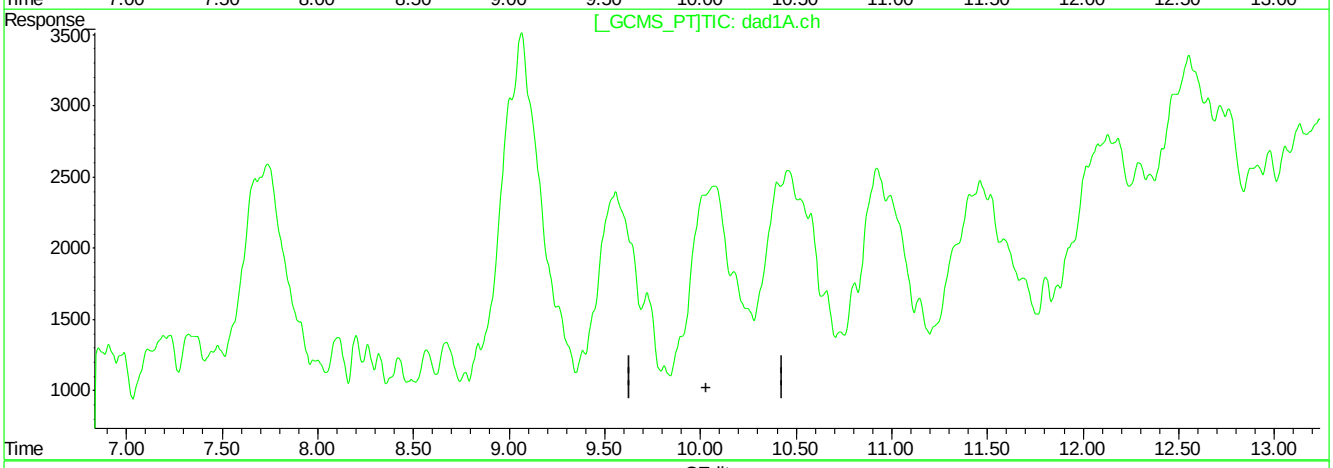
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:27:12 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.06min 48.523ppb m

response 190062

(12) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb

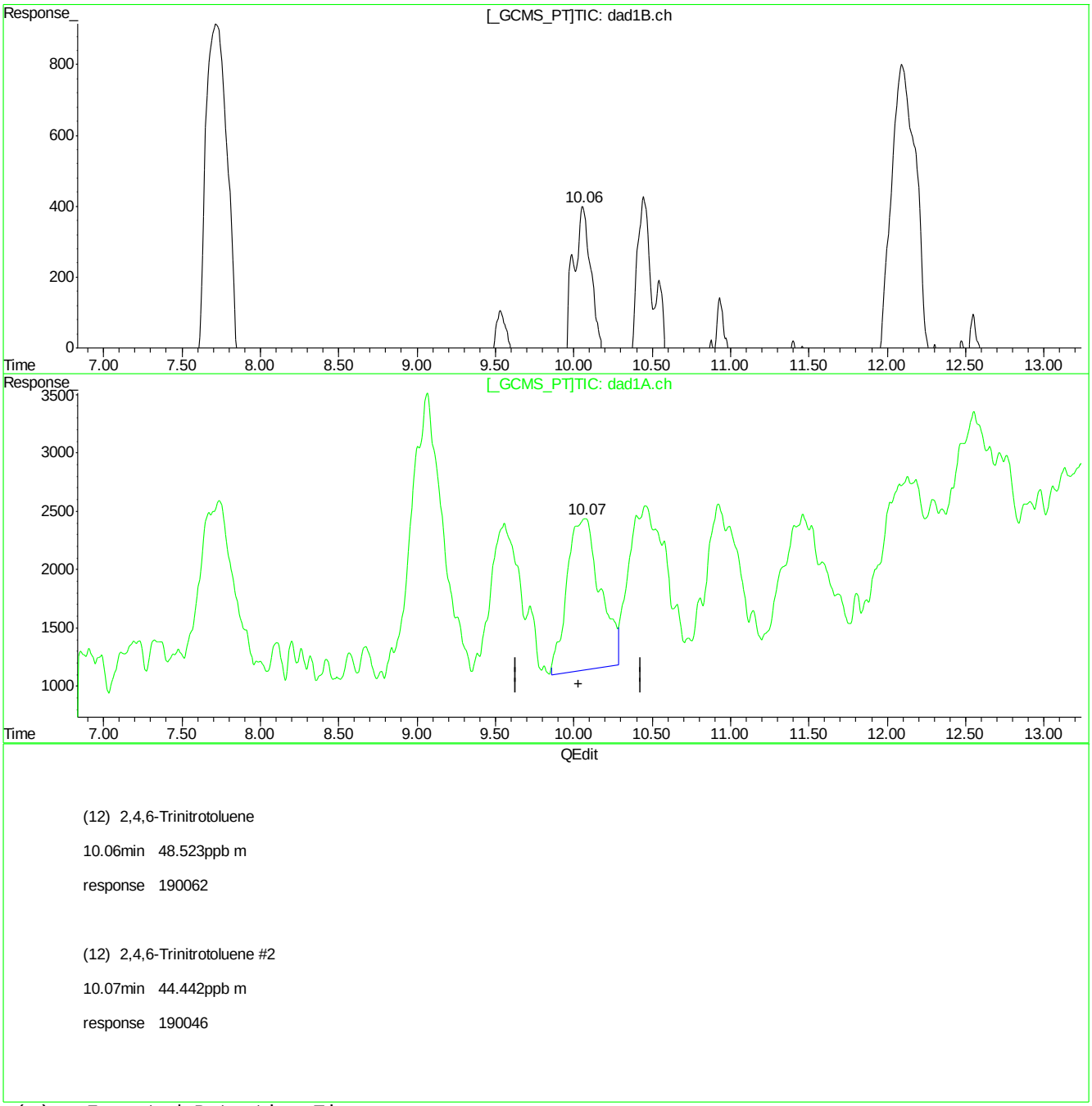
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:27:57 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

10.06min 48.523ppb m

response 190062

(12) 2,4,6-Trinitrotoluene #2

10.07min 44.442ppb m

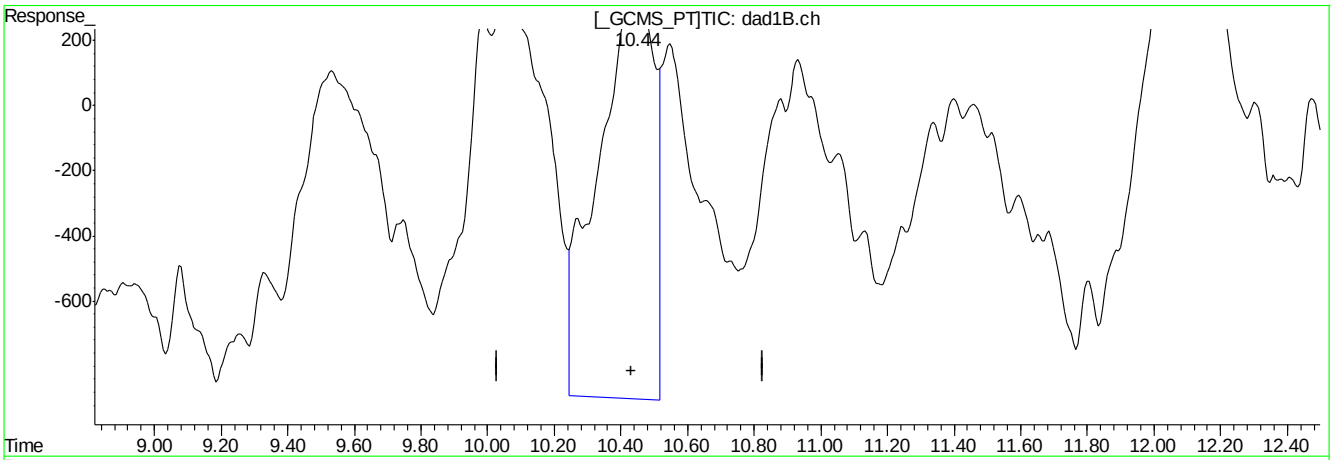
response 190046

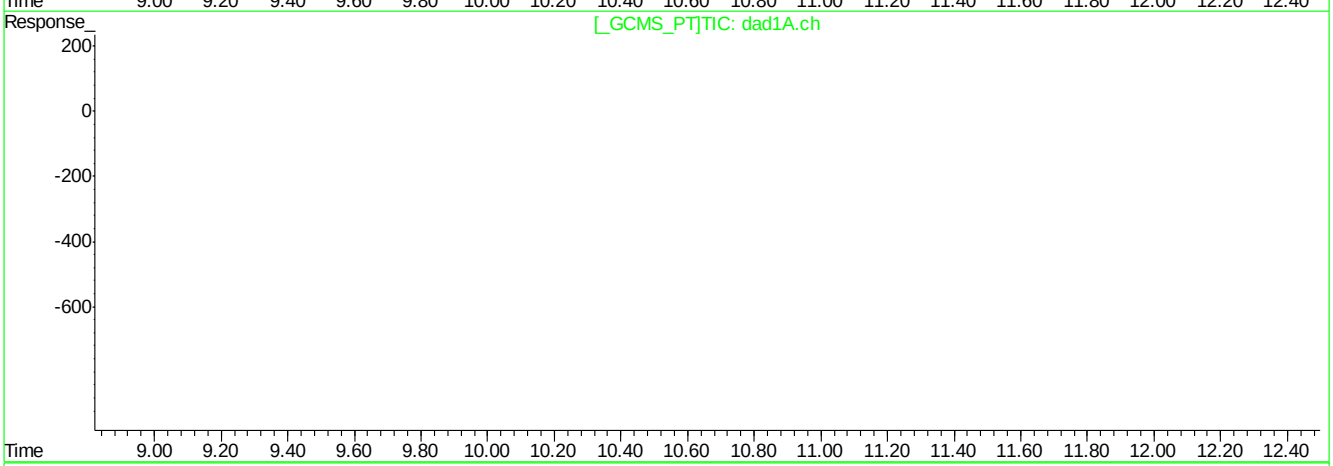
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:28:05 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.45min 39.501ppb

response 147508

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:28:14 2018

9.5.2.22

9

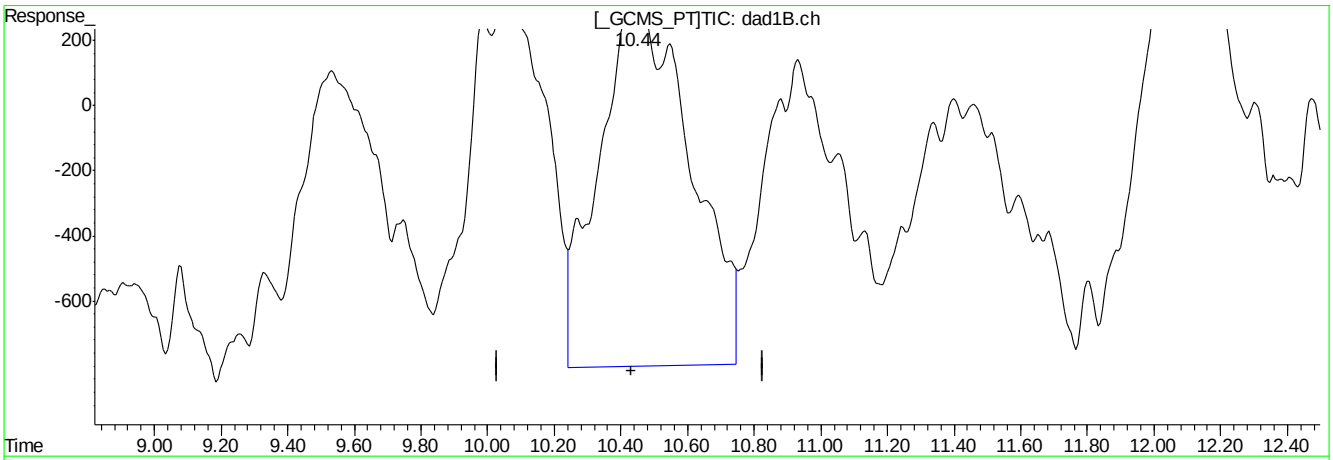
FA55941

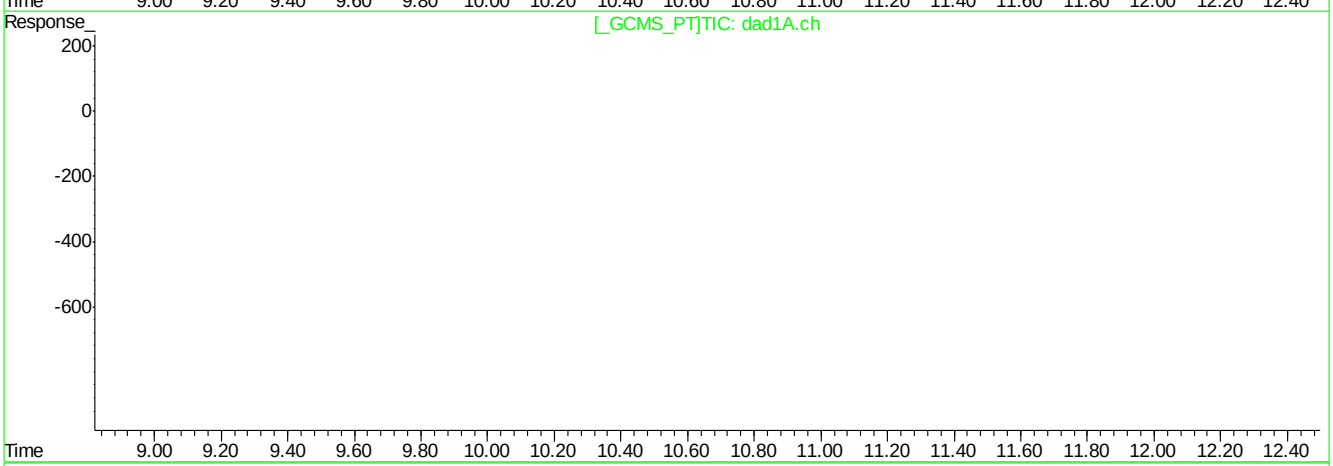
BB060201.D edits: 2-Amino-4,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.44min 58.208ppb m

response 217365

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

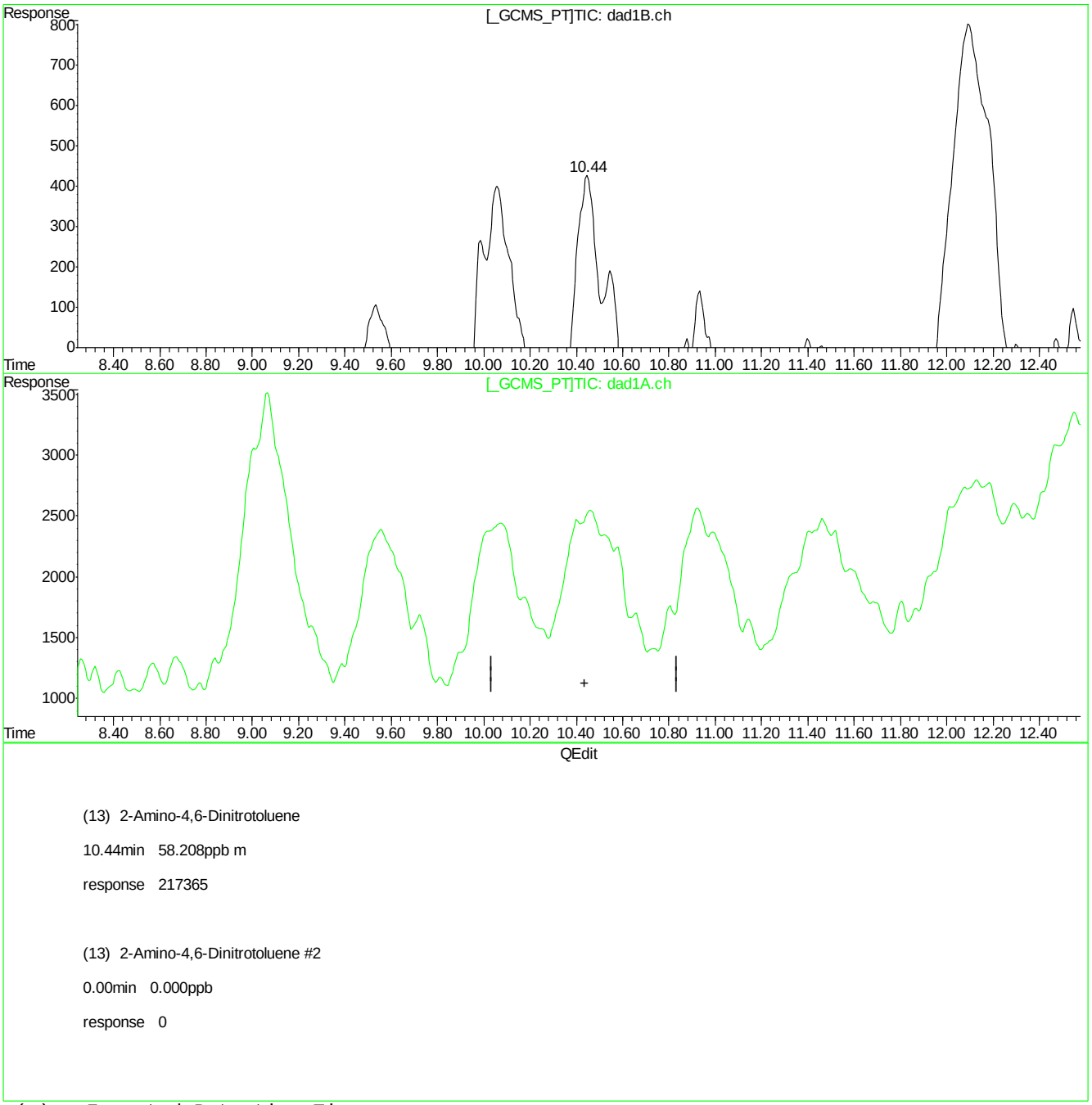
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:28:22 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.44min 58.208ppb m

response 217365

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

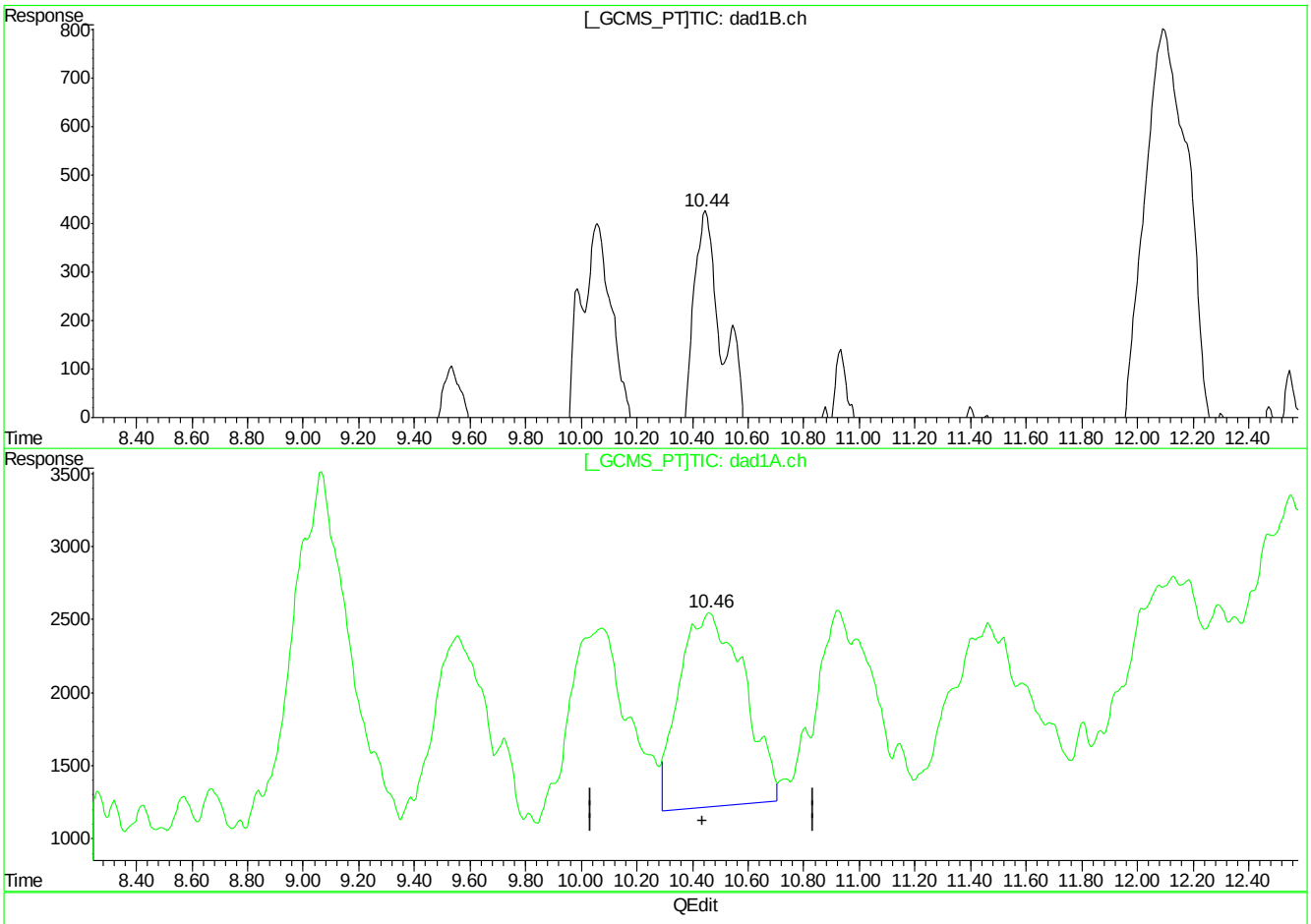
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:28:25 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.44min 58.208ppb m

response 217365

(13) 2-Amino-4,6-Dinitrotoluene #2

10.46min 38.227ppb m

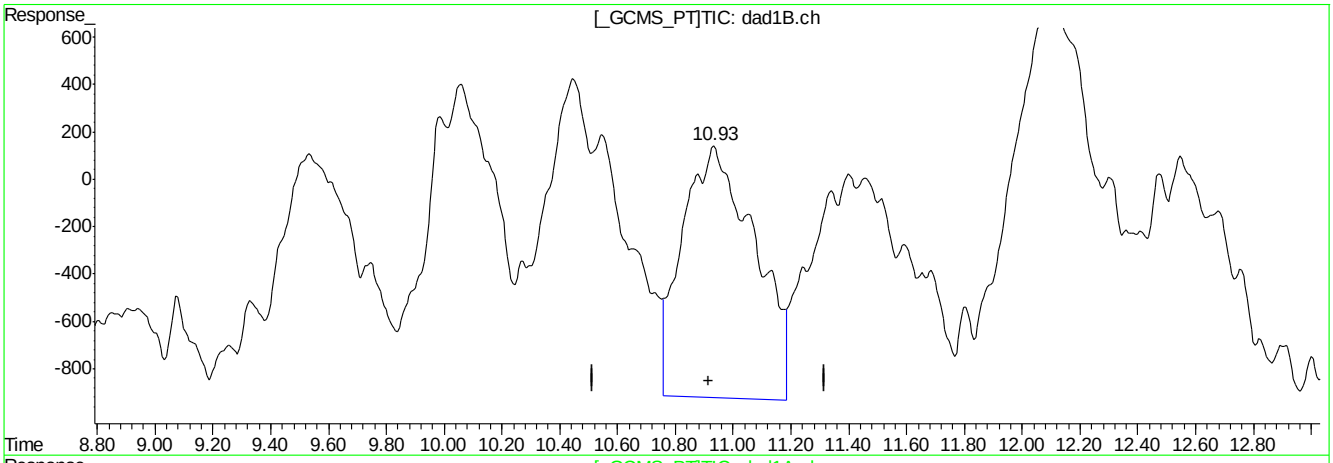
response 214056

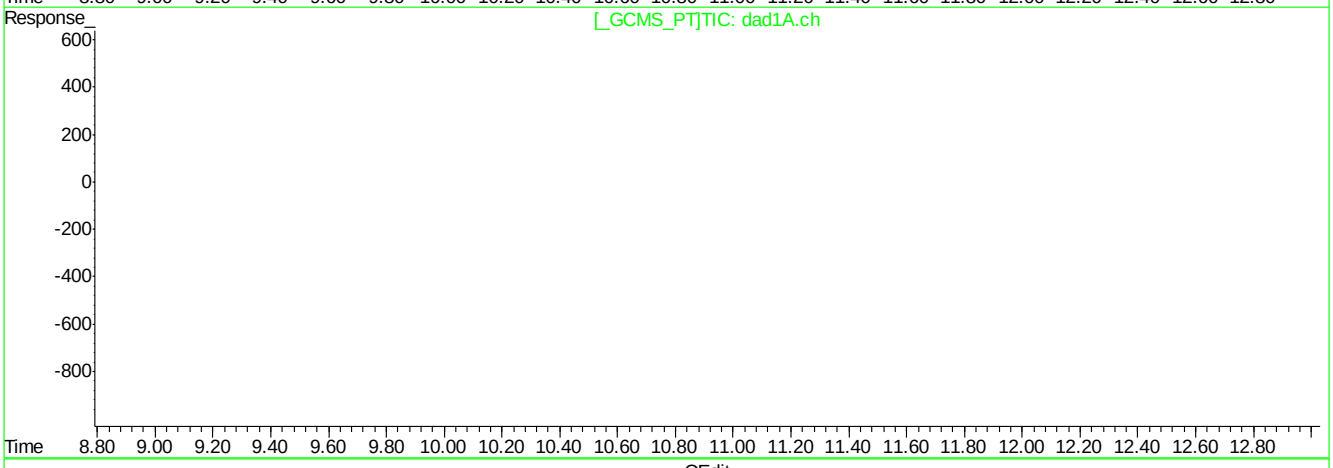
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:28:37 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.93min 70.216ppb

response 185286

(14) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb

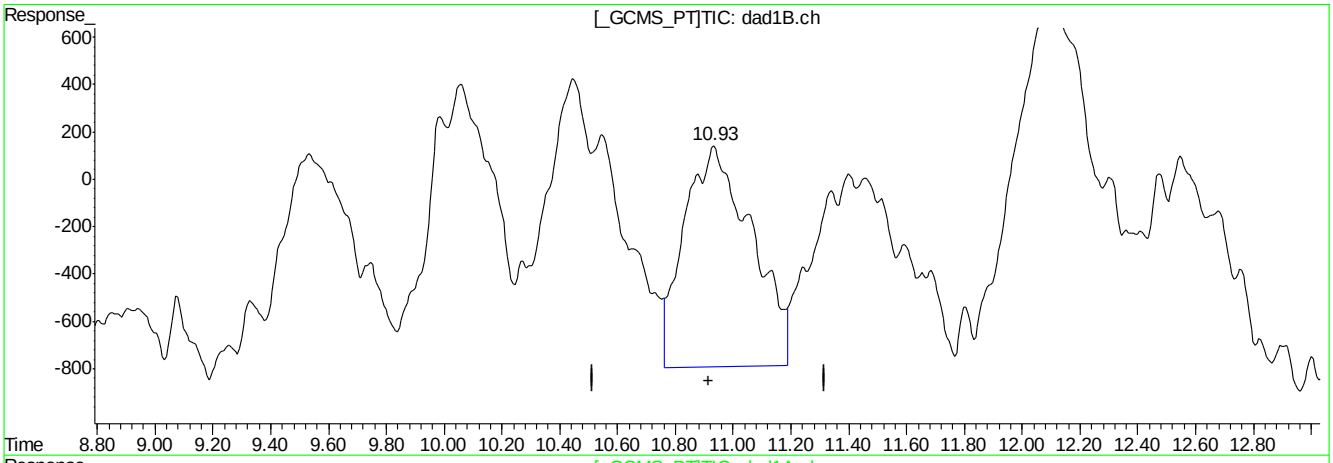
response 0

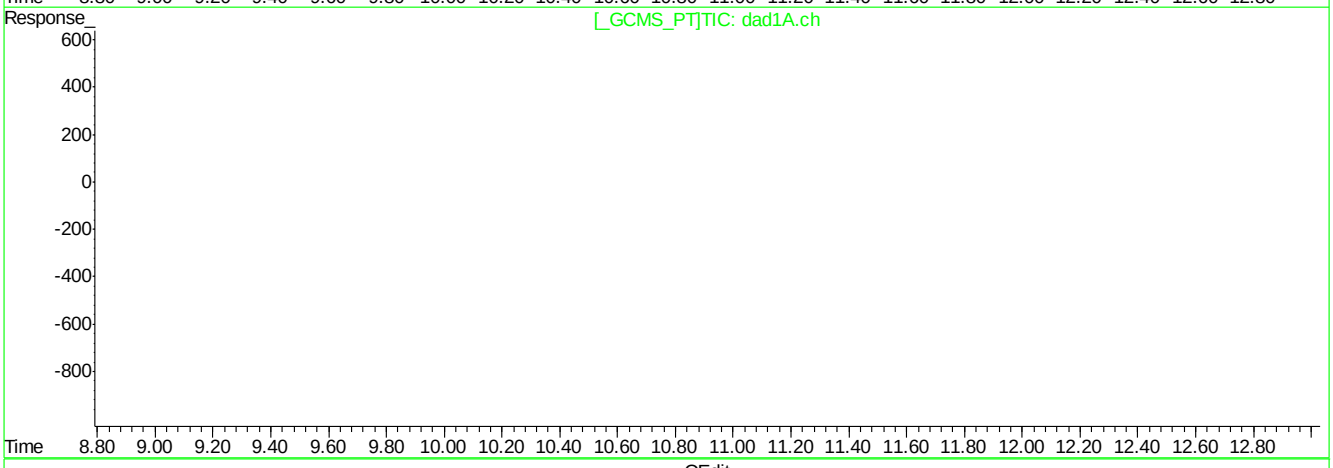
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:29:26 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.93min 57.302ppb m

response 151170

(14) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb

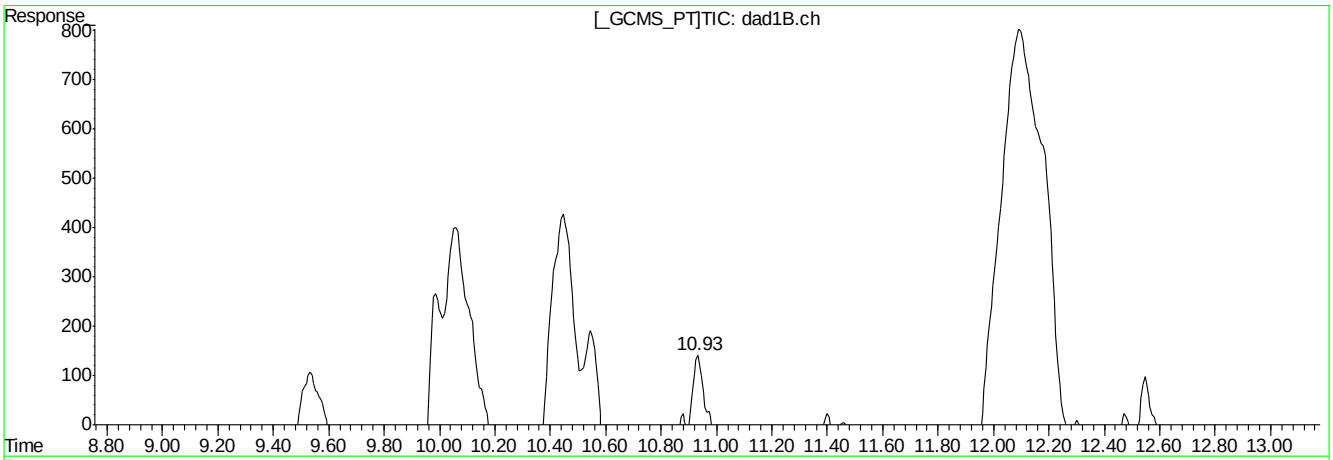
response 0

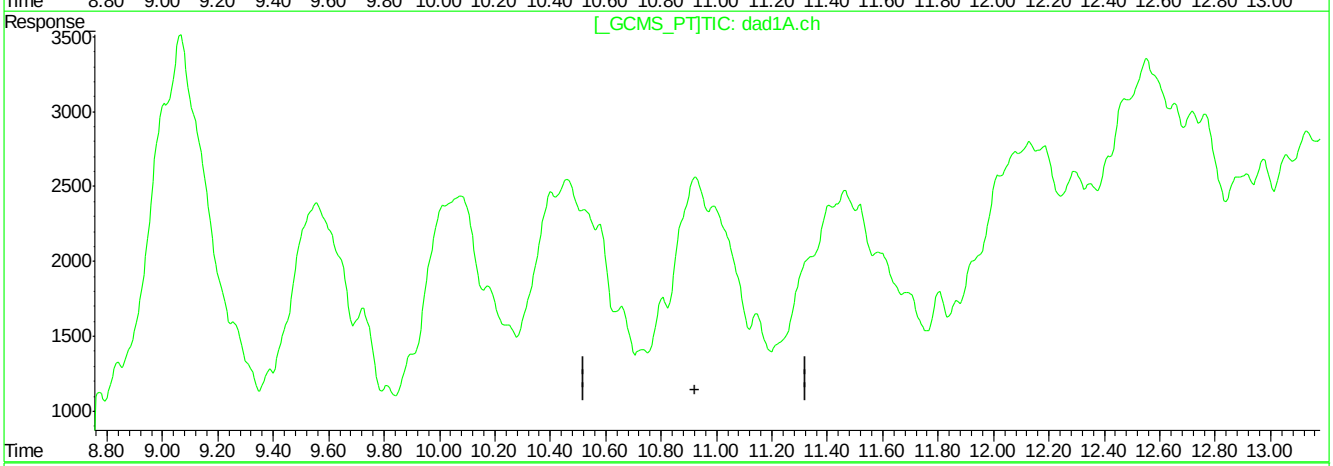
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:29:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.93min 57.302ppb m

response 151170

(14) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb

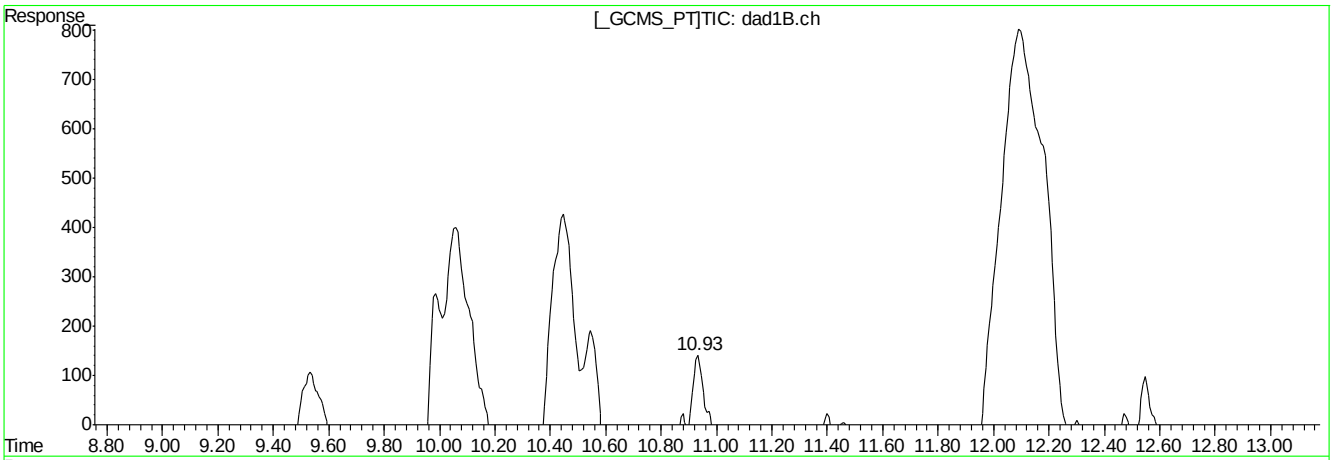
response 0

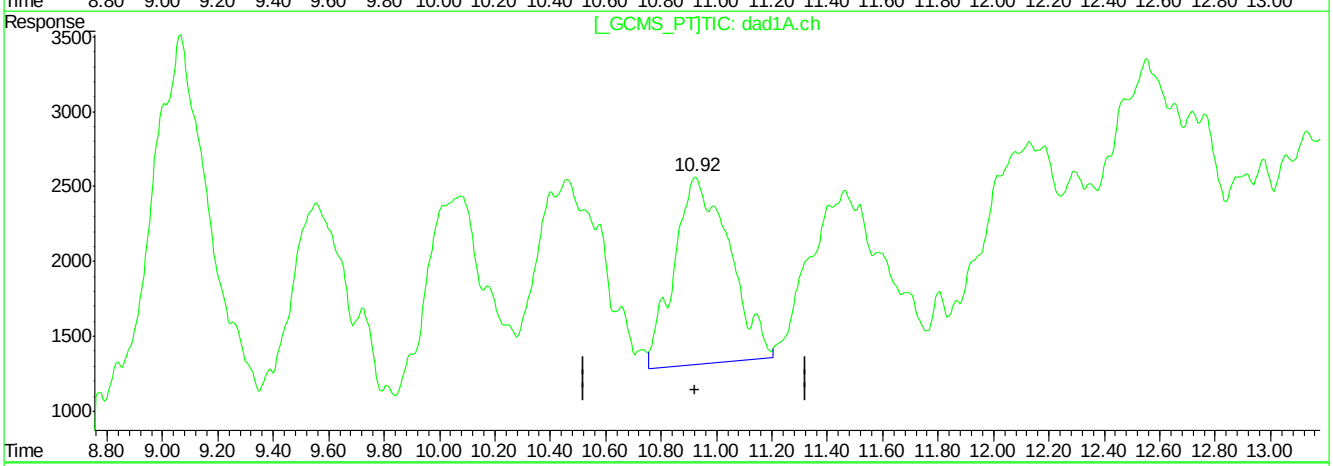
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:29:41 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.93min 57.302ppb m

response 151170

(14) 4-Amino-2,6-Dinitrotoluene #2

10.92min 32.370ppb m

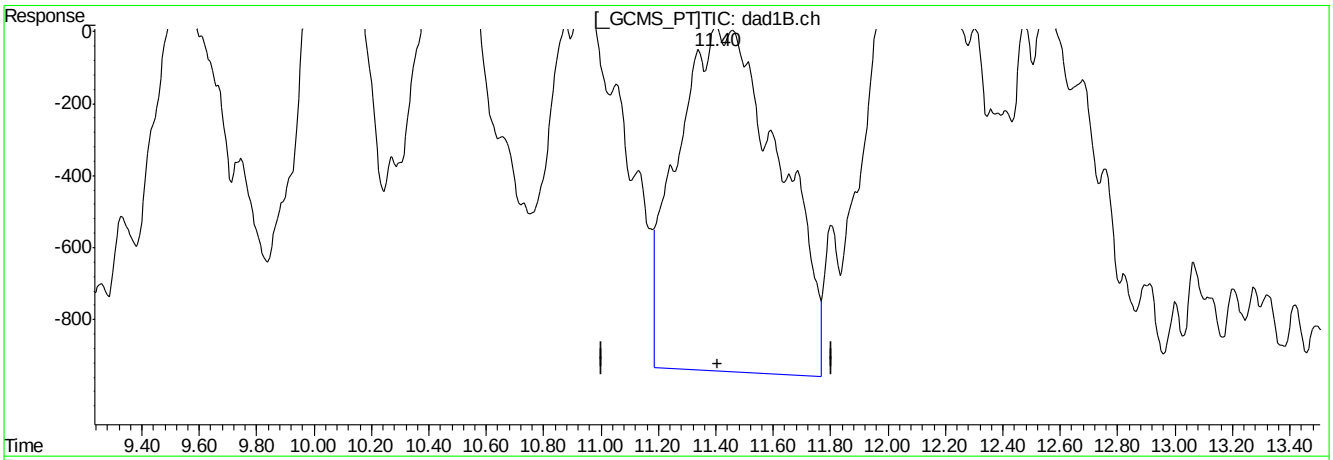
response 172539

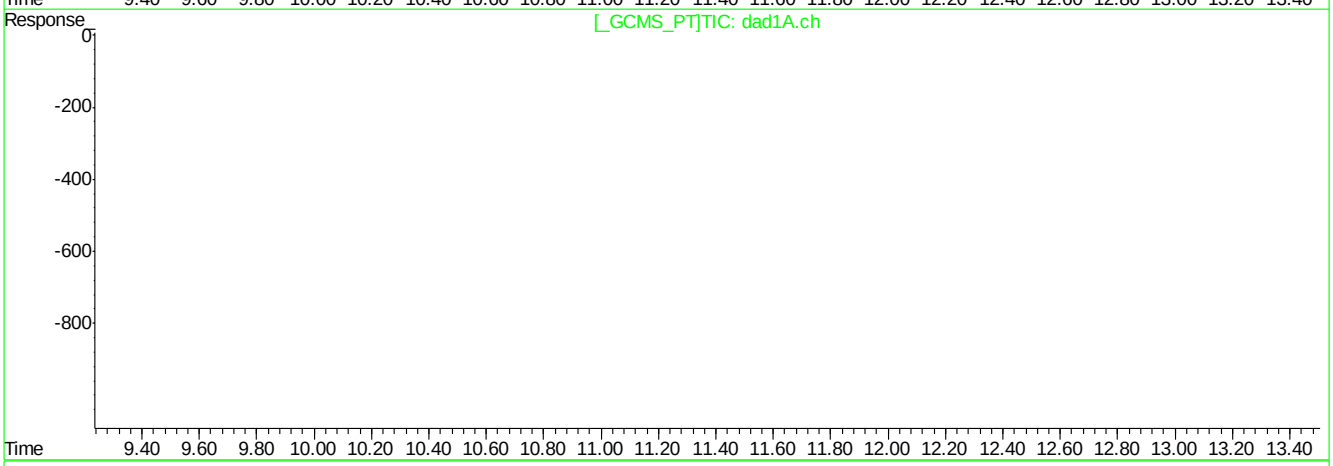
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:29:50 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.40min 94.542ppb

response 235270

(15) 3,4-Dinitrotoluene #2 (S)

0.00min 0.000ppb

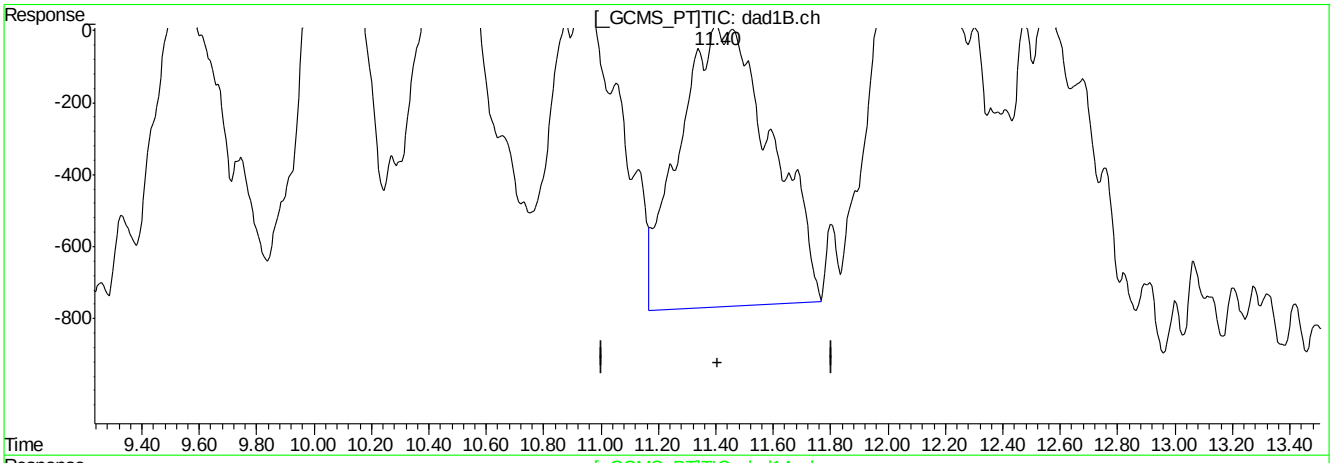
response 0

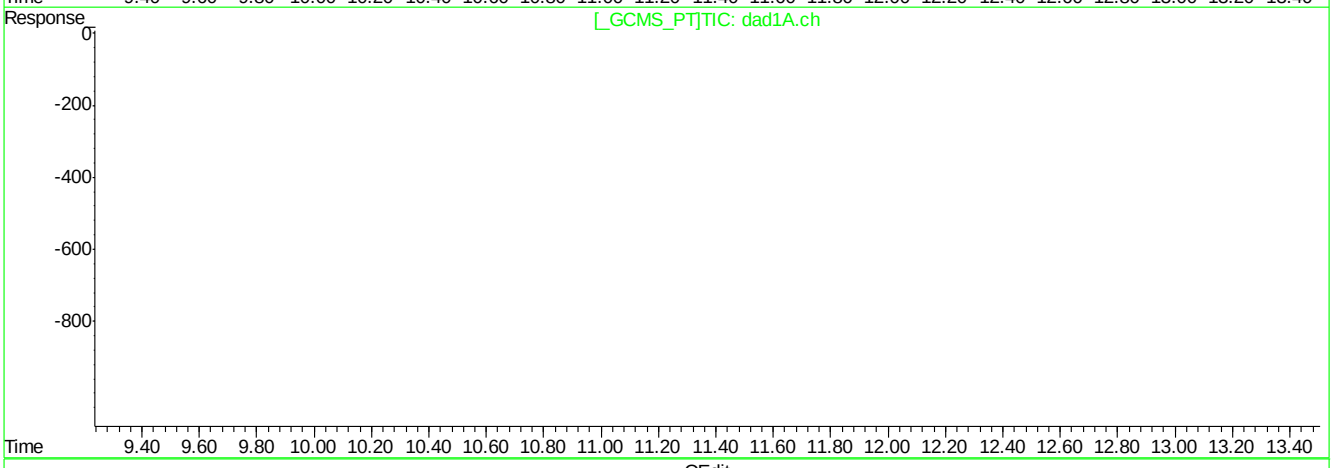
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:30:25 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.40min 70.107ppb m

response 174462

(15) 3,4-Dinitrotoluene #2 (S)

0.00min 0.000ppb

response 0

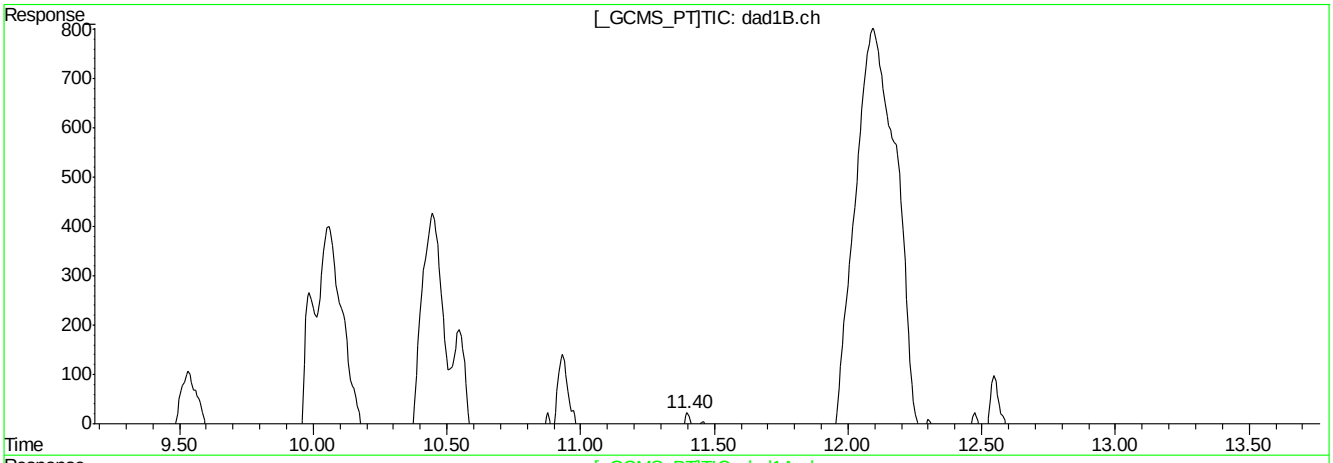
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:30:37 2018

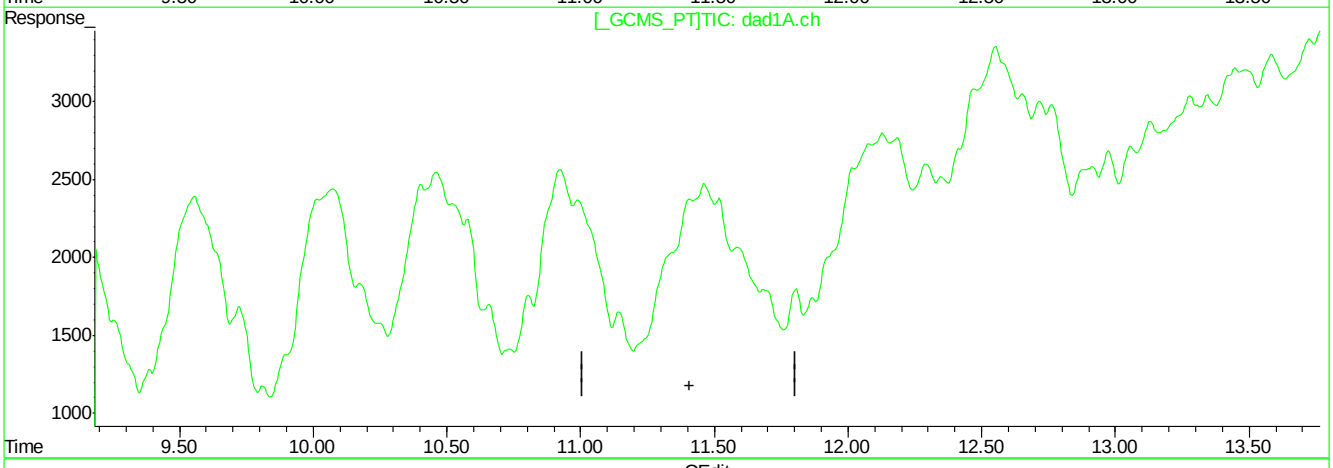
BB060201.D edits: 3,4-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.40min 70.107ppb m

response 174462

(15) 3,4-Dinitrotoluene #2 (S)

0.00min 0.000ppb

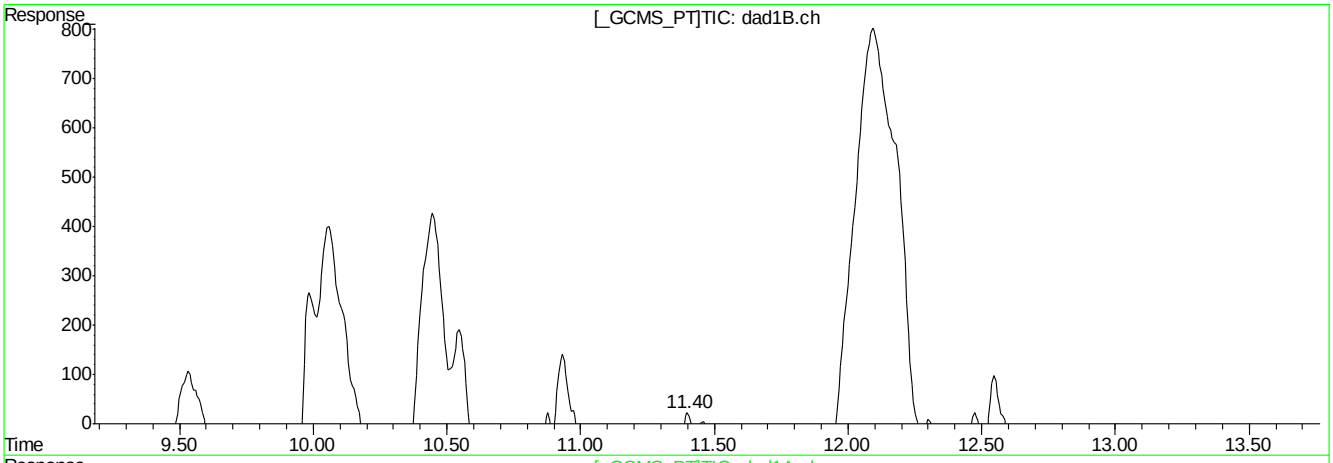
response 0

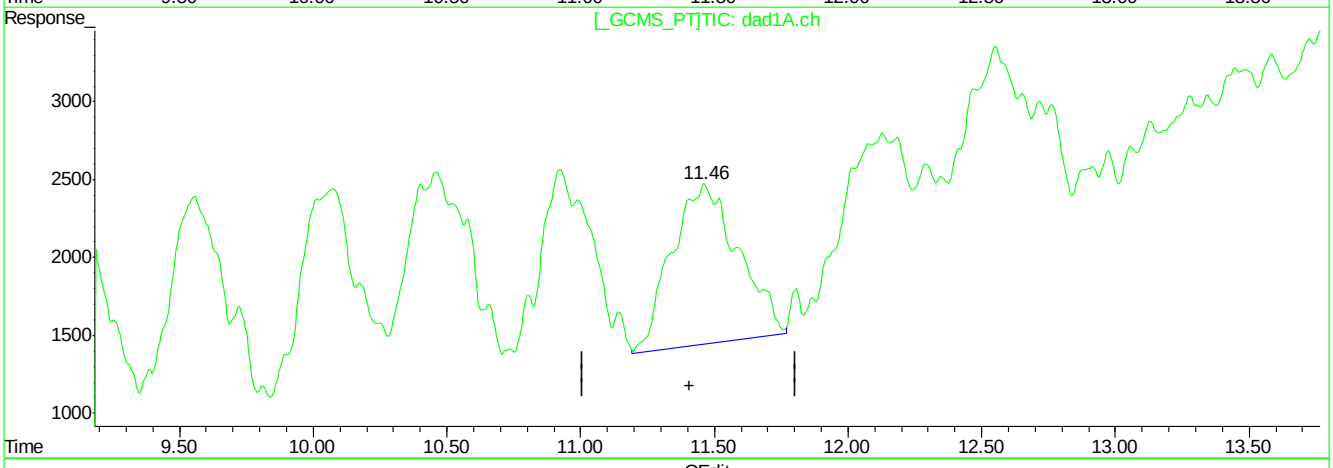
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:30:44 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.40min 70.107ppb m

response 174462

(15) 3,4-Dinitrotoluene #2 (S)

11.46min 42.241ppb m

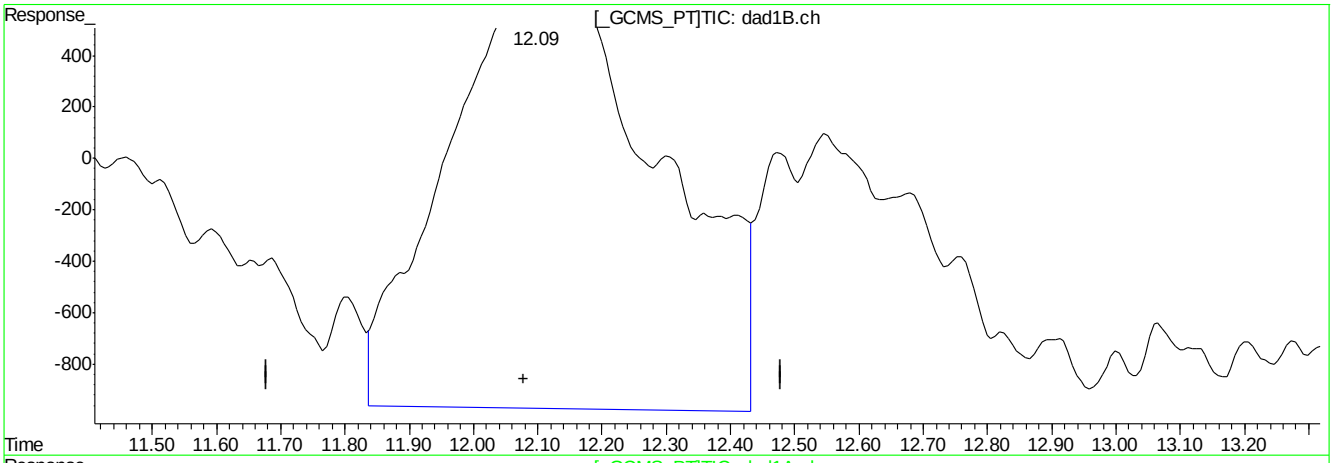
response 177673

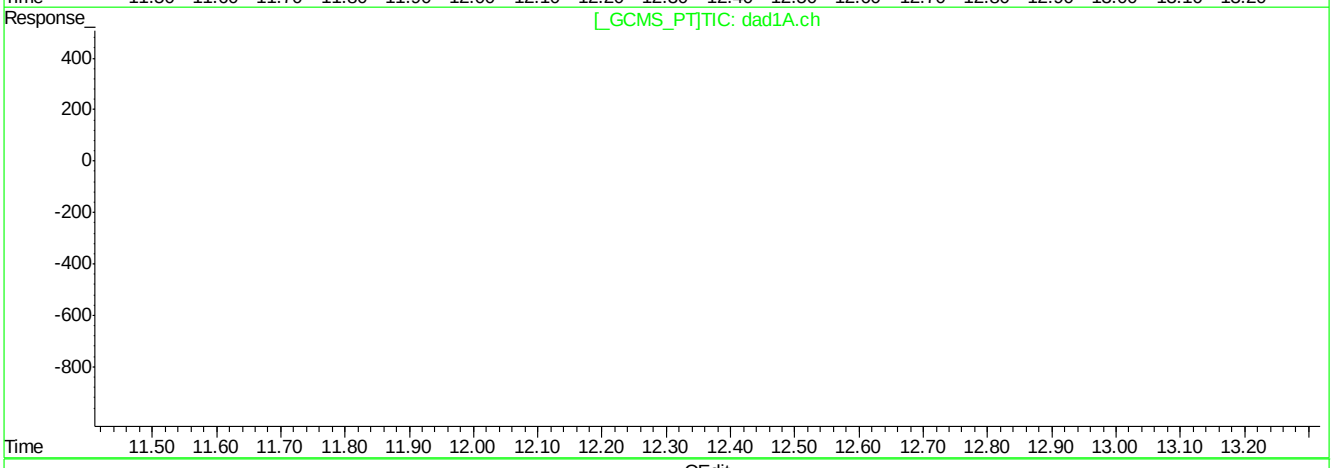
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:30:52 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.10min 74.949ppb

response 388847

(16) 2,4-Dinitrotoluene #2

0.00min 0.000ppb

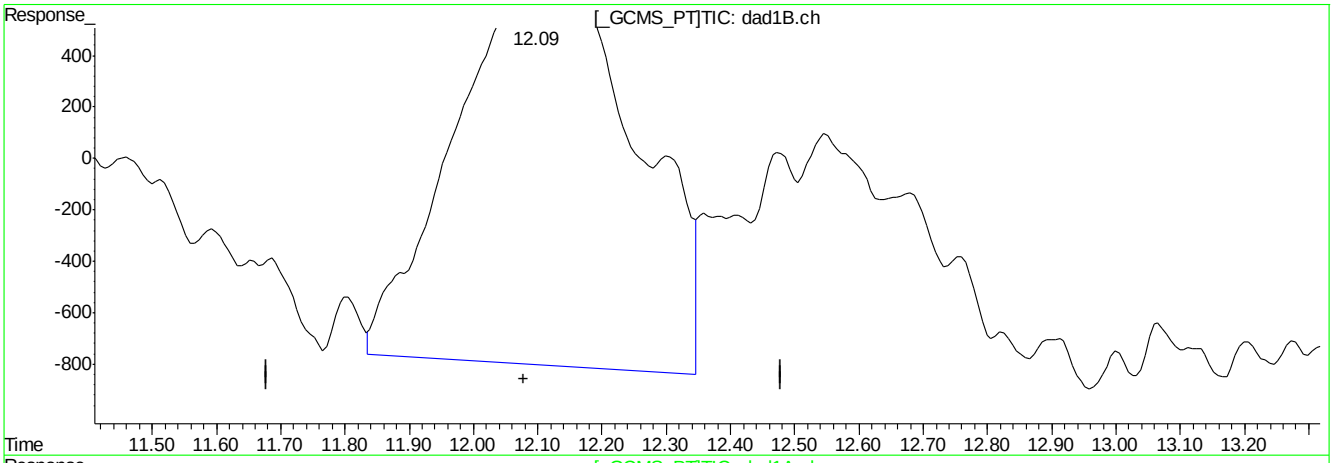
response 0

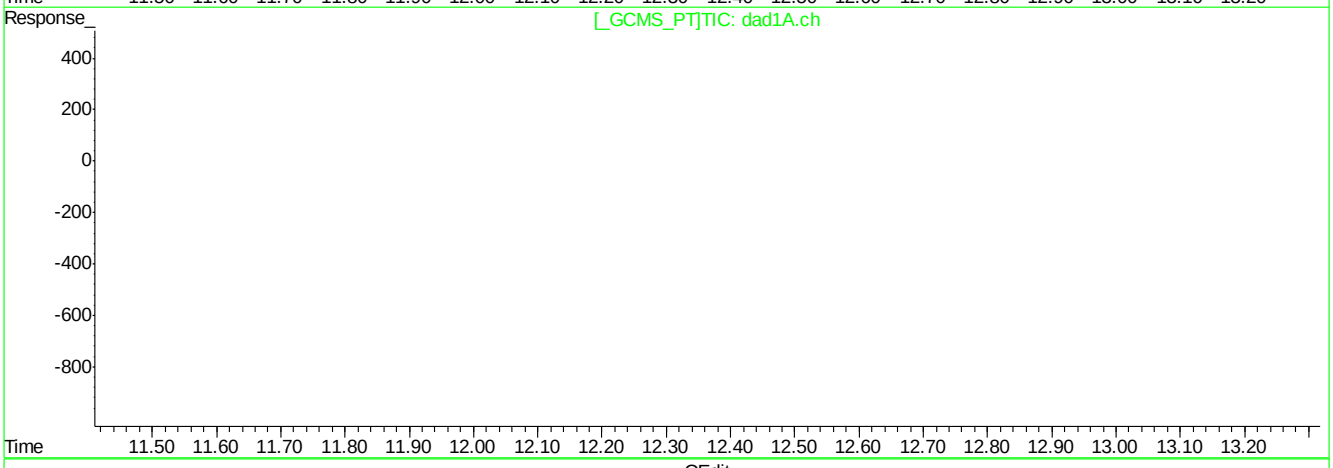
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:02 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.09min 57.126ppb m

response 296379

(16) 2,4-Dinitrotoluene #2

0.00min 0.000ppb

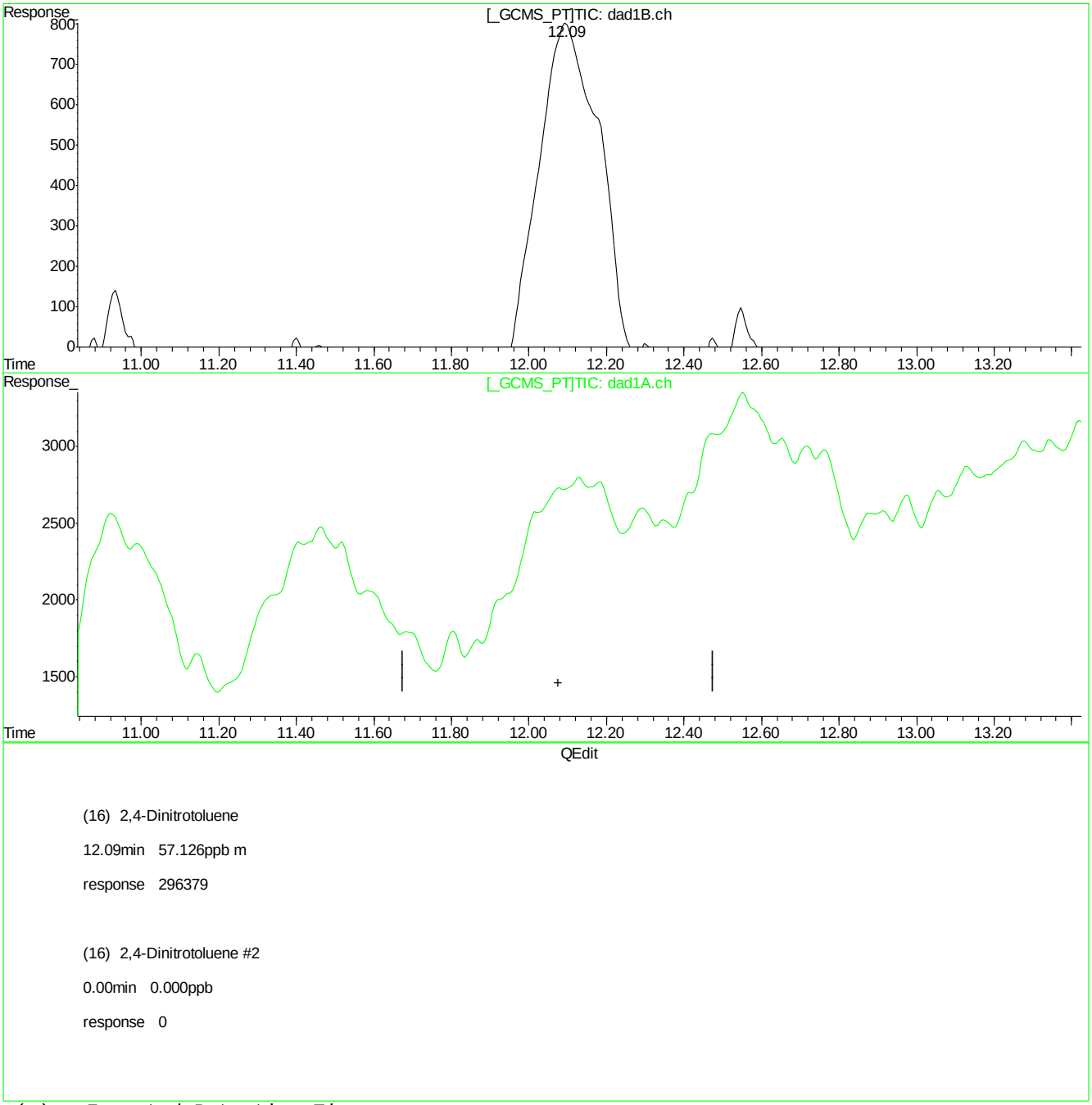
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:11 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration

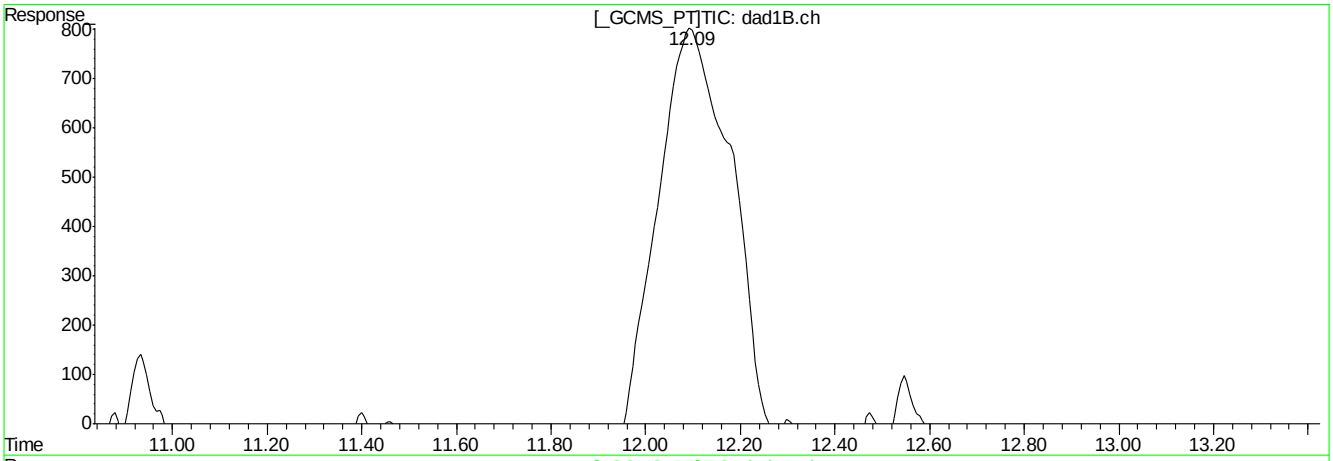


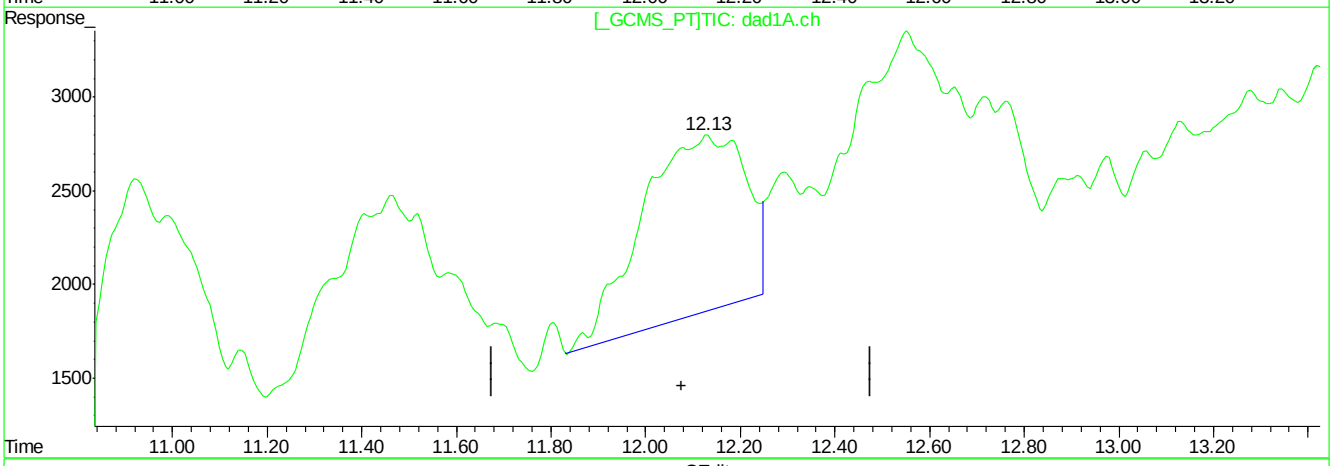
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:15 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.09min 57.126ppb m

response 296379

(16) 2,4-Dinitrotoluene #2

12.13min 46.262ppb m

response 145969

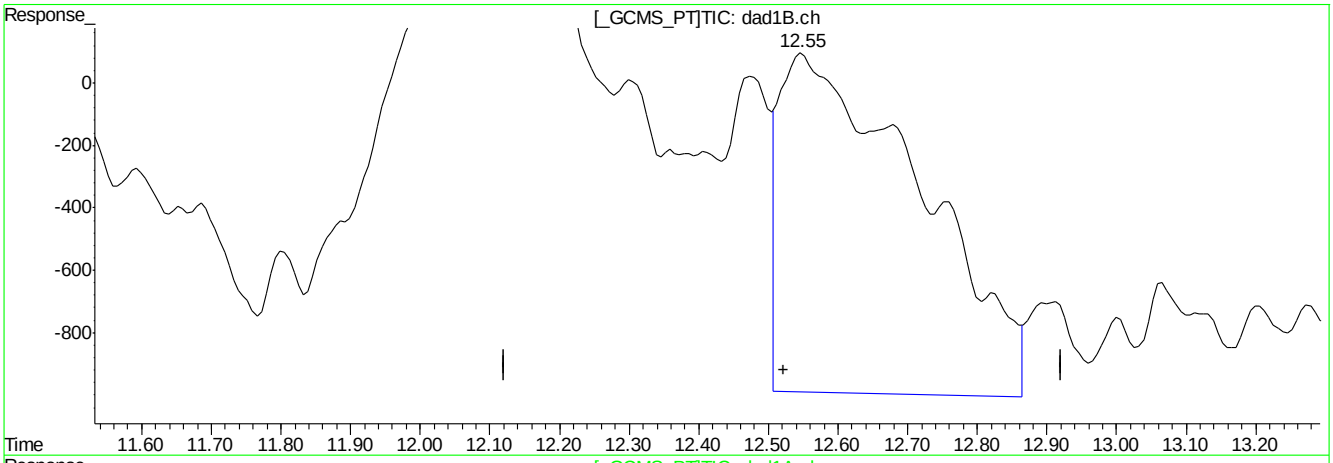
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:26 2018

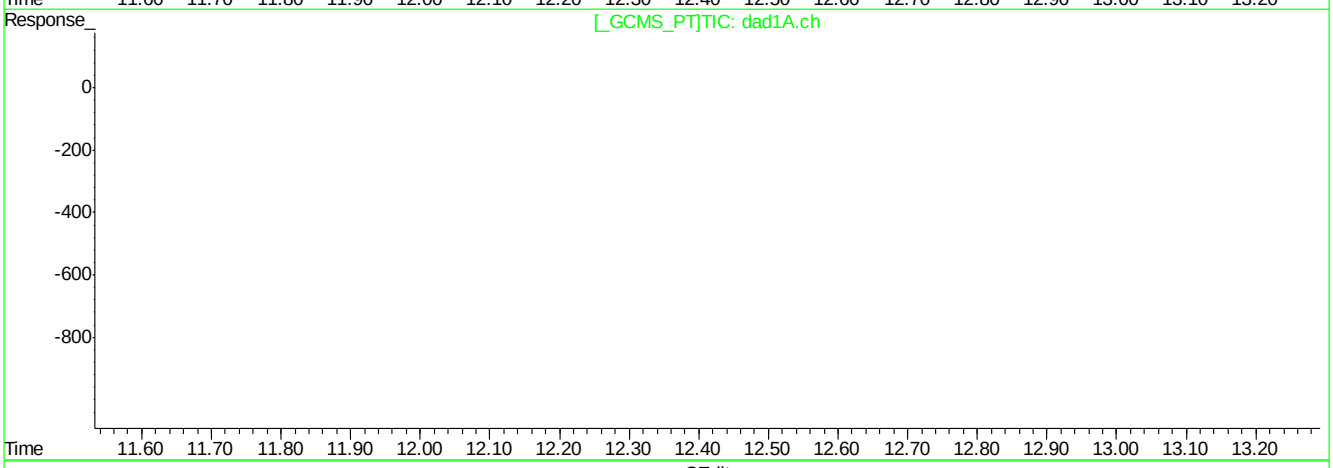
BB060201.D edits: 2,4-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 52.561ppb

response 154484

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

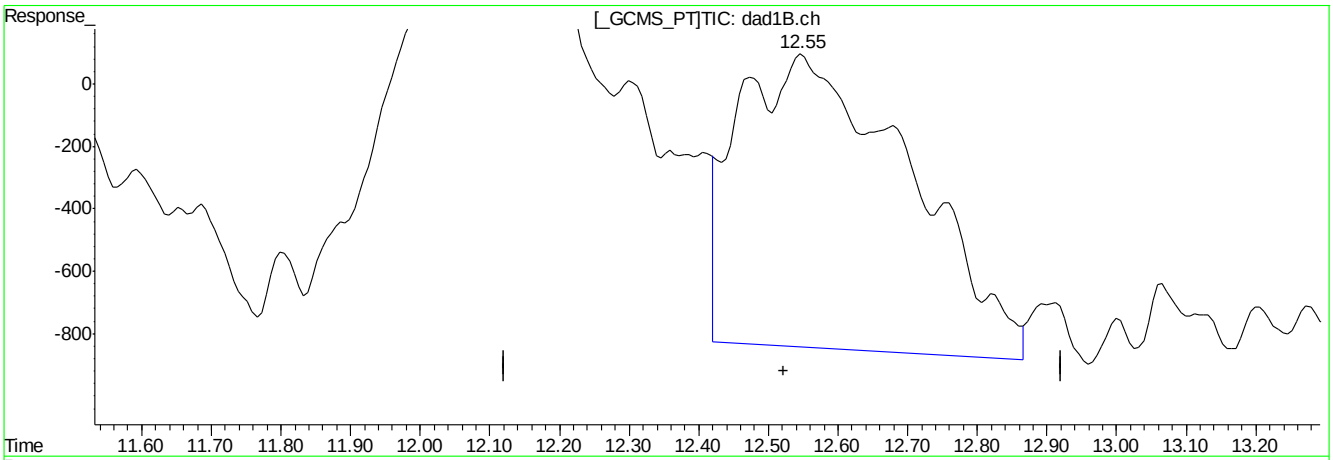
response 0

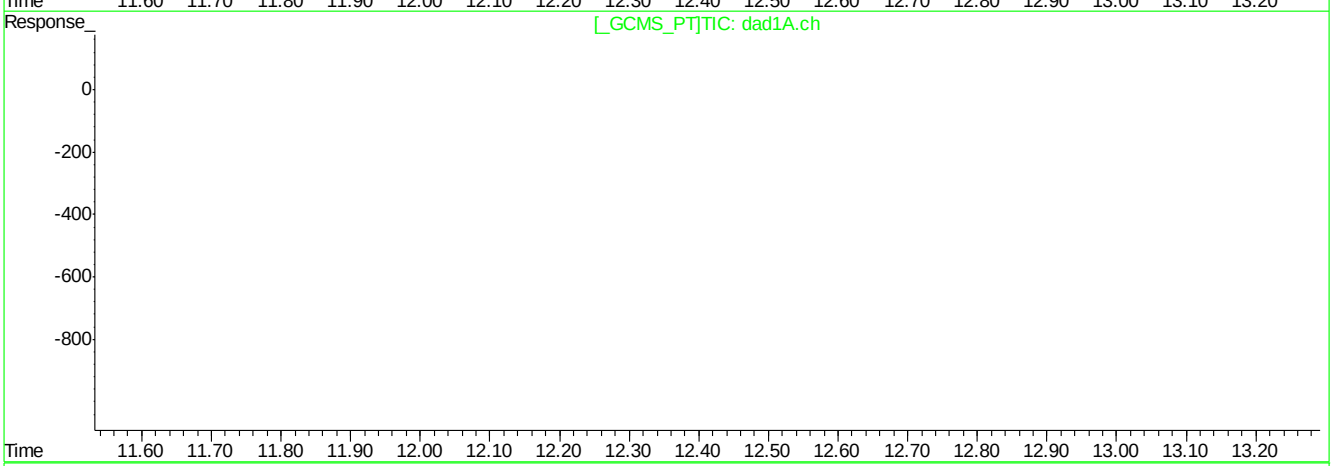
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:34 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 55.194ppb m

response 162232

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

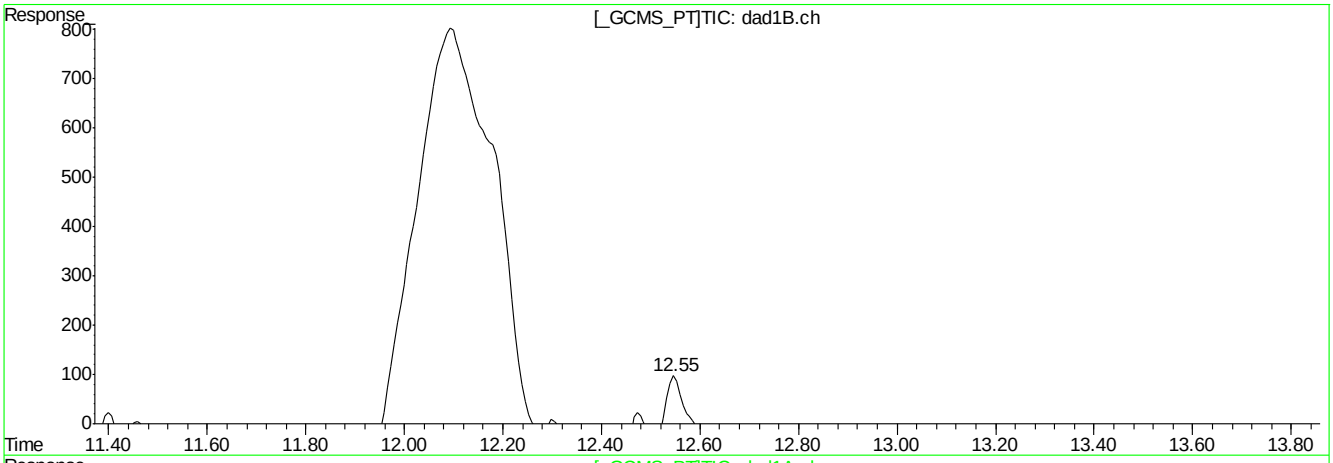
response 0

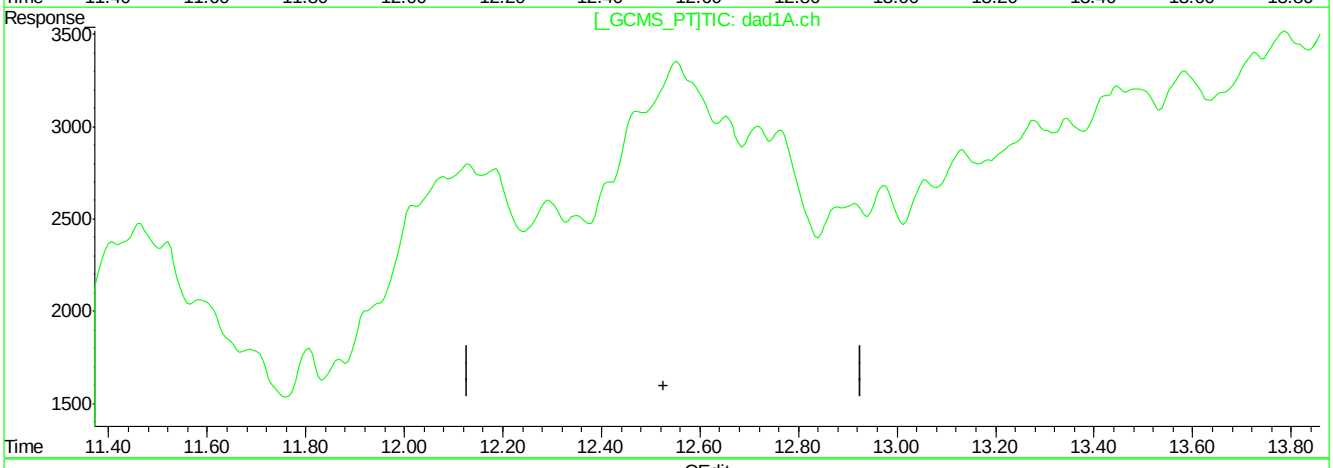
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:40 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 55.194ppb m

response 162232

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

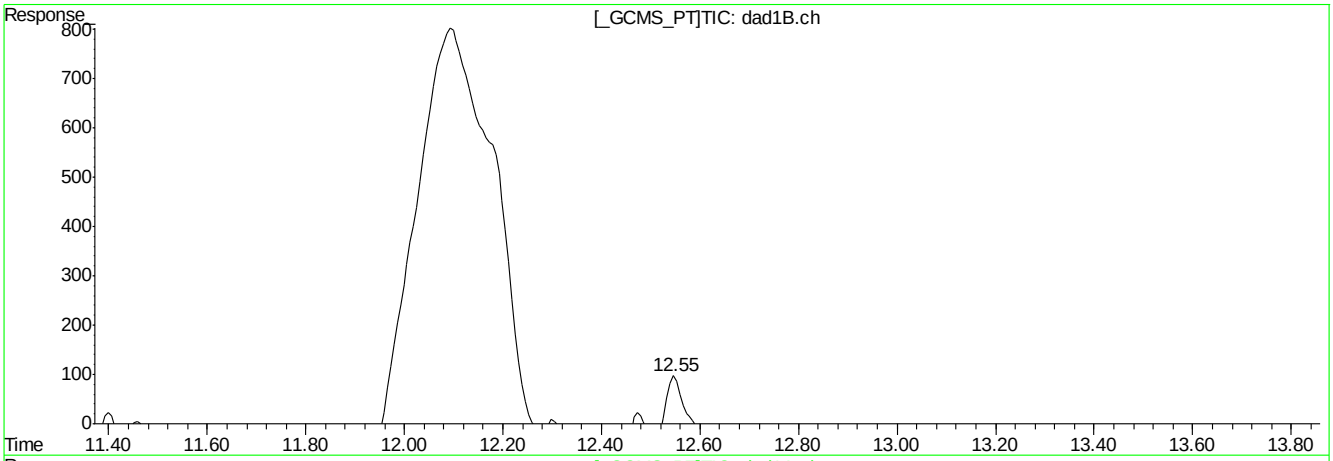
response 0

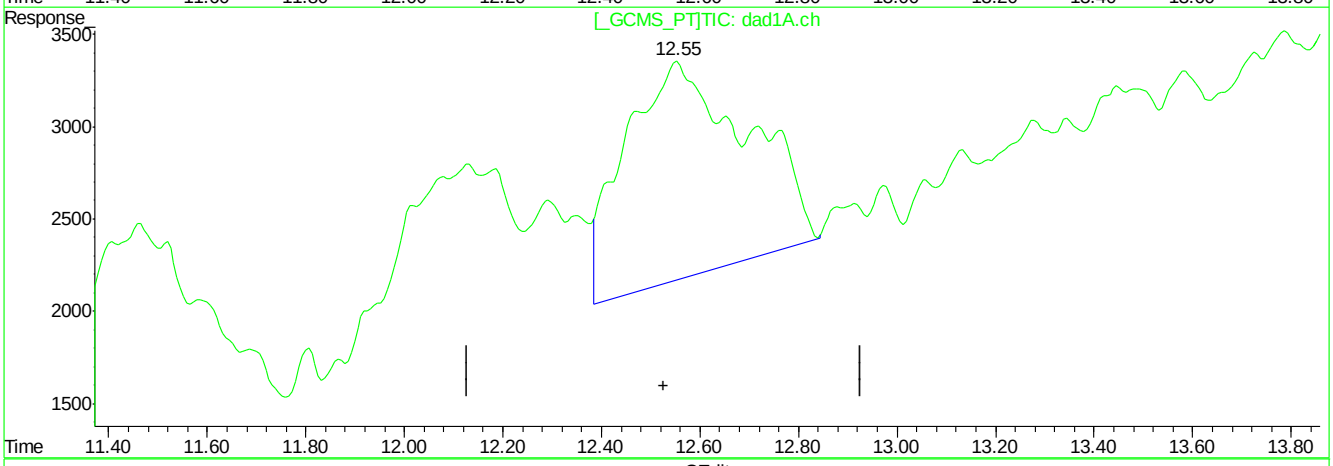
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:45 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 55.194ppb m

response 162232

(17) 2,6-Dinitrotoluene #2

12.55min 55.448ppb m

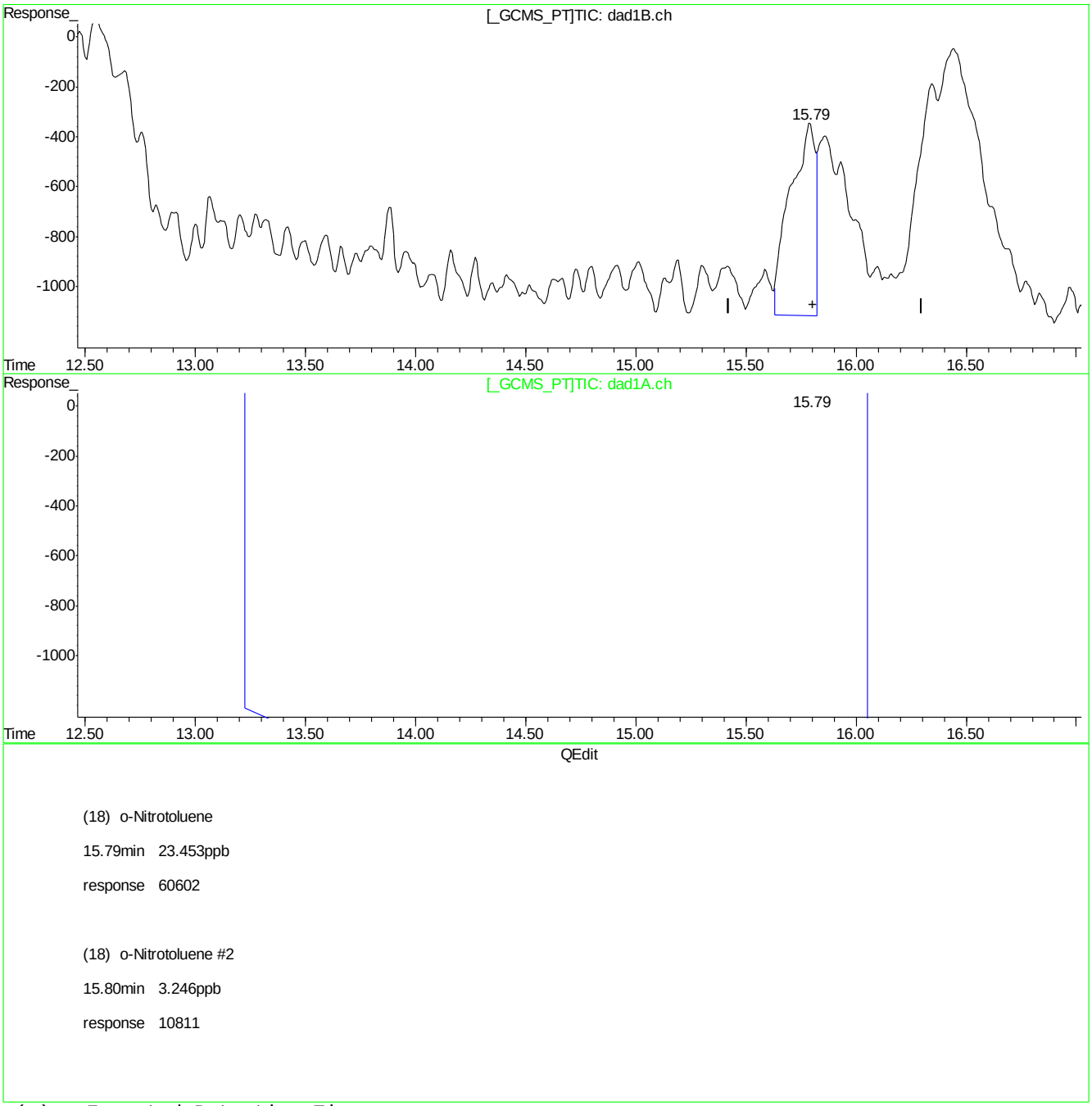
response 204595

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:52 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration

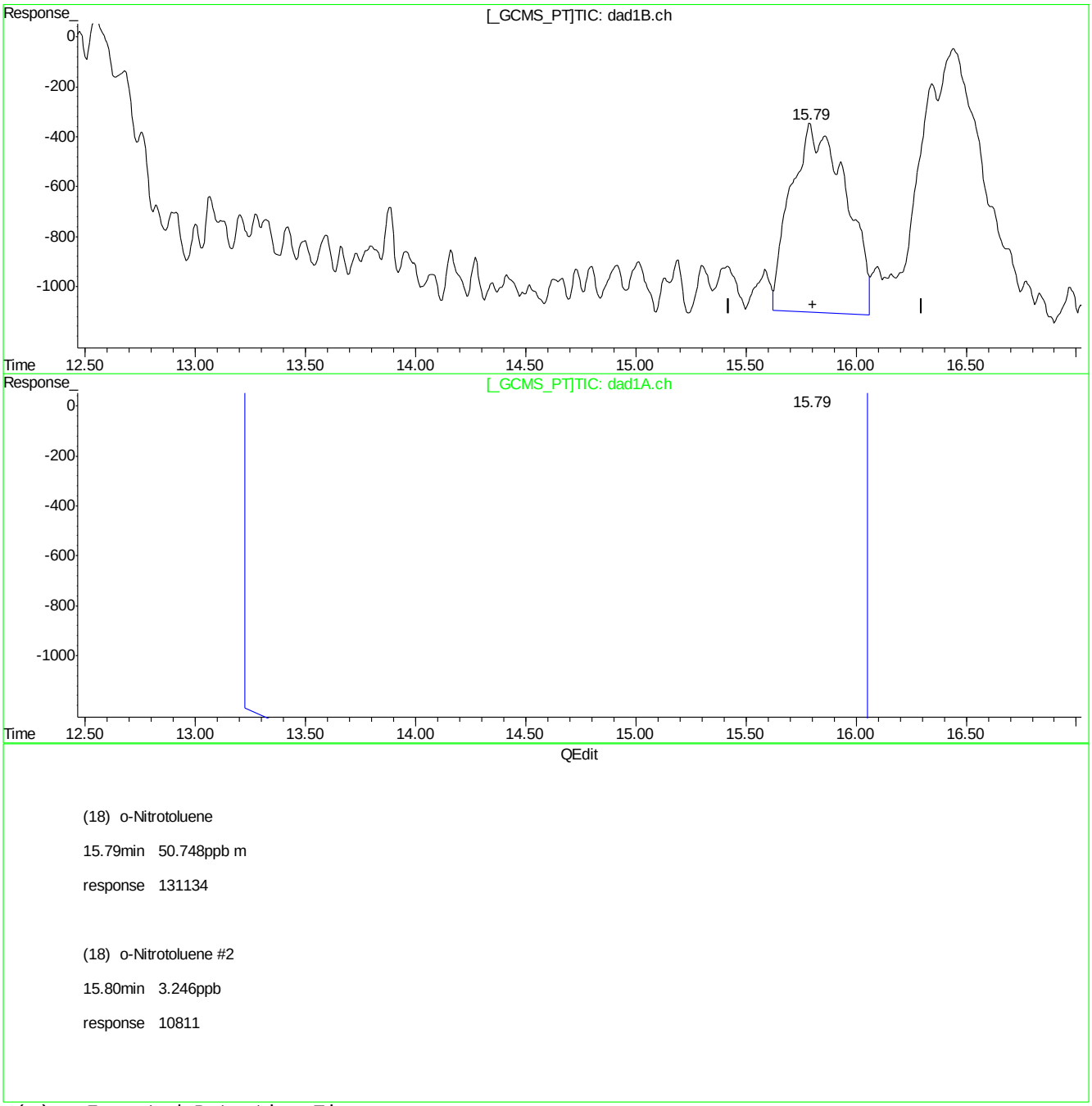


(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:32:03 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.79min 50.748ppb m

response 131134

(18) o-Nitrotoluene #2

15.80min 3.246ppb

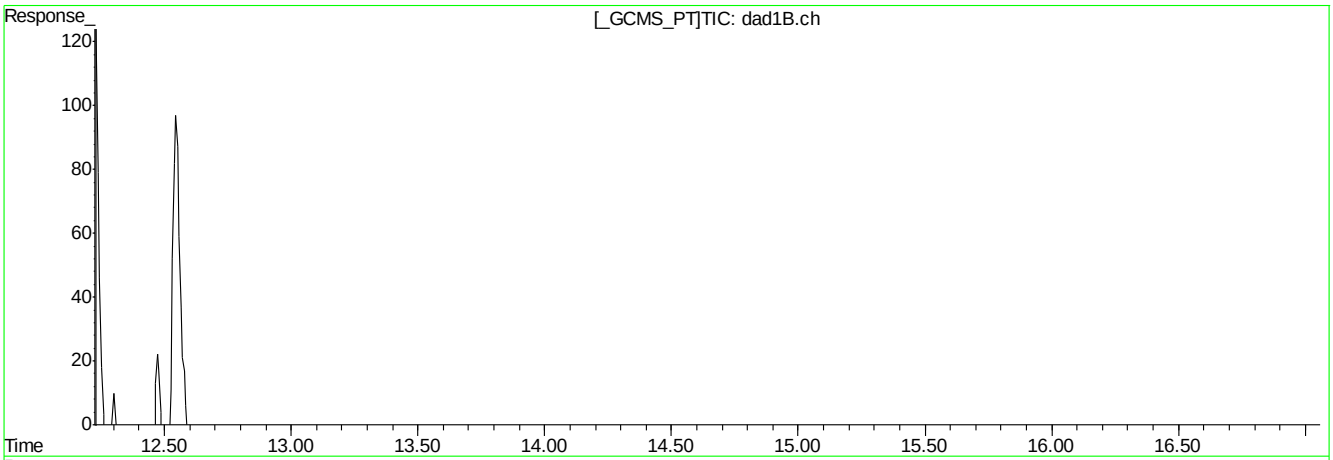
response 10811

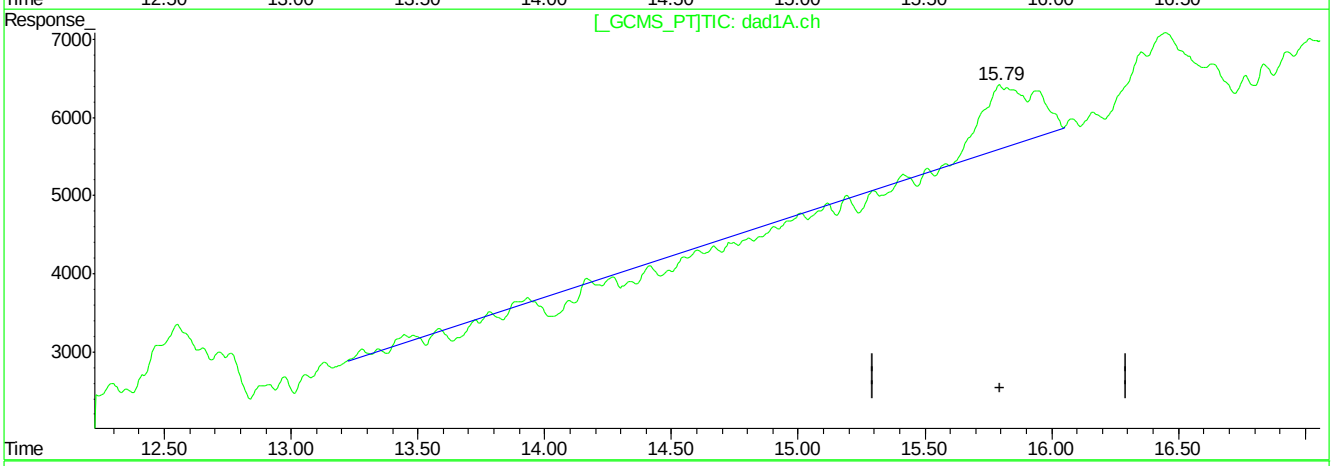
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:32:12 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.79min 50.748ppb m

response 131134

(18) o-Nitrotoluene #2

15.80min 3.246ppb

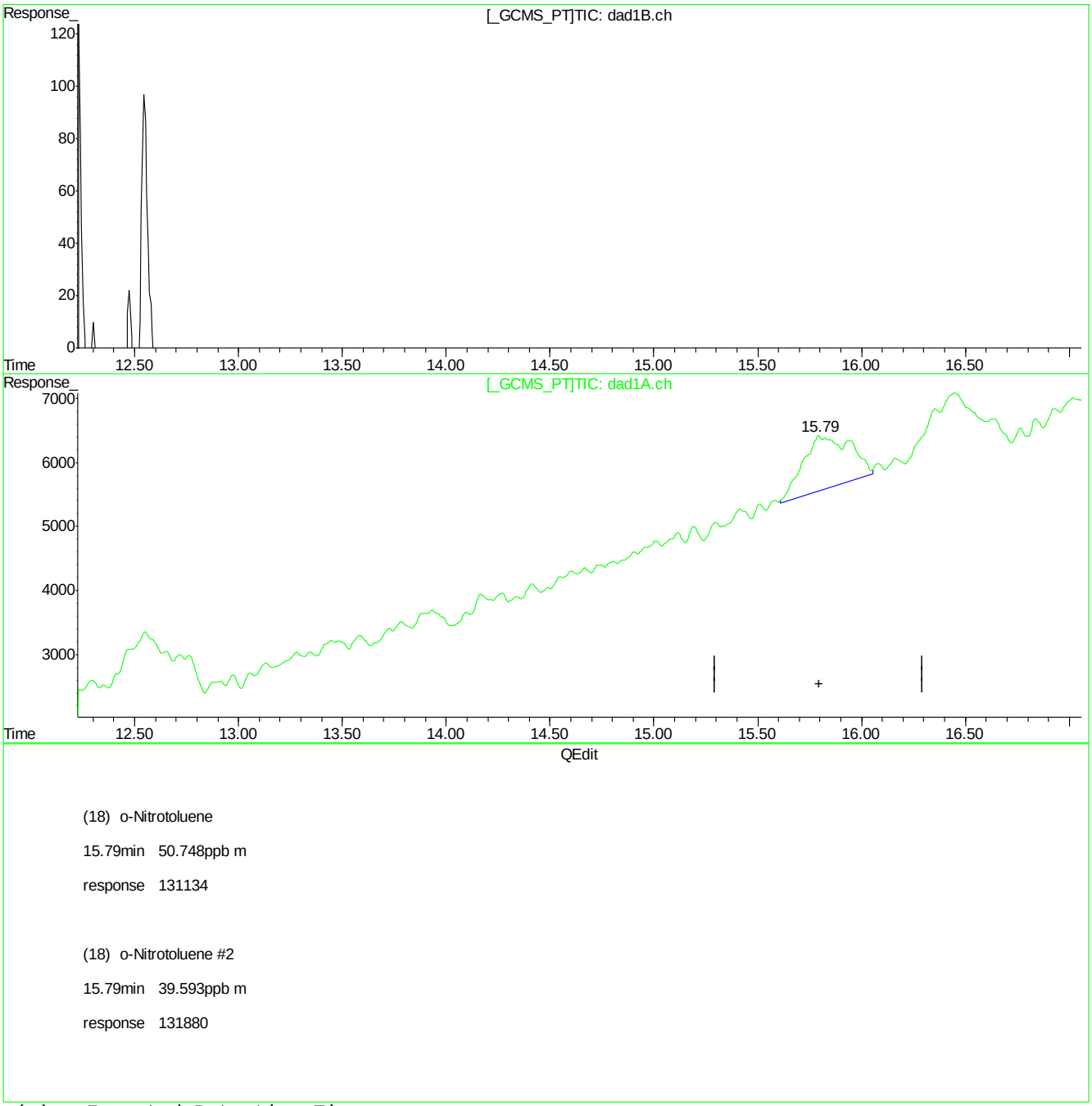
response 10811

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:32:16 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.79min 50.748ppb m

response 131134

(18) o-Nitrotoluene #2

15.79min 39.593ppb m

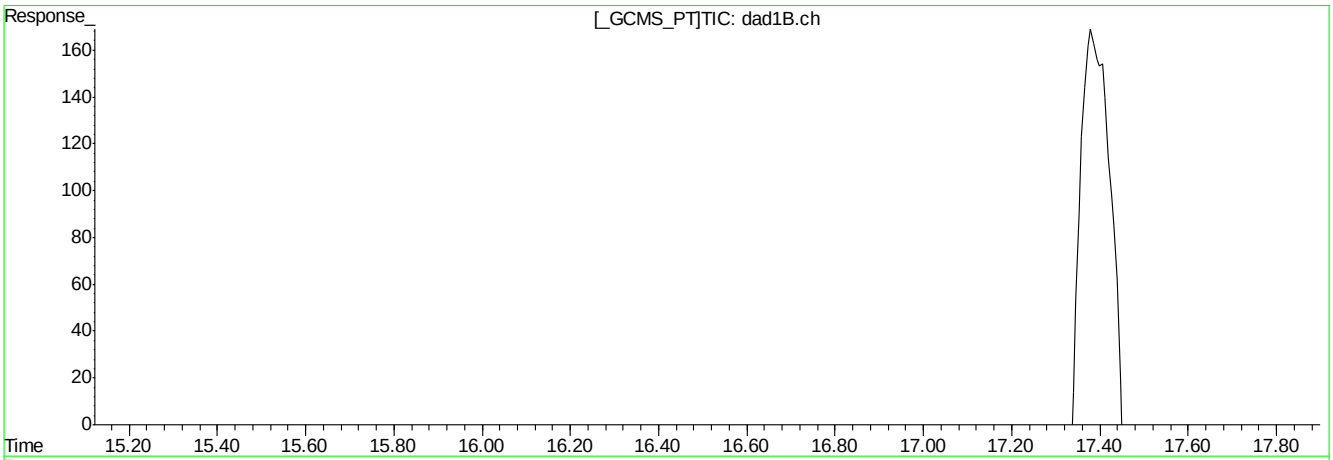
response 131880

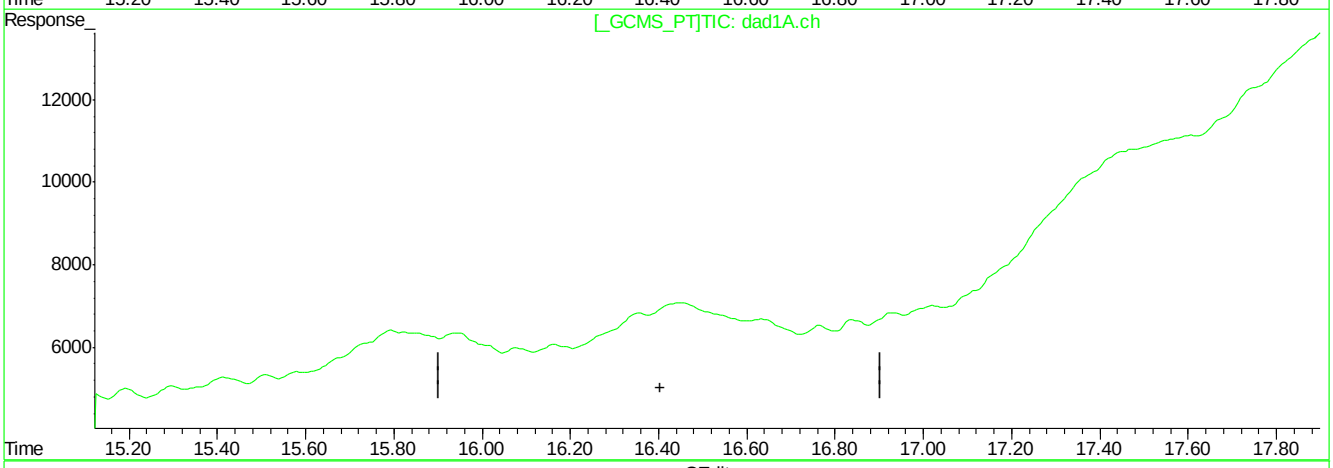
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:32:21 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.45min 56.312ppb

response 225031

(19) p-Nitrotoluene #2

0.00min 0.000ppb

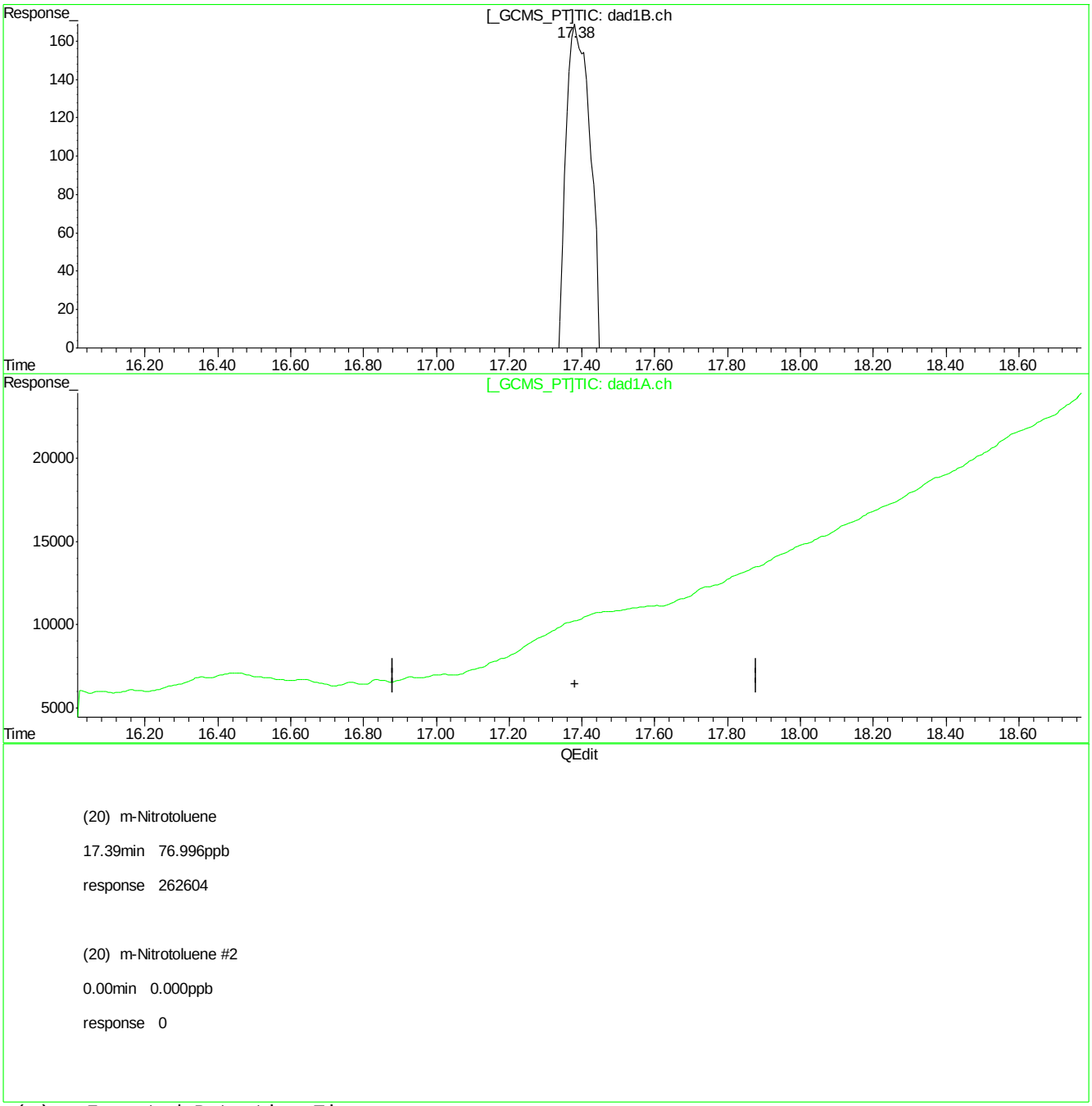
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:32:46 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration

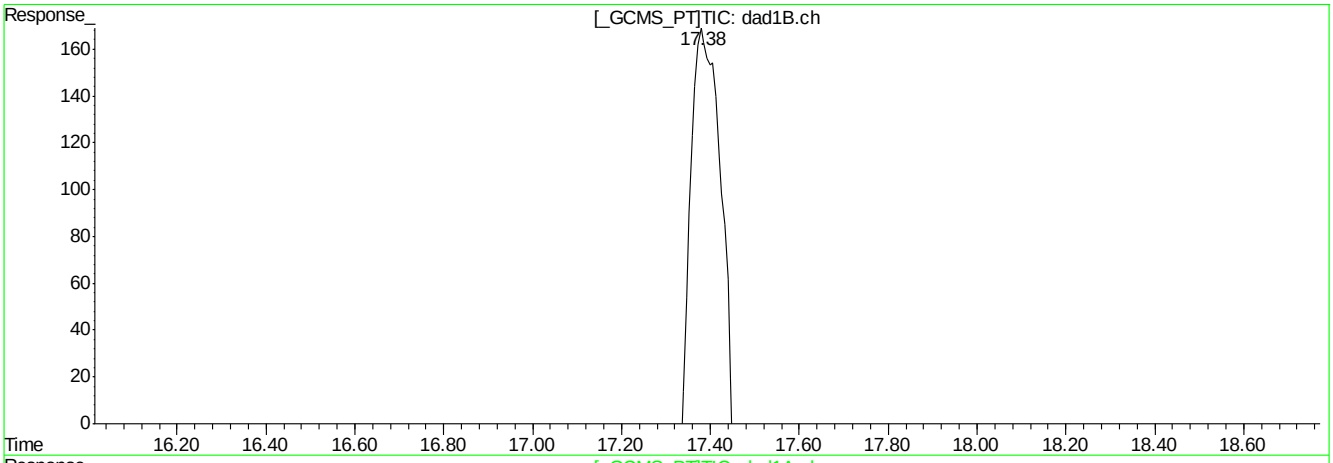


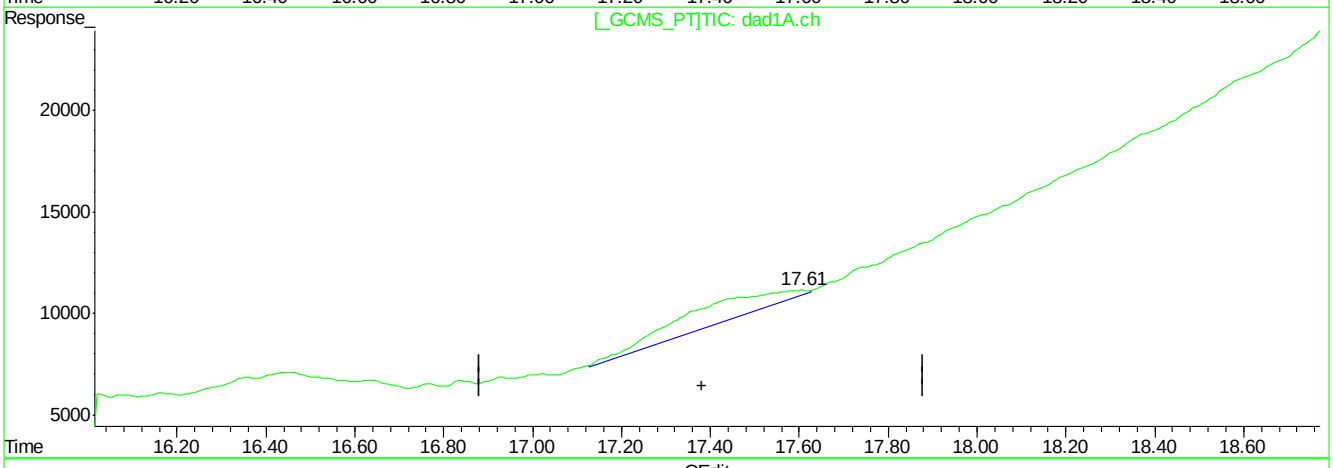
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:33:01 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.39min 76.996ppb

response 262604

(20) m-Nitrotoluene #2

17.61min 52.216ppb m

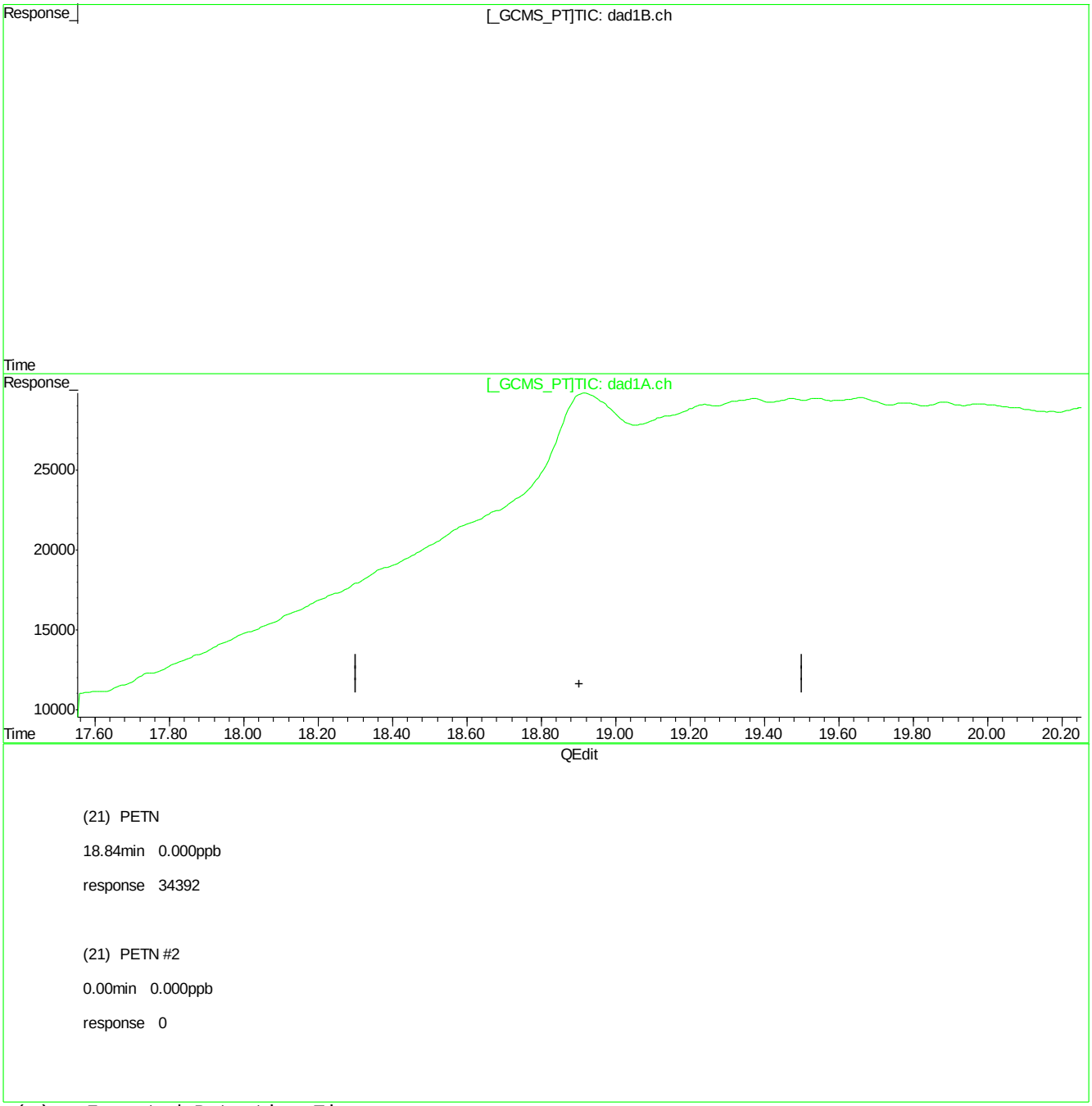
response 183968

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:33:09 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration

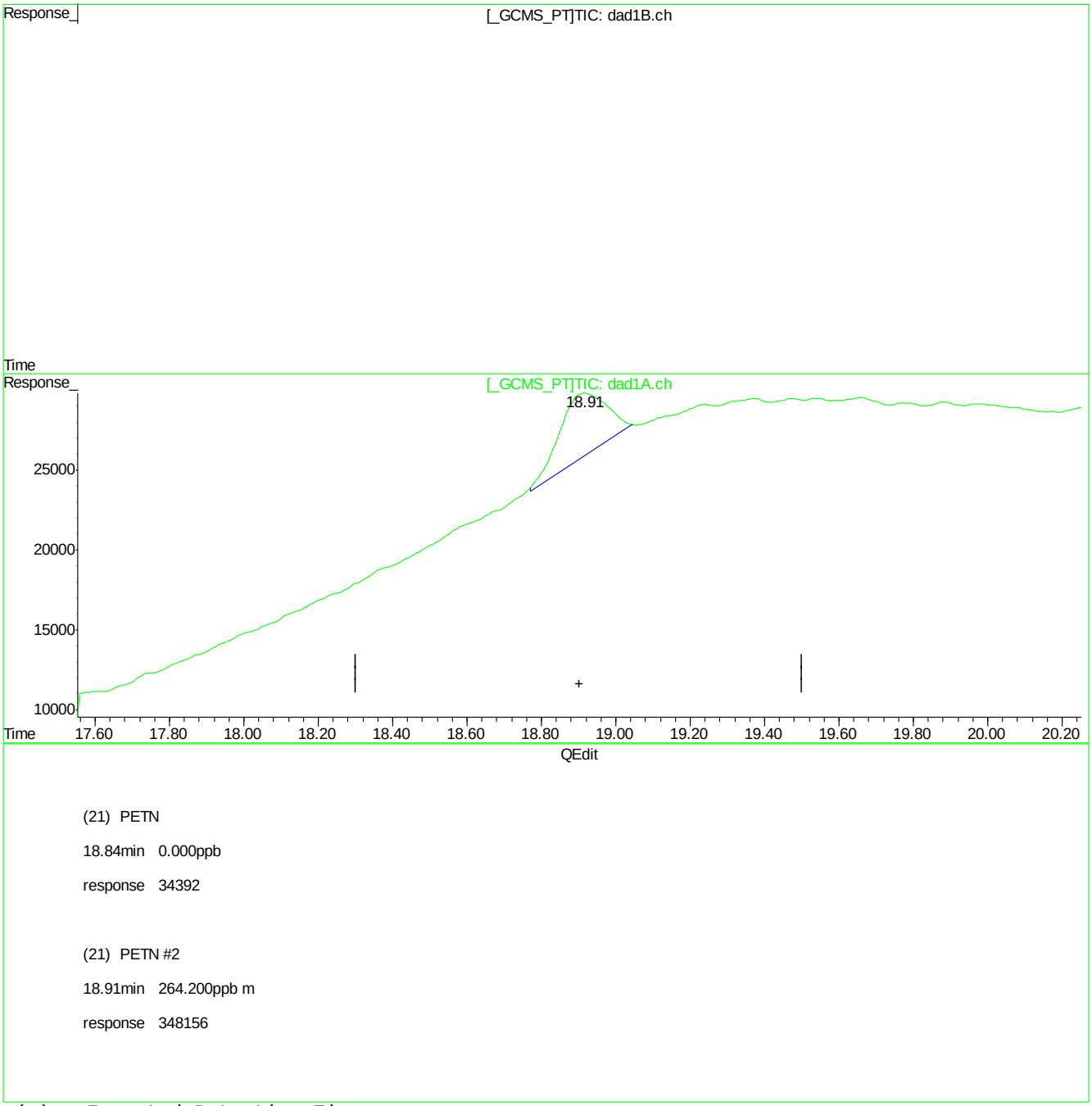


(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:33:14 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(21) PETN

18.84min 0.000ppb

response 34392

(21) PETN #2

18.91min 264.200ppb m

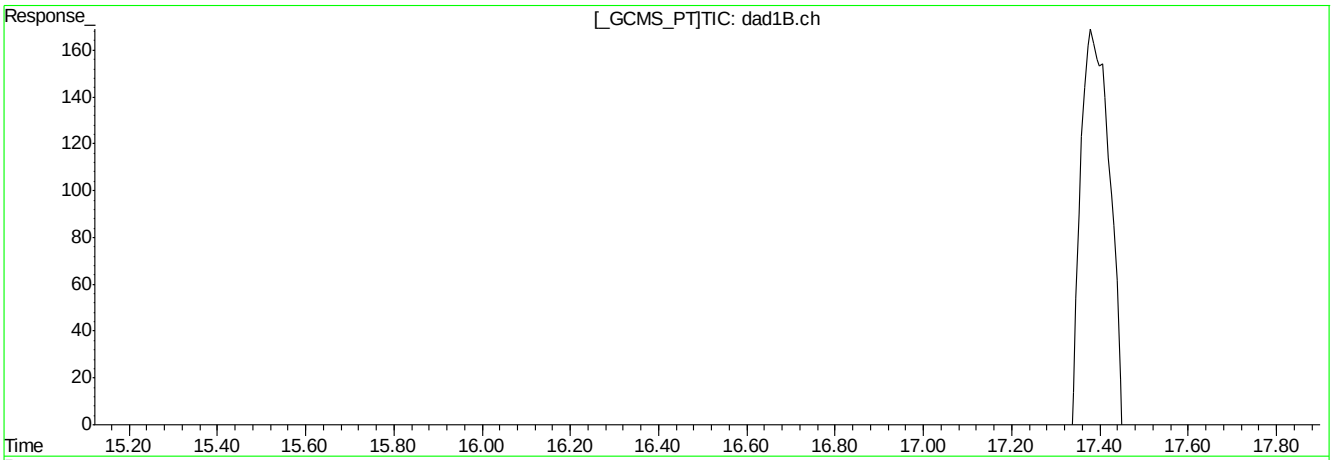
response 348156

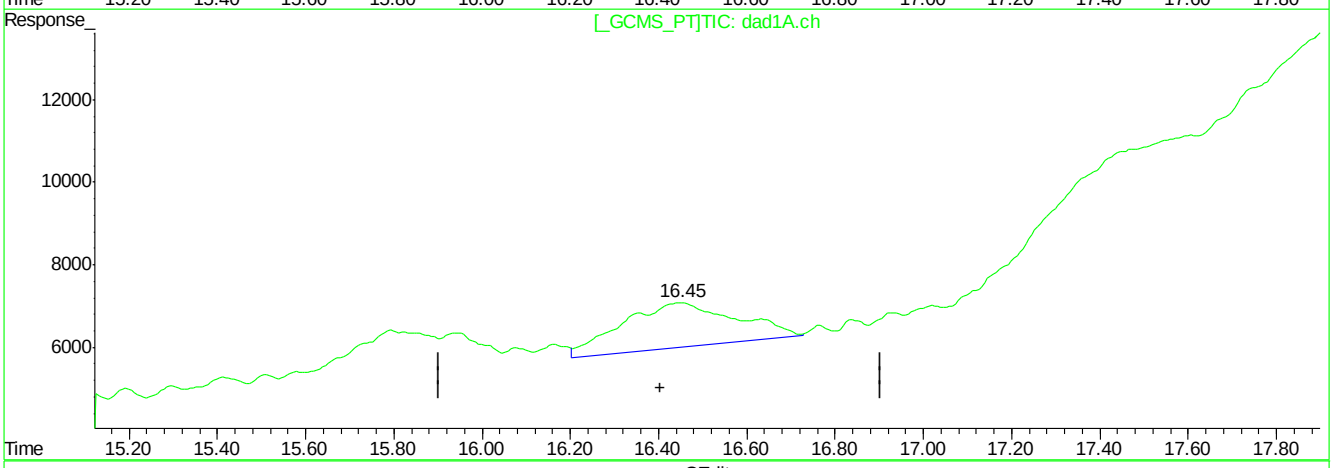
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:33:19 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:06 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.45min 56.312ppb

response 225031

(19) p-Nitrotoluene #2

16.45min 61.939ppb m

response 196142

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 14:56:14 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:29 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.45	11.42	243543	337052	97.867m	80.133
	Spiked Amount 500.000	Range 70 - 136		Recovery =		19.57%#	16.03%#
	Target Compounds						
1)	TNX	1.40	1.40	496861	772053	101.516	101.146
2)	HMX	1.55	1.55	188991	501943	104.553	101.435
3)	DNX	1.80	1.80	293719	432193	95.507	85.242
4)	MNX	2.40	2.40	312824	417376	100.107	88.521
5)	RDX	3.03	3.02	186515	328854	95.805m	100.847m
6)	1,3,5-Trinitrobe	4.83	4.83	391758	800907	89.904m	97.704m
7)	1,3-Dinitrobenze	6.07	6.07	549072	405606	94.196m	105.328m
8)	3,5-Dinitroanili	6.42	6.41	493777	843524	105.604	107.898
9)	Nitrobenzene	7.70	7.71	335829	329599	89.744	104.697m
10)	Nitroglycerin	0.00	9.05	0	628213	N.D. d	491.636m
11)	Tetryl	9.58	9.55	298926	395754	101.008m	95.610m
12)	2,4,6-Trinitroto	10.04	10.06	355562	363139	90.775m	84.920m
13)	2-Amino-4,6-Dini	10.42	10.47	369021	460555	98.820m	82.247m
14)	4-Amino-2,6-Dini	10.97	10.96	244977	395056	92.796m	74.116m
16)	2,4-Dinitrotolue	12.08	12.13	499014	315018	96.183m	99.839m
17)	2,6-Dinitrotolue	12.54	12.54	301682	412058	102.534m	111.674
18)	o-Nitrotoluene	15.85	15.83	273711	363866	105.925	109.241m
19)	p-Nitrotoluene	16.42	16.43	394551	394268	98.732	124.506m
20)	m-Nitrotoluene	17.42	17.43	419276	294844	122.811	83.460m
21)	PETN	0.00	18.91	0	704993	N.D. d	534.988m

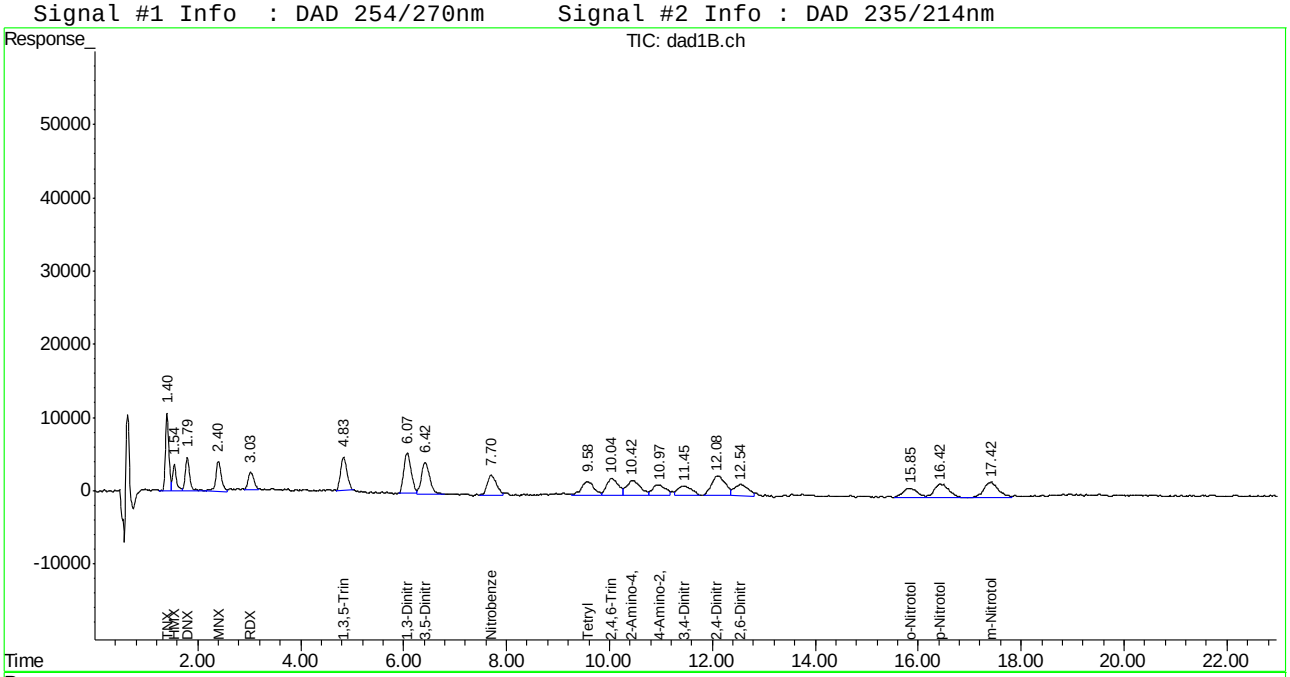
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060202.D 8330B_0707PLUS.M Mon Jul 09 11:20:50 2018 Page 1

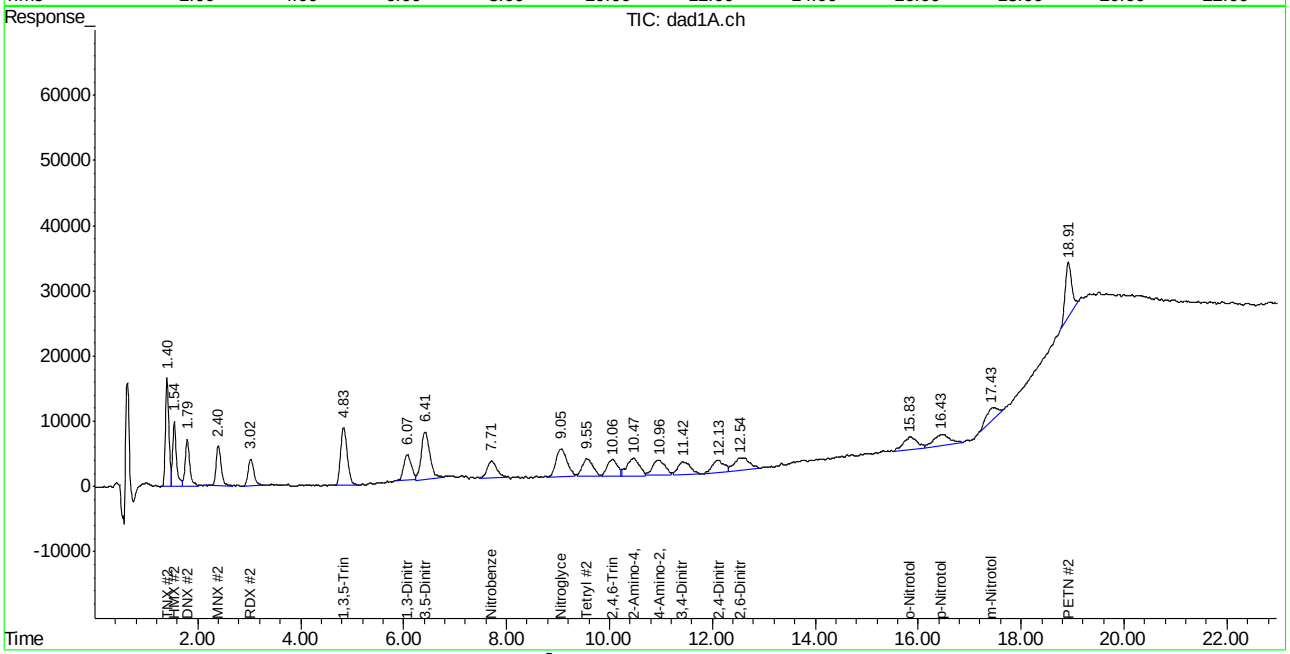
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:06 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

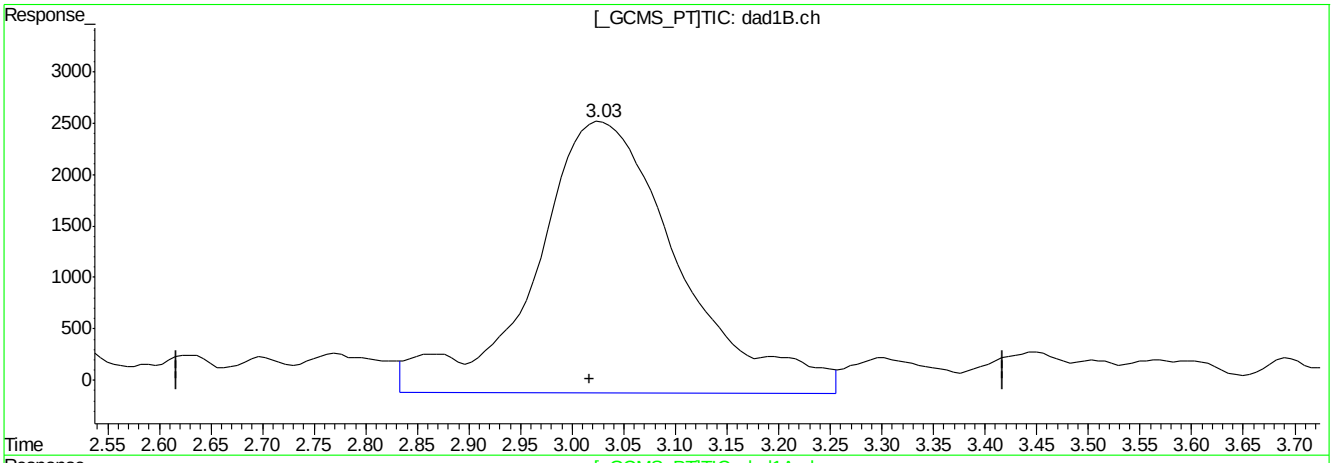
Sample Number: GBB1748-IC1748 **Method:** SW846 8330A
Lab FileID: BB060202.D **Analyst approved:** 07/09/18 11:23 William Hustedde
Injection Time: 07/06/18 16:33 **Supervisor approved:** 07/09/18 16:15 Mike Eger

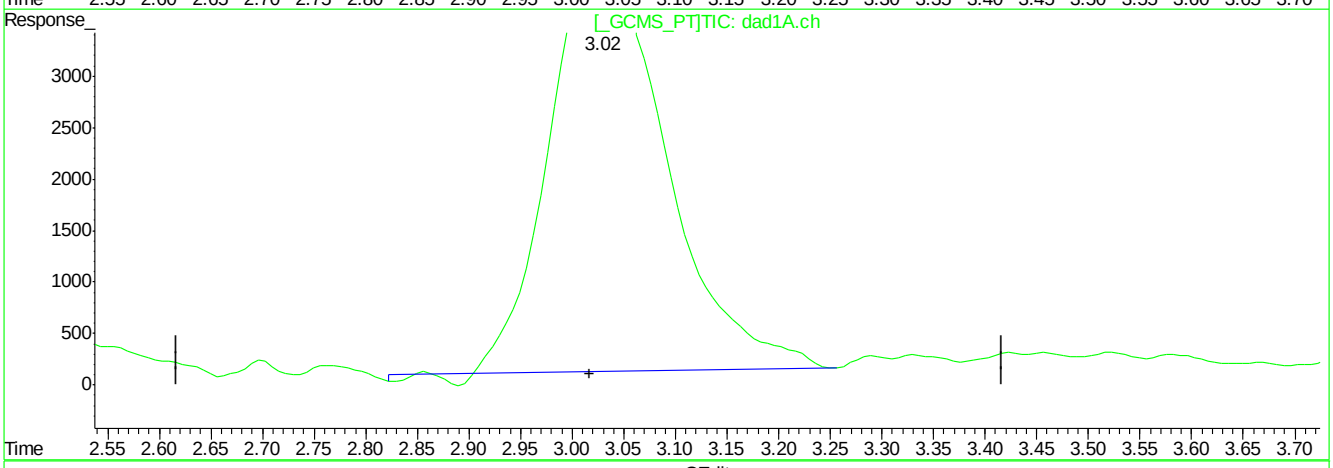
Parameter	CAS	Sig#	R.T. (min.)	Reason
RDX	121-82-4	2	3.02	Poor instrument integration
RDX	121-82-4	1	3.03	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.83	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.83	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	6.07	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.07	Poor instrument integration
Nitrobenzene	98-95-3	2	7.71	Poor instrument integration
Nitroglycerine	55-63-0	2	9.05	Poor instrument integration
Tetryl	479-45-8	2	9.55	Poor instrument integration
Tetryl	479-45-8	1	9.58	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	10.04	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	10.06	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.42	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.47	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	10.96	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.97	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.45	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	12.08	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	12.13	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.54	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.83	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.43	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.43	Poor instrument integration
PETN	78-11-5	2	18.91	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.03min 132.058ppb

response 257315

(5) RDX #2

3.03min 96.549ppb

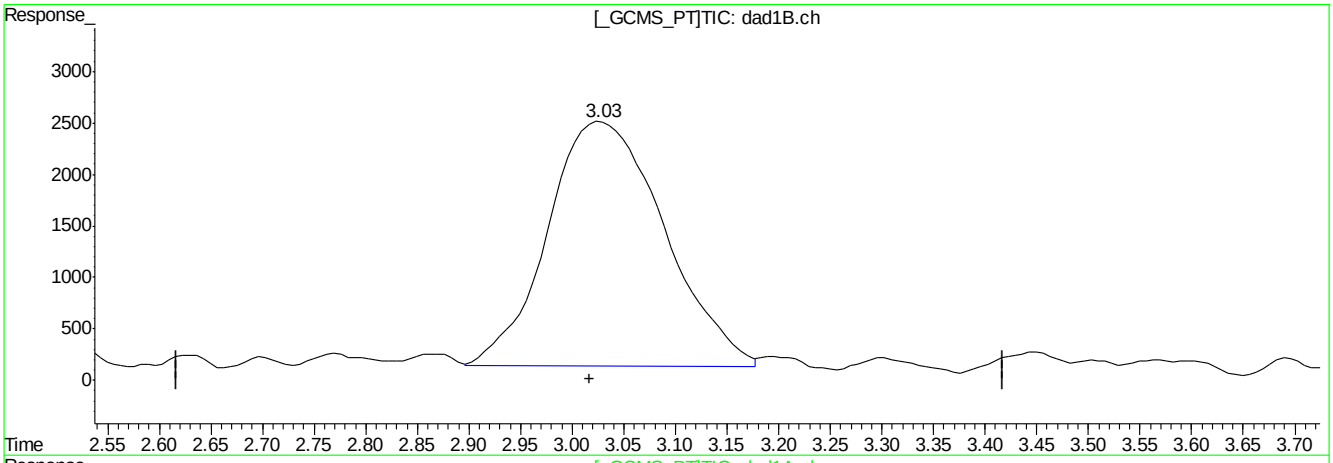
response 314838

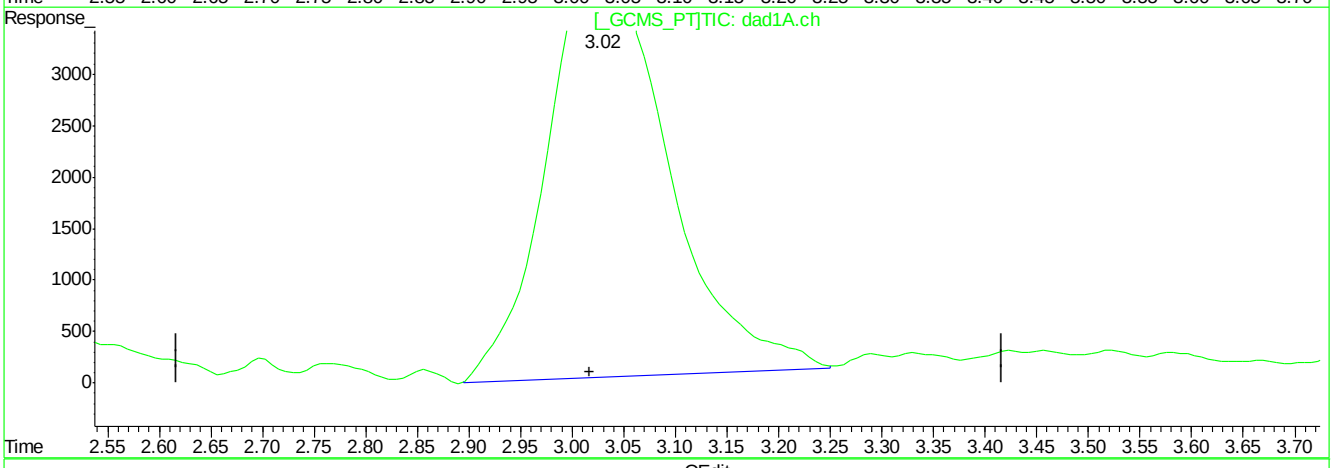
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:49:33 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.03min 95.805ppb m

response 186515

(5) RDX #2

3.02min 100.847ppb m

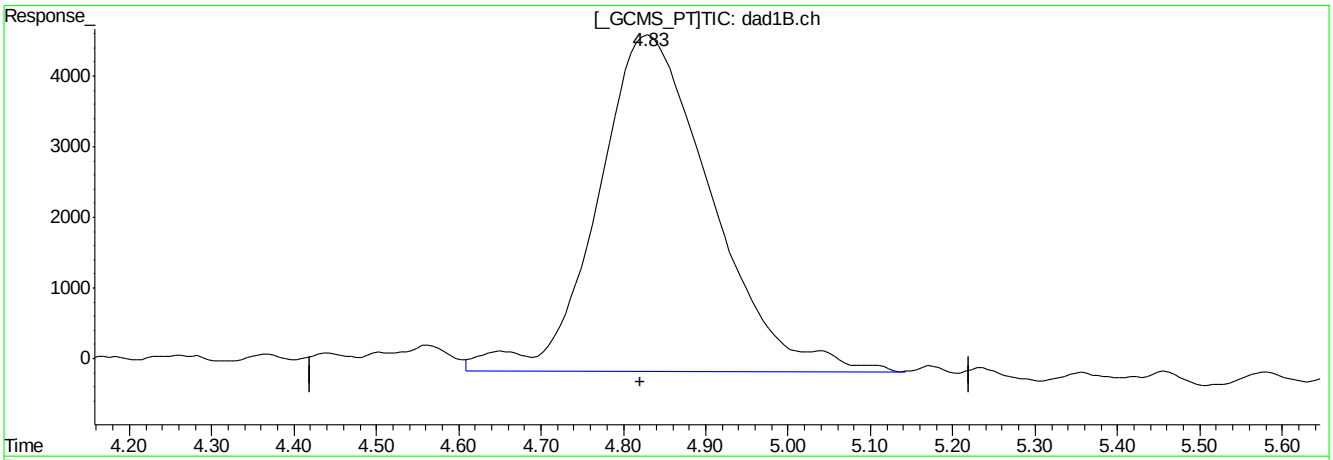
response 328854

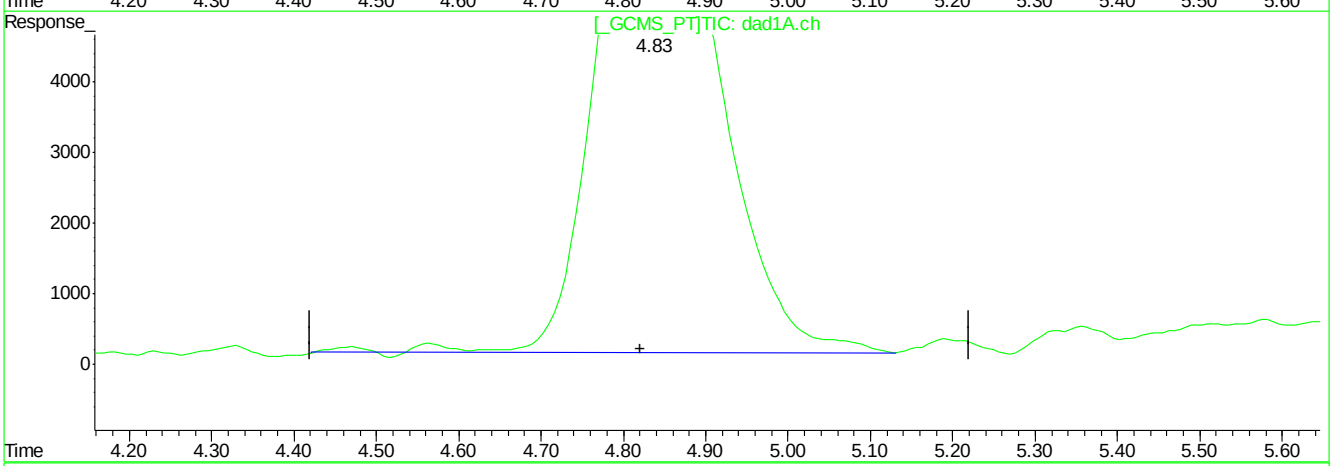
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:49:45 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.83min 104.545ppb

response 455554

(6) 1,3,5-Trinitrobenzene #2

4.83min 98.937ppb

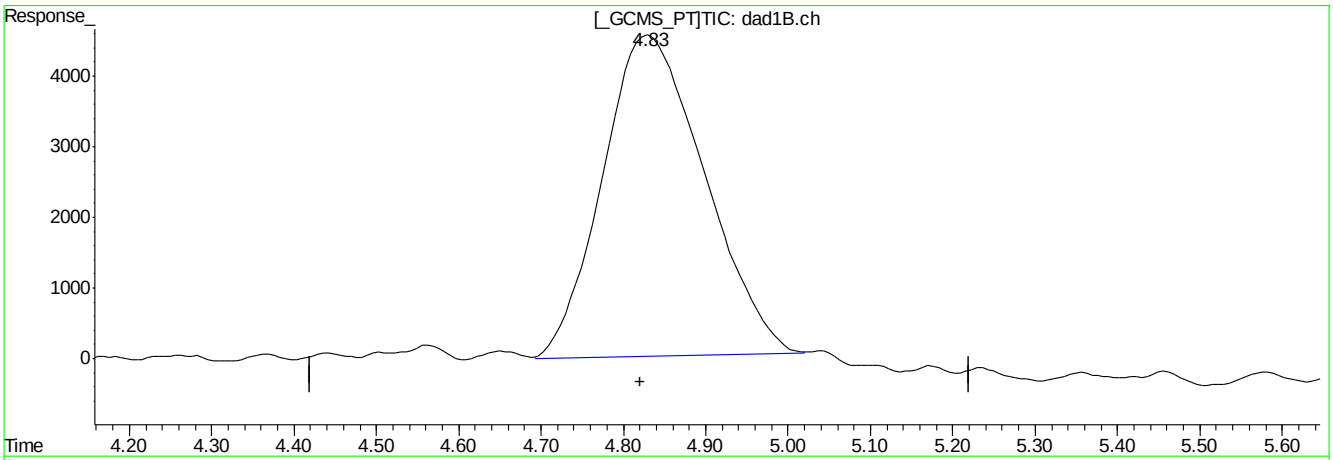
response 811020

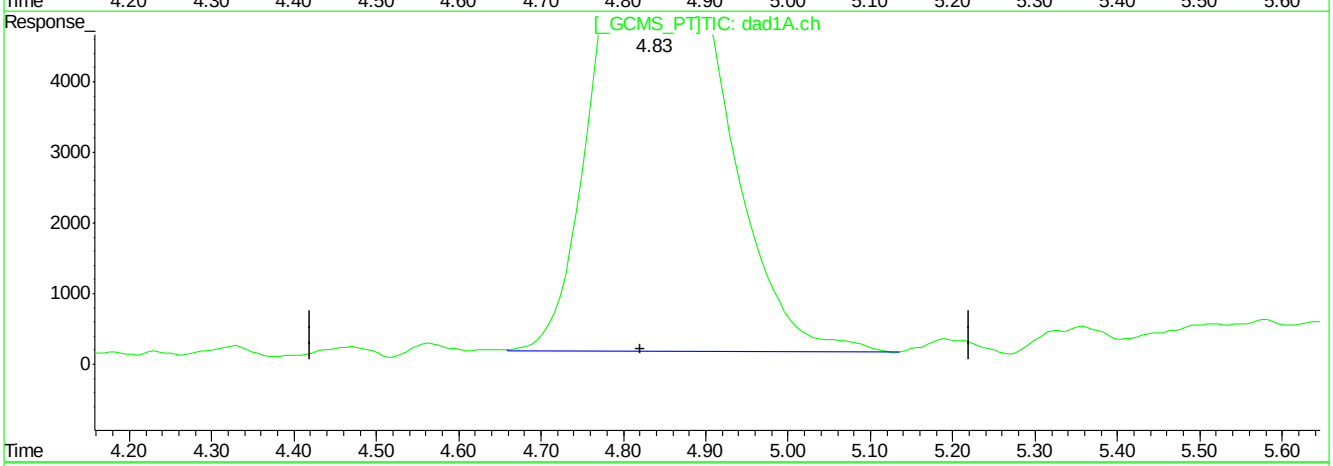
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:49:52 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.83min 89.904ppb m

response 391758

(6) 1,3,5-Trinitrobenzene #2

4.83min 97.704ppb m

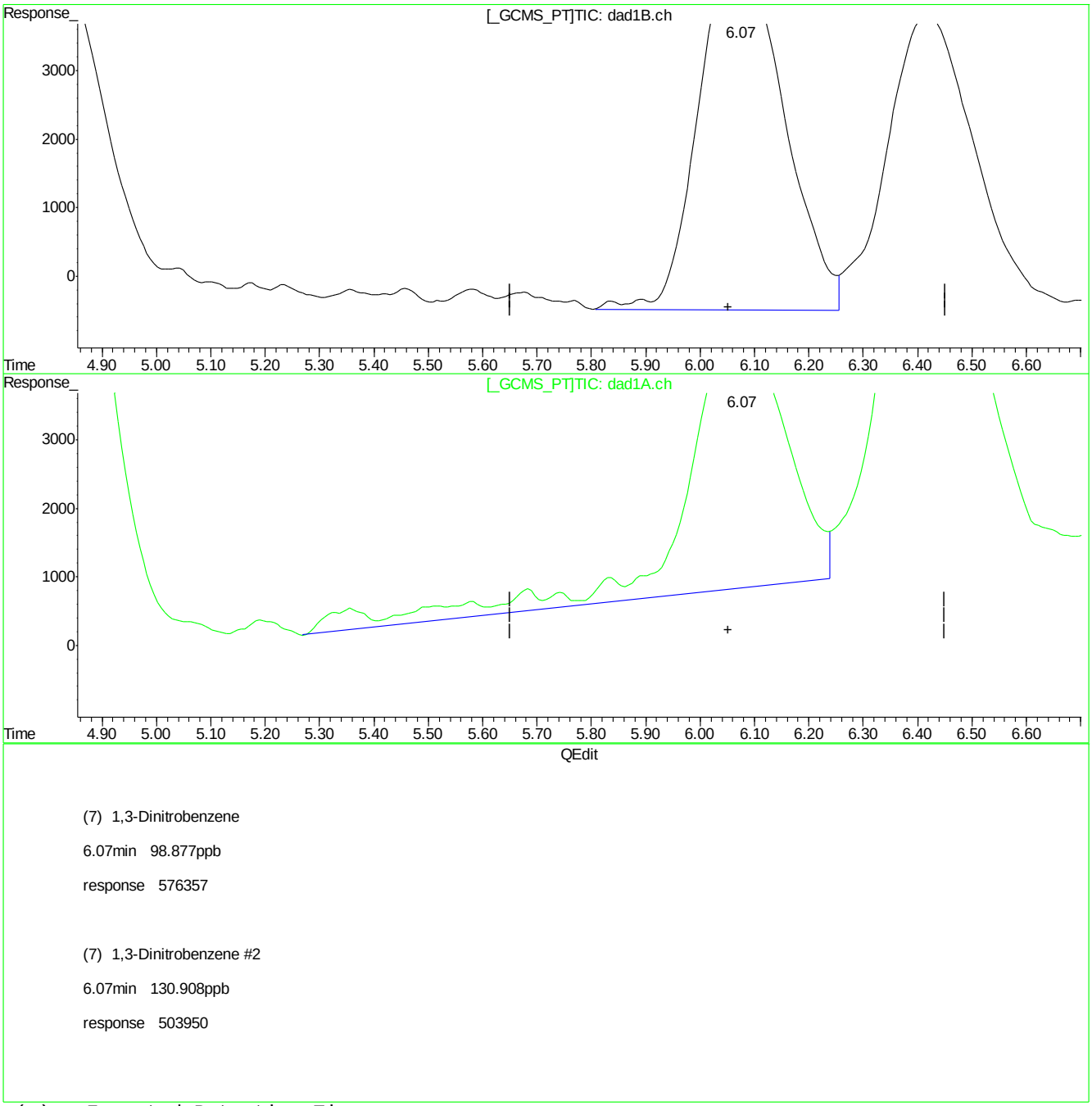
response 800907

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:49:59 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

6.07min 98.877ppb

response 576357

(7) 1,3-Dinitrobenzene #2

6.07min 130.908ppb

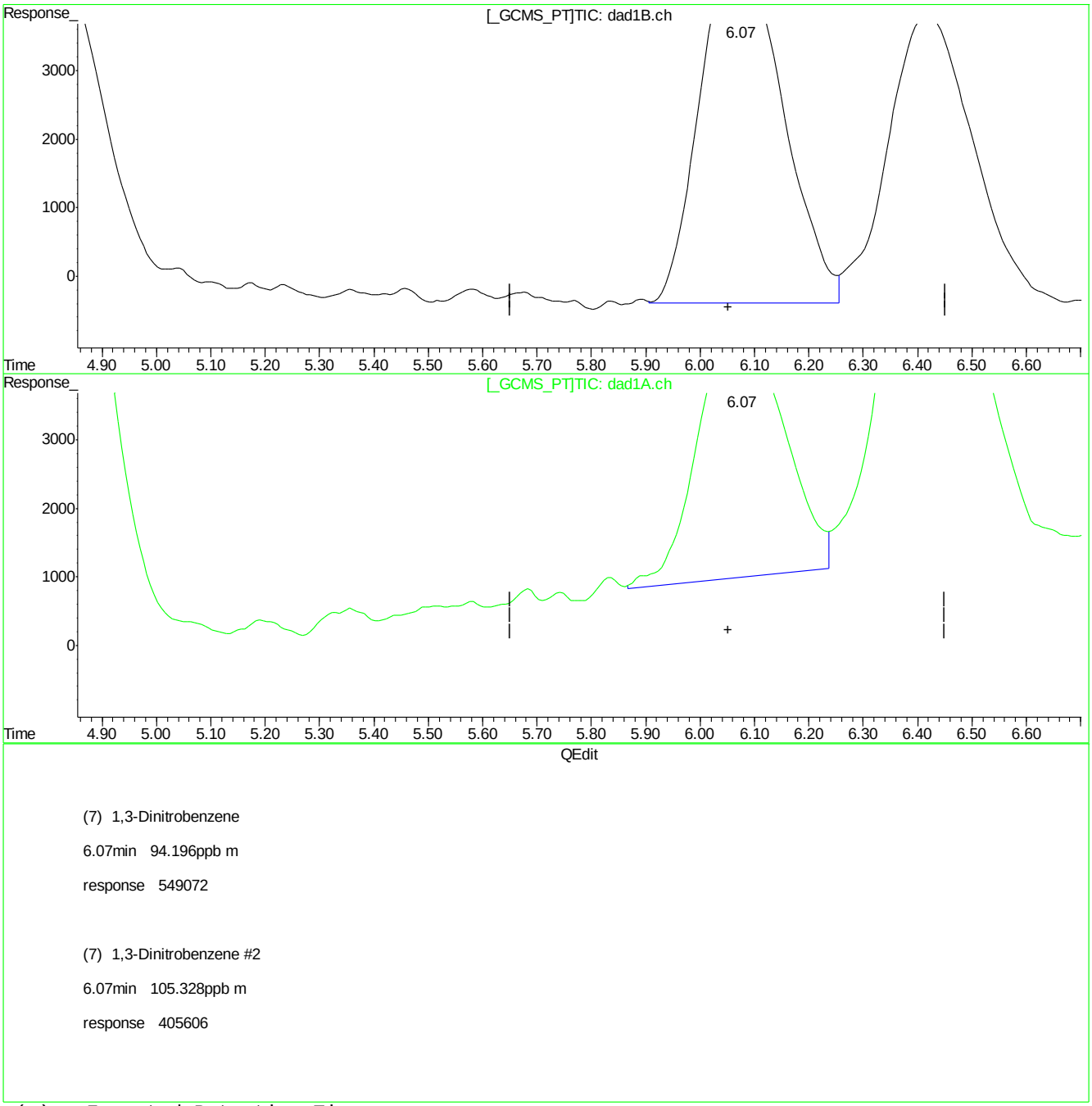
response 503950

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:50:06 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

6.07min 94.196ppb m

response 549072

(7) 1,3-Dinitrobenzene #2

6.07min 105.328ppb m

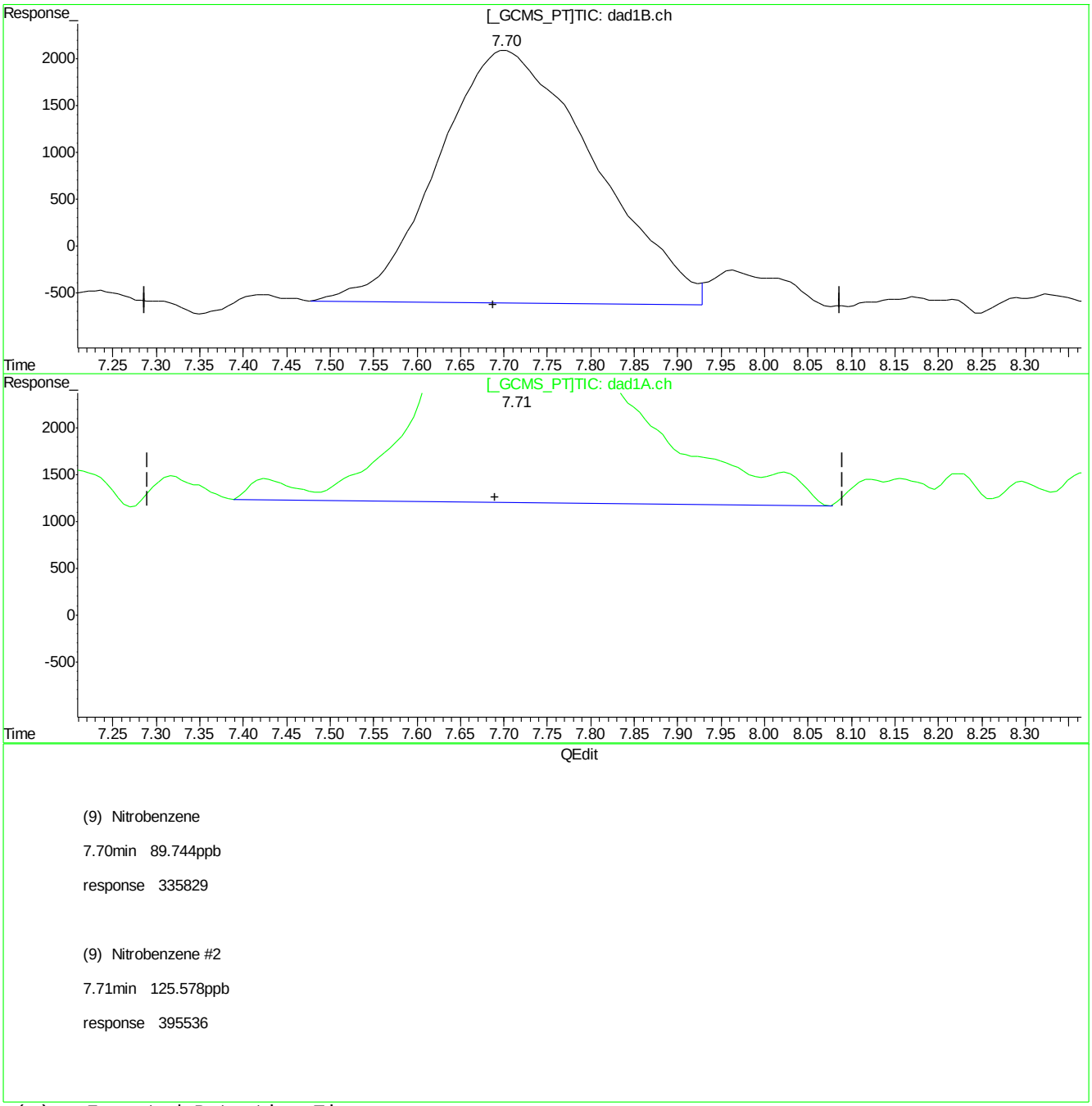
response 405606

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:50:17 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(9) Nitrobenzene

7.70min 89.744ppb

response 335829

(9) Nitrobenzene #2

7.71min 125.578ppb

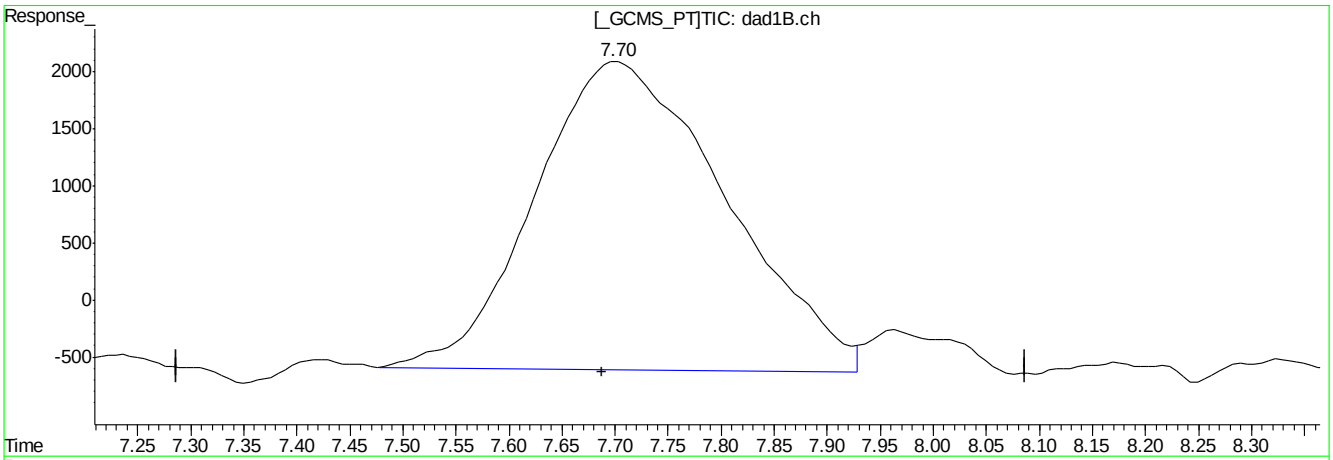
response 395536

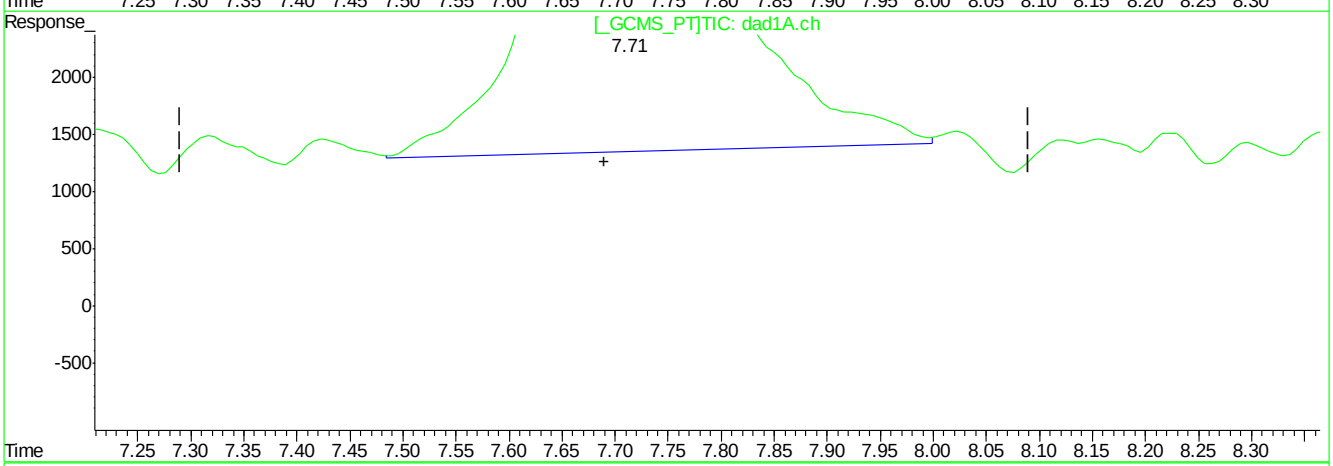
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:50:36 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.70min 89.744ppb

response 335829

(9) Nitrobenzene #2

7.71min 104.697ppb m

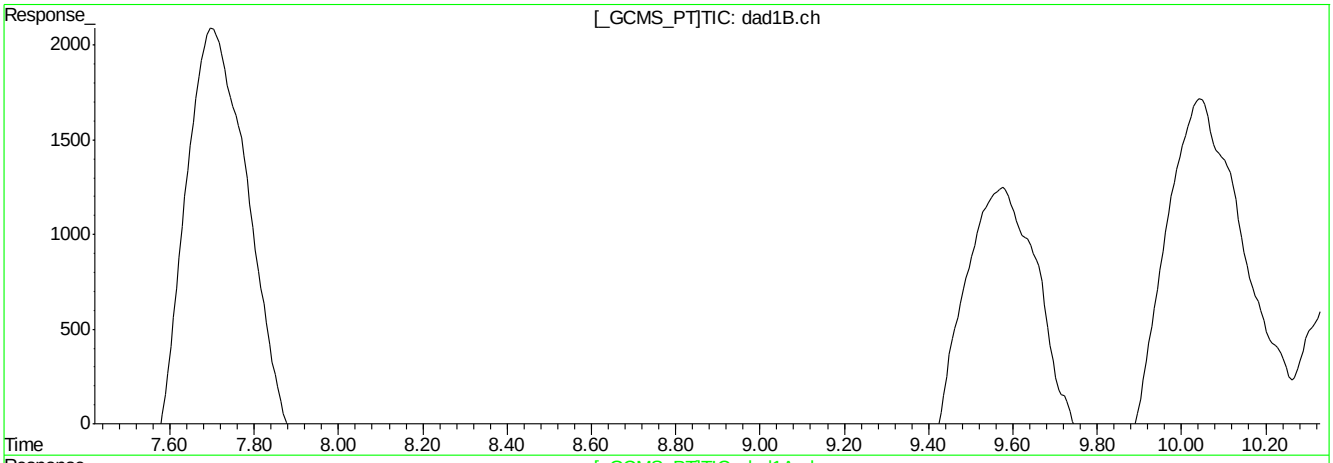
response 329599

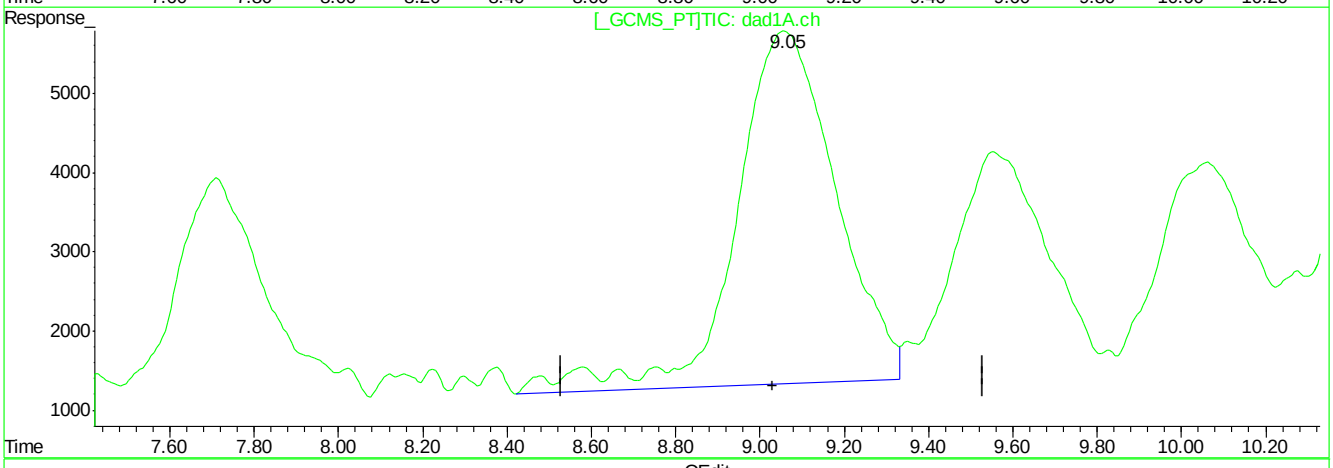
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:50:41 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

8.96min 0.000ppb

response 20984

(10) Nitroglycerin #2

9.06min 574.852ppb

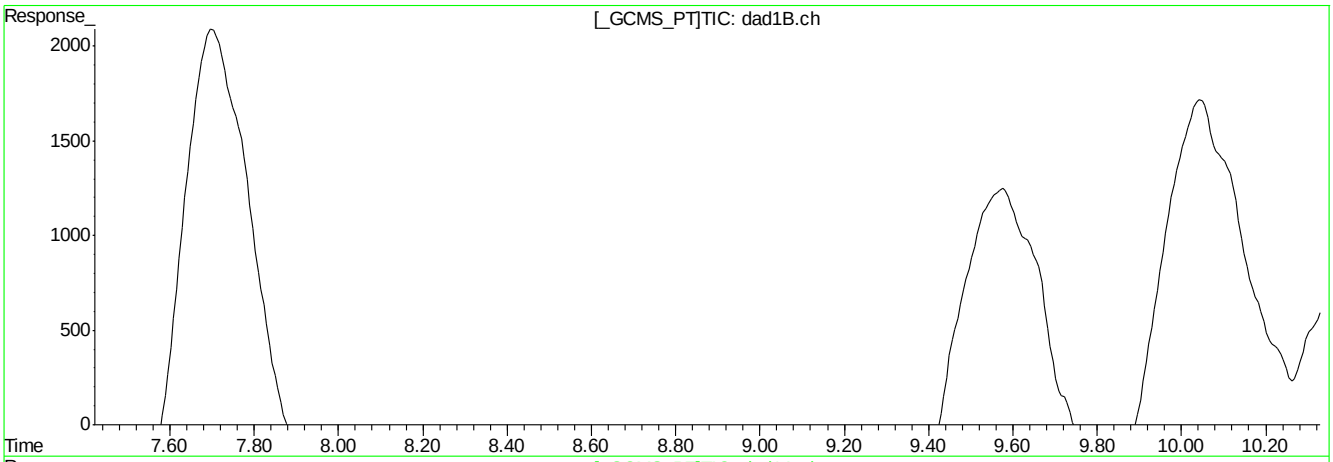
response 734547

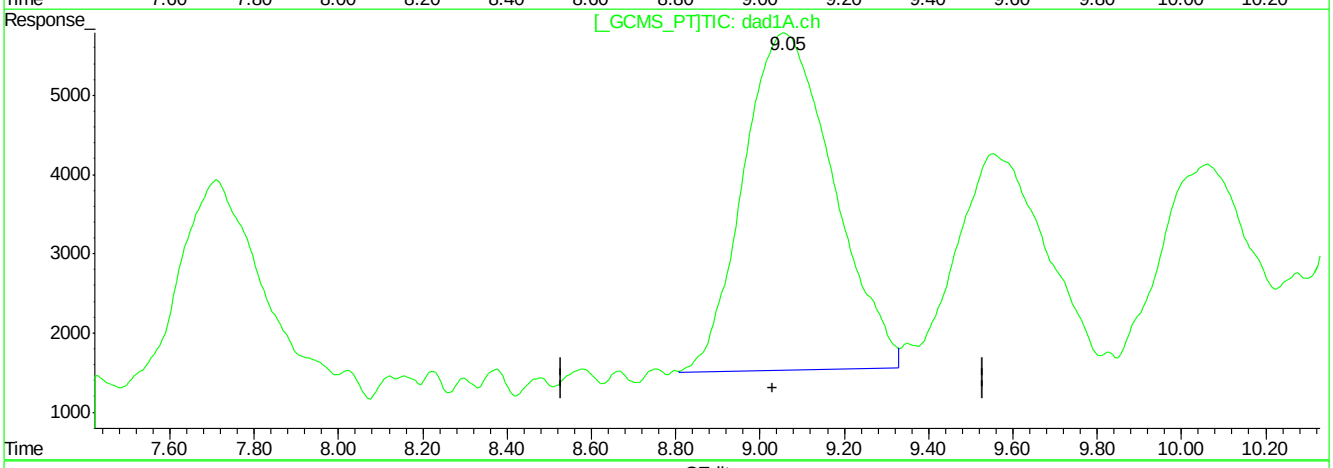
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:50:45 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

8.96min 0.000ppb

response 20984

(10) Nitroglycerin #2

9.05min 491.636ppb m

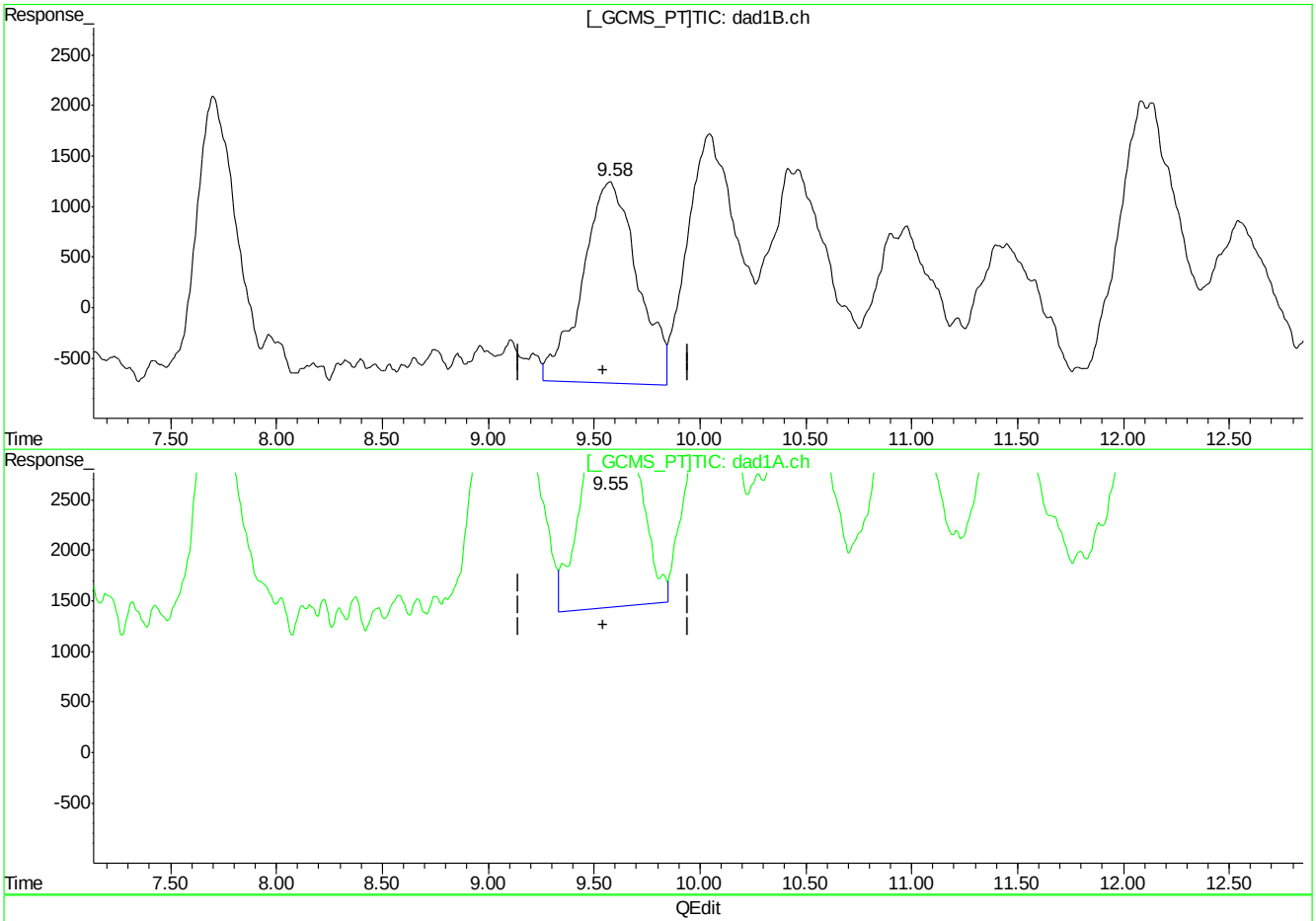
response 628213

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:50:53 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(11) Tetryl

9.57min 121.417ppb

response 359326

(11) Tetryl #2

9.56min 105.620ppb

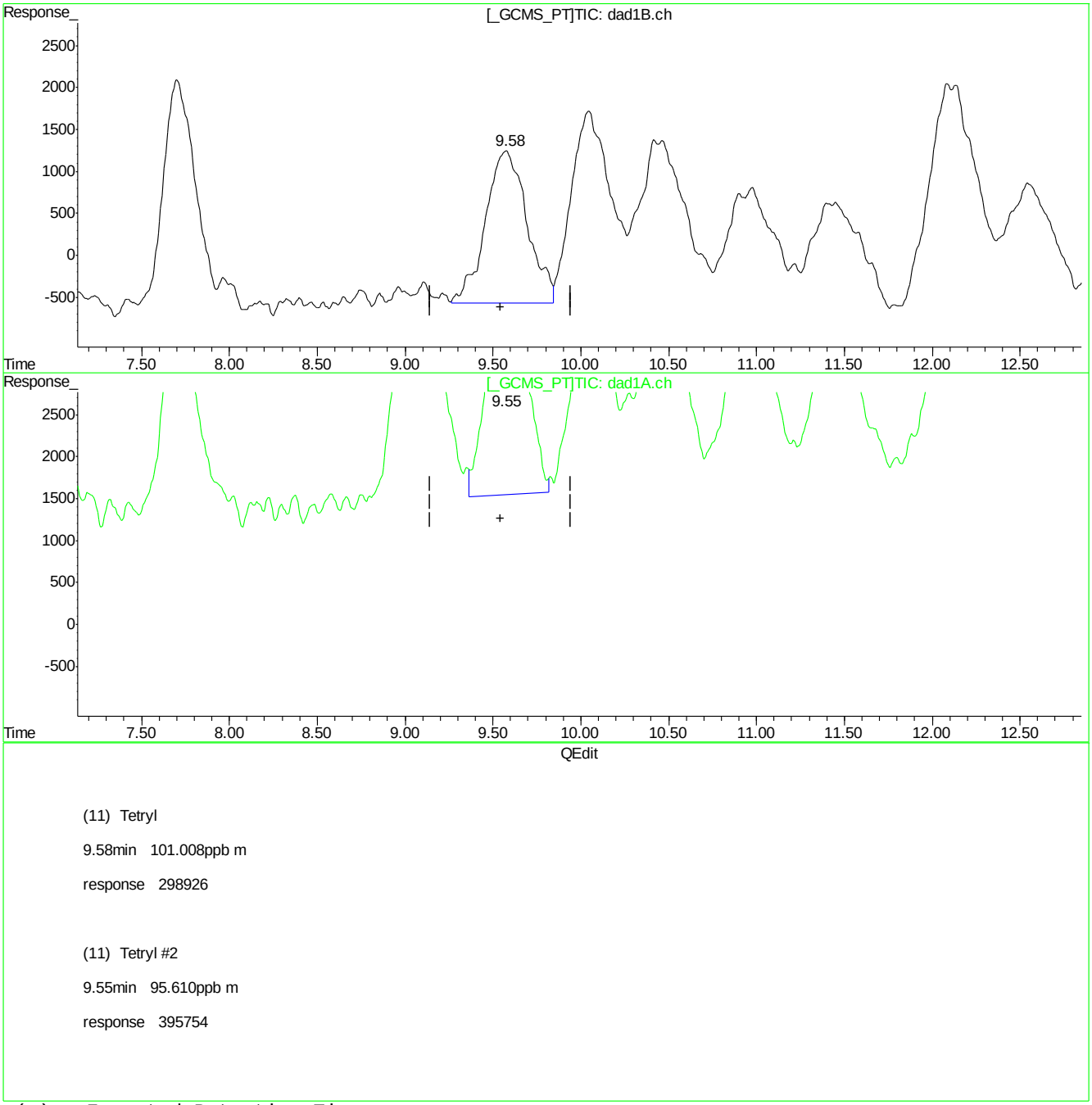
response 437188

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:51:09 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration

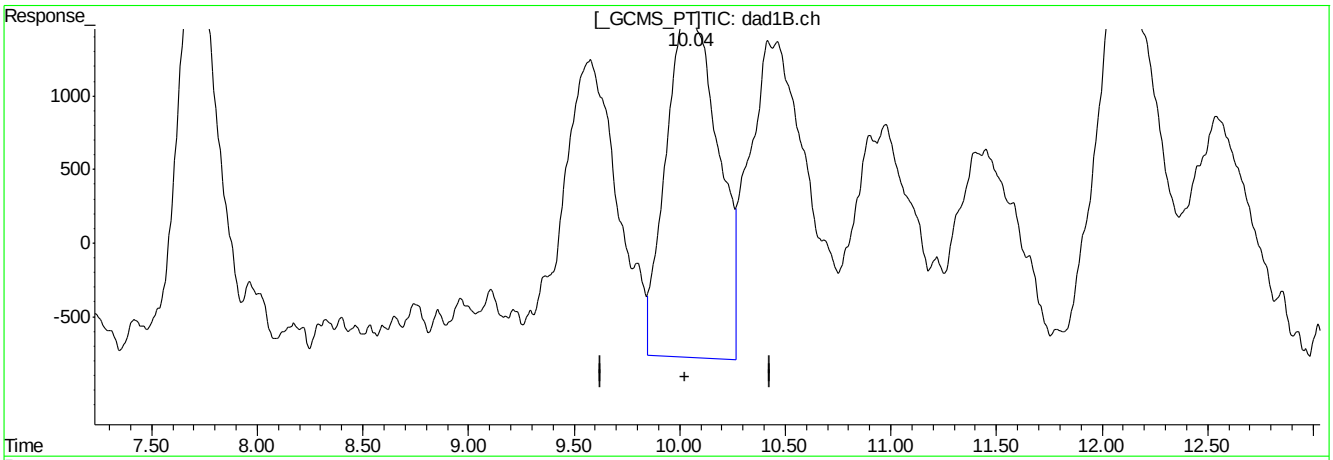


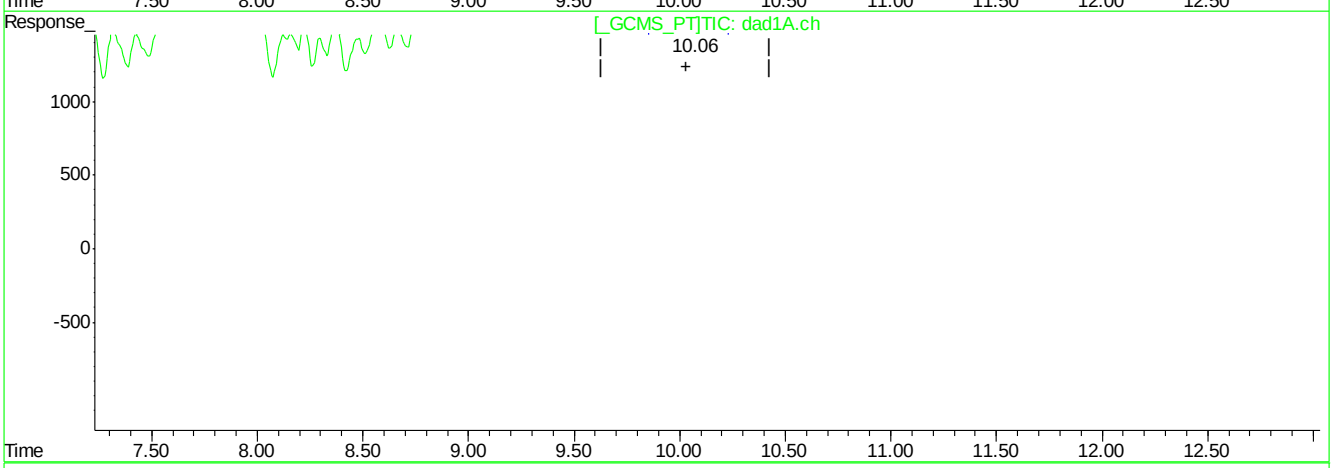
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:51:33 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.05min 103.218ppb

response 404299

(12) 2,4,6-Trinitrotoluene #2

10.06min 87.655ppb

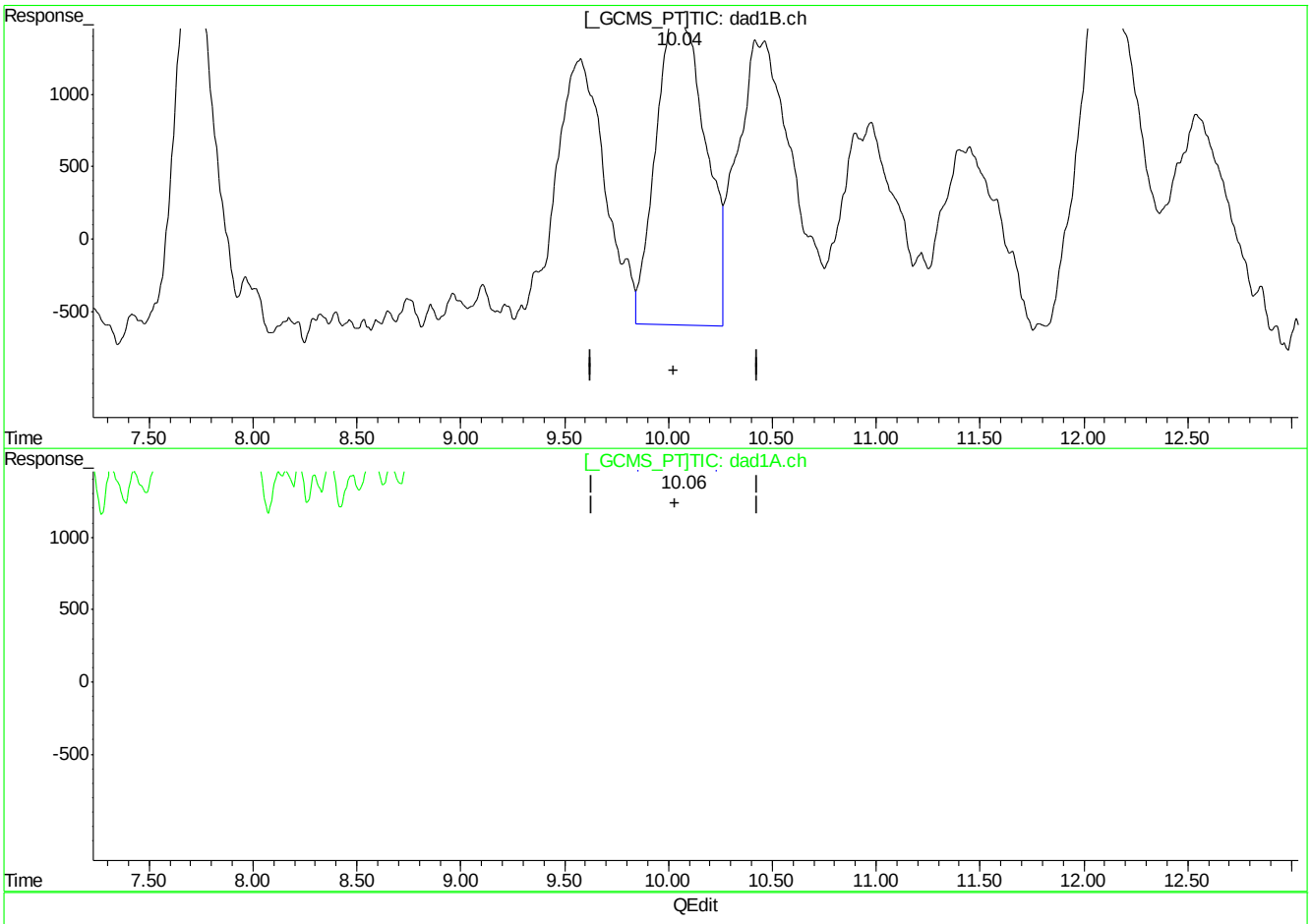
response 374837

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:52:09 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



QEdit

(12) 2,4,6-Trinitrotoluene

10.04min 90.775ppb m

response 355562

(12) 2,4,6-Trinitrotoluene #2

10.06min 87.655ppb

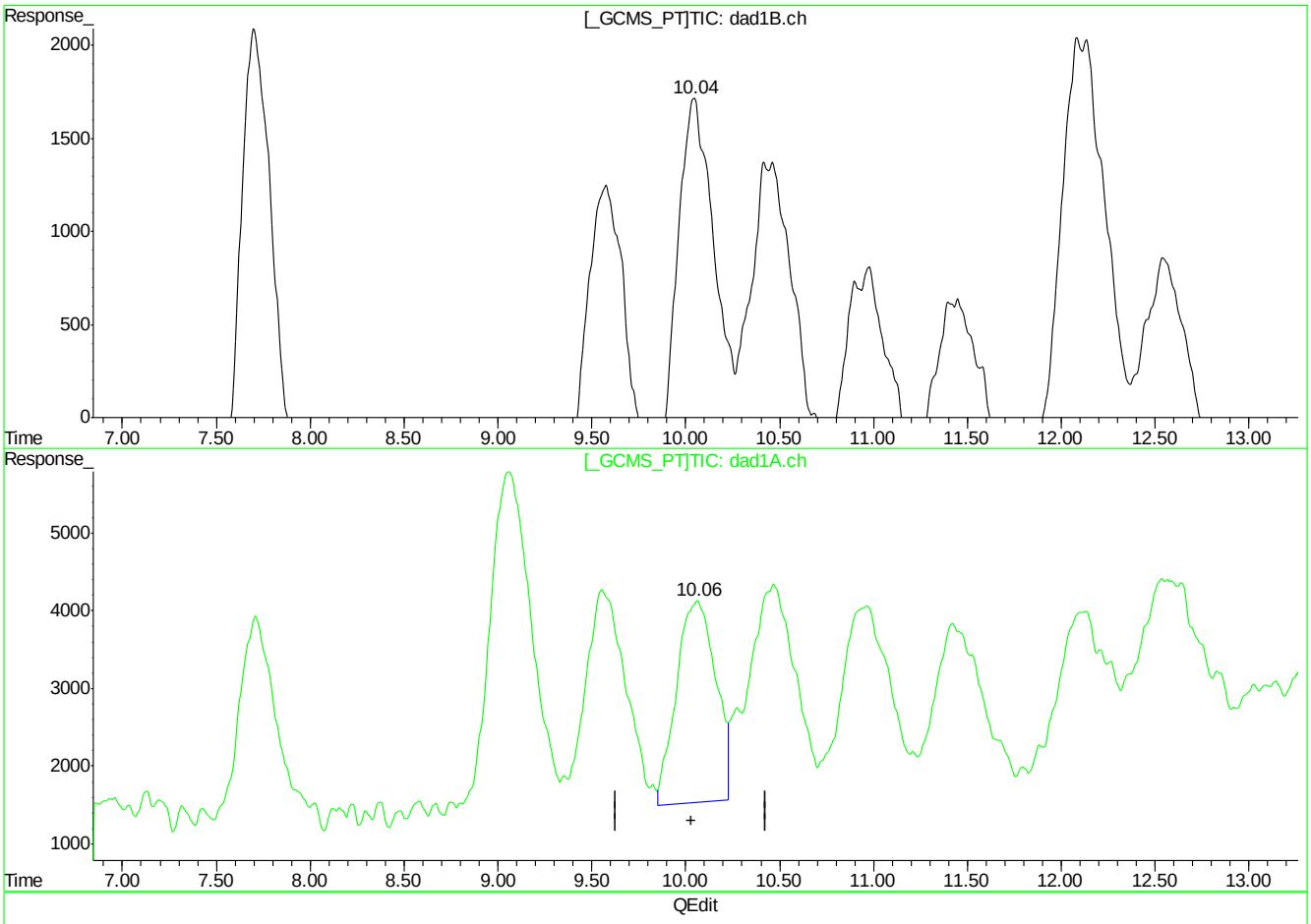
response 374837

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:52:22 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

10.04min 90.775ppb m

response 355562

(12) 2,4,6-Trinitrotoluene #2

10.06min 87.655ppb

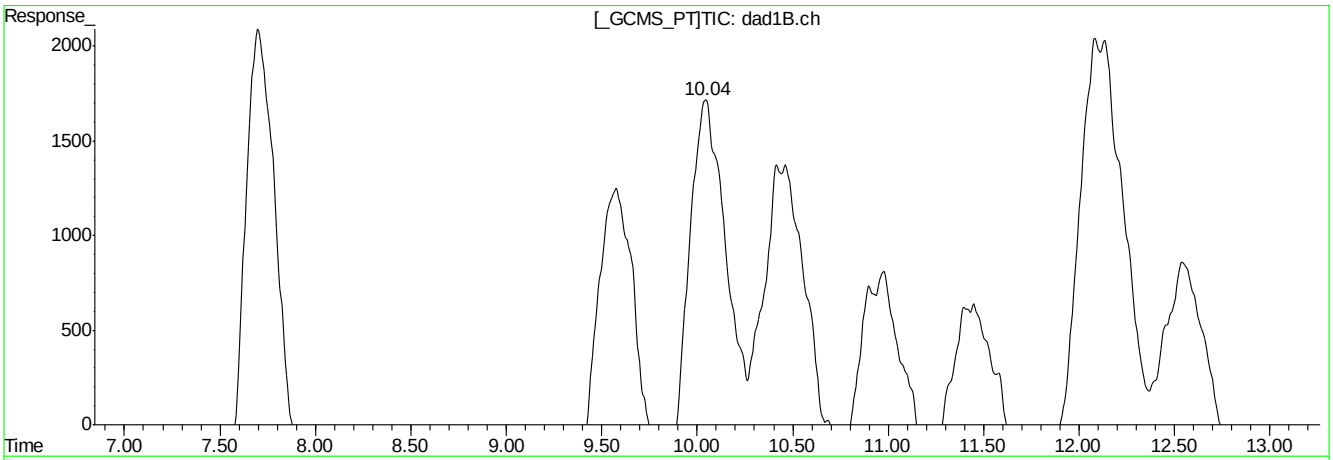
response 374837

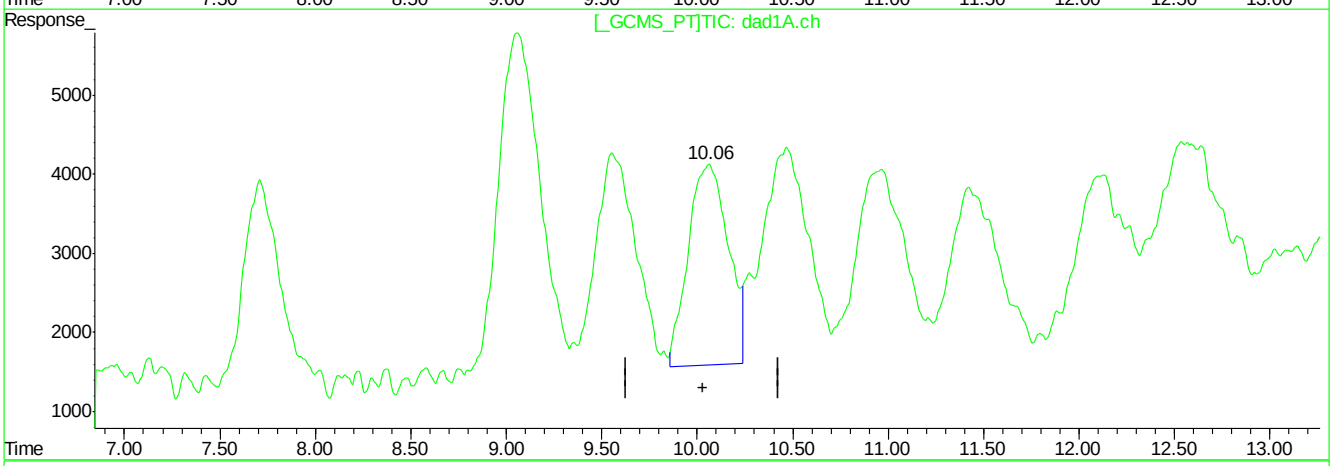
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:52:28 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.04min 90.775ppb m

response 355562

(12) 2,4,6-Trinitrotoluene #2

10.06min 84.920ppb m

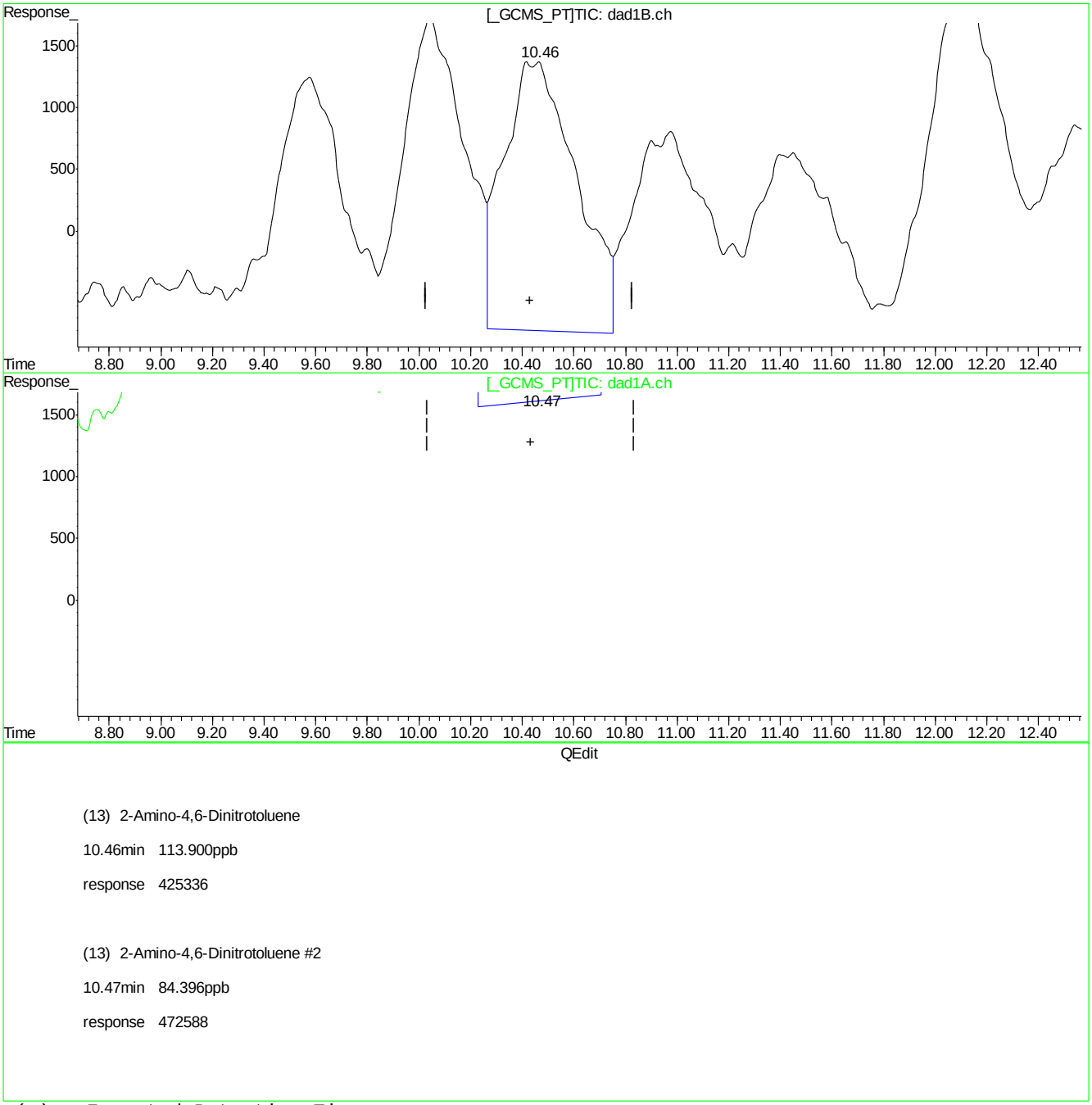
response 363139

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:52:38 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.46min 113.900ppb

response 425336

(13) 2-Amino-4,6-Dinitrotoluene #2

10.47min 84.396ppb

response 472588

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:52:56 2018

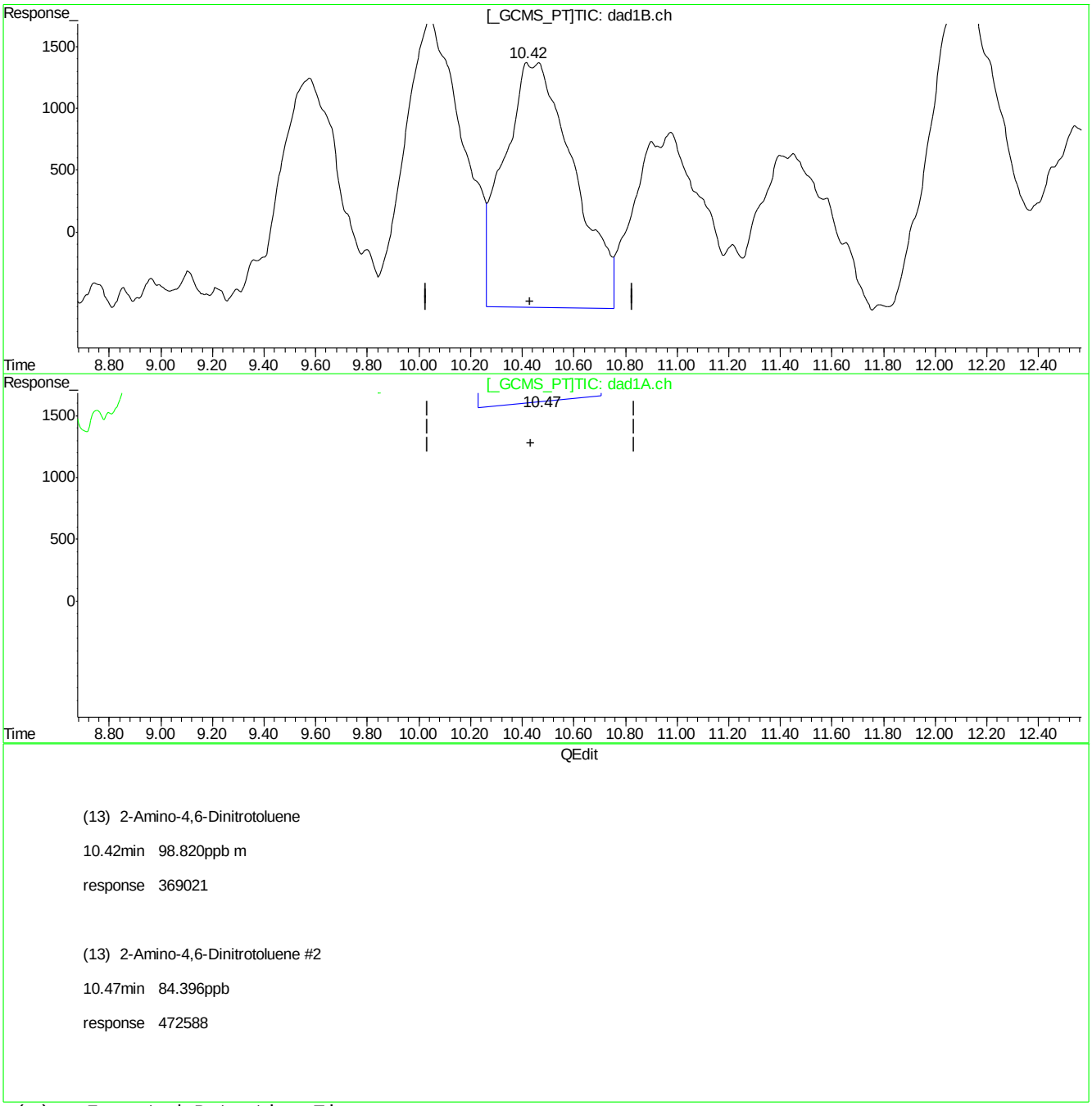
9.5.3.18

9

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.42min 98.820ppb m

response 369021

(13) 2-Amino-4,6-Dinitrotoluene #2

10.47min 84.396ppb

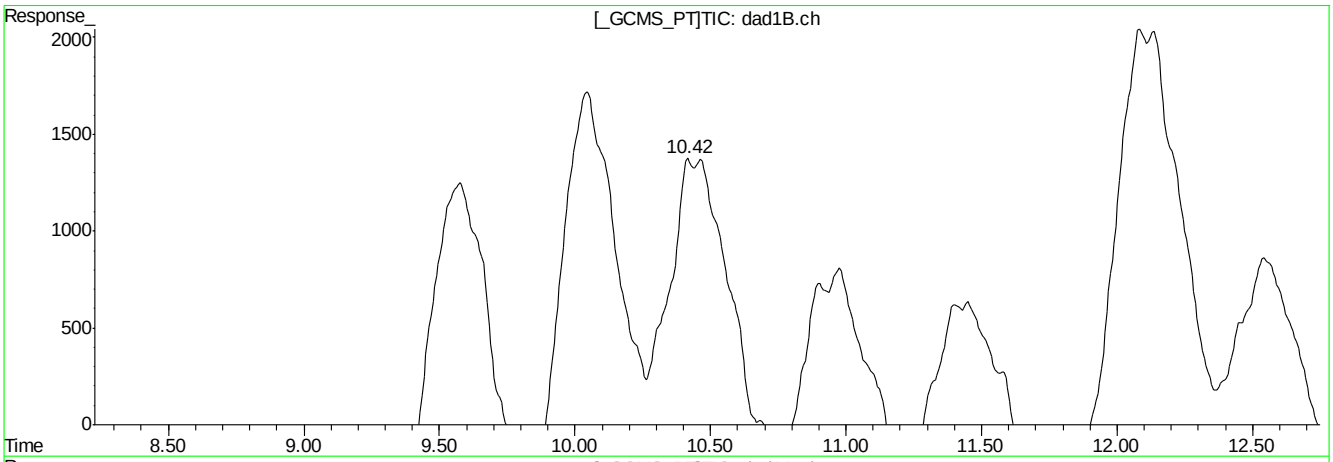
response 472588

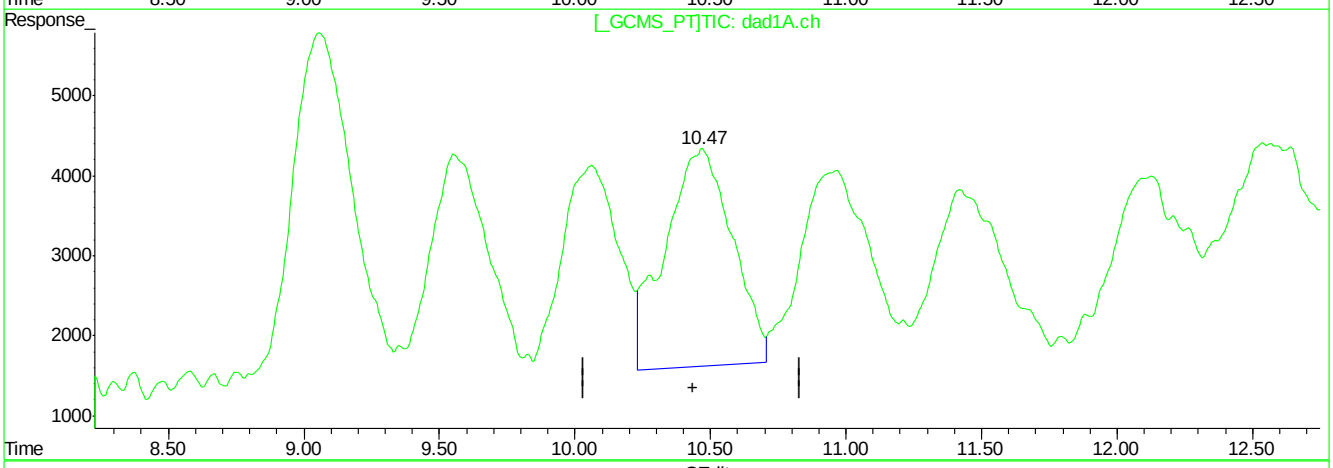
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:09 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.42min 98.820ppb m

response 369021

(13) 2-Amino-4,6-Dinitrotoluene #2

10.47min 84.396ppb

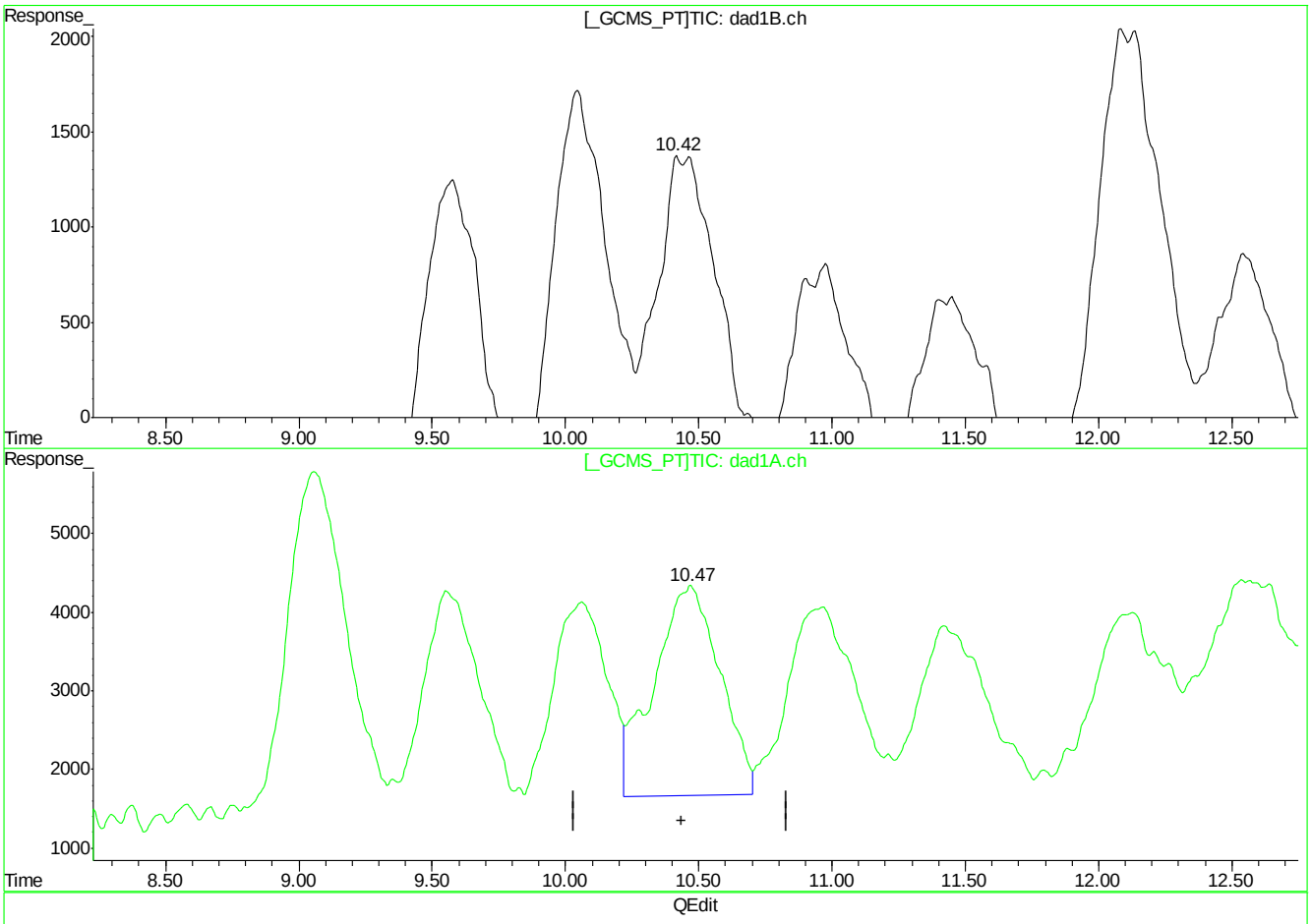
response 472588

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:13 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.42min 98.820ppb m

response 369021

(13) 2-Amino-4,6-Dinitrotoluene #2

10.47min 82.247ppb m

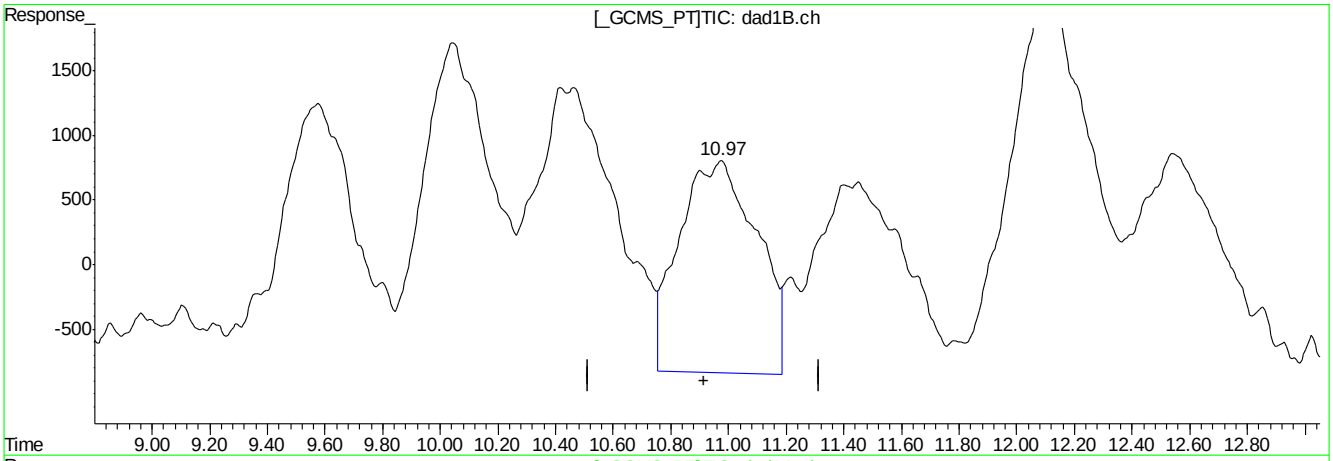
response 460555

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:23 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(14) 4-Amino-2,6-Dinitrotoluene

10.98min 116.814ppb

response 308528

(14) 4-Amino-2,6-Dinitrotoluene #2

10.96min 77.377ppb

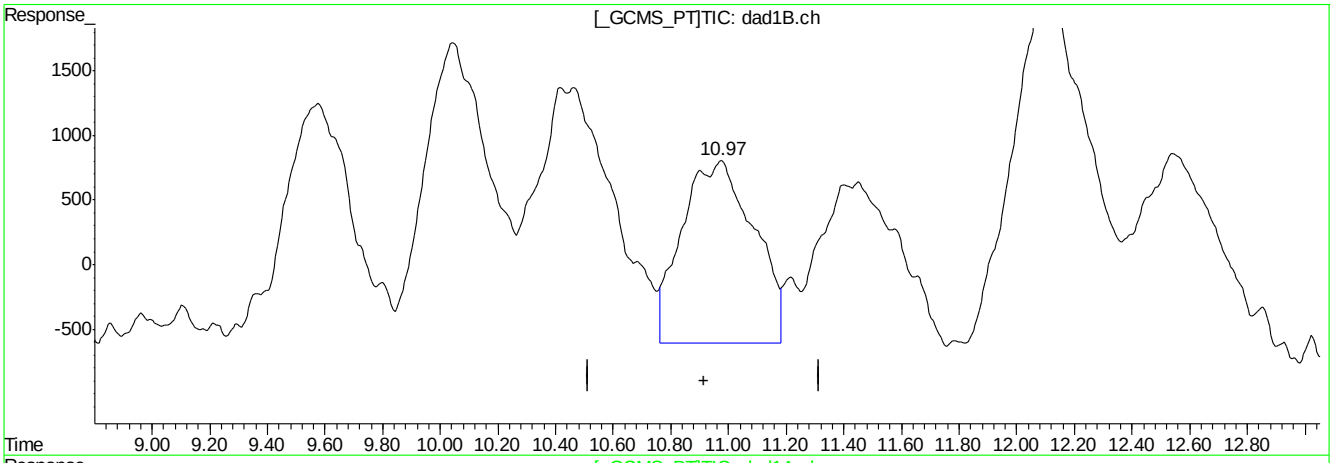
response 412438

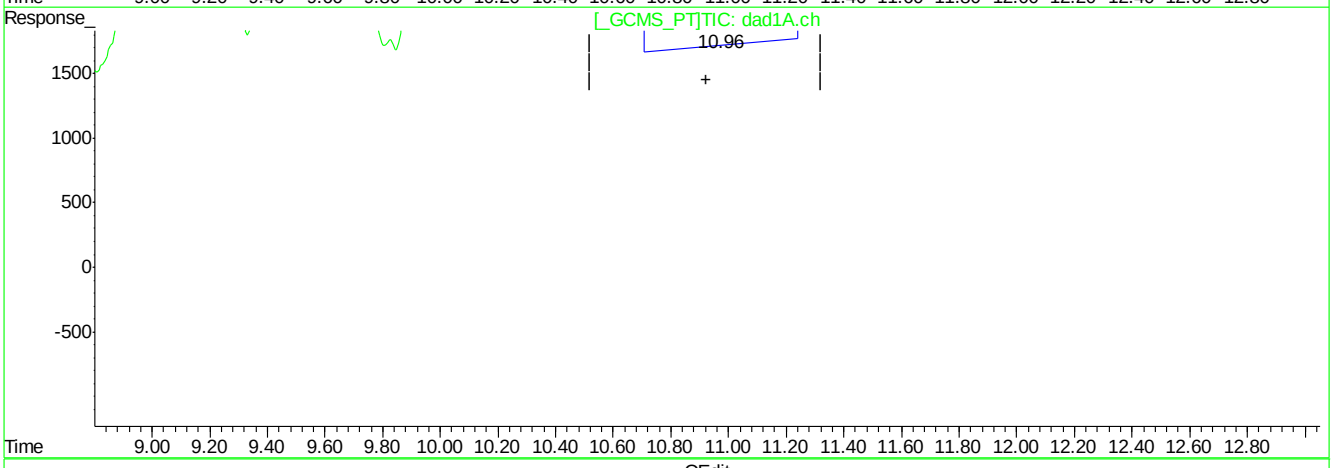
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:37 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.97min 92.796ppb m

response 244977

(14) 4-Amino-2,6-Dinitrotoluene #2

10.96min 77.377ppb

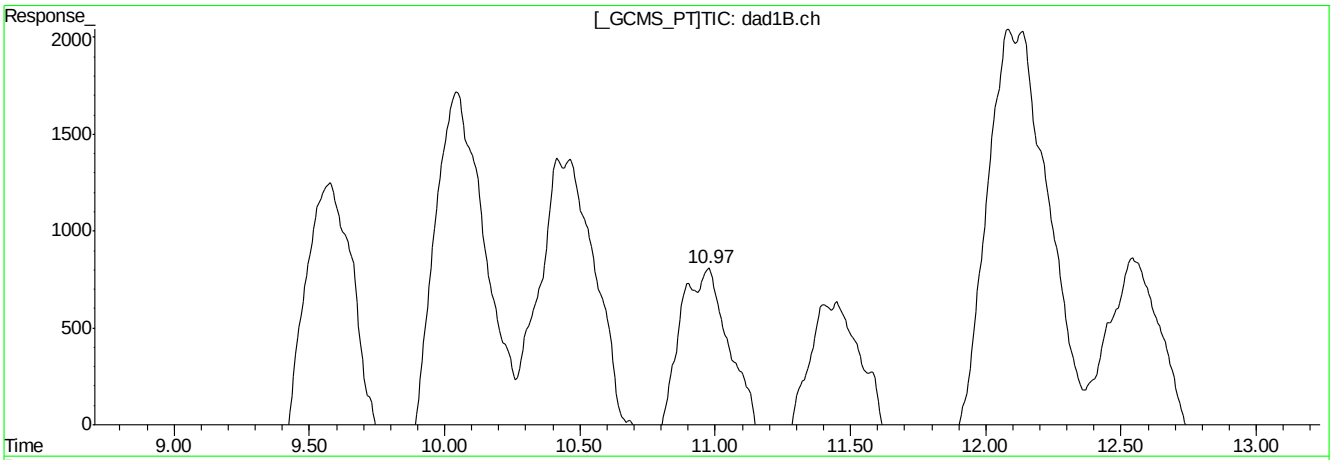
response 412438

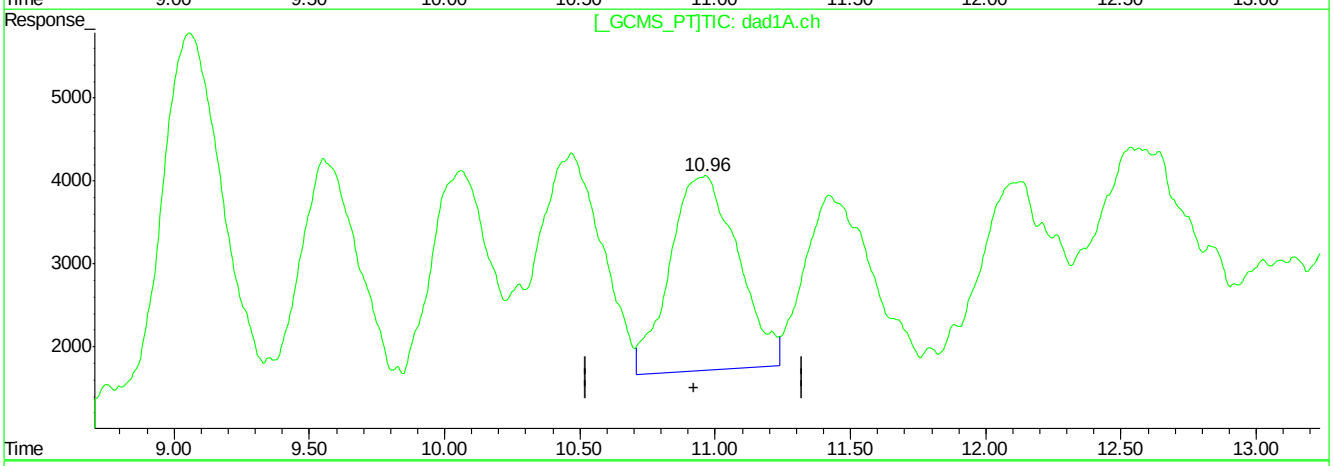
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:46 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.97min 92.796ppb m

response 244977

(14) 4-Amino-2,6-Dinitrotoluene #2

10.96min 77.377ppb

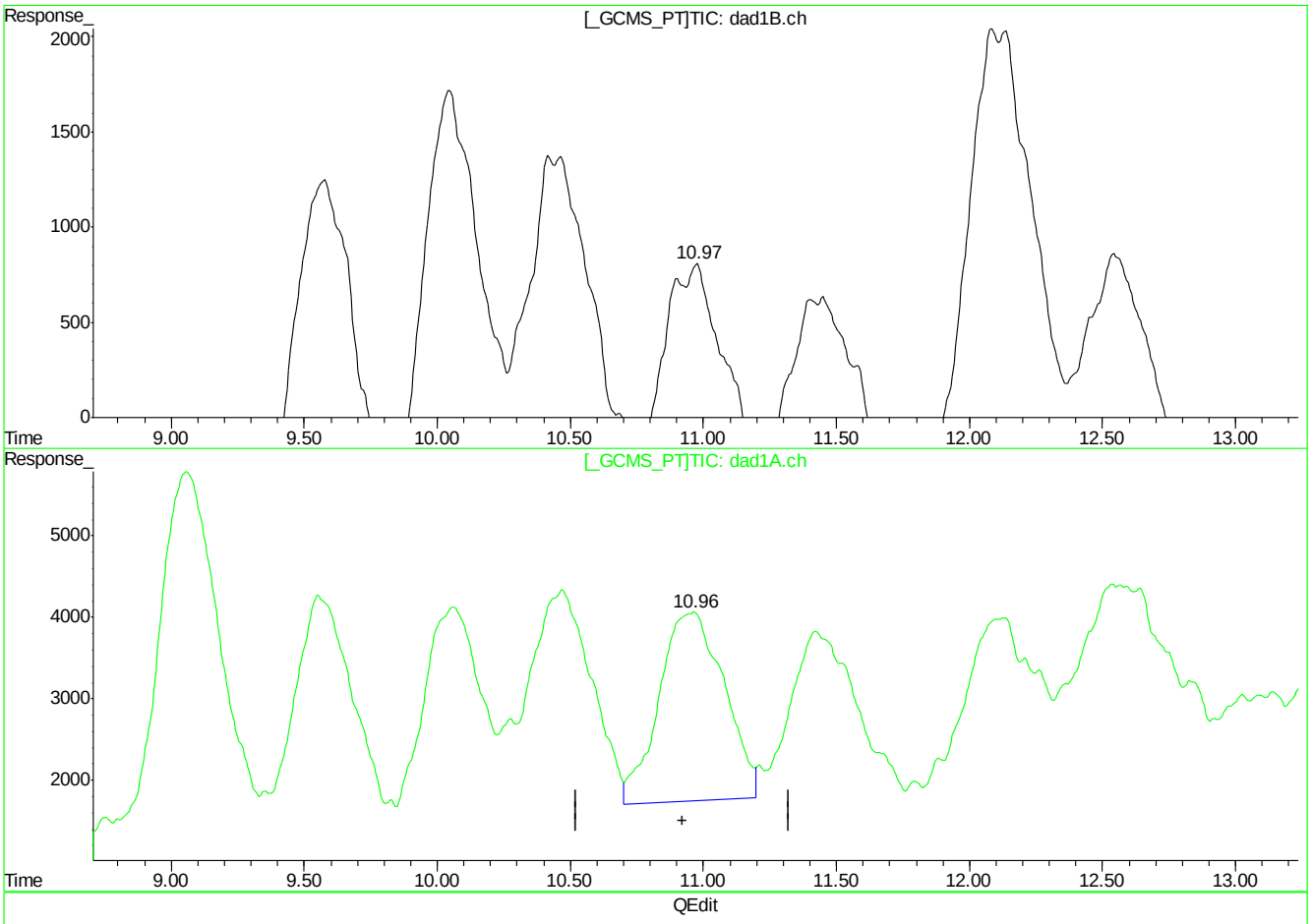
response 412438

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:49 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(14) 4-Amino-2,6-Dinitrotoluene

10.97min 92.796ppb m

response 244977

(14) 4-Amino-2,6-Dinitrotoluene #2

10.96min 74.116ppb m

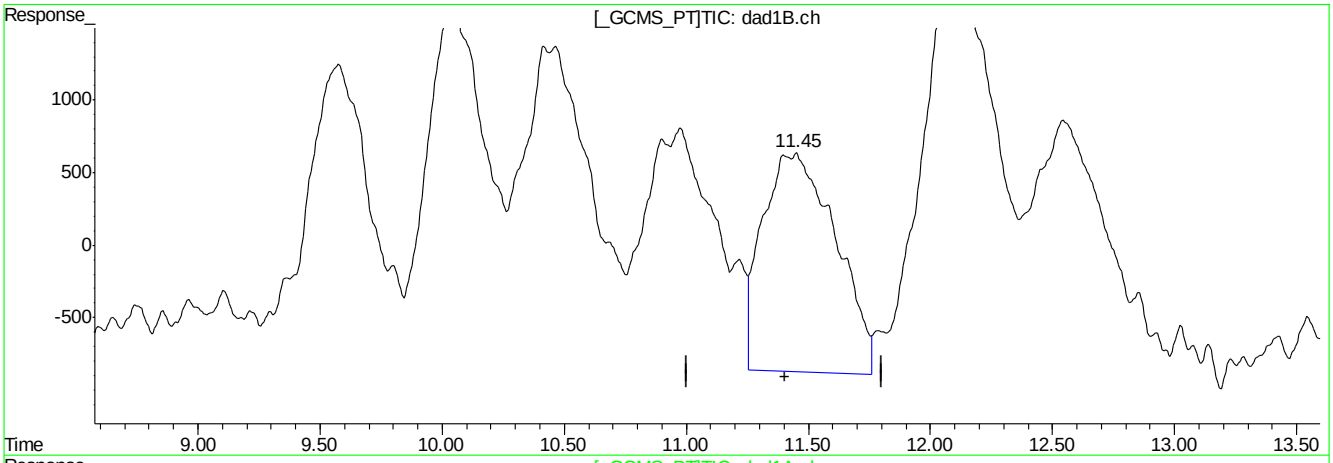
response 395056

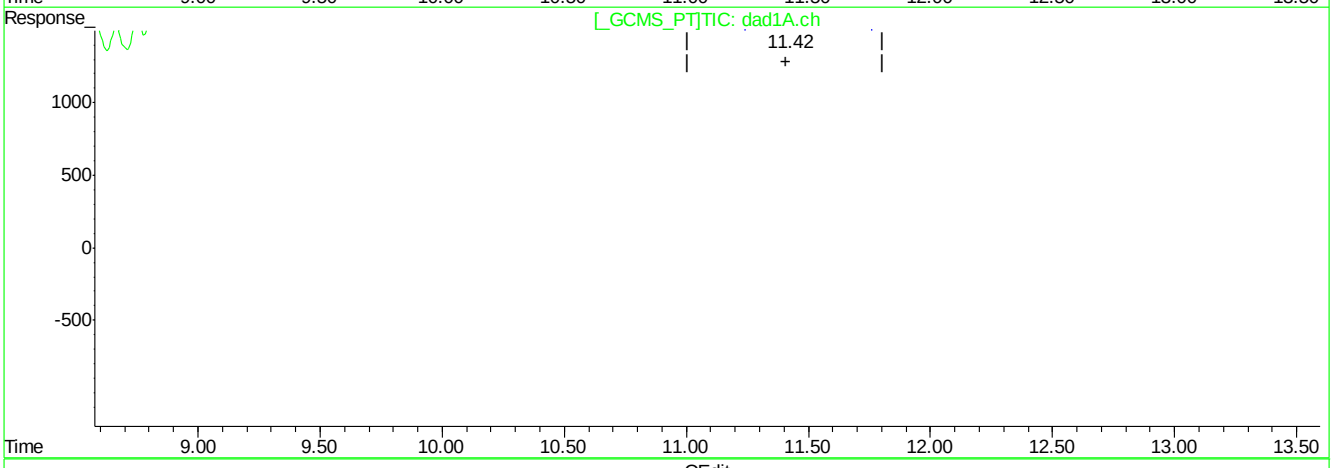
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:58 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.45min 126.683ppb

response 315252

(15) 3,4-Dinitrotoluene #2 (S)

11.42min 80.133ppb

response 337052

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:54:21 2018

9.5.3.26

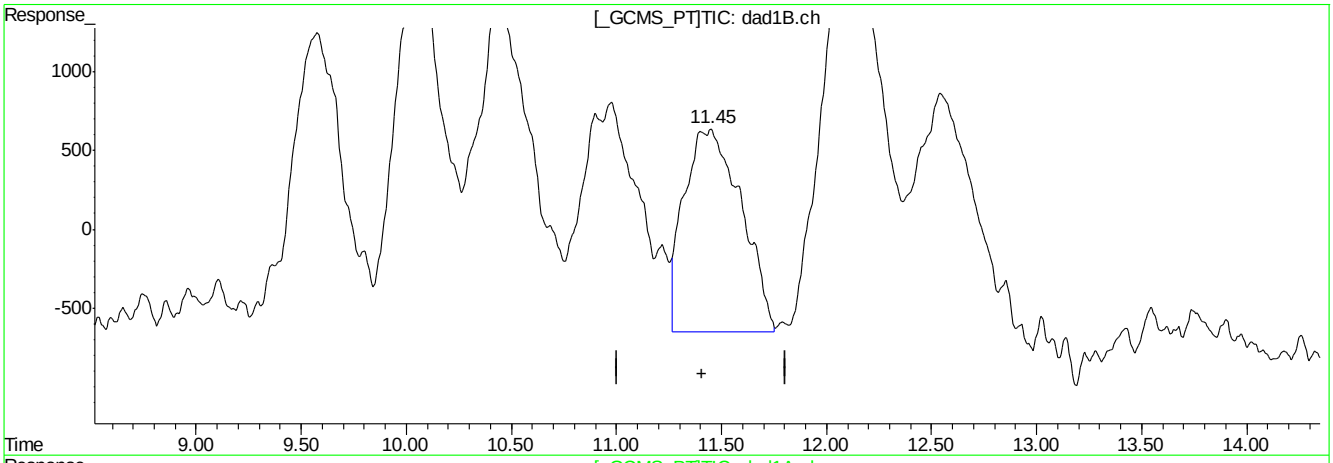
9

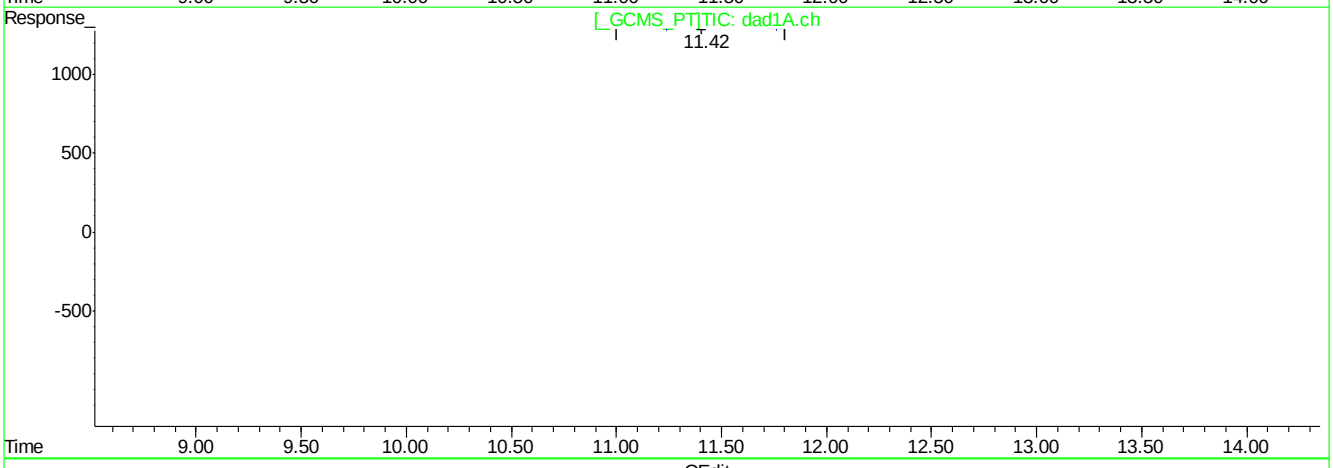
BB060202.D edits: 3,4-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.45min 97.867ppb m

response 243543

(15) 3,4-Dinitrotoluene #2 (S)

11.42min 80.133ppb

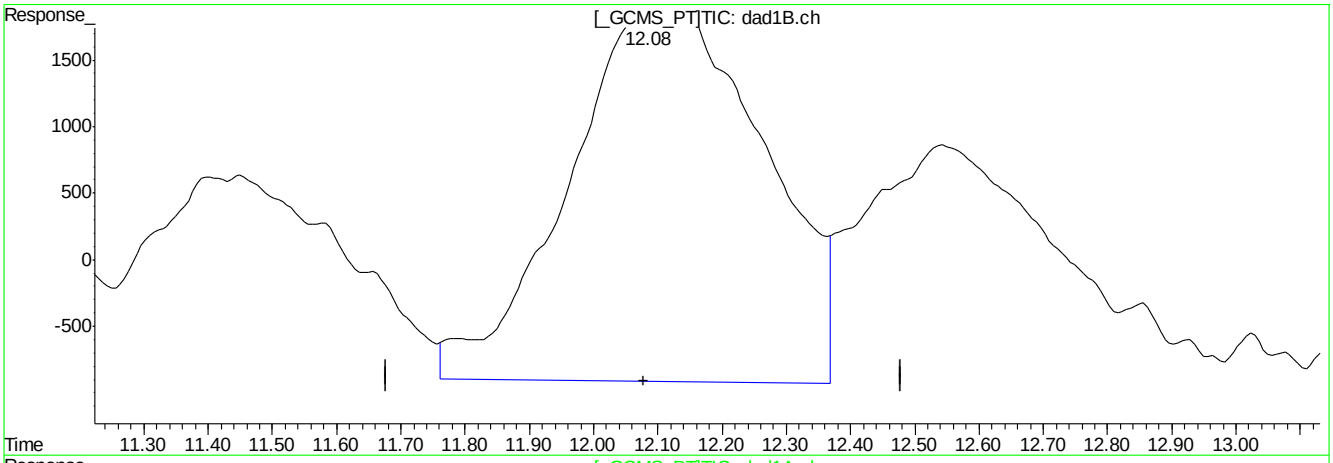
response 337052

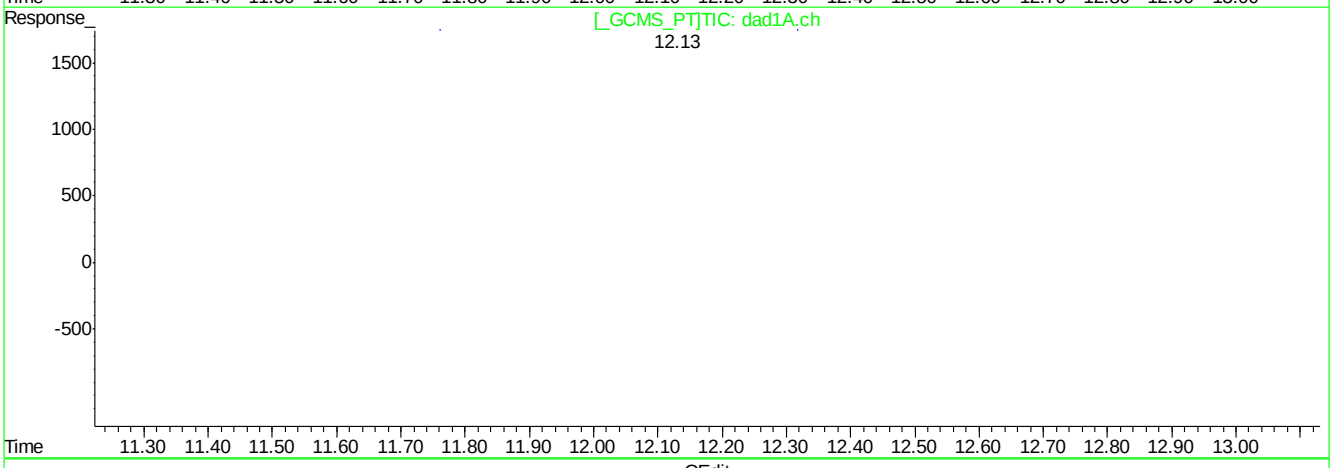
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:54:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.09min 116.004ppb

response 601850

(16) 2,4-Dinitrotoluene #2

12.13min 99.321ppb

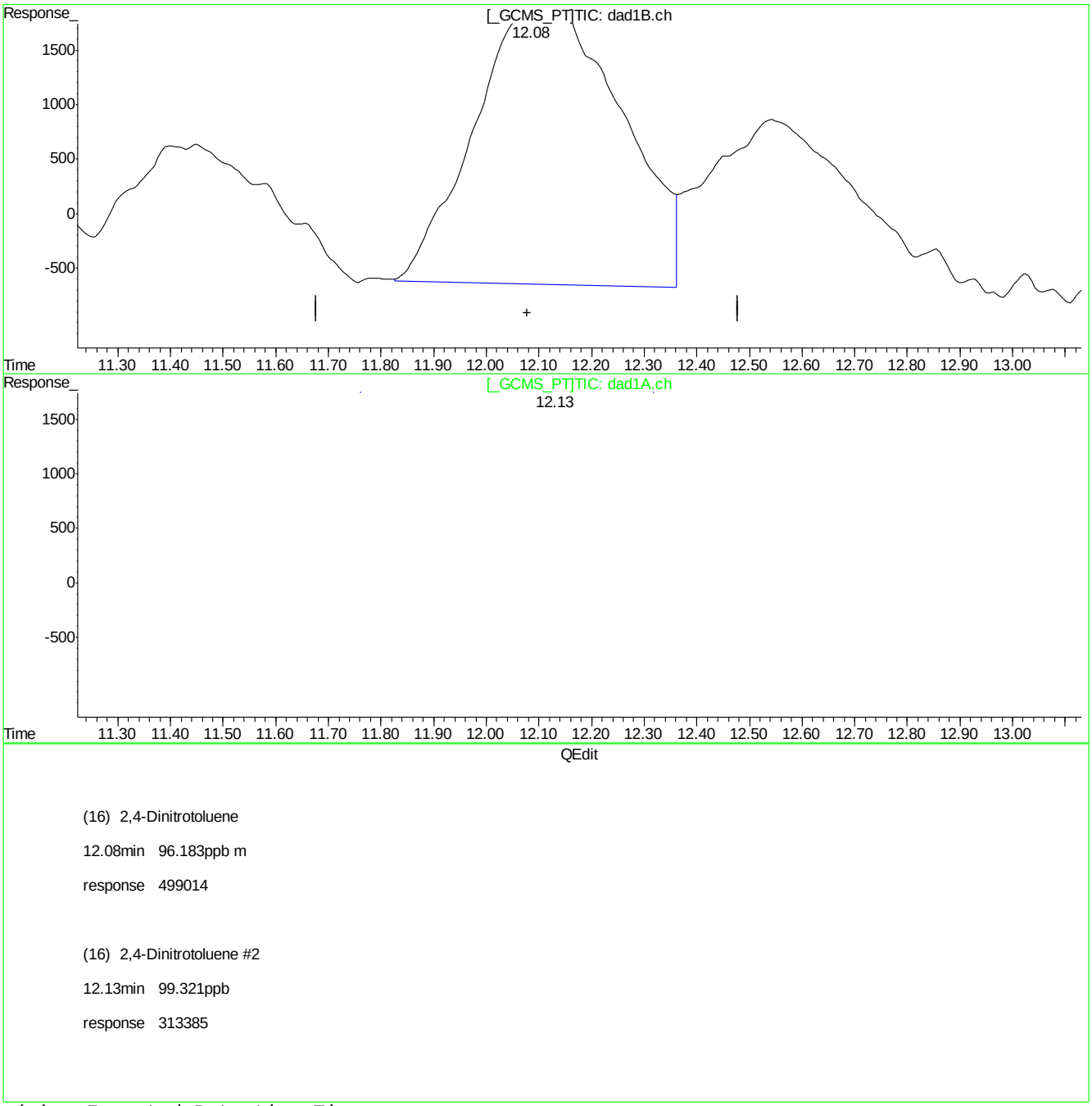
response 313385

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:54:40 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration

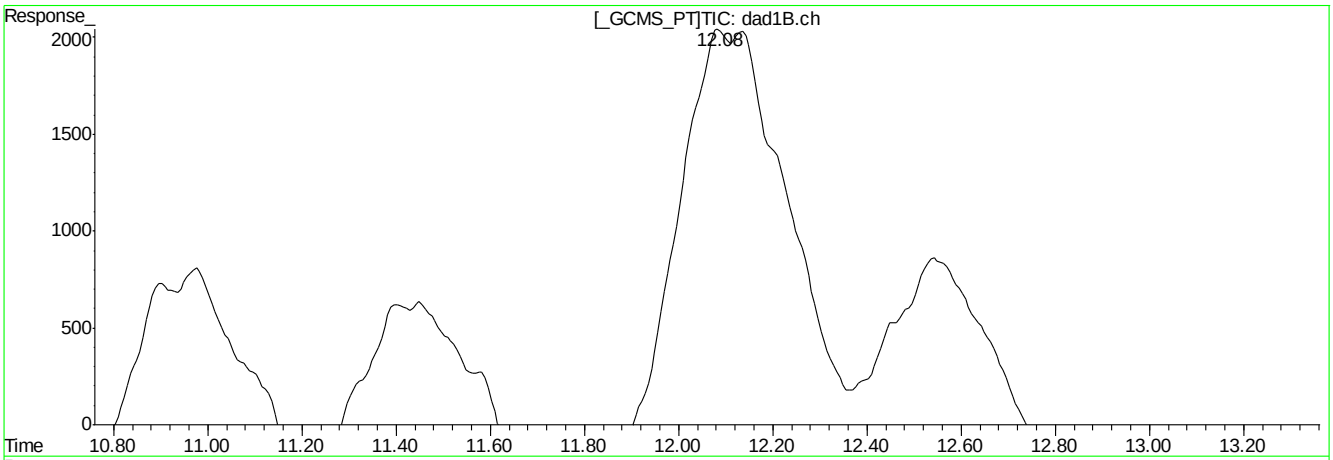


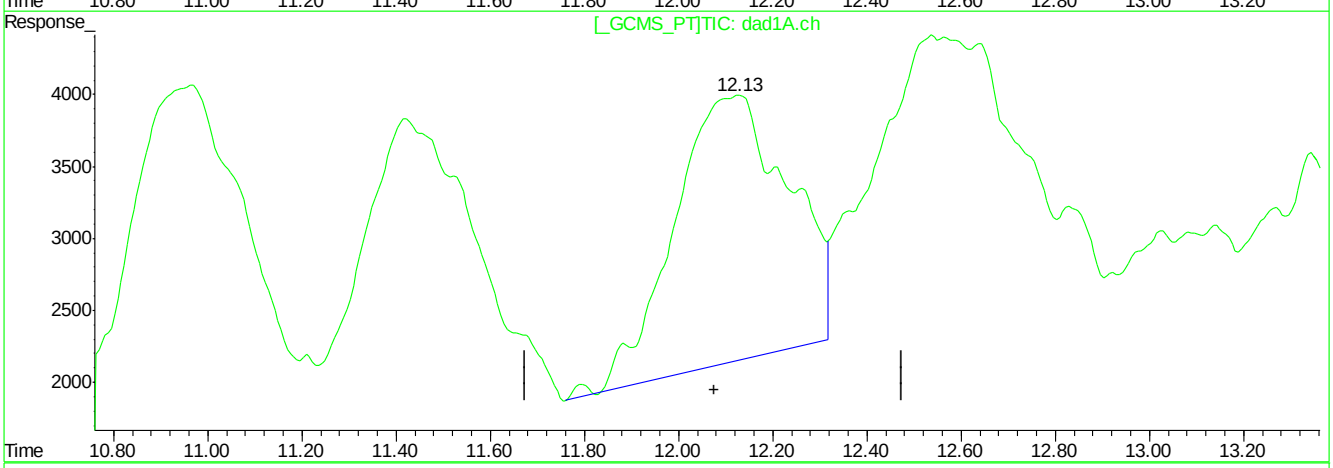
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:54:48 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.08min 96.183ppb m

response 499014

(16) 2,4-Dinitrotoluene #2

12.13min 99.321ppb

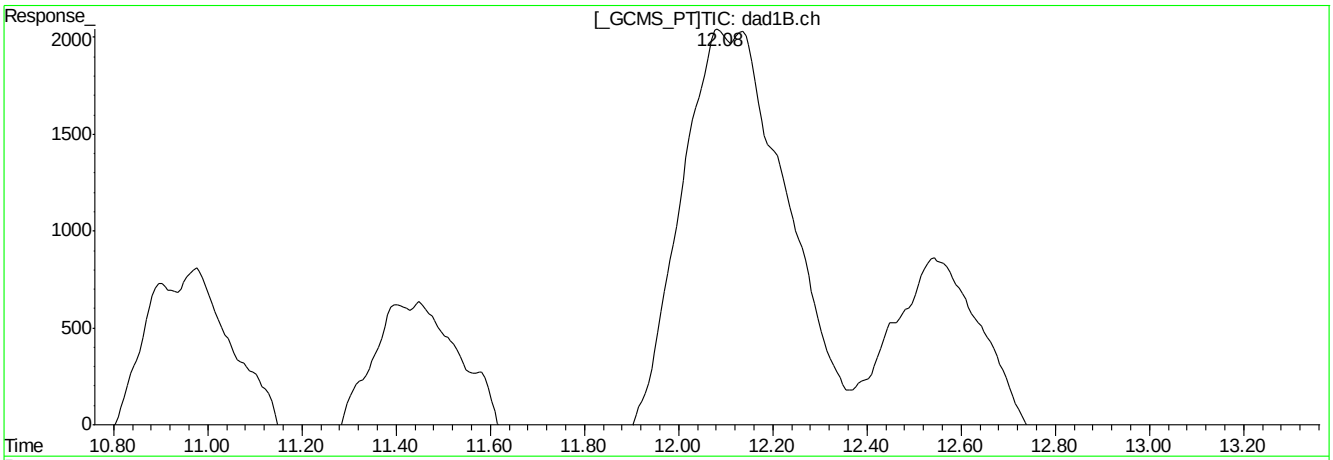
response 313385

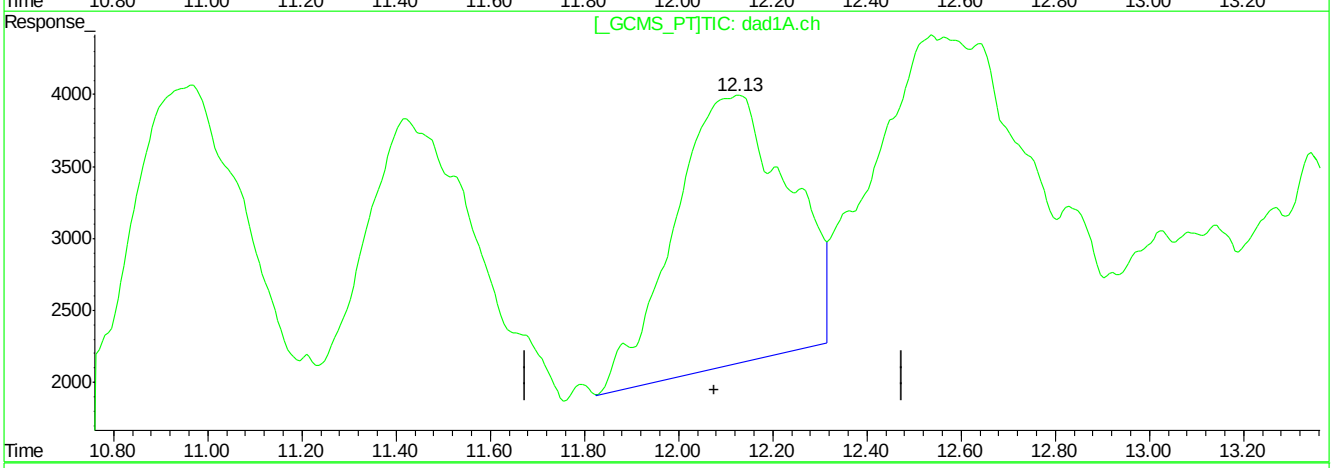
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:54:53 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.08min 96.183ppb m

response 499014

(16) 2,4-Dinitrotoluene #2

12.13min 99.839ppb m

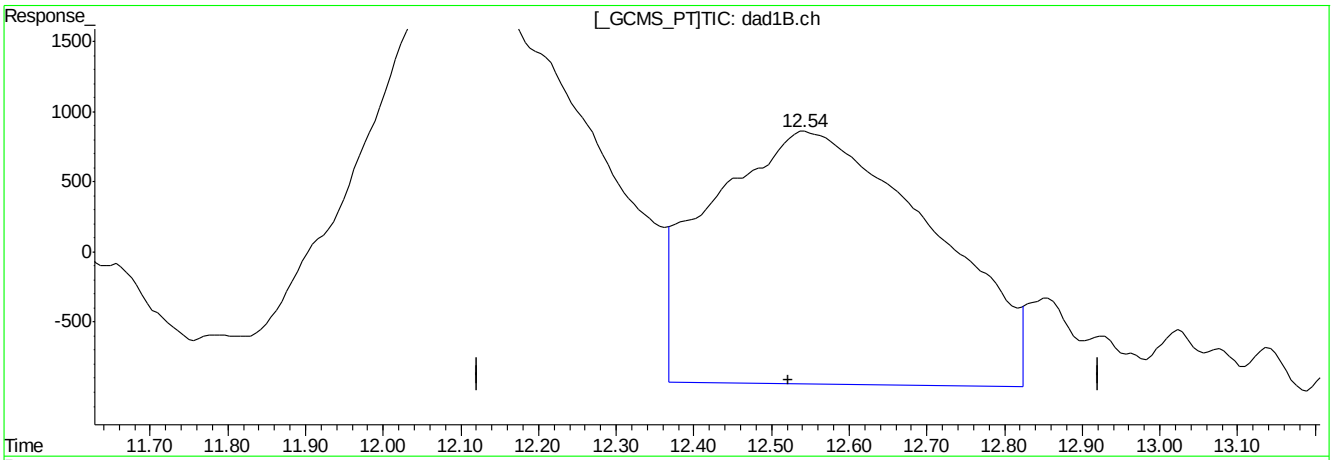
response 315018

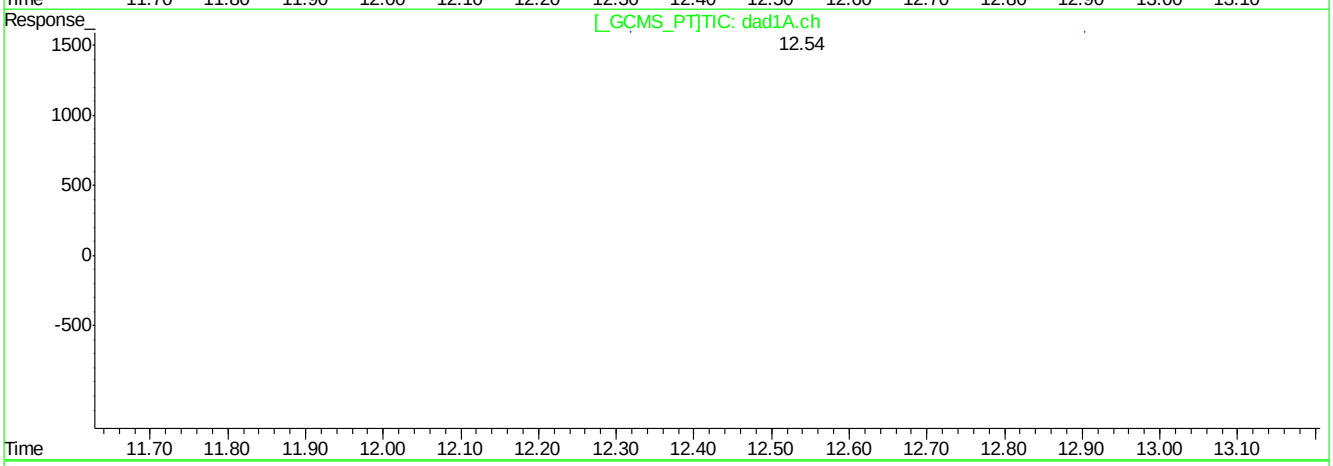
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:04 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 122.083ppb

response 359348

(17) 2,6-Dinitrotoluene #2

12.54min 111.674ppb

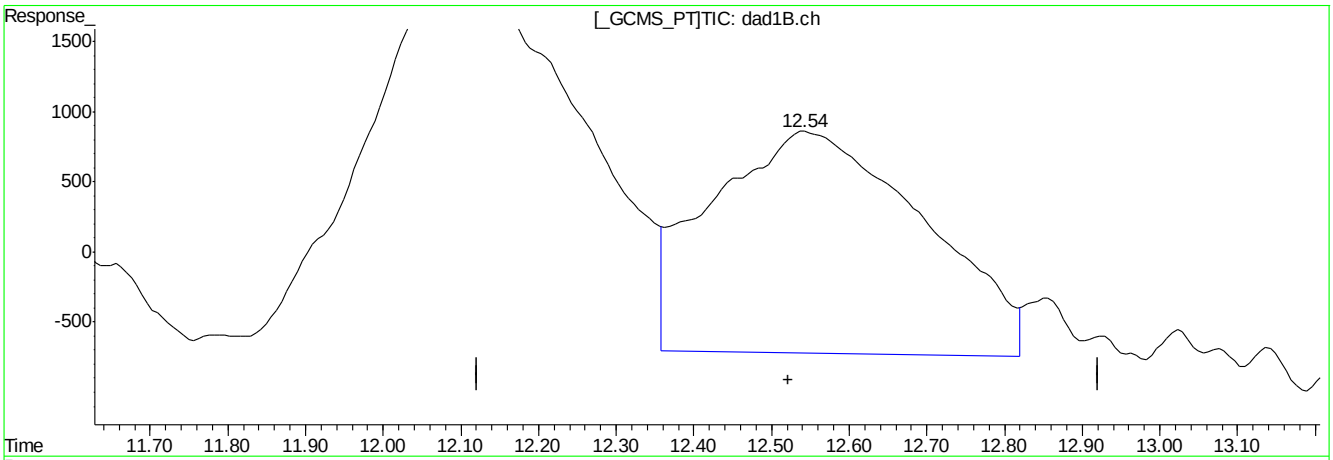
response 412058

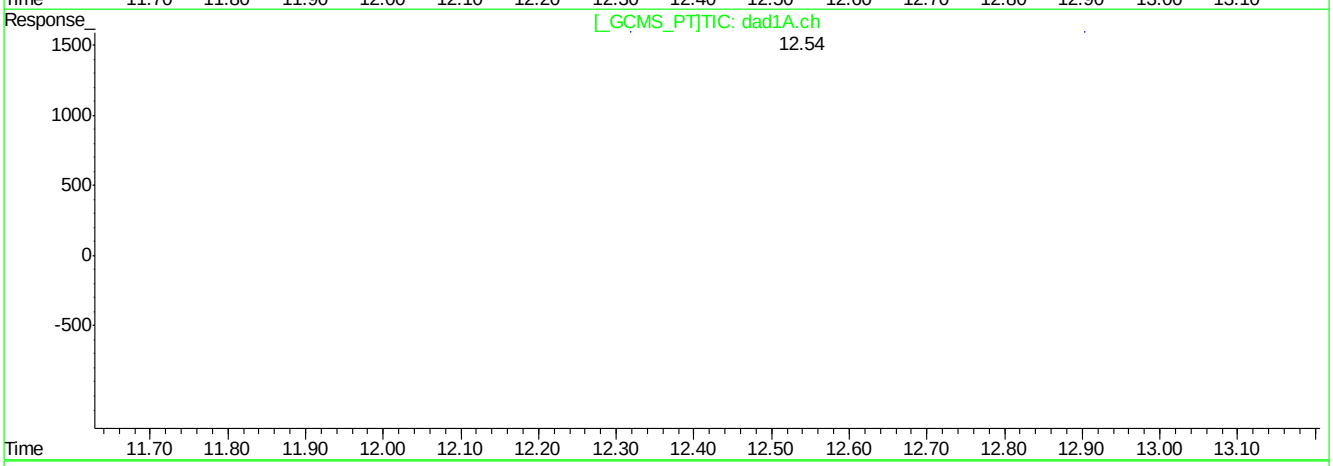
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:13 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.54min 102.534ppb m

response 301682

(17) 2,6-Dinitrotoluene #2

12.54min 111.674ppb

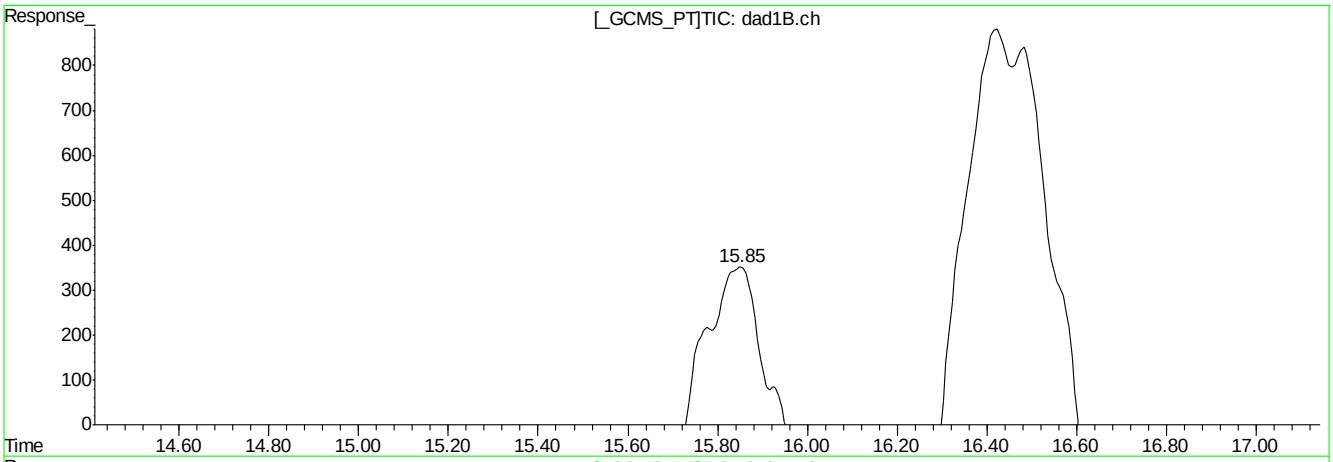
response 412058

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:20 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.85min 105.925ppb

response 273711

(18) o-Nitrotoluene #2

15.84min 82.154ppb

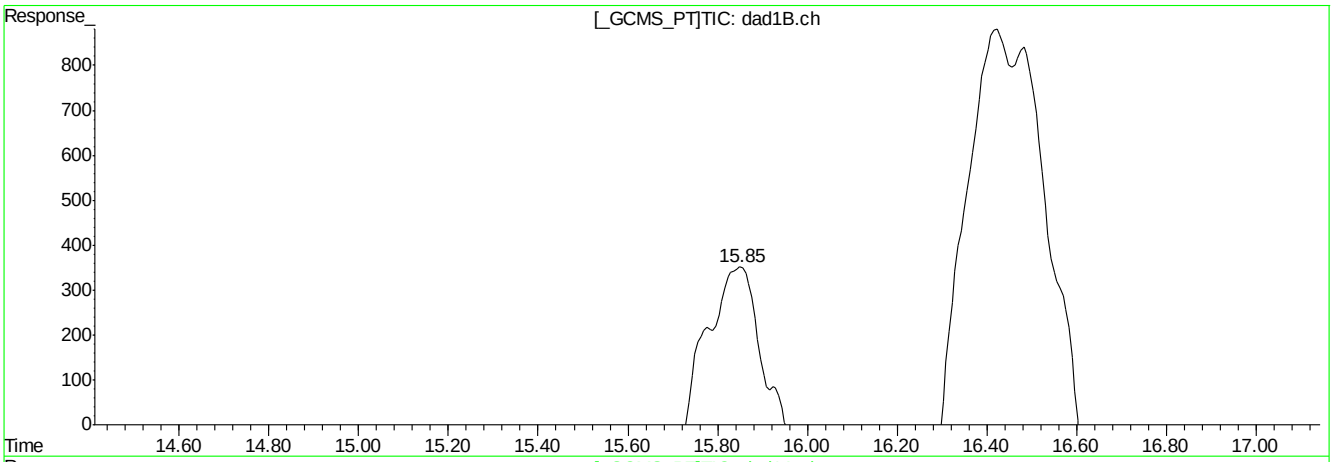
response 273645

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:31 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.85min 105.925ppb

response 273711

(18) o-Nitrotoluene #2

15.83min 109.241ppb m

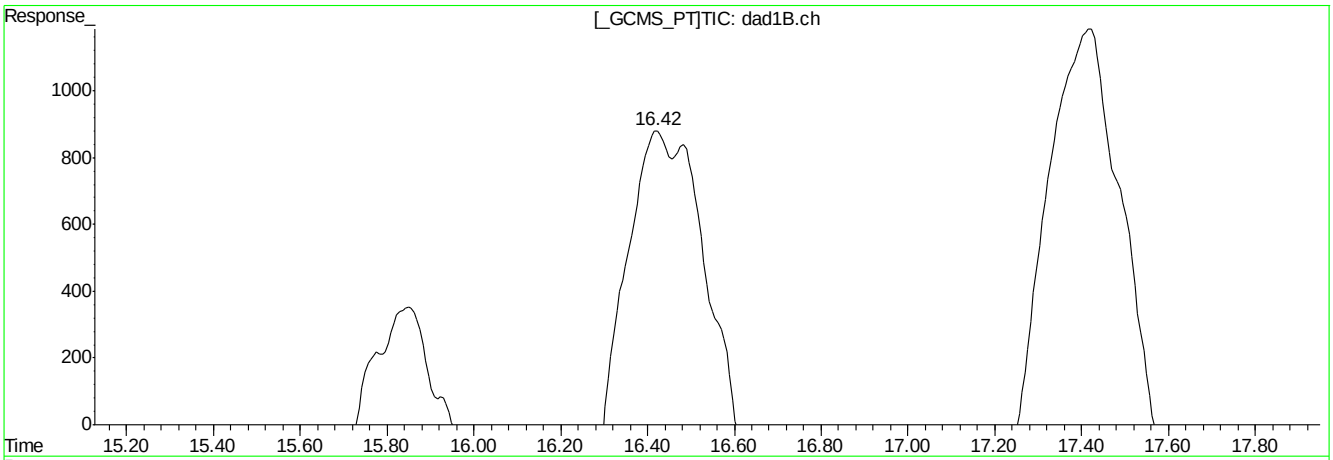
response 363866

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:39 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.42min 98.732ppb

response 394551

(19) p-Nitrotoluene #2

16.44min 47.202ppb

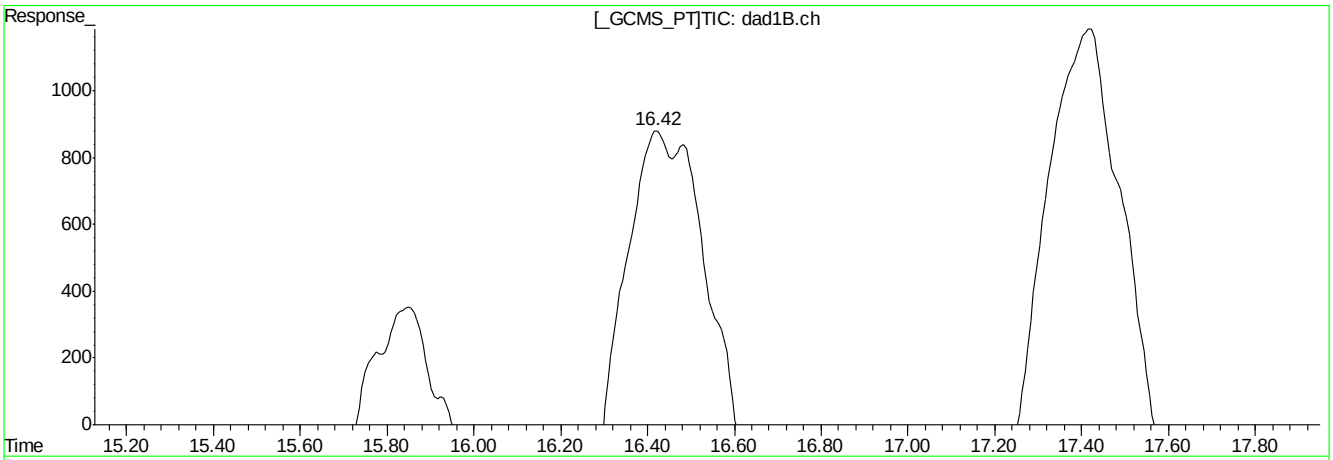
response 149474

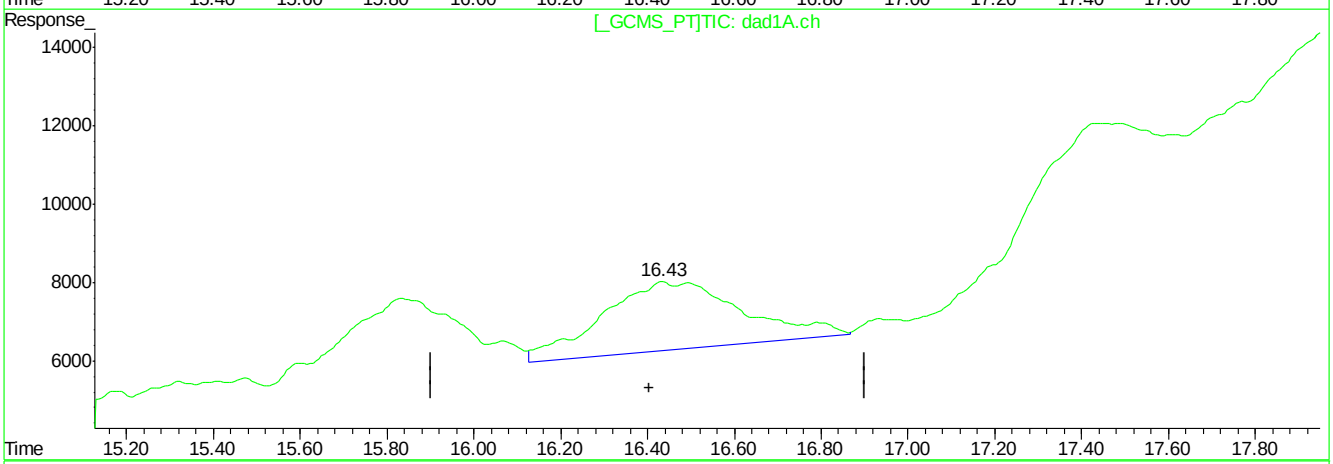
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:46 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.42min 98.732ppb

response 394551

(19) p-Nitrotoluene #2

16.43min 124.506ppb m

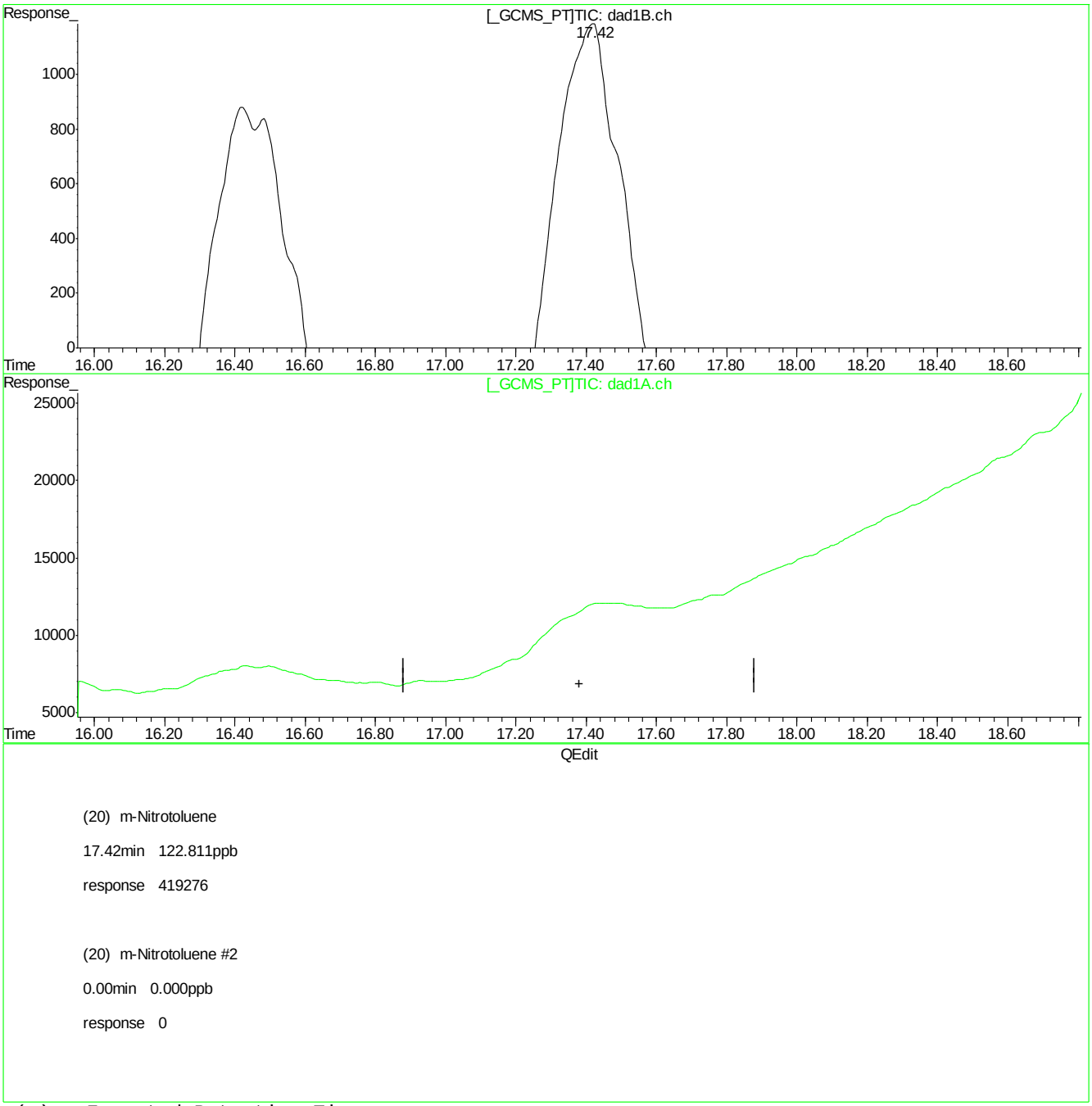
response 394268

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:54 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

17.42min 122.811ppb

response 419276

(20) m-Nitrotoluene #2

0.00min 0.000ppb

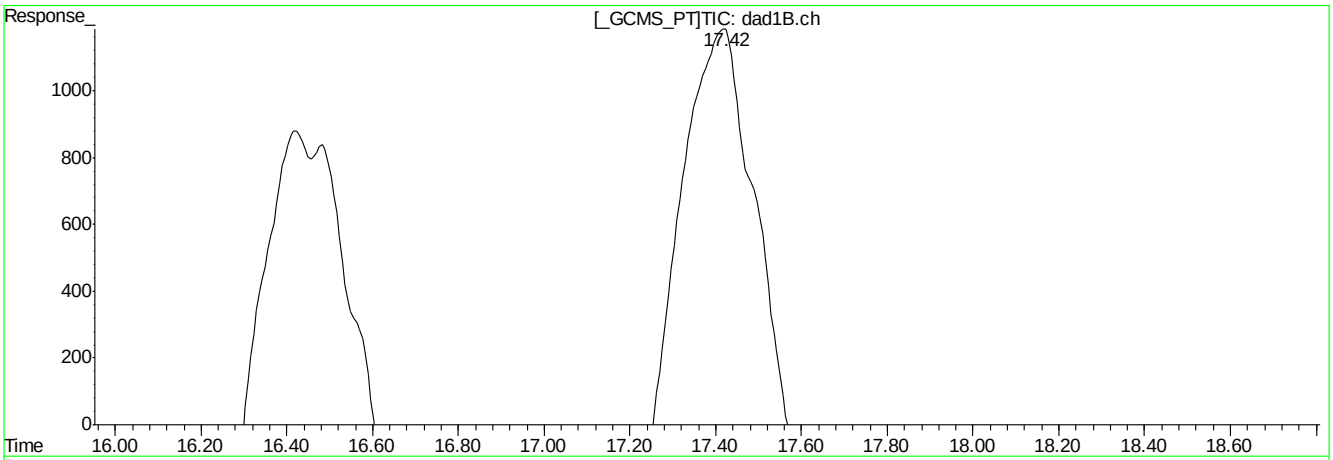
response 0

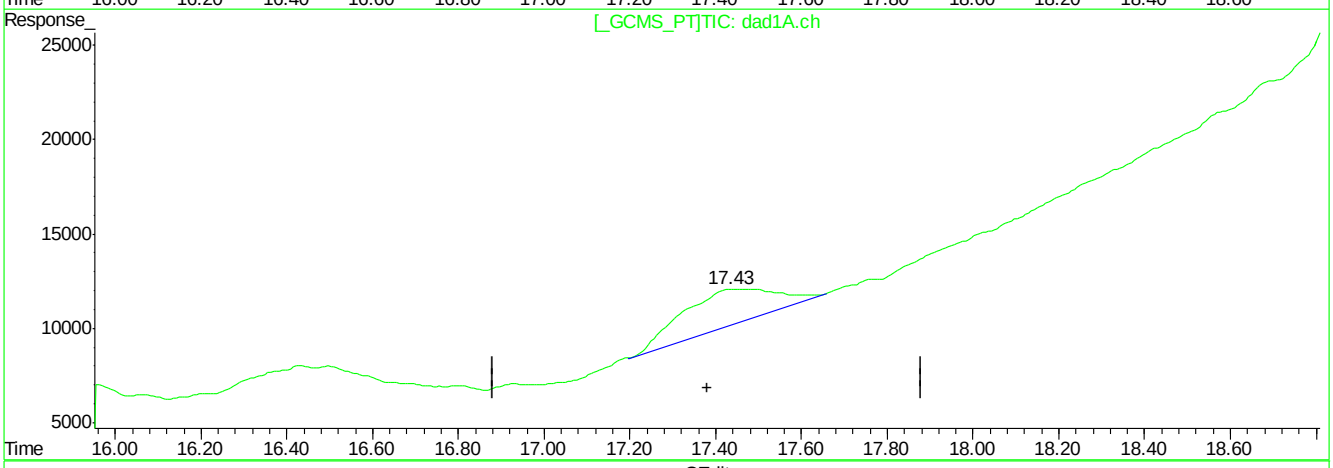
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:56:03 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.42min 122.811ppb

response 419276

(20) m-Nitrotoluene #2

17.43min 83.460ppb m

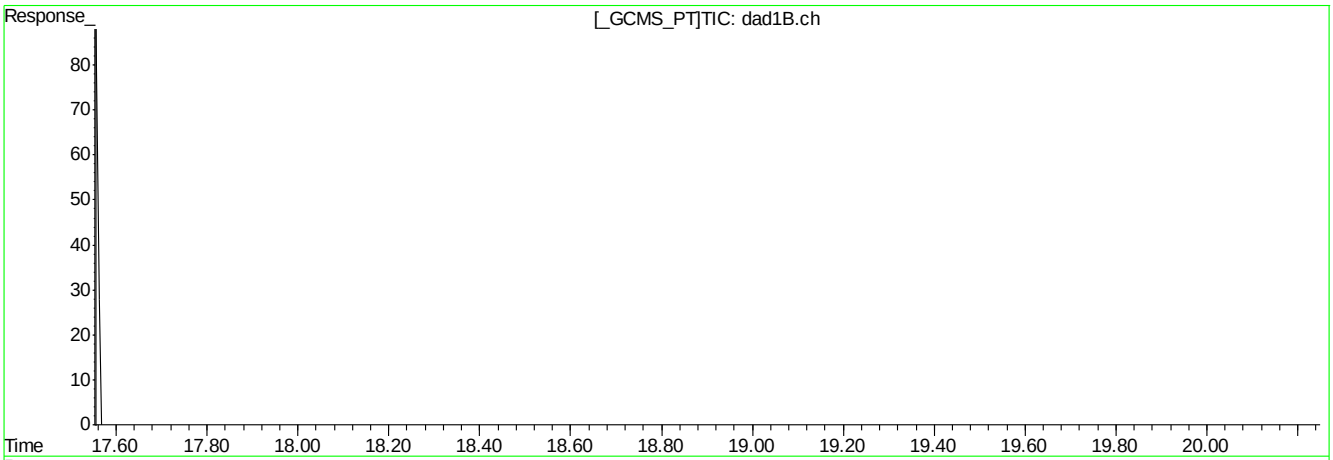
response 294844

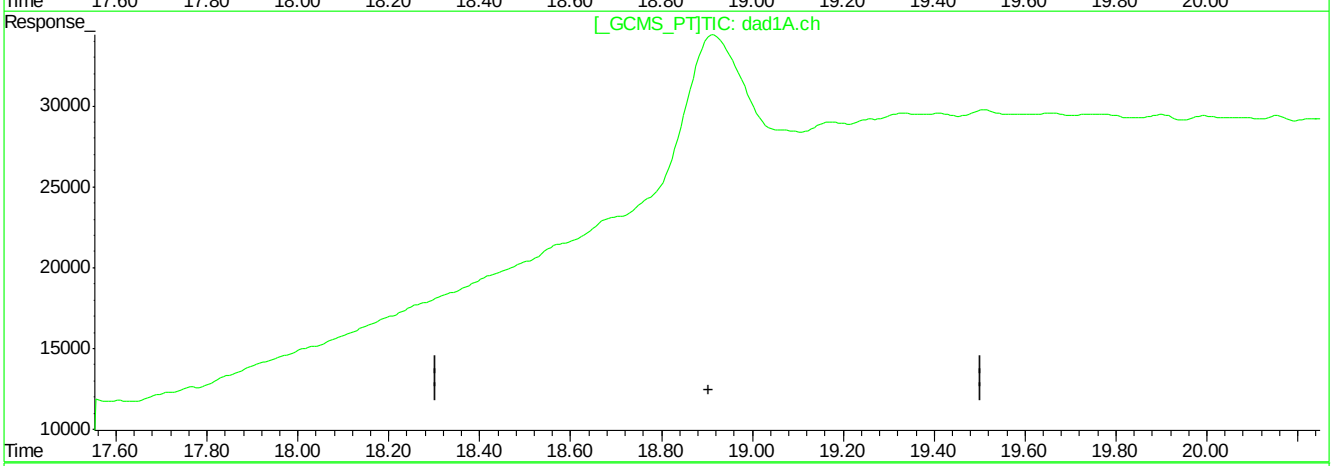
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:56:08 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.96min 0.000ppb

response 22949

(21) PETN #2

0.00min 0.000ppb

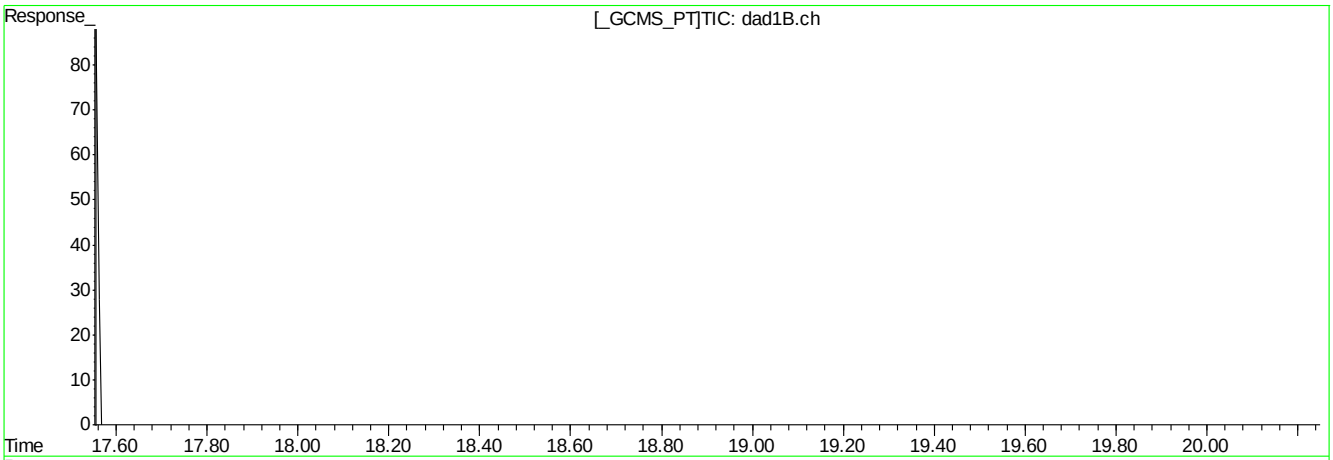
response 0

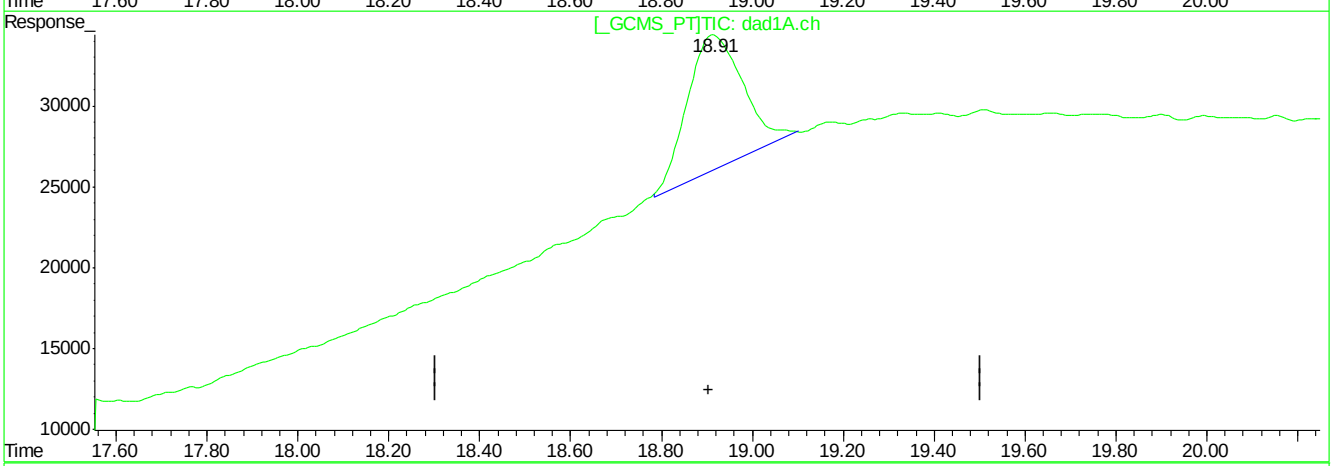
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:56:12 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.96min 0.000ppb

response 22949

(21) PETN #2

18.91min 534.988ppb m

response 704993

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:56:18 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:30 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.44	11.45	519740	738848	208.855	175.659
Spiked Amount	500.000	Range	70 - 136	Recovery	=	41.77%#	35.13%#
	Target Compounds						
1)	TNX	1.40	1.40	1013813	1588935	207.137	208.166
2)	HMX	1.54	1.54	367501	1086351	203.308	219.536
3)	DNX	1.79	1.79	555004	940350	180.467	185.467
4)	MNX	2.40	2.40	560123	824492	179.245	174.866m
5)	RDX	3.02	3.02	394305	674661	202.026m	206.893m
6)	1,3,5-Trinitrobe	4.83	4.83	860101	1607722	197.385	196.128
7)	1,3-Dinitrobenze	6.06	6.06	1104856	740582	189.544m	192.527m
8)	3,5-Dinitroanili	6.42	6.42	965484	1662853	206.488	212.702
9)	Nitrobenzene	7.71	7.71	730467	677197	195.204	214.537
10)	Nitroglycerin	0.00	9.05	0	1269517	N.D. d	993.517
11)	Tetryl	9.58	9.56	548276	759245	185.264	183.425
12)	2,4,6-Trinitroto	10.05	10.04	700562	781607	178.854	182.778
13)	2-Amino-4,6-Dini	10.44	10.45	763996	941355	204.589	168.109
14)	4-Amino-2,6-Dini	10.94	10.96	522801	901049	197.632	169.045
16)	2,4-Dinitrotolue	12.10	12.11	1029064	561998	198.348	178.115
17)	2,6-Dinitrotolue	12.56	12.58	597888	715257	202.775	193.845
18)	o-Nitrotoluene	15.82	15.82	465201	616132	180.031	184.977m
19)	p-Nitrotoluene	16.42	16.42	747964	659517	187.170	208.269
20)	m-Nitrotoluene	17.38	17.42	749218	651487	219.001	182.835m
21)	PETN	0.00	18.91	0	1424589	N.D. d	1081.058m

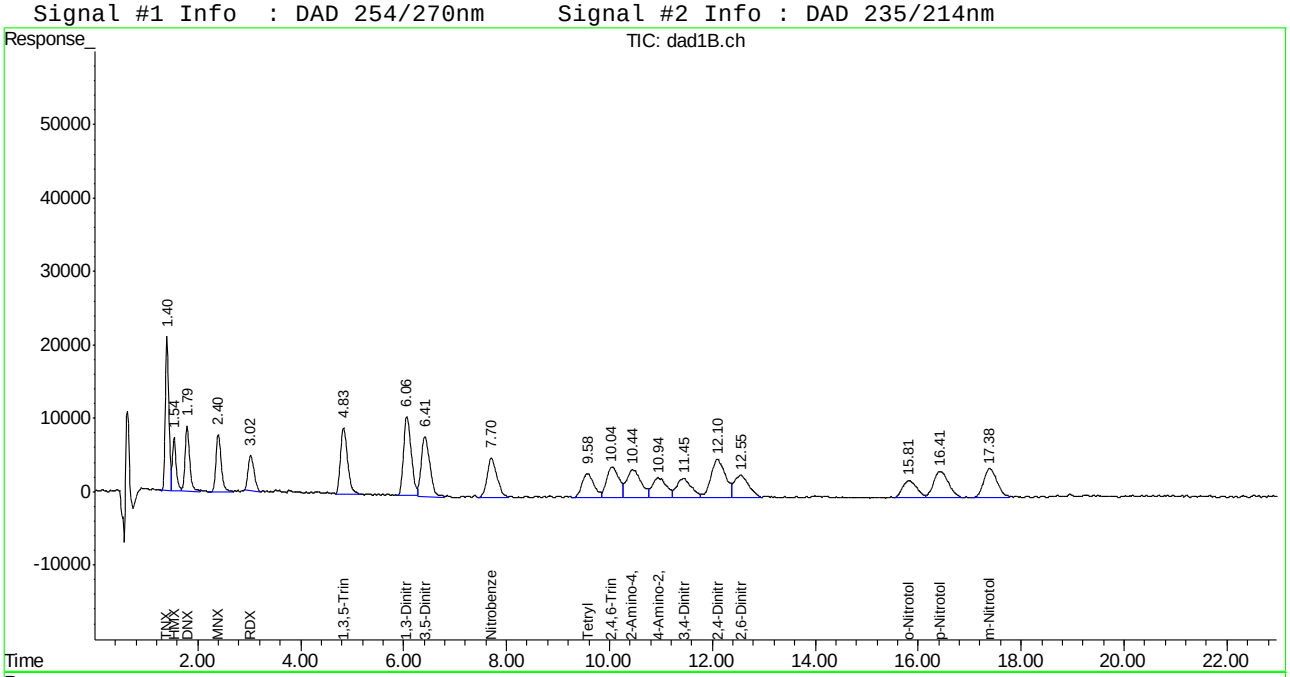
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060203.D 8330B_0707PLUS.M Mon Jul 09 11:20:51 2018 Page 1

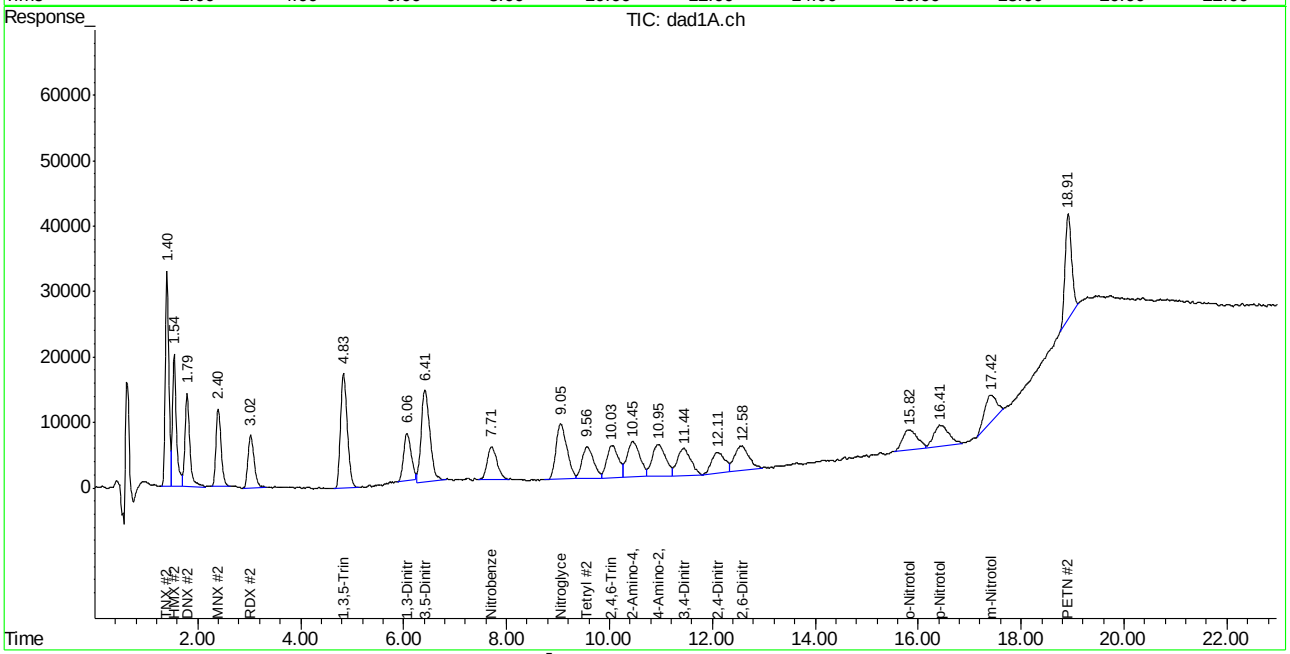
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:06 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

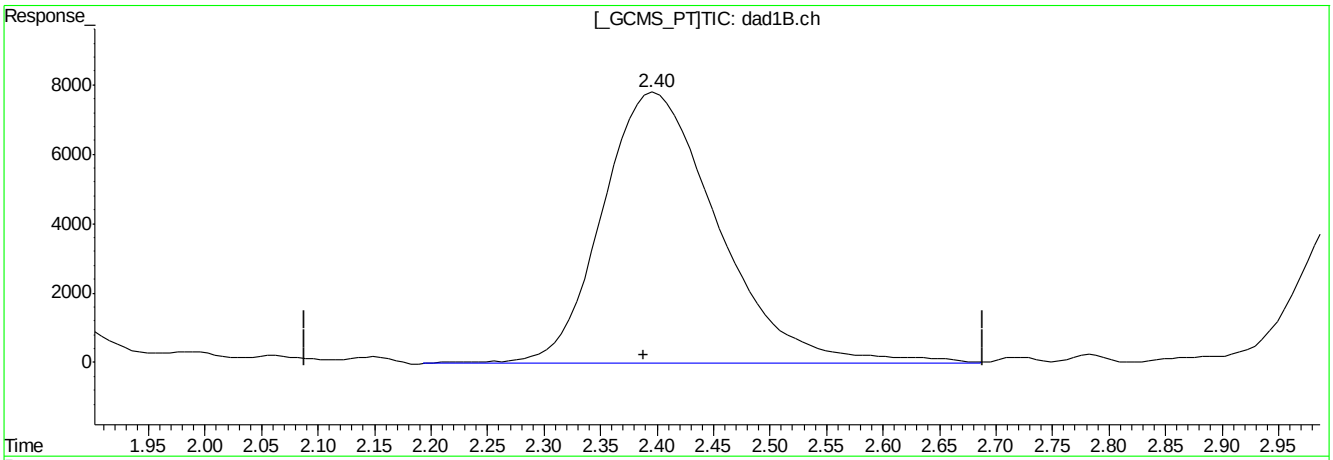
Sample Number: GBB1748-IC1748 **Method:** SW846 8330A
Lab FileID: BB060203.D **Analyst approved:** 07/09/18 11:23 William Hustedde
Injection Time: 07/06/18 17:03 **Supervisor approved:** 07/09/18 16:15 Mike Eger

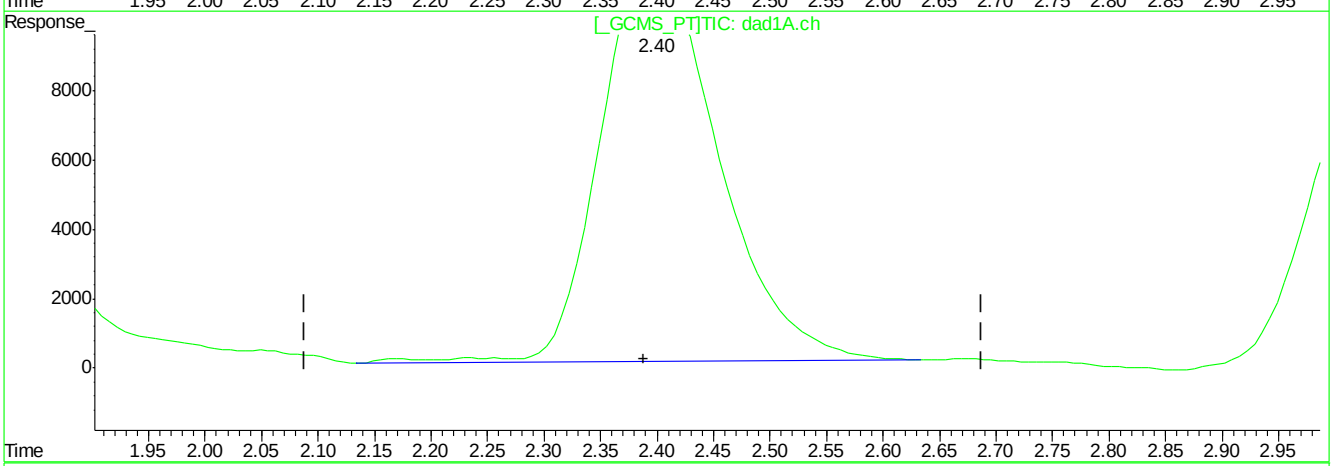
Parameter	CAS	Sig#	R.T. (min.)	Reason
MNX		2	2.40	Poor instrument integration
RDX	121-82-4	1	3.02	Poor instrument integration
RDX	121-82-4	2	3.02	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	6.06	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.06	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.82	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.42	Poor instrument integration
PETN	78-11-5	2	18.91	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.40min 179.245ppb

response 560123

(4) MNX #2

2.40min 177.792ppb

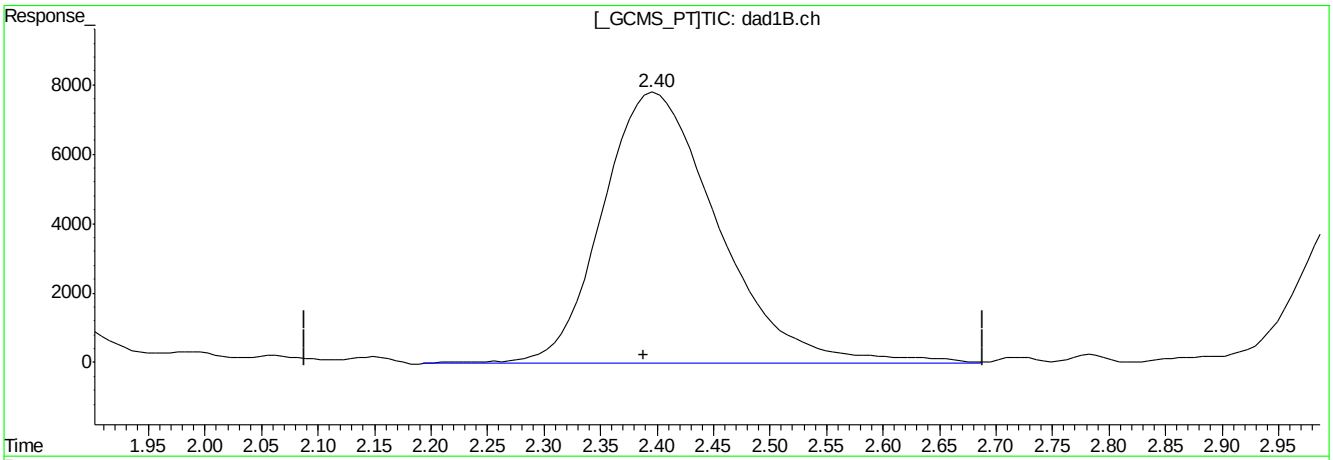
response 838288

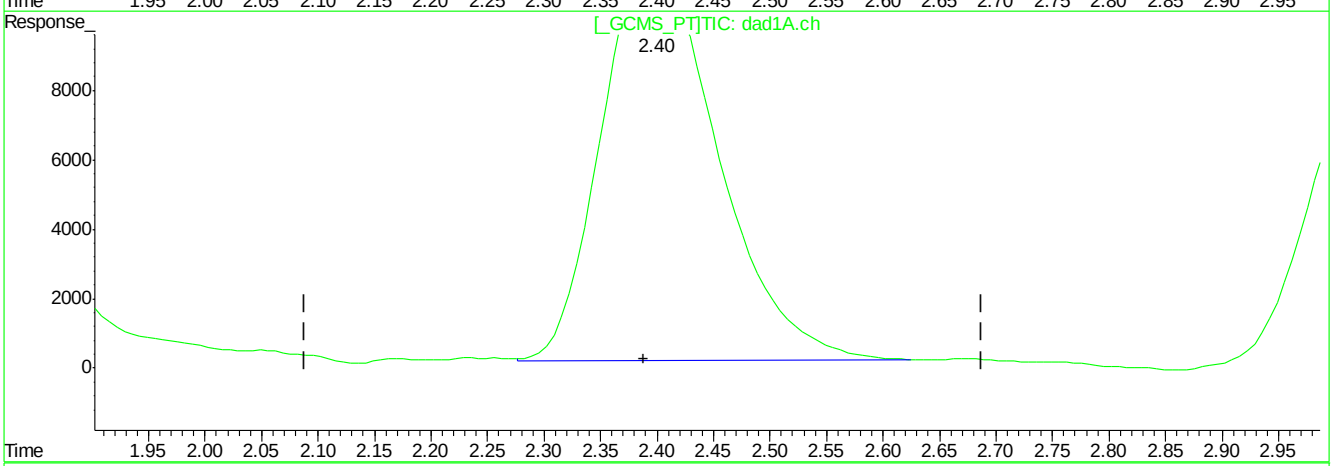
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:56:43 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.40min 179.245ppb

response 560123

(4) MNX #2

2.40min 174.866ppb m

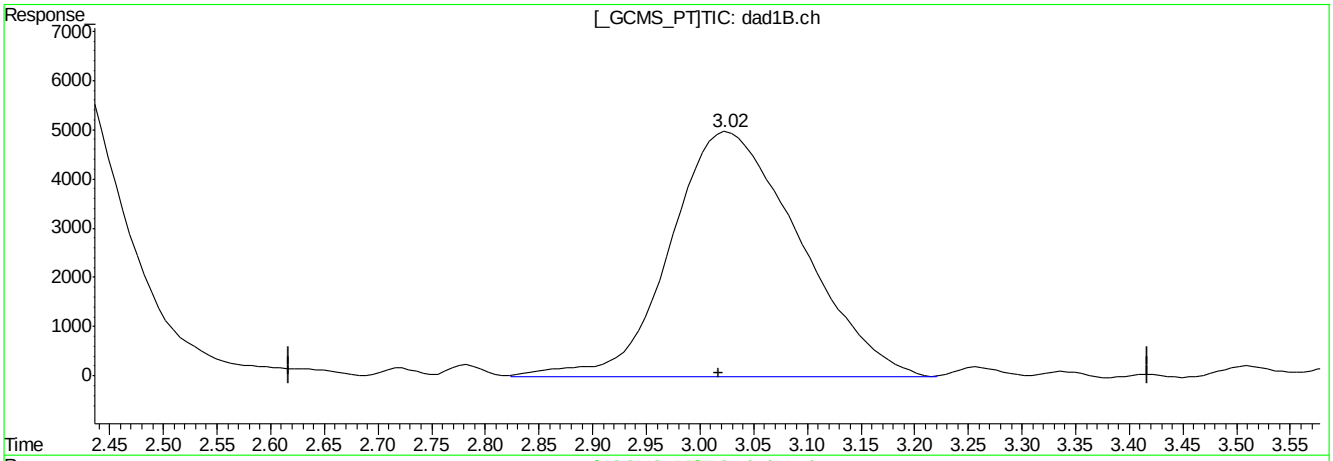
response 824492

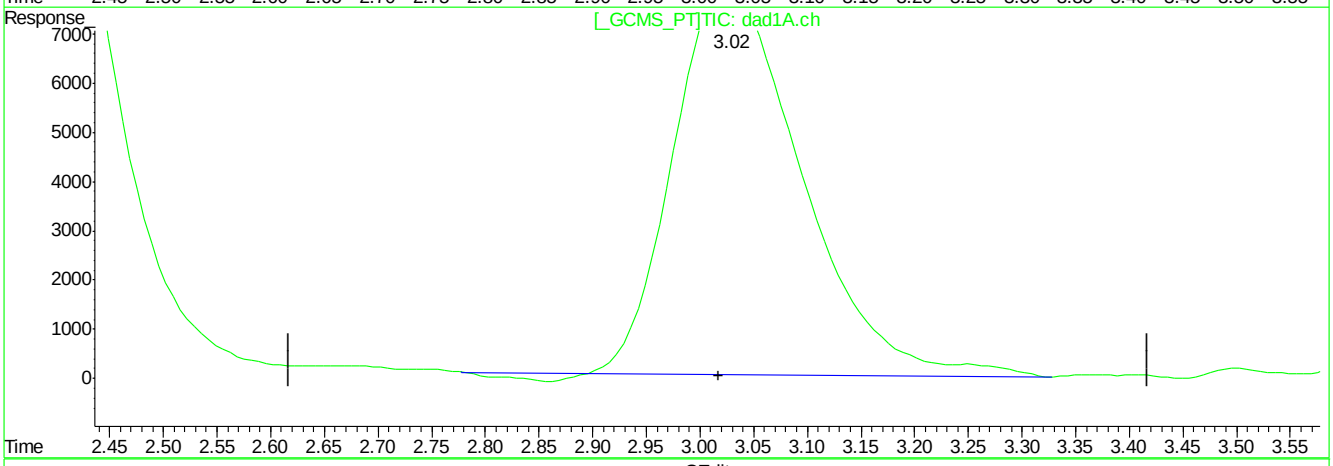
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:56:50 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.03min 212.700ppb

response 415243

(5) RDX #2

3.03min 199.903ppb

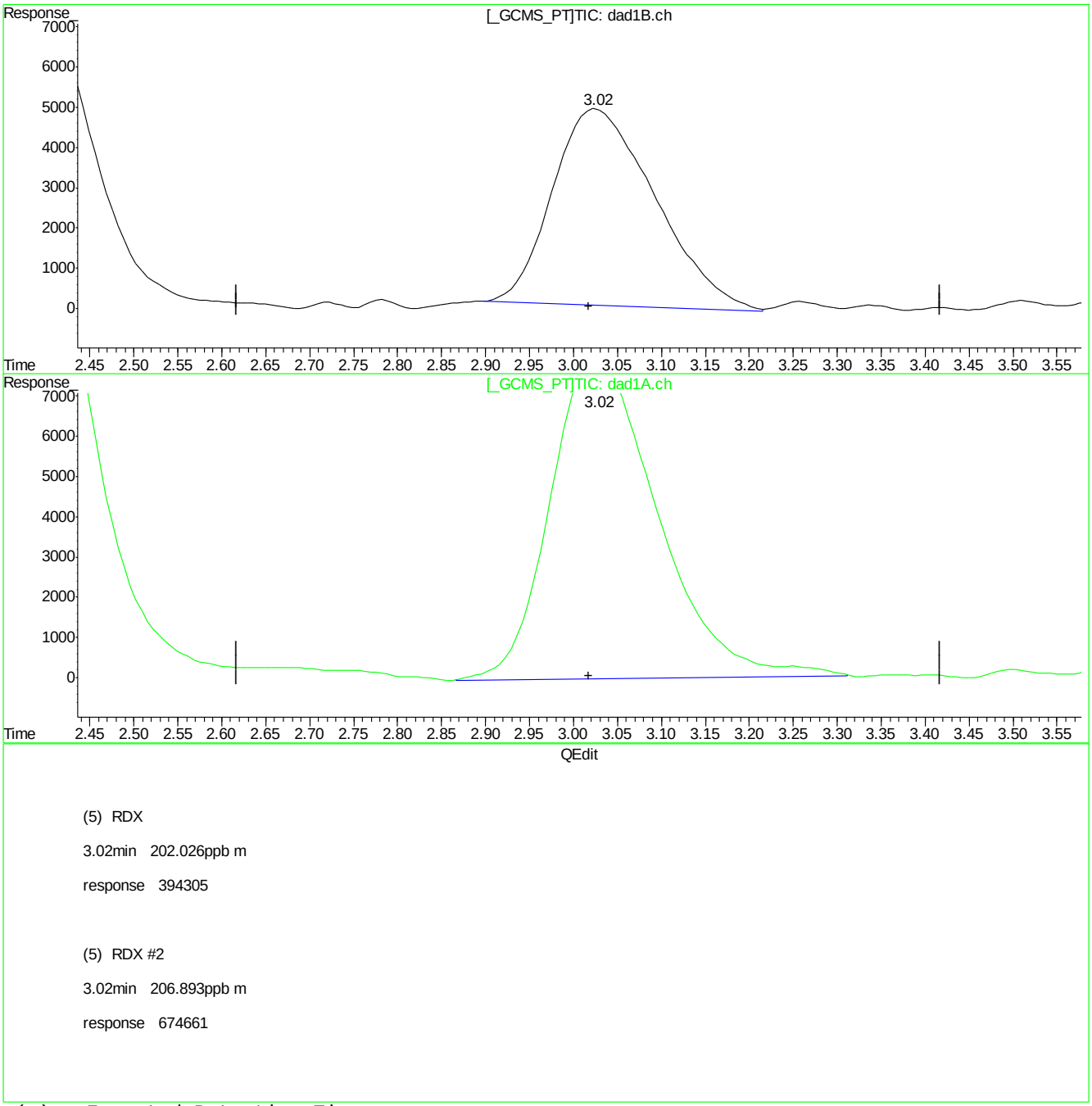
response 651869

(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:56:56 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(5) RDX

3.02min 202.026ppb m

response 394305

(5) RDX #2

3.02min 206.893ppb m

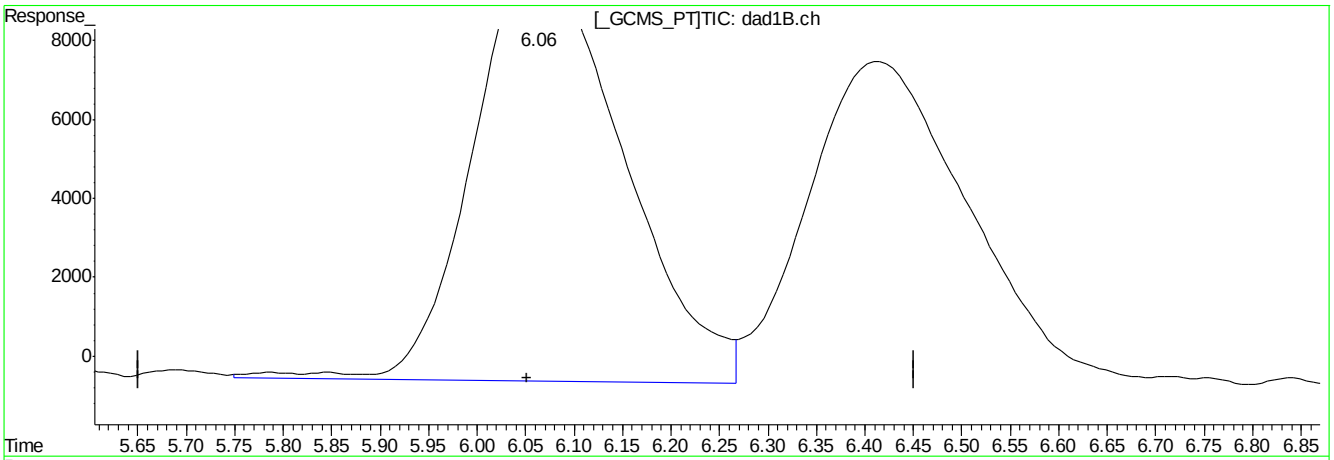
response 674661

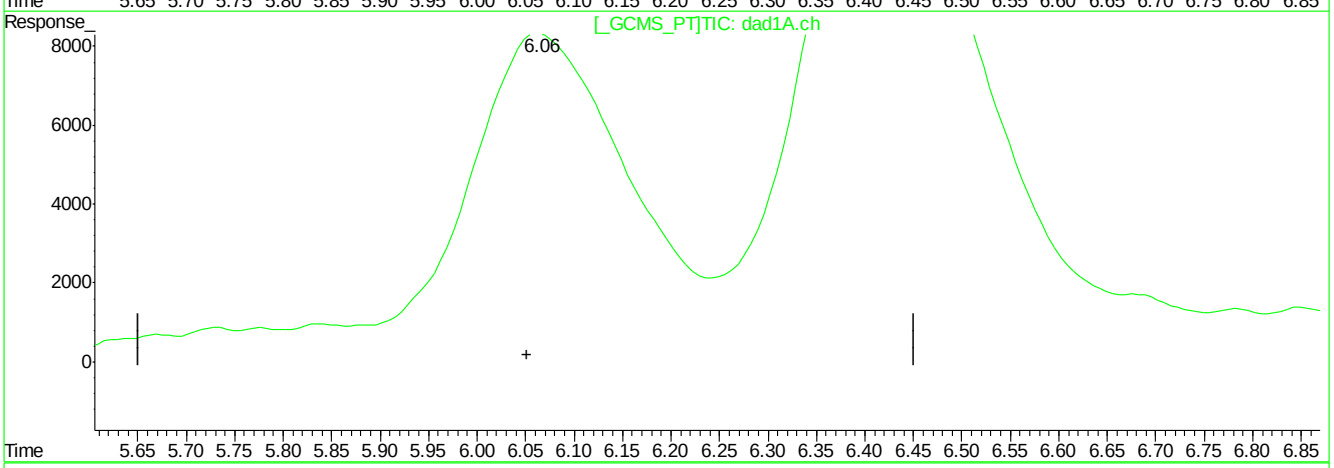
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:57:04 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.06min 195.357ppb

response 1138744

(7) 1,3-Dinitrobenzene #2

6.07min 237.834ppb

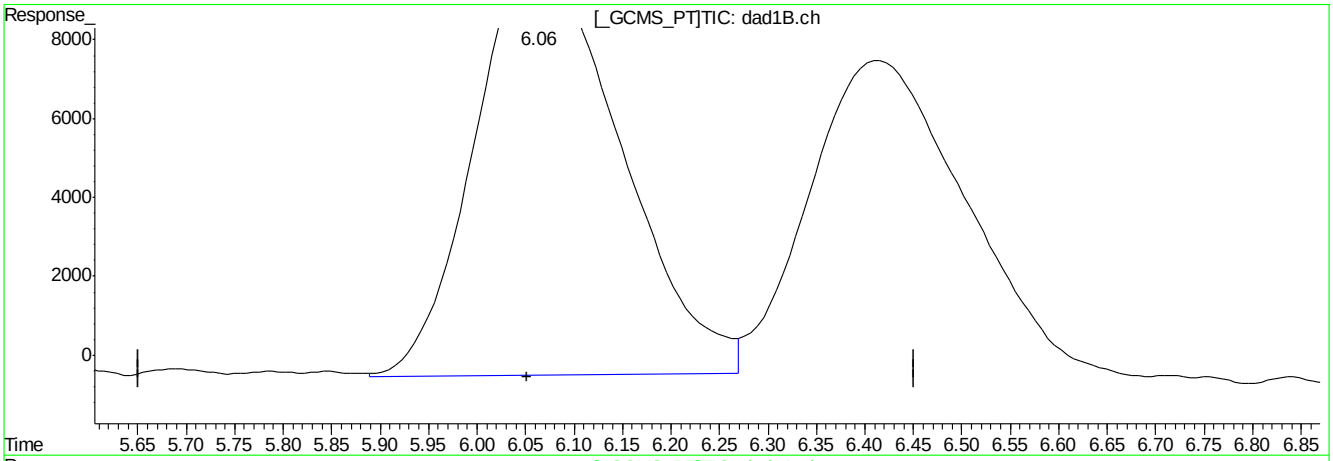
response 914341

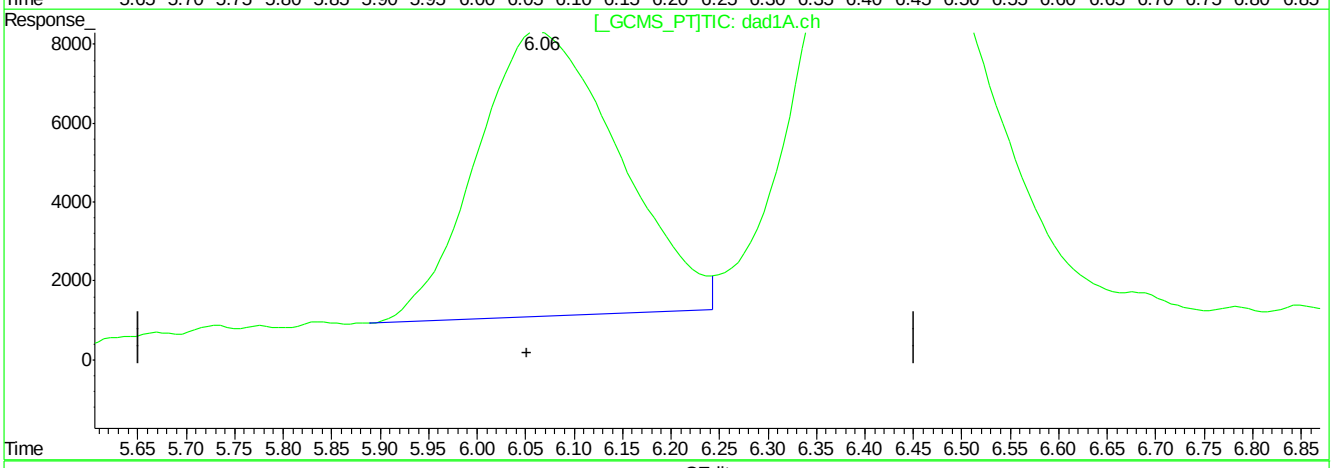
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:57:16 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.06min 189.544ppb m

response 1104856

(7) 1,3-Dinitrobenzene #2

6.06min 192.527ppb m

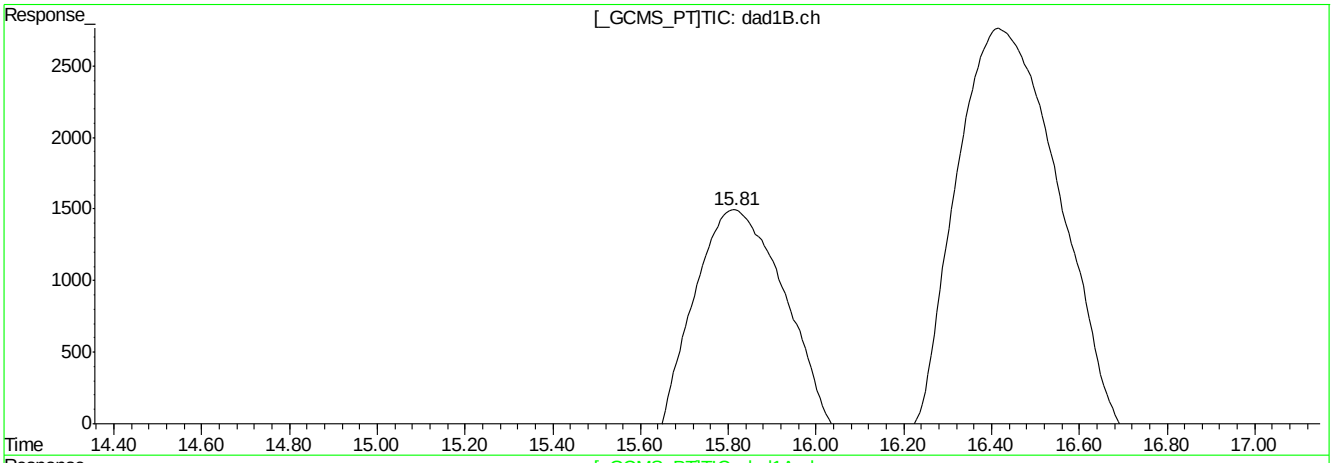
response 740582

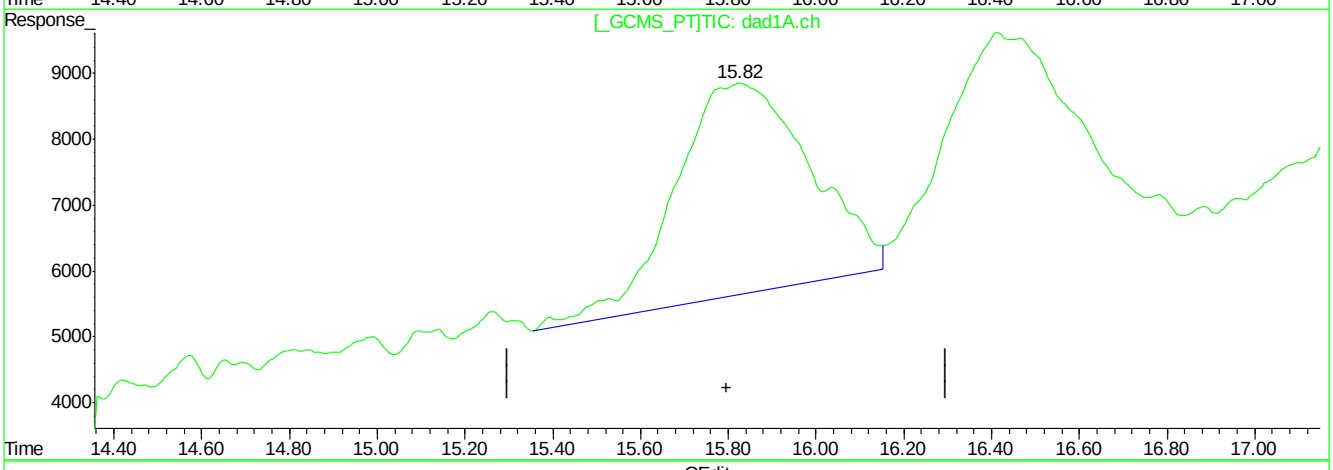
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:57:30 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.82min 180.031ppb

response 465201

(18) o-Nitrotoluene #2

15.83min 205.420ppb

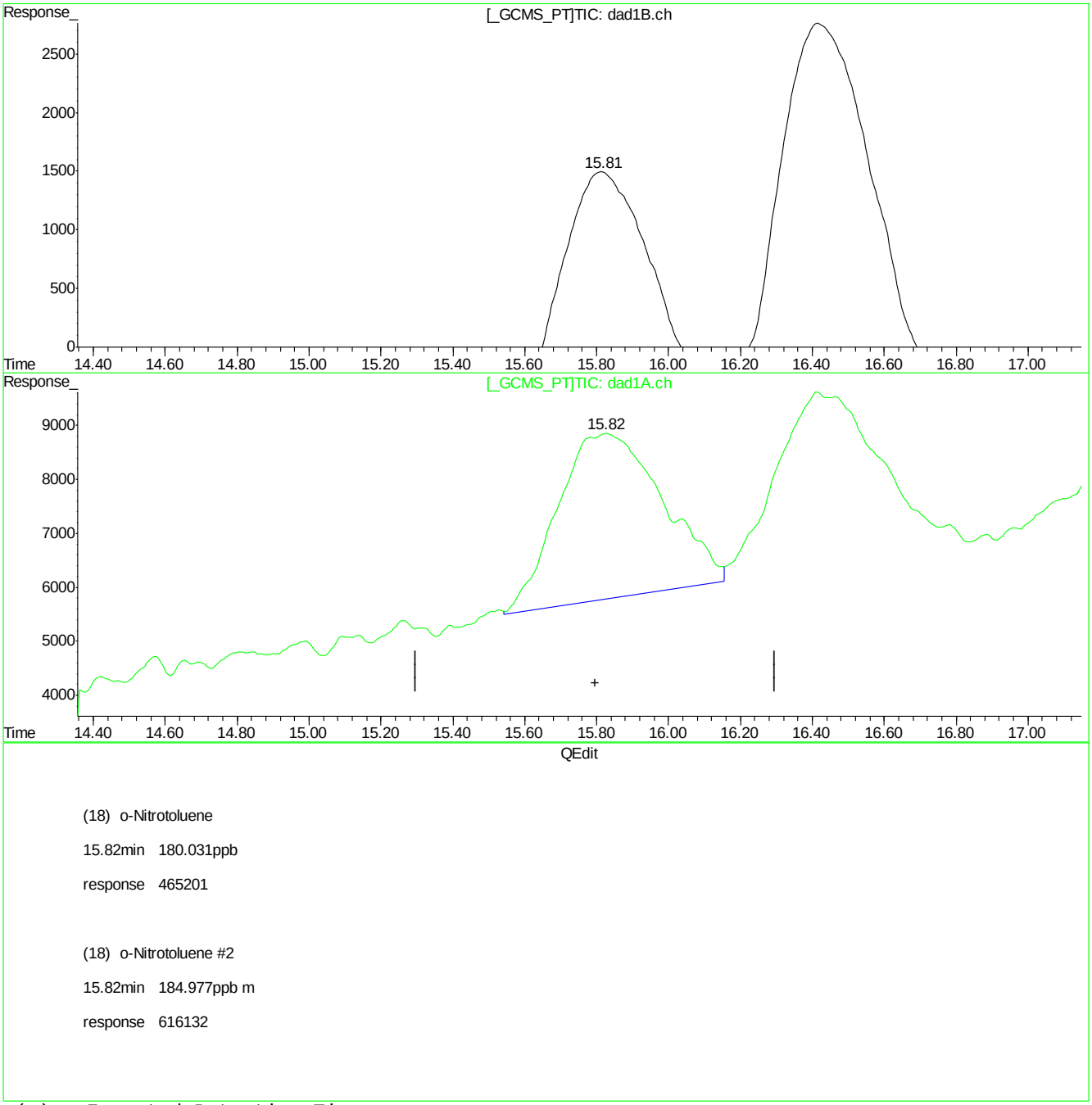
response 684228

(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:58:40 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.82min 180.031ppb

response 465201

(18) o-Nitrotoluene #2

15.82min 184.977ppb m

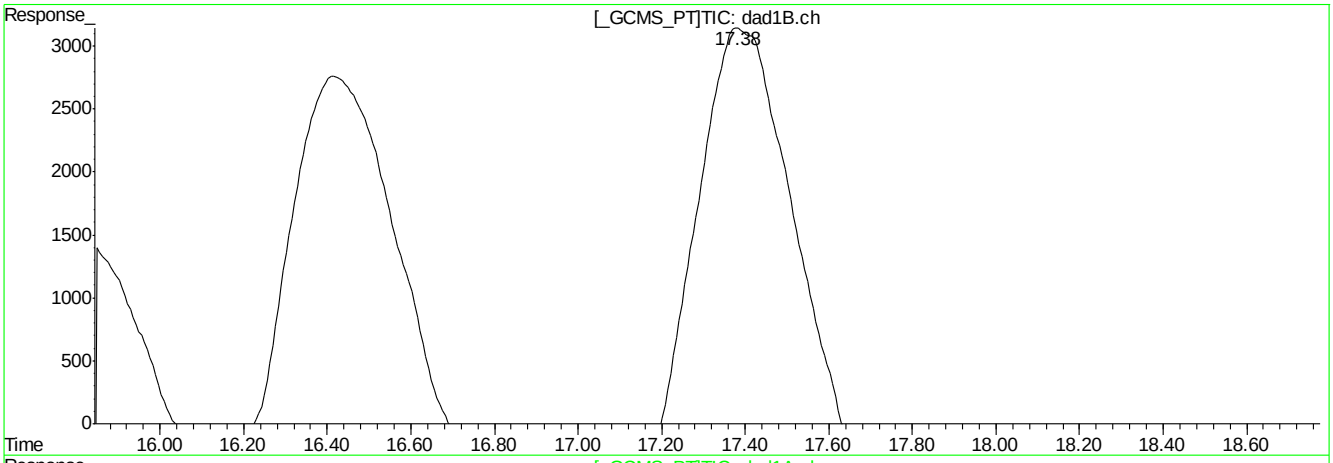
response 616132

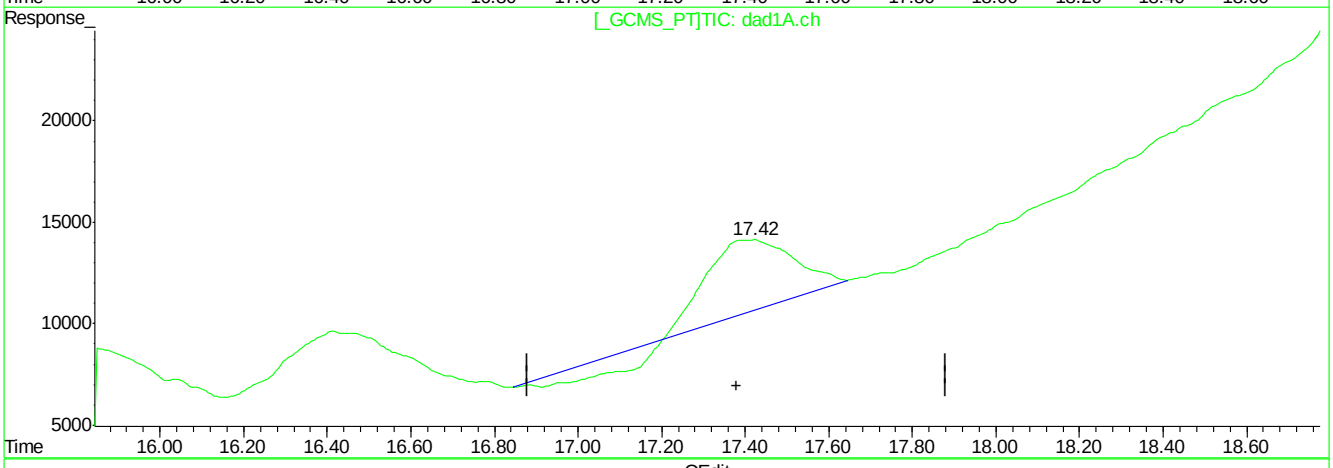
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:58:45 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.38min 219.001ppb

response 749218

(20) m-Nitrotoluene #2

17.41min 109.389ppb

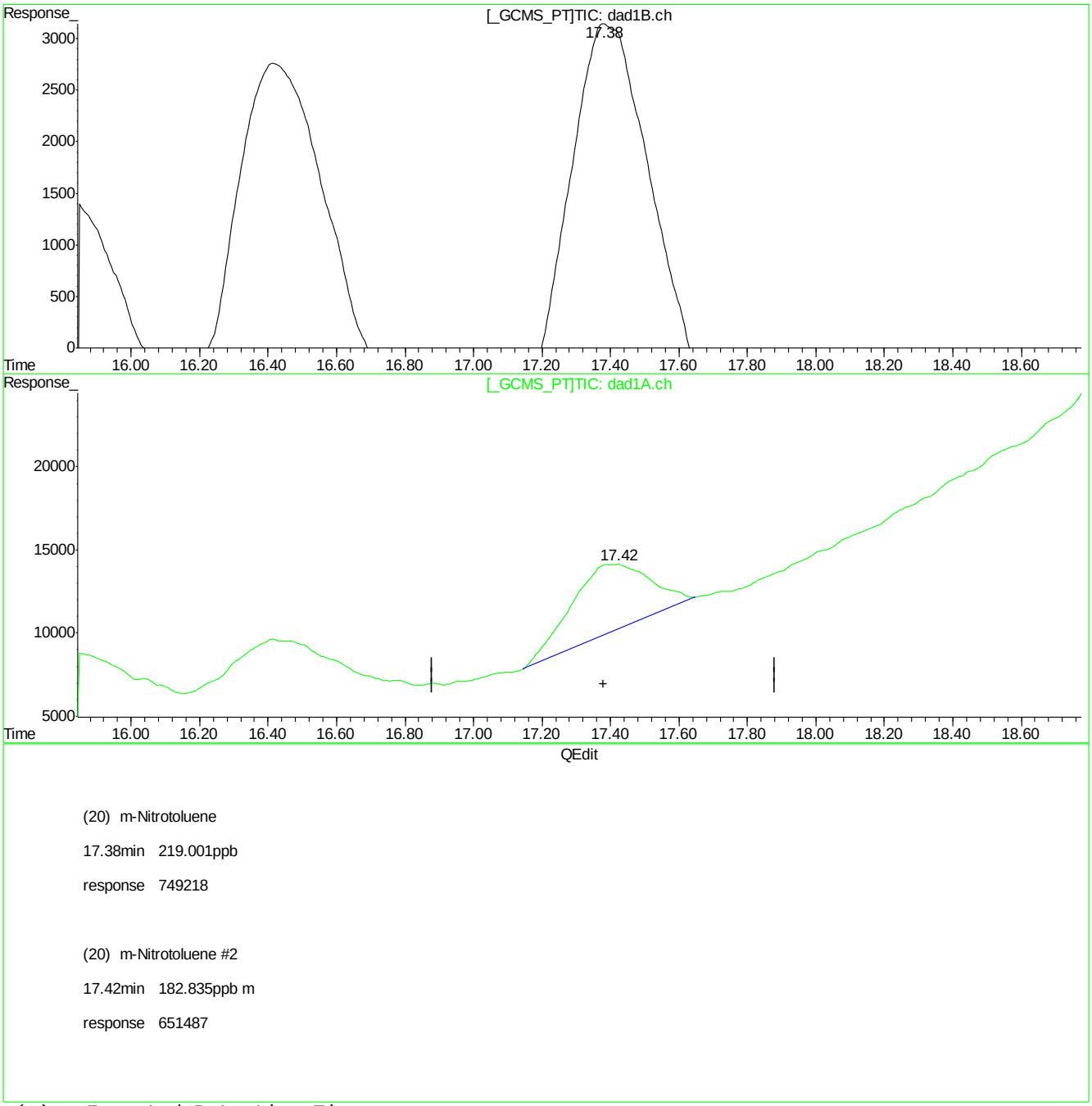
response 387317

(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:58:55 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

17.38min 219.001ppb

response 749218

(20) m-Nitrotoluene #2

17.42min 182.835ppb m

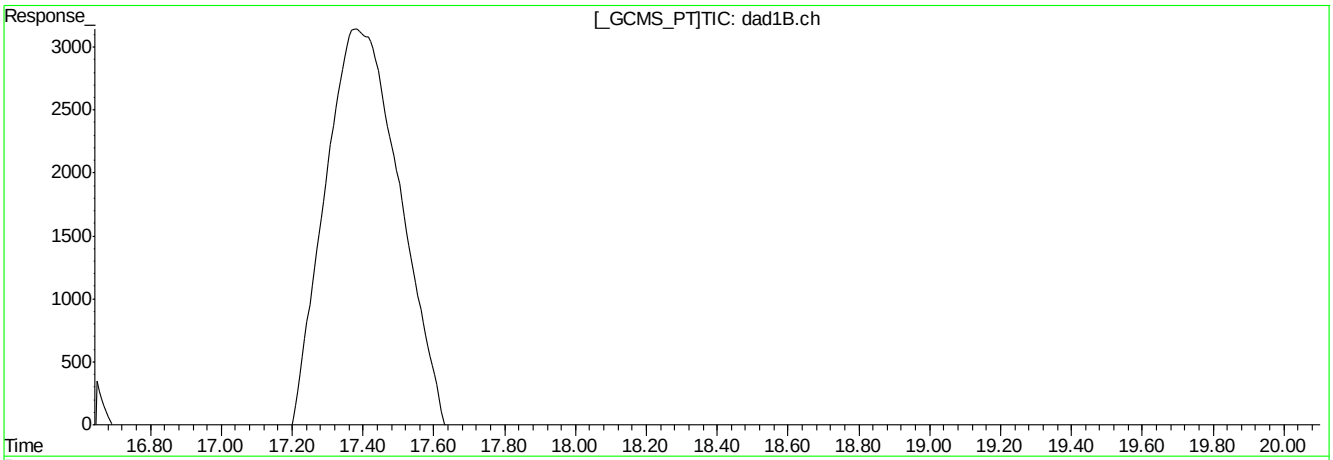
response 651487

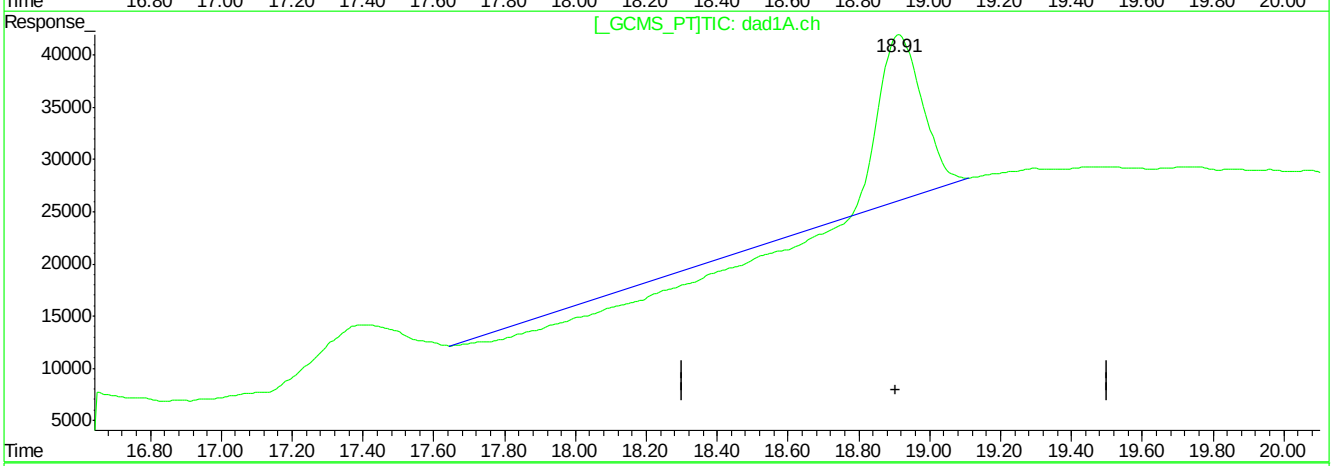
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:58:59 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.95min 0.000ppb

response 45798

(21) PETN #2

18.92min 437.598ppb

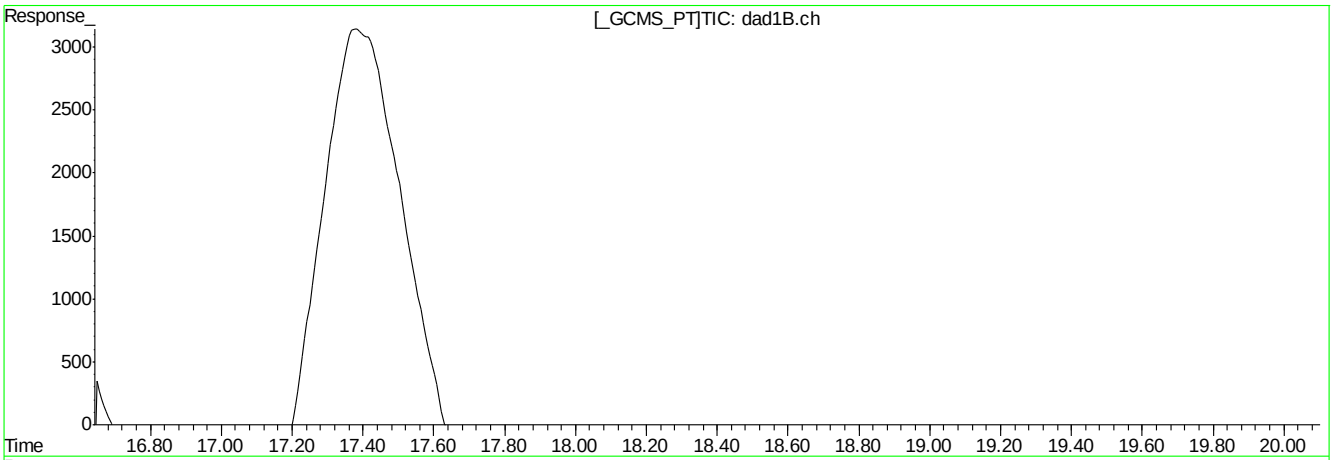
response 576655

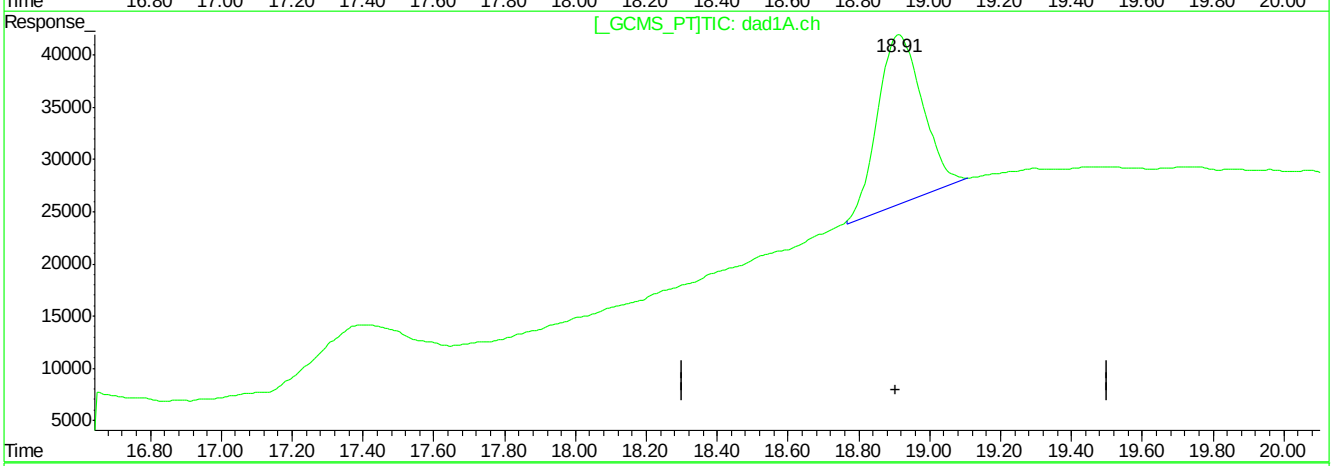
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:59:02 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.95min 0.000ppb

response 45798

(21) PETN #2

18.91min 1081.058ppb m

response 1424589

(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:59:06 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:31 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.43	11.43	1326259	2009879	532.951	477.841
	Spiked Amount 500.000	Range 70 - 136		Recovery =		106.59%	95.57%
	Target Compounds						
1)	TNX	1.40	1.40	2540056	3934187	518.971	515.416
2)	HMX	1.54	1.54	866622	2432057	479.430	491.484
3)	DNX	1.79	1.79	1288131	2082049	418.854	410.646
4)	MNX	2.40	2.40	1356477	2085790	434.086	442.374
5)	RDX	3.03	3.03	1026432	1589435	521.932	487.420
6)	1,3,5-Trinitrobe	4.83	4.83	2151407	4091369	493.726	499.111
7)	1,3-Dinitrobenze	6.06	6.06	2787254	1966959	478.167	513.424
8)	3,5-Dinitroanili	6.41	6.41	2362475	3996217	505.263	511.171
9)	Nitrobenzene	7.70	7.70	1752261	1685137	468.259	529.797
10)	Nitroglycerin	0.00	9.05	0	3257598	N.D. d	2549.377
11)	Tetryl	9.57	9.57	1335519	2004141	451.275	484.179
12)	2,4,6-Trinitroto	10.05	10.04	1763560	1994076	450.239	466.312
13)	2-Amino-4,6-Dini	10.45	10.45	1860707	2633204	498.276	470.243
14)	4-Amino-2,6-Dini	10.94	10.94	1350375	2528291	507.423	474.329
16)	2,4-Dinitrotolue	12.09	12.09	2624271	1517167	505.818	480.837
17)	2,6-Dinitrotolue	12.55	12.55	1570807	1909487	529.079	517.499
18)	o-Nitrotoluene	15.82	15.81	1200374	1703628	464.540	511.467m
19)	p-Nitrotoluene	16.42	16.43	1875115	1707142	469.227	539.097
20)	m-Nitrotoluene	17.40	17.39	1816420	1971467	527.450	536.915m
21)	PETN	0.00	18.91	0	3568025	N.D. d	2707.617m

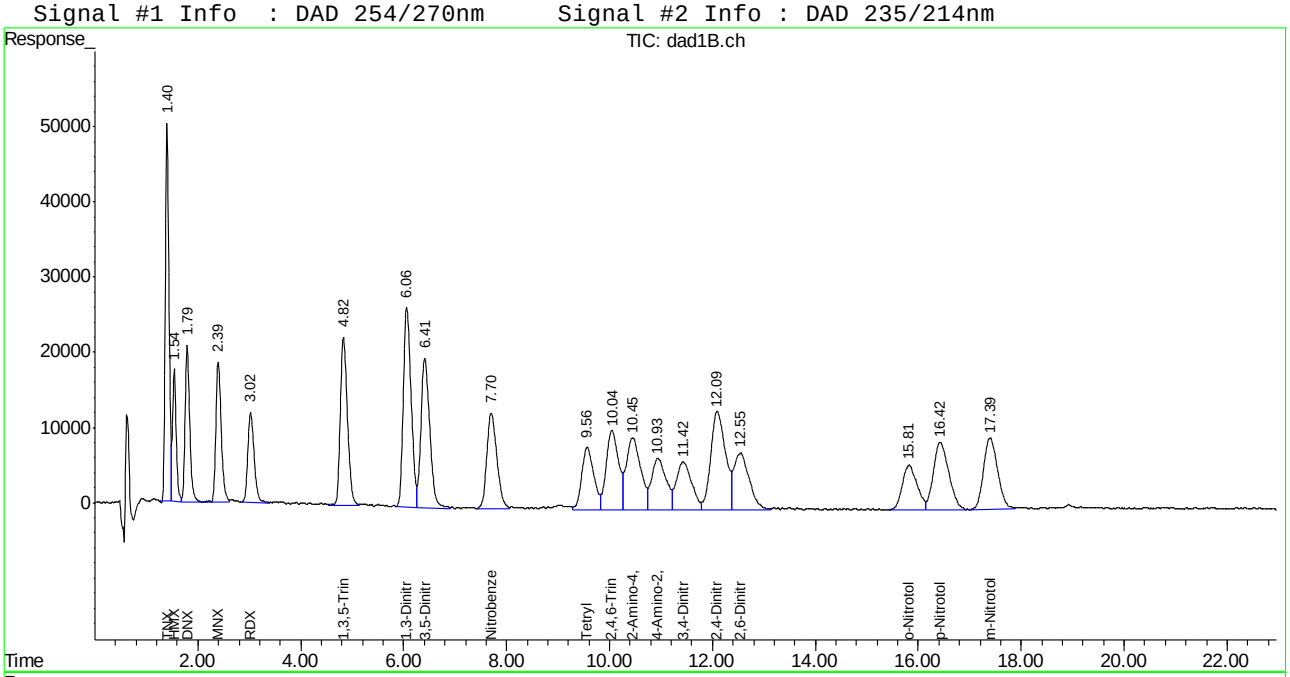
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060204.D 8330B_0707PLUS.M Mon Jul 09 11:20:52 2018 Page 1

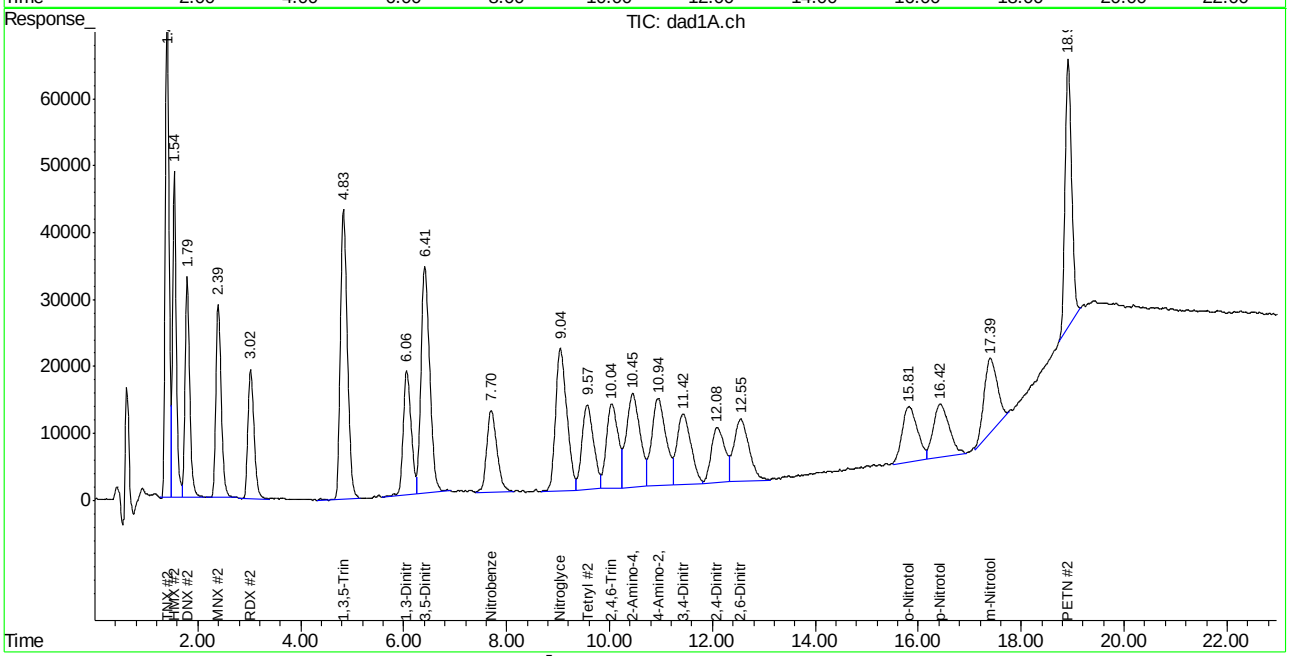
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:06 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

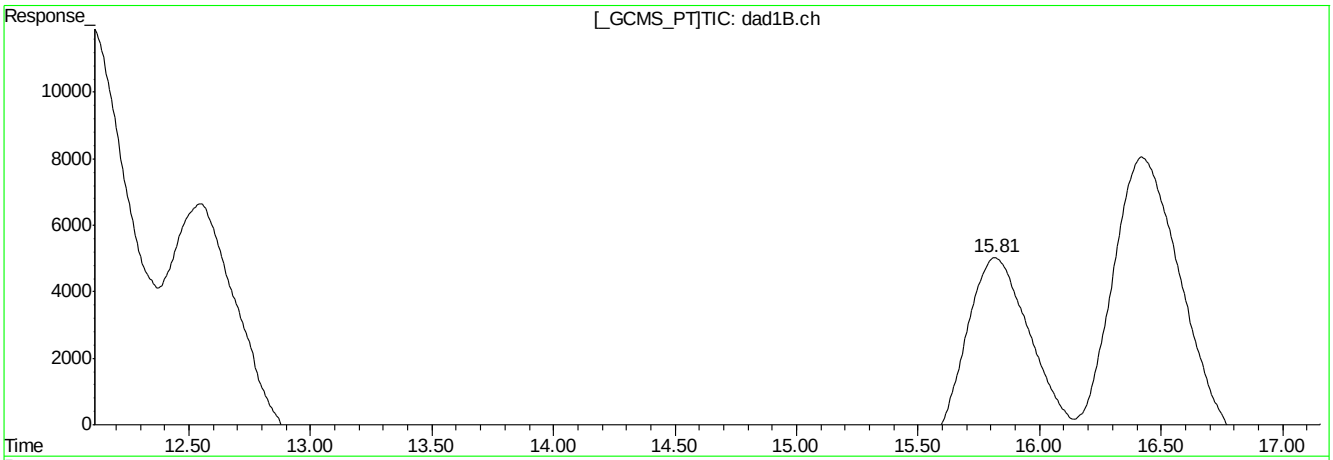
Sample Number: GBB1748-IC1748
Lab FileID: BB060204.D
Injection Time: 07/06/18 17:33
Method: SW846 8330A
Analyst approved: 07/09/18 11:23 William Hustedde
Supervisor approved: 07/09/18 16:15 Mike Eger

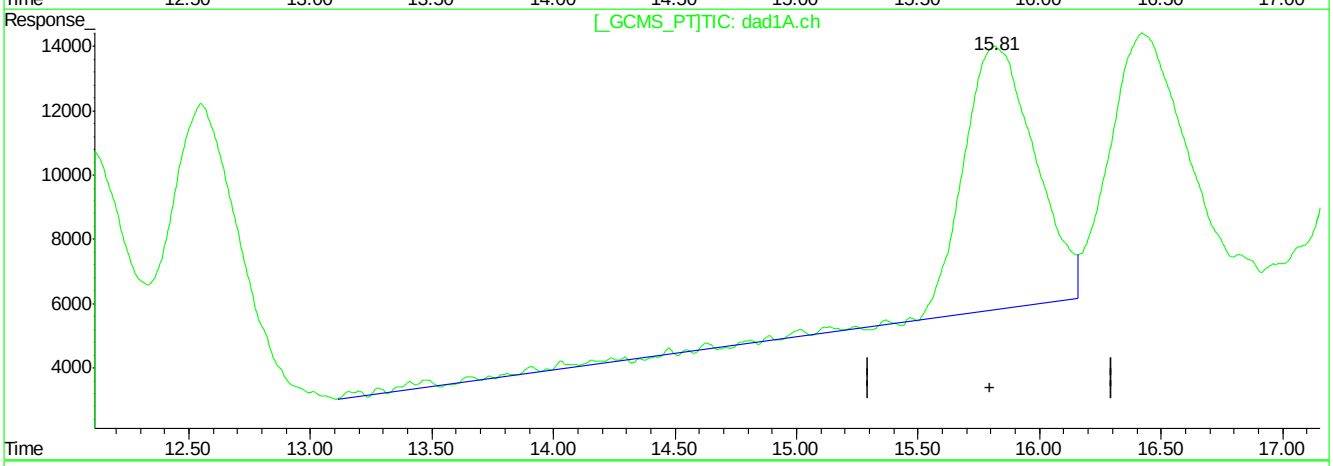
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.81	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.39	Poor instrument integration
PETN	78-11-5	2	18.91	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.82min 464.540ppb

response 1200374

(18) o-Nitrotoluene #2

15.82min 513.742ppb

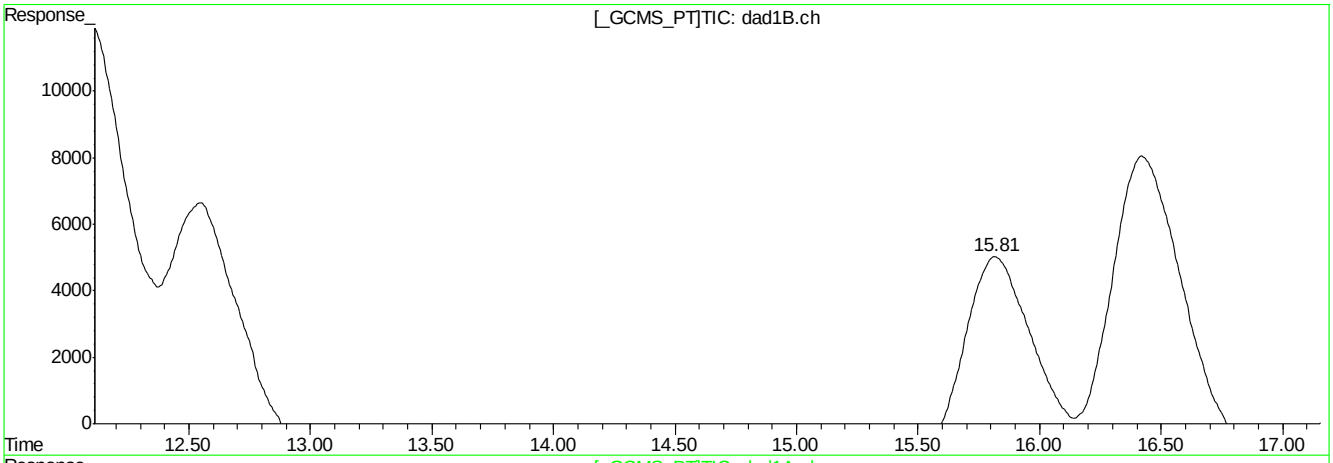
response 1711208

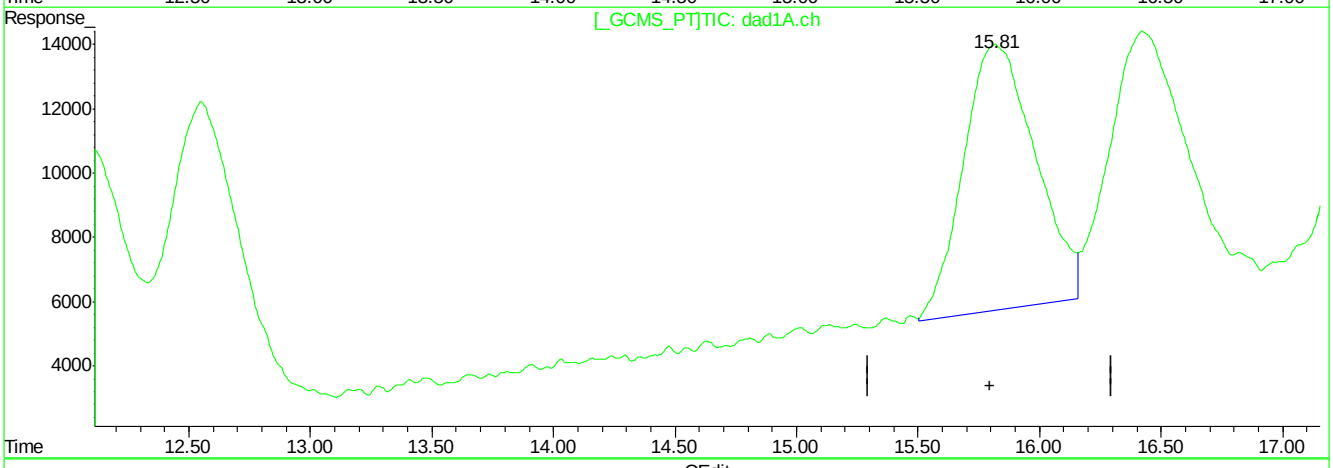
(+) = Expected Retention Time
BB060204.D 8330B_0707PLUS.M Mon Jul 09 10:00:00 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.82min 464.540ppb

response 1200374

(18) o-Nitrotoluene #2

15.81min 511.467ppb m

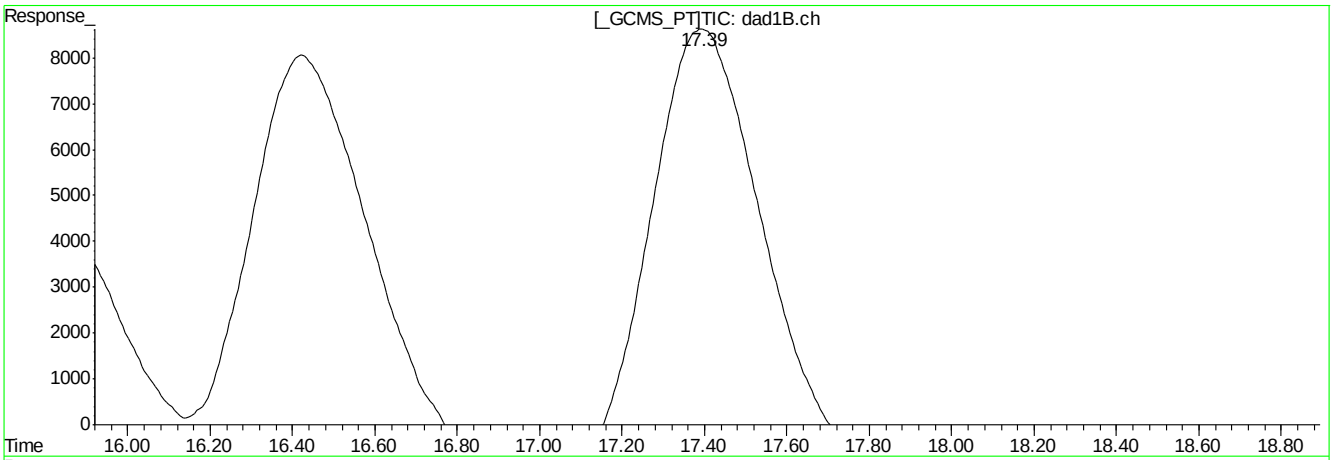
response 1703628

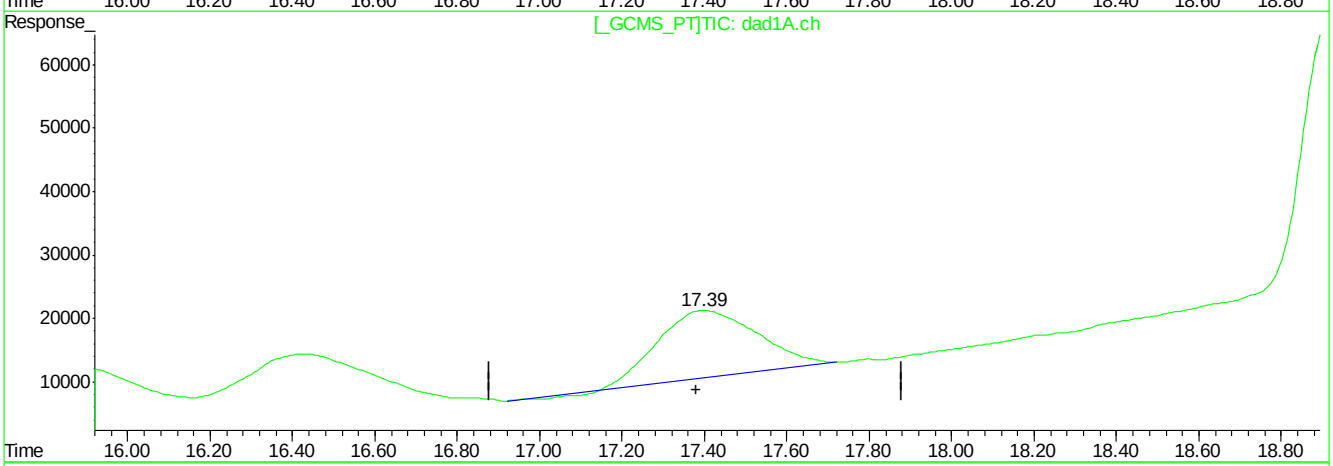
(+) = Expected Retention Time
BB060204.D 8330B_0707PLUS.M Mon Jul 09 10:00:08 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.40min 527.450ppb

response 1816420

(20) m-Nitrotoluene #2

17.40min 477.321ppb

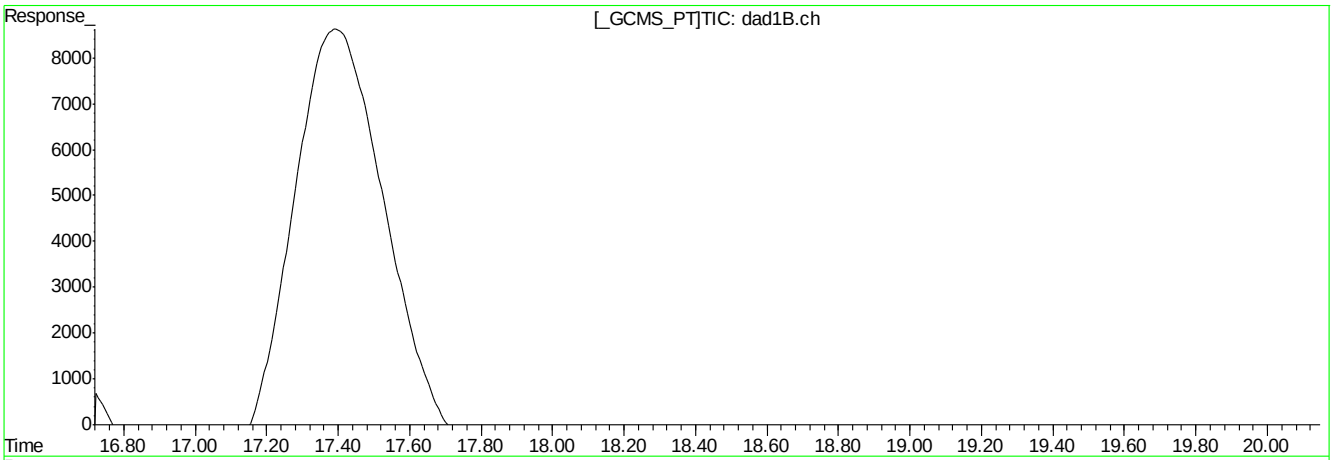
response 1743927

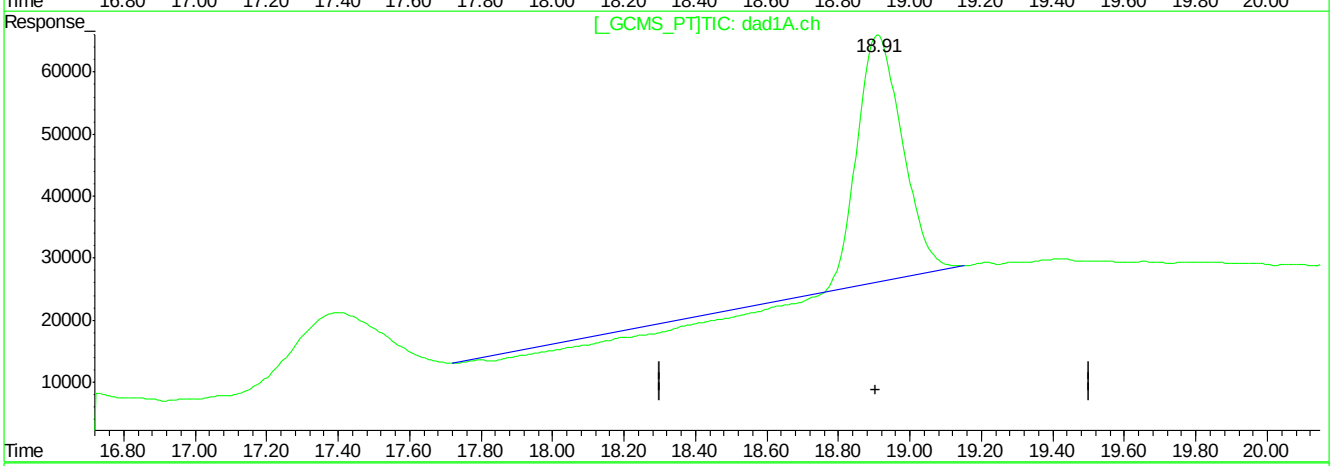
(+) = Expected Retention Time
BB060204.D 8330B_0707PLUS.M Mon Jul 09 10:00:17 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.93min 0.000ppb

response 59501

(21) PETN #2

18.91min 2176.580ppb

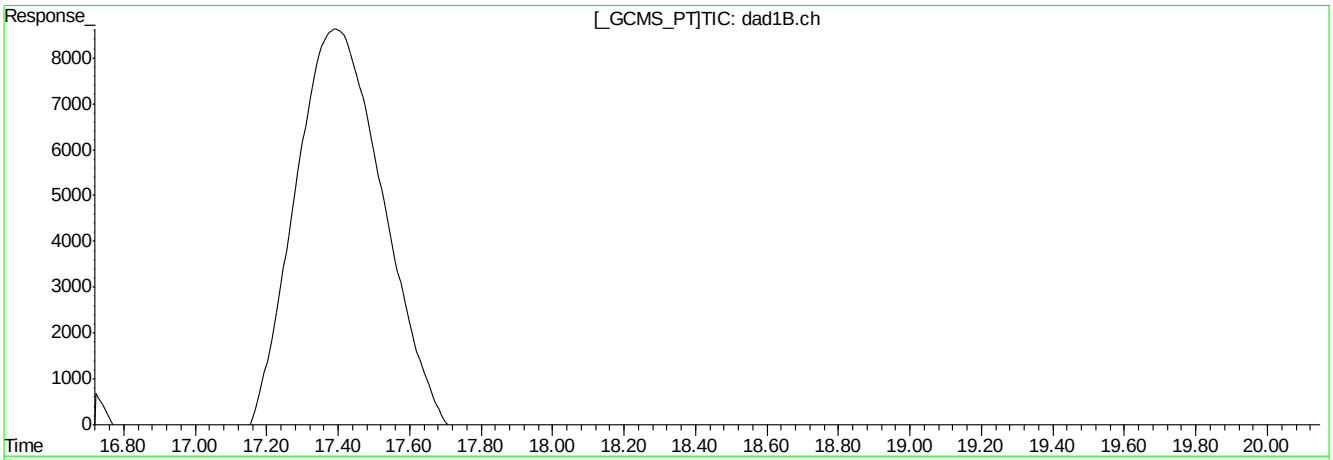
response 2868239

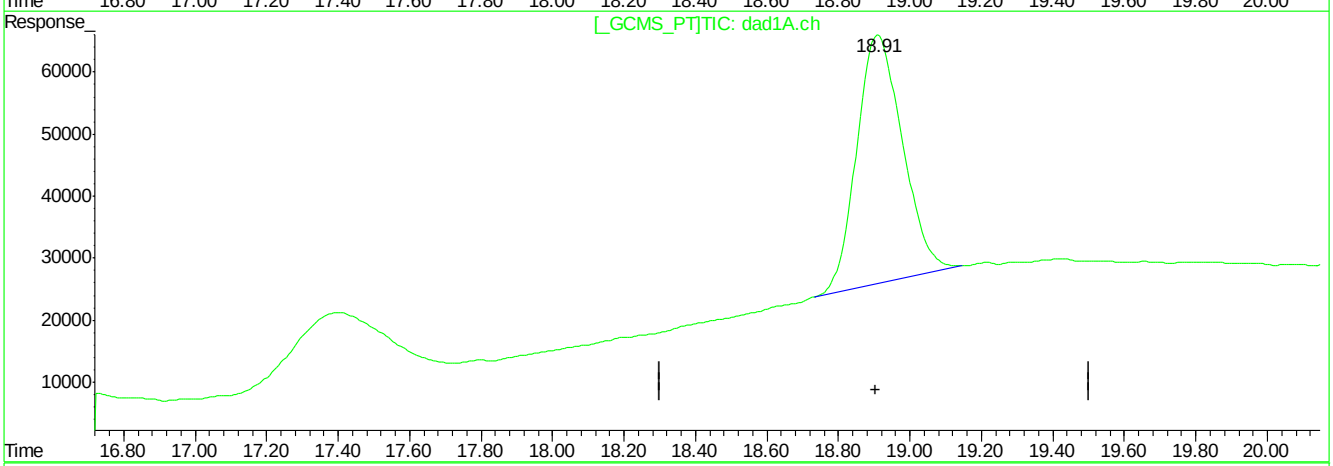
(+) = Expected Retention Time
BB060204.D 8330B_0707PLUS.M Mon Jul 09 10:00:24 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.93min 0.000ppb

response 59501

(21) PETN #2

18.91min 2707.617ppb m

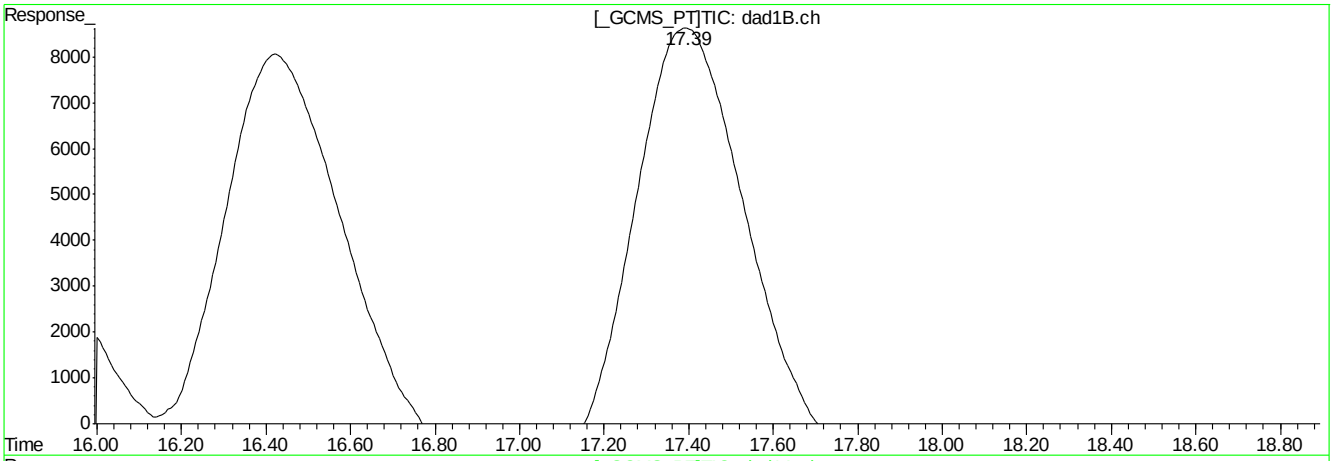
response 3568025

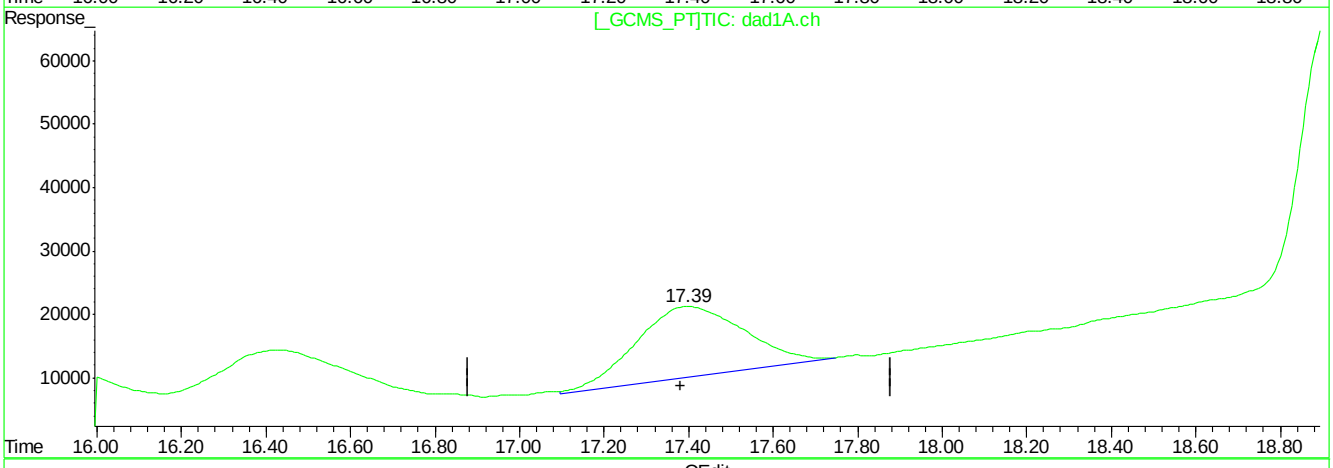
(+) = Expected Retention Time
BB060204.D 8330B_0707PLUS.M Mon Jul 09 10:00:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:06 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.40min 527.450ppb

response 1816420

(20) m-Nitrotoluene #2

17.39min 536.915ppb m

response 1971467

(+) = Expected Retention Time
BB060204.D 8330B_0707PLUS.M Mon Jul 09 14:57:24 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:32 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.41	11.41	2561824	4298869	1029.457	1022.041
	Spiked Amount 500.000	Range 70 - 136		Recovery =		205.89%#	204.41%#
	Target Compounds						
1)	TNX	1.40	1.40	5066573	7811576	1035.177	1023.390
2)	HMX	1.54	1.54	1747477	4809701	966.733	971.972
3)	DNX	1.79	1.79	2600076	4210229	845.451	830.391
4)	MNX	2.39	2.39	2680610	4205036	857.821	891.844
5)	RDX	3.02	3.02	1965147	3162496	988.379	969.818
6)	1,3,5-Trinitrobe	4.82	4.82	4293926	8184186	985.413	998.399
7)	1,3-Dinitrobenze	6.05	6.05	5535275	3856903	949.604	1013.160
8)	3,5-Dinitroanili	6.40	6.40	4629054	7790581	990.018	996.523
9)	Nitrobenzene	7.69	7.69	3384877	3205789	904.546	996.664
10)	Nitroglycerin	0.00	9.03	0	6440885	N.D. d	5040.599m
11)	Tetryl	9.55	9.55	2569677	4000666	868.300	966.518
12)	2,4,6-Trinitroto	10.03	10.03	3401002	4070531	868.280	951.888
13)	2-Amino-4,6-Dini	10.43	10.44	3651023	5325321	977.702	951.006
14)	4-Amino-2,6-Dini	10.92	10.93	2555519	5058545	952.103	949.027
16)	2,4-Dinitrotolue	12.08	12.08	5046352	3053181	972.665	967.647
17)	2,6-Dinitrotolue	12.52	12.53	3108741	3922811	1036.013	1063.140
18)	o-Nitrotoluene	15.80	15.80	2353681	3312890	910.866	994.603m
19)	p-Nitrotoluene	16.41	16.41	3780874	3193214	946.122	1008.383
20)	m-Nitrotoluene	17.38	17.38	3464883	3888967	996.149m	1018.202m
21)	PETN	0.00	18.90	0	7077497	N.D. d	5370.800m

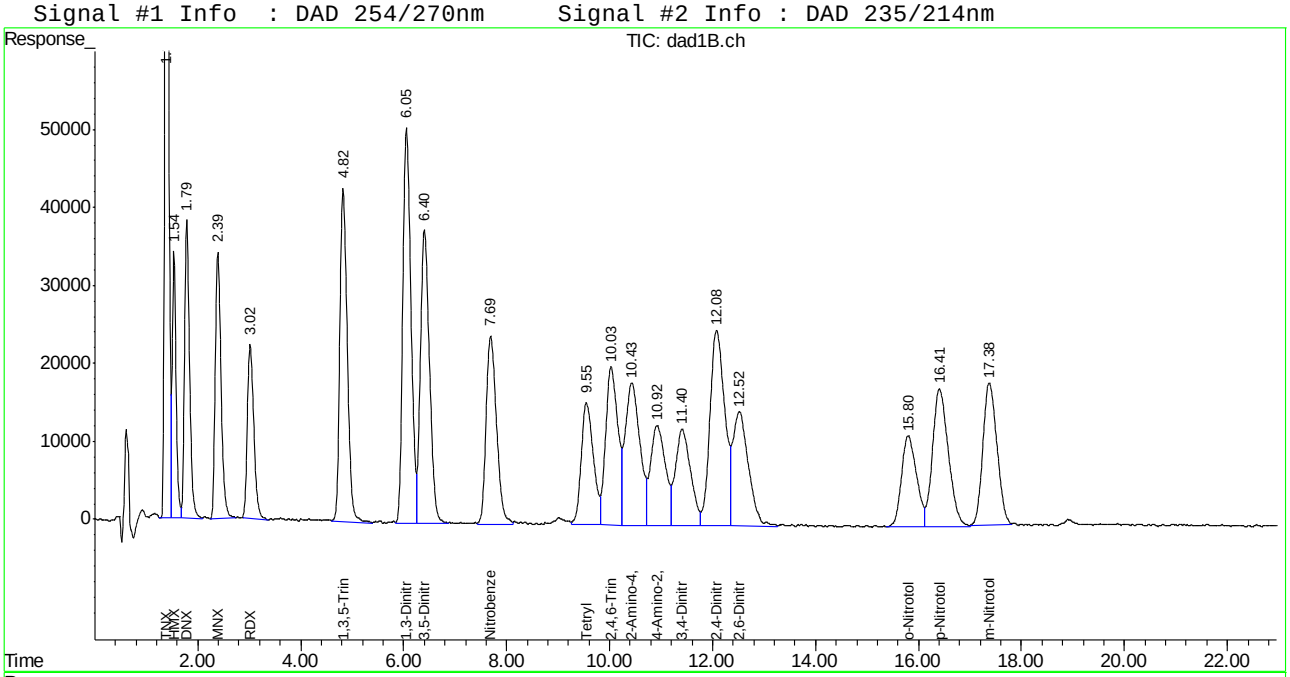
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060205.D 8330B_0707PLUS.M Mon Jul 09 11:20:53 2018 Page 1

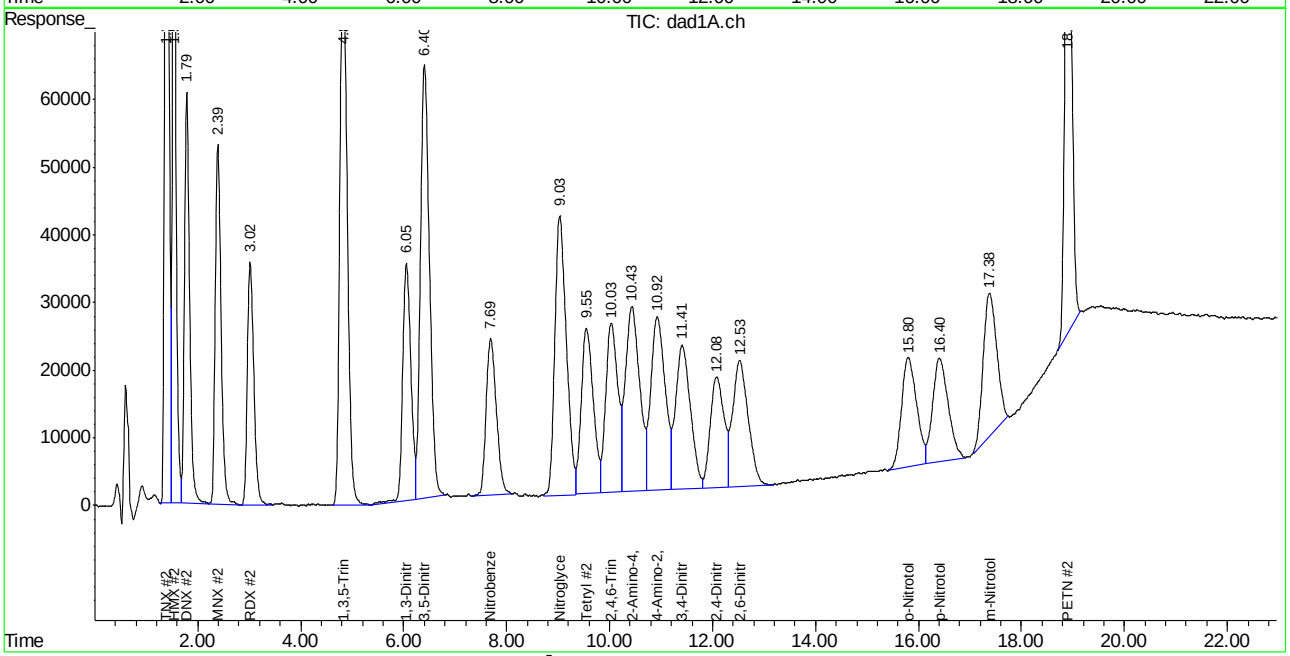
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:05 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

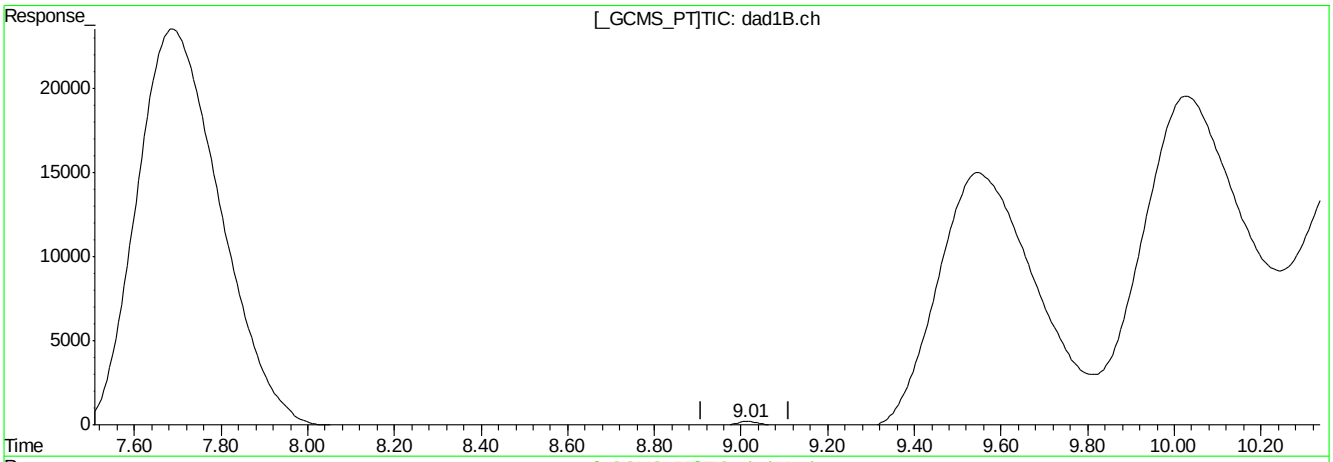
Sample Number: GBB1748-ICC1748 **Method:** SW846 8330A
Lab FileID: BB060205.D **Analyst approved:** 07/09/18 11:23 William Hustedde
Injection Time: 07/06/18 18:03 **Supervisor approved:** 07/09/18 16:15 Mike Eger

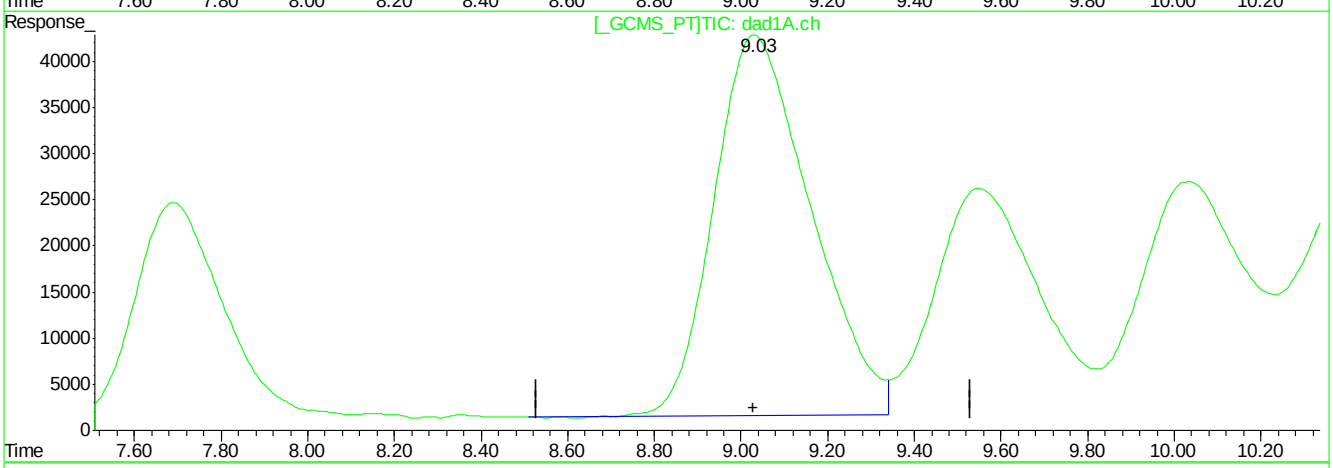
Parameter	CAS	Sig#	R.T. (min.)	Reason
Nitroglycerine	55-63-0	2	9.03	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.80	Poor instrument integration
m-Nitrotoluene	99-08-1	1	17.38	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.38	Poor instrument integration
PETN	78-11-5	2	18.90	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

9.02min 0.000ppb

response 131673

(10) Nitroglycerin #2

9.03min 4994.562ppb

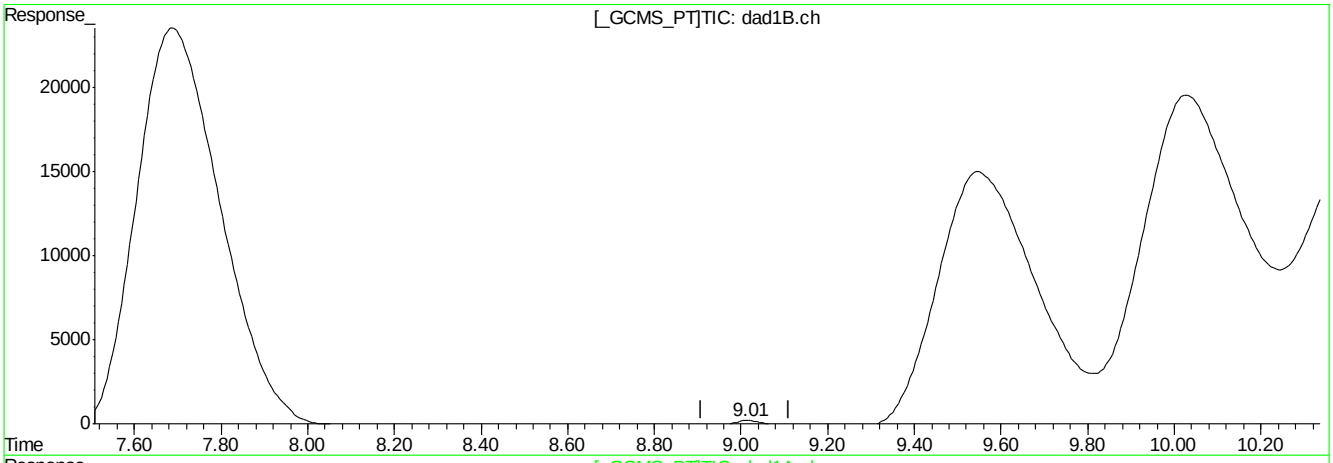
response 6382059

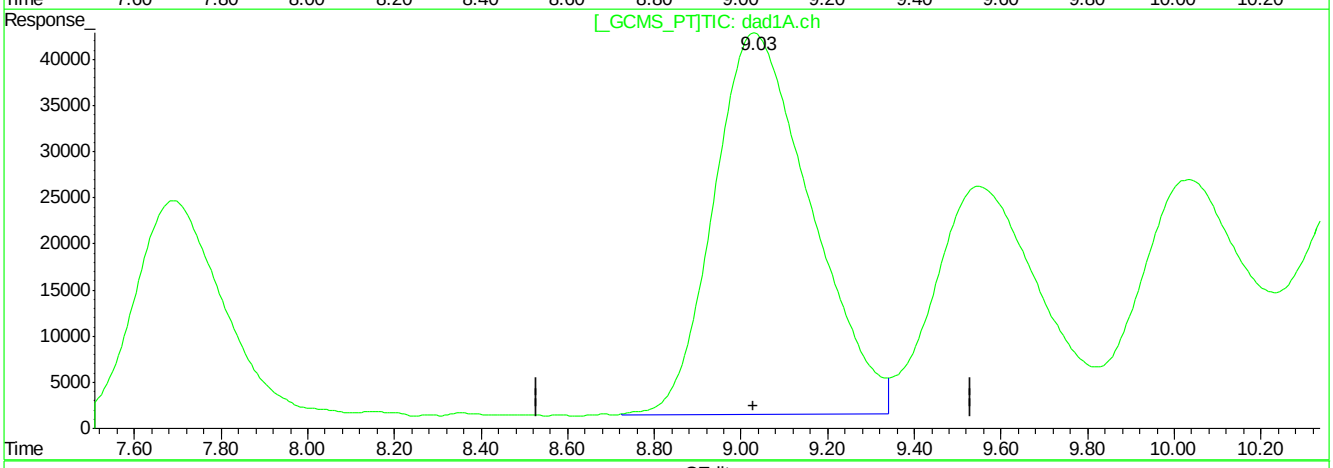
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:00:58 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

9.02min 0.000ppb

response 131673

(10) Nitroglycerin #2

9.03min 5040.599ppb m

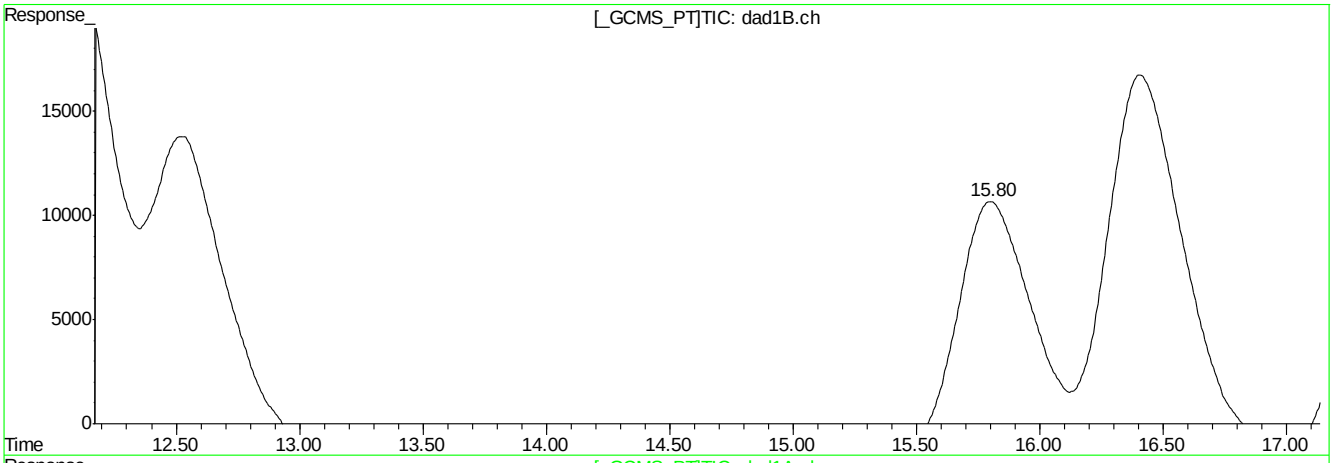
response 6440885

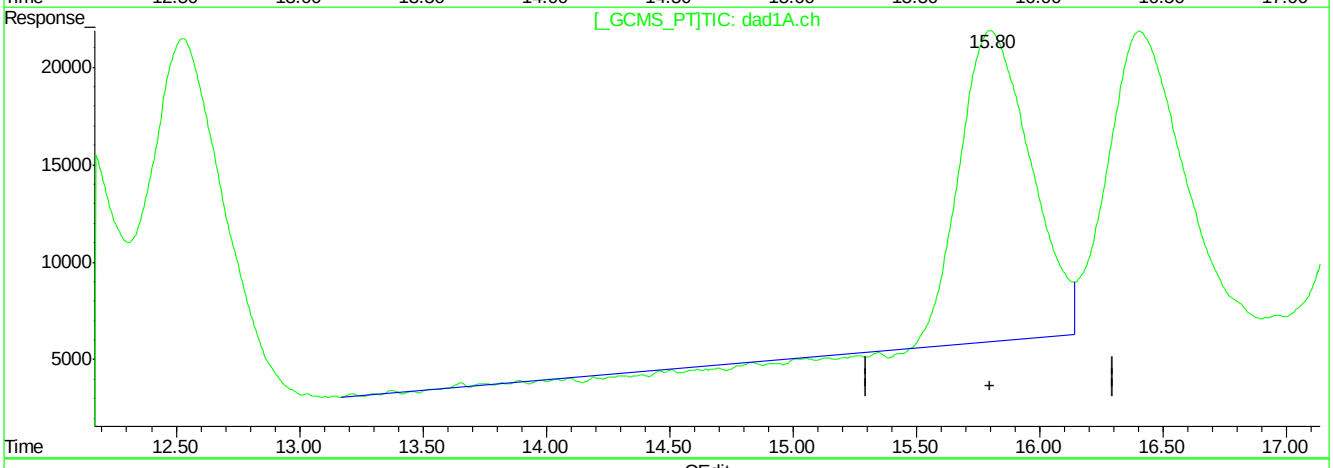
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:01:21 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.80min 910.866ppb

response 2353681

(18) o-Nitrotoluene #2

15.80min 917.908ppb

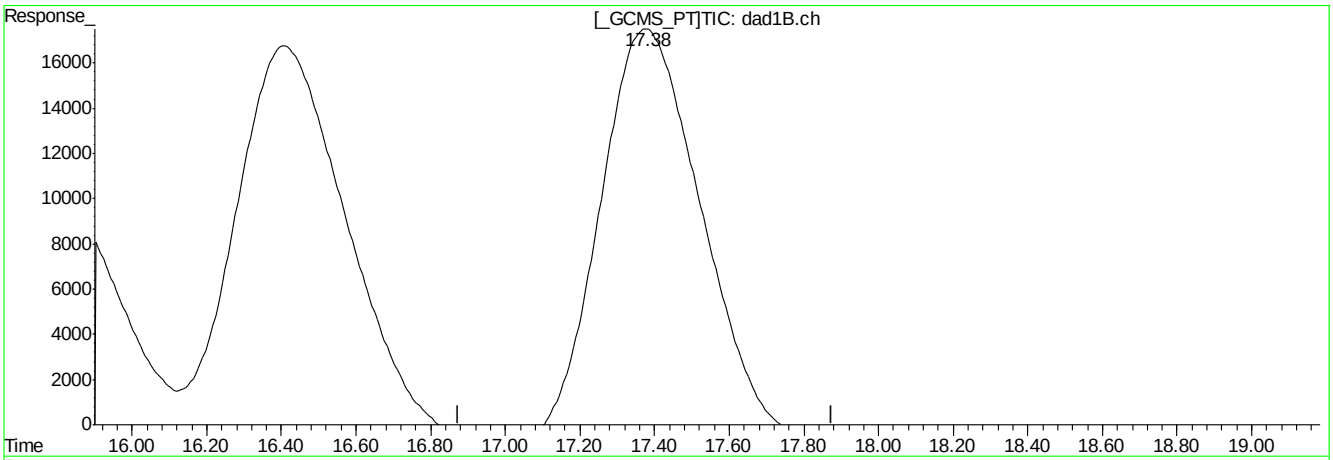
response 3057429

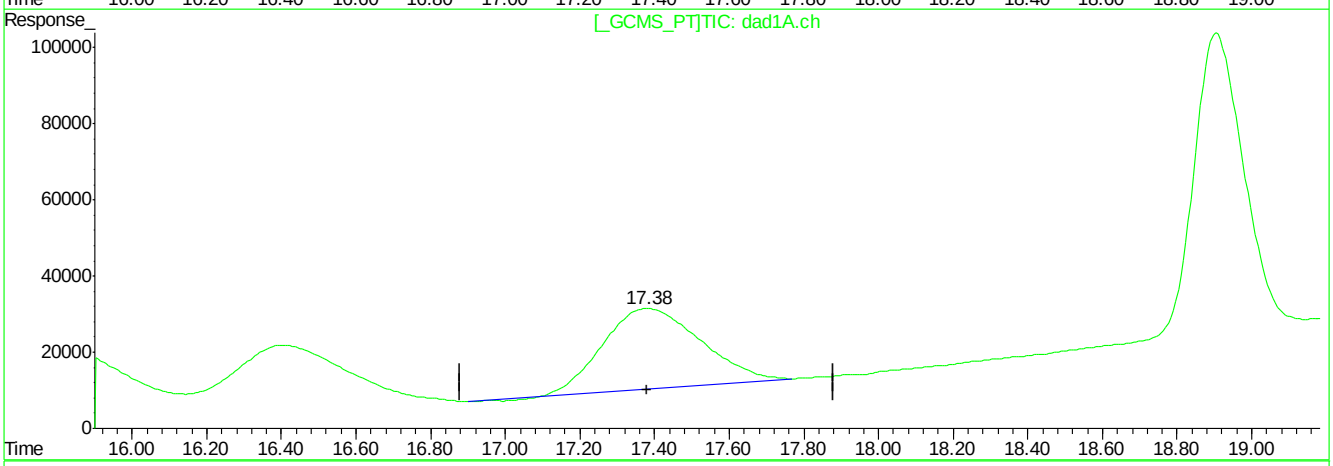
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:01:45 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.38min 996.149ppb m

response 3464883

(20) m-Nitrotoluene #2

17.38min 991.679ppb

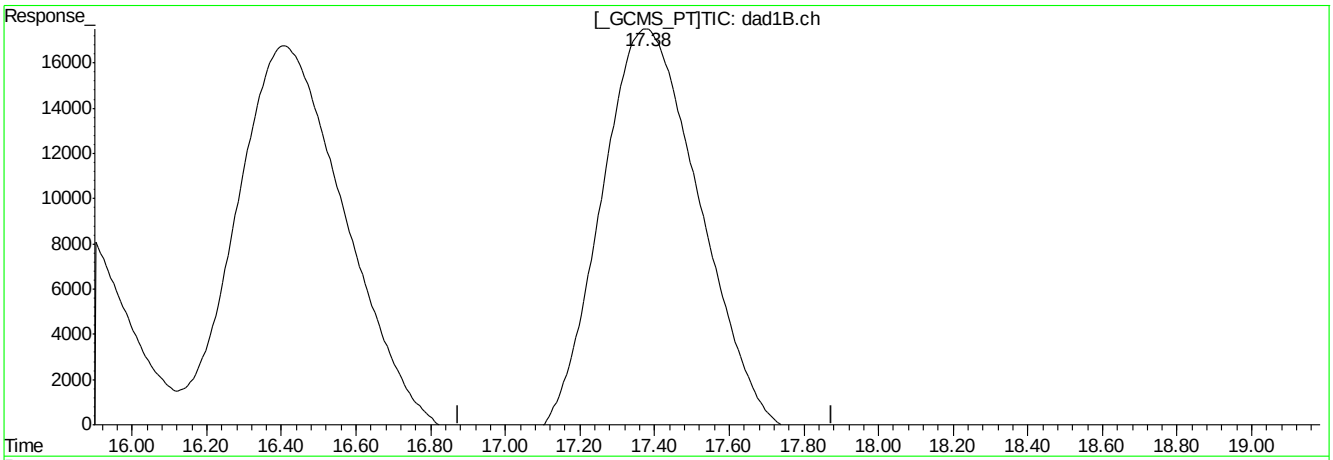
response 3779597

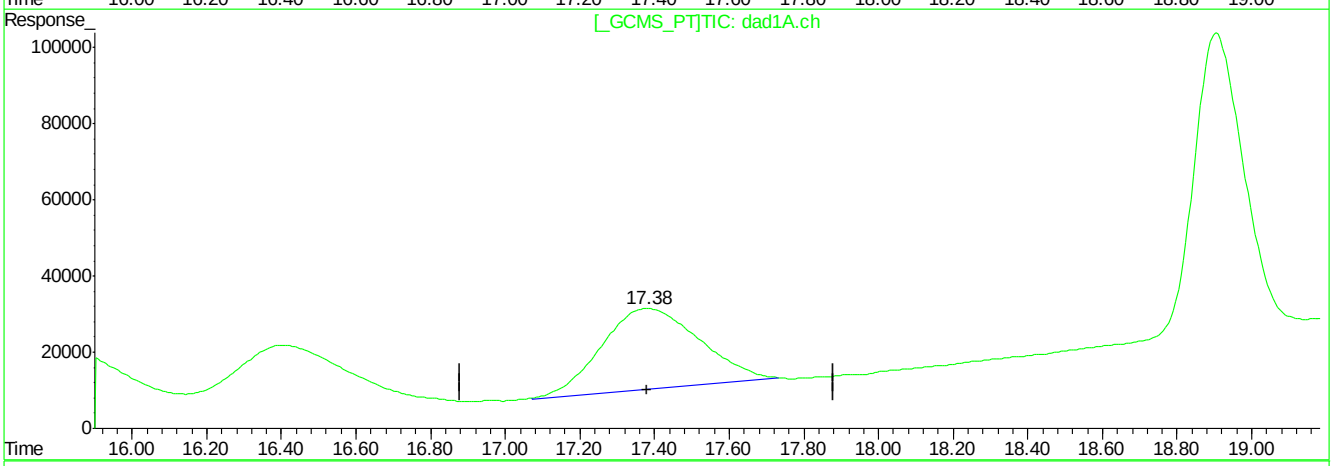
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:03:12 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.38min 996.149ppb m

response 3464883

(20) m-Nitrotoluene #2

17.38min 1018.202ppb m

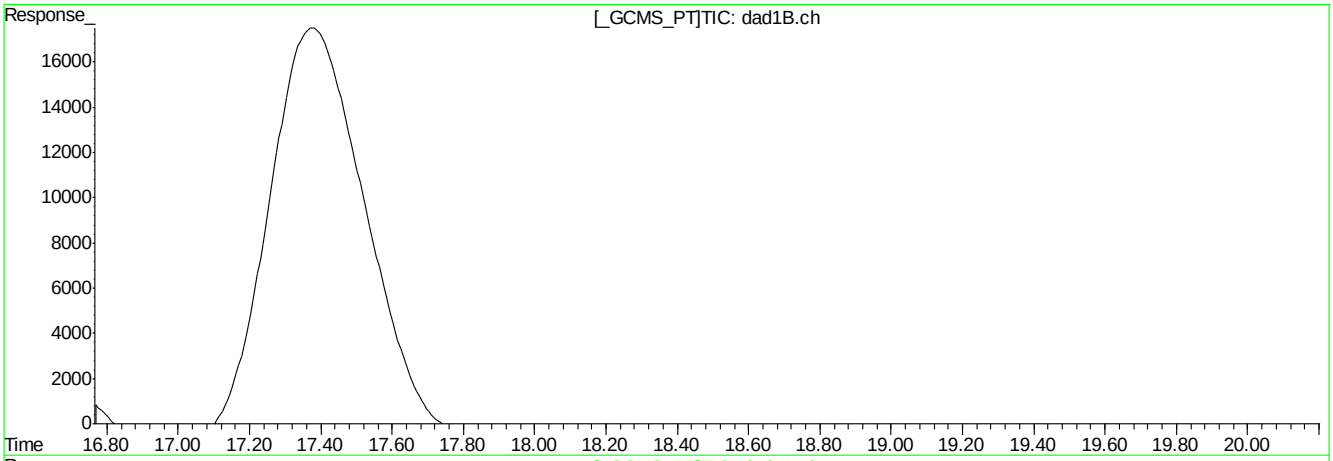
response 3888967

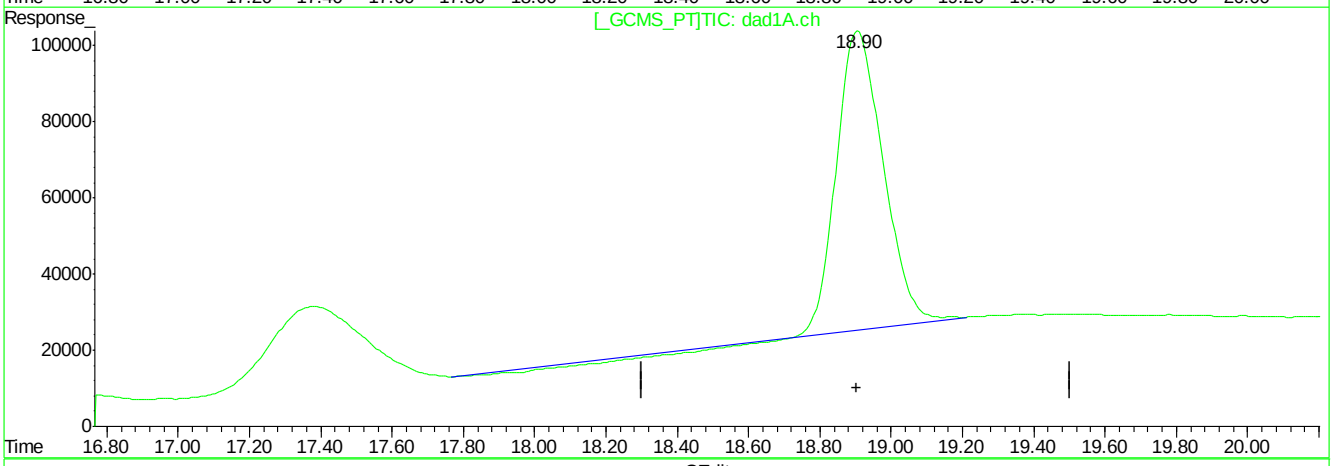
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:03:26 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.91min 0.000ppb

response 134464

(21) PETN #2

18.91min 5130.566ppb

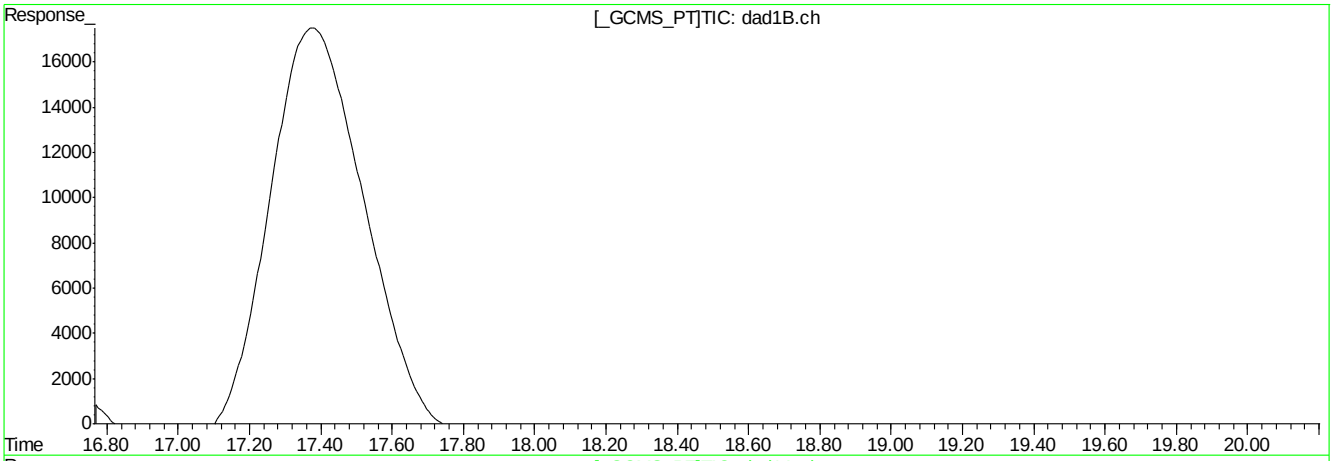
response 6760923

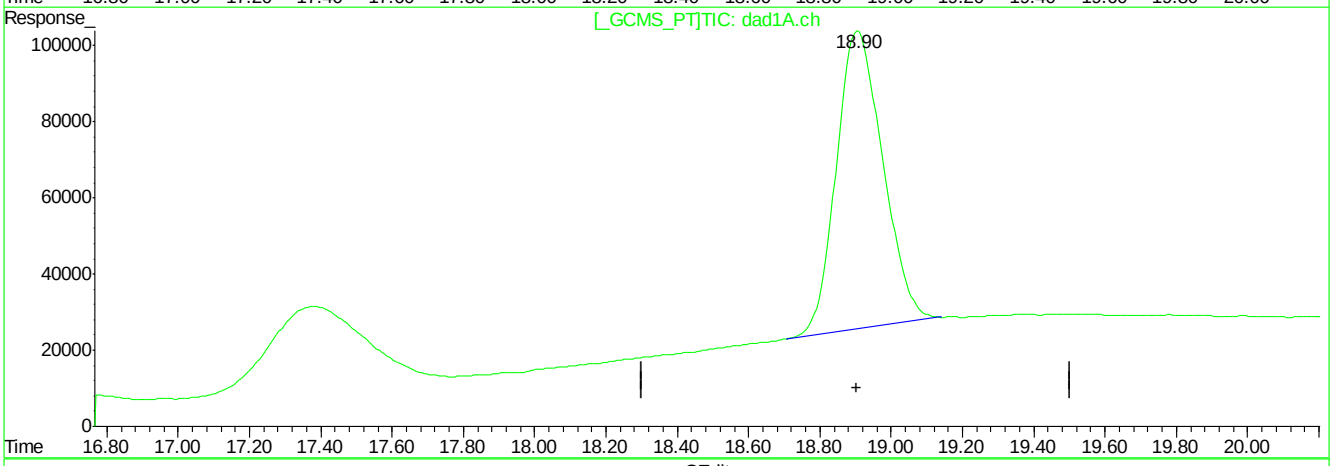
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:03:30 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.91min 0.000ppb

response 134464

(21) PETN #2

18.90min 5370.800ppb m

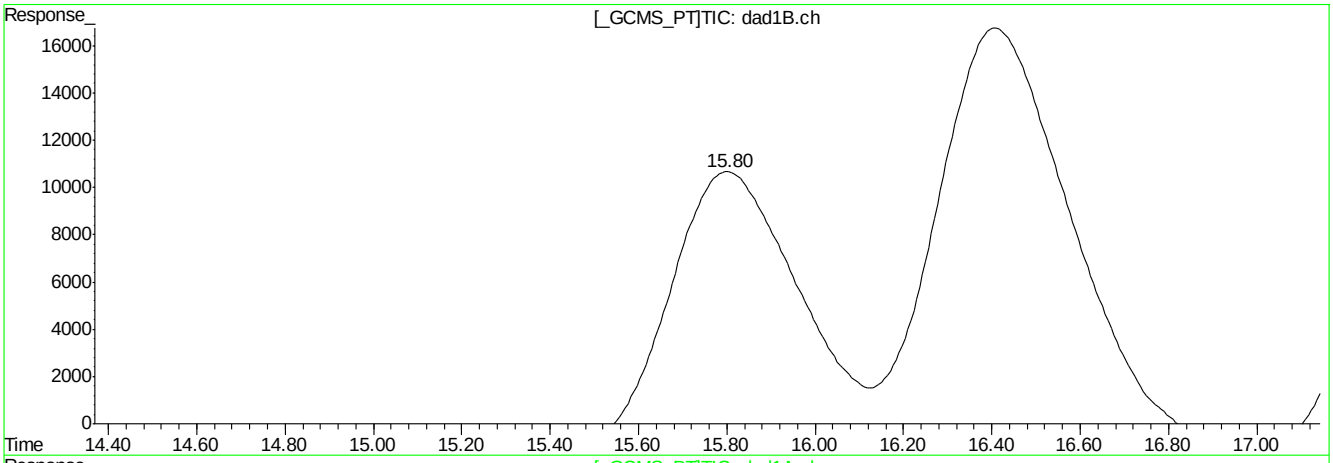
response 7077497

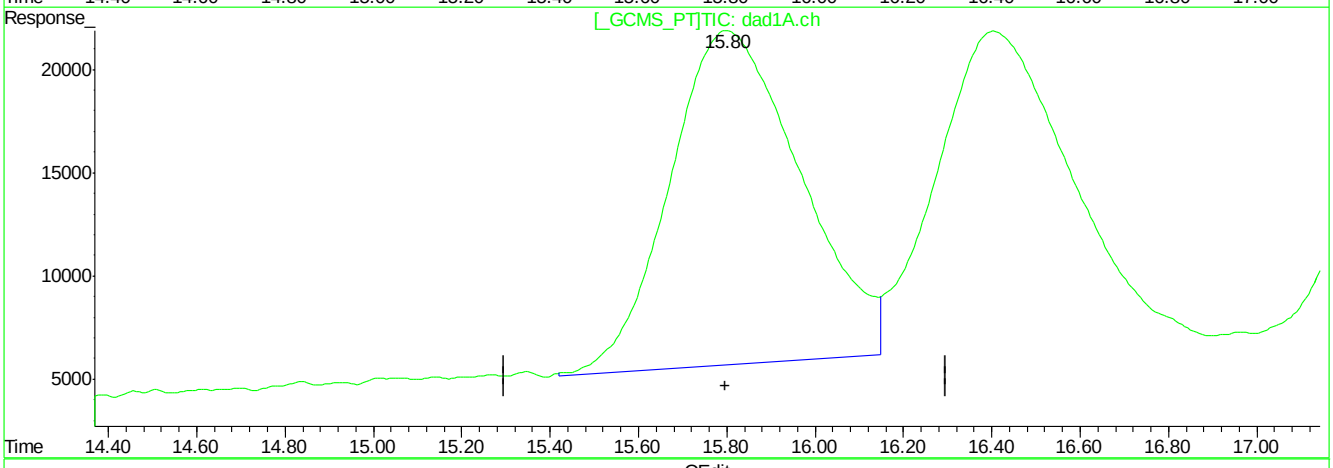
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:03:41 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:05 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.80min 910.866ppb

response 2353681

(18) o-Nitrotoluene #2

15.80min 994.603ppb m

response 3312890

(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 14:58:22 2018

BB060206.D

Manual Integrations APPROVED (compounds with "m" flag)

Mike Eger 07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1A.ch
Acq On : 06-Jul-2018, 18:32:59 Operator: kismetl
Sample : ic1748-2000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:33 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.39	11.39	5115538	9053265	2055.656	2152.381
	Spiked Amount 500.000	Range 70 - 136		Recovery =		411.13%#	430.48%#
	Target Compounds						
1)	TNX	1.39	1.39	10105818	15448809	2064.770	2023.940
2)	HMX	1.53	1.54	3483085	9749731	1926.900	1970.281
3)	DNX	1.78	1.78	5255169	8449746	1708.792	1666.558
4)	MNX	2.38	2.38	5357968	8298916	1714.601	1760.113
5)	RDX	3.01	3.01	3919638	6255301	1929.035	1918.264
6)	1,3,5-Trinitrobe	4.81	4.81	8513836	16411515	1953.840	2002.061
7)	1,3-Dinitrobenze	6.04	6.04	11037661	7502576	1893.565	1995.846
8)	3,5-Dinitroanili	6.39	6.39	9333920	15843000	1996.249	2026.539
9)	Nitrobenzene	7.67	7.67	6798534	6515780	1816.782	1979.353
10)	Nitroglycerin	0.00	9.02	0	12866154	N.D. d	10068.976
11)	Tetryl	9.54	9.54	5097597	8150390	1722.490	1969.047
12)	2,4,6-Trinitroto	10.02	10.02	6742837	8172998	1721.455	1911.244
13)	2-Amino-4,6-Dini	10.40	10.40	7309803	10968055	1957.481	1958.696
14)	4-Amino-2,6-Dini	10.90	10.90	5081720	10532204	1860.921	1975.933
16)	2,4-Dinitrotolue	12.06	12.06	10059472	6208052	1938.924	1967.523
17)	2,6-Dinitrotolue	12.49	12.50	6133132	8070107	2003.485	2187.118
18)	o-Nitrotoluene	15.78	15.78	4702437	6540969	1819.826	1963.744m
19)	p-Nitrotoluene	16.39	16.39	7610234	6456208	1904.376	2038.802
20)	m-Nitrotoluene	17.36	17.36	7122912	7918223	2005.015	1931.495
21)	PETN	0.00	18.90	0	14289945	N.D. d	10844.008m

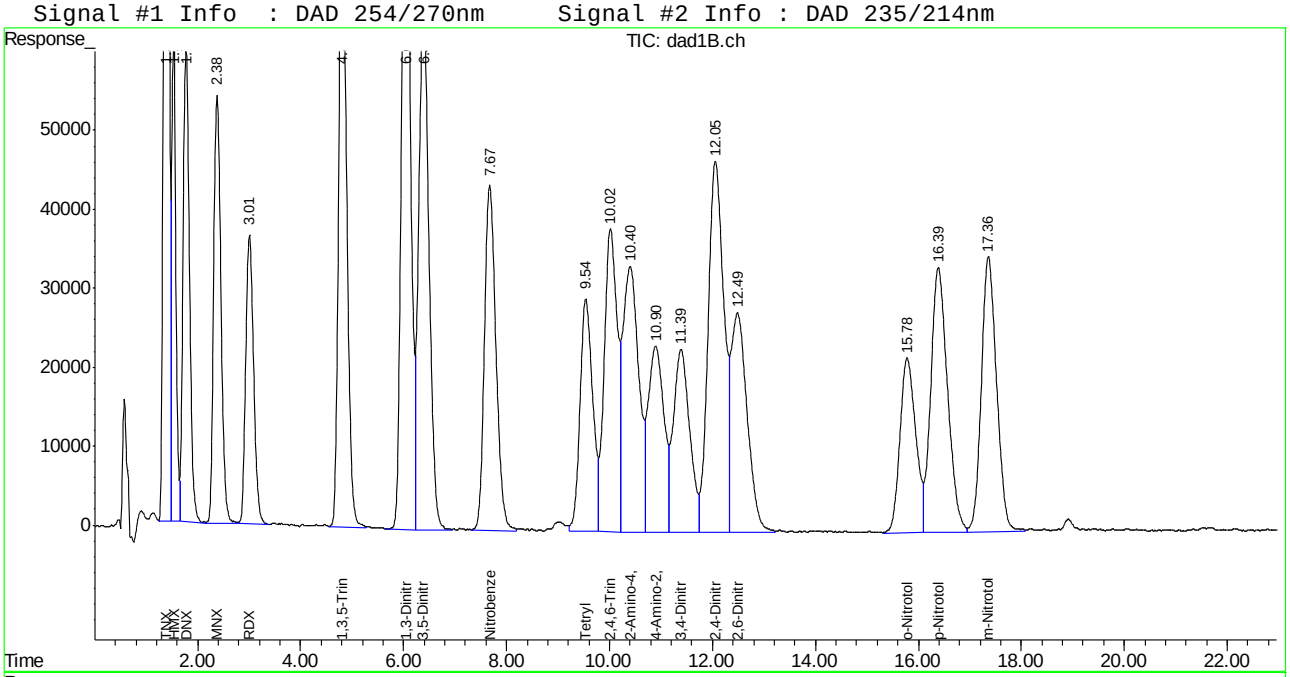
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060206.D 8330B_0707PLUS.M Mon Jul 09 11:20:54 2018 Page 1

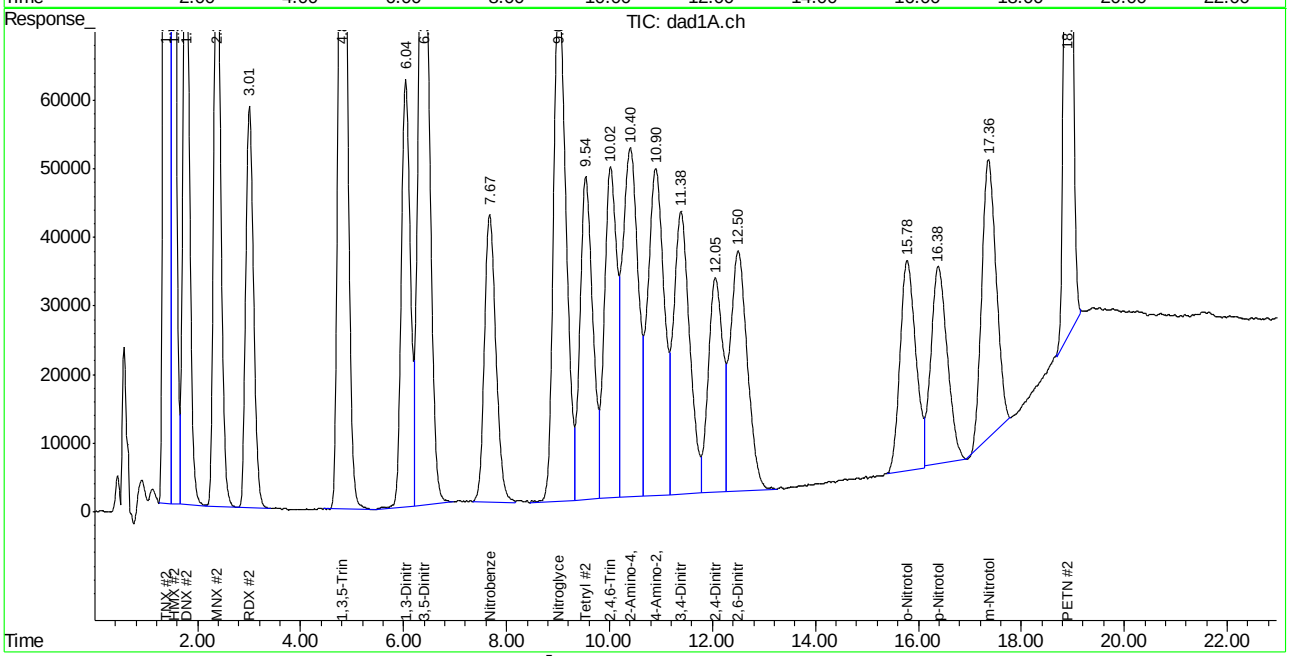
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1A.ch
Acq On : 06-Jul-2018, 18:32:59 Operator: kismetl
Sample : ic1748-2000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:04 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

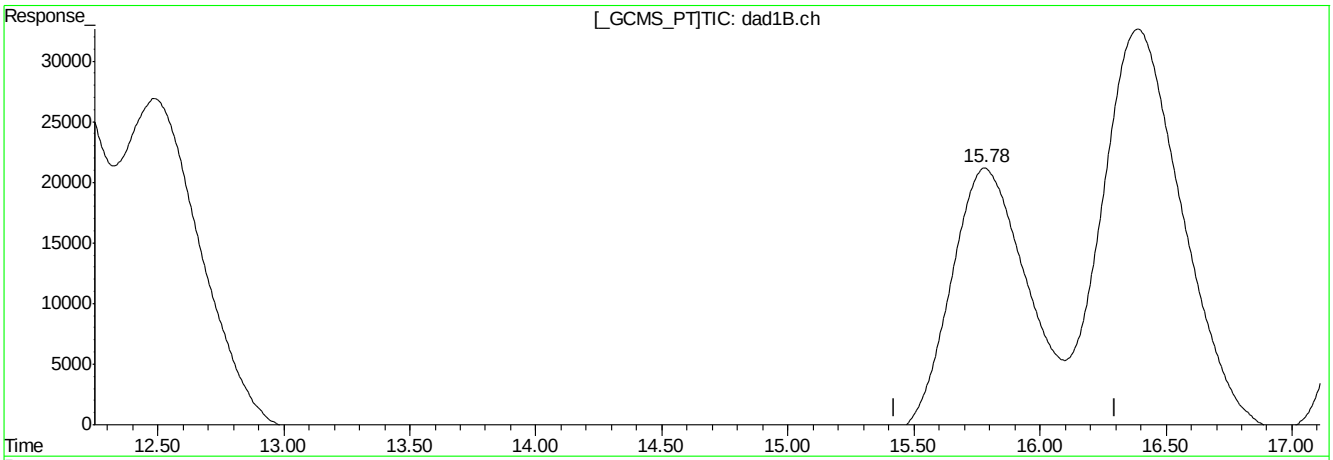
Sample Number:	GBB1748-IC1748	**Method:**	SW846 8330A
Lab FileID:	BB060206.D	**Analyst approved:**	07/09/18 11:23 William Hustedde
Injection Time:	07/06/18 18:32	**Supervisor approved:**	07/09/18 16:15 Mike Eger

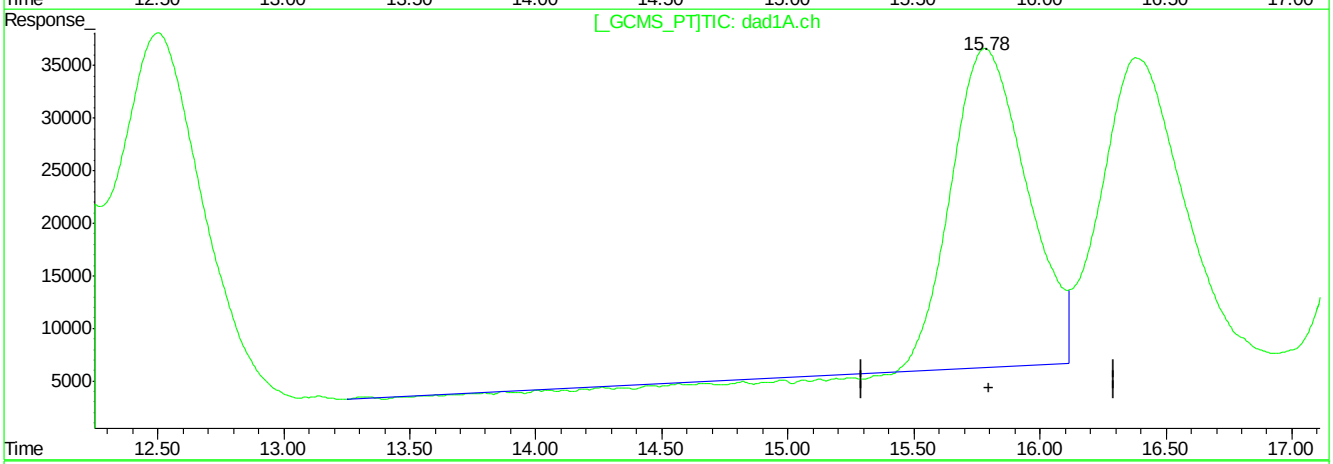
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.78	Poor instrument integration
PETN	78-11-5	2	18.90	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1A.ch
Acq On : 06-Jul-2018, 18:32:59 Operator: kismetl
Sample : ic1748-2000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.78min 1819.826ppb

response 4702437

(18) o-Nitrotoluene #2

15.78min 1839.383ppb

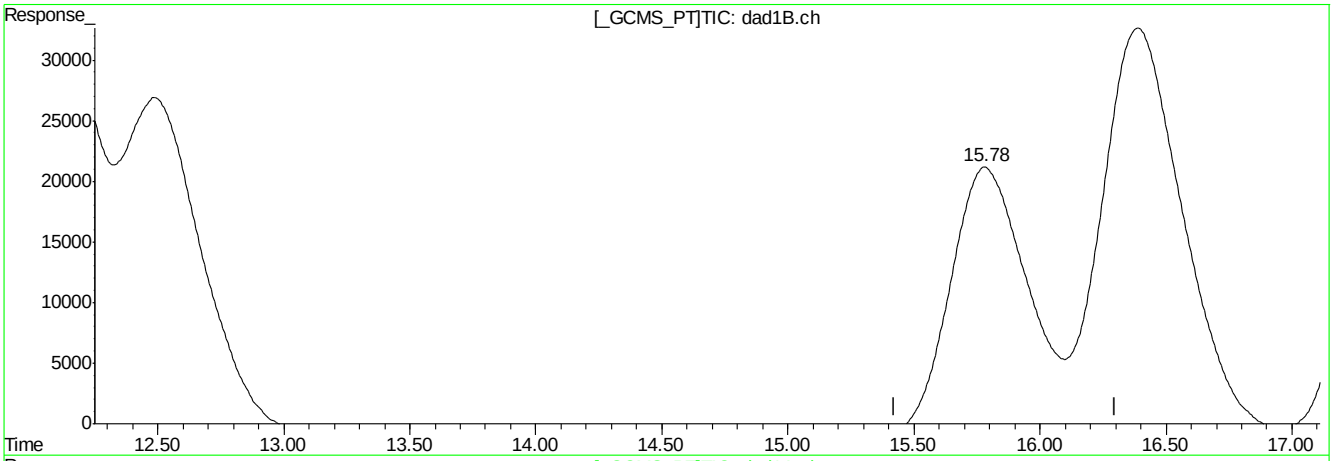
response 6126739

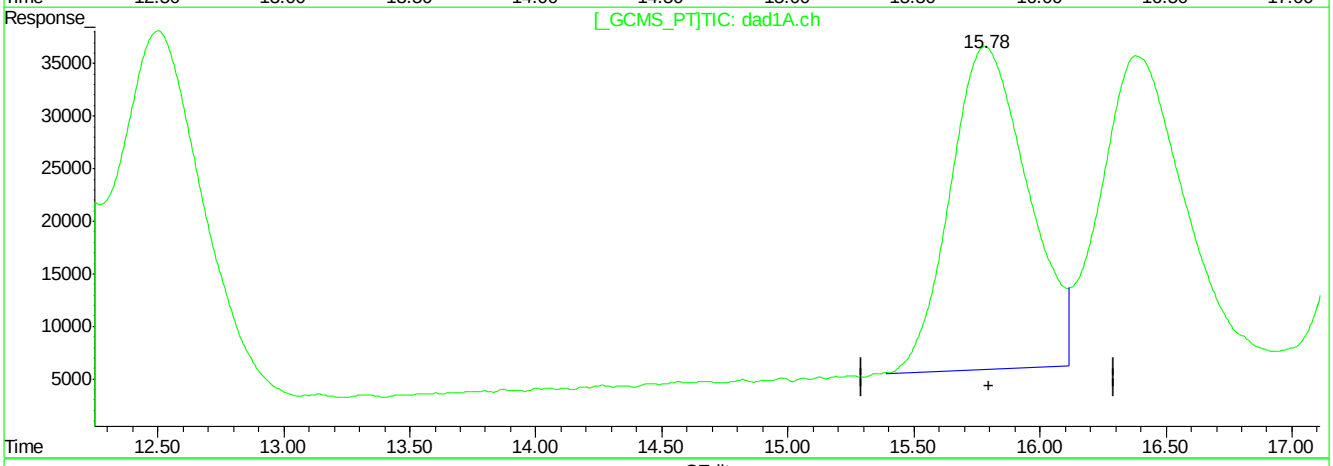
(+) = Expected Retention Time
BB060206.D 8330B_0707PLUS.M Mon Jul 09 10:04:22 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1A.ch
Acq On : 06-Jul-2018, 18:32:59 Operator: kismetl
Sample : ic1748-2000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.78min 1819.826ppb

response 4702437

(18) o-Nitrotoluene #2

15.78min 1963.744ppb m

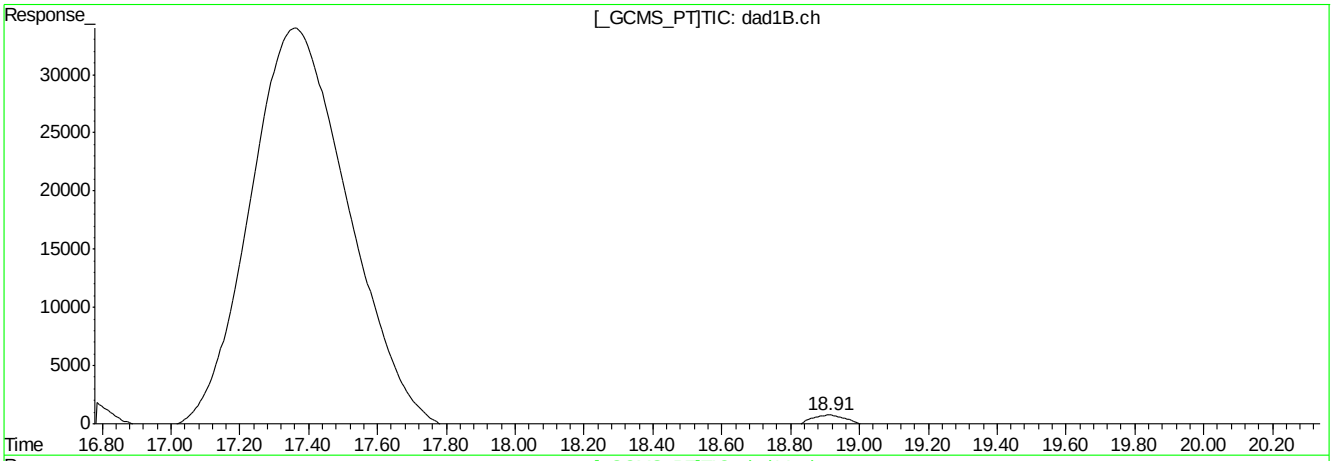
response 6540969

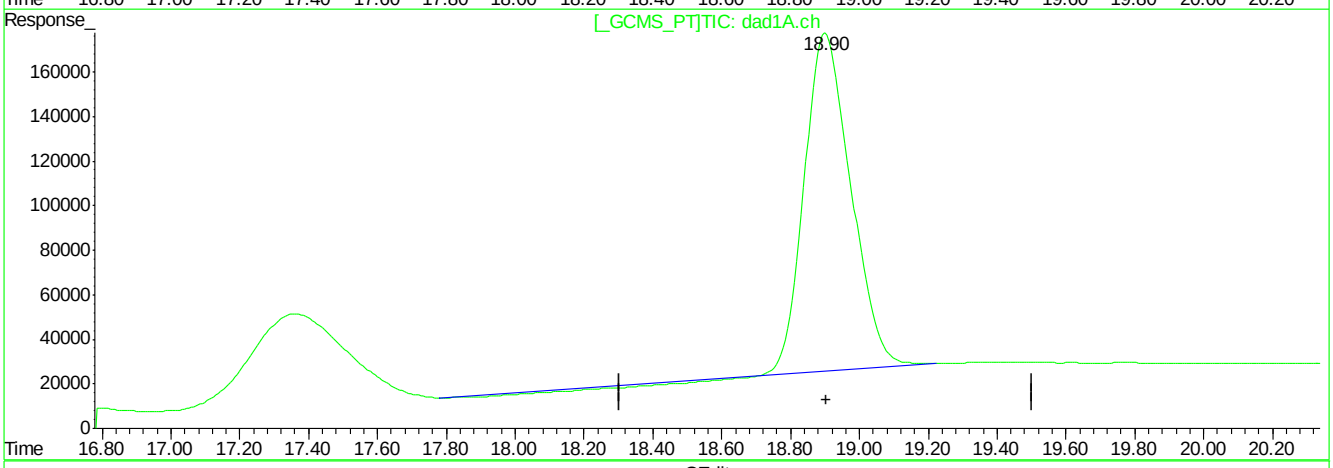
(+) = Expected Retention Time
BB060206.D 8330B_0707PLUS.M Mon Jul 09 10:04:29 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1A.ch
Acq On : 06-Jul-2018, 18:32:59 Operator: kismetl
Sample : ic1748-2000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.91min 0.000ppb

response 168009

(21) PETN #2

18.90min 10471.514ppb

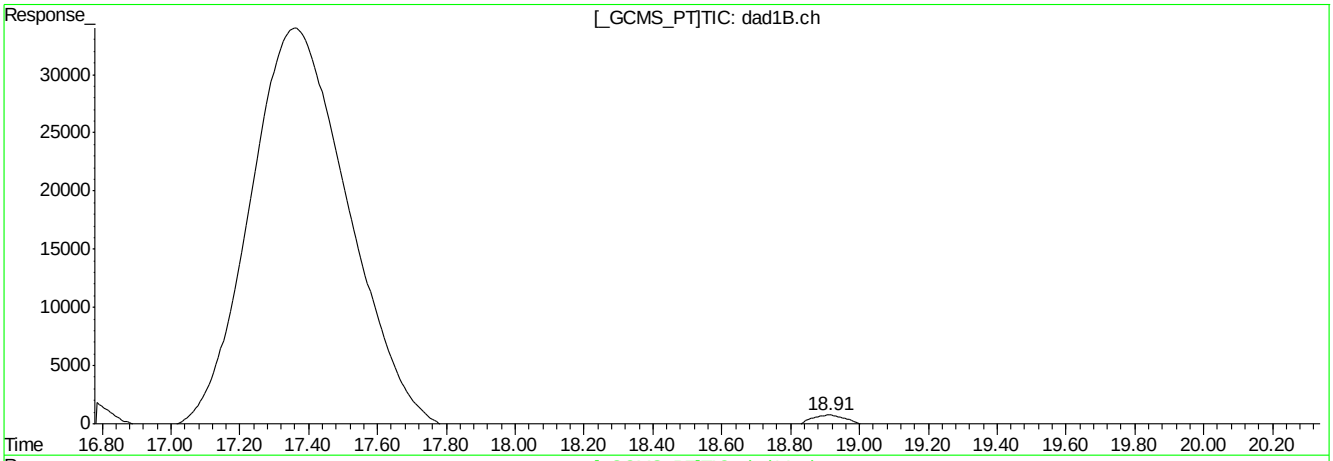
response 13799082

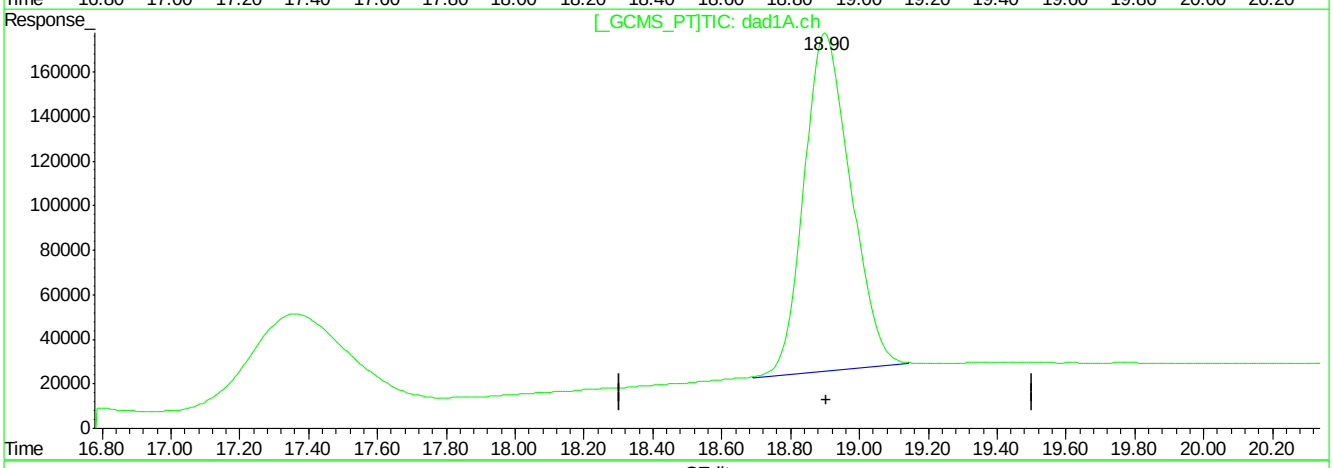
(+) = Expected Retention Time
BB060206.D 8330B_0707PLUS.M Mon Jul 09 10:04:41 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1A.ch
Acq On : 06-Jul-2018, 18:32:59 Operator: kismetl
Sample : ic1748-2000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.91min 0.000ppb

response 168009

(21) PETN #2

18.90min 10844.008ppb m

response 14289945

(+) = Expected Retention Time
BB060206.D 8330B_0707PLUS.M Mon Jul 09 10:04:55 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 11:03:35 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
Spiked Amount	500.000	Range	70 - 136	Recovery	=	0.00%#	0.00%#
	Target Compounds						
1)	TNX	1.39	1.39	4515438	6945759	888.280	881.147
2)	HMX	1.54	1.54	2011935	5533116	1043.978	1137.187
3)	DNX	1.78	1.78	2521630	4036157	965.091	889.408
4)	MNX	2.39	2.39	2620001	4050127	908.873	939.824
5)	RDX	3.01	3.01	2243559	3605185	1088.039	1056.691
6)	1,3,5-Trinitrobe	4.82	4.82	4810677	9191960	1122.936	1101.772
7)	1,3-Dinitrobenze	6.05	6.05	6161966	4294442	1067.478	1117.069
8)	3,5-Dinitroanili	6.40	6.40	4358334	7455000	933.611	945.674
9)	Nitrobenzene	7.68	7.68	3736320	3624907	1003.720	1112.210
10)	Nitroglycerin	0.00	9.02	0	6279551	N.D. d	4813.802
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	12.06	12.06	5571508	3462562	1020.089	1133.416
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	15.79	15.78	2663398	3599618	1120.494	1116.301m
19)	p-Nitrotoluene	16.39	16.39	4189871	3567103	1066.427	1019.236
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	18.90	0	7180831	N.D. d	5002.949m

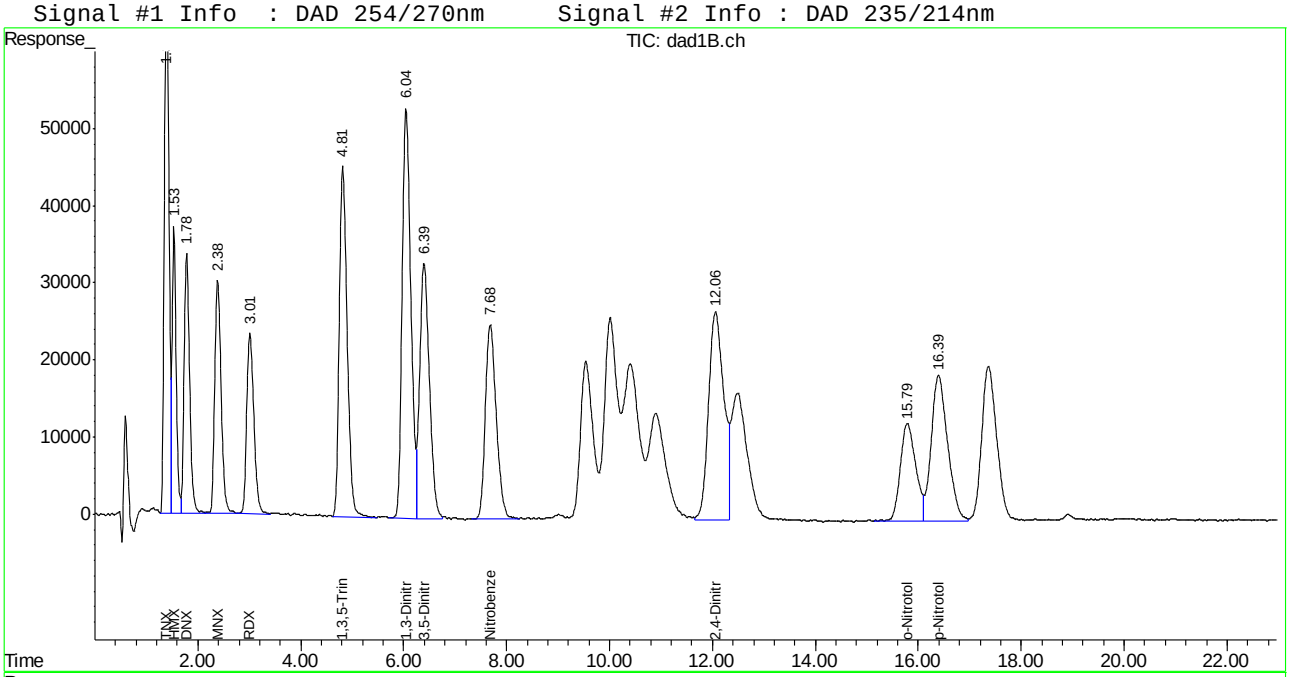
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060207.D 8330B_0707PLUS.M Mon Jul 09 11:20:55 2018 Page 1

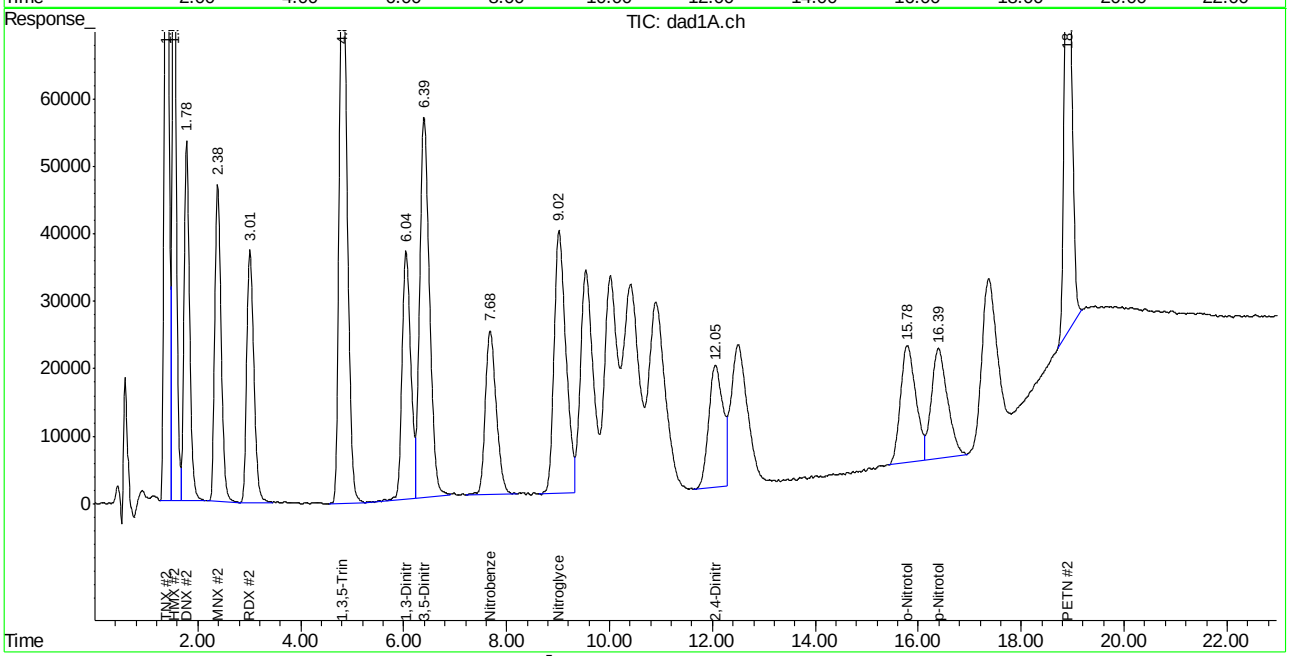
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 11:17 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

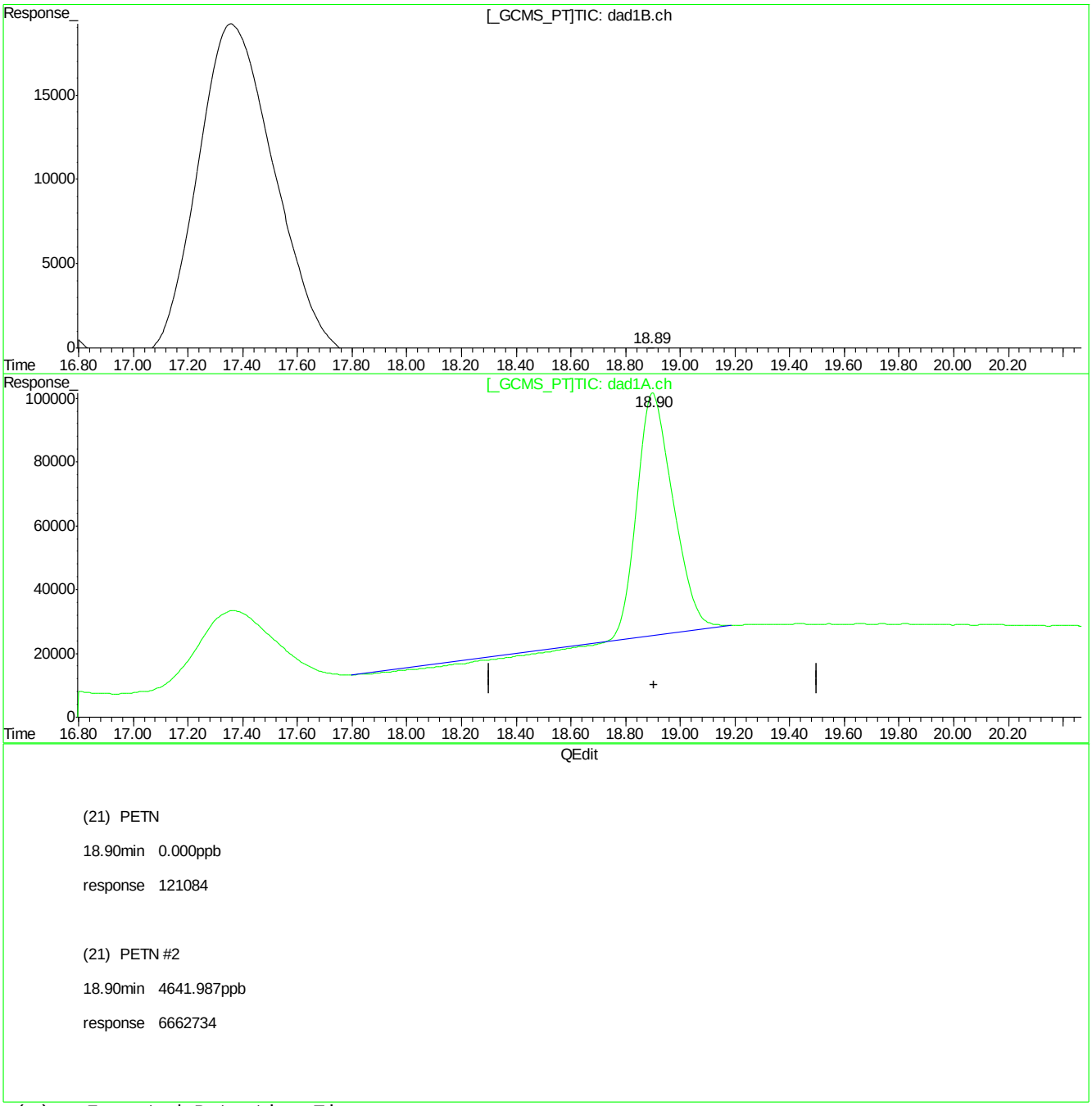
Sample Number: GBB1748-ICV1748 **Method:** SW846 8330A
Lab FileID: BB060207.D **Analyst approved:** 07/09/18 11:23 William Hustedde
Injection Time: 07/06/18 19:02 **Supervisor approved:** 07/09/18 16:15 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.78	Poor instrument integration
PETN	78-11-5	2	18.90	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 11:03 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration



(21) PETN

18.90min 0.000ppb

response 121084

(21) PETN #2

18.90min 4641.987ppb

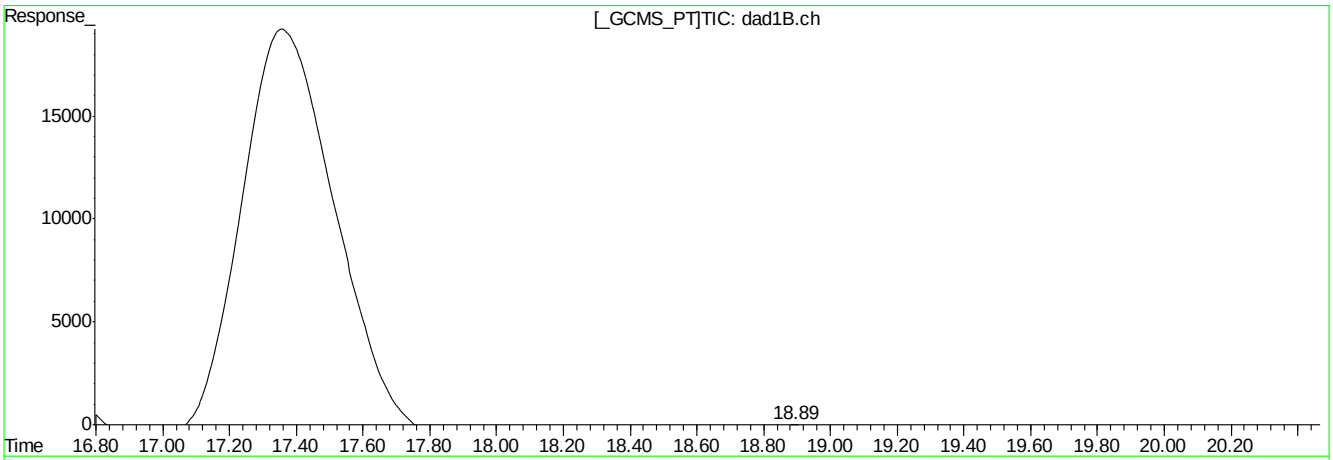
response 6662734

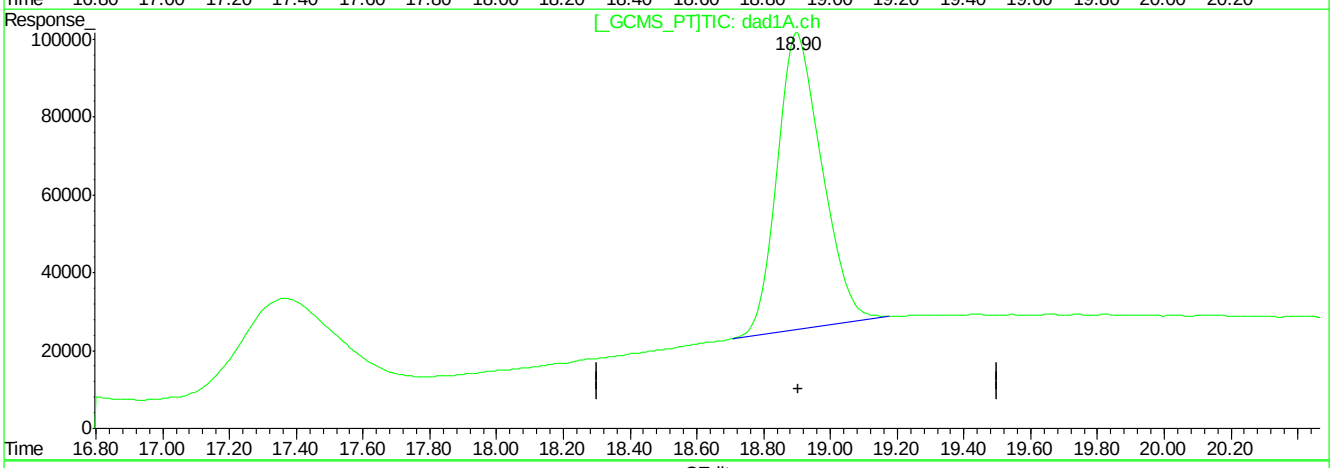
(+) = Expected Retention Time
BB060207.D 8330B_0707PLUS.M Mon Jul 09 11:04:29 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 11:03 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.90min 0.000ppb

response 121084

(21) PETN #2

18.90min 5002.949ppb m

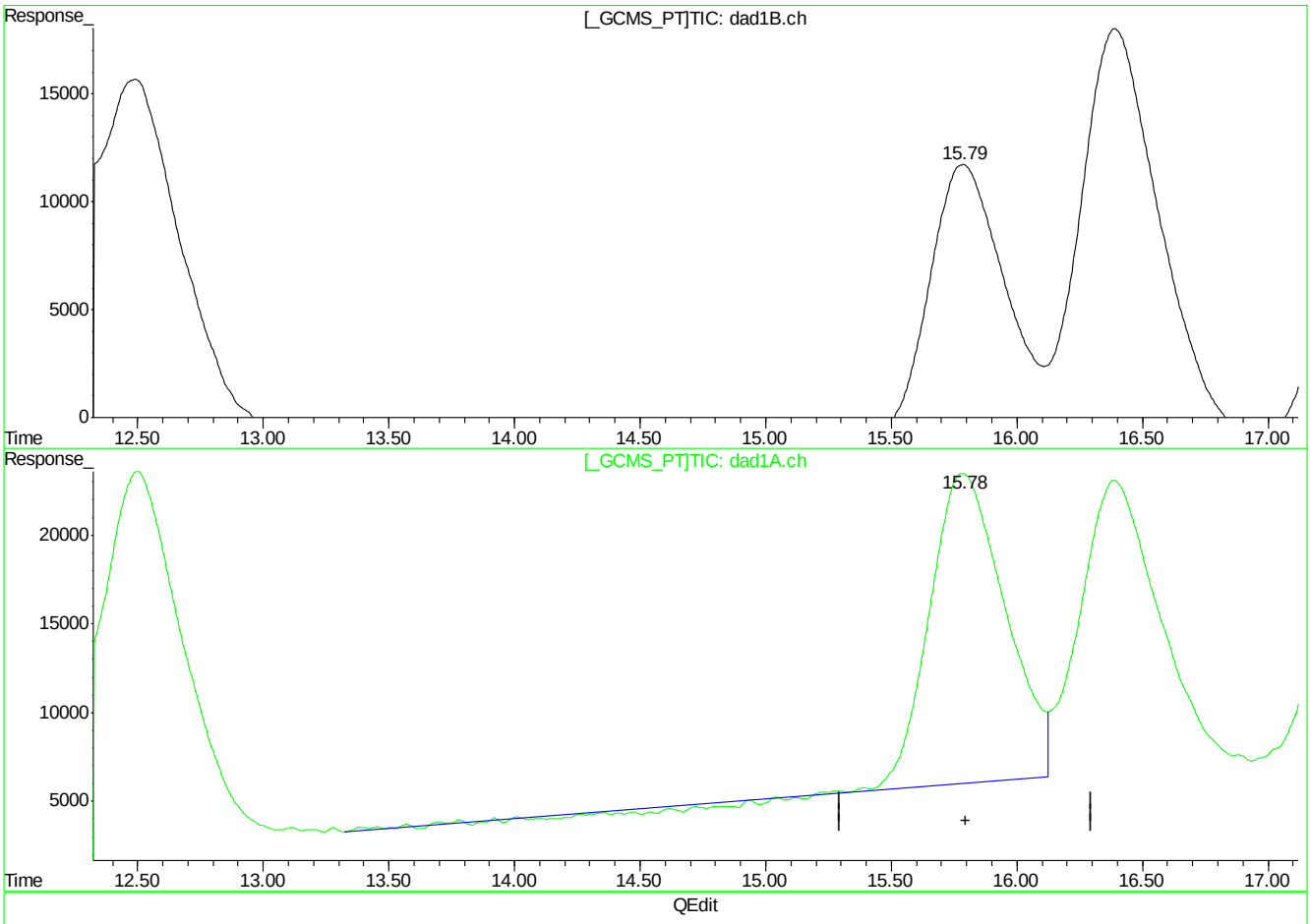
response 7180831

(+) = Expected Retention Time
BB060207.D 8330B_0707PLUS.M Mon Jul 09 11:04:38 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 11:03 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.79min 1120.494ppb

response 2663398

(18) o-Nitrotoluene #2

15.79min 1097.541ppb

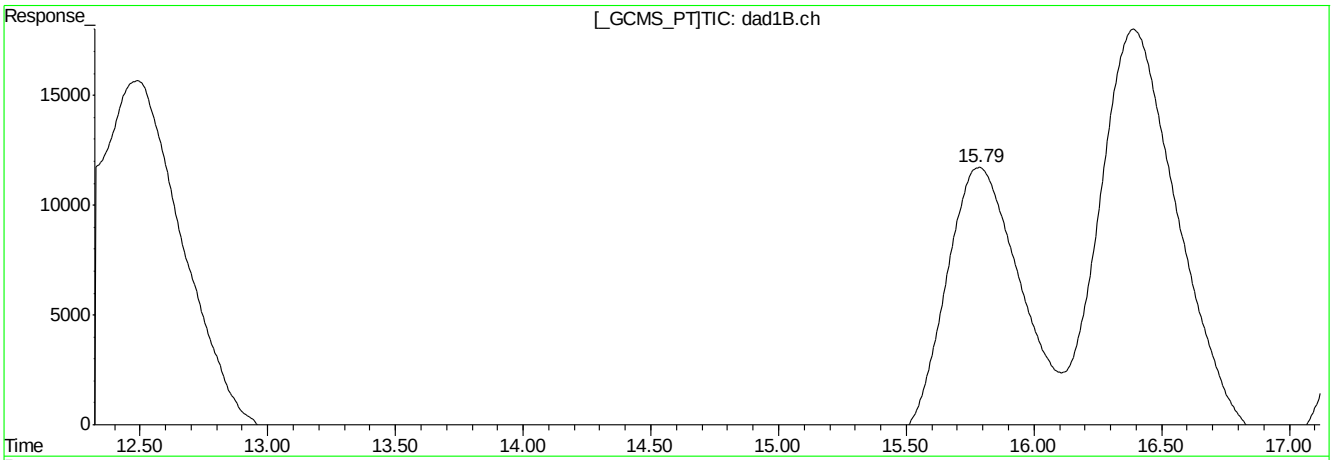
response 3539122

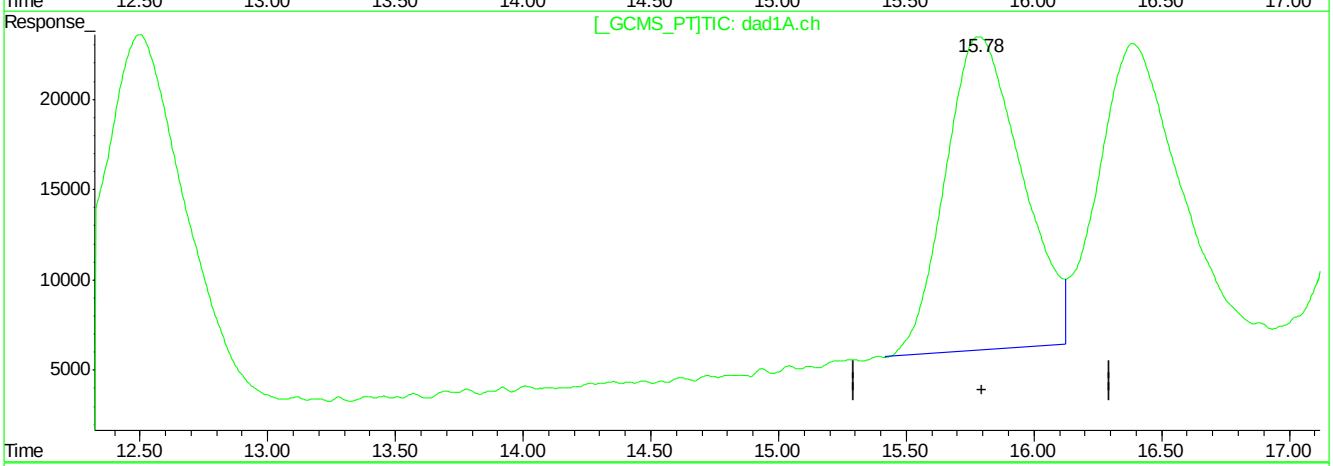
(+) = Expected Retention Time
BB060207.D 8330B_0707PLUS.M Mon Jul 09 11:04:43 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 11:03 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.79min 1120.494ppb

response 2663398

(18) o-Nitrotoluene #2

15.78min 1116.301ppb m

response 3599618

(+) = Expected Retention Time
BB060207.D 8330B_0707PLUS.M Mon Jul 09 11:04:52 2018

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1A.ch
Acq On : 06-Jul-2018, 19:32:55 Operator: kismetl
Sample : icv1748-1000 spk Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 11:03:36 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
	Spiked Amount 500.000	Range 70 - 136		Recovery	=	0.00%#	0.00%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	9.55	9.55	2737696	4395456	982.234	1095.709
12)	2,4,6-Trinitroto	10.02	10.02	3431479	4263770	1000.138	1053.616
13)	2-Amino-4,6-Dini	10.42	10.43	3553663	5249645	913.856	1033.000
14)	4-Amino-2,6-Dini	10.92	10.92	2653232	5361584	994.624	1058.821
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	12.51	12.52	2978778	4005471	958.888	1024.395
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	17.37	17.37	3386708	3621920	956.540	1002.550
21)	PETN	0.00	0.00	0	0	N.D.	N.D.

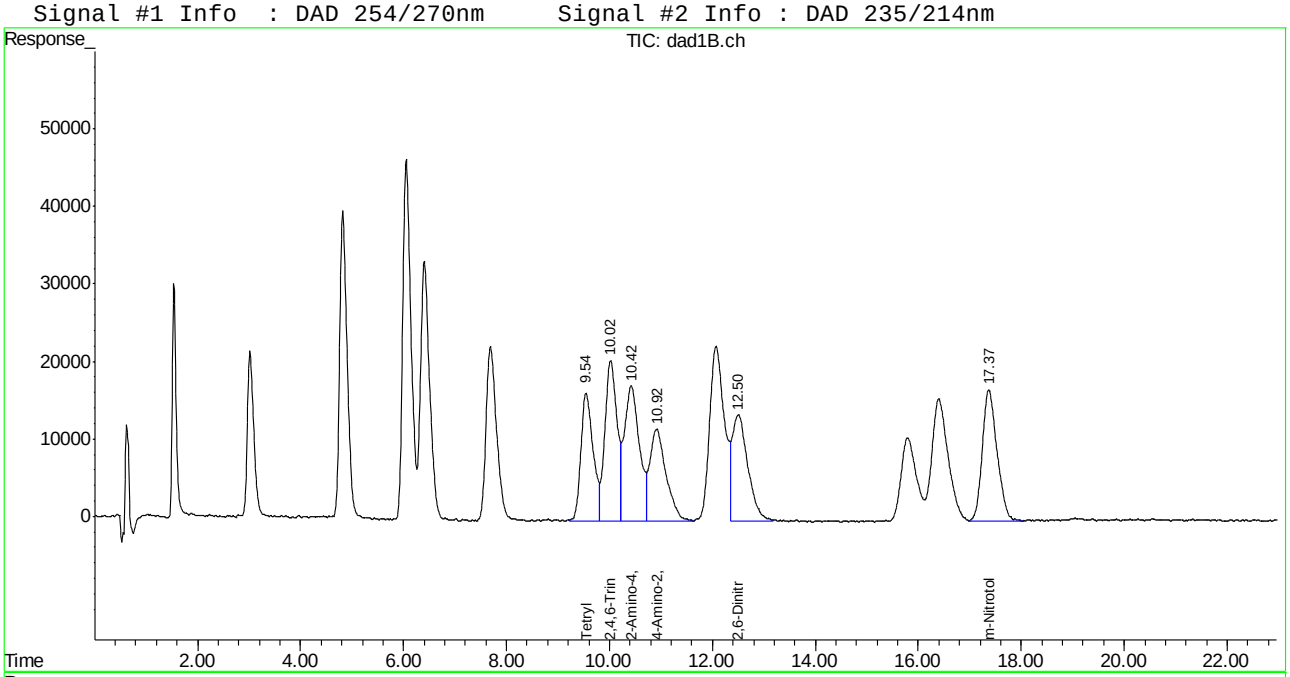
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060208.D 8330B_0707PLUS.M Mon Jul 09 11:20:56 2018 Page 1

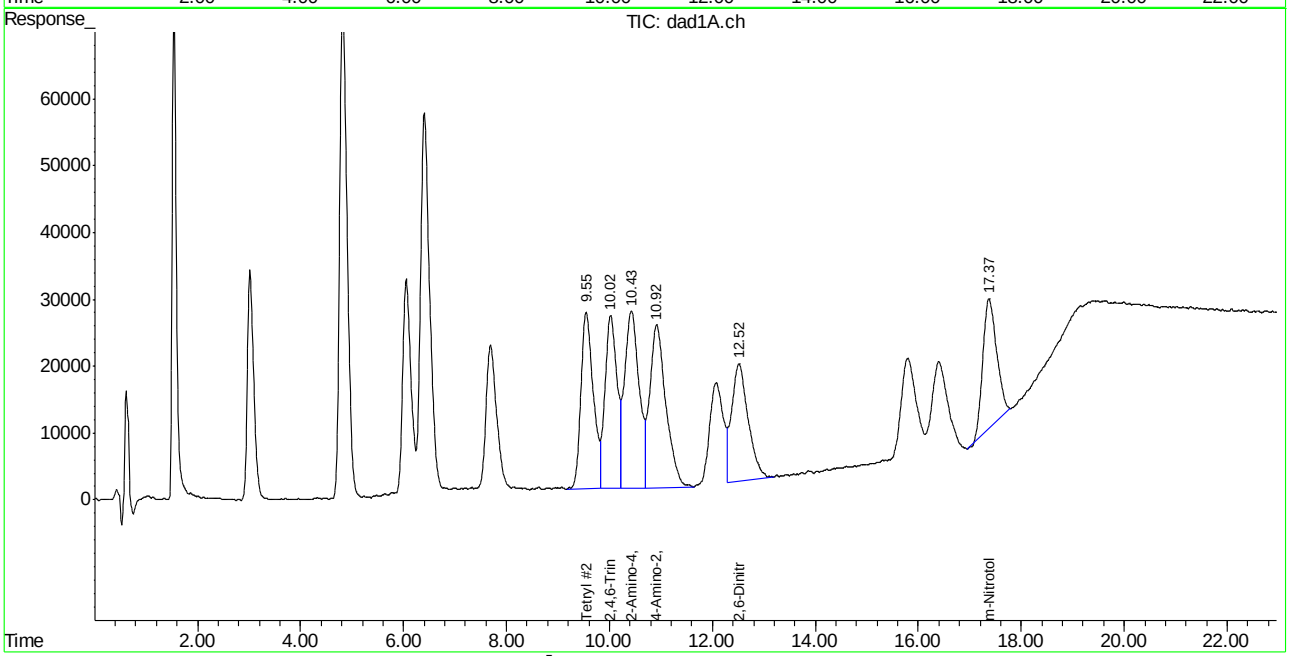
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1A.ch
Acq On : 06-Jul-2018, 19:32:55 Operator: kismetl
Sample : icv1748-1000 spk Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 11:05 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

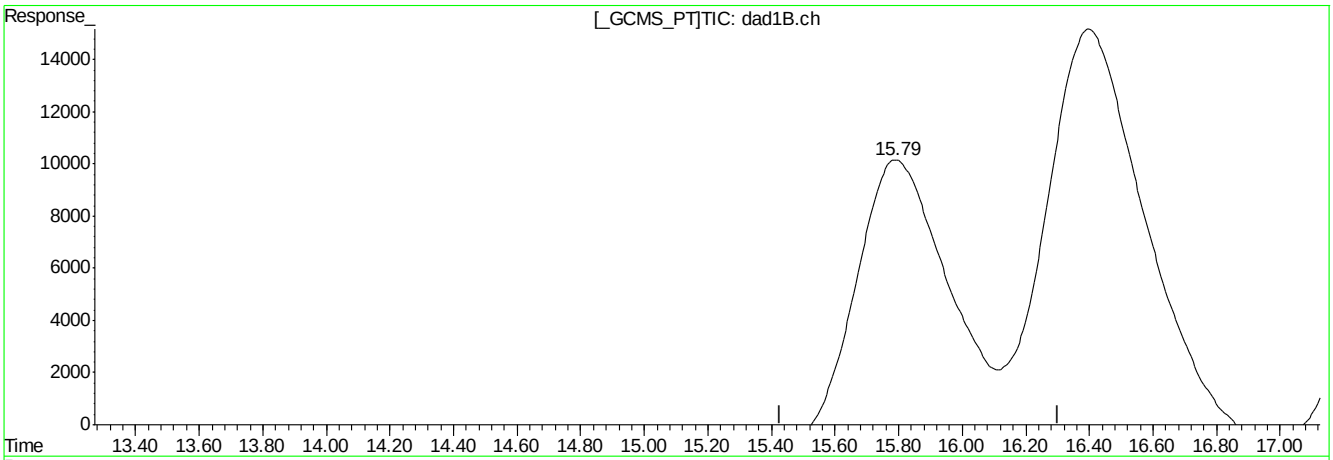


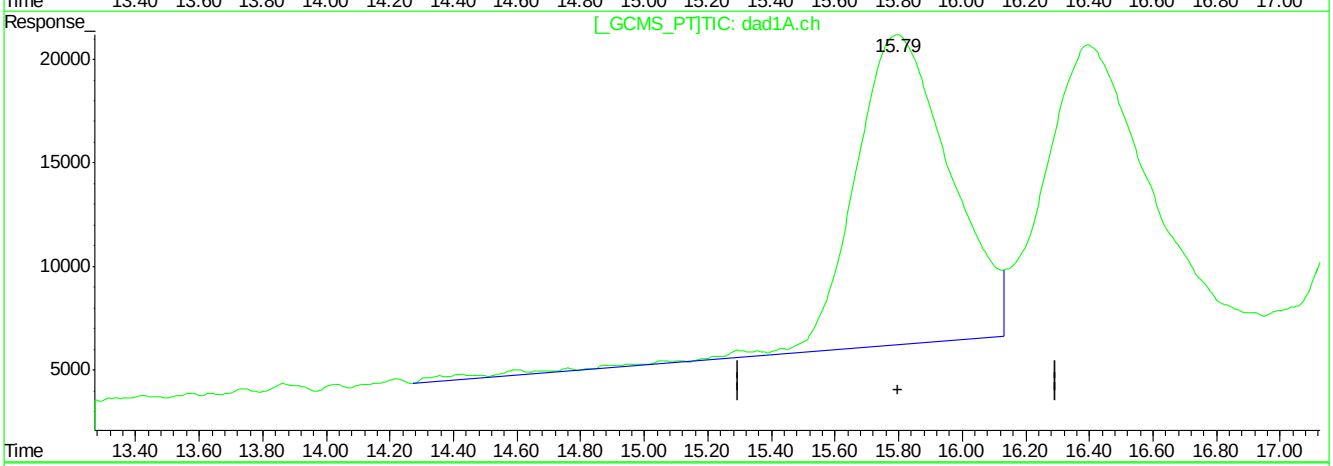


Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1A.ch
Acq On : 06-Jul-2018, 19:32:55 Operator: kismetl
Sample : icv1748-1000 spk Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:27 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:27:29 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.79min 919.460ppb

response 2185543

(18) o-Nitrotoluene #2

15.80min 981.327ppb

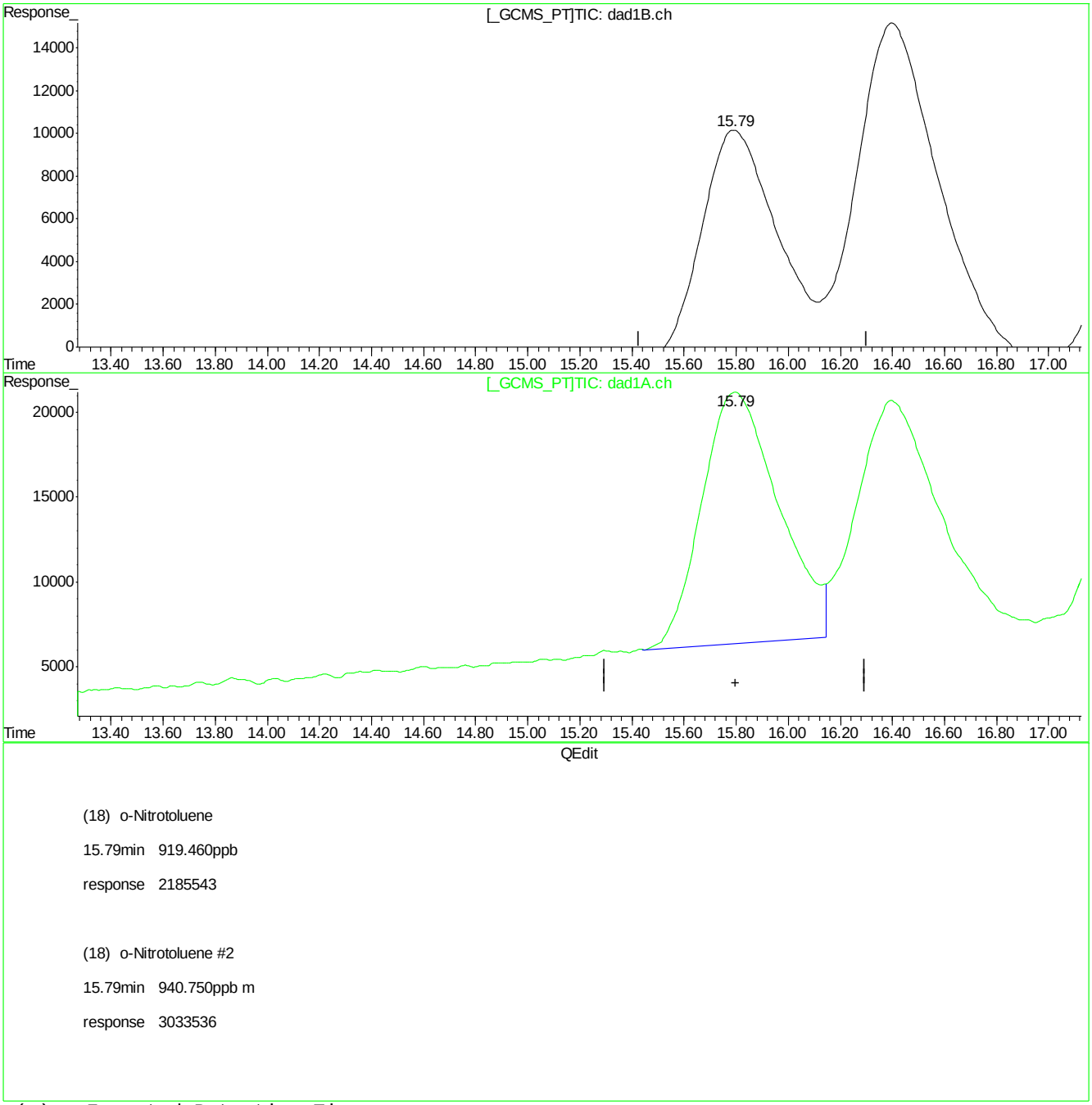
response 3164380

(+) = Expected Retention Time
BB060208.D 8330B_0707PLUS.M Mon Jul 09 10:30:33 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1A.ch
Acq On : 06-Jul-2018, 19:32:55 Operator: kismetl
Sample : icv1748-1000 spk Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:27 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:27:29 2018
Response via : Multiple Level Calibration



(+) = Expected Retention Time
BB060208.D 8330B_0707PLUS.M Mon Jul 09 10:30:44 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/27/18 15:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1A.ch
Acq On : 24-Jul-2018, 12:57:10 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:12 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.78	10.78	2477436	4164578	958.440	983.923
	Spiked Amount 500.000	Range 70 - 136		Recovery =		191.69%#	196.78%#
	Target Compounds						
1)	TNX	1.28	1.28	4881635	7501749	960.319	951.681
2)	HMX	1.42	1.42	1715679	4713268	890.253	968.803
3)	DNX	1.65	1.65	2467189	3952960	944.348	871.074
4)	MNX	2.21	2.21	2616019	4087604	907.491	948.521
5)	RDX	2.80	2.80	1972523	3125958	956.597	916.228
6)	1,3,5-Trinitrobe	4.57	4.57	4231811	8211458	986.871	984.246
7)	1,3-Dinitrobenze	5.74	5.74	5384488	3711711	932.790	961.393
8)	3,5-Dinitroanili	6.03	6.03	4589908	7759257	983.267	984.138
9)	Nitrobenzene	7.26	7.26	3303070	3234159	887.332	992.060
10)	Nitroglycerin	0.00	8.69	0	6247688	N.D. d	4789.376
11)	Tetryl	9.11	9.11	2367919	3835481	849.565	958.424
12)	2,4,6-Trinitroto	9.58	9.59	3309358	3703362	963.911	916.522
13)	2-Amino-4,6-Dini	9.77	9.78	3631649	5746556	933.911	1130.780
14)	4-Amino-2,6-Dini	10.24	10.25	2651198	5225769	993.861	1033.139
16)	2,4-Dinitrotolue	11.45	11.45	5028924	3059110	920.747	1003.802
17)	2,6-Dinitrotolue	11.88	11.89	3078229	3770212	991.293	966.094
18)	o-Nitrotoluene	15.10	15.10	2271754	3262284	955.729	1011.688m
19)	p-Nitrotoluene	15.71	15.71	3652501	3154824	929.653	901.434
20)	m-Nitrotoluene	16.68	16.68	3417042	3847672	965.078	1065.038
21)	PETN	0.00	18.74	0	6862039	N.D. d	4780.845m

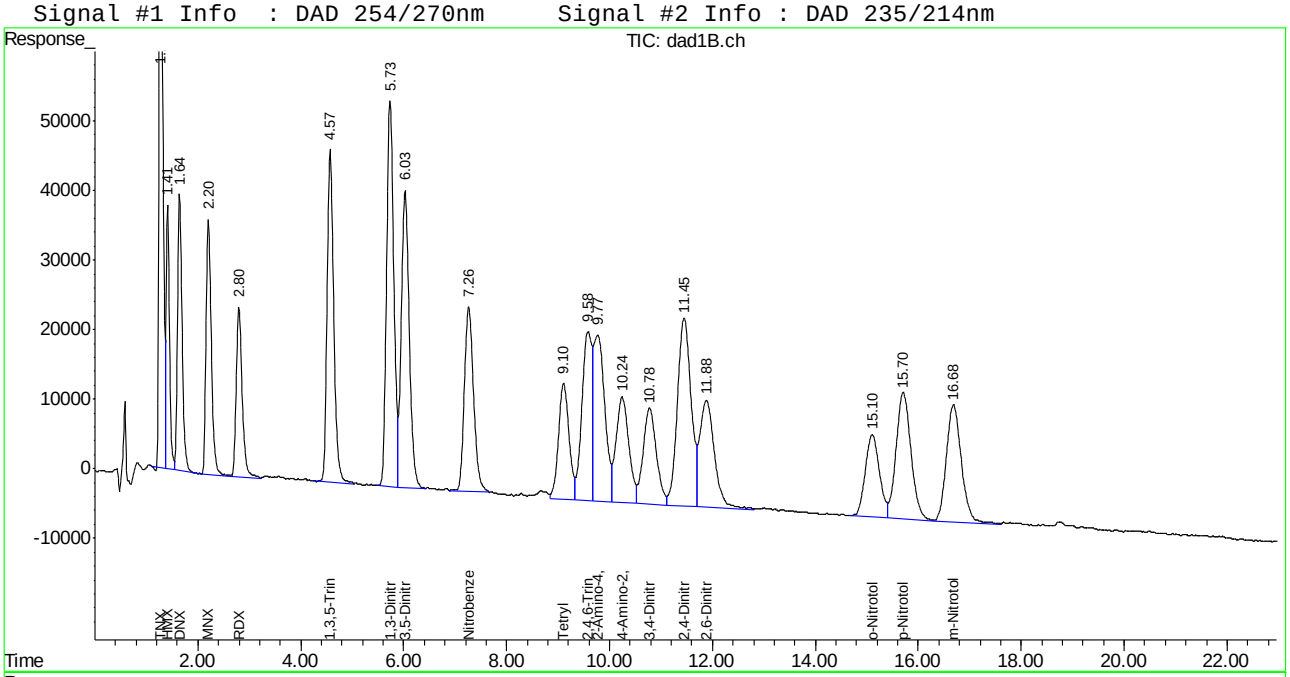
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060341.D 8330B_0707PLUS.M Thu Jul 26 16:02:13 2018 Page 1

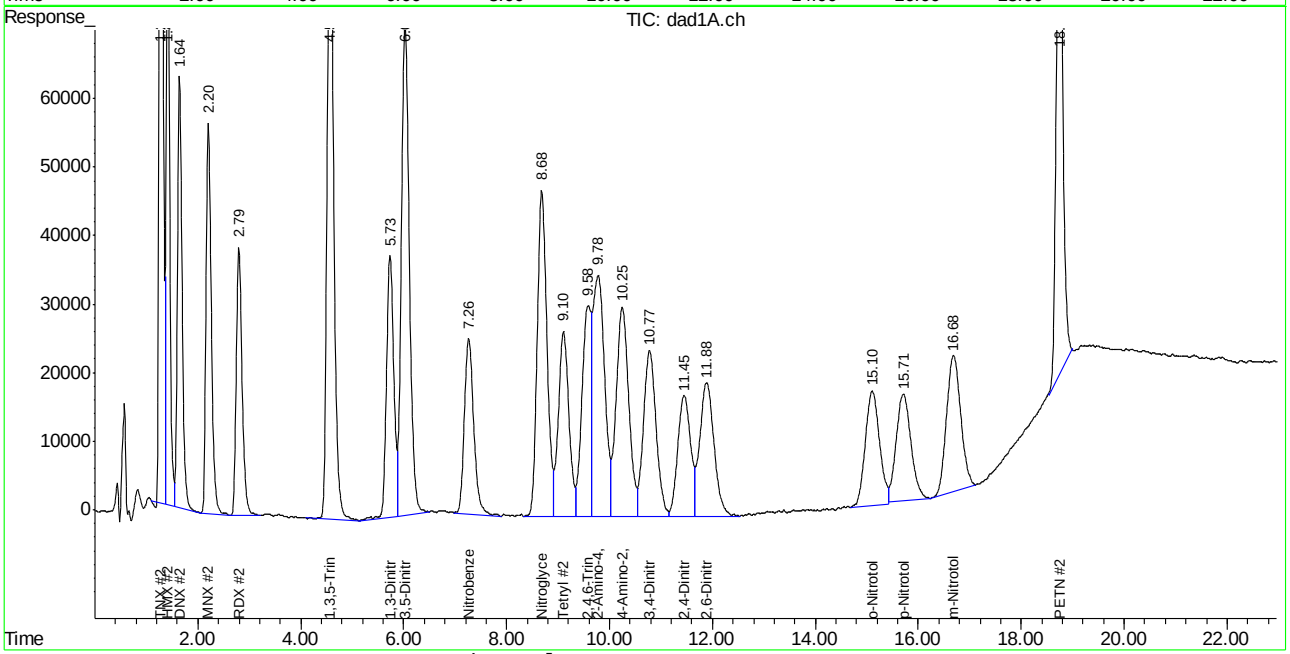
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1A.ch
Acq On : 24-Jul-2018, 12:57:10 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 15:33 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

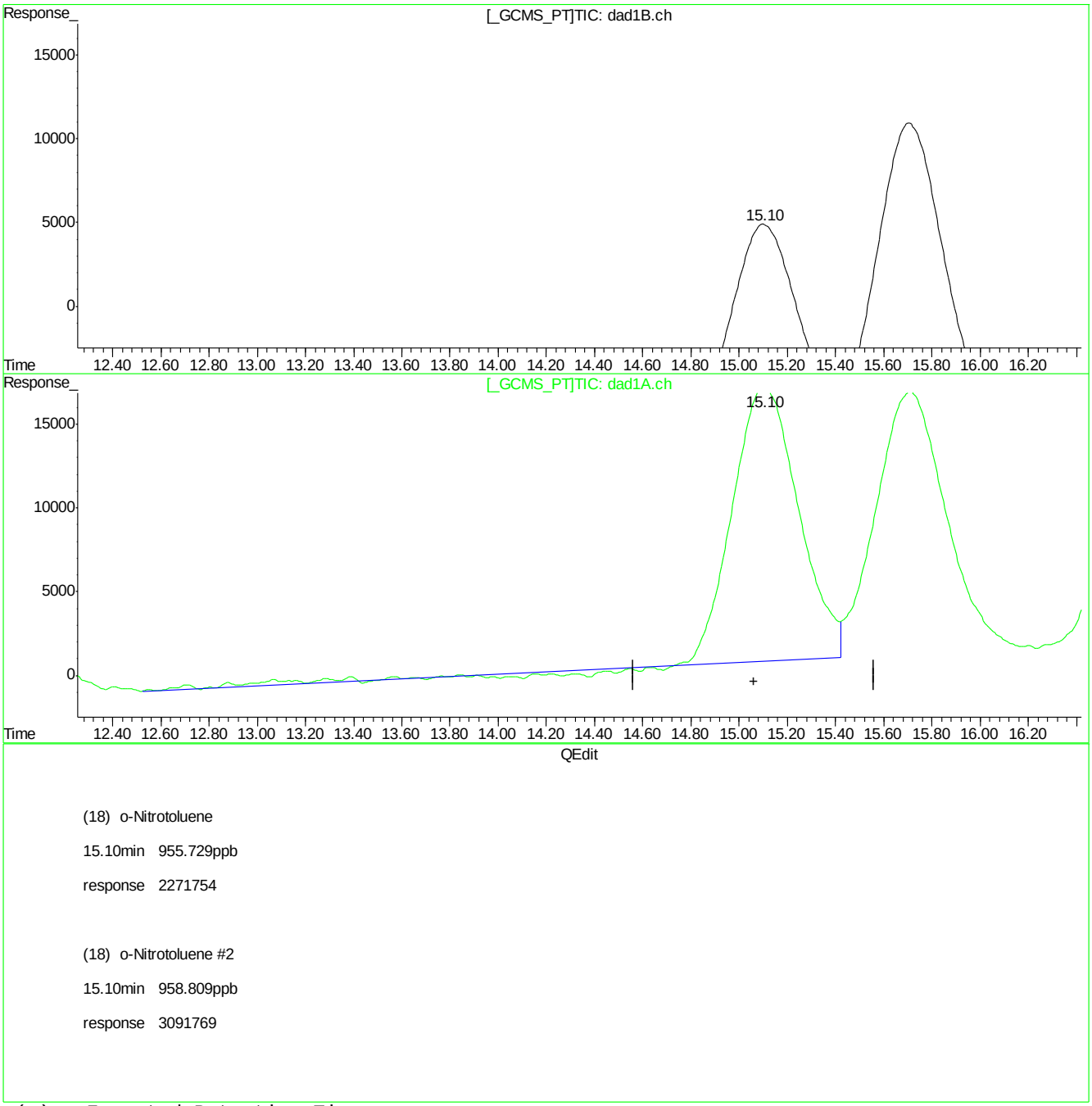
Sample Number:	GBB1754-CC1748	**Method:**	SW846 8330A
Lab FileID:	BB060341.D	**Analyst approved:**	07/26/18 16:20 Mike Eger
Injection Time:	07/24/18 12:57	**Supervisor approved:**	07/27/18 15:26 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.10	Poor instrument integration
PETN	78-11-5	2	18.74	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1A.ch
Acq On : 24-Jul-2018, 12:57:10 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 24 13:44 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 23 10:50:09 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.10min 955.729ppb

response 2271754

(18) o-Nitrotoluene #2

15.10min 958.809ppb

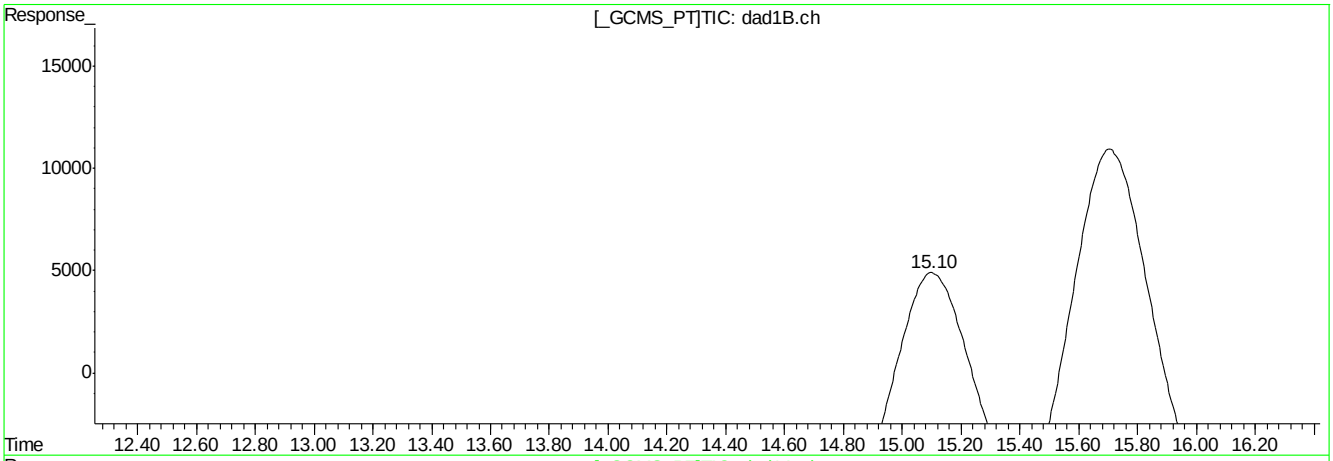
response 3091769

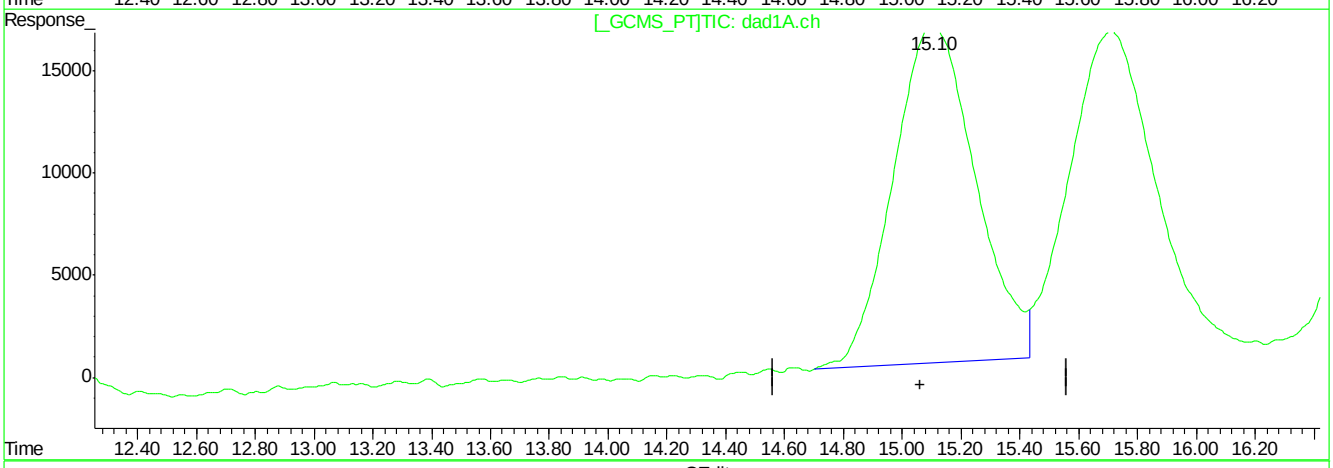
(+) = Expected Retention Time
BB060341.D 8330B_0707PLUS.M Tue Jul 24 13:58:34 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1A.ch
Acq On : 24-Jul-2018, 12:57:10 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 24 13:44 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 23 10:50:09 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.10min 955.729ppb

response 2271754

(18) o-Nitrotoluene #2

15.10min 989.700ppb m

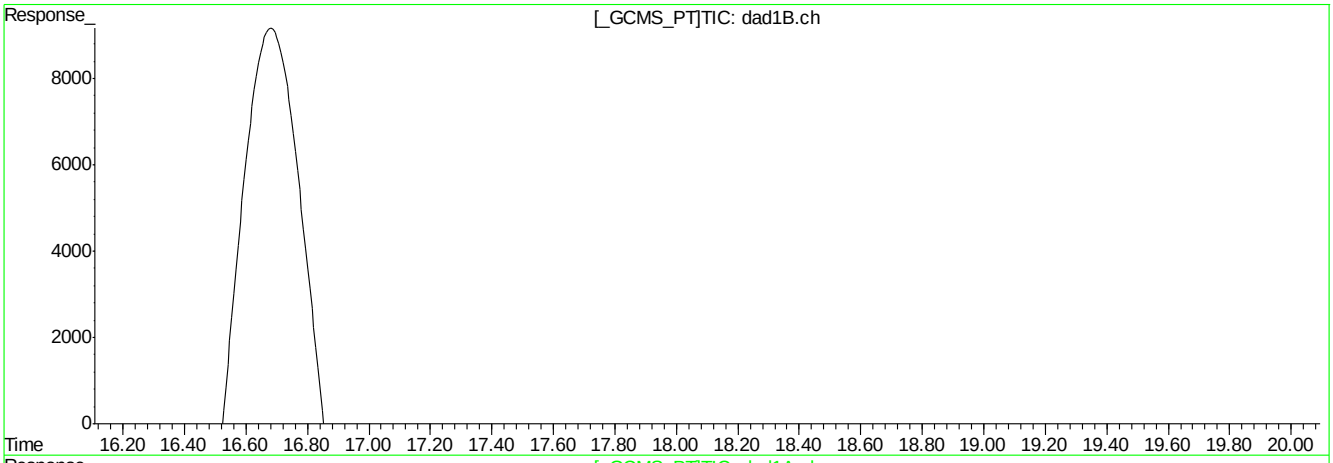
response 3191380

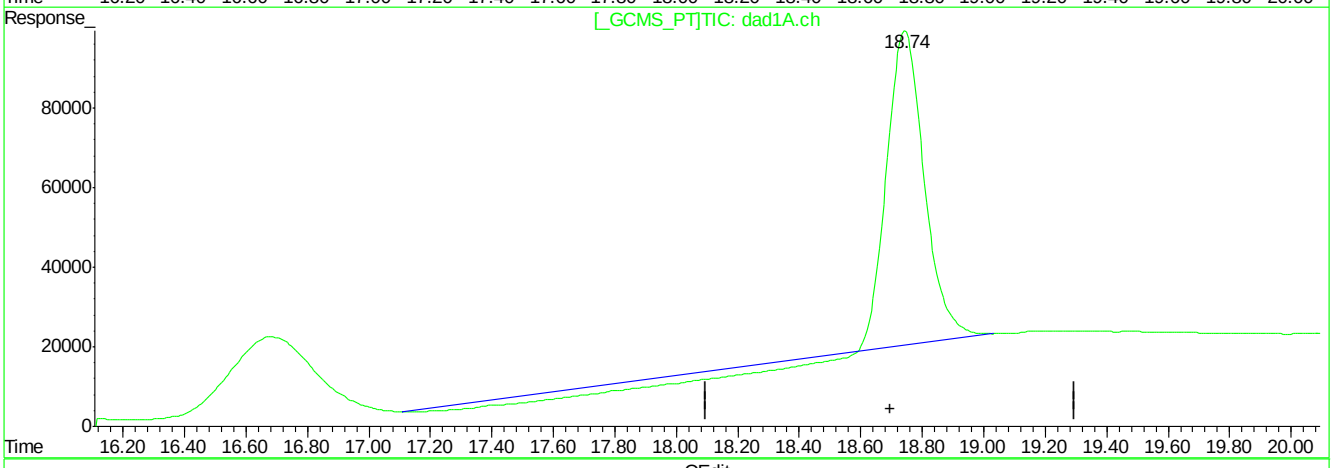
(+) = Expected Retention Time
BB060341.D 8330B_0707PLUS.M Tue Jul 24 13:58:44 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1A.ch
Acq On : 24-Jul-2018, 12:57:10 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 24 13:44 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 23 10:50:09 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.75min 0.000ppb

response 139637

(21) PETN #2

18.74min 3769.888ppb

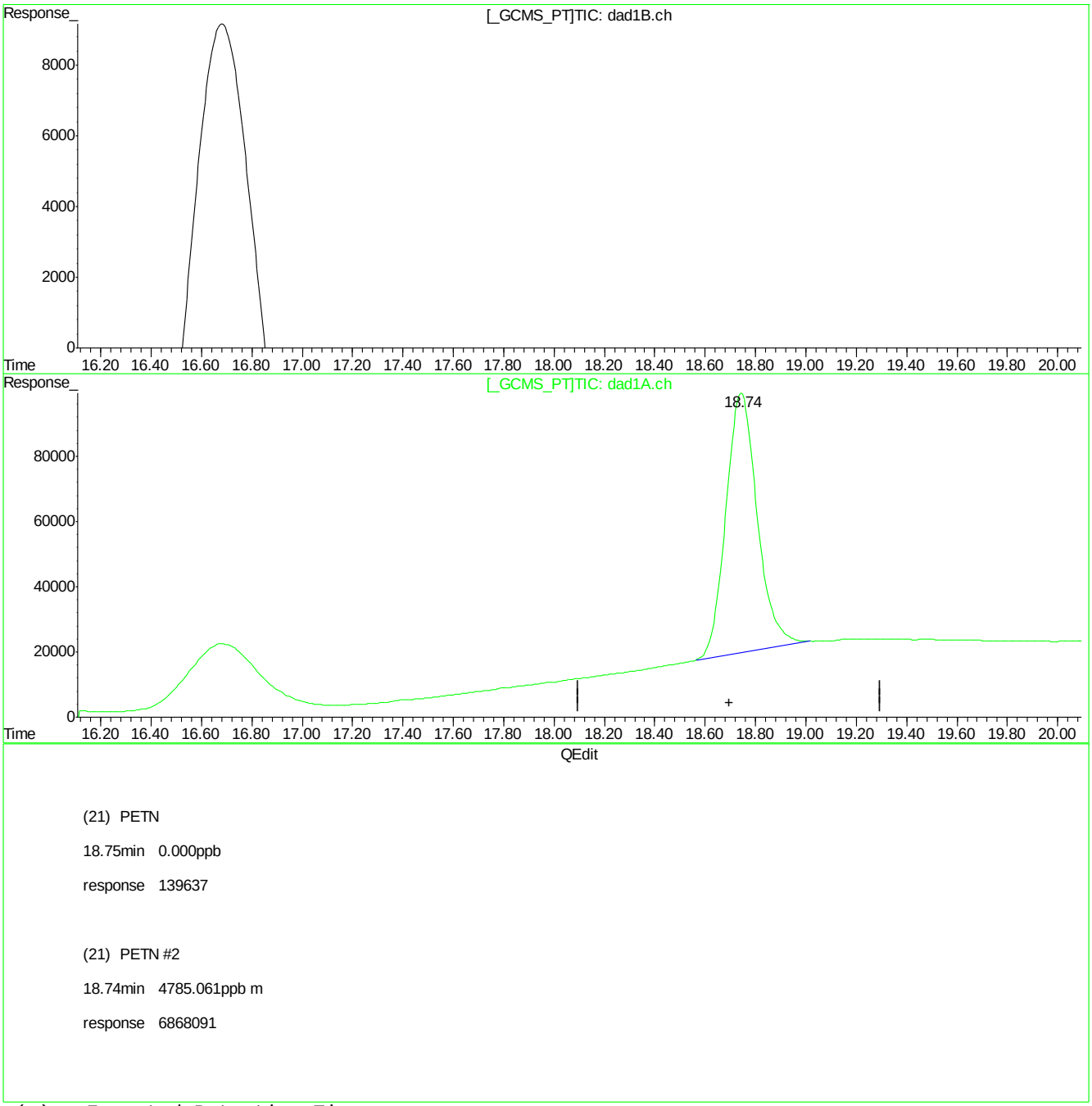
response 5410994

(+) = Expected Retention Time
BB060341.D 8330B_0707PLUS.M Tue Jul 24 13:58:52 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060341.D\dad1A.ch
Acq On : 24-Jul-2018, 12:57:10 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 24 13:44 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 23 10:50:09 2018
Response via : Multiple Level Calibration



(21) PETN

18.75min 0.000ppb

response 139637

(21) PETN #2

18.74min 4785.061ppb m

response 6868091

(+) = Expected Retention Time
BB060341.D 8330B_0707PLUS.M Tue Jul 24 13:59:02 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/27/18 15:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060352.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060352.D\dad1A.ch
Acq On : 24-Jul-2018, 18:47:13 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:23 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.78	10.78	2418572	4157590	935.436	982.378
	Spiked Amount 500.000	Range 70 - 136		Recovery =		187.09%#	196.48%#
	Target Compounds						
1)	TNX	1.29	1.29	4877614	7566747	959.528	959.927
2)	HMX	1.42	1.42	1731220	4836775	898.317	994.172
3)	DNX	1.65	1.65	2476072	4039988	947.733	890.252
4)	MNX	2.21	2.21	2616272	4055550	907.579	941.083
5)	RDX	2.80	2.80	1937615	3090209	939.668	905.750
6)	1,3,5-Trinitrobe	4.57	4.57	4216316	8197573	983.233	982.582
7)	1,3-Dinitrobenze	5.73	5.73	5321551	3673806	921.887	951.313
8)	3,5-Dinitroanili	6.03	6.03	4596483	7893126	984.677	1001.058
9)	Nitrobenzene	7.27	7.27	3317119	3153203	891.106	967.175
10)	Nitroglycerin	0.00	8.69	0	6139861	N.D. d	4706.718
11)	Tetryl	9.11	9.10	2371704	3809428	850.923	952.021
12)	2,4,6-Trinitroto	9.59	9.64	3252075	3734976	946.934	924.267m
13)	2-Amino-4,6-Dini	9.76	9.77	3587923	5516174	922.666	1085.446m
14)	4-Amino-2,6-Dini	10.25	10.25	2699712	5271246	1012.048	1041.744
16)	2,4-Dinitrotolue	11.45	11.45	4899864	3021190	897.118	991.588
17)	2,6-Dinitrotolue	11.88	11.89	3002389	3785896	966.580	969.987
18)	o-Nitrotoluene	15.11	15.10	2364636	3098310	994.805	960.838m
19)	p-Nitrotoluene	15.71	15.71	3754009	3172703	955.489	906.543
20)	m-Nitrotoluene	16.68	16.68	3470817	3729495	980.213	1032.327
21)	PETN	0.00	18.74	0	6781610	N.D. d	4724.808m

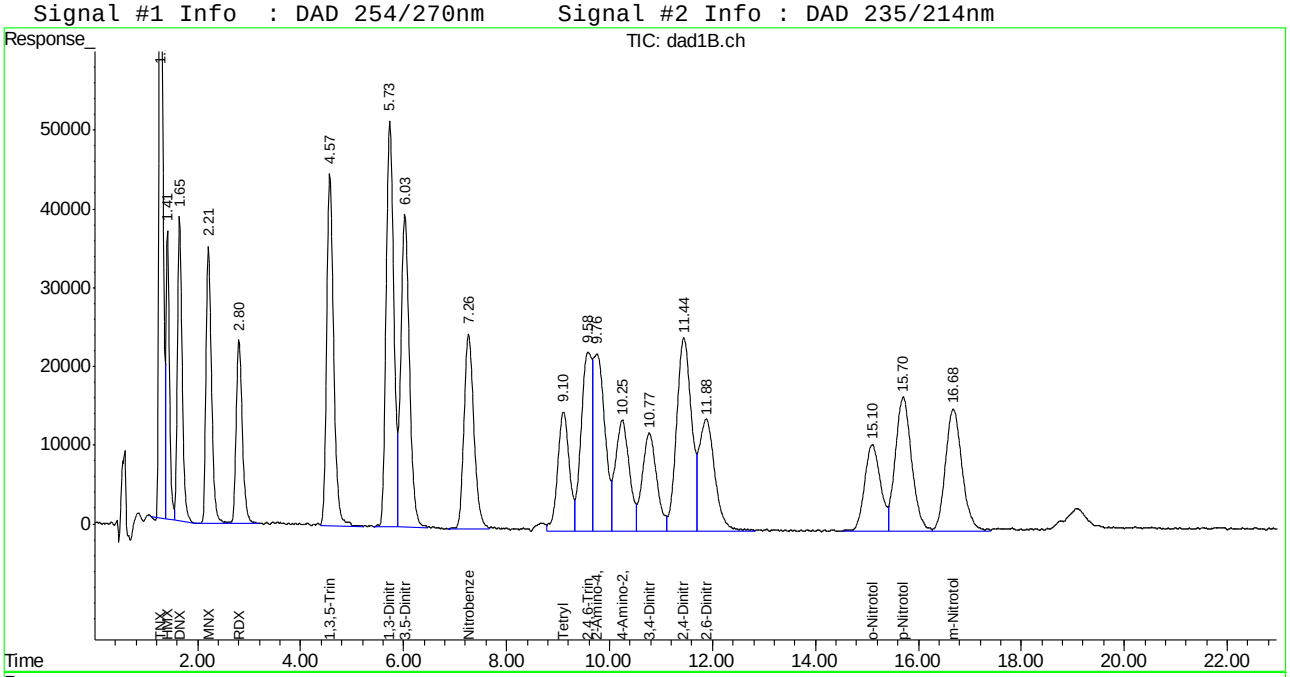
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060352.D 8330B_0707PLUS.M Thu Jul 26 16:02:24 2018 Page 1

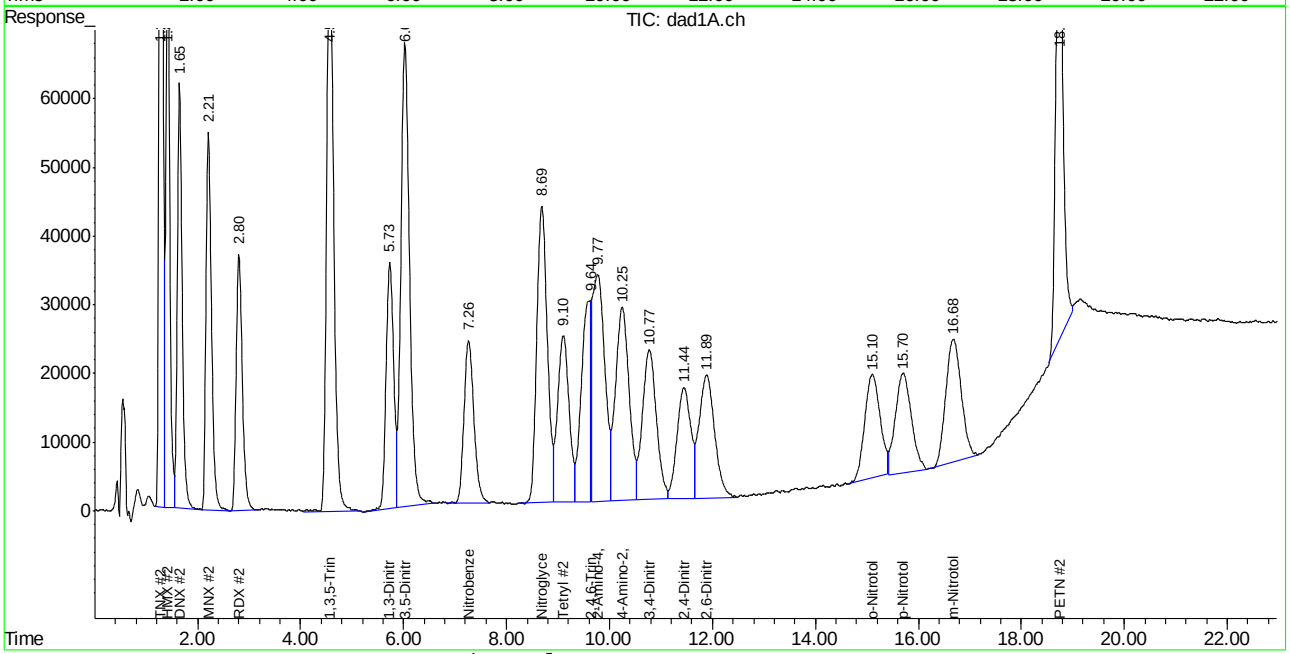
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060352.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060352.D\dad1A.ch
Acq On : 24-Jul-2018, 18:47:13 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 15:56 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

Sample Number: GBB1754-CC1748
Lab FileID: BB060352.D
Injection Time: 07/24/18 18:47
Method: SW846 8330A
Analyst approved: 07/26/18 16:20 Mike Eger
Supervisor approved: 07/27/18 15:26 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
2,4,6-Trinitrotoluene	118-96-7	2	9.64	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	9.77	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.10	Poor instrument integration
PETN	78-11-5	2	18.74	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/27/18 15:26

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060359.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060359.D\dad1A.ch
Acq On : 24-Jul-2018, 22:16:59 Operator: williamh
Sample : ecc1748-1000 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 25 15:32:30 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	10.74	10.74	2468290	4135877	954.864	977.576
	Spiked Amount 500.000	Range 70 - 136		Recovery =		190.97%#	195.52%#
	Target Compounds						
1)	TNX	1.29	1.29	4836049	7427974	951.351	942.322
2)	HMX	1.42	1.42	1698979	4683356	881.588	962.659
3)	DNX	1.65	1.65	2443595	3907022	935.357	860.951
4)	MNX	2.21	2.21	2580723	4034731	895.247	936.252
5)	RDX	2.80	2.80	1903705	3091747	923.223	906.201
6)	1,3,5-Trinitrobe	4.56	4.56	4087732	8167258	953.045	978.948
7)	1,3-Dinitrobenze	5.72	5.72	5308903	3596030	919.696	930.650
8)	3,5-Dinitroanili	6.02	6.02	4585893	7801985	982.406	989.539
9)	Nitrobenzene	7.25	7.25	3326206	3160361	893.547	969.376
10)	Nitroglycerin	0.00	8.66	0	6117437	N.D. d	4689.528
11)	Tetryl	9.08	9.08	2311106	3789892	829.181	947.219
12)	2,4,6-Trinitroto	9.55	9.56	3291520	3758298	958.623	929.979
13)	2-Amino-4,6-Dini	9.74	9.75	3528238	5554603	907.318	1093.008
14)	4-Amino-2,6-Dini	10.22	10.22	2666711	5244182	999.676	1036.624
16)	2,4-Dinitrotolue	11.41	11.41	4931773	3031109	902.960	994.783
17)	2,6-Dinitrotolue	11.84	11.85	3074647	3696041	990.125	947.668
18)	o-Nitrotoluene	15.07	15.07	2312472	2972646	972.859	921.867
19)	p-Nitrotoluene	15.67	15.68	3756339	3185473	956.082	910.191
20)	m-Nitrotoluene	16.65	16.65	3448866	3871172	974.035	1071.543
21)	PETN	0.00	18.71	0	6798286	N.D. d	4736.427m

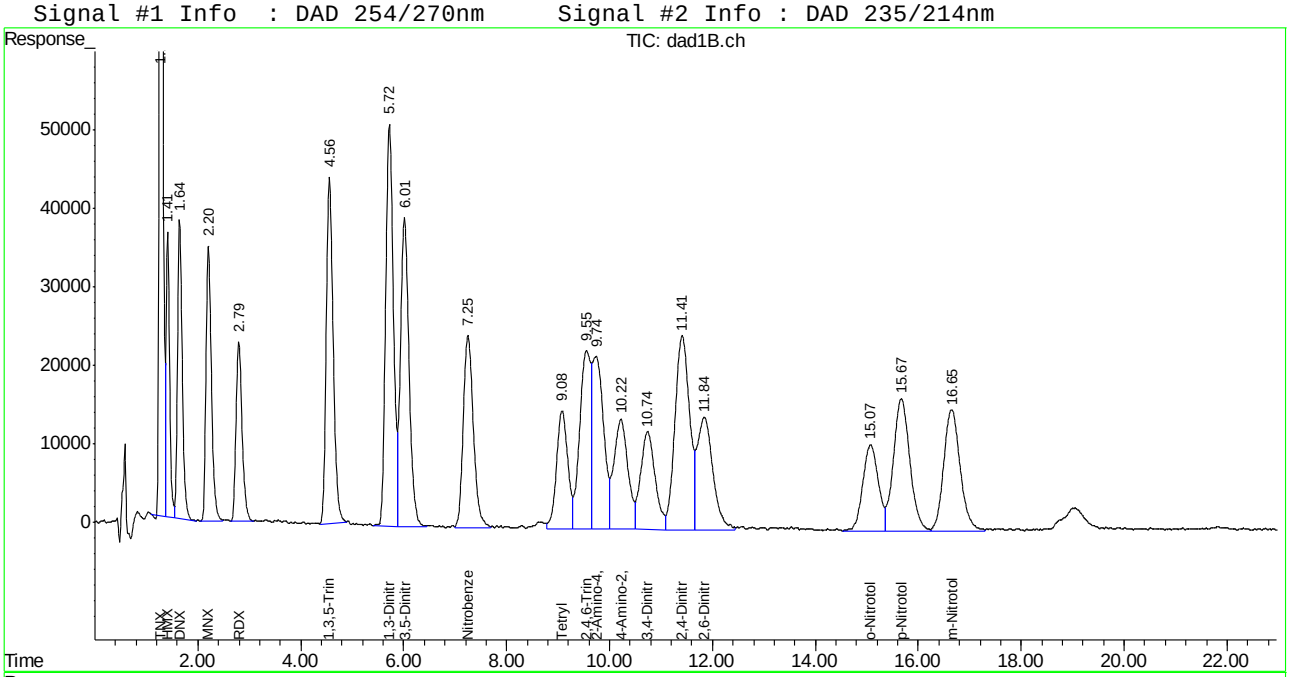
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060359.D 8330B_0707PLUS.M Thu Jul 26 16:02:31 2018 Page 1

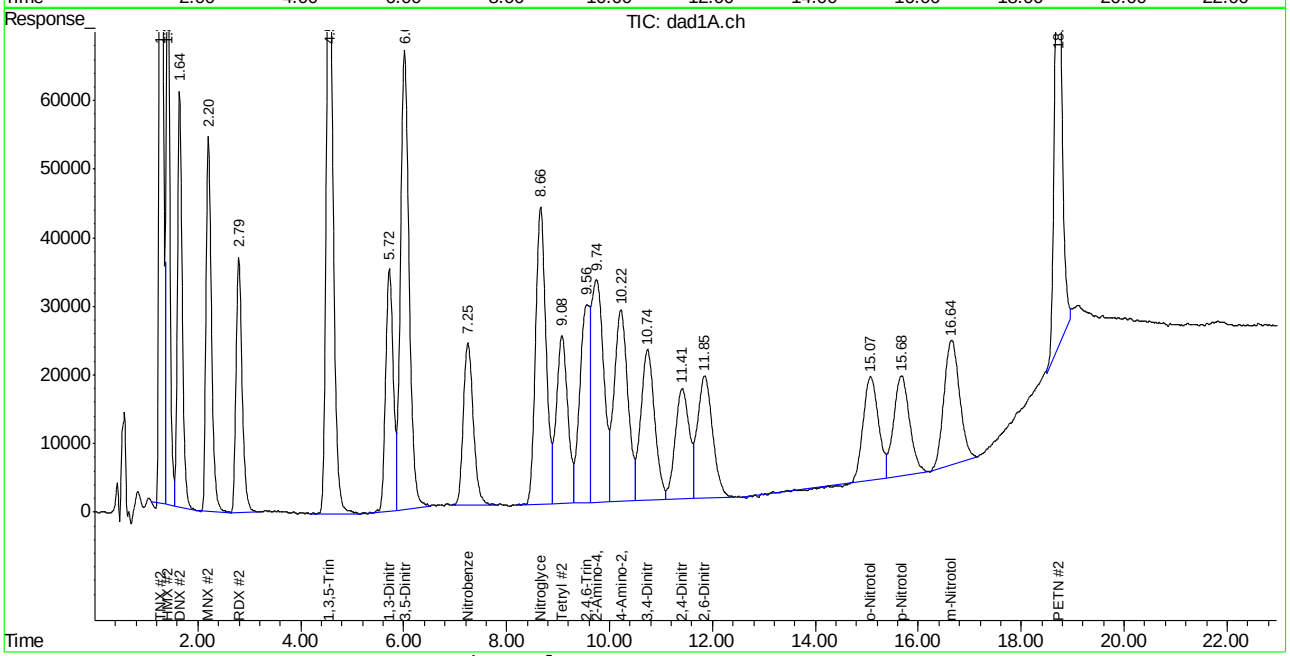
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1754\BB060359.D\dad1B.ch Vial: 72
Signal #2 : C:\HPCHEM\1\DATA\GBB1754\BB060359.D\dad1A.ch
Acq On : 24-Jul-2018, 22:16:59 Operator: williamh
Sample : ecc1748-1000 Inst : G1315B
Misc : OP71008,gbb1754,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 26 16:01 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Wed Jul 25 15:31:59 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

Sample Number:	GBB1754-ECC1748	**Method:**	SW846 8330A
Lab FileID:	BB060359.D	**Analyst approved:**	07/26/18 16:20 Mike Eger
Injection Time:	07/24/18 22:16	**Supervisor approved:**	07/27/18 15:26 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	18.71	Poor instrument integration

SGS ACCUTEST-ORLANDO

DATE:	7/6/18
COLUMN TYPE:	Extend C18
AMOUNT INJECTED:	100 ul
INSTRUMENT:	HPLC5-BB

HPLC5-BB ANALYSIS LOG

METHODS:	8330A+B
ACQ. METHOD:	8330B
PROC. METHOD:	8330B_0707PLUS.M
CALIB. DATE:	7/6/18
RUN BATCH:	GBB 1748

ANALYST:	WTH
ACETONITRILE LOT #:	
MEOH LOT #:	
HEAD PRESSURE:	292

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
BB 060197	1	ccb	8330		1		✓
BB 98	62	TEST			1		✓
BB 99	1	ccb			1		✓
BB 060200	2	ic1748-20		LC1079	4/400		✓
BB 01	3	ic1748-50			10/400		✓
BB 02	4	ic1748-100			20/400		✓
BB 03	5	ic1748-200			40/400		✓
BB 04	6	ic1748-500			100/400		✓
BB 05	7	icc1748-1000			200/400		✓
BB 06	8	ic1748-2000			400/400		✓
BB 07	9	icv1748-1000 std		E6231, E6248 LC1058, LC1491	20+10+ 25+25/500		Tetryl, TNT, 4A26 3A46 26DNT, mNTA okay in spk ICV
BB 08	10	icv1748-1000 spk		E6264	20/400		HMX, 24DNT okay to std ICV
BB 09	11	op 70738-BS		op 70738	1		✓
BB 10	12	op 70734-MB			1		ND
BB 11	13	FA55464-1			1		RDX -150
BB 12	14	FA55469-2			1		RDX -130
BB 13	15	FA55467-3			1		RDX -114
BB 14	16	op 70734-MS			1		✓
BB 15	17	op 70734-MSD			1		✓
BB 16	7	cc1748-1000		LC1074	200/400		24-DNT ↓ S1, report S2

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Analyst's Signature: _____

SGS ACCUTEST-ORLANDO

DATE:	7/6/18
COLUMN TYPE:	Extend C18
AMOUNT INJECTED:	100 ul
INSTRUMENT: HPLC5-BB	

HPLC5-BB ANALYSIS LOG

METHODS:	8330A+B
ACQ. METHOD:	8330B
PROC. METHOD:	8330B_070718Lus.M
CALIB. DATE:	7/6/18
RUN BATCH:	GBB

ANALYST:	WFL
ACETONITRILE LOT #:	
MEOH LOT #:	
HEAD PRESSURE:	292

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
BB 060217	1	ccb	8330		1		
BB 18	18	op 70744-BS		op 70744	1		✓
BB 19	19	op 70744-MB			1		✓
BB 20	20	FA55475-3			1		ND
BB 21	21	FA55475-7			1		ND
BB 22	22	FA55475-8			1		ND
BB 23	23	FA55518-1			1		ND
BB 24	24	FA55518-12			1		ND
BB 25	25	FA55518-13		✓	1		ND
BB 26	7	ecc1748-1000	↓	LC1074	200/400		Tetryl ↓ S1
BB							
BB							
BB							
BB							
BB							
BB						WFL 7/9/18	
BB							
BB							
BB							
BB							
BB							

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Analyst's Signature:

SGS ACCUTEST-ORLANDO

DATE:	
COLUMN TYPE:	Extend C18
AMOUNT INJECTED:	100ul
INSTRUMENT:	HPLC5-BB

HPLC5-BB ANALYSIS LOG

METHODS:	8330 A+B
ACQ. METHOD:	8330B
PROC. METHOD:	8330B-07071845
CALIB. DATE:	07/07/16
RUN BATCH: GBB	1754

ANALYST:	
ACETONITRILE LOT #:	
MEOH LOT #:	
HEAD PRESSURE:	267

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
BB060339	71	CCb	8330B	—	—		
BB 40	71	CCb		—	—		
BB 41	72	CC1748-1000		LC1079	300/1000	P4	MP ✓
BB 42	73	OP71008-bs		OP71008	1	P4	
BB 43	74	↓ -mb					BDL
BB 44	75	FA55941-1					ND
BB 45	76	-2					Conf → ND
BB 46	77	-3					ND
BB 47	78	-4					CR. → ND
BB 48	79	-5					ND
BB 49	80	-6					ND
BB 50	81	-7					ND
BB 51	82	↓ -8		↓	↓		ND
BB 52	72	CC1748-1000		LC1079	300/1000		MP ✓
BB 53	71	CCb		—	—		—
BB 54	83	FA55941-9		OP71008	1		ND
BB 55	84	OP71008-ms					—
BB 56	85	↓ -msd					—
BB 57	86	FA55914-2					ND
BB 58	87	↓ -9		↓	↓		ND
BB 59	72	CC1748-1000	↓	LC1079	300/1000		MP ✓

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Analyst's Signature:

SGS - ORLANDO

SPE LIQUID SAMPLE PREP REPORT

Date/Time: 07/23/18 0930
Started {mm/dd/yy 24:00}

Date/Time: 07/23/18 1600
Finished {mm/dd/yy 24:00}

Prep Method: 3535A or 537 or 537MOD (circle)

Analytical Method: 8330

Batch#: OP 71008 Ext. By: MB MB 07/23/18 Conc. By: ✓ Vialed By: MB

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Manifold ID	Comments
OP 71008 MB	X	1000	6	N/A	250ul		10 ml	N/A	
OP 71008 BS	X	1000				25+25 250ul			
FAS5941-1	6	1060	13+ 6	6+ N/A					
-2	6	1050							
-3	6	1050							
-4	6	1060							
-5	12	1060							
-6	6	1060							
-7	5	1060							
-8	5	1050							
-9	5	1000							
FAS5914-2	6	1060							
-9	5	1060							
				MB 07/23/18					
FAS5941-5 MS	9	520	6	N/A	250ul	25+25 250ul	10 ml	N/A	
-5 MSD	9	520	+	+	+	+	+	+	
DUP									

Comments:

Surr.1 ID: E6285C Conc: 20 ppm Exp. Date: 12/01/18 Inj. By: MB Ver. By MB

Spk.1 ID: E6264 Conc: 20 ppm Exp. Date: 11/09/18 Inj. By: MB Ver. By MB

Spk.2 ID: 9078B Conc: 1000 ug/mL Exp. Date: 07/10/19 Inj. By: MB Ver. By MB

Spk.3 ID: 9079B Conc: 1000 ug/mL Exp. Date: 07/10/19 Inj. By: MB Ver. By MB

TurboVap Temp (Therm ID): ✓
Observed Temp °C: ✓ Corr. Temp °C: ✓

N-Evap Temp (Therm ID): ✓
Observed Temp °C: ✓ Corr. Temp °C: ✓

Methanol Lot # ✓
Acetonitrile Lot # 175291
Water Lot# DI H2O
Solvent# ✓

SPE Lot # 5214-0075
Syringe filter Lot # ✓
Pre-filter Lot# ✓
Carbon Lot# ✓

pH Paper # 215517
Reagent # ✓
Reagent # ✓
Other ✓

Relinquished By: [signature] Date: 07/23/18

Accepted By: [signature] Date: 07-24-18

ORLD-EXT-0001-3-08-FORM-extwater_spe.xls 032718

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15064
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:29	MA15064-STD1	1		STD1
12:31	MA15064-STD2	1		STD2
12:32	MA15064-STD3	1		STD3
12:34	MA15064-STD4	1		STD4
12:35	MA15064-STD5	1		STD5
12:37	MA15064-STD6	1		STD6
12:39	MA15064-HSTD1	1		
12:41	MA15064-ICV1	1		
12:43	MA15064-ICB1	1		
12:45	MA15064-CRI1	1		
12:46	MA15064-CCV1	1		
12:47	MA15064-CCB1	1		
12:49	MP34053-MB1	1		
12:50	MP34053-B1	1		
12:52	FA55914-1	1		(sample used for QC only; not part of login FA55941)
12:54	MP34053-D1	1		
12:55	MP34053-SD1	5		
12:56	MP34053-S1	1		
12:57	MP34053-S2	1		
12:59	ZZZZZZ	1		
13:01	ZZZZZZ	1		
13:02	ZZZZZZ	1		
13:04	MA15064-CCV2	1		
13:05	MA15064-CCB2	1		
13:07	ZZZZZZ	1		
13:08	ZZZZZZ	1		
13:10	ZZZZZZ	1		
13:11	ZZZZZZ	1		
13:13	ZZZZZZ	1		
13:14	ZZZZZZ	1		
13:15	ZZZZZZ	1		
13:17	ZZZZZZ	1		
13:18	MP34054-MB1	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15064
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:19	MP34054-B1	1		
13:21	MA15064-CCV3	1		
13:22	MA15064-CCB3	1		
13:24	FA55967-1	1		(sample used for QC only; not part of login FA55941)
13:26	MP34054-D1	1		
13:27	MP34054-SD1	5		
13:28	MP34054-S1	1		
13:29	MP34054-S2	1		
13:31	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:34	ZZZZZZ	1		
13:36	ZZZZZZ	1		
13:37	ZZZZZZ	1		
13:38	MA15064-CCV4	1		
13:40	MA15064-CCB4	1		
13:41	ZZZZZZ	1		
13:43	ZZZZZZ	1		
13:44	ZZZZZZ	1		
13:45	ZZZZZZ	1		
13:47	ZZZZZZ	1		
13:48	ZZZZZZ	1		
13:49	ZZZZZZ	1		
13:51	ZZZZZZ	1		
13:53	MP34055-B1	1		
13:55	MA15064-CCV5	1		
13:57	MA15064-CCB5	1		
13:59	FA55941-8A	1		
---------->	Last reportable sample/prep for job FA55941			
14:00	MP34055-D1	1		
14:01	MP34055-SD1	5		
14:03	MP34055-S1	1		
14:04	MP34055-S2	1		
14:06	FA55925-2	1		(sample used for QC only; not part of login FA55941)
14:08	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15064
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:09	ZZZZZZ	1		
14:10	ZZZZZZ	1		
14:12	ZZZZZZ	1		
14:13	MA15064-CCV6	1		
14:14	MA15064-CCB6	1		
14:16	FA55819-1L	1		(sample used for QC only; not part of login FA55941)
14:18	MP34055-D2	1		
14:19	MP34055-MB2	1		
14:20	MP34055-B2	1		
14:21	MA15064-CRI2	1		
14:23	MA15064-CCV7	1		
14:25	MA15064-CCB7	1		
---------->	Last reportable CCB for job FA55941			
15:02	MA15064-CCV8	1		
15:03	MA15064-CCB8	1		
15:08	MP34055-MB1	1		
15:09	MA15064-CRI3	1		
15:11	MA15064-CCV9	1		
15:12	MA15064-CCB9	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15064
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg	
12:39	MA15064-HSTD1	1	X	
12:41	MA15064-ICV1	1	X	
12:43	MA15064-ICB1	1	X	
12:45	MA15064-CRI1	1	X	
12:46	MA15064-CCV1	1	X	
12:47	MA15064-CCB1	1	X	
12:49	MP34053-MB1	1	X	
12:50	MP34053-B1	1	X	
12:52	FA55914-1	1	X	(a)
12:54	MP34053-D1	1	X	
12:55	MP34053-SD1	5	X	
12:56	MP34053-S1	1	X	
12:57	MP34053-S2	1	X	
12:59	ZZZZZZ	1		
13:01	ZZZZZZ	1		
13:02	ZZZZZZ	1		
13:04	MA15064-CCV2	1	X	
13:05	MA15064-CCB2	1	X	
13:07	ZZZZZZ	1		
13:08	ZZZZZZ	1		
13:10	ZZZZZZ	1		
13:11	ZZZZZZ	1		
13:13	ZZZZZZ	1		
13:14	ZZZZZZ	1		
13:15	ZZZZZZ	1		
13:17	ZZZZZZ	1		
13:18	MP34054-MB1	1	X	
13:19	MP34054-B1	1	X	
13:21	MA15064-CCV3	1	X	
13:22	MA15064-CCB3	1	X	
13:24	FA55967-1	1	X	(a)
13:26	MP34054-D1	1	X	
13:27	MP34054-SD1	5	X	
		Element:	Hg	

REPORTED ELEMENTS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15064
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg	
13:28	MP34054-S1	1	X	
13:29	MP34054-S2	1	X	
13:31	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:34	ZZZZZZ	1		
13:36	ZZZZZZ	1		
13:37	ZZZZZZ	1		
13:38	MA15064-CCV4	1	X	
13:40	MA15064-CCB4	1	X	
13:41	ZZZZZZ	1		
13:43	ZZZZZZ	1		
13:44	ZZZZZZ	1		
13:45	ZZZZZZ	1		
13:47	ZZZZZZ	1		
13:48	ZZZZZZ	1		
13:49	ZZZZZZ	1		
13:51	ZZZZZZ	1		
13:53	MP34055-B1	1	X	
13:55	MA15064-CCV5	1	X	
13:57	MA15064-CCB5	1	X	
13:59	FA55941-8A	1	X	
14:00	MP34055-D1	1	X	
14:01	MP34055-SD1	5	X	
14:03	MP34055-S1	1	X	
14:04	MP34055-S2	1	X	
14:06	FA55925-2	1	X	(a)
14:08	ZZZZZZ	1		
14:09	ZZZZZZ	1		
14:10	ZZZZZZ	1		
14:12	ZZZZZZ	1		
14:13	MA15064-CCV6	1	X	
14:14	MA15064-CCB6	1	X	
14:16	FA55819-1L	1	X	(a)
		Element:	Hg	

REPORTED ELEMENTS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15064
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg
14:18	MP34055-D2	1	X
14:19	MP34055-MB2	1	X
14:20	MP34055-B2	1	X
14:21	MA15064-CRI2	1	X
14:23	MA15064-CCV7	1	X
14:25	MA15064-CCB7	1	X
15:02	MA15064-CCV8	1	X
15:03	MA15064-CCB8	1	X
15:08	MP34055-MB1	1	X
15:09	MA15064-CRI3	1	X
15:11	MA15064-CCV9	1	X
15:12	MA15064-CCB9	1	X

(a) Sample used for QC only; not part of login FA55941.

Element: Hg

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA15064 Units: ug/l

Time: / Sample ID:			12:43 ICB1		12:47 CCB1		13:05 CCB2		13:22 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	0.00800	<0.50	0.0117	<0.50	0.00540	<0.50	0.00560	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA15064 Units: ug/l

Time: / Sample ID:			13:40 CCB4		13:57 CCB5		14:14 CCB6		14:25 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	0.00670	<0.50	0.0112	<0.50	0.00970	<0.50	0.00850	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA15064 Units: ug/l

Time:		12:41			12:46			13:04	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.07	102.3	3.0	3.00	100.0	3	2.95	98.3

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA15064 Units: ug/l

Time:		13:21			13:38			13:55	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.94	98.0	3	2.90	96.7	3	2.96	98.7

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA15064 Units: ug/l

Time:		14:13			14:23	
Sample ID:	CCV	CCV6		CCV	CCV7	
Metal	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.87	95.7	3	2.94	98.0

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
QC Limits: 95 to 105 % Recovery Run ID: MA15064 Units: ug/l

Time:		12:39	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6	6.05	100.8

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50723W1.CSV Date Analyzed: 07/23/18 Methods: SW846 7470A
QC Limits: 80 to 120 % Recovery Run ID: MA15064 Units: ug/l

Time:			12:45		14:21	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.198	99.0	0.189	94.5

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50726W1.CSV Date Analyzed: 07/26/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15072
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:28	MA15072-STD1	1		STD1
12:29	MA15072-STD2	1		STD2
12:30	MA15072-STD3	1		STD3
12:32	MA15072-STD4	1		STD4
12:33	MA15072-STD5	1		STD5
12:35	MA15072-STD6	1		STD6
12:37	MA15072-HSTD1	1		
12:39	MA15072-ICV1	1		
12:41	MA15072-ICB1	1		
12:43	MA15072-CRI1	1		
12:44	MA15072-CCV1	1		
12:46	MA15072-CCB1	1		
12:48	MP34076-MB1	1		
12:49	MP34076-B1	1		
12:50	FA55941-5	1		
12:52	MP34076-D1	1		
12:53	MP34076-SD1	5		
12:55	MP34076-S1	1		
12:56	MP34076-S2	1		
12:58	FA55941-1	1		
13:00	FA55941-2	1		
13:01	FA55941-3	1		
13:02	MA15072-CCV2	1		
13:04	MA15072-CCB2	1		
13:05	FA55941-4	1		
13:07	FA55941-6	1		
13:08	FA55941-7	1		
13:10	FA55941-9	1		
---------->	Last reportable sample/prep for job FA55941			
13:11	ZZZZZZ	1		
13:12	ZZZZZZ	1		
13:14	ZZZZZZ	1		
13:15	ZZZZZZ	1		
13:17	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50726W1.CSV Date Analyzed: 07/26/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15072
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:18	ZZZZZZ	1		
13:20	MA15072-CCV3	1		
13:22	MA15072-CCB3	1		
13:23	ZZZZZZ	1		
13:25	ZZZZZZ	1		
13:27	ZZZZZZ	1		
13:28	ZZZZZZ	1		
13:30	ZZZZZZ	1		
13:31	MP34077-MB1	1		
13:33	MP34077-B1	1		
13:34	FA56103-26	1		(sample used for QC only; not part of login FA55941)
13:36	MP34077-D1	1		
13:37	MP34077-SD1	5		
13:38	MA15072-CCV4	1		
13:40	MA15072-CCB4	1		
13:41	MP34077-S1	1		
13:43	MP34077-S2	1		
13:45	ZZZZZZ	1		
13:47	ZZZZZZ	1		
13:48	ZZZZZZ	1		
13:49	ZZZZZZ	1		
13:51	ZZZZZZ	1		
13:52	ZZZZZZ	1		
13:53	ZZZZZZ	1		
13:54	ZZZZZZ	1		
13:56	MA15072-CCV5	1		
13:57	MA15072-CCB5	1		
13:59	MP34078-MB1	1		
14:00	MP34078-B1	1		
14:02	FA55964-1L	1		(sample used for QC only; not part of login FA55941)
14:04	MP34078-D1	1		
14:05	MP34078-SD1	5		
14:06	MP34078-S1	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50726W1.CSV Date Analyzed: 07/26/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15072
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:07	MP34078-S2	1		
14:09	ZZZZZZ	1		
14:11	ZZZZZZ	1		
14:12	ZZZZZZ	1		
14:14	MA15072-CCV6	1		
14:15	MA15072-CCB6	1		
14:17	ZZZZZZ	1		
14:18	MP34078-D2	1		
14:20	MP34078-MB2	1		
14:21	MP34078-B2	1		
14:22	MA15072-CRI2	1		
14:24	MA15072-CCV7	1		
14:26	MA15072-CCB7	1		

----------> Last reportable CCB for job FA55941
Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50726W1.CSV Date Analyzed: 07/26/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15072
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg
12:37	MA15072-HSTD1	1	X
12:39	MA15072-ICV1	1	X
12:41	MA15072-ICB1	1	X
12:43	MA15072-CRI1	1	X
12:44	MA15072-CCV1	1	X
12:46	MA15072-CCB1	1	X
12:48	MP34076-MB1	1	X
12:49	MP34076-B1	1	X
12:50	FA55941-5	1	X
12:52	MP34076-D1	1	X
12:53	MP34076-SD1	5	X
12:55	MP34076-S1	1	X
12:56	MP34076-S2	1	X
12:58	FA55941-1	1	X
13:00	FA55941-2	1	X
13:01	FA55941-3	1	X
13:02	MA15072-CCV2	1	X
13:04	MA15072-CCB2	1	X
13:05	FA55941-4	1	X
13:07	FA55941-6	1	X
13:08	FA55941-7	1	X
13:10	FA55941-9	1	X
13:11	ZZZZZZ	1	
13:12	ZZZZZZ	1	
13:14	ZZZZZZ	1	
13:15	ZZZZZZ	1	
13:17	ZZZZZZ	1	
13:18	ZZZZZZ	1	
13:20	MA15072-CCV3	1	X
13:22	MA15072-CCB3	1	X
13:23	ZZZZZZ	1	
13:25	ZZZZZZ	1	
13:27	ZZZZZZ	1	
		Element:	Hg

REPORTED ELEMENTS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50726W1.CSV Date Analyzed: 07/26/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15072
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg	
13:28	ZZZZZZ	1		
13:30	ZZZZZZ	1		
13:31	MP34077-MB1	1	X	
13:33	MP34077-B1	1	X	
13:34	FA56103-26	1	X	(a)
13:36	MP34077-D1	1	X	
13:37	MP34077-SD1	5	X	
13:38	MA15072-CCV4	1	X	
13:40	MA15072-CCB4	1	X	
13:41	MP34077-S1	1	X	
13:43	MP34077-S2	1	X	
13:45	ZZZZZZ	1		
13:47	ZZZZZZ	1		
13:48	ZZZZZZ	1		
13:49	ZZZZZZ	1		
13:51	ZZZZZZ	1		
13:52	ZZZZZZ	1		
13:53	ZZZZZZ	1		
13:54	ZZZZZZ	1		
13:56	MA15072-CCV5	1	X	
13:57	MA15072-CCB5	1	X	
13:59	MP34078-MB1	1	X	
14:00	MP34078-B1	1	X	
14:02	FA55964-1L	1	X	(a)
14:04	MP34078-D1	1	X	
14:05	MP34078-SD1	5	X	
14:06	MP34078-S1	1	X	
14:07	MP34078-S2	1	X	
14:09	ZZZZZZ	1		
14:11	ZZZZZZ	1		
14:12	ZZZZZZ	1		
14:14	MA15072-CCV6	1	X	
14:15	MA15072-CCB6	1	X	
		Element:	Hg	

REPORTED ELEMENTS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50726W1.CSV Date Analyzed: 07/26/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15072
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg
14:17	ZZZZZZ	1	
14:18	MP34078-D2	1	X
14:20	MP34078-MB2	1	X
14:21	MP34078-B2	1	X
14:22	MA15072-CRI2	1	X
14:24	MA15072-CCV7	1	X
14:26	MA15072-CCB7	1	X

(a) Sample used for QC only; not part of login FA55941.

Element: Hg

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50726W1.CSV Date Analyzed: 07/26/18 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA15072 Units: ug/l

Time: / Sample ID:			12:41 ICB1		12:46 CCB1		13:04 CCB2		13:22 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	0.0806	<0.50	0.0848	<0.50	0.0874	<0.50	0.0840	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50726W1.CSV Date Analyzed: 07/26/18 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA15072 Units: ug/l

Time: / Sample ID:			13:40 CCB4		13:57 CCB5		14:15 CCB6		14:26 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	0.0787	<0.50	0.0762	<0.50	0.0851	<0.50	0.0728	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50726W1.CSV Date Analyzed: 07/26/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA15072 Units: ug/l

Time:		12:39			12:44			13:02	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.93	97.7	3.0	3.00	100.0	3	2.99	99.7

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50726W1.CSV Date Analyzed: 07/26/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA15072 Units: ug/l

Time:		13:20			13:38			13:56	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.94	98.0	3	2.90	96.7	3	2.87	95.7

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50726W1.CSV Date Analyzed: 07/26/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA15072 Units: ug/l

Time:		14:14			14:24	
Sample ID:	CCV	CCV6		CCV	CCV7	
Metal	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.87	95.7	3	2.81	93.7

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50726W1.CSV Date Analyzed: 07/26/18 Methods: SW846 7470A
QC Limits: 95 to 105 % Recovery Run ID: MA15072 Units: ug/l

Time:		12:37	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6	5.92	98.7

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50726W1.CSV Date Analyzed: 07/26/18 Methods: SW846 7470A
QC Limits: 80 to 120 % Recovery Run ID: MA15072 Units: ug/l

Time:			12:43		14:22	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.165	82.5	0.135	67.5*(a)

(*) Outside of QC limits
(anr) Analyte not requested
(a) Possible instrument baseline drift.

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15082
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:57	MA15082-STD1	1		STDA
09:05	MA15082-STD2	1		STDB
09:09	MA15082-STD3	1		STDC
09:13	MA15082-STD4	1		STDD
09:17	MA15082-STD5	1		STDE
09:21	MA15082-STD6	1		STDF
09:25	MA15082-HSTD1	1		
09:29	MA15082-HSTD2	1		
09:33	MA15082-ICV1	1		
09:37	MA15082-ICB1	1		
09:41	MA15082-CRIA1	1		
09:44	MA15082-ICSA1	1		
09:48	MA15082-ICSAB1	1		
09:52	MA15082-CCV1	1		
09:56	MA15082-CCV2	1		
10:00	MA15082-CCB1	1		
10:03	MA15082-ICV2	1		
10:07	MP34080-MB1	2		
10:11	MP34080-B1	2		
10:15	FA55941-5	2		
10:19	MP34080-D1	2		
10:22	MP34080-SD1	10		
10:26	MP34080-S1	2		
10:30	MP34080-S2	2		
10:34	MP34080-PS1	2		
10:37	FA55941-1	2		
10:41	MA15082-CCV3	1		
10:45	MA15082-CCV4	1		
10:49	MA15082-CCB2	1		
10:53	FA55941-2	2		
10:57	FA55941-3	2		
11:00	FA55941-4	2		
11:04	FA55941-6	2		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15082
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:08	FA55941-7	2		
11:12	FA55941-8A	2		
11:15	FA55941-9	2		
11:19	ZZZZZZ	2		
11:23	ZZZZZZ	2		
11:27	ZZZZZZ	2		
11:31	MA15082-CCV5	1		
11:34	MA15082-CCV6	1		
11:38	MA15082-CCB3	1		
11:42	ZZZZZZ	2		
11:46	ZZZZZZ	2		
11:50	ZZZZZZ	2		
11:53	ZZZZZZ	2		
11:57	ZZZZZZ	2		
12:01	ZZZZZZ	2		
12:05	ZZZZZZ	2		
12:20	MA15082-CCV7	1		
12:24	MA15082-CCV8	1		
12:28	MA15082-CCB4	1		
12:50	FA55941-1	40		
12:54	FA55941-2	100		
12:58	FA55941-2	10		
13:02	FA55941-6	5		
13:05	FA55941-8A	20		
---------->	Last reportable sample/prep for job FA55941			
13:09	MA15082-CCV9	1		
13:13	MA15082-CCV10	1		
13:17	MA15082-CCB5	1		
13:21	ZZZZZZ	5		
13:24	ZZZZZZ	20		
13:28	MA15082-CRIA2	1		
13:32	MA15082-ICSA2	1		
13:36	MA15082-ICSAB2	1		
13:40	MA15082-CCV11	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15082
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:43	MA15082-CCV12	1		
13:47	MA15082-CCB6	1		

----------> Last reportable CCB for job FA55941
Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15082
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element: Dilution	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn
09:25	MA15082-HSTD1	1																		X				
09:29	MA15082-HSTD2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
09:33	MA15082-ICV1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
09:37	MA15082-ICB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
09:41	MA15082-CRIA1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
09:44	MA15082-ICSA1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
09:48	MA15082-ICSAB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
09:52	MA15082-CCV1	1																		X				
09:56	MA15082-CCV2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
10:00	MA15082-CCB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:03	MA15082-ICV2	1																		X				
10:07	MP34080-MB1	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:11	MP34080-B1	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:15	FA55941-5	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:19	MP34080-D1	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:22	MP34080-SD1	10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:26	MP34080-S1	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:30	MP34080-S2	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:34	MP34080-PS1	2																						
10:37	FA55941-1	2	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X
10:41	MA15082-CCV3	1																		X				
10:45	MA15082-CCV4	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
10:49	MA15082-CCB2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:53	FA55941-2	2	X	X	X		X	X		X	X	X		X	X		X	X	X	X		X	X	X
10:57	FA55941-3	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11:00	FA55941-4	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11:04	FA55941-6	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
11:08	FA55941-7	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11:12	FA55941-8A	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
11:15	FA55941-9	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11:19	ZZZZZZ	2																						
11:23	ZZZZZZ	2																						
11:27	ZZZZZZ	2																						
		Element:	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn

REPORTED ELEMENTS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15082
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element: Dilution	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn
11:31	MA15082-CCV5	1																		X				
11:34	MA15082-CCV6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
11:38	MA15082-CCB3	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11:42	ZZZZZZ	2																						
11:46	ZZZZZZ	2																						
11:50	ZZZZZZ	2																						
11:53	ZZZZZZ	2																						
11:57	ZZZZZZ	2																						
12:01	ZZZZZZ	2																						
12:05	ZZZZZZ	2																						
12:20	MA15082-CCV7	1																		X				
12:24	MA15082-CCV8	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
12:28	MA15082-CCB4	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12:50	FA55941-1	40				X		X													X			
12:54	FA55941-2	100											X								X			
12:58	FA55941-2	10				X		X								X								
13:02	FA55941-6	5																			X			
13:05	FA55941-8A	20																			X			
13:09	MA15082-CCV9	1																		X				
13:13	MA15082-CCV10	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
13:17	MA15082-CCB5	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13:21	ZZZZZZ	5																						
13:24	ZZZZZZ	20																						
13:28	MA15082-CRIA2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13:32	MA15082-ICSA2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13:36	MA15082-ICSAB2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13:40	MA15082-CCV11	1																		X				
13:43	MA15082-CCV12	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
13:47	MA15082-CCB6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		Element: Dilution	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn

INTERNAL STANDARD SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15082
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
08:57	MA15082-STD1	100	100	100	100	100	100	100	100
09:05	MA15082-STD2	93.1	96.3	97.9	97.9	98	99.3	98.7	98.3
09:09	MA15082-STD3	95.8	96	97.3	96.2	96.1	99.2	96.9	96.7
09:13	MA15082-STD4	90.9	94.6	95.7	96.2	96	98.2	95.4	93.2
09:17	MA15082-STD5	91.2	95.1	96.4	96.4	96.5	99.4	93.8	93
09:21	MA15082-STD6	83.9	97.2	97.8	97.5	96.3	100.6	92.9	88.3
09:25	MA15082-HSTD1	90.3	98.5	99.5	98.6	98.5	101.6	95.8	93
09:29	MA15082-HSTD2	94.3	97.1	96.5	96.7	96.4	100.9	92.6	89.5
09:33	MA15082-ICV1	99.1	97.4	98.6	98.5	97.2	101.7	95	93.5
09:37	MA15082-ICB1	95	98.2	99.9	99.6	100.7	102.3	99.1	101
09:41	MA15082-CRIA1	92.5	99.2	100.4	99.8	101	103.4	100	101.3
09:44	MA15082-ICSA1	79	98.7	97.2	94.6	93.9	98.6	86	83.9
09:48	MA15082-ICSAB1	82.1	97.9	96.7	95.3	93.3	97.7	85.8	82.1
09:52	MA15082-CCV1	91.8	95.5	98.4	98.2	96.4	102.2	96.8	93.7
09:56	MA15082-CCV2	95.9	96.7	98.6	98.4	96.9	102.3	95.5	90.8
10:00	MA15082-CCB1	90.4	95.6	99.7	99.3	97.8	103.2	98.9	98
10:03	MA15082-ICV2	123.1	91.1	91.8	93.3	94.2	100.2	91.7	83.7
10:07	MP34080-MB1	82.9	90	91.5	91.1	91.8	100.4	94.8	76.4
10:11	MP34080-B1	92	90.6	92.5	91.3	90.6	100.3	91.3	73.9
10:15	FA55941-5	90.6	91.5	94	94.1	91.7	100.1	93.9	76.7
10:19	MP34080-D1	102.8	93.9	96	97.8	93.2	103.1	95.7	78
10:22	MP34080-SD1	98.9	100.8	102.9	103.5	99.5	105.4	99.2	94
10:26	MP34080-S1	89.3	92.3	94.7	93.6	90.8	99.8	90.5	74.8
10:30	MP34080-S2	90.2	92.7	94.6	94.1	90.3	100.8	91	73.1
10:34	MP34080-PS1	No results reported for the elements associated with this internal standard.							
10:37	FA55941-1	96.4	97.2	95.2	94.6	90.7	100.5	86.2	72.3
10:41	MA15082-CCV3	104.1	100	102.4	102	98.8	105.8	96.8	95.2
10:45	MA15082-CCV4	96	100.9	101.4	101.9	98.4	105.9	94.8	91.6
10:49	MA15082-CCB2	96.4	100.1	102	102.8	100.1	106.2	99.6	98
10:53	FA55941-2	79.7	94.2	92	90.5	86.4	91.1	78.6	66.4 !
10:57	FA55941-3	94.7	95.6	97.9	97.4	94.8	102.8	93.8	76.9
11:00	FA55941-4	96	95.8	98	97.9	95	103.1	93.1	76.8
11:04	FA55941-6	95.9	95.6	96.8	96.4	92.9	102.7	91.1	76.3

INTERNAL STANDARD SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15082
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
11:08	FA55941-7	97.4	95.1	97.2	97.6	93.4	102.4	93.4	78.1
11:12	FA55941-8A	93.6	94.7	93.9	94.5	91	100	88.6	74.7
11:15	FA55941-9	102.5	98.2	100.5	99.4	96.5	104.1	95.7	79.5
11:19	ZZZZZZ	89.7	93.5	94.3	95.1	90.1	100.5	88.5	73.4
11:23	ZZZZZZ	95.6	95.3	95.7	94.9	89.9	99.4	86.6	72.2
11:27	ZZZZZZ	96.4	95.2	95.2	95.3	90.5	99.7	88.1	74.4
11:31	MA15082-CCV5	102.3	100.4	102.2	101.2	97.2	105	94.2	94.3
11:34	MA15082-CCV6	93.3	101.3	101.6	101.8	96.5	103.4	93.1	92.5
11:38	MA15082-CCB3	99.2	100.3	102.2	101	98.9	104.2	95.4	98.1
11:42	ZZZZZZ	96.8	98.1	96.7	96.6	94.3	104	91.1	77.6
11:46	ZZZZZZ	94.5	91.8	93.4	92.5	90	100	89.3	74.6
11:50	ZZZZZZ	96	91.6	95.1	93.7	89.9	101.5	90.6	75.9
11:53	ZZZZZZ	91.9	94.3	97.1	96.4	92.1	103.8	91.7	77.4
11:57	ZZZZZZ	94.1	97.1	99.1	98.6	95.1	104.3	94.1	77.5
12:01	ZZZZZZ	92.9	96.2	97.3	97	93.9	102.4	93.1	77.7
12:05	ZZZZZZ	95.7	94.9	96.5	97.3	93.4	102.8	93.2	78.3
12:20	MA15082-CCV7	98.7	102.2	101.3	101.3	97.7	105.2	93.4	94.4
12:24	MA15082-CCV8	97.5	98.8	99.5	98.7	94.1	101	89.2	90.5
12:28	MA15082-CCB4	93.6	100.2	101.4	100.5	97.9	103.2	94.8	96.2
12:50	FA55941-1	97.6	102.4	102.6	101.8	99.1	104.9	94.3	98.1
12:54	FA55941-2	94.4	102.1	102.8	101.6	98.6	103.9	93.9	95.2
12:58	FA55941-2	93.9	98.5	98.3	97.3	92.6	100.8	86.2	83
13:02	FA55941-6	93.5	96	97.7	96.6	93.8	101.8	90.5	84.2
13:05	FA55941-8A	95.4	101.3	101.2	100.7	97.5	103.8	93.8	93.5
13:09	MA15082-CCV9	90.5	99.9	100.8	99.9	96.1	103.2	90.5	92.5
13:13	MA15082-CCV10	91.5	100.6	100.2	99.5	95.5	103.2	90.1	90
13:17	MA15082-CCB5	94.7	99	99.4	99.6	97	103	92.4	97
13:21	ZZZZZZ	94.5	95.7	96.4	96.2	92.7	102.1	89.3	83.9
13:24	ZZZZZZ	103.8	101.1	100.6	101.1	97.5	103.8	92	92.9
13:28	MA15082-CRIA2	92.8	102.5	102.3	102.4	97.8	104.4	94.3	97.9
13:32	MA15082-ICSA2	81.9	98.5	95.3	93	90	97.5	79.8	79.8
13:36	MA15082-ICSAB2	75.5	96.9	94.2	92.7	88.5	96.9	79.2	78.7
13:40	MA15082-CCV11	84.1	92.5	95.5	94.4	92	101.2	89.2	89.6

INTERNAL STANDARD SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15082
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
13:43	MA15082-CCV12	87	93.4	95.8	95	91.7	101.2	87.7	85.9
13:47	MA15082-CCB6	91.9	93.9	96.1	95.4	93.4	101.8	92.4	89.6

! = Outside limits.

LEGEND:

Istd#	Parameter	Limits	CCV/CCB Limits
Istd#1	Lithium	70-130 %	70-130 %
Istd#2	Scandium	70-130 %	70-130 %
Istd#3	Germanium (72-2)	70-130 %	70-130 %
Istd#4	Germanium (74-2)	70-130 %	70-130 %
Istd#5	Indium	70-130 %	70-130 %
Istd#6	Terbium	70-130 %	70-130 %
Istd#7	Bismuth	70-130 %	70-130 %
Istd#8	Tellurium	70-130 %	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: result < RL Run ID: MA15082 Units: ug/l

Time: / Sample ID:			09:37 ICB1		10:00 CCB1		10:49 CCB2		11:38 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	100	4.4	0.278	<100	0.764	<100	0.371	<100	0.382	<100
Antimony	1.0	.1	0.00975	<1.0	0.0102	<1.0	0.0113	<1.0	0.0103	<1.0
Arsenic	1.0	.1	0.00691	<1.0	0.0000100	<1.0	0.00306	<1.0	-0.00442	<1.0
Barium	1.0	.1	0.000980	<1.0	-0.00174	<1.0	0.00439	<1.0	0.00242	<1.0
Beryllium	1.0	.1	0.00733	<1.0	0.000170	<1.0	0.0263	<1.0	0.00705	<1.0
Cadmium	1.0	.1	0.00662	<1.0	0.00292	<1.0	0.00477	<1.0	0.00664	<1.0
Calcium	100	7.2	0.00188	<100	0.0952	<100	-0.0803	<100	0.509	<100
Chromium	1.0	.1	0.00514	<1.0	-0.00172	<1.0	0.00246	<1.0	0.000380	<1.0
Cobalt	1.0	.1	0.00608	<1.0	0.00317	<1.0	0.00599	<1.0	0.00597	<1.0
Copper	1.0	.1	-0.0553	<1.0	-0.0702	<1.0	-0.0821	<1.0	-0.108	<1.0
Iron	100	7.9	0.558	<100	1.10	<100	0.690	<100	0.753	<100
Lead	1.0	.1	0.0226	<1.0	0.0164	<1.0	0.0163	<1.0	0.0154	<1.0
Magnesium	100	5.2	0.420	<100	1.03	<100	0.539	<100	0.538	<100
Manganese	1.0	.1	-0.00344	<1.0	0.00500	<1.0	0.00103	<1.0	0.000510	<1.0
Molybdenum	1.0	.1	anr							
Nickel	1.0	.1	0.00387	<1.0	0.00391	<1.0	0.00413	<1.0	0.00304	<1.0
Potassium	100	6.6	0.822	<100	2.81	<100	2.65	<100	3.16	<100
Selenium	1.0	.11	0.00241	<1.0	-0.0131	<1.0	0.0219	<1.0	0.0312	<1.0
Silver	1.0	.1	0.109	<1.0	0.0403	<1.0	0.0119	<1.0	0.00917	<1.0
Sodium	100	4.8	1.50	<100	5.32	<100	4.18	<100	6.46	<100
Strontium	1.0	.1	anr							
Thallium	1.0	.1	0.0487	<1.0	0.0784	<1.0	0.0764	<1.0	0.0712	<1.0
Tin	1.0	.1	anr							
Titanium	1.0	.3	anr							
Vanadium	1.0	.1	-0.0552	<1.0	-0.0529	<1.0	-0.0537	<1.0	-0.0511	<1.0
Zinc	2.0	.29	-0.109	<2.0	-0.117	<2.0	-0.116	<2.0	-0.0850	<2.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: result < RL Run ID: MA15082 Units: ug/l

Time: / Sample ID:			12:28 CCB4		13:17 CCB5		13:47 CCB6	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	100	4.4	0.284	<100	0.320	<100	0.761	<100
Antimony	1.0	.1	0.00750	<1.0	0.00726	<1.0	0.0103	<1.0
Arsenic	1.0	.1	0.00217	<1.0	-0.00107	<1.0	0.00255	<1.0
Barium	1.0	.1	0.00341	<1.0	0.00178	<1.0	0.00219	<1.0
Beryllium	1.0	.1	0.0143	<1.0	0.0120	<1.0	0.0181	<1.0
Cadmium	1.0	.1	0.00620	<1.0	0.00548	<1.0	0.00413	<1.0
Calcium	100	7.2	-0.293	<100	0.185	<100	-0.0290	<100
Chromium	1.0	.1	0.00126	<1.0	0.00129	<1.0	-0.00152	<1.0
Cobalt	1.0	.1	0.00544	<1.0	0.00489	<1.0	0.00352	<1.0
Copper	1.0	.1	-0.116	<1.0	-0.120	<1.0	-0.107	<1.0
Iron	100	7.9	0.626	<100	0.603	<100	1.01	<100
Lead	1.0	.1	0.0175	<1.0	0.0154	<1.0	0.0149	<1.0
Magnesium	100	5.2	0.527	<100	0.568	<100	1.25	<100
Manganese	1.0	.1	0.00480	<1.0	0.0109	<1.0	0.0114	<1.0
Molybdenum	1.0	.1	anr					
Nickel	1.0	.1	0.00433	<1.0	0.00536	<1.0	0.00164	<1.0
Potassium	100	6.6	2.85	<100	2.45	<100	4.55	<100
Selenium	1.0	.11	0.0189	<1.0	0.0289	<1.0	-0.00257	<1.0
Silver	1.0	.1	0.00961	<1.0	0.00948	<1.0	0.0121	<1.0
Sodium	100	4.8	2.42	<100	3.83	<100	6.53	<100
Strontium	1.0	.1	anr					
Thallium	1.0	.1	0.0730	<1.0	0.0752	<1.0	0.0745	<1.0
Tin	1.0	.1	anr					
Titanium	1.0	.3	anr					
Vanadium	1.0	.1	-0.0567	<1.0	-0.0563	<1.0	-0.0552	<1.0
Zinc	2.0	.29	-0.0773	<2.0	-0.0854	<2.0	-0.0680	<2.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15082 Units: ug/l

Time:		09:33			09:52			09:56	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	10000	9530	95.3				10000	9490	94.9
Antimony	100	97.4	97.4				100	98.6	98.6
Arsenic	100	97.3	97.3				100	98.7	98.7
Barium	100	100	100.0				100	98.0	98.0
Beryllium	100	96.4	96.4				100	100	100.0
Cadmium	100	97.7	97.7				100	101	101.0
Calcium	10000	9670	96.7				10000	9750	97.5
Chromium	100	96.8	96.8				100	99.1	99.1
Cobalt	100	99.3	99.3				100	101	101.0
Copper	100	98.9	98.9				100	101	101.0
Iron	10000	9770	97.7				10000	10100	101.0
Lead	100	96.1	96.1				100	97.9	97.9
Magnesium	10000	10100	101.0				10000	9860	98.6
Manganese	100	96.8	96.8				100	98.5	98.5
Molybdenum	anr								
Nickel	100	97.5	97.5				100	101	101.0
Potassium	10000	9570	95.7				10000	9720	97.2
Selenium	100	100	100.0				100	99.8	99.8
Silver				50	51.6	103.2			
Sodium	10000	9890	98.9				10000	9960	99.6
Strontium	anr								
Thallium	100	97.6	97.6				100	101	101.0
Tin	anr								
Titanium	anr								
Vanadium	100	98.4	98.4				100	100	100.0
Zinc	100	99.3	99.3				100	100	100.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15082 Units: ug/l

Time:		10:03			10:41			10:45	
Sample ID:	ICV	ICV2		CCV	CCV3		CCV	CCV4	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum							10000	9560	95.6
Antimony							100	97.0	97.0
Arsenic							100	99.8	99.8
Barium							100	98.1	98.1
Beryllium							100	103	103.0
Cadmium							100	99.5	99.5
Calcium							10000	9690	96.9
Chromium							100	102	102.0
Cobalt							100	102	102.0
Copper							100	103	103.0
Iron							10000	10300	103.0
Lead							100	98.4	98.4
Magnesium							10000	10100	101.0
Manganese							100	98.3	98.3
Molybdenum									
Nickel							100	102	102.0
Potassium							10000	10200	102.0
Selenium							100	101	101.0
Silver	50	56.6	91.0	50	51.4	102.8			
Sodium							10000	10300	103.0
Strontium									
Thallium							100	103	103.0
Tin									
Titanium									
Vanadium							100	101	101.0
Zinc							100	100	100.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15082 Units: ug/l

Time:		11:31			11:34			12:20	
Sample ID:	CCV	CCV5		CCV	CCV6		CCV	CCV7	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum				10000	9540	95.4			
Antimony				100	95.0	95.0			
Arsenic				100	99.6	99.6			
Barium				100	98.6	98.6			
Beryllium				100	101	101.0			
Cadmium				100	97.7	97.7			
Calcium				10000	9680	96.8			
Chromium				100	101	101.0			
Cobalt				100	100	100.0			
Copper				100	101	101.0			
Iron				10000	10300	103.0			
Lead				100	97.8	97.8			
Magnesium				10000	10100	101.0			
Manganese				100	99.0	99.0			
Molybdenum									
Nickel				100	102	102.0			
Potassium				10000	10200	102.0			
Selenium				100	100	100.0			
Silver	50	51.6	103.2				50	50.3	100.6
Sodium				10000	10200	102.0			
Strontium									
Thallium				100	104	104.0			
Tin									
Titanium									
Vanadium				100	99.2	99.2			
Zinc				100	98.9	98.9			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15082 Units: ug/l

Time:		12:24			13:09			13:13	
Sample ID:	CCV	CCV8		CCV	CCV9		CCV	CCV10	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	10000	9740	97.4				10000	9600	96.0
Antimony	100	97.4	97.4				100	95.6	95.6
Arsenic	100	101	101.0				100	98.7	98.7
Barium	100	100	100.0				100	97.8	97.8
Beryllium	100	103	103.0				100	99.2	99.2
Cadmium	100	98.9	98.9				100	97.4	97.4
Calcium	10000	9890	98.9				10000	9690	96.9
Chromium	100	101	101.0				100	99.4	99.4
Cobalt	100	101	101.0				100	99.3	99.3
Copper	100	102	102.0				100	99.9	99.9
Iron	10000	10400	104.0				10000	10300	103.0
Lead	100	99.7	99.7				100	97.1	97.1
Magnesium	10000	10300	103.0				10000	10100	101.0
Manganese	100	101	101.0				100	98.9	98.9
Molybdenum	anr								
Nickel	100	101	101.0				100	99.4	99.4
Potassium	10000	10400	104.0				10000	10300	103.0
Selenium	100	103	103.0				100	101	101.0
Silver				50	49.8	99.6			
Sodium	10000	10300	103.0				10000	10100	101.0
Strontium	anr								
Thallium	100	107	107.0				100	105	105.0
Tin	anr								
Titanium	anr								
Vanadium	100	101	101.0				100	98.6	98.6
Zinc	100	101	101.0				100	99.1	99.1

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15082 Units: ug/l

Time:		13:40			13:43	
Sample ID:	CCV	CCV11		CCV	CCV12	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum				10000	9490	94.9
Antimony				100	96.3	96.3
Arsenic				100	98.2	98.2
Barium				100	97.7	97.7
Beryllium				100	99.5	99.5
Cadmium				100	97.8	97.8
Calcium				10000	9720	97.2
Chromium				100	98.6	98.6
Cobalt				100	99.5	99.5
Copper				100	98.8	98.8
Iron				10000	10400	104.0
Lead				100	98.3	98.3
Magnesium				10000	10100	101.0
Manganese				100	97.6	97.6
Molybdenum						
Nickel				100	99.1	99.1
Potassium				10000	9780	97.8
Selenium				100	100	100.0
Silver	50	51.4	102.8			
Sodium				10000	10200	102.0
Strontium						
Thallium				100	108	108.0
Tin						
Titanium						
Vanadium				100	101	101.0
Zinc				100	98.9	98.9

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15082 Units: ug/l

Time:		09:25			09:29	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum				20000	19600	98.0
Antimony				200	200	100.0
Arsenic				200	200	100.0
Barium				200	197	98.5
Beryllium				200	198	99.0
Cadmium				200	199	99.5
Calcium				20000	19900	99.5
Chromium				200	202	101.0
Cobalt				200	201	100.5
Copper				200	200	100.0
Iron				20000	20300	101.5
Lead				200	200	100.0
Magnesium				20000	19900	99.5
Manganese				200	203	101.5
Molybdenum						
Nickel				200	202	101.0
Potassium				20000	20000	100.0
Selenium				200	198	99.0
Silver	100	98.1	98.1			
Sodium				20000	19800	99.0
Strontium						
Thallium				200	198	99.0
Tin						
Titanium						
Vanadium				200	200	100.0
Zinc				200	198	99.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: CRI 70-130% CRIA 80-120% Run ID: MA15082 Units: ug/l

Time:			09:41		13:28	
Sample ID:	CRI	CRIA	CRIA1		CRIA2	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	100	100	99.6	99.6	98.4	98.4
Antimony	1.0	1.0	1.01	101.0	0.954	95.4
Arsenic	1.0	1.0	1.00	100.0	1.00	100.0
Barium	1.0	1.0	0.950	95.0	0.977	97.7
Beryllium	1.0	1.0	1.03	103.0	0.933	93.3
Cadmium	1.0	1.0	1.08	108.0	0.946	94.6
Calcium	100	100	99.3	99.3	102	102.0
Chromium	1.0	1.0	1.02	102.0	1.01	101.0
Cobalt	1.0	1.0	1.04	104.0	1.03	103.0
Copper	1.0	1.0	1.19	119.0	1.13	113.0
Iron	100	100	102	102.0	100	100.0
Lead	1.0	1.0	0.978	97.8	0.959	95.9
Magnesium	100	100	101	101.0	99.6	99.6
Manganese	1.0	1.0	1.06	106.0	1.07	107.0
Molybdenum	1.0	1.0	anr			
Nickel	1.0	1.0	1.05	105.0	1.01	101.0
Potassium	100	100	99.4	99.4	102	102.0
Selenium	1.0	1.0	1.08	108.0	1.08	108.0
Silver	1.0	1.0	1.08	108.0	1.01	101.0
Sodium	100	100	108	108.0	112	112.0
Strontium	1.0	1.0	anr			
Thallium	1.0	1.0	1.01	101.0	0.985	98.5
Tin	1.0	1.0	anr			
Titanium	1.0	1.0	anr			
Vanadium	1.0	1.0	0.944	94.4	0.939	93.9
Zinc	1.0	1.0	1.11	111.0	1.22	122.0*(a

(*) Outside of QC limits
(anr) Analyte not requested
(a) Possible instrument baseline drift.

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA073118M1.CSV Date Analyzed: 07/31/18 Methods: SW846 6020A
QC Limits: 80 to 120 % Recovery Run ID: MA15082 Units: ug/l

Time:			09:44		09:48		13:32		13:36	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	100000	100000	91700	91.7	89900	89.9	91400	91.4	89900	89.9
Antimony			0.0480		0.0416		0.0357		0.0375	
Arsenic		20	0.0712		19.3	96.5	0.0788		18.9	94.5
Barium			0.0763		0.0650		0.0674		0.0598	
Beryllium			0.0267		0.0245		0.00722		0.0100	
Cadmium		20	0.394		18.5	92.5	0.364		18.0	90.0
Calcium	100000	100000	92000	92.0	91000	91.0	89900	89.9	89000	89.0
Chromium		20	1.24		20.5	102.5	1.29		20.5	102.5
Cobalt		20	0.0137		19.0	95.0	0.0108		18.8	94.0
Copper		20	0.163		18.3	91.5	0.107		17.9	89.5
Iron	100000	100000	96900	96.9	97300	97.3	100000	100.0	99700	99.7
Lead			0.0936		0.0925		0.0829		0.0852	
Magnesium	100000	100000	96300	96.3	96000	96.0	97200	97.2	95900	95.9
Manganese		20	0.278		19.4	97.0	0.288		19.3	96.5
Molybdenum	2000	2000	2010	100.5	2020	101.0	2090	104.5	2060	103.0
Nickel		20	0.141		18.6	93.0	0.149		18.4	92.0
Potassium	100000	100000	98400	98.4	98600	98.6	100000	100.0	100000	100.0
Selenium			0.0830		0.0402		0.0771		0.0981	
Silver		20	0.0946		17.8	89.0	0.0360		17.7	88.5
Sodium	100000	100000	96500	96.5	96900	96.9	98100	98.1	96800	96.8
Strontium			0.933		0.903		0.912		0.929	
Thallium			0.0178		0.0125		0.00654		0.00556	
Tin			0.118		0.160		0.122		0.193	
Titanium	2000	2000	1950	97.5	1940	97.0	1940	97.0	1920	96.0
Vanadium			-0.0330		-0.0300		-0.0354		-0.0374	
Zinc		20	0.976		19.1	95.5	0.957		18.9	94.5

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34054
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/23/18

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	-0.012	<0.50

Associated samples MP34054: FA55941-8A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34054
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/23/18 07/23/18

Metal	FA55967-1 Original	DUP	RPD	QC Limits	FA55967-1 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	2.9	3	96.7	80-120

Associated samples MP34054: FA55941-8A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34054 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/23/18

Metal	FA55967-1 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.0	3	100.0	3.4	20

Associated samples MP34054: FA55941-8A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34054
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/23/18

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	2.9	3	96.7	80-120

Associated samples MP34054: FA55941-8A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34054
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/23/18

Metal	FA55967-1 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP34054: FA55941-8A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34076
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/26/18

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	-0.092	<0.50

Associated samples MP34076: FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5, FA55941-6, FA55941-7, FA55941-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34076
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date:			07/26/18					07/26/18	
Metal	FA55941-5 Original	DUP	RPD	QC Limits	FA55941-5 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	2.9	3	96.7	80-120

Associated samples MP34076: FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5, FA55941-6, FA55941-7, FA55941-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34076
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/26/18

Metal	FA55941-5 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	2.9	3	96.7	0.0	20

Associated samples MP34076: FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5, FA55941-6, FA55941-7, FA55941-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34076
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/26/18

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	80-120

Associated samples MP34076: FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5, FA55941-6, FA55941-7, FA55941-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34076
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/26/18

Metal	FA55941-5 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP34076: FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5, FA55941-6, FA55941-7, FA55941-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34080
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 07/27/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.7	22	10.4	<200
Antimony	2.0	.2	.2	0.16	<2.0
Arsenic	2.0	.2	.21	0.12	<2.0
Barium	2.0	.2	.2	0.11	<2.0
Beryllium	2.0	.2	.2	0.065	<2.0
Cadmium	2.0	.2	.2	0.056	<2.0
Calcium	200	14	36	20.4	<200
Chromium	2.0	.2	.2	0.33	<2.0
Cobalt	2.0	.2	.2	0.15	<2.0
Copper	2.0	.2	.2	1.3	* (a)
Iron	200	16	23	10.0	<200
Lead	2.0	.2	.2	0.32	<2.0
Magnesium	200	10	19	11.2	<200
Manganese	2.0	.2	.2	0.29	<2.0
Molybdenum	2.0	.2	.39		
Nickel	2.0	.2	.2	0.10	<2.0
Potassium	200	13	75	11.1	<200
Selenium	2.0	.22	.22	0.069	<2.0
Silver	2.0	.2	.2	0.29	<2.0
Sodium	200	9.6	24	30.9	<200
Strontium	2.0	.2	.2		
Thallium	2.0	.2	.2	0.45	<2.0
Tin	2.0	.2	.2		
Titanium	2.0	.61	.88		
Vanadium	2.0	.2	.24	0.15	<2.0
Zinc	4.0	.58	1.7	2.2	* (a)

Associated samples MP34080: FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5, FA55941-6, FA55941-7, FA55941-9, FA55941-8A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) All associated samples with results >MDL "B" coded.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34080
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date:			07/27/18					07/27/18	
Metal	FA55941-5 Original	DUP	RPD	QC Limits	FA55941-5 Original	MS	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum	10.7	9.7	9.8	0-20	10.7	17100	20000	85.4	80-120
Antimony	0.0	0.0	NC	0-20	0.0	195	200	97.5	80-120
Arsenic	0.94	0.94	0.0	0-20	0.94	207	200	103.0	80-120
Barium	7.6	7.7	1.3	0-20	7.6	210	200	101.2	80-120
Beryllium	0.0	0.0	NC	0-20	0.0	209	200	104.5	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	200	200	100.0	80-120
Calcium	20300	20400	0.5	0-20	20300	39200	20000	94.5	80-120
Chromium	0.54	0.40	29.8 (a)	0-20	0.54	208	200	103.7	80-120
Cobalt	0.0	0.0	NC	0-20	0.0	208	200	104.0	80-120
Copper	0.60	0.0	200.0(a)	0-20	0.60	208	200	103.7	80-120
Iron	34.8	0.00	200.0(a)	0-20	34.8	20200	20000	100.8	80-120
Lead	0.22	0.0	200.0(a)	0-20	0.22	205	200	102.4	80-120
Magnesium	5480	5530	0.9	0-20	5480	25400	20000	99.6	80-120
Manganese	24.0	24.1	0.4	0-20	24.0	223	200	99.5	80-120
Molybdenum	anr								
Nickel	0.0	0.0	NC	0-20	0.0	207	200	103.5	80-120
Potassium	1590	1590	0.0	0-20	1590	20700	20000	95.6	80-120
Selenium	0.0	0.0	NC	0-20	0.0	177	200	88.5	80-120
Silver	0.0	0.0	NC	0-20	0.0	104	100	104.0	80-120
Sodium	3770	3790	0.5	0-20	3770	23800	20000	100.2	80-120
Strontium	anr								
Thallium	0.22	0.0	200.0(a)	0-20	0.22	205	200	102.4	80-120
Tin	anr								
Titanium	anr								
Vanadium	0.35	0.37	5.6	0-20	0.35	208	200	103.8	80-120
Zinc	6.9	6.9	0.0	0-20	6.9	194	200	93.6	80-120

Associated samples MP34080: FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5, FA55941-6, FA55941-7, FA55941-9, FA55941-8A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34080
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 07/27/18

Metal	FA55941-5 Original	MSD	Spikelot MPICPMS1	% Rec	MSD RPD	QC Limit
Aluminum	10.7	17900	20000	89.4	4.6	20
Antimony	0.0	203	200	101.5	4.0	20
Arsenic	0.94	217	200	108.0	4.7	20
Barium	7.6	223	200	107.7	6.0	20
Beryllium	0.0	221	200	110.5	5.6	20
Cadmium	0.0	208	200	104.0	3.9	20
Calcium	20300	40500	20000	101.0	3.3	20
Chromium	0.54	221	200	110.2	6.1	20
Cobalt	0.0	221	200	110.5	6.1	20
Copper	0.60	221	200	110.2	6.1	20
Iron	34.8	21300	20000	106.3	5.3	20
Lead	0.22	214	200	106.9	4.3	20
Magnesium	5480	26800	20000	106.6	5.4	20
Manganese	24.0	235	200	105.5	5.2	20
Molybdenum	anr					
Nickel	0.0	218	200	109.0	5.2	20
Potassium	1590	22200	20000	103.1	7.0	20
Selenium	0.0	188	200	94.0	6.0	20
Silver	0.0	112	100	112.0	7.4	20
Sodium	3770	25100	20000	106.7	5.3	20
Strontium	anr					
Thallium	0.22	217	200	108.4	5.7	20
Tin	anr					
Titanium	anr					
Vanadium	0.35	218	200	108.8	4.7	20
Zinc	6.9	203	200	98.1	4.5	20

Associated samples MP34080: FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5, FA55941-6, FA55941-7, FA55941-9, FA55941-8A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34080
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 07/27/18

Metal	BSP Result	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum	18200	20000	91.0	80-120
Antimony	208	200	104.0	80-120
Arsenic	216	200	108.0	80-120
Barium	209	200	104.5	80-120
Beryllium	219	200	109.5	80-120
Cadmium	213	200	106.5	80-120
Calcium	20100	20000	100.5	80-120
Chromium	219	200	109.5	80-120
Cobalt	220	200	110.0	80-120
Copper	220	200	110.0	80-120
Iron	21300	20000	106.5	80-120
Lead	212	200	106.0	80-120
Magnesium	20900	20000	104.5	80-120
Manganese	210	200	105.0	80-120
Molybdenum	anr			
Nickel	219	200	109.5	80-120
Potassium	20100	20000	100.5	80-120
Selenium	186	200	93.0	80-120
Silver	108	100	108.0	80-120
Sodium	21000	20000	105.0	80-120
Strontium	anr			
Thallium	213	200	106.5	80-120
Tin	anr			
Titanium	anr			
Vanadium	220	200	110.0	80-120
Zinc	202	200	101.0	80-120

Associated samples MP34080: FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5, FA55941-6, FA55941-7, FA55941-9, FA55941-8A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA55941
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34080
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 07/27/18

Metal	FA55941-5 Original	SDL 2:10	%DIF	QC Limits
Aluminum	10.7	0.00	100.0(a)	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	0.939	1.15	22.9 (a)	0-10
Barium	7.60	8.28	8.9	0-10
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	20300	22600	11.2*(b)	0-10
Chromium	0.536	0.00	100.0(a)	0-10
Cobalt	0.00	0.00	NC	0-10
Copper	0.605	0.00	100.0(a)	0-10
Iron	34.8	0.00	100.0(a)	0-10
Lead	0.222	0.00	100.0(a)	0-10
Magnesium	5480	6090	11.1*(b)	0-10
Manganese	24.0	26.2	9.2	0-10
Molybdenum	anr			
Nickel	0.00	0.00	NC	0-10
Potassium	1590	1780	11.6*(b)	0-10
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium	3770	4150	10.2*(b)	0-10
Strontium	anr			
Thallium	0.215	0.00	100.0(a)	0-10
Tin	anr			
Titanium	anr			
Vanadium	0.355	0.00	100.0(a)	0-10
Zinc	6.88	6.48	5.8	0-10

Associated samples MP34080: FA55941-1, FA55941-2, FA55941-3, FA55941-4, FA55941-5, FA55941-6, FA55941-7, FA55941-9, FA55941-8A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

Instrument Detection Limits

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	IDL ug/l
Aluminum	4.35
Antimony	.1
Arsenic	.1
Arsenic	.1
Barium	.1
Beryllium	.1
Boron	.5
Cadmium	.1
Cadmium	.1
Calcium	7.2
Calcium	7.2
Chromium	.1
Chromium	.1
Cobalt	.1
Cobalt	.1
Copper	.1
Copper	.1
Iron	7.9
Iron	7.9
Lead	.1
Magnesium	5.2
Manganese	.1
Manganese	.1
Molybdenum	.1
Nickel	.1
Nickel	.1
Potassium	6.57
Selenium	.11
Selenium	.11
Silver	.1
Sodium	4.8
Strontium	.1
Thallium	.1
Tin	.1
Tin	.1
Titanium	.303
Vanadium	.1
Vanadium	.1
Zinc	.29
Zinc	.29

The above applies to the following instrument runs:
MA15082

Instrument Detection Limits

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Instrument ID: LEEMANHG5 **Effective Date:** 10/01/12

Analyte	IDL ug/l
Mercury	.03

The above applies to the following instrument runs:
MA15064,MA15072

Instrument Linear Ranges

Job Number: FA55941
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	Linear Range ug/l
Aluminum	100000
Antimony	1000
Arsenic	1000
Arsenic	1000
Barium	1000
Beryllium	1000
Cadmium	1000
Cadmium	1000
Calcium	100000
Calcium	100000
Chromium	1000
Chromium	1000
Cobalt	1000
Cobalt	1000
Copper	1000
Copper	1000
Iron	100000
Iron	100000
Lead	1000
Magnesium	100000
Manganese	1000
Manganese	1000
Molybdenum	1000
Nickel	1000
Nickel	1000
Potassium	100000
Selenium	1000
Selenium	1000
Silver	100
Sodium	100000
Strontium	1000
Thallium	1000
Tin	1000
Tin	1000
Titanium	1000
Vanadium	1000
Vanadium	1000
Zinc	1000
Zinc	1000

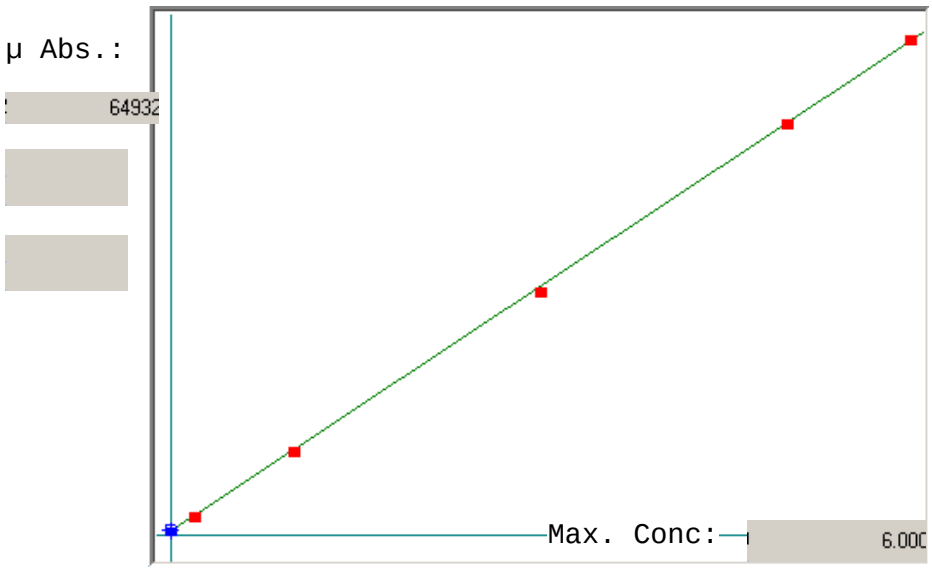
The above applies to the following instrument runs:
MA15082

Metals Analysis

Raw Data

Hg7470/EPA245.1 HG5

Linear



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B= 9.3483e-005

C= -4.3280e-002

Rho= 0.9999225

Accept= Accepted

Accepted Date=

07/23/18 12:39

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
blank	0.000	0.031	0.031	790	0.000	790				
0.2ppb	0.200	0.194	-0.006	2537	0.0 %	2537				
1.0ppb	1.000	1.006	0.006	11223	0.0 %	11223				
3.0ppb	3.000	2.942	-0.058	31938	0.0 %	31938				
5.0ppb	5.000	5.001	0.001	53954	0.0 %	53954				
6.0ppb	6.000	6.027	0.027	64932	0.0 %	64932				

Method: Hg7470/EPA245.1 HG5 Operator: Admin Date of Analysis: 23 Jul 2018 11:44:16

Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
blank - 1	23 Jul 2018 12:29:59	S		-	790	1.000	1.000
0.2ppb - 1	23 Jul 2018 12:31:15	S		-	2537	1.000	1.000
1.0ppb - 1	23 Jul 2018 12:32:36	S		-	11223	1.000	1.000
3.0ppb - 1	23 Jul 2018 12:34:05	S		-	31938	1.000	1.000
5.0ppb - 1	23 Jul 2018 12:35:44	S		-	53954	1.000	1.000
6.0ppb - 1	23 Jul 2018 12:37:34	S		-	64932	1.000	1.000
HSTD - 1	23 Jul 2018 12:39:26	C		100.8% 6.0471	65149	1.000	1.000
ICV - 1	23 Jul 2018 12:41:20	C		102.4% 3.0722	33327	1.000	1.000
ICB - 1	23 Jul 2018 12:43:12	C		0.0080	549	1.000	1.000
CRI - 1	23 Jul 2018 12:45:01	C		99.0% 0.1980	2581	1.000	1.000
CCV - 1	23 Jul 2018 12:46:21	C		99.9% 2.9961	32513	1.000	1.000
CCB - 1	23 Jul 2018 12:47:48	C		0.0117	588	1.000	1.000
MP34053-MB1 - 1	23 Jul 2018 12:49:37	U		0.0223	701	1.000	1.000
MP34053-B1 - 1	23 Jul 2018 12:50:56	U		2.8518	30969	1.000	1.000
FA55914-1 - 1	23 Jul 2018 12:52:16	U		0.0005	468	1.000	1.000
MP34053-D1 - 1	23 Jul 2018 12:54:05	U		0.0009	473	1.000	1.000
MP34053-SD1 - 1	23 Jul 2018 12:55:23	U		-0.2664	-107	1.000	5.000
MP34053-S1 - 1	23 Jul 2018 12:56:41	U		2.9162	31658	1.000	1.000
MP34053-S2 - 1	23 Jul 2018 12:57:57	U		2.8212	30642	1.000	1.000
FA55914-2 - 1	23 Jul 2018 12:59:47	U		-0.0086	371	1.000	1.000
FA55914-9 - 1	23 Jul 2018 13:01:36	U		-0.0076	382	1.000	1.000
FA55977-1 - 1	23 Jul 2018 13:02:55	U		0.1882	2476	1.000	1.000
CCV - 1	23 Jul 2018 13:04:14	C		98.3% 2.9495	32014	1.000	1.000
CCB - 1	23 Jul 2018 13:05:42	C		0.0054	521	1.000	1.000
FA55977-2 - 1	23 Jul 2018 13:07:29	U		0.0653	1161	1.000	1.000
FA55977-3 - 1	23 Jul 2018 13:08:50	U		0.1620	2196	1.000	1.000
FA55977-4 - 1	23 Jul 2018 13:10:14	U		0.1949	2548	1.000	1.000
FA55950-1 - 1	23 Jul 2018 13:11:42	U		0.0070	538	1.000	1.000
FA55951-1 - 1	23 Jul 2018 13:13:11	U		0.0403	894	1.000	1.000
FA55951-2 - 1	23 Jul 2018 13:14:29	U		0.0089	558	1.000	1.000
FA56015-2 - 1	23 Jul 2018 13:15:50	U		-0.0050	409	1.000	1.000
FA56015-3 - 1	23 Jul 2018 13:17:09	U		-0.0149	304	1.000	1.000
MP34054-MB1 - 1	23 Jul 2018 13:18:27	U		-0.0120	335	1.000	1.000
MP34054-B1 - 1	23 Jul 2018 13:19:46	U		2.8911	31389	1.000	1.000
CCV - 1	23 Jul 2018 13:21:05	C		97.9% 2.9377	31888	1.000	1.000
CCB - 1	23 Jul 2018 13:22:52	C		0.0056	523	1.000	1.000
FA55967-1 - 1	23 Jul 2018 13:24:40	U		0.0023	488	1.000	1.000
MP34054-D1 - 1	23 Jul 2018 13:26:00	U		0.0051	518	1.000	1.000
MP34054-SD1 - 1	23 Jul 2018 13:27:19	U		-0.2664	-107	1.000	5.000
MP34054-S1 - 1	23 Jul 2018 13:28:39	U		2.8541	30994	1.000	1.000
MP34054-S2 - 1	23 Jul 2018 13:29:56	U		2.9521	32042	1.000	1.000
FA55967-2 - 1	23 Jul 2018 13:31:44	U		-0.0148	305	1.000	1.000
FA55967-3 - 1	23 Jul 2018 13:33:31	U		-0.0078	380	1.000	1.000
FA55967-4 - 1	23 Jul 2018 13:34:49	U		-0.0039	421	1.000	1.000
FA55967-5 - 1	23 Jul 2018 13:36:07	U		-0.0031	430	1.000	1.000
FA55967-6 - 1	23 Jul 2018 13:37:25	U		-0.0036	424	1.000	1.000
CCV - 1	23 Jul 2018 13:38:43	C		96.8% 2.9048	31536	1.000	1.000
CCB - 1	23 Jul 2018 13:40:01	C		0.0067	535	1.000	1.000
FA55967-1F - 1	23 Jul 2018 13:41:49	U		-0.0029	432	1.000	1.000
FA55967-2F - 1	23 Jul 2018 13:43:08	U		-0.0064	395	1.000	1.000
FA55967-3F - 1	23 Jul 2018 13:44:27	U		-0.0022	439	1.000	1.000
FA55967-4F - 1	23 Jul 2018 13:45:46	U		-0.0041	419	1.000	1.000
FA55967-6F - 1	23 Jul 2018 13:47:05	U		-0.0036	424	1.000	1.000
FA55888-1A - 1	23 Jul 2018 13:48:25	U		-0.0042	418	1.000	1.000
FA55889-1A - 1	23 Jul 2018 13:49:45	U		-0.0015	447	1.000	1.000
FA55978-1 - 1	23 Jul 2018 13:51:03	U		0.2871	3534	1.000	1.000
MP34055-B1 - 1	23 Jul 2018 13:53:55	U		2.9911	32459	1.000	1.000
CCV - 1	23 Jul 2018 13:55:30	C		98.7% 2.9608	32135	1.000	1.000
CCB - 1	23 Jul 2018 13:57:18	C		0.0112	583	1.000	1.000
FA55941-8A - 1	23 Jul 2018 13:59:08	U		-0.0147	306	1.000	1.000
MP34055-D1 - 1	23 Jul 2018 14:00:27	U		0.0338	825	1.000	1.000
MP34055-SD1 - 1	23 Jul 2018 14:01:45	U		-0.2566	-86	1.000	5.000
MP34055-S1 - 1	23 Jul 2018 14:03:06	U		2.9323	31830	1.000	1.000
MP34055-S2 - 1	23 Jul 2018 14:04:23	U		2.9772	32310	1.000	1.000
FA55925-2 - 1	23 Jul 2018 14:06:12	U		0.0425	918	1.000	1.000
FA55692-4 - 1	23 Jul 2018 14:08:02	U		0.0701	1213	1.000	1.000
FA55692-5 - 1	23 Jul 2018 14:09:26	U		0.0846	1368	1.000	1.000
FA55666-4 - 1	23 Jul 2018 14:10:51	U		0.0049	515	1.000	1.000
FA55666-5 - 1	23 Jul 2018 14:12:17	U		-0.0031	430	1.000	1.000

Method: Hg7470/EPA245.1 HG5 Operator: Admin Date of Analysis: 23 Jul 2018 11:44:16

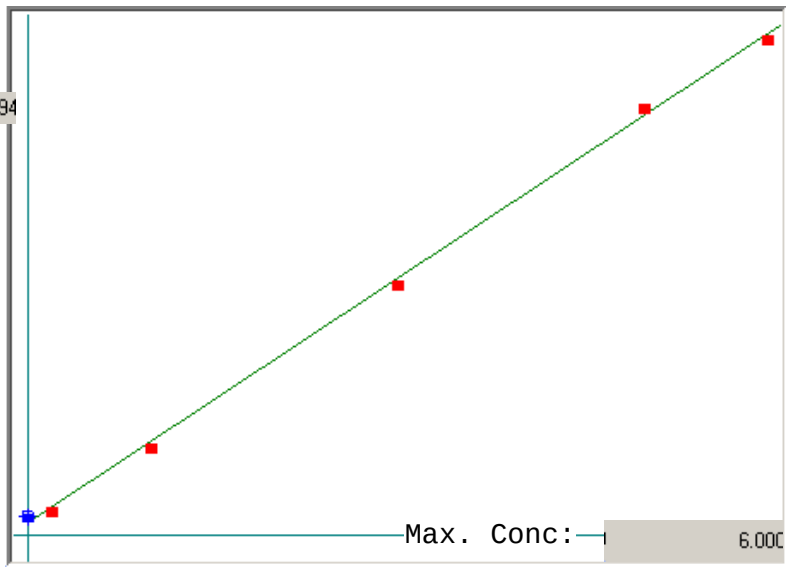
Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
CCV - 1	23 Jul 2018 14:13:35	C		95.5% 2.8663	31124	1.000	1.000
CCB - 1	23 Jul 2018 14:14:53	C		0.0097	567	1.000	1.000
FA55819-1L - 1	23 Jul 2018 14:16:43	U		-0.0078	380	1.000	1.000
MP34055-D2 - 1	23 Jul 2018 14:18:02	U		-0.0081	376	1.000	1.000
MP34055-MB2 - 1	23 Jul 2018 14:19:20	U		-0.0032	429	1.000	1.000
MP34055-B2 - 1	23 Jul 2018 14:20:38	U		2.8057	30476	1.000	1.000
CRI - 1	23 Jul 2018 14:21:57	U		0.1885	2479	1.000	1.000
CCV - 1	23 Jul 2018 14:23:45	C		97.8% 2.9350	31859	1.000	1.000
CCB - 1	23 Jul 2018 14:25:15	C		0.0085	554	1.000	1.000
CCV - 1	23 Jul 2018 15:02:18	C		96.9% 2.9056	31545	1.000	1.000
CCB - 1	23 Jul 2018 15:03:34	C		-0.0093	364	1.000	1.000
MP34055-MB1 - 1	23 Jul 2018 15:08:32	U		0.0355	843	1.000	1.000
CRI - 1	23 Jul 2018 15:09:48	U		0.1732	2316	1.000	1.000
CCV - 1	23 Jul 2018 15:11:08	C		93.9% 2.8181	30609	1.000	1.000
CCB - 1	23 Jul 2018 15:12:36	C		-0.0078	379	1.000	1.000

Hg7470/EPA245.1 HG5

Linear

μ Abs.:

59494



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C= -1.4562e-001

Rho= 0.9994306

Accept= Accepted

Accepted Date=

07/26/18 12:37

11.2 11

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
blank	0.000	0.106	0.106	2460	0.000	2460				
0.2ppb	0.200	0.155	-0.045	2941	0.0 %	2941				
1.0ppb	1.000	0.944	-0.056	10656	0.0 %	10656				
3.0ppb	3.000	2.942	-0.058	30204	0.0 %	30204				
5.0ppb	5.000	5.116	0.116	51460	0.0 %	51460				
6.0ppb	6.000	5.937	-0.063	59494	0.0 %	59494				

Method: Hg7470/EPA245.1 HG5 Operator: Admin Date of Analysis: 26 Jul 2018 10:06:12

Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
blank - 1	26 Jul 2018 12:28:01	S		-	2460	1.000	1.000
0.2ppb - 1	26 Jul 2018 12:29:18	S		-	2941	1.000	1.000
1.0ppb - 1	26 Jul 2018 12:30:47	S		-	10656	1.000	1.000
3.0ppb - 1	26 Jul 2018 12:32:18	S		-	30204	1.000	1.000
5.0ppb - 1	26 Jul 2018 12:33:56	S		-	51460	1.000	1.000
6.0ppb - 1	26 Jul 2018 12:35:46	S		-	59494	1.000	1.000
HSTD - 1	26 Jul 2018 12:37:40	C		98.7% 5.9247	59373	1.000	1.000
ICV - 1	26 Jul 2018 12:39:35	C		97.7% 2.9298	30080	1.000	1.000
ICB - 1	26 Jul 2018 12:41:28	C		0.0806	2213	1.000	1.000
CRI - 1	26 Jul 2018 12:43:17	C		82.5% 0.1650	3038	1.000	1.000
CCV - 1	26 Jul 2018 12:44:46	C		100.1% 3.0015	30782	1.000	1.000
CCB - 1	26 Jul 2018 12:46:15	C		0.0848	2254	1.000	1.000
MP34076-MB1 - 1	26 Jul 2018 12:48:03	U		-0.0920	524	1.000	1.000
MP34076-B1 - 1	26 Jul 2018 12:49:31	U		3.0205	30967	1.000	1.000
FA55941-5 - 1	26 Jul 2018 12:50:49	U		-0.0889	555	1.000	1.000
MP34076-D1 - 1	26 Jul 2018 12:52:37	U		-0.0905	539	1.000	1.000
MP34076-SD1 - 1	26 Jul 2018 12:53:56	U		-0.7833	-108	1.000	5.000
MP34076-S1 - 1	26 Jul 2018 12:55:15	U		2.8896	29687	1.000	1.000
MP34076-S2 - 1	26 Jul 2018 12:56:30	U		2.9062	29849	1.000	1.000
FA55941-1 - 1	26 Jul 2018 12:58:18	U		-0.0835	608	1.000	1.000
FA55941-2 - 1	26 Jul 2018 13:00:08	U		-0.0829	613	1.000	1.000
FA55941-3 - 1	26 Jul 2018 13:01:28	U		-0.0806	636	1.000	1.000
CCV - 1	26 Jul 2018 13:02:47	C		99.5% 2.9852	30622	1.000	1.000
CCB - 1	26 Jul 2018 13:04:06	C		0.0874	2279	1.000	1.000
FA55941-4 - 1	26 Jul 2018 13:05:55	U		-0.0801	641	1.000	1.000
FA55941-6 - 1	26 Jul 2018 13:07:24	U		-0.0806	636	1.000	1.000
FA55941-7 - 1	26 Jul 2018 13:08:45	U		-0.0843	600	1.000	1.000
FA55941-9 - 1	26 Jul 2018 13:10:03	U		-0.0888	556	1.000	1.000
FA56082-1 - 1	26 Jul 2018 13:11:22	U		0.2451	3822	1.000	1.000
FA56082-2 - 1	26 Jul 2018 13:12:41	U		0.4144	5477	1.000	1.000
FA56082-3 - 1	26 Jul 2018 13:14:14	U		0.4196	5528	1.000	1.000
FA56082-4 - 1	26 Jul 2018 13:15:49	U		0.3013	4371	1.000	1.000
FA56082-5 - 1	26 Jul 2018 13:17:25	U		0.4348	5677	1.000	1.000
FA56082-6 - 1	26 Jul 2018 13:18:58	U		0.3045	4403	1.000	1.000
CCV - 1	26 Jul 2018 13:20:34	C		98.0% 2.9404	30184	1.000	1.000
CCB - 1	26 Jul 2018 13:22:08	C		0.0840	2246	1.000	1.000
FA56082-7 - 1	26 Jul 2018 13:23:57	U		0.2713	4078	1.000	1.000
FA56082-8 - 1	26 Jul 2018 13:25:25	U		1.9240	20243	1.000	1.000
FA56051-4 - 1	26 Jul 2018 13:27:00	U		-0.0181	1247	1.000	1.000
FA56051-5 - 1	26 Jul 2018 13:28:46	U		0.1170	2569	1.000	1.000
FA56051-6 - 1	26 Jul 2018 13:30:13	U		-0.0677	762	1.000	1.000
MP34077-MB1 - 1	26 Jul 2018 13:31:45	U		-0.0978	468	1.000	1.000
MP34077-B1 - 1	26 Jul 2018 13:33:07	U		2.7430	28253	1.000	1.000
FA56103-26 - 1	26 Jul 2018 13:34:26	U		-0.0945	500	1.000	1.000
MP34077-D1 - 1	26 Jul 2018 13:36:13	U		-0.0891	553	1.000	1.000
MP34077-SD1 - 1	26 Jul 2018 13:37:32	U		-0.8073	-155	1.000	5.000
CCV - 1	26 Jul 2018 13:38:50	C		96.7% 2.9025	29813	1.000	1.000
CCB - 1	26 Jul 2018 13:40:06	C		0.0787	2194	1.000	1.000
MP34077-S1 - 1	26 Jul 2018 13:41:54	U		2.8027	28837	1.000	1.000
MP34077-S2 - 1	26 Jul 2018 13:43:22	U		2.8274	29079	1.000	1.000
FA56103-25 - 1	26 Jul 2018 13:45:11	U		-0.0977	469	1.000	1.000
FA56103-27 - 1	26 Jul 2018 13:47:01	U		-0.0949	496	1.000	1.000
FA56103-25F - 1	26 Jul 2018 13:48:21	U		-0.0899	545	1.000	1.000
FA56103-27F - 1	26 Jul 2018 13:49:42	U		-0.0904	540	1.000	1.000
FA56111-8 - 1	26 Jul 2018 13:51:02	U		-0.0890	554	1.000	1.000
FA56111-9 - 1	26 Jul 2018 13:52:21	U		-0.0798	644	1.000	1.000
FA56111-15 - 1	26 Jul 2018 13:53:40	U		-0.0934	511	1.000	1.000
FA56111-16 - 1	26 Jul 2018 13:54:59	U		-0.0953	492	1.000	1.000
CCV - 1	26 Jul 2018 13:56:18	C		95.8% 2.8732	29527	1.000	1.000
CCB - 1	26 Jul 2018 13:57:36	C		0.0762	2170	1.000	1.000
MP34078-MB1 - 1	26 Jul 2018 13:59:25	U		-0.0938	507	1.000	1.000
MP34078-B1 - 1	26 Jul 2018 14:00:53	U		2.7958	28770	1.000	1.000
FA55964-1L - 1	26 Jul 2018 14:02:13	U		-0.0799	643	1.000	1.000
MP34078-D1 - 1	26 Jul 2018 14:04:01	U		-0.0810	632	1.000	1.000
MP34078-SD1 - 1	26 Jul 2018 14:05:21	U		-0.8012	-143	1.000	5.000
MP34078-S1 - 1	26 Jul 2018 14:06:41	U		2.8490	29290	1.000	1.000
MP34078-S2 - 1	26 Jul 2018 14:07:58	U		2.7309	28135	1.000	1.000
FA56021-1L - 1	26 Jul 2018 14:09:48	U		-0.0947	498	1.000	1.000
FA56034-1 - 1	26 Jul 2018 14:11:37	U		-0.0874	569	1.000	1.000

Method: Hg7470/EPA245.1 HG5 Operator: Admin Date of Analysis: 26 Jul 2018 10:06:12

Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
FA56035-1 - 1	26 Jul 2018 14:12:57	U		-0.0914	530	1.000	1.000
CCV - 1	26 Jul 2018 14:14:16	C		95.6% 2.8680	29476	1.000	1.000
CCB - 1	26 Jul 2018 14:15:34	C		0.0851	2257	1.000	1.000
FA56037-1 - 1	26 Jul 2018 14:17:25	U		-0.0928	517	1.000	1.000
MP34078-D2 - 1	26 Jul 2018 14:18:52	U		-0.0797	645	1.000	1.000
MP34078-MB2 - 1	26 Jul 2018 14:20:11	U		-0.0884	560	1.000	1.000
MP34078-B2 - 1	26 Jul 2018 14:21:31	U		2.7949	28761	1.000	1.000
CRI - 1	26 Jul 2018 14:22:50	U		0.1345	2740	1.000	1.000
CCV - 1	26 Jul 2018 14:24:39	C		93.7% 2.8103	28911	1.000	1.000
CCB - 1	26 Jul 2018 14:26:10	C		0.0728	2136	1.000	1.000

Quantitation Report

File Name	001CALB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 8:53
Sample Name	Blank
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.002	ug/l	132.93	580.68	3.454E-03	Pulse	0.50	3
As			1	-0.004	ug/l	-69.09	17.67	1.053E-04	Pulse	1.00	3
Mo			1	0.001	ug/l	151.65	12.00	4.723E-05	Pulse	0.50	3
Pb			1	0.000	ug/l	-226.37	1,134.71	2.150E-04	Pulse	1.00	3
Be			1	0.002	ug/l	534.27	0.50	2.494E-06	Pulse	2.00	3
Ag			1	0.000	ug/l	175.82	29.33	1.726E-05	Pulse	0.50	3
Ba			1	-0.002	ug/l	-147.47	22.67	1.337E-05	Pulse	0.50	3
Tl			1	0.001	ug/l	7.49	119.33	2.261E-05	Pulse	0.50	3
Sn			1	0.003	ug/l	272.47	336.67	1.980E-04	Pulse	0.30	3
Sr			1	0.003	ug/l	306.15	539.34	3.176E-04	Pulse	0.50	3
[Pb]			1	-0.001	ug/l	-60.10	502.68	9.524E-05	Pulse	0.50	3
Ca			1	0.743	ug/l	154.84	137.33	6.855E-04	Pulse	0.50	3
Ti			1	0.000	ug/l	-72429.93	2.67	1.334E-05	Pulse	0.50	3
Na			1	-0.054	ug/l	-140.55	10,907.30	5.446E-02	Pulse	1.00	3
Mg			1	-0.041	ug/l	-69.34	184.67	9.218E-04	Pulse	1.00	3
K			1	-0.298	ug/l	-157.18	17,032.33	8.503E-02	Pulse	1.00	3
V			1	0.007	ug/l	96.16	958.69	4.786E-03	Pulse	0.50	3
Mn			1	-0.003	ug/l	-108.71	90.67	5.404E-04	Pulse	0.50	3
Fe			1	0.011	ug/l	331.13	7,234.70	4.307E-02	Pulse	0.50	3
Co			1	0.000	ug/l	153.95	36.67	2.187E-04	Pulse	0.50	3
Ni			1	0.002	ug/l	81.04	98.67	5.876E-04	Pulse	0.50	3
Cu			1	0.014	ug/l	72.44	8,591.93	5.114E-02	Pulse	0.50	3
Zn			1	0.032	ug/l	111.20	1,993.44	7.814E-03	Pulse	1.00	3
Cd			1	-0.001	ug/l	-0.54	4.00	1.568E-05	Pulse	0.50	3
Al			1	0.039	ug/l	91.29	145.67	7.272E-04	Pulse	1.00	3
Se			1	-0.016	ug/l	-89.76	13.56	7.985E-06	Pulse	3.00	3
Sb			1	-0.001	ug/l	-163.36	123.67	4.846E-04	Pulse	1.00	3
Se			1	-0.010	ug/l	-121.78	26.67	1.787E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,277,984.00	0.56	100.0	Pulse	0.50	3
1	Sc		200,296.84	0.28	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		168,042.08	1.12	100.0	Pulse	0.30	3
1	In		1,698,643.68	0.97	100.0	Pulse	0.30	3
1	Tb		6,822,442.33	0.39	100.0	Analog	0.50	3
1	Lu		4,229,223.17	0.42	100.0	Pulse	0.50	3
1	Ge		255,145.02	0.71	100.0	Pulse	0.30	3
1	Te		14,919.45	2.56	100.0	Pulse	0.50	3
1	Li		1,074.48	5.04	100.0	Pulse	0.30	3

Quantitation Report

File Name	002CALB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 8:57
Sample Name	CALSTD-1
Sample Type	CalBlk
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	---	554.01	3.307E-03	Pulse	0.50	3
As			1	0.000	ug/l	---	23.67	1.416E-04	Pulse	1.00	3
Mo			1	0.000	ug/l	---	4.67	1.825E-05	Pulse	0.50	3
Pb			1	0.000	ug/l	---	1,153.37	2.172E-04	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.33	1.685E-06	Pulse	2.00	3
Ag			1	0.000	ug/l	---	24.67	1.451E-05	Pulse	0.50	3
Ba			1	0.000	ug/l	---	28.00	1.647E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	---	71.33	1.343E-05	Pulse	0.50	3
Sn			1	0.000	ug/l	---	315.56	1.856E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	---	522.68	3.074E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	---	532.01	1.002E-04	Pulse	0.50	3
Ca			1	0.000	ug/l	---	117.33	5.827E-04	Pulse	0.50	3
Ti			1	0.000	ug/l	---	2.67	1.336E-05	Pulse	0.50	3
Na			1	0.000	ug/l	---	11,046.04	5.485E-02	Pulse	1.00	3
Mg			1	0.000	ug/l	---	213.33	1.059E-03	Pulse	1.00	3
K			1	0.000	ug/l	---	17,272.54	8.577E-02	Pulse	1.00	3
V			1	0.000	ug/l	---	898.69	4.463E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	---	108.00	6.443E-04	Pulse	0.50	3
Fe			1	0.000	ug/l	---	7,109.32	4.244E-02	Pulse	0.50	3
Co			1	0.000	ug/l	---	26.00	1.554E-04	Pulse	0.50	3
Ni			1	0.000	ug/l	---	84.67	5.060E-04	Pulse	0.50	3
Cu			1	0.000	ug/l	---	8,315.14	4.964E-02	Pulse	0.50	3
Zn			1	0.000	ug/l	---	1,920.10	7.519E-03	Pulse	1.00	3
Cd			1	0.000	ug/l	---	9.33	3.641E-05	Pulse	0.50	3
Al			1	0.000	ug/l	---	138.67	6.878E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	15.11	8.888E-06	Pulse	3.00	3
Sb			1	0.000	ug/l	---	131.67	5.153E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	27.00	1.823E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,311,698.17	0.96	100.0	Pulse	0.50	3
1	Sc		201,421.81	1.82	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		167,529.01	0.92	100.0	Pulse	0.30	3
1	In		1,700,192.57	0.17	100.0	Pulse	0.30	3
1	Tb		6,812,502.50	0.09	100.0	Analog	0.50	3
1	Lu		4,237,731.33	0.68	100.0	Pulse	0.50	3
1	Ge		255,382.93	0.89	100.0	Pulse	0.30	3
1	Te		14,797.36	0.80	100.0	Pulse	0.50	3
1	Li		1,094.48	4.89	100.0	Pulse	0.30	3

Quantitation Report

File Name	003CALS.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:02
Sample Name	CALSTD-2
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

Quantitation Report

File Name	004CALS.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:05
Sample Name	CALSTD-3
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.010	ug/l	1.71	12,878.95	7.850E-02	Pulse	0.50	3
As			1	0.980	ug/l	3.88	1,416.72	8.636E-03	Pulse	1.00	3
Mo			1	0.973	ug/l	0.88	8,322.55	3.330E-02	Pulse	0.50	3
Pb			1	0.971	ug/l	0.89	51,516.84	9.831E-03	Pulse	1.00	3
Be			1	1.033	ug/l	17.81	69.67	3.593E-04	Pulse	2.00	3
Ag			1	1.004	ug/l	0.43	32,124.39	1.927E-02	Pulse	0.50	3
Ba			1	0.943	ug/l	5.06	2,972.92	1.784E-03	Pulse	0.50	3
Tl			1	0.977	ug/l	1.37	74,219.88	1.416E-02	Pulse	0.50	3
Sn			1	1.111	ug/l	0.91	7,999.57	4.800E-03	Pulse	0.30	3
Sr			1	0.990	ug/l	3.16	6,657.86	3.995E-03	Pulse	0.50	3
[Pb]			1	0.974	ug/l	0.29	24,225.16	4.623E-03	Pulse	0.50	3
Ca			1	100.902	ug/l	0.82	2,821.55	1.455E-02	Pulse	0.50	3
Ti			1	0.967	ug/l	11.43	217.33	1.120E-03	Pulse	0.50	3
Na			1	113.019	ug/l	0.66	169,880.55	8.761E-01	Pulse	1.00	3
Mg			1	101.577	ug/l	0.49	66,269.94	3.417E-01	Pulse	1.00	3
K			1	99.471	ug/l	1.88	64,380.62	3.320E-01	Pulse	1.00	3
V			1	0.981	ug/l	3.57	9,693.77	5.000E-02	Pulse	0.50	3
Mn			1	1.051	ug/l	2.99	5,815.56	3.545E-02	Pulse	0.50	3
Fe			1	99.229	ug/l	1.14	981,178.06	5.980E+00	Pulse	0.50	3
Co			1	1.013	ug/l	2.06	22,198.73	1.353E-01	Pulse	0.50	3
Ni			1	1.057	ug/l	2.28	6,509.12	3.967E-02	Pulse	0.50	3
Cu			1	1.256	ug/l	0.70	29,523.90	1.799E-01	Pulse	0.50	3
Zn			1	1.200	ug/l	0.95	4,674.91	1.871E-02	Pulse	1.00	3
Cd			1	1.026	ug/l	1.11	4,189.82	1.677E-02	Pulse	0.50	3
Al			1	104.234	ug/l	0.32	20,601.26	1.062E-01	Pulse	1.00	3
Se			1	0.964	ug/l	4.26	105.11	6.308E-05	Pulse	3.00	3
Sb			1	0.971	ug/l	0.85	9,304.03	3.723E-02	Pulse	1.00	3
Se			1	0.718	ug/l	18.62	63.44	4.367E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,240,316.33	0.56	98.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		193,919.35	0.71	96.3	Pulse	0.30	3
1	Ge		164,082.56	1.09	97.9	Pulse	0.30	3
1	In		1,666,692.09	0.94	98.0	Pulse	0.30	3
1	Tb		6,764,322.67	0.59	99.3	Analog	0.50	3
1	Lu		4,207,824.83	0.66	99.3	Pulse	0.50	3
1	Ge		249,909.32	0.25	97.9	Pulse	0.30	3
1	Te		14,542.48	1.59	98.3	Pulse	0.50	3
1	Li		1,018.92	6.55	93.1	Pulse	0.30	3

Quantitation Report

File Name	005CALS.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:09
Sample Name	CALSTD-4
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	10.539	ug/l	1.08	128,468.04	7.882E-01	Pulse	0.50	3
As			1	10.235	ug/l	1.60	14,488.16	8.889E-02	Pulse	1.00	3
Mo			1	10.230	ug/l	0.98	86,010.48	3.501E-01	Pulse	0.50	3
Pb			1	10.205	ug/l	0.33	520,772.73	1.012E-01	Pulse	1.00	3
Be			1	10.600	ug/l	2.60	709.68	3.671E-03	Pulse	2.00	3
Ag			1	10.520	ug/l	1.03	329,776.88	2.018E-01	Pulse	0.50	3
Ba			1	10.233	ug/l	1.67	31,375.79	1.919E-02	Pulse	0.50	3
Tl			1	10.197	ug/l	0.10	760,137.71	1.478E-01	Pulse	0.50	3
Sn			1	10.526	ug/l	1.11	71,768.25	4.391E-02	Pulse	0.30	3
Sr			1	10.151	ug/l	1.19	62,320.98	3.813E-02	Pulse	0.50	3
[Pb]			1	10.334	ug/l	1.11	247,446.98	4.810E-02	Pulse	0.50	3
Ca			1	1021.354	ug/l	0.69	27,446.49	1.420E-01	Pulse	0.50	3
Ti			1	9.920	ug/l	5.24	2,196.80	1.136E-02	Pulse	0.50	3
Na			1	1053.895	ug/l	0.18	1,491,070.21	7.713E+00	Pulse	1.00	3
Mg			1	1044.776	ug/l	0.86	677,657.39	3.505E+00	Pulse	1.00	3
K			1	1020.352	ug/l	1.08	504,896.01	2.612E+00	Pulse	1.00	3
V			1	10.363	ug/l	0.77	93,827.97	4.853E-01	Pulse	0.50	3
Mn			1	10.645	ug/l	1.24	57,548.70	3.531E-01	Pulse	0.50	3
Fe			1	1040.250	ug/l	0.94	10,152,947.33	6.229E+01	Analog	0.50	3
Co			1	10.521	ug/l	1.38	228,866.19	1.404E+00	Pulse	0.50	3
Ni			1	10.692	ug/l	0.86	64,678.84	3.968E-01	Pulse	0.50	3
Cu			1	11.040	ug/l	1.01	194,822.31	1.195E+00	Pulse	0.50	3
Zn			1	11.067	ug/l	0.69	27,182.76	1.107E-01	Pulse	1.00	3
Cd			1	10.733	ug/l	1.15	43,013.15	1.751E-01	Pulse	0.50	3
Al			1	1060.459	ug/l	0.49	207,737.84	1.075E+00	Pulse	1.00	3
Se			1	10.747	ug/l	2.95	1,002.14	6.130E-04	Pulse	3.00	3
Sb			1	10.452	ug/l	1.33	97,196.51	3.957E-01	Pulse	1.00	3
Se			1	9.694	ug/l	0.72	517.45	3.616E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,144,713.17	0.49	96.9	Pulse	0.50	3
1	Sc		193,329.94	0.57	96.0	Pulse	0.30	3
1	Ge		163,011.41	1.54	97.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,634,633.75	1.05	96.1	Pulse	0.30	3
1	Tb		6,760,097.17	0.54	99.2	Analog	0.50	3
1	Lu		4,181,255.92	0.51	98.7	Pulse	0.50	3
1	Ge		245,661.33	0.36	96.2	Pulse	0.30	3
1	Te		14,311.63	1.59	96.7	Pulse	0.50	3
1	Li		1,048.37	6.04	95.8	Pulse	0.30	3

Quantitation Report

File Name	006CALS.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:13
Sample Name	CALSTD-5
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.335	ug/l	0.96	601,597.02	3.752E+00	Pulse	0.50	3
As			1	50.390	ug/l	1.57	70,084.26	4.371E-01	Pulse	1.00	3
Mo			1	49.746	ug/l	1.81	418,403.00	1.702E+00	Pulse	0.50	3
Pb			1	49.300	ug/l	0.88	2,472,965.83	4.882E-01	Pulse	1.00	3
Be			1	52.260	ug/l	1.01	3,447.96	1.809E-02	Pulse	2.00	3
Ag			1	50.250	ug/l	1.26	1,573,230.67	9.636E-01	Pulse	0.50	3
Ba			1	49.355	ug/l	1.44	151,037.05	9.251E-02	Pulse	0.50	3
Tl			1	49.392	ug/l	0.39	3,624,931.92	7.156E-01	Pulse	0.50	3
Sn			1	50.447	ug/l	1.10	342,405.67	2.097E-01	Pulse	0.30	3
Sr			1	48.916	ug/l	1.17	298,055.19	1.826E-01	Pulse	0.50	3
[Pb]			1	49.595	ug/l	1.29	1,167,371.58	2.305E-01	Pulse	0.50	3
Ca			1	4987.516	ug/l	1.09	131,693.77	6.910E-01	Pulse	0.50	3
Ti			1	50.381	ug/l	2.09	10,989.11	5.766E-02	Pulse	0.50	3
Na			1	5000.729	ug/l	0.24	6,935,643.33	3.639E+01	Analog	1.00	3
Mg			1	5024.209	ug/l	0.92	3,211,775.33	1.685E+01	Pulse	1.00	3
K			1	4962.255	ug/l	0.94	2,357,537.08	1.237E+01	Pulse	1.00	3
V			1	50.352	ug/l	0.54	446,154.44	2.341E+00	Pulse	0.50	3
Mn			1	50.803	ug/l	0.83	269,811.86	1.683E+00	Pulse	0.50	3
Fe			1	5023.015	ug/l	1.45	48,202,193.33	3.006E+02	Analog	0.50	3
Co			1	50.986	ug/l	1.39	1,091,045.46	6.804E+00	Pulse	0.50	3
Ni			1	51.393	ug/l	1.29	305,490.58	1.905E+00	Pulse	0.50	3
Cu			1	52.083	ug/l	1.15	874,563.89	5.454E+00	Pulse	0.50	3
Zn			1	51.480	ug/l	0.98	119,760.26	4.873E-01	Pulse	1.00	3
Cd			1	51.408	ug/l	1.20	206,087.45	8.385E-01	Pulse	0.50	3
Al			1	5061.521	ug/l	0.42	976,967.87	5.126E+00	Pulse	1.00	3
Se			1	50.627	ug/l	0.50	4,660.79	2.855E-03	Pulse	3.00	3
Sb			1	50.333	ug/l	1.32	467,795.67	1.903E+00	Pulse	1.00	3
Se			1	48.734	ug/l	0.20	2,406.82	1.744E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,065,629.17	0.40	95.4	Pulse	0.50	3
1	Sc		190,588.00	0.25	94.6	Pulse	0.30	3
1	Ge		160,356.80	0.77	95.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,632,708.62	0.84	96.0	Pulse	0.30	3
1	Tb		6,690,992.33	0.29	98.2	Analog	0.50	3
1	Lu		4,167,726.50	0.76	98.3	Pulse	0.50	3
1	Ge		245,795.55	1.19	96.2	Pulse	0.30	3
1	Te		13,797.90	0.87	93.2	Pulse	0.50	3
1	Li		994.48	6.95	90.9	Pulse	0.30	3

Quantitation Report

File Name	007CALS.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:17
Sample Name	CALSTD-6
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	101.491	ug/l	0.90	1,221,266.13	7.561E+00	Pulse	0.50	3
As			1	101.568	ug/l	0.02	142,273.83	8.809E-01	Pulse	1.00	3
Mo			1	101.476	ug/l	1.38	854,676.08	3.473E+00	Pulse	0.50	3
Pb			1	100.587	ug/l	0.78	4,961,850.17	9.958E-01	Pulse	1.00	3
Be			1	102.366	ug/l	1.78	6,789.13	3.543E-02	Pulse	2.00	3
Ag			1	99.823	ug/l	0.56	3,139,734.25	1.914E+00	Pulse	0.50	3
Ba			1	100.445	ug/l	0.86	308,795.72	1.883E-01	Pulse	0.50	3
Tl			1	100.652	ug/l	1.60	7,265,523.00	1.458E+00	Analog	0.50	3
Sn			1	100.883	ug/l	1.69	687,585.60	4.192E-01	Pulse	0.30	3
Sr			1	100.042	ug/l	0.87	611,869.08	3.731E-01	Pulse	0.50	3
[Pb]			1	101.632	ug/l	1.54	2,352,470.33	4.722E-01	Pulse	0.50	3
Ca			1	10190.788	ug/l	0.99	270,406.03	1.411E+00	Pulse	0.50	3
Ti			1	101.149	ug/l	1.78	22,176.56	1.157E-01	Pulse	0.50	3
Na			1	10182.382	ug/l	1.00	14,186,683.00	7.404E+01	Analog	1.00	3
Mg			1	10214.259	ug/l	0.88	6,564,375.67	3.426E+01	Analog	1.00	3
K			1	10101.711	ug/l	1.01	4,807,855.33	2.509E+01	Pulse	1.00	3
V			1	101.739	ug/l	1.27	905,474.81	4.725E+00	Pulse	0.50	3
Mn			1	101.709	ug/l	0.67	543,988.69	3.368E+00	Pulse	0.50	3
Fe			1	10189.152	ug/l	0.37	98,483,202.67	6.097E+02	Analog	0.50	3
Co			1	102.445	ug/l	0.68	2,208,170.42	1.367E+01	Pulse	0.50	3
Ni			1	102.035	ug/l	0.76	610,861.90	3.782E+00	Pulse	0.50	3
Cu			1	103.346	ug/l	0.81	1,740,088.71	1.077E+01	Pulse	0.50	3
Zn			1	103.172	ug/l	1.63	238,464.35	9.690E-01	Pulse	1.00	3
Cd			1	102.579	ug/l	1.12	411,771.59	1.673E+00	Pulse	0.50	3
Al			1	10262.089	ug/l	1.40	1,991,196.08	1.039E+01	Pulse	1.00	3
Se			1	102.185	ug/l	0.40	9,435.66	5.753E-03	Pulse	3.00	3
Sb			1	101.758	ug/l	0.45	946,942.73	3.848E+00	Pulse	1.00	3
Se			1	98.205	ug/l	1.03	4,812.61	3.497E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,982,867.67	0.99	93.8	Pulse	0.50	3
1	Sc		191,618.15	1.13	95.1	Pulse	0.30	3
1	Ge		161,515.19	0.24	96.4	Pulse	0.30	3
1	In		1,640,202.51	0.43	96.5	Pulse	0.30	3
1	Tb		6,771,485.33	0.34	99.4	Analog	0.50	3
1	Lu		4,167,779.17	0.69	98.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,122.62	1.04	96.4	Pulse	0.30	3
1	Te		13,763.88	0.41	93.0	Pulse	0.50	3
1	Li		997.81	15.57	91.2	Pulse	0.30	3

Quantitation Report

File Name	008CALS.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:21
Sample Name	CALSTD-7
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	199.144	ug/l	0.92	2,429,184.33	1.483E+01	Pulse	0.50	3
As			1	199.107	ug/l	1.23	282,756.40	1.727E+00	Pulse	1.00	3
Mo			1	199.314	ug/l	0.21	1,697,732.09	6.821E+00	Pulse	0.50	3
Pb			1	199.871	ug/l	1.96	9,763,872.33	1.979E+00	Analog	1.00	3
Be			1	198.222	ug/l	1.45	13,433.59	6.861E-02	Pulse	2.00	3
Ag			1	170.439	ug/l	0.53	5,352,425.50	3.268E+00	Pulse	0.50	3
Ba			1	199.928	ug/l	0.55	613,633.08	3.747E-01	Pulse	0.50	3
Tl			1	199.817	ug/l	2.25	14,285,885.33	2.895E+00	Analog	0.50	3
Sn			1	199.420	ug/l	0.29	1,356,806.48	8.285E-01	Pulse	0.30	3
Sr			1	200.243	ug/l	0.61	1,222,303.33	7.464E-01	Pulse	0.50	3
[Pb]			1	199.269	ug/l	1.95	4,567,976.67	9.257E-01	Pulse	0.50	3
Ca			1	19906.655	ug/l	0.68	539,619.83	2.756E+00	Pulse	0.50	3
Ti			1	199.334	ug/l	1.48	44,656.76	2.281E-01	Pulse	0.50	3
Na			1	19905.867	ug/l	0.93	28,327,792.67	1.447E+02	Analog	1.00	3
Mg			1	19884.572	ug/l	0.61	13,057,338.00	6.669E+01	Analog	1.00	3
K			1	19957.566	ug/l	0.84	9,689,217.67	4.949E+01	Analog	1.00	3
V			1	199.024	ug/l	1.48	1,808,886.00	9.240E+00	Pulse	0.50	3
Mn			1	198.912	ug/l	0.57	1,078,602.42	6.586E+00	Pulse	0.50	3
Fe			1	19897.662	ug/l	2.09	194,979,968.00	1.191E+03	Analog	0.50	3
Co			1	198.505	ug/l	0.68	4,338,306.00	2.649E+01	Pulse	0.50	3
Ni			1	198.599	ug/l	1.60	1,205,404.67	7.361E+00	Pulse	0.50	3
Cu			1	197.753	ug/l	1.13	3,368,677.17	2.057E+01	Pulse	0.50	3
Zn			1	197.990	ug/l	0.80	461,092.27	1.853E+00	Pulse	1.00	3
Cd			1	198.322	ug/l	1.06	805,089.56	3.235E+00	Pulse	0.50	3
Al			1	19850.531	ug/l	0.82	3,935,507.17	2.010E+01	Pulse	1.00	3
Se			1	198.714	ug/l	0.82	18,306.85	1.118E-02	Pulse	3.00	3
Sb			1	199.015	ug/l	0.89	1,872,735.46	7.524E+00	Pulse	1.00	3
Se			1	201.230	ug/l	1.72	9,337.40	7.146E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,936,049.17	1.89	92.9	Pulse	0.50	3
1	Sc		195,787.82	0.89	97.2	Pulse	0.30	3
1	Ge		163,768.83	0.69	97.8	Pulse	0.30	3
1	In		1,637,640.94	0.46	96.3	Pulse	0.30	3
1	Tb		6,851,230.83	1.31	100.6	Analog	0.50	3
1	Lu		4,186,118.92	0.60	98.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		248,892.32	0.46	97.5	Pulse	0.30	3
1	Te		13,068.69	0.99	88.3	Pulse	0.50	3
1	Li		917.81	2.55	83.9	Pulse	0.30	3

Quantitation Report

File Name	009HSAG.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:25
Sample Name	HSTD (Ag)
Sample Type	HSTD _Ag
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	98.170	ug/l	0.87	1,218,502.17	7.314E+00	Pulse	0.50	3
As			1	98.389	ug/l	1.11	142,164.10	8.533E-01	Pulse	1.00	3
Mo			1	99.125	ug/l	1.82	854,297.60	3.392E+00	Pulse	0.50	3
Pb			1	97.703	ug/l	0.55	4,921,882.67	9.673E-01	Pulse	1.00	3
Be			1	98.423	ug/l	0.82	6,757.29	3.407E-02	Pulse	2.00	3
Ag			1	98.090	ug/l	1.99	3,149,386.58	1.881E+00	Pulse	0.50	3
Ba			1	98.286	ug/l	1.52	308,454.25	1.842E-01	Pulse	0.50	3
Tl			1	97.786	ug/l	0.69	7,208,865.83	1.417E+00	Analog	0.50	3
Sn			1	100.397	ug/l	1.67	698,553.09	4.172E-01	Pulse	0.30	3
Sr			1	98.669	ug/l	1.93	616,039.89	3.679E-01	Pulse	0.50	3
[Pb]			1	98.376	ug/l	0.80	2,325,532.42	4.570E-01	Pulse	0.50	3
Ca			1	9737.951	ug/l	0.27	267,474.23	1.349E+00	Pulse	0.50	3
Ti			1	99.043	ug/l	0.17	22,478.91	1.133E-01	Pulse	0.50	3
Na			1	9778.092	ug/l	0.57	14,102,387.00	7.110E+01	Analog	1.00	3
Mg			1	9808.448	ug/l	1.07	6,524,898.83	3.290E+01	Analog	1.00	3
K			1	9696.334	ug/l	1.33	4,777,580.17	2.409E+01	Pulse	1.00	3
V			1	98.610	ug/l	0.59	908,427.00	4.580E+00	Pulse	0.50	3
Mn			1	98.421	ug/l	0.78	542,975.40	3.259E+00	Pulse	0.50	3
Fe			1	9877.853	ug/l	0.70	98,480,216.00	5.911E+02	Analog	0.50	3
Co			1	99.313	ug/l	1.13	2,208,058.00	1.325E+01	Pulse	0.50	3
Ni			1	99.694	ug/l	1.46	615,605.35	3.695E+00	Pulse	0.50	3
Cu			1	99.905	ug/l	1.67	1,735,247.33	1.042E+01	Pulse	0.50	3
Zn			1	100.941	ug/l	1.04	238,788.53	9.482E-01	Pulse	1.00	3
Cd			1	100.917	ug/l	1.06	414,525.52	1.646E+00	Pulse	0.50	3
Al			1	9791.017	ug/l	0.90	1,966,528.33	9.915E+00	Pulse	1.00	3
Se			1	99.359	ug/l	1.50	9,366.41	5.594E-03	Pulse	3.00	3
Sb			1	99.437	ug/l	0.75	946,836.79	3.760E+00	Pulse	1.00	3
Se			1	97.877	ug/l	1.35	4,793.83	3.485E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,088,443.67	0.55	95.8	Pulse	0.50	3
1	Sc		198,336.37	0.37	98.5	Pulse	0.30	3
1	Ge		166,609.49	1.33	99.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,674,613.58	1.45	98.5	Pulse	0.30	3
1	Tb		6,921,335.33	0.85	101.6	Analog	0.50	3
1	Lu		4,224,004.50	0.63	99.7	Pulse	0.50	3
1	Ge		251,834.95	0.29	98.6	Pulse	0.30	3
1	Te		13,757.20	0.99	93.0	Pulse	0.50	3
1	Li		987.81	4.58	90.3	Pulse	0.30	3

Quantitation Report

File Name	010HSTD.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:29
Sample Name	HSTD
Sample Type	HSTD
Comment	=std 6
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	202.064	ug/l	0.73	2,432,150.17	1.505E+01	Pulse	0.50	3
As			1	200.376	ug/l	0.46	280,795.82	1.738E+00	Pulse	1.00	3
Mo			1	201.173	ug/l	0.85	1,700,031.17	6.885E+00	Pulse	0.50	3
Pb			1	200.164	ug/l	0.57	9,748,229.33	1.981E+00	Analog	1.00	3
Be			1	197.906	ug/l	1.44	13,392.90	6.851E-02	Pulse	2.00	3
Ag			1	167.588	ug/l	1.10	5,269,376.17	3.214E+00	Pulse	0.50	3
Ba			1	197.433	ug/l	0.18	606,713.69	3.700E-01	Pulse	0.50	3
Tl			1	198.498	ug/l	0.37	14,148,533.33	2.876E+00	Analog	0.50	3
Sn			1	201.494	ug/l	0.18	1,372,587.62	8.371E-01	Pulse	0.30	3
Sr			1	199.614	ug/l	0.39	1,219,966.66	7.440E-01	Pulse	0.50	3
[Pb]			1	198.675	ug/l	0.68	4,540,441.83	9.229E-01	Pulse	0.50	3
Ca			1	19888.763	ug/l	0.67	538,366.50	2.754E+00	Pulse	0.50	3
Ti			1	198.900	ug/l	1.03	44,496.42	2.276E-01	Pulse	0.50	3
Na			1	19764.216	ug/l	0.80	28,086,618.67	1.437E+02	Analog	1.00	3
Mg			1	19899.563	ug/l	0.38	13,048,685.67	6.674E+01	Analog	1.00	3
K			1	20037.837	ug/l	0.39	9,714,480.00	4.969E+01	Analog	1.00	3
V			1	199.961	ug/l	1.17	1,814,833.12	9.283E+00	Pulse	0.50	3
Mn			1	202.922	ug/l	0.58	1,085,744.79	6.719E+00	Pulse	0.50	3
Fe			1	20344.217	ug/l	1.35	196,715,594.67	1.217E+03	Analog	0.50	3
Co			1	200.574	ug/l	0.97	4,325,271.33	2.677E+01	Pulse	0.50	3
Ni			1	201.519	ug/l	0.96	1,206,930.50	7.469E+00	Pulse	0.50	3
Cu			1	200.171	ug/l	1.15	3,364,384.75	2.082E+01	Pulse	0.50	3
Zn			1	198.399	ug/l	0.52	458,399.96	1.856E+00	Pulse	1.00	3
Cd			1	199.363	ug/l	0.59	802,941.50	3.252E+00	Pulse	0.50	3
Al			1	19627.408	ug/l	0.88	3,885,705.50	1.988E+01	Pulse	1.00	3
Se			1	198.390	ug/l	0.56	18,299.18	1.116E-02	Pulse	3.00	3
Sb			1	200.090	ug/l	0.30	1,868,036.83	7.565E+00	Pulse	1.00	3
Se			1	196.172	ug/l	1.40	9,226.56	6.966E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,919,808.83	0.44	92.6	Pulse	0.50	3
1	Sc		195,507.23	0.77	97.1	Pulse	0.30	3
1	Ge		161,598.09	0.96	96.5	Pulse	0.30	3
1	In		1,639,630.04	0.29	96.4	Pulse	0.30	3
1	Tb		6,877,030.17	0.61	100.9	Analog	0.50	3
1	Lu		4,162,561.08	1.13	98.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,927.78	0.32	96.7	Pulse	0.30	3
1	Te		13,246.83	2.17	89.5	Pulse	0.50	3
1	Li		1,032.25	3.23	94.3	Pulse	0.30	3

Quantitation Report

File Name	011_ICV.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:33
Sample Name	ICV
Sample Type	ICV
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	96.804	ug/l	1.48	1,190,826.54	7.212E+00	Pulse	0.50	3
As			1	97.302	ug/l	1.32	139,334.16	8.439E-01	Pulse	1.00	3
Mo			1	97.943	ug/l	0.61	842,835.71	3.352E+00	Pulse	0.50	3
Pb			1	96.077	ug/l	1.68	4,797,095.33	9.512E-01	Pulse	1.00	3
Be			1	96.410	ug/l	0.54	6,547.39	3.337E-02	Pulse	2.00	3
Ag			1	42.007	ug/l	0.41	1,331,160.17	8.056E-01	Pulse	0.50	3
Ba			1	100.159	ug/l	1.48	310,193.29	1.877E-01	Pulse	0.50	3
Tl			1	97.571	ug/l	1.39	7,129,478.50	1.414E+00	Analog	0.50	3
Sn			1	109.041	ug/l	1.33	748,764.62	4.531E-01	Pulse	0.30	3
Sr			1	98.969	ug/l	0.37	609,845.23	3.691E-01	Pulse	0.50	3
[Pb]			1	97.512	ug/l	0.97	2,284,795.08	4.530E-01	Pulse	0.50	3
Ca			1	9673.971	ug/l	0.46	262,841.36	1.340E+00	Pulse	0.50	3
Ti			1	99.310	ug/l	0.37	22,295.35	1.136E-01	Pulse	0.50	3
Na			1	9890.357	ug/l	0.93	14,109,548.67	7.192E+01	Analog	1.00	3
Mg			1	10142.537	ug/l	1.11	6,673,998.17	3.402E+01	Analog	1.00	3
K			1	9571.407	ug/l	0.27	4,665,307.33	2.378E+01	Pulse	1.00	3
V			1	98.393	ug/l	0.48	896,608.19	4.570E+00	Pulse	0.50	3
Mn			1	96.842	ug/l	2.46	529,438.58	3.207E+00	Pulse	0.50	3
Fe			1	9772.645	ug/l	1.44	96,563,573.33	5.848E+02	Analog	0.50	3
Co			1	99.298	ug/l	1.47	2,188,024.50	1.325E+01	Pulse	0.50	3
Ni			1	97.504	ug/l	1.47	596,731.50	3.614E+00	Pulse	0.50	3
Cu			1	98.851	ug/l	0.98	1,701,914.00	1.031E+01	Pulse	0.50	3
Zn			1	99.303	ug/l	0.87	234,570.09	9.329E-01	Pulse	1.00	3
Cd			1	97.711	ug/l	0.15	400,747.74	1.594E+00	Pulse	0.50	3
Al			1	9534.078	ug/l	0.93	1,894,188.67	9.655E+00	Pulse	1.00	3
Se			1	100.156	ug/l	0.46	9,318.05	5.639E-03	Pulse	3.00	3
Sb			1	97.429	ug/l	1.12	926,229.75	3.684E+00	Pulse	1.00	3
Se			1	96.945	ug/l	0.45	4,777.38	3.452E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,043,804.67	1.00	95.0	Pulse	0.50	3
1	Sc		196,188.14	0.28	97.4	Pulse	0.30	3
1	Ge		165,136.11	1.64	98.6	Pulse	0.30	3
1	In		1,652,478.30	0.73	97.2	Pulse	0.30	3
1	Tb		6,928,897.83	1.02	101.7	Analog	0.50	3
1	Lu		4,209,877.58	0.78	99.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		251,443.71	1.13	98.5	Pulse	0.30	3
1	Te		13,839.92	0.73	93.5	Pulse	0.50	3
1	Li		1,084.48	9.77	99.1	Pulse	0.30	3

Quantitation Report

File Name	012_ICB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:37
Sample Name	ICB
Sample Type	ICB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.005	ug/l	80.76	617.34	3.690E-03	Pulse	0.50	3
As			1	0.007	ug/l	79.49	33.67	2.015E-04	Pulse	1.00	3
Mo			1	0.047	ug/l	20.32	416.67	1.640E-03	Pulse	0.50	3
Pb			1	0.023	ug/l	18.97	2,318.83	4.405E-04	Pulse	1.00	3
Be			1	0.007	ug/l	153.33	0.83	4.222E-06	Pulse	2.00	3
Ag			1	0.109	ug/l	10.74	3,593.69	2.099E-03	Pulse	0.50	3
Ba			1	0.001	ug/l	265.48	31.33	1.831E-05	Pulse	0.50	3
Tl			1	0.049	ug/l	7.78	3,784.44	7.190E-04	Pulse	0.50	3
Sn			1	0.052	ug/l	15.50	687.80	4.018E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	1447.12	529.34	3.092E-04	Pulse	0.50	3
[Pb]			1	0.021	ug/l	32.49	1,045.37	1.985E-04	Pulse	0.50	3
Ca			1	0.002	ug/l	29449.98	115.33	5.829E-04	Pulse	0.50	3
Ti			1	0.003	ug/l	451.76	3.33	1.677E-05	Pulse	0.50	3
Na			1	1.504	ug/l	29.62	13,012.58	6.577E-02	Pulse	1.00	3
Mg			1	0.420	ug/l	39.63	487.67	2.468E-03	Pulse	1.00	3
K			1	0.822	ug/l	34.78	17,374.96	8.781E-02	Pulse	1.00	3
V			1	-0.055	ug/l	-6.16	376.67	1.903E-03	Pulse	0.50	3
Mn			1	-0.003	ug/l	-90.75	88.67	5.303E-04	Pulse	0.50	3
Fe			1	0.558	ug/l	27.64	12,685.56	7.580E-02	Pulse	0.50	3
Co			1	0.006	ug/l	36.72	162.00	9.672E-04	Pulse	0.50	3
Ni			1	0.004	ug/l	95.90	108.67	6.496E-04	Pulse	0.50	3
Cu			1	-0.055	ug/l	-2.78	7,345.42	4.391E-02	Pulse	0.50	3
Zn			1	-0.109	ug/l	-26.20	1,653.41	6.503E-03	Pulse	1.00	3
Cd			1	0.007	ug/l	59.74	36.67	1.443E-04	Pulse	0.50	3
Al			1	0.278	ug/l	58.96	191.67	9.696E-04	Pulse	1.00	3
Se			1	0.002	ug/l	328.08	15.45	9.024E-06	Pulse	3.00	3
Sb			1	0.010	ug/l	25.35	224.67	8.838E-04	Pulse	1.00	3
Se			1	-0.013	ug/l	-633.32	26.56	1.778E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,262,585.50	0.69	99.1	Pulse	0.50	3
1	Sc		197,886.80	0.98	98.2	Pulse	0.30	3

Quantitation Report

1	Ge		167,280.50	0.65	99.9	Pulse	0.30	3
1	In		1,711,815.77	0.44	100.7	Pulse	0.30	3
1	Tb		6,971,478.67	0.07	102.3	Analog	0.50	3
1	Lu		4,197,966.50	0.57	99.1	Pulse	0.50	3
1	Ge		254,265.60	0.72	99.6	Pulse	0.30	3
1	Te		14,948.80	2.14	101.0	Pulse	0.50	3
1	Li		1,040.03	6.09	95.0	Pulse	0.30	3

Quantitation Report

File Name	013LCCV.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:41
Sample Name	CRIA
Sample Type	CRIA
Comment	=std 2
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.016	ug/l	2.81	13,281.89	7.900E-02	Pulse	0.50	3
As			1	1.003	ug/l	5.01	1,485.39	8.837E-03	Pulse	1.00	3
Mo			1	1.045	ug/l	1.40	9,116.91	3.577E-02	Pulse	0.50	3
Pb			1	0.978	ug/l	0.76	52,568.32	9.897E-03	Pulse	1.00	3
Be			1	1.034	ug/l	8.31	71.83	3.594E-04	Pulse	2.00	3
Ag			1	1.083	ug/l	2.26	35,690.93	2.079E-02	Pulse	0.50	3
Ba			1	0.950	ug/l	5.16	3,084.94	1.797E-03	Pulse	0.50	3
Tl			1	1.011	ug/l	0.43	77,855.94	1.466E-02	Pulse	0.50	3
Sn			1	1.096	ug/l	3.81	8,136.31	4.739E-03	Pulse	0.30	3
Sr			1	1.001	ug/l	2.84	6,930.63	4.037E-03	Pulse	0.50	3
[Pb]			1	1.002	ug/l	0.93	25,243.94	4.753E-03	Pulse	0.50	3
Ca			1	99.269	ug/l	4.85	2,862.89	1.432E-02	Pulse	0.50	3
Ti			1	1.067	ug/l	17.01	246.67	1.234E-03	Pulse	0.50	3
Na			1	107.508	ug/l	0.18	167,085.39	8.360E-01	Pulse	1.00	3
Mg			1	100.540	ug/l	0.43	67,605.74	3.383E-01	Pulse	1.00	3
K			1	99.421	ug/l	0.94	66,330.65	3.319E-01	Pulse	1.00	3
V			1	0.944	ug/l	1.24	9,649.08	4.828E-02	Pulse	0.50	3
Mn			1	1.056	ug/l	1.59	5,986.28	3.560E-02	Pulse	0.50	3
Fe			1	101.868	ug/l	1.01	1,032,052.73	6.138E+00	Pulse	0.50	3
Co			1	1.040	ug/l	2.02	23,365.41	1.390E-01	Pulse	0.50	3
Ni			1	1.054	ug/l	2.40	6,651.83	3.956E-02	Pulse	0.50	3
Cu			1	1.194	ug/l	0.13	29,182.69	1.736E-01	Pulse	0.50	3
Zn			1	1.110	ug/l	3.00	4,553.88	1.786E-02	Pulse	1.00	3
Cd			1	1.076	ug/l	1.36	4,483.89	1.759E-02	Pulse	0.50	3
Al			1	99.638	ug/l	0.65	20,302.30	1.016E-01	Pulse	1.00	3
Se			1	1.084	ug/l	9.91	119.89	6.981E-05	Pulse	3.00	3
Sb			1	1.010	ug/l	1.93	9,864.65	3.870E-02	Pulse	1.00	3
Se			1	0.921	ug/l	11.39	76.22	5.083E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,311,772.17	0.93	100.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		199,858.16	0.08	99.2	Pulse	0.30	3
1	Ge		168,149.69	0.95	100.4	Pulse	0.30	3
1	In		1,717,016.01	0.44	101.0	Pulse	0.30	3
1	Tb		7,044,051.67	0.17	103.4	Analog	0.50	3
1	Lu		4,264,168.17	0.61	100.6	Pulse	0.50	3
1	Ge		254,898.51	0.51	99.8	Pulse	0.30	3
1	Te		14,988.20	1.58	101.3	Pulse	0.50	3
1	Li		1,012.25	5.06	92.5	Pulse	0.30	3

Quantitation Report

File Name 014ICSA.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 9:44
Sample Name ICSA
Sample Type ICSA
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.239	ug/l	2.45	15,572.92	9.561E-02	Pulse	0.50	3
As			1	0.071	ug/l	12.33	123.67	7.589E-04	Pulse	1.00	3
Mo			1	2014.888	ug/l	0.97	16,657,615.00	6.896E+01	Analog	0.50	3
Pb			1	0.094	ug/l	4.40	5,218.47	1.143E-03	Pulse	1.00	3
Be			1	0.027	ug/l	43.02	2.17	1.094E-05	Pulse	2.00	3
Ag			1	0.095	ug/l	15.21	2,916.91	1.829E-03	Pulse	0.50	3
Ba			1	0.076	ug/l	5.94	254.67	1.594E-04	Pulse	0.50	3
Tl			1	0.018	ug/l	6.64	1,234.72	2.705E-04	Pulse	0.50	3
Sn			1	0.118	ug/l	6.07	1,077.82	6.752E-04	Pulse	0.30	3
Sr			1	0.933	ug/l	1.65	6,041.65	3.782E-03	Pulse	0.50	3
[Pb]			1	0.097	ug/l	6.23	2,514.86	5.510E-04	Pulse	0.50	3
Ca			1	91992.475	ug/l	2.38	2,530,296.33	1.273E+01	Pulse	0.50	3
Ti			1	1954.867	ug/l	2.17	444,433.21	2.237E+00	Pulse	0.50	3
Na			1	96539.632	ug/l	2.46	139,384,858.67	7.015E+02	Analog	1.00	3
Mg			1	96271.926	ug/l	3.28	64,149,545.33	3.229E+02	Analog	1.00	3
K			1	98387.667	ug/l	2.51	48,409,006.67	2.436E+02	Analog	1.00	3
V			1	-0.033	ug/l	-18.85	582.01	2.931E-03	Pulse	0.50	3
Mn			1	0.278	ug/l	4.30	1,605.41	9.856E-03	Pulse	0.50	3
Fe			1	96893.080	ug/l	1.25	944,392,960.00	5.798E+03	Analog	0.50	3
Co			1	0.014	ug/l	8.58	322.67	1.981E-03	Pulse	0.50	3
Ni			1	0.141	ug/l	4.74	933.36	5.731E-03	Pulse	0.50	3
Cu			1	0.163	ug/l	5.52	10,849.75	6.661E-02	Pulse	0.50	3
Zn			1	0.976	ug/l	4.10	4,012.42	1.661E-02	Pulse	1.00	3
Cd			1	0.394	ug/l	2.56	1,560.74	6.461E-03	Pulse	0.50	3
Al			1	91714.479	ug/l	2.17	18,453,291.33	9.287E+01	Analog	1.00	3
Se			1	0.083	ug/l	27.30	21.67	1.355E-05	Pulse	3.00	3
Sb			1	0.048	ug/l	6.47	563.01	2.331E-03	Pulse	1.00	3
Se			1	-0.043	ug/l	-269.55	20.78	1.671E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,566,288.50	1.29	86.0	Pulse	0.50	3
1	Sc		198,742.22	1.68	98.7	Pulse	0.30	3
1	Ge		162,888.15	0.87	97.2	Pulse	0.30	3
1	In		1,597,058.34	1.65	93.9	Pulse	0.30	3
1	Tb		6,719,619.67	0.58	98.6	Analog	0.50	3
1	Lu		4,078,903.50	0.76	96.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		241,565.43	0.26	94.6	Pulse	0.30	3
1	Te		12,422.24	1.31	83.9	Pulse	0.50	3
1	Li		864.47	5.35	79.0	Pulse	0.30	3

Quantitation Report

File Name	015ICSB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:48
Sample Name	ICSAB
Sample Type	ICSAB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	20.481	ug/l	0.48	247,753.97	1.529E+00	Pulse	0.50	3
As			1	19.300	ug/l	0.64	27,147.20	1.675E-01	Pulse	1.00	3
Mo			1	2019.557	ug/l	0.39	16,829,551.00	6.912E+01	Analog	0.50	3
Pb			1	0.092	ug/l	2.39	5,160.45	1.132E-03	Pulse	1.00	3
Be			1	0.025	ug/l	156.02	2.00	1.018E-05	Pulse	2.00	3
Ag			1	17.843	ug/l	0.36	542,598.96	3.422E-01	Pulse	0.50	3
Ba			1	0.065	ug/l	5.12	219.33	1.383E-04	Pulse	0.50	3
Tl			1	0.012	ug/l	11.66	886.03	1.944E-04	Pulse	0.50	3
Sn			1	0.160	ug/l	10.00	1,346.73	8.491E-04	Pulse	0.30	3
Sr			1	0.903	ug/l	0.96	5,824.25	3.673E-03	Pulse	0.50	3
[Pb]			1	0.091	ug/l	5.51	2,380.18	5.224E-04	Pulse	0.50	3
Ca			1	90962.896	ug/l	0.91	2,484,134.67	1.259E+01	Pulse	0.50	3
Ti			1	1941.785	ug/l	0.12	438,290.91	2.222E+00	Pulse	0.50	3
Na			1	96863.269	ug/l	0.87	138,856,837.33	7.039E+02	Analog	1.00	3
Mg			1	95962.161	ug/l	0.39	63,492,882.67	3.219E+02	Analog	1.00	3
K			1	98612.745	ug/l	0.91	48,174,829.33	2.442E+02	Analog	1.00	3
V			1	-0.030	ug/l	-17.38	605.34	3.069E-03	Pulse	0.50	3
Mn			1	19.406	ug/l	1.10	104,237.61	6.431E-01	Pulse	0.50	3
Fe			1	97320.311	ug/l	1.51	943,877,632.00	5.824E+03	Analog	0.50	3
Co			1	19.046	ug/l	0.33	411,996.75	2.542E+00	Pulse	0.50	3
Ni			1	18.625	ug/l	0.75	111,962.71	6.908E-01	Pulse	0.50	3
Cu			1	18.313	ug/l	0.41	316,055.23	1.950E+00	Pulse	0.50	3
Zn			1	19.085	ug/l	0.41	45,137.91	1.854E-01	Pulse	1.00	3
Cd			1	18.464	ug/l	0.27	73,342.33	3.012E-01	Pulse	0.50	3
Al			1	89942.521	ug/l	0.46	17,967,239.33	9.108E+01	Analog	1.00	3
Se			1	0.040	ug/l	105.93	17.67	1.115E-05	Pulse	3.00	3
Sb			1	0.042	ug/l	4.68	508.01	2.086E-03	Pulse	1.00	3
Se			1	0.040	ug/l	199.25	23.89	1.964E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,556,906.33	0.71	85.8	Pulse	0.50	3
1	Sc		197,269.20	0.48	97.9	Pulse	0.30	3
1	Ge		162,082.52	0.73	96.7	Pulse	0.30	3
1	In		1,585,736.26	0.56	93.3	Pulse	0.30	3
1	Tb		6,657,382.17	0.71	97.7	Analog	0.50	3
1	Lu		4,024,529.17	0.91	95.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		243,498.01	0.26	95.3	Pulse	0.30	3
1	Te		12,155.40	0.63	82.1	Pulse	0.50	3
1	Li		898.91	2.78	82.1	Pulse	0.30	3

Quantitation Report

File Name	016CCVA.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 9:52
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	49.966	ug/l	1.58	614,196.77	3.724E+00	Pulse	0.50	3
As			1	49.993	ug/l	0.72	71,516.20	4.336E-01	Pulse	1.00	3
Mo			1	50.801	ug/l	0.58	436,033.20	1.739E+00	Pulse	0.50	3
Pb			1	49.245	ug/l	1.38	2,507,967.58	4.876E-01	Pulse	1.00	3
Be			1	49.852	ug/l	1.50	3,321.11	1.726E-02	Pulse	2.00	3
Ag			1	51.580	ug/l	1.32	1,620,292.42	9.891E-01	Pulse	0.50	3
Ba			1	50.271	ug/l	1.52	154,357.31	9.423E-02	Pulse	0.50	3
Tl			1	49.536	ug/l	1.15	3,691,213.42	7.177E-01	Pulse	0.50	3
Sn			1	51.397	ug/l	1.08	350,021.72	2.137E-01	Pulse	0.30	3
Sr			1	49.853	ug/l	1.41	304,771.53	1.861E-01	Pulse	0.50	3
[Pb]			1	49.810	ug/l	1.10	1,190,416.63	2.315E-01	Pulse	0.50	3
Ca			1	4886.750	ug/l	0.97	130,284.50	6.770E-01	Pulse	0.50	3
Ti			1	49.847	ug/l	0.86	10,977.78	5.705E-02	Pulse	0.50	3
Na			1	5019.185	ug/l	0.66	7,028,640.83	3.653E+01	Analog	1.00	3
Mg			1	4843.935	ug/l	0.25	3,126,623.08	1.625E+01	Pulse	1.00	3
K			1	4907.571	ug/l	0.44	2,354,364.75	1.223E+01	Pulse	1.00	3
V			1	50.516	ug/l	1.06	451,947.81	2.349E+00	Pulse	0.50	3
Mn			1	49.364	ug/l	0.92	269,643.94	1.635E+00	Pulse	0.50	3
Fe			1	5068.254	ug/l	0.78	50,024,564.00	3.033E+02	Analog	0.50	3
Co			1	50.761	ug/l	0.99	1,117,227.54	6.774E+00	Pulse	0.50	3
Ni			1	50.732	ug/l	0.60	310,166.99	1.881E+00	Pulse	0.50	3
Cu			1	51.945	ug/l	0.90	897,131.10	5.440E+00	Pulse	0.50	3
Zn			1	51.284	ug/l	1.11	121,743.72	4.854E-01	Pulse	1.00	3
Cd			1	51.136	ug/l	1.17	209,180.54	8.341E-01	Pulse	0.50	3
Al			1	4765.451	ug/l	0.60	928,746.98	4.826E+00	Pulse	1.00	3
Se			1	50.099	ug/l	1.79	4,627.45	2.825E-03	Pulse	3.00	3
Sb			1	49.895	ug/l	0.95	473,198.32	1.887E+00	Pulse	1.00	3
Se			1	47.642	ug/l	4.10	2,363.81	1.706E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,143,568.67	1.11	96.8	Pulse	0.50	3
1	Sc		192,438.92	0.83	95.5	Pulse	0.30	3
1	Ge		164,923.04	0.43	98.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,638,211.01	0.99	96.4	Pulse	0.30	3
1	Tb		6,963,161.17	1.09	102.2	Analog	0.50	3
1	Lu		4,144,452.08	0.74	97.8	Pulse	0.50	3
1	Ge		250,793.04	0.32	98.2	Pulse	0.30	3
1	Te		13,871.30	3.35	93.7	Pulse	0.50	3
1	Li		1,004.47	9.67	91.8	Pulse	0.30	3

Quantitation Report

File Name 017_CCV.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 9:56
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	99.090	ug/l	1.33	1,219,380.50	7.383E+00	Pulse	0.50	3
As			1	98.722	ug/l	0.88	141,421.50	8.562E-01	Pulse	1.00	3
Mo			1	100.474	ug/l	0.39	864,085.63	3.439E+00	Pulse	0.50	3
Pb			1	97.855	ug/l	1.07	4,914,684.67	9.688E-01	Pulse	1.00	3
Be			1	100.045	ug/l	0.35	6,748.79	3.463E-02	Pulse	2.00	3
Ag			1	100.569	ug/l	0.63	3,175,767.58	1.929E+00	Pulse	0.50	3
Ba			1	98.013	ug/l	0.13	302,513.81	1.837E-01	Pulse	0.50	3
Tl			1	101.034	ug/l	0.81	7,425,924.50	1.464E+00	Analog	0.50	3
Sn			1	101.507	ug/l	0.62	694,611.13	4.218E-01	Pulse	0.30	3
Sr			1	99.165	ug/l	0.19	608,935.69	3.698E-01	Pulse	0.50	3
[Pb]			1	98.471	ug/l	2.52	2,320,515.33	4.575E-01	Pulse	0.50	3
Ca			1	9753.981	ug/l	0.38	263,236.18	1.351E+00	Pulse	0.50	3
Ti			1	99.285	ug/l	0.69	22,140.52	1.136E-01	Pulse	0.50	3
Na			1	9959.625	ug/l	0.32	14,113,231.67	7.242E+01	Analog	1.00	3
Mg			1	9855.849	ug/l	0.37	6,441,979.67	3.306E+01	Analog	1.00	3
K			1	9720.138	ug/l	0.57	4,705,750.67	2.415E+01	Pulse	1.00	3
V			1	100.479	ug/l	0.26	909,478.58	4.667E+00	Pulse	0.50	3
Mn			1	98.510	ug/l	0.44	538,844.62	3.262E+00	Pulse	0.50	3
Fe			1	10089.124	ug/l	1.54	99,722,058.67	6.038E+02	Analog	0.50	3
Co			1	100.750	ug/l	1.89	2,220,678.17	1.345E+01	Pulse	0.50	3
Ni			1	101.379	ug/l	1.74	620,645.06	3.758E+00	Pulse	0.50	3
Cu			1	101.132	ug/l	1.21	1,741,552.38	1.054E+01	Pulse	0.50	3
Zn			1	99.962	ug/l	0.31	235,984.32	9.391E-01	Pulse	1.00	3
Cd			1	100.539	ug/l	0.43	412,093.10	1.640E+00	Pulse	0.50	3
Al			1	9490.905	ug/l	0.50	1,873,013.75	9.611E+00	Pulse	1.00	3
Se			1	99.759	ug/l	1.25	9,248.68	5.616E-03	Pulse	3.00	3
Sb			1	98.593	ug/l	0.42	936,807.56	3.728E+00	Pulse	1.00	3
Se			1	97.757	ug/l	0.58	4,674.91	3.481E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,073,395.17	1.22	95.5	Pulse	0.50	3
1	Sc		194,873.45	0.29	96.7	Pulse	0.30	3
1	Ge		165,187.18	1.22	98.6	Pulse	0.30	3
1	In		1,646,725.04	0.33	96.9	Pulse	0.30	3
1	Tb		6,969,129.17	0.31	102.3	Analog	0.50	3
1	Lu		4,134,440.58	1.06	97.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		251,292.84	0.37	98.4	Pulse	0.30	3
1	Te		13,431.63	1.24	90.8	Pulse	0.50	3
1	Li		1,050.04	9.37	95.9	Pulse	0.30	3

Quantitation Report

File Name	018_CCB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:00
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.002	ug/l	-216.58	530.68	3.179E-03	Pulse	0.50	3
As			1	0.000	ug/l	33052.98	23.67	1.416E-04	Pulse	1.00	3
Mo			1	0.080	ug/l	14.14	696.01	2.747E-03	Pulse	0.50	3
Pb			1	0.016	ug/l	15.86	1,994.45	3.796E-04	Pulse	1.00	3
Be			1	0.000	ug/l	5160.11	0.33	1.744E-06	Pulse	2.00	3
Ag			1	0.040	ug/l	13.65	1,308.05	7.871E-04	Pulse	0.50	3
Ba			1	-0.002	ug/l	-264.81	22.00	1.321E-05	Pulse	0.50	3
Tl			1	0.078	ug/l	14.70	6,039.77	1.149E-03	Pulse	0.50	3
Sn			1	0.028	ug/l	39.21	503.34	3.026E-04	Pulse	0.30	3
Sr			1	0.007	ug/l	61.02	557.34	3.352E-04	Pulse	0.50	3
[Pb]			1	0.018	ug/l	22.31	967.37	1.841E-04	Pulse	0.50	3
Ca			1	0.095	ug/l	489.57	114.67	5.958E-04	Pulse	0.50	3
Ti			1	0.010	ug/l	55.17	4.67	2.424E-05	Pulse	0.50	3
Na			1	5.316	ug/l	9.74	17,993.40	9.347E-02	Pulse	1.00	3
Mg			1	1.032	ug/l	17.53	870.02	4.521E-03	Pulse	1.00	3
K			1	2.807	ug/l	15.04	17,851.06	9.272E-02	Pulse	1.00	3
V			1	-0.053	ug/l	-6.46	386.67	2.008E-03	Pulse	0.50	3
Mn			1	0.005	ug/l	97.41	135.33	8.099E-04	Pulse	0.50	3
Fe			1	1.101	ug/l	20.17	18,089.89	1.083E-01	Pulse	0.50	3
Co			1	0.003	ug/l	53.55	96.67	5.784E-04	Pulse	0.50	3
Ni			1	0.004	ug/l	67.48	108.67	6.510E-04	Pulse	0.50	3
Cu			1	-0.070	ug/l	-12.97	7,071.99	4.235E-02	Pulse	0.50	3
Zn			1	-0.117	ug/l	-12.29	1,630.74	6.433E-03	Pulse	1.00	3
Cd			1	0.003	ug/l	98.78	21.33	8.400E-05	Pulse	0.50	3
Al			1	0.764	ug/l	5.72	281.33	1.461E-03	Pulse	1.00	3
Se			1	-0.013	ug/l	-113.12	13.56	8.153E-06	Pulse	3.00	3
Sb			1	0.010	ug/l	39.63	228.67	9.014E-04	Pulse	1.00	3
Se			1	-0.038	ug/l	-112.05	24.44	1.687E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,252,770.33	0.72	98.9	Pulse	0.50	3
1	Sc		192,531.09	0.73	95.6	Pulse	0.30	3

Quantitation Report

1	Ge		166,974.07	0.68	99.7	Pulse	0.30	3
1	In		1,662,675.49	0.58	97.8	Pulse	0.30	3
1	Tb		7,033,382.33	0.75	103.2	Analog	0.50	3
1	Lu		4,175,520.42	0.55	98.5	Pulse	0.50	3
1	Ge		253,500.55	0.63	99.3	Pulse	0.30	3
1	Te		14,501.77	2.46	98.0	Pulse	0.50	3
1	Li		988.92	8.29	90.4	Pulse	0.30	3

Quantitation Report

File Name	019SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:03
Sample Name	ICV
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	516.962	ug/l	1.56	5,921,720.67	3.850E+01	Analog	0.50	3
As			1	500.692	ug/l	1.22	667,809.06	4.342E+00	Pulse	1.00	3
Mo			1	514.200	ug/l	0.41	4,192,838.42	1.760E+01	Pulse	0.50	3
Pb			1	515.770	ug/l	1.85	24,850,950.00	5.105E+00	Analog	1.00	3
Be			1	505.808	ug/l	1.70	32,115.57	1.751E-01	Pulse	2.00	3
Ag			1	56.627	ug/l	0.72	1,738,992.13	1.086E+00	Pulse	0.50	3
Ba			1	471.741	ug/l	0.78	1,415,837.79	8.841E-01	Pulse	0.50	3
Tl			1	510.051	ug/l	1.13	35,971,800.00	7.390E+00	Analog	0.50	3
Sn			1	513.960	ug/l	1.19	3,418,957.16	2.135E+00	Pulse	0.30	3
Sr			1	481.261	ug/l	0.96	2,871,991.33	1.793E+00	Pulse	0.50	3
[Pb]			1	514.075	ug/l	1.34	11,623,601.33	2.388E+00	Analog	0.50	3
Ca			1	11864.726	ug/l	1.12	301,386.32	1.643E+00	Pulse	0.50	3
Ti			1	507.720	ug/l	1.24	106,563.78	5.809E-01	Pulse	0.50	3
Na			1	10023.350	ug/l	0.60	13,370,284.33	7.289E+01	Analog	1.00	3
Mg			1	10584.295	ug/l	1.18	6,511,970.67	3.550E+01	Analog	1.00	3
K			1	9981.101	ug/l	1.02	4,548,146.00	2.479E+01	Pulse	1.00	3
V			1	510.488	ug/l	0.54	4,346,226.17	2.369E+01	Pulse	0.50	3
Mn			1	497.685	ug/l	0.56	2,534,690.67	1.648E+01	Pulse	0.50	3
Fe			1	10640.826	ug/l	1.23	97,944,384.00	6.368E+02	Analog	0.50	3
Co			1	537.563	ug/l	2.00	11,033,342.00	7.174E+01	Analog	0.50	3
Ni			1	511.933	ug/l	0.97	2,918,421.25	1.897E+01	Pulse	0.50	3
Cu			1	532.905	ug/l	1.89	8,512,447.67	5.535E+01	Analog	0.50	3
Zn			1	495.639	ug/l	1.24	1,102,245.54	4.626E+00	Pulse	1.00	3
Cd			1	502.726	ug/l	1.34	1,953,586.75	8.200E+00	Pulse	0.50	3
Al			1	9479.045	ug/l	0.73	1,760,901.00	9.599E+00	Pulse	1.00	3
Se			1	471.559	ug/l	0.50	42,464.85	2.652E-02	Pulse	3.00	3
Sb			1	491.116	ug/l	0.50	4,423,927.83	1.857E+01	Pulse	1.00	3
Se			1	488.404	ug/l	1.62	21,443.81	1.732E+00	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,868,286.67	1.13	91.7	Pulse	0.50	3
1	Sc		183,448.97	1.15	91.1	Pulse	0.30	3
1	Ge		153,827.58	1.47	91.8	Pulse	0.30	3
1	In		1,601,490.60	1.02	94.2	Pulse	0.30	3
1	Tb		6,823,673.17	1.13	100.2	Analog	0.50	3
1	Lu		3,989,283.08	0.73	94.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		238,269.10	1.10	93.3	Pulse	0.30	3
1	Te		12,385.56	1.86	83.7	Pulse	0.50	3
1	Li		1,347.28	4.58	123.1	Pulse	0.30	3

Quantitation Report

File Name	020_MB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:07
Sample Name	MP34080-MB1
Sample Type	MB
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.329	ug/l	10.66	2,384.83	1.555E-02	Pulse	0.50	3
As			1	0.118	ug/l	23.86	100.33	6.533E-04	Pulse	1.00	3
Mo			1	0.421	ug/l	2.42	1,681.42	7.225E-03	Pulse	0.50	3
Pb			1	0.321	ug/l	15.92	9,087.46	1.803E-03	Pulse	1.00	3
Be			1	0.065	ug/l	94.47	2.33	1.293E-05	Pulse	2.00	3
Ag			1	0.291	ug/l	11.46	4,375.87	2.804E-03	Pulse	0.50	3
Ba			1	0.111	ug/l	15.46	188.67	1.208E-04	Pulse	0.50	3
Tl			1	0.452	ug/l	21.31	16,563.65	3.286E-03	Pulse	0.50	3
Sn			1	1.281	ug/l	15.88	4,443.36	2.846E-03	Pulse	0.30	3
Sr			1	0.138	ug/l	5.90	880.02	5.637E-04	Pulse	0.50	3
[Pb]			1	0.329	ug/l	16.72	4,355.92	8.643E-04	Pulse	0.50	3
Ca			1	20.376	ug/l	16.04	361.34	1.993E-03	Pulse	0.50	3
Ti			1	0.285	ug/l	17.75	32.00	1.764E-04	Pulse	0.50	3
Na			1	30.897	ug/l	4.39	30,310.50	1.671E-01	Pulse	1.00	3
Mg			1	11.164	ug/l	3.06	3,587.99	1.978E-02	Pulse	1.00	3
K			1	11.112	ug/l	17.25	18,050.91	9.953E-02	Pulse	1.00	3
V			1	0.154	ug/l	15.13	1,457.39	8.032E-03	Pulse	0.50	3
Mn			1	0.288	ug/l	5.72	828.69	5.406E-03	Pulse	0.50	3
Fe			1	10.009	ug/l	2.12	52,406.66	3.419E-01	Pulse	0.50	3
Co			1	0.154	ug/l	9.60	1,605.41	1.046E-02	Pulse	0.50	3
Ni			1	0.102	ug/l	40.73	368.67	2.397E-03	Pulse	0.50	3
Cu			1	1.331	ug/l	1.87	18,189.24	1.187E-01	Pulse	0.50	3
Zn			1	2.248	ug/l	1.96	4,187.47	1.799E-02	Pulse	1.00	3
Cd			1	0.056	ug/l	31.94	115.33	4.953E-04	Pulse	0.50	3
Al			1	10.365	ug/l	4.61	1,076.36	5.936E-03	Pulse	1.00	3
Se			1	0.069	ug/l	110.18	16.89	1.081E-05	Pulse	3.00	3
Sb			1	0.155	ug/l	15.61	802.69	3.448E-03	Pulse	1.00	3
Se			1	0.250	ug/l	98.55	25.55	2.265E-03	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,037,496.83	1.08	94.8	Pulse	0.50	3
1	Sc		181,379.61	1.16	90.0	Pulse	0.30	3
1	Ge		153,254.05	1.69	91.5	Pulse	0.30	3
1	In		1,561,195.91	0.38	91.8	Pulse	0.30	3
1	Tb		6,839,830.83	1.24	100.4	Analog	0.50	3
1	Lu		3,988,452.83	1.72	94.1	Pulse	0.50	3
1	Ge		232,733.49	0.30	91.1	Pulse	0.30	3
1	Te		11,307.53	1.84	76.4	Pulse	0.50	3
1	Li		907.81	6.94	82.9	Pulse	0.30	3

Quantitation Report

File Name 021_BSP.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 10:11
Sample Name MP34080-B1
Sample Type BSP
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	219.367	ug/l	1.18	1,266,196.96	8.172E+00	Pulse	0.50	3
As			1	216.387	ug/l	1.03	145,396.45	9.383E-01	Pulse	1.00	3
Mo			1	221.405	ug/l	2.58	883,159.91	3.789E+00	Pulse	0.50	3
Pb			1	211.994	ug/l	1.72	5,086,416.67	1.049E+00	Pulse	1.00	3
Be			1	219.335	ug/l	2.42	6,923.69	3.796E-02	Pulse	2.00	3
Ag			1	108.488	ug/l	2.88	1,602,285.59	1.040E+00	Pulse	0.50	3
Ba			1	208.861	ug/l	2.81	301,492.20	1.957E-01	Pulse	0.50	3
Tl			1	212.961	ug/l	1.71	7,477,533.83	1.543E+00	Analog	0.50	3
Sn			1	235.804	ug/l	2.70	754,643.95	4.899E-01	Pulse	0.30	3
Sr			1	210.949	ug/l	3.17	605,769.13	3.933E-01	Pulse	0.50	3
[Pb]			1	204.493	ug/l	1.38	2,302,424.92	4.750E-01	Pulse	0.50	3
Ca			1	20074.569	ug/l	2.17	253,529.11	1.390E+00	Pulse	0.50	3
Ti			1	212.504	ug/l	2.75	22,175.24	1.216E-01	Pulse	0.50	3
Na			1	20995.096	ug/l	2.19	13,922,055.00	7.633E+01	Analog	1.00	3
Mg			1	20930.573	ug/l	2.88	6,401,657.50	3.510E+01	Analog	1.00	3
K			1	20088.650	ug/l	2.35	4,550,620.67	2.495E+01	Pulse	1.00	3
V			1	219.753	ug/l	2.19	930,766.54	5.103E+00	Pulse	0.50	3
Mn			1	210.337	ug/l	2.06	539,620.56	3.483E+00	Pulse	0.50	3
Fe			1	21288.851	ug/l	1.86	98,700,565.33	6.370E+02	Analog	0.50	3
Co			1	220.356	ug/l	1.93	2,278,300.00	1.470E+01	Pulse	0.50	3
Ni			1	218.577	ug/l	1.45	627,691.12	4.051E+00	Pulse	0.50	3
Cu			1	220.097	ug/l	1.71	1,777,124.37	1.147E+01	Pulse	0.50	3
Zn			1	202.233	ug/l	2.61	221,416.55	9.498E-01	Pulse	1.00	3
Cd			1	213.423	ug/l	2.96	405,725.46	1.741E+00	Pulse	0.50	3
Al			1	18208.398	ug/l	2.26	1,681,580.79	9.220E+00	Pulse	1.00	3
Se			1	185.708	ug/l	1.34	8,055.14	5.228E-03	Pulse	3.00	3
Sb			1	208.499	ug/l	2.14	918,903.79	3.942E+00	Pulse	1.00	3
Se			1	207.570	ug/l	3.03	4,037.43	3.694E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,847,319.33	0.50	91.3	Pulse	0.50	3
1	Sc		182,435.48	1.74	90.6	Pulse	0.30	3
1	Ge		154,961.07	0.69	92.5	Pulse	0.30	3
1	In		1,540,969.10	2.24	90.6	Pulse	0.30	3
1	Tb		6,833,598.83	0.41	100.3	Analog	0.50	3
1	Lu		3,989,290.50	0.63	94.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		233,175.33	1.68	91.3	Pulse	0.30	3
1	Te		10,933.30	1.90	73.9	Pulse	0.50	3
1	Li		1,006.70	9.29	92.0	Pulse	0.30	3

Quantitation Report

File Name 022SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 10:15
Sample Name FA55941-5
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.536	ug/l	4.64	3,663.03	2.327E-02	Pulse	0.50	3
As			1	0.939	ug/l	5.23	663.01	4.211E-03	Pulse	1.00	3
Mo			1	3.051	ug/l	1.48	12,555.56	5.222E-02	Pulse	0.50	3
Pb			1	0.222	ug/l	3.77	6,557.94	1.314E-03	Pulse	1.00	3
Be			1	0.037	ug/l	43.10	1.50	8.159E-06	Pulse	2.00	3
Ag			1	0.158	ug/l	13.12	2,374.83	1.525E-03	Pulse	0.50	3
Ba			1	7.604	ug/l	2.71	11,129.46	7.142E-03	Pulse	0.50	3
Tl			1	0.215	ug/l	13.47	7,848.52	1.572E-03	Pulse	0.50	3
Sn			1	0.791	ug/l	2.11	2,850.24	1.829E-03	Pulse	0.30	3
Sr			1	42.069	ug/l	1.22	122,622.28	7.868E-02	Pulse	0.50	3
[Pb]			1	0.210	ug/l	6.60	2,926.93	5.867E-04	Pulse	0.50	3
Ca			1	20309.666	ug/l	1.64	259,073.67	1.406E+00	Pulse	0.50	3
Ti			1	0.217	ug/l	34.15	25.33	1.378E-04	Pulse	0.50	3
Na			1	3768.821	ug/l	0.89	2,532,595.50	1.375E+01	Pulse	1.00	3
Mg			1	5484.808	ug/l	0.61	1,694,703.58	9.199E+00	Pulse	1.00	3
K			1	1593.280	ug/l	1.38	379,098.51	2.058E+00	Pulse	1.00	3
V			1	0.355	ug/l	13.75	2,339.48	1.269E-02	Pulse	0.50	3
Mn			1	23.967	ug/l	2.63	62,555.46	3.974E-01	Pulse	0.50	3
Fe			1	34.770	ug/l	1.70	170,441.34	1.083E+00	Pulse	0.50	3
Co			1	0.042	ug/l	14.99	461.34	2.930E-03	Pulse	0.50	3
Ni			1	0.135	ug/l	1.22	474.01	3.011E-03	Pulse	0.50	3
Cu			1	0.605	ug/l	2.58	12,755.56	8.103E-02	Pulse	0.50	3
Zn			1	6.876	ug/l	1.45	9,510.35	3.956E-02	Pulse	1.00	3
Cd			1	0.025	ug/l	18.39	58.67	2.441E-04	Pulse	0.50	3
Al			1	10.700	ug/l	6.41	1,124.37	6.105E-03	Pulse	1.00	3
Se			1	0.044	ug/l	158.42	15.78	1.011E-05	Pulse	3.00	3
Sb			1	0.186	ug/l	2.08	969.03	4.031E-03	Pulse	1.00	3
Se			1	0.072	ug/l	38.97	22.11	1.950E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,990,158.67	1.42	93.9	Pulse	0.50	3
1	Sc		184,225.25	0.91	91.5	Pulse	0.30	3
1	Ge		157,424.60	0.36	94.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,558,587.44	0.83	91.7	Pulse	0.30	3
1	Tb		6,818,518.67	0.69	100.1	Analog	0.50	3
1	Lu		3,991,990.75	0.22	94.2	Pulse	0.50	3
1	Ge		240,419.98	0.32	94.1	Pulse	0.30	3
1	Te		11,345.56	2.96	76.7	Pulse	0.50	3
1	Li		991.15	1.36	90.6	Pulse	0.30	3

Quantitation Report

File Name	023SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:19
Sample Name	MP34080-D1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.402	ug/l	4.30	2,937.57	1.826E-02	Pulse	0.50	3
As			1	0.938	ug/l	3.56	677.01	4.209E-03	Pulse	1.00	3
Mo			1	2.991	ug/l	3.32	12,788.39	5.120E-02	Pulse	0.50	3
Pb			1	0.185	ug/l	1.04	5,764.98	1.134E-03	Pulse	1.00	3
Be			1	-0.005	ug/l	-187.07	0.17	8.751E-07	Pulse	2.00	3
Ag			1	0.119	ug/l	9.65	1,821.43	1.151E-03	Pulse	0.50	3
Ba			1	7.664	ug/l	2.91	11,400.96	7.198E-03	Pulse	0.50	3
Tl			1	0.059	ug/l	6.10	2,222.15	4.372E-04	Pulse	0.50	3
Sn			1	0.661	ug/l	6.02	2,469.07	1.559E-03	Pulse	0.30	3
Sr			1	42.481	ug/l	2.24	125,826.33	7.945E-02	Pulse	0.50	3
[Pb]			1	0.179	ug/l	7.13	2,616.88	5.150E-04	Pulse	0.50	3
Ca			1	20402.971	ug/l	1.74	267,135.99	1.413E+00	Pulse	0.50	3
Ti			1	0.161	ug/l	49.01	20.00	1.054E-04	Pulse	0.50	3
Na			1	3786.307	ug/l	1.47	2,611,517.58	1.381E+01	Pulse	1.00	3
Mg			1	5529.480	ug/l	1.18	1,753,687.92	9.274E+00	Pulse	1.00	3
K			1	1591.199	ug/l	1.57	388,633.44	2.055E+00	Pulse	1.00	3
V			1	0.366	ug/l	0.86	2,450.83	1.296E-02	Pulse	0.50	3
Mn			1	24.076	ug/l	0.42	64,222.82	3.992E-01	Pulse	0.50	3
Fe			1	11.227	ug/l	4.84	60,870.39	3.783E-01	Pulse	0.50	3
Co			1	0.035	ug/l	9.35	404.68	2.516E-03	Pulse	0.50	3
Ni			1	0.101	ug/l	8.68	383.34	2.383E-03	Pulse	0.50	3
Cu			1	0.191	ug/l	8.22	9,578.40	5.954E-02	Pulse	0.50	3
Zn			1	6.874	ug/l	3.48	9,878.20	3.955E-02	Pulse	1.00	3
Cd			1	0.017	ug/l	10.63	44.00	1.762E-04	Pulse	0.50	3
Al			1	9.683	ug/l	6.64	1,056.70	5.590E-03	Pulse	1.00	3
Se			1	0.051	ug/l	25.52	16.33	1.031E-05	Pulse	3.00	3
Sb			1	0.177	ug/l	4.48	966.70	3.869E-03	Pulse	1.00	3
Se			1	0.184	ug/l	86.52	24.78	2.149E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,082,993.17	1.07	95.7	Pulse	0.50	3
1	Sc		189,113.57	1.27	93.9	Pulse	0.30	3
1	Ge		160,877.95	0.49	96.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,584,119.49	1.57	93.2	Pulse	0.30	3
1	Tb		7,022,335.50	0.85	103.1	Analog	0.50	3
1	Lu		4,062,867.58	0.73	95.9	Pulse	0.50	3
1	Ge		249,808.01	0.74	97.8	Pulse	0.30	3
1	Te		11,536.34	1.92	78.0	Pulse	0.50	3
1	Li		1,125.60	0.45	102.8	Pulse	0.30	3

Quantitation Report

File Name	024SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:22
Sample Name	MP34080-SD1
Sample Type	Sample
Comment	
Prep Dilution	10.000
Auto Dilution	N/A
Total Dilution	10.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.496	ug/l	12.04	1,206.71	6.999E-03	Pulse	0.50	3
As			1	1.153	ug/l	11.81	196.67	1.142E-03	Pulse	1.00	3
Mo			1	3.385	ug/l	4.12	3,066.93	1.160E-02	Pulse	0.50	3
Pb			1	0.207	ug/l	2.52	2,226.48	4.225E-04	Pulse	1.00	3
Be			1	0.094	ug/l	76.57	1.00	4.929E-06	Pulse	2.00	3
Ag			1	0.184	ug/l	12.69	620.68	3.670E-04	Pulse	0.50	3
Ba			1	8.278	ug/l	1.69	2,652.87	1.568E-03	Pulse	0.50	3
Tl			1	0.119	ug/l	3.00	982.03	1.864E-04	Pulse	0.50	3
Sn			1	0.562	ug/l	25.66	707.80	4.191E-04	Pulse	0.30	3
Sr			1	46.678	ug/l	2.10	29,934.37	1.770E-02	Pulse	0.50	3
[Pb]			1	0.220	ug/l	4.89	1,066.04	2.023E-04	Pulse	0.50	3
Ca			1	22585.825	ug/l	0.98	63,583.00	3.132E-01	Pulse	0.50	3
Ti			1	0.456	ug/l	84.16	13.33	6.549E-05	Pulse	0.50	3
Na			1	4153.531	ug/l	1.24	623,746.65	3.073E+00	Pulse	1.00	3
Mg			1	6094.995	ug/l	1.13	415,171.50	2.045E+00	Pulse	1.00	3
K			1	1778.347	ug/l	0.51	106,775.33	5.260E-01	Pulse	1.00	3
V			1	0.296	ug/l	19.20	1,185.37	5.838E-03	Pulse	0.50	3
Mn			1	26.173	ug/l	0.71	15,045.86	8.730E-02	Pulse	0.50	3
Fe			1	21.591	ug/l	0.82	29,582.51	1.716E-01	Pulse	0.50	3
Co			1	0.054	ug/l	23.54	151.33	8.792E-04	Pulse	0.50	3
Ni			1	0.172	ug/l	5.00	197.33	1.145E-03	Pulse	0.50	3
Cu			1	-0.620	ug/l	-22.28	7,445.46	4.321E-02	Pulse	0.50	3
Zn			1	6.477	ug/l	5.61	3,583.67	1.356E-02	Pulse	1.00	3
Cd			1	0.027	ug/l	41.84	21.33	8.058E-05	Pulse	0.50	3
Al			1	12.915	ug/l	7.50	405.00	1.996E-03	Pulse	1.00	3
Se			1	0.044	ug/l	394.56	15.45	9.133E-06	Pulse	3.00	3
Sb			1	0.213	ug/l	10.57	349.33	1.322E-03	Pulse	1.00	3
Se			1	-0.563	ug/l	-140.32	22.56	1.623E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,269,249.00	0.84	99.2	Pulse	0.50	3
1	Sc		202,999.34	0.92	100.8	Pulse	0.30	3
1	Ge		172,353.88	1.27	102.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,691,625.04	1.62	99.5	Pulse	0.30	3
1	Tb		7,178,775.00	0.80	105.4	Analog	0.50	3
1	Lu		4,159,317.58	0.78	98.1	Pulse	0.50	3
1	Ge		264,417.22	1.04	103.5	Pulse	0.30	3
1	Te		13,904.66	1.72	94.0	Pulse	0.50	3
1	Li		1,082.26	4.61	98.9	Pulse	0.30	3

Quantitation Report

File Name	025SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:26
Sample Name	MP34080-S1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	208.162	ug/l	1.67	1,230,611.75	7.754E+00	Pulse	0.50	3
As			1	206.537	ug/l	1.82	142,133.83	8.956E-01	Pulse	1.00	3
Mo			1	212.638	ug/l	0.81	869,326.27	3.639E+00	Pulse	0.50	3
Pb			1	205.043	ug/l	1.25	4,881,011.83	1.015E+00	Pulse	1.00	3
Be			1	208.914	ug/l	0.34	6,719.78	3.616E-02	Pulse	2.00	3
Ag			1	104.446	ug/l	0.87	1,545,470.29	1.001E+00	Pulse	0.50	3
Ba			1	210.087	ug/l	0.71	303,828.95	1.969E-01	Pulse	0.50	3
Tl			1	204.916	ug/l	1.70	7,138,416.17	1.484E+00	Analog	0.50	3
Sn			1	226.413	ug/l	0.55	725,950.25	4.704E-01	Pulse	0.30	3
Sr			1	243.101	ug/l	0.18	699,383.48	4.532E-01	Pulse	0.50	3
[Pb]			1	197.302	ug/l	0.95	2,204,028.33	4.583E-01	Pulse	0.50	3
Ca			1	39168.460	ug/l	1.05	503,907.62	2.712E+00	Pulse	0.50	3
Ti			1	202.947	ug/l	1.88	21,579.24	1.161E-01	Pulse	0.50	3
Na			1	23836.854	ug/l	0.95	16,103,731.67	8.666E+01	Analog	1.00	3
Mg			1	25377.661	ug/l	1.40	7,908,849.00	4.256E+01	Analog	1.00	3
K			1	20684.380	ug/l	0.26	4,773,878.50	2.569E+01	Pulse	1.00	3
V			1	207.899	ug/l	1.07	897,212.19	4.828E+00	Pulse	0.50	3
Mn			1	222.514	ug/l	1.48	584,689.92	3.684E+00	Pulse	0.50	3
Fe			1	20230.942	ug/l	1.42	96,070,226.67	6.053E+02	Analog	0.50	3
Co			1	207.581	ug/l	1.58	2,198,235.33	1.385E+01	Pulse	0.50	3
Ni			1	206.810	ug/l	1.63	608,278.83	3.833E+00	Pulse	0.50	3
Cu			1	208.430	ug/l	1.69	1,724,086.66	1.086E+01	Pulse	0.50	3
Zn			1	193.514	ug/l	1.04	217,224.53	9.092E-01	Pulse	1.00	3
Cd			1	199.659	ug/l	1.56	389,022.13	1.628E+00	Pulse	0.50	3
Al			1	17088.678	ug/l	1.53	1,607,975.00	8.653E+00	Pulse	1.00	3
Se			1	176.647	ug/l	0.68	7,675.32	4.974E-03	Pulse	3.00	3
Sb			1	195.137	ug/l	1.03	881,411.06	3.689E+00	Pulse	1.00	3
Se			1	199.364	ug/l	1.13	3,928.07	3.549E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,809,183.17	0.59	90.5	Pulse	0.50	3
1	Sc		185,842.80	0.65	92.3	Pulse	0.30	3
1	Ge		158,721.04	1.13	94.7	Pulse	0.30	3
1	In		1,543,247.13	0.63	90.8	Pulse	0.30	3
1	Tb		6,798,950.00	1.43	99.8	Analog	0.50	3
1	Lu		3,964,888.67	0.33	93.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		238,926.47	0.81	93.6	Pulse	0.30	3
1	Te		11,068.70	0.16	74.8	Pulse	0.50	3
1	Li		977.81	2.08	89.3	Pulse	0.30	3

Quantitation Report

File Name	026SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:30
Sample Name	MP34080-S2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	221.393	ug/l	1.83	1,307,135.25	8.247E+00	Pulse	0.50	3
As			1	216.818	ug/l	1.39	149,023.34	9.402E-01	Pulse	1.00	3
Mo			1	221.883	ug/l	1.36	912,390.23	3.797E+00	Pulse	0.50	3
Pb			1	214.114	ug/l	1.88	5,122,452.50	1.060E+00	Pulse	1.00	3
Be			1	220.837	ug/l	3.52	7,134.42	3.822E-02	Pulse	2.00	3
Ag			1	111.683	ug/l	2.71	1,642,800.50	1.071E+00	Pulse	0.50	3
Ba			1	222.673	ug/l	2.42	320,151.50	2.087E-01	Pulse	0.50	3
Tl			1	216.734	ug/l	2.12	7,588,029.67	1.570E+00	Analog	0.50	3
Sn			1	237.456	ug/l	1.96	756,913.46	4.933E-01	Pulse	0.30	3
Sr			1	253.175	ug/l	2.36	724,063.04	4.720E-01	Pulse	0.50	3
[Pb]			1	205.484	ug/l	1.84	2,306,964.58	4.773E-01	Pulse	0.50	3
Ca			1	40547.028	ug/l	2.43	524,005.61	2.807E+00	Pulse	0.50	3
Ti			1	209.559	ug/l	4.01	22,378.78	1.199E-01	Pulse	0.50	3
Na			1	25124.190	ug/l	2.45	17,049,772.67	9.133E+01	Analog	1.00	3
Mg			1	26791.472	ug/l	2.97	8,386,873.83	4.493E+01	Analog	1.00	3
K			1	22175.500	ug/l	4.37	5,138,613.67	2.753E+01	Mix	1.00	3
V			1	217.945	ug/l	2.53	944,817.75	5.061E+00	Pulse	0.50	3
Mn			1	234.770	ug/l	1.38	616,118.92	3.887E+00	Pulse	0.50	3
Fe			1	21306.174	ug/l	1.48	101,047,978.67	6.375E+02	Analog	0.50	3
Co			1	220.506	ug/l	2.04	2,332,119.33	1.471E+01	Pulse	0.50	3
Ni			1	217.754	ug/l	1.59	639,661.52	4.036E+00	Pulse	0.50	3
Cu			1	220.580	ug/l	1.64	1,821,868.92	1.149E+01	Pulse	0.50	3
Zn			1	202.849	ug/l	0.87	228,949.15	9.527E-01	Pulse	1.00	3
Cd			1	208.318	ug/l	1.21	408,273.91	1.699E+00	Pulse	0.50	3
Al			1	17914.071	ug/l	2.66	1,693,258.79	9.071E+00	Pulse	1.00	3
Se			1	188.110	ug/l	2.36	8,124.61	5.296E-03	Pulse	3.00	3
Sb			1	203.109	ug/l	1.58	922,750.87	3.840E+00	Pulse	1.00	3
Se			1	210.625	ug/l	2.62	4,053.43	3.748E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,833,775.83	1.32	91.0	Pulse	0.50	3
1	Sc		186,737.17	1.99	92.7	Pulse	0.30	3
1	Ge		158,513.20	0.71	94.6	Pulse	0.30	3
1	In		1,534,556.33	1.69	90.3	Pulse	0.30	3
1	Tb		6,866,016.00	0.35	100.8	Analog	0.50	3
1	Lu		4,006,484.08	1.44	94.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		240,326.43	1.05	94.1	Pulse	0.30	3
1	Te		10,817.23	1.75	73.1	Pulse	0.50	3
1	Li		986.70	7.32	90.2	Pulse	0.30	3

Quantitation Report

File Name	027SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:34
Sample Name	MP34080-PS1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	21.018	ug/l	2.27	129,905.70	7.859E-01	Pulse	0.50	3
As			1	21.286	ug/l	0.78	15,280.10	9.243E-02	Pulse	1.00	3
Mo			1	23.576	ug/l	0.40	100,176.77	4.034E-01	Pulse	0.50	3
Pb			1	20.333	ug/l	2.15	508,360.38	1.008E-01	Pulse	1.00	3
Be			1	21.778	ug/l	2.36	720.34	3.771E-03	Pulse	2.00	3
Ag			1	4.794	ug/l	1.22	73,128.63	4.598E-02	Pulse	0.50	3
Ba			1	27.970	ug/l	2.37	41,706.52	2.623E-02	Pulse	0.50	3
Tl			1	19.887	ug/l	1.32	726,312.63	1.441E-01	Pulse	0.50	3
Sn			1	23.968	ug/l	2.29	79,456.04	4.996E-02	Pulse	0.30	3
Sr			1	62.518	ug/l	1.63	185,711.00	1.168E-01	Pulse	0.50	3
[Pb]			1	19.717	ug/l	1.82	231,334.34	4.589E-02	Pulse	0.50	3
Ca			1	22478.392	ug/l	1.84	297,257.92	1.556E+00	Pulse	0.50	3
Ti			1	20.762	ug/l	5.59	2,270.81	1.189E-02	Pulse	0.50	3
Na			1	5802.702	ug/l	1.53	4,036,900.75	2.114E+01	Pulse	1.00	3
Mg			1	7484.205	ug/l	1.43	2,397,382.58	1.255E+01	Pulse	1.00	3
K			1	3541.045	ug/l	0.87	853,518.89	4.469E+00	Pulse	1.00	3
V			1	21.469	ug/l	2.28	95,984.27	5.026E-01	Pulse	0.50	3
Mn			1	43.676	ug/l	0.90	119,623.23	7.237E-01	Pulse	0.50	3
Fe			1	2041.311	ug/l	1.17	10,102,640.00	6.112E+01	Analog	0.50	3
Co			1	20.721	ug/l	1.18	228,589.35	1.383E+00	Pulse	0.50	3
Ni			1	20.717	ug/l	0.49	63,545.04	3.844E-01	Pulse	0.50	3
Cu			1	20.973	ug/l	1.29	188,082.08	1.138E+00	Pulse	0.50	3
Zn			1	25.601	ug/l	1.22	31,487.28	1.268E-01	Pulse	1.00	3
Cd			1	19.980	ug/l	1.06	40,468.81	1.630E-01	Pulse	0.50	3
Al			1	1750.316	ug/l	1.66	169,388.61	8.869E-01	Pulse	1.00	3
Se			1	17.245	ug/l	3.15	784.91	4.936E-04	Pulse	3.00	3
Sb			1	18.710	ug/l	1.32	87,946.10	3.542E-01	Pulse	1.00	3
Se			1	19.960	ug/l	6.12	426.90	3.717E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,041,874.50	1.35	94.9	Pulse	0.50	3
1	Sc		191,008.61	0.87	94.8	Pulse	0.30	3
1	Ge		165,313.18	1.12	98.7	Pulse	0.30	3
1	In		1,590,493.86	0.93	93.5	Pulse	0.30	3
1	Tb		7,017,278.83	0.85	103.0	Analog	0.50	3
1	Lu		4,010,100.92	1.26	94.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		248,306.65	0.15	97.2	Pulse	0.30	3
1	Te		11,500.32	3.45	77.7	Pulse	0.50	3
1	Li		1,125.59	10.08	102.8	Pulse	0.30	3

Quantitation Report

File Name	028SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:37
Sample Name	FA55941-1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.604	ug/l	4.65	4,115.79	2.581E-02	Pulse	0.50	3
As			1	3.750	ug/l	5.65	2,616.52	1.640E-02	Pulse	1.00	3
Mo			1	5.644	ug/l	2.36	23,331.18	9.659E-02	Pulse	0.50	3
Pb			1	7.508	ug/l	1.87	171,185.71	3.737E-02	Pulse	1.00	3
Be			1	0.000	ug/l	20838.85	0.33	1.692E-06	Pulse	2.00	3
Ag			1	0.047	ug/l	6.49	714.68	4.633E-04	Pulse	0.50	3
Ba			1	534.116	ug/l	2.05	771,424.10	5.005E-01	Pulse	0.50	3
Tl			1	0.058	ug/l	4.23	2,002.13	4.370E-04	Pulse	0.50	3
Sn			1	0.664	ug/l	11.14	2,415.77	1.565E-03	Pulse	0.30	3
Sr			1	13797.049	ug/l	2.02	39,615,764.00	2.570E+01	Analog	0.50	3
[Pb]			1	7.886	ug/l	1.37	84,354.63	1.842E-02	Pulse	0.50	3
Ca			1	319201.420	ug/l	1.06	4,325,467.50	2.209E+01	Pulse	0.50	3
Ti			1	0.350	ug/l	39.13	42.00	2.138E-04	Pulse	0.50	3
Na			1	320418.102	ug/l	1.62	227,901,413.33	1.164E+03	Analog	1.00	3
Mg			1	36.869	ug/l	1.61	12,311.45	6.289E-02	Pulse	1.00	3
K			1	27095.101	ug/l	1.87	6,581,963.17	3.362E+01	Analog	1.00	3
V			1	4.028	ug/l	0.64	19,172.11	9.791E-02	Pulse	0.50	3
Mn			1	0.505	ug/l	8.01	1,434.73	9.000E-03	Pulse	0.50	3
Fe			1	13.605	ug/l	3.10	71,689.68	4.495E-01	Pulse	0.50	3
Co			1	0.156	ug/l	6.19	1,686.08	1.056E-02	Pulse	0.50	3
Ni			1	2.239	ug/l	1.78	6,699.18	4.199E-02	Pulse	0.50	3
Cu			1	1.258	ug/l	5.39	18,328.05	1.149E-01	Pulse	0.50	3
Zn			1	6.495	ug/l	2.31	9,127.83	3.779E-02	Pulse	1.00	3
Cd			1	0.012	ug/l	51.67	33.33	1.373E-04	Pulse	0.50	3
Al			1	83.155	ug/l	0.26	8,378.44	4.279E-02	Pulse	1.00	3
Se			1	0.095	ug/l	154.55	17.78	1.155E-05	Pulse	3.00	3
Sb			1	1.362	ug/l	1.88	6,343.44	2.626E-02	Pulse	1.00	3
Se			1	0.617	ug/l	34.64	31.22	2.915E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,580,955.67	1.12	86.2	Pulse	0.50	3
1	Sc		195,800.69	1.71	97.2	Pulse	0.30	3
1	Ge		159,542.11	1.71	95.2	Pulse	0.30	3
1	In		1,541,658.55	1.95	90.7	Pulse	0.30	3
1	Tb		6,844,027.67	0.44	100.5	Analog	0.50	3
1	Lu		3,968,391.50	0.82	93.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		241,618.19	1.93	94.6	Pulse	0.30	3
1	Te		10,704.49	2.57	72.3	Pulse	0.50	3
1	Li		1,055.59	7.20	96.4	Pulse	0.30	3

Quantitation Report

File Name	029CCVA.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:41
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.800	ug/l	1.14	649,731.58	3.786E+00	Pulse	0.50	3
As			1	49.731	ug/l	0.49	74,025.32	4.314E-01	Pulse	1.00	3
Mo			1	50.202	ug/l	1.41	447,394.63	1.718E+00	Pulse	0.50	3
Pb			1	49.376	ug/l	0.32	2,513,890.17	4.889E-01	Pulse	1.00	3
Be			1	52.816	ug/l	1.60	3,681.83	1.828E-02	Pulse	2.00	3
Ag			1	51.421	ug/l	0.73	1,655,728.58	9.861E-01	Pulse	0.50	3
Ba			1	49.380	ug/l	0.07	155,427.92	9.256E-02	Pulse	0.50	3
Tl			1	49.848	ug/l	0.94	3,713,031.42	7.222E-01	Pulse	0.50	3
Sn			1	50.638	ug/l	0.13	353,502.20	2.105E-01	Pulse	0.30	3
Sr			1	50.063	ug/l	0.53	313,727.73	1.868E-01	Pulse	0.50	3
[Pb]			1	50.070	ug/l	0.74	1,196,188.21	2.327E-01	Pulse	0.50	3
Ca			1	4927.308	ug/l	1.08	137,482.58	6.827E-01	Pulse	0.50	3
Ti			1	49.903	ug/l	4.51	11,497.42	5.711E-02	Pulse	0.50	3
Na			1	5217.488	ug/l	0.94	7,646,007.00	3.797E+01	Analog	1.00	3
Mg			1	4953.039	ug/l	1.16	3,345,729.92	1.661E+01	Pulse	1.00	3
K			1	4988.950	ug/l	1.36	2,504,410.58	1.244E+01	Pulse	1.00	3
V			1	50.907	ug/l	2.12	476,571.50	2.367E+00	Pulse	0.50	3
Mn			1	49.235	ug/l	1.25	279,822.12	1.631E+00	Pulse	0.50	3
Fe			1	5171.728	ug/l	0.35	53,113,652.00	3.095E+02	Analog	0.50	3
Co			1	51.066	ug/l	0.64	1,169,472.21	6.815E+00	Pulse	0.50	3
Ni			1	51.551	ug/l	1.34	327,930.22	1.911E+00	Pulse	0.50	3
Cu			1	52.160	ug/l	1.28	937,268.44	5.462E+00	Pulse	0.50	3
Zn			1	51.236	ug/l	1.13	126,294.53	4.850E-01	Pulse	1.00	3
Cd			1	50.319	ug/l	0.27	213,741.51	8.208E-01	Pulse	0.50	3
Al			1	4797.809	ug/l	1.89	978,467.10	4.859E+00	Pulse	1.00	3
Se			1	51.033	ug/l	0.42	4,831.83	2.878E-03	Pulse	3.00	3
Sb			1	48.462	ug/l	0.31	477,255.62	1.833E+00	Pulse	1.00	3
Se			1	47.601	ug/l	2.55	2,399.49	1.704E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,141,507.17	1.04	96.8	Pulse	0.50	3
1	Sc		201,412.89	1.71	100.0	Pulse	0.30	3
1	Ge		171,607.74	1.06	102.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,679,187.26	1.08	98.8	Pulse	0.30	3
1	Tb		7,205,754.33	0.79	105.8	Analog	0.50	3
1	Lu		4,154,973.17	0.69	98.0	Pulse	0.50	3
1	Ge		260,412.54	0.49	102.0	Pulse	0.30	3
1	Te		14,081.45	1.19	95.2	Pulse	0.50	3
1	Li		1,138.93	3.89	104.1	Pulse	0.30	3

Quantitation Report

File Name	030_CCV.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:45
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	101.600	ug/l	0.77	1,286,301.92	7.570E+00	Pulse	0.50	3
As			1	99.755	ug/l	0.45	147,015.71	8.651E-01	Pulse	1.00	3
Mo			1	100.098	ug/l	0.91	891,555.15	3.426E+00	Pulse	0.50	3
Pb			1	98.374	ug/l	1.45	4,904,506.83	9.739E-01	Pulse	1.00	3
Be			1	102.949	ug/l	1.88	7,238.29	3.564E-02	Pulse	2.00	3
Ag			1	101.735	ug/l	0.42	3,264,557.58	1.951E+00	Pulse	0.50	3
Ba			1	98.074	ug/l	0.46	307,595.72	1.838E-01	Pulse	0.50	3
Tl			1	103.053	ug/l	1.46	7,518,661.00	1.493E+00	Analog	0.50	3
Sn			1	101.495	ug/l	1.34	705,750.63	4.218E-01	Pulse	0.30	3
Sr			1	100.119	ug/l	0.34	624,727.98	3.733E-01	Pulse	0.50	3
[Pb]			1	98.686	ug/l	1.45	2,308,794.50	4.585E-01	Pulse	0.50	3
Ca			1	9687.105	ug/l	0.52	272,517.25	1.342E+00	Pulse	0.50	3
Ti			1	99.709	ug/l	0.27	23,177.70	1.141E-01	Pulse	0.50	3
Na			1	10253.835	ug/l	1.22	15,144,961.67	7.456E+01	Analog	1.00	3
Mg			1	10074.210	ug/l	1.02	6,863,655.00	3.379E+01	Analog	1.00	3
K			1	10196.002	ug/l	1.29	5,144,265.50	2.533E+01	Analog	1.00	3
V			1	100.641	ug/l	1.01	949,517.16	4.675E+00	Pulse	0.50	3
Mn			1	98.328	ug/l	0.78	553,327.04	3.256E+00	Pulse	0.50	3
Fe			1	10284.165	ug/l	1.40	104,582,392.00	6.154E+02	Analog	0.50	3
Co			1	102.015	ug/l	0.44	2,313,520.42	1.361E+01	Pulse	0.50	3
Ni			1	102.001	ug/l	0.61	642,482.11	3.781E+00	Pulse	0.50	3
Cu			1	102.504	ug/l	0.55	1,815,960.12	1.069E+01	Pulse	0.50	3
Zn			1	99.978	ug/l	0.27	244,436.91	9.392E-01	Pulse	1.00	3
Cd			1	99.488	ug/l	0.86	422,312.88	1.623E+00	Pulse	0.50	3
Al			1	9556.459	ug/l	1.45	1,965,747.46	9.678E+00	Pulse	1.00	3
Se			1	100.614	ug/l	0.73	9,478.57	5.665E-03	Pulse	3.00	3
Sb			1	96.951	ug/l	0.73	954,025.77	3.666E+00	Pulse	1.00	3
Se			1	98.915	ug/l	1.14	4,771.93	3.522E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,036,405.00	1.30	94.8	Pulse	0.50	3
1	Sc		203,138.06	0.95	100.9	Pulse	0.30	3
1	Ge		169,933.82	0.55	101.4	Pulse	0.30	3
1	In		1,673,345.32	0.31	98.4	Pulse	0.30	3
1	Tb		7,216,346.50	0.54	105.9	Analog	0.50	3
1	Lu		4,142,291.00	0.50	97.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		260,254.01	0.54	101.9	Pulse	0.30	3
1	Te		13,550.39	1.54	91.6	Pulse	0.50	3
1	Li		1,051.14	5.57	96.0	Pulse	0.30	3

Quantitation Report

File Name	031_CCB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:49
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.002	ug/l	24.86	596.68	3.490E-03	Pulse	0.50	3
As			1	0.003	ug/l	136.15	28.67	1.681E-04	Pulse	1.00	3
Mo			1	0.036	ug/l	12.23	329.34	1.255E-03	Pulse	0.50	3
Pb			1	0.016	ug/l	19.66	2,003.45	3.785E-04	Pulse	1.00	3
Be			1	0.026	ug/l	57.50	2.17	1.077E-05	Pulse	2.00	3
Ag			1	0.012	ug/l	7.44	412.68	2.425E-04	Pulse	0.50	3
Ba			1	0.004	ug/l	64.41	42.00	2.470E-05	Pulse	0.50	3
Tl			1	0.076	ug/l	13.48	5,931.07	1.120E-03	Pulse	0.50	3
Sn			1	0.029	ug/l	26.45	523.34	3.076E-04	Pulse	0.30	3
Sr			1	0.023	ug/l	39.67	668.02	3.926E-04	Pulse	0.50	3
[Pb]			1	0.017	ug/l	16.25	959.36	1.813E-04	Pulse	0.50	3
Ca			1	-0.080	ug/l	-1116.01	115.33	5.715E-04	Pulse	0.50	3
Ti			1	0.017	ug/l	77.65	6.67	3.312E-05	Pulse	0.50	3
Na			1	4.183	ug/l	5.47	17,192.03	8.524E-02	Pulse	1.00	3
Mg			1	0.539	ug/l	39.54	578.68	2.866E-03	Pulse	1.00	3
K			1	2.651	ug/l	7.36	18,620.41	9.233E-02	Pulse	1.00	3
V			1	-0.054	ug/l	-5.73	397.34	1.971E-03	Pulse	0.50	3
Mn			1	0.001	ug/l	285.98	116.00	6.783E-04	Pulse	0.50	3
Fe			1	0.690	ug/l	42.06	14,318.17	8.373E-02	Pulse	0.50	3
Co			1	0.006	ug/l	35.33	163.33	9.547E-04	Pulse	0.50	3
Ni			1	0.004	ug/l	25.28	112.67	6.590E-04	Pulse	0.50	3
Cu			1	-0.082	ug/l	-12.32	7,029.31	4.113E-02	Pulse	0.50	3
Zn			1	-0.116	ug/l	-11.97	1,689.75	6.437E-03	Pulse	1.00	3
Cd			1	0.005	ug/l	61.16	30.00	1.143E-04	Pulse	0.50	3
Al			1	0.371	ug/l	69.15	214.67	1.063E-03	Pulse	1.00	3
Se			1	0.022	ug/l	18.93	17.22	1.012E-05	Pulse	3.00	3
Sb			1	0.011	ug/l	25.91	247.00	9.411E-04	Pulse	1.00	3
Se			1	-0.004	ug/l	-1480.34	26.22	1.810E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,291,687.00	0.59	99.6	Pulse	0.50	3
1	Sc		201,668.82	0.81	100.1	Pulse	0.30	3

Quantitation Report

1	Ge		170,956.32	1.72	102.0	Pulse	0.30	3
1	In		1,702,271.60	0.66	100.1	Pulse	0.30	3
1	Tb		7,237,065.17	0.21	106.2	Analog	0.50	3
1	Lu		4,147,429.83	0.67	97.9	Pulse	0.50	3
1	Ge		262,528.57	0.48	102.8	Pulse	0.30	3
1	Te		14,495.10	2.05	98.0	Pulse	0.50	3
1	Li		1,055.59	11.34	96.4	Pulse	0.30	3

Quantitation Report

File Name	032SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:53
Sample Name	FA55941-2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.473	ug/l	6.53	8,957.59	5.816E-02	Pulse	0.50	3
As			1	8.608	ug/l	1.61	5,771.54	3.746E-02	Pulse	1.00	3
Mo			1	0.669	ug/l	28.88	2,652.13	1.147E-02	Pulse	0.50	3
Pb			1	1.111	ug/l	2.82	23,841.90	5.713E-03	Pulse	1.00	3
Be			1	0.116	ug/l	102.80	4.17	2.171E-05	Pulse	2.00	3
Ag			1	0.061	ug/l	7.82	884.02	6.017E-04	Pulse	0.50	3
Ba			1	1298.877	ug/l	1.87	1,786,695.83	1.217E+00	Pulse	0.50	3
Tl			1	0.076	ug/l	5.64	2,360.17	5.649E-04	Pulse	0.50	3
Sn			1	0.810	ug/l	1.74	2,742.45	1.868E-03	Pulse	0.30	3
Sr			1	650.562	ug/l	2.49	1,779,416.04	1.212E+00	Pulse	0.50	3
[Pb]			1	1.174	ug/l	1.75	11,801.46	2.827E-03	Pulse	0.50	3
Ca			1	129082.101	ug/l	3.40	1,693,450.08	8.935E+00	Pulse	0.50	3
Ti			1	24.646	ug/l	25.85	2,689.08	1.411E-02	Pulse	0.50	3
Na			1	1168907.257	ug/l	3.10	804,949,312.00	4.247E+03	Analog	1.00	3
Mg			1	29649.585	ug/l	3.78	9,423,481.67	4.972E+01	Analog	1.00	3
K			1	4676.470	ug/l	3.07	1,113,407.41	5.874E+00	Pulse	1.00	3
V			1	1.859	ug/l	5.37	9,018.12	4.759E-02	Pulse	0.50	3
Mn			1	1129.397	ug/l	1.12	2,880,653.83	1.870E+01	Pulse	0.50	3
Fe			1	60366.887	ug/l	1.88	278,270,293.33	1.806E+03	Analog	0.50	3
Co			1	0.924	ug/l	4.11	9,526.36	6.183E-02	Pulse	0.50	3
Ni			1	1.618	ug/l	2.99	4,696.58	3.049E-02	Pulse	0.50	3
Cu			1	2.306	ug/l	5.04	26,075.61	1.693E-01	Pulse	0.50	3
Zn			1	11.949	ug/l	2.11	14,609.87	6.320E-02	Pulse	1.00	3
Cd			1	0.038	ug/l	19.27	80.00	3.459E-04	Pulse	0.50	3
Al			1	1133.992	ug/l	5.12	108,917.00	5.748E-01	Pulse	1.00	3
Se			1	0.615	ug/l	3.94	38.44	2.618E-05	Pulse	3.00	3
Sb			1	0.252	ug/l	3.51	1,221.38	5.283E-03	Pulse	1.00	3
Se			1	1.947	ug/l	6.78	51.78	5.271E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,174,996.83	2.48	78.6	Pulse	0.50	3
1	Sc		189,652.22	2.79	94.2	Pulse	0.30	3
1	Ge		154,086.35	1.27	92.0	Pulse	0.30	3
1	In		1,468,237.68	1.67	86.4	Pulse	0.30	3
1	Tb		6,203,382.00	5.37	91.1	Mix	0.50	3
1	Lu		3,766,074.17	3.24	88.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		231,208.71	1.20	90.5	Pulse	0.30	3
1	Te		9,822.00	1.92	66.4	Pulse	0.50	3
1	Li		872.25	13.19	79.7	Pulse	0.30	3

Quantitation Report

File Name	033SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 10:57
Sample Name	FA55941-3
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.506	ug/l	3.32	3,633.68	2.215E-02	Pulse	0.50	3
As			1	0.184	ug/l	9.08	154.33	9.406E-04	Pulse	1.00	3
Mo			1	0.196	ug/l	3.80	839.35	3.373E-03	Pulse	0.50	3
Pb			1	0.812	ug/l	1.82	21,109.00	4.238E-03	Pulse	1.00	3
Be			1	0.005	ug/l	511.72	0.50	2.548E-06	Pulse	2.00	3
Ag			1	0.031	ug/l	4.13	508.68	3.155E-04	Pulse	0.50	3
Ba			1	6.940	ug/l	1.10	10,507.08	6.519E-03	Pulse	0.50	3
Tl			1	0.029	ug/l	10.99	1,114.71	2.239E-04	Pulse	0.50	3
Sn			1	0.750	ug/l	11.30	2,806.90	1.743E-03	Pulse	0.30	3
Sr			1	60.811	ug/l	1.12	183,079.94	1.136E-01	Pulse	0.50	3
[Pb]			1	0.845	ug/l	2.83	10,274.45	2.063E-03	Pulse	0.50	3
Ca			1	13458.188	ug/l	1.49	179,499.17	9.321E-01	Pulse	0.50	3
Ti			1	0.772	ug/l	100.74	87.34	4.548E-04	Pulse	0.50	3
Na			1	13893.913	ug/l	1.17	9,732,075.00	5.053E+01	Analog	1.00	3
Mg			1	8804.167	ug/l	1.29	2,843,571.25	1.477E+01	Pulse	1.00	3
K			1	1458.008	ug/l	1.18	364,056.52	1.890E+00	Pulse	1.00	3
V			1	0.122	ug/l	10.76	1,404.05	7.291E-03	Pulse	0.50	3
Mn			1	21.567	ug/l	1.32	58,673.47	3.577E-01	Pulse	0.50	3
Fe			1	186.540	ug/l	0.64	922,502.57	5.624E+00	Pulse	0.50	3
Co			1	0.125	ug/l	5.34	1,396.06	8.509E-03	Pulse	0.50	3
Ni			1	0.234	ug/l	13.29	796.02	4.851E-03	Pulse	0.50	3
Cu			1	0.161	ug/l	10.46	9,509.78	5.797E-02	Pulse	0.50	3
Zn			1	7.225	ug/l	1.13	10,246.73	4.118E-02	Pulse	1.00	3
Cd			1	0.022	ug/l	40.19	54.00	2.168E-04	Pulse	0.50	3
Al			1	12.221	ug/l	3.50	1,323.72	6.876E-03	Pulse	1.00	3
Se			1	0.079	ug/l	29.25	17.89	1.110E-05	Pulse	3.00	3
Sb			1	0.135	ug/l	3.33	762.69	3.066E-03	Pulse	1.00	3
Se			1	0.206	ug/l	25.91	24.89	2.187E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,981,107.50	0.61	93.8	Pulse	0.50	3
1	Sc		192,587.32	1.66	95.6	Pulse	0.30	3
1	Ge		164,050.00	1.49	97.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,611,720.11	1.05	94.8	Pulse	0.30	3
1	Tb		7,005,811.17	0.99	102.8	Analog	0.50	3
1	Lu		4,038,354.75	0.77	95.3	Pulse	0.50	3
1	Ge		248,791.03	0.73	97.4	Pulse	0.30	3
1	Te		11,372.23	2.85	76.9	Pulse	0.50	3
1	Li		1,036.70	4.18	94.7	Pulse	0.30	3

Quantitation Report

File Name	034SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 11:00
Sample Name	FA55941-4
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.355	ug/l	1.18	14,935.09	9.101E-02	Pulse	0.50	3
As			1	1.159	ug/l	3.90	847.69	5.166E-03	Pulse	1.00	3
Mo			1	5.982	ug/l	1.29	25,584.09	1.024E-01	Pulse	0.50	3
Pb			1	0.336	ug/l	3.32	9,291.87	1.880E-03	Pulse	1.00	3
Be			1	0.015	ug/l	151.34	0.83	4.306E-06	Pulse	2.00	3
Ag			1	0.026	ug/l	13.07	421.34	2.610E-04	Pulse	0.50	3
Ba			1	9.619	ug/l	2.88	14,579.24	9.030E-03	Pulse	0.50	3
Tl			1	0.014	ug/l	9.52	584.01	1.182E-04	Pulse	0.50	3
Sn			1	0.560	ug/l	11.68	2,179.03	1.350E-03	Pulse	0.30	3
Sr			1	434.251	ug/l	1.39	1,306,718.33	8.093E-01	Pulse	0.50	3
[Pb]			1	0.366	ug/l	5.10	4,700.66	9.510E-04	Pulse	0.50	3
Ca			1	6144.376	ug/l	2.00	82,122.01	4.259E-01	Pulse	0.50	3
Ti			1	0.152	ug/l	27.28	19.33	1.002E-04	Pulse	0.50	3
Na			1	31890.216	ug/l	1.90	22,352,877.33	1.159E+02	Analog	1.00	3
Mg			1	198.156	ug/l	1.35	64,289.20	3.334E-01	Pulse	1.00	3
K			1	32219.633	ug/l	1.37	7,707,274.67	3.997E+01	Analog	1.00	3
V			1	3.950	ug/l	1.01	18,534.16	9.610E-02	Pulse	0.50	3
Mn			1	0.654	ug/l	5.04	1,883.43	1.148E-02	Pulse	0.50	3
Fe			1	33.184	ug/l	0.51	169,890.34	1.035E+00	Pulse	0.50	3
Co			1	0.106	ug/l	2.03	1,185.37	7.224E-03	Pulse	0.50	3
Ni			1	0.249	ug/l	13.54	840.69	5.124E-03	Pulse	0.50	3
Cu			1	0.134	ug/l	15.92	9,290.92	5.662E-02	Pulse	0.50	3
Zn			1	5.697	ug/l	3.58	8,512.22	3.407E-02	Pulse	1.00	3
Cd			1	0.008	ug/l	52.26	24.67	9.855E-05	Pulse	0.50	3
Al			1	15.446	ug/l	3.26	1,640.74	8.508E-03	Pulse	1.00	3
Se			1	0.257	ug/l	39.48	26.00	1.611E-05	Pulse	3.00	3
Sb			1	0.584	ug/l	2.77	2,885.90	1.155E-02	Pulse	1.00	3
Se			1	0.250	ug/l	97.05	25.78	2.266E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,943,978.33	1.53	93.1	Pulse	0.50	3
1	Sc		192,870.86	1.33	95.8	Pulse	0.30	3
1	Ge		164,100.12	0.32	98.0	Pulse	0.30	3
1	In		1,614,770.25	1.03	95.0	Pulse	0.30	3
1	Tb		7,021,798.67	1.00	103.1	Analog	0.50	3
1	Lu		4,012,333.00	1.85	94.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		249,918.98	0.92	97.9	Pulse	0.30	3
1	Te		11,364.23	1.06	76.8	Pulse	0.50	3
1	Li		1,051.15	8.69	96.0	Pulse	0.30	3

Quantitation Report

File Name	035SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 11:04
Sample Name	FA55941-6
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.523	ug/l	4.39	3,697.03	2.278E-02	Pulse	0.50	3
As			1	0.113	ug/l	8.50	102.67	6.327E-04	Pulse	1.00	3
Mo			1	0.224	ug/l	8.54	947.36	3.849E-03	Pulse	0.50	3
Pb			1	0.077	ug/l	5.58	2,904.25	5.999E-04	Pulse	1.00	3
Be			1	0.010	ug/l	167.67	0.67	3.486E-06	Pulse	2.00	3
Ag			1	0.022	ug/l	11.00	354.67	2.244E-04	Pulse	0.50	3
Ba			1	26.743	ug/l	1.65	39,609.88	2.508E-02	Pulse	0.50	3
Tl			1	0.011	ug/l	22.93	436.01	9.013E-05	Pulse	0.50	3
Sn			1	0.545	ug/l	5.12	2,079.03	1.316E-03	Pulse	0.30	3
Sr			1	114.057	ug/l	1.58	336,107.79	2.128E-01	Pulse	0.50	3
[Pb]			1	0.089	ug/l	2.05	1,481.40	3.060E-04	Pulse	0.50	3
Ca			1	27787.663	ug/l	1.06	370,254.87	1.924E+00	Pulse	0.50	3
Ti			1	0.055	ug/l	67.21	8.67	4.486E-05	Pulse	0.50	3
Na			1	42784.377	ug/l	1.78	29,922,658.67	1.555E+02	Analog	1.00	3
Mg			1	12400.871	ug/l	2.21	4,002,012.25	2.080E+01	Pulse	1.00	3
K			1	2938.934	ug/l	1.46	716,547.42	3.723E+00	Pulse	1.00	3
V			1	0.193	ug/l	21.67	1,718.08	8.931E-03	Pulse	0.50	3
Mn			1	4.187	ug/l	1.11	11,350.67	6.996E-02	Pulse	0.50	3
Fe			1	9.693	ug/l	2.44	53,938.60	3.324E-01	Pulse	0.50	3
Co			1	0.067	ug/l	7.07	753.35	4.644E-03	Pulse	0.50	3
Ni			1	0.868	ug/l	8.13	2,690.20	1.658E-02	Pulse	0.50	3
Cu			1	0.196	ug/l	6.30	9,707.81	5.983E-02	Pulse	0.50	3
Zn			1	6.354	ug/l	1.64	9,140.51	3.712E-02	Pulse	1.00	3
Cd			1	0.021	ug/l	51.84	50.67	2.053E-04	Pulse	0.50	3
Al			1	6.164	ug/l	0.24	733.02	3.809E-03	Pulse	1.00	3
Se			1	0.085	ug/l	136.33	17.78	1.128E-05	Pulse	3.00	3
Sb			1	0.059	ug/l	4.98	400.34	1.626E-03	Pulse	1.00	3
Se			1	0.235	ug/l	111.43	25.22	2.239E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,841,117.50	0.62	91.1	Pulse	0.50	3
1	Sc		192,465.46	1.28	95.6	Pulse	0.30	3
1	Ge		162,245.28	0.31	96.8	Pulse	0.30	3
1	In		1,579,762.16	1.38	92.9	Pulse	0.30	3
1	Tb		6,994,680.67	1.17	102.7	Analog	0.50	3
1	Lu		3,968,933.17	1.34	93.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,220.09	1.01	96.4	Pulse	0.30	3
1	Te		11,290.18	2.44	76.3	Pulse	0.50	3
1	Li		1,050.03	8.45	95.9	Pulse	0.30	3

Quantitation Report

File Name	036SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 11:08
Sample Name	FA55941-7
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.287	ug/l	3.99	2,282.15	1.401E-02	Pulse	0.50	3
As			1	0.945	ug/l	4.24	690.68	4.240E-03	Pulse	1.00	3
Mo			1	2.983	ug/l	1.69	12,721.01	5.106E-02	Pulse	0.50	3
Pb			1	0.201	ug/l	3.77	6,010.07	1.211E-03	Pulse	1.00	3
Be			1	0.051	ug/l	79.45	2.00	1.045E-05	Pulse	2.00	3
Ag			1	0.016	ug/l	8.20	274.00	1.725E-04	Pulse	0.50	3
Ba			1	7.465	ug/l	1.82	11,130.79	7.011E-03	Pulse	0.50	3
Tl			1	0.012	ug/l	7.86	486.68	9.808E-05	Pulse	0.50	3
Sn			1	0.535	ug/l	6.38	2,056.80	1.296E-03	Pulse	0.30	3
Sr			1	42.573	ug/l	3.02	126,378.73	7.962E-02	Pulse	0.50	3
[Pb]			1	0.209	ug/l	3.02	2,905.59	5.855E-04	Pulse	0.50	3
Ca			1	20403.246	ug/l	1.42	270,458.68	1.413E+00	Pulse	0.50	3
Ti			1	0.184	ug/l	42.72	22.67	1.187E-04	Pulse	0.50	3
Na			1	3938.424	ug/l	2.01	2,749,535.25	1.436E+01	Pulse	1.00	3
Mg			1	5516.499	ug/l	2.32	1,771,033.00	9.252E+00	Pulse	1.00	3
K			1	1595.806	ug/l	2.04	394,524.45	2.061E+00	Pulse	1.00	3
V			1	0.330	ug/l	4.34	2,320.81	1.212E-02	Pulse	0.50	3
Mn			1	23.896	ug/l	2.18	64,539.91	3.962E-01	Pulse	0.50	3
Fe			1	15.567	ug/l	3.96	82,772.23	5.082E-01	Pulse	0.50	3
Co			1	0.027	ug/l	30.49	323.34	1.988E-03	Pulse	0.50	3
Ni			1	0.079	ug/l	6.34	320.67	1.968E-03	Pulse	0.50	3
Cu			1	0.028	ug/l	117.72	8,323.83	5.110E-02	Pulse	0.50	3
Zn			1	5.185	ug/l	3.32	7,890.96	3.168E-02	Pulse	1.00	3
Cd			1	0.008	ug/l	48.49	26.00	1.046E-04	Pulse	0.50	3
Al			1	8.795	ug/l	7.88	984.02	5.141E-03	Pulse	1.00	3
Se			1	0.015	ug/l	150.74	14.78	9.313E-06	Pulse	3.00	3
Sb			1	0.144	ug/l	5.87	806.35	3.237E-03	Pulse	1.00	3
Se			1	0.268	ug/l	6.59	26.56	2.297E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,962,647.83	0.24	93.4	Pulse	0.50	3
1	Sc		191,468.81	1.73	95.1	Pulse	0.30	3
1	Ge		162,913.82	1.03	97.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,587,932.82	2.10	93.4	Pulse	0.30	3
1	Tb		6,972,995.33	0.66	102.4	Analog	0.50	3
1	Lu		3,988,397.42	0.92	94.1	Pulse	0.50	3
1	Ge		249,136.91	0.91	97.6	Pulse	0.30	3
1	Te		11,560.35	1.27	78.1	Pulse	0.50	3
1	Li		1,065.59	4.25	97.4	Pulse	0.30	3

Quantitation Report

File Name	037SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 11:12
Sample Name	FA55941-8A
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.427	ug/l	1.59	3,021.58	1.922E-02	Pulse	0.50	3
As			1	0.145	ug/l	10.37	121.00	7.696E-04	Pulse	1.00	3
Mo			1	0.145	ug/l	3.85	601.34	2.492E-03	Pulse	0.50	3
Pb			1	0.053	ug/l	8.66	2,251.82	4.787E-04	Pulse	1.00	3
Be			1	0.020	ug/l	146.54	1.00	5.152E-06	Pulse	2.00	3
Ag			1	0.026	ug/l	13.04	410.01	2.652E-04	Pulse	0.50	3
Ba			1	19.896	ug/l	1.57	28,852.97	1.866E-02	Pulse	0.50	3
Tl			1	0.010	ug/l	11.71	393.34	8.364E-05	Pulse	0.50	3
Sn			1	0.536	ug/l	4.17	2,007.90	1.299E-03	Pulse	0.30	3
Sr			1	128.964	ug/l	2.27	371,937.33	2.406E-01	Pulse	0.50	3
[Pb]			1	0.051	ug/l	10.74	1,028.04	2.186E-04	Pulse	0.50	3
Ca			1	36794.216	ug/l	3.18	485,567.33	2.547E+00	Pulse	0.50	3
Ti			1	0.431	ug/l	44.32	49.33	2.599E-04	Pulse	0.50	3
Na			1	160052.251	ug/l	3.15	110,854,122.67	5.815E+02	Analog	1.00	3
Mg			1	13531.284	ug/l	3.02	4,325,855.00	2.269E+01	Pulse	1.00	3
K			1	1572.068	ug/l	3.20	387,275.13	2.032E+00	Pulse	1.00	3
V			1	0.260	ug/l	12.98	1,997.45	1.049E-02	Pulse	0.50	3
Mn			1	1.126	ug/l	2.79	3,031.60	1.928E-02	Pulse	0.50	3
Fe			1	21.872	ug/l	1.31	109,562.79	6.968E-01	Pulse	0.50	3
Co			1	0.035	ug/l	7.43	393.34	2.502E-03	Pulse	0.50	3
Ni			1	0.301	ug/l	7.69	957.36	6.089E-03	Pulse	0.50	3
Cu			1	0.215	ug/l	12.78	9,557.05	6.078E-02	Pulse	0.50	3
Zn			1	5.524	ug/l	1.08	8,028.34	3.326E-02	Pulse	1.00	3
Cd			1	0.013	ug/l	118.89	34.00	1.409E-04	Pulse	0.50	3
Al			1	20.307	ug/l	1.72	2,092.79	1.097E-02	Pulse	1.00	3
Se			1	0.279	ug/l	34.93	25.89	1.672E-05	Pulse	3.00	3
Sb			1	0.034	ug/l	14.77	280.33	1.162E-03	Pulse	1.00	3
Se			1	0.262	ug/l	137.91	25.22	2.286E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,704,394.83	0.92	88.6	Pulse	0.50	3
1	Sc		190,735.56	2.86	94.7	Pulse	0.30	3
1	Ge		157,237.89	0.91	93.9	Pulse	0.30	3
1	In		1,546,408.27	1.26	91.0	Pulse	0.30	3
1	Tb		6,814,885.50	0.32	100.0	Analog	0.50	3
1	Lu		3,923,324.00	1.51	92.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		241,380.08	0.98	94.5	Pulse	0.30	3
1	Te		11,055.36	1.08	74.7	Pulse	0.50	3
1	Li		1,024.48	10.81	93.6	Pulse	0.30	3

Quantitation Report

File Name 038SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 11:15
Sample Name FA55941-9
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.355	ug/l	7.55	2,779.54	1.651E-02	Pulse	0.50	3
As			1	0.042	ug/l	25.25	54.33	3.227E-04	Pulse	1.00	3
Mo			1	0.063	ug/l	15.18	277.33	1.094E-03	Pulse	0.50	3
Pb			1	0.028	ug/l	6.67	1,816.77	3.575E-04	Pulse	1.00	3
Be			1	0.000	ug/l	-38270.17	0.33	1.678E-06	Pulse	2.00	3
Ag			1	0.009	ug/l	5.13	164.67	1.003E-04	Pulse	0.50	3
Ba			1	0.157	ug/l	5.93	268.00	1.633E-04	Pulse	0.50	3
Tl			1	0.005	ug/l	11.90	248.67	4.890E-05	Pulse	0.50	3
Sn			1	0.527	ug/l	4.66	2,100.14	1.279E-03	Pulse	0.30	3
Sr			1	0.864	ug/l	5.17	3,144.28	1.916E-03	Pulse	0.50	3
[Pb]			1	0.028	ug/l	10.03	844.02	1.660E-04	Pulse	0.50	3
Ca			1	182.587	ug/l	2.12	2,615.52	1.322E-02	Pulse	0.50	3
Ti			1	0.071	ug/l	37.27	10.67	5.385E-05	Pulse	0.50	3
Na			1	667.843	ug/l	1.05	490,771.47	2.481E+00	Pulse	1.00	3
Mg			1	66.769	ug/l	0.49	22,358.11	1.130E-01	Pulse	1.00	3
K			1	18.361	ug/l	10.16	21,458.95	1.085E-01	Pulse	1.00	3
V			1	0.203	ug/l	12.28	1,812.76	9.168E-03	Pulse	0.50	3
Mn			1	0.130	ug/l	9.89	469.34	2.788E-03	Pulse	0.50	3
Fe			1	6.253	ug/l	4.72	38,641.00	2.295E-01	Pulse	0.50	3
Co			1	0.013	ug/l	7.32	174.00	1.033E-03	Pulse	0.50	3
Ni			1	0.055	ug/l	7.33	256.00	1.521E-03	Pulse	0.50	3
Cu			1	-0.175	ug/l	-16.14	6,832.57	4.058E-02	Pulse	0.50	3
Zn			1	6.404	ug/l	1.86	9,480.67	3.736E-02	Pulse	1.00	3
Cd			1	0.002	ug/l	182.63	14.00	5.514E-05	Pulse	0.50	3
Al			1	4.230	ug/l	9.56	559.34	2.829E-03	Pulse	1.00	3
Se			1	0.111	ug/l	63.56	19.67	1.201E-05	Pulse	3.00	3
Sb			1	0.019	ug/l	14.50	221.67	8.733E-04	Pulse	1.00	3
Se			1	0.177	ug/l	146.36	25.11	2.136E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,082,832.83	1.04	95.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		197,814.13	1.20	98.2	Pulse	0.30	3
1	Ge		168,375.02	0.54	100.5	Pulse	0.30	3
1	In		1,640,748.06	1.86	96.5	Pulse	0.30	3
1	Tb		7,091,411.67	0.86	104.1	Analog	0.50	3
1	Lu		4,068,671.33	0.39	96.0	Pulse	0.50	3
1	Ge		253,778.48	0.92	99.4	Pulse	0.30	3
1	Te		11,769.82	2.19	79.5	Pulse	0.50	3
1	Li		1,122.26	8.48	102.5	Pulse	0.30	3

Quantitation Report

File Name	039SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 11:19
Sample Name	FA55914-1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.634	ug/l	1.35	10,137.32	6.416E-02	Pulse	0.50	3
As			1	0.429	ug/l	6.75	316.00	2.000E-03	Pulse	1.00	3
Mo			1	0.988	ug/l	4.39	4,115.13	1.693E-02	Pulse	0.50	3
Pb			1	7.508	ug/l	1.41	175,609.76	3.737E-02	Pulse	1.00	3
Be			1	0.001	ug/l	1511.00	0.33	1.788E-06	Pulse	2.00	3
Ag			1	0.020	ug/l	8.70	312.00	2.036E-04	Pulse	0.50	3
Ba			1	8.791	ug/l	2.03	12,650.45	8.254E-03	Pulse	0.50	3
Tl			1	0.009	ug/l	12.82	364.68	7.762E-05	Pulse	0.50	3
Sn			1	0.750	ug/l	3.26	2,671.32	1.743E-03	Pulse	0.30	3
Sr			1	138.495	ug/l	0.62	395,884.75	2.583E-01	Pulse	0.50	3
[Pb]			1	7.476	ug/l	2.10	82,048.30	1.746E-02	Pulse	0.50	3
Ca			1	39259.556	ug/l	2.45	511,641.39	2.718E+00	Pulse	0.50	3
Ti			1	8.981	ug/l	0.49	970.03	5.151E-03	Pulse	0.50	3
Na			1	53957.320	ug/l	2.45	36,912,342.67	1.961E+02	Analog	1.00	3
Mg			1	26699.705	ug/l	2.06	8,429,423.67	4.478E+01	Analog	1.00	3
K			1	2672.760	ug/l	1.47	638,981.71	3.394E+00	Pulse	1.00	3
V			1	1.793	ug/l	3.56	8,670.62	4.605E-02	Pulse	0.50	3
Mn			1	32.952	ug/l	0.53	86,286.87	5.461E-01	Pulse	0.50	3
Fe			1	1807.359	ug/l	1.71	8,549,749.67	5.412E+01	Analog	0.50	3
Co			1	0.300	ug/l	1.79	3,185.61	2.016E-02	Pulse	0.50	3
Ni			1	2.332	ug/l	1.87	6,907.93	4.372E-02	Pulse	0.50	3
Cu			1	2.096	ug/l	2.97	25,020.88	1.584E-01	Pulse	0.50	3
Zn			1	24.573	ug/l	2.18	29,638.37	1.220E-01	Pulse	1.00	3
Cd			1	0.043	ug/l	18.65	93.33	3.847E-04	Pulse	0.50	3
Al			1	252.968	ug/l	3.24	24,237.65	1.288E-01	Pulse	1.00	3
Se			1	0.120	ug/l	83.56	18.78	1.225E-05	Pulse	3.00	3
Sb			1	0.179	ug/l	6.01	948.03	3.904E-03	Pulse	1.00	3
Se			1	0.531	ug/l	26.52	30.00	2.763E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,698,873.00	0.63	88.5	Pulse	0.50	3
1	Sc		188,303.11	1.89	93.5	Pulse	0.30	3
1	Ge		157,999.32	0.79	94.3	Pulse	0.30	3
1	In		1,532,571.67	0.31	90.1	Pulse	0.30	3
1	Tb		6,845,440.00	0.48	100.5	Analog	0.50	3
1	Lu		3,891,634.50	1.86	91.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		242,945.07	1.70	95.1	Pulse	0.30	3
1	Te		10,855.92	0.76	73.4	Pulse	0.50	3
1	Li		982.25	1.96	89.7	Pulse	0.30	3

Quantitation Report

File Name 040SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 11:23
Sample Name FA55914-2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.400	ug/l	1.84	2,916.89	1.820E-02	Pulse	0.50	3
As			1	0.218	ug/l	9.63	174.00	1.086E-03	Pulse	1.00	3
Mo			1	0.093	ug/l	6.88	388.67	1.604E-03	Pulse	0.50	3
Pb			1	0.369	ug/l	2.24	9,397.93	2.043E-03	Pulse	1.00	3
Be			1	0.010	ug/l	222.81	0.67	3.491E-06	Pulse	2.00	3
Ag			1	0.057	ug/l	1.69	864.02	5.652E-04	Pulse	0.50	3
Ba			1	48.132	ug/l	0.36	68,973.38	4.512E-02	Pulse	0.50	3
Tl			1	0.007	ug/l	2.89	299.33	6.507E-05	Pulse	0.50	3
Sn			1	0.526	ug/l	4.91	1,953.45	1.278E-03	Pulse	0.30	3
Sr			1	207.021	ug/l	1.50	589,995.10	3.860E-01	Pulse	0.50	3
[Pb]			1	0.377	ug/l	4.48	4,487.94	9.757E-04	Pulse	0.50	3
Ca			1	51703.301	ug/l	1.07	686,824.44	3.579E+00	Pulse	0.50	3
Ti			1	1.453	ug/l	20.68	162.00	8.448E-04	Pulse	0.50	3
Na			1	226349.494	ug/l	0.70	157,816,901.33	8.224E+02	Analog	1.00	3
Mg			1	16135.619	ug/l	0.90	5,192,747.33	2.706E+01	Analog	1.00	3
K			1	2352.722	ug/l	0.67	575,288.54	2.998E+00	Pulse	1.00	3
V			1	0.502	ug/l	2.93	3,090.92	1.611E-02	Pulse	0.50	3
Mn			1	29.154	ug/l	0.68	77,458.67	4.833E-01	Pulse	0.50	3
Fe			1	196.941	ug/l	0.81	951,240.52	5.935E+00	Pulse	0.50	3
Co			1	0.218	ug/l	2.14	2,358.82	1.472E-02	Pulse	0.50	3
Ni			1	0.671	ug/l	1.53	2,072.79	1.293E-02	Pulse	0.50	3
Cu			1	0.309	ug/l	8.11	10,525.57	6.566E-02	Pulse	0.50	3
Zn			1	5.752	ug/l	0.97	8,319.13	3.432E-02	Pulse	1.00	3
Cd			1	0.024	ug/l	26.14	55.33	2.283E-04	Pulse	0.50	3
Al			1	86.834	ug/l	3.67	8,570.51	4.465E-02	Pulse	1.00	3
Se			1	0.617	ug/l	9.59	40.11	2.623E-05	Pulse	3.00	3
Sb			1	0.072	ug/l	11.65	457.01	1.885E-03	Pulse	1.00	3
Se			1	0.887	ug/l	19.63	36.22	3.393E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,600,211.83	0.67	86.6	Pulse	0.50	3
1	Sc		191,905.50	0.94	95.3	Pulse	0.30	3
1	Ge		160,284.55	0.52	95.7	Pulse	0.30	3
1	In		1,528,719.73	0.98	89.9	Pulse	0.30	3
1	Tb		6,771,351.50	0.35	99.4	Analog	0.50	3
1	Lu		3,881,600.75	0.45	91.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		242,380.78	0.30	94.9	Pulse	0.30	3
1	Te		10,687.14	2.08	72.2	Pulse	0.50	3
1	Li		1,046.70	3.44	95.6	Pulse	0.30	3

Quantitation Report

File Name 041SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 11:27
Sample Name FA55914-3
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.669	ug/l	1.10	4,499.87	2.820E-02	Pulse	0.50	3
As			1	4.107	ug/l	2.59	2,863.55	1.795E-02	Pulse	1.00	3
Mo			1	0.286	ug/l	9.14	1,196.71	4.920E-03	Pulse	0.50	3
Pb			1	0.058	ug/l	4.35	2,356.17	5.037E-04	Pulse	1.00	3
Be			1	0.000	ug/l	2822.93	0.33	1.739E-06	Pulse	2.00	3
Ag			1	0.009	ug/l	14.81	157.33	1.023E-04	Pulse	0.50	3
Ba			1	40.551	ug/l	0.30	58,512.14	3.802E-02	Pulse	0.50	3
Tl			1	0.004	ug/l	18.60	206.67	4.417E-05	Pulse	0.50	3
Sn			1	0.621	ug/l	3.21	2,270.20	1.475E-03	Pulse	0.30	3
Sr			1	121.150	ug/l	1.60	347,848.43	2.260E-01	Pulse	0.50	3
[Pb]			1	0.059	ug/l	6.59	1,110.04	2.373E-04	Pulse	0.50	3
Ca			1	55036.352	ug/l	0.96	730,160.54	3.810E+00	Pulse	0.50	3
Ti			1	0.171	ug/l	49.63	21.33	1.114E-04	Pulse	0.50	3
Na			1	63731.901	ug/l	1.80	44,384,706.67	2.316E+02	Analog	1.00	3
Mg			1	24958.677	ug/l	1.41	8,021,699.67	4.186E+01	Analog	1.00	3
K			1	1416.120	ug/l	0.79	352,363.93	1.839E+00	Pulse	1.00	3
V			1	0.434	ug/l	5.11	2,785.54	1.454E-02	Pulse	0.50	3
Mn			1	162.277	ug/l	0.74	428,750.23	2.687E+00	Pulse	0.50	3
Fe			1	249.664	ug/l	1.45	1,198,678.79	7.512E+00	Pulse	0.50	3
Co			1	0.069	ug/l	4.75	757.35	4.746E-03	Pulse	0.50	3
Ni			1	0.262	ug/l	7.97	856.02	5.365E-03	Pulse	0.50	3
Cu			1	0.236	ug/l	6.93	9,875.22	6.189E-02	Pulse	0.50	3
Zn			1	4.216	ug/l	1.72	6,608.47	2.716E-02	Pulse	1.00	3
Cd			1	0.008	ug/l	119.27	25.33	1.039E-04	Pulse	0.50	3
Al			1	14.416	ug/l	8.37	1,530.40	7.987E-03	Pulse	1.00	3
Se			1	0.233	ug/l	65.81	23.78	1.544E-05	Pulse	3.00	3
Sb			1	0.108	ug/l	7.20	621.68	2.556E-03	Pulse	1.00	3
Se			1	0.567	ug/l	42.50	31.11	2.828E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,678,094.00	0.43	88.1	Pulse	0.50	3
1	Sc		191,654.48	0.42	95.2	Pulse	0.30	3
1	Ge		159,565.47	0.12	95.2	Pulse	0.30	3
1	In		1,539,174.66	0.41	90.5	Pulse	0.30	3
1	Tb		6,791,629.83	0.35	99.7	Analog	0.50	3
1	Lu		3,899,340.25	0.26	92.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		243,265.13	0.42	95.3	Pulse	0.30	3
1	Te		11,016.01	1.58	74.4	Pulse	0.50	3
1	Li		1,055.59	5.91	96.4	Pulse	0.30	3

Quantitation Report

File Name	042CCVA.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 11:31
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.602	ug/l	0.92	645,536.71	3.772E+00	Pulse	0.50	3
As			1	49.646	ug/l	0.07	73,707.42	4.306E-01	Pulse	1.00	3
Mo			1	50.299	ug/l	0.30	444,855.80	1.721E+00	Pulse	0.50	3
Pb			1	49.581	ug/l	0.81	2,457,518.17	4.910E-01	Pulse	1.00	3
Be			1	51.660	ug/l	0.40	3,617.49	1.788E-02	Pulse	2.00	3
Ag			1	51.573	ug/l	0.65	1,634,874.00	9.890E-01	Pulse	0.50	3
Ba			1	48.961	ug/l	1.00	151,708.11	9.178E-02	Pulse	0.50	3
Tl			1	50.349	ug/l	0.39	3,651,385.92	7.295E-01	Pulse	0.50	3
Sn			1	50.533	ug/l	0.81	347,279.47	2.101E-01	Pulse	0.30	3
Sr			1	49.968	ug/l	1.04	308,258.69	1.865E-01	Pulse	0.50	3
[Pb]			1	49.932	ug/l	0.90	1,161,362.67	2.320E-01	Pulse	0.50	3
Ca			1	4915.653	ug/l	1.47	137,754.95	6.810E-01	Pulse	0.50	3
Ti			1	48.944	ug/l	4.31	11,329.31	5.601E-02	Pulse	0.50	3
Na			1	5170.649	ug/l	1.15	7,610,520.50	3.763E+01	Analog	1.00	3
Mg			1	4926.441	ug/l	0.79	3,342,428.17	1.652E+01	Pulse	1.00	3
K			1	4962.092	ug/l	0.93	2,502,014.25	1.237E+01	Pulse	1.00	3
V			1	50.204	ug/l	1.04	472,121.77	2.334E+00	Pulse	0.50	3
Mn			1	49.425	ug/l	0.84	280,187.86	1.637E+00	Pulse	0.50	3
Fe			1	5197.193	ug/l	0.58	53,237,469.33	3.110E+02	Analog	0.50	3
Co			1	50.778	ug/l	1.11	1,159,873.71	6.777E+00	Pulse	0.50	3
Ni			1	51.196	ug/l	0.75	324,850.87	1.898E+00	Pulse	0.50	3
Cu			1	51.335	ug/l	0.71	920,228.06	5.377E+00	Pulse	0.50	3
Zn			1	51.028	ug/l	0.59	124,833.97	4.831E-01	Pulse	1.00	3
Cd			1	50.008	ug/l	0.56	210,798.60	8.157E-01	Pulse	0.50	3
Al			1	4778.862	ug/l	1.50	978,945.65	4.840E+00	Pulse	1.00	3
Se			1	50.809	ug/l	0.48	4,735.92	2.865E-03	Pulse	3.00	3
Sb			1	48.325	ug/l	1.26	472,260.05	1.827E+00	Pulse	1.00	3
Se			1	47.713	ug/l	2.32	2,383.26	1.708E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,005,553.67	0.61	94.2	Pulse	0.50	3
1	Sc		202,282.62	0.85	100.4	Pulse	0.30	3
1	Ge		171,159.46	0.51	102.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,653,052.16	0.31	97.2	Pulse	0.30	3
1	Tb		7,151,646.50	0.69	105.0	Analog	0.50	3
1	Lu		4,051,810.67	0.47	95.6	Pulse	0.50	3
1	Ge		258,429.35	0.47	101.2	Pulse	0.30	3
1	Te		13,950.67	1.14	94.3	Pulse	0.50	3
1	Li		1,120.04	7.81	102.3	Pulse	0.30	3

Quantitation Report

File Name	043_CCV.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 11:34
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	100.857	ug/l	0.53	1,279,015.04	7.514E+00	Pulse	0.50	3
As			1	99.581	ug/l	0.80	147,002.01	8.636E-01	Pulse	1.00	3
Mo			1	99.094	ug/l	0.84	881,825.15	3.391E+00	Pulse	0.50	3
Pb			1	97.847	ug/l	0.85	4,788,878.33	9.687E-01	Pulse	1.00	3
Be			1	101.231	ug/l	0.60	7,147.09	3.504E-02	Pulse	2.00	3
Ag			1	101.559	ug/l	1.23	3,195,620.00	1.948E+00	Pulse	0.50	3
Ba			1	98.593	ug/l	0.41	303,225.27	1.848E-01	Pulse	0.50	3
Tl			1	104.121	ug/l	1.02	7,457,414.67	1.509E+00	Analog	0.50	3
Sn			1	101.417	ug/l	0.56	691,541.86	4.214E-01	Pulse	0.30	3
Sr			1	100.675	ug/l	0.47	616,012.07	3.754E-01	Pulse	0.50	3
[Pb]			1	99.477	ug/l	0.73	2,284,707.08	4.621E-01	Pulse	0.50	3
Ca			1	9683.500	ug/l	1.71	273,506.44	1.341E+00	Pulse	0.50	3
Ti			1	99.557	ug/l	3.01	23,233.13	1.139E-01	Pulse	0.50	3
Na			1	10162.906	ug/l	1.94	15,070,535.00	7.390E+01	Analog	1.00	3
Mg			1	10091.209	ug/l	1.32	6,902,851.83	3.385E+01	Analog	1.00	3
K			1	10196.679	ug/l	1.63	5,165,451.33	2.533E+01	Analog	1.00	3
V			1	99.175	ug/l	1.85	939,412.06	4.606E+00	Pulse	0.50	3
Mn			1	98.951	ug/l	0.34	557,767.44	3.277E+00	Pulse	0.50	3
Fe			1	10284.306	ug/l	0.57	104,758,178.67	6.154E+02	Analog	0.50	3
Co			1	100.485	ug/l	1.04	2,282,539.67	1.341E+01	Pulse	0.50	3
Ni			1	101.521	ug/l	0.41	640,522.56	3.763E+00	Pulse	0.50	3
Cu			1	100.737	ug/l	0.84	1,787,720.50	1.050E+01	Pulse	0.50	3
Zn			1	98.863	ug/l	0.37	241,518.31	9.288E-01	Pulse	1.00	3
Cd			1	97.719	ug/l	0.05	414,450.61	1.594E+00	Pulse	0.50	3
Al			1	9543.234	ug/l	1.89	1,970,878.00	9.664E+00	Pulse	1.00	3
Se			1	100.154	ug/l	1.73	9,251.90	5.639E-03	Pulse	3.00	3
Sb			1	94.983	ug/l	0.47	933,854.06	3.591E+00	Pulse	1.00	3
Se			1	97.030	ug/l	0.51	4,726.15	3.455E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,943,711.83	0.62	93.1	Pulse	0.50	3
1	Sc		203,970.22	1.50	101.3	Pulse	0.30	3
1	Ge		170,217.63	0.72	101.6	Pulse	0.30	3
1	In		1,640,923.24	0.66	96.5	Pulse	0.30	3
1	Tb		7,043,049.33	0.71	103.4	Analog	0.50	3
1	Lu		4,046,690.08	0.46	95.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		260,024.36	0.46	101.8	Pulse	0.30	3
1	Te		13,680.48	2.14	92.5	Pulse	0.50	3
1	Li		1,021.14	1.54	93.3	Pulse	0.30	3

Quantitation Report

File Name	044_CCB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 11:38
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	1120.58	571.34	3.335E-03	Pulse	0.50	3
As			1	-0.004	ug/l	-47.82	17.67	1.032E-04	Pulse	1.00	3
Mo			1	0.040	ug/l	15.22	356.67	1.383E-03	Pulse	0.50	3
Pb			1	0.015	ug/l	27.38	1,875.77	3.694E-04	Pulse	1.00	3
Be			1	0.007	ug/l	58.90	0.83	4.127E-06	Pulse	2.00	3
Ag			1	0.009	ug/l	4.75	320.00	1.904E-04	Pulse	0.50	3
Ba			1	0.002	ug/l	225.11	35.33	2.100E-05	Pulse	0.50	3
Tl			1	0.071	ug/l	16.46	5,311.53	1.045E-03	Pulse	0.50	3
Sn			1	0.032	ug/l	26.16	534.45	3.179E-04	Pulse	0.30	3
Sr			1	0.006	ug/l	81.98	556.01	3.307E-04	Pulse	0.50	3
[Pb]			1	0.017	ug/l	21.15	911.37	1.795E-04	Pulse	0.50	3
Ca			1	0.509	ug/l	136.48	132.00	6.532E-04	Pulse	0.50	3
Ti			1	0.020	ug/l	49.42	7.33	3.627E-05	Pulse	0.50	3
Na			1	6.459	ug/l	5.04	20,567.52	1.018E-01	Pulse	1.00	3
Mg			1	0.538	ug/l	51.08	579.01	2.863E-03	Pulse	1.00	3
K			1	3.164	ug/l	8.29	18,914.07	9.360E-02	Pulse	1.00	3
V			1	-0.051	ug/l	-5.65	422.68	2.092E-03	Pulse	0.50	3
Mn			1	0.001	ug/l	827.24	113.33	6.613E-04	Pulse	0.50	3
Fe			1	0.753	ug/l	33.80	15,000.61	8.748E-02	Pulse	0.50	3
Co			1	0.006	ug/l	37.71	163.33	9.517E-04	Pulse	0.50	3
Ni			1	0.003	ug/l	74.98	106.00	6.186E-04	Pulse	0.50	3
Cu			1	-0.107	ug/l	-8.25	6,591.81	3.849E-02	Pulse	0.50	3
Zn			1	-0.085	ug/l	-20.98	1,735.75	6.727E-03	Pulse	1.00	3
Cd			1	0.007	ug/l	46.23	37.33	1.447E-04	Pulse	0.50	3
Al			1	0.382	ug/l	87.88	217.33	1.075E-03	Pulse	1.00	3
Se			1	0.031	ug/l	82.88	17.89	1.064E-05	Pulse	3.00	3
Sb			1	0.010	ug/l	25.13	234.00	9.064E-04	Pulse	1.00	3
Se			1	-0.006	ug/l	-1183.79	26.11	1.800E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,069,830.67	1.99	95.4	Pulse	0.50	3
1	Sc		202,066.15	0.53	100.3	Pulse	0.30	3

Quantitation Report

1	Ge		171,279.94	1.11	102.2	Pulse	0.30	3
1	In		1,680,743.20	0.54	98.9	Pulse	0.30	3
1	Tb		7,097,304.00	1.15	104.2	Analog	0.50	3
1	Lu		4,060,520.33	0.53	95.8	Pulse	0.50	3
1	Ge		258,016.93	0.83	101.0	Pulse	0.30	3
1	Te		14,514.45	0.54	98.1	Pulse	0.50	3
1	Li		1,085.59	4.96	99.2	Pulse	0.30	3

Quantitation Report

File Name 045SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 11:42
Sample Name FA55914-4
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.621	ug/l	4.48	22,344.15	1.381E-01	Pulse	0.50	3
As			1	0.248	ug/l	14.11	196.67	1.217E-03	Pulse	1.00	3
Mo			1	0.745	ug/l	0.78	3,148.28	1.277E-02	Pulse	0.50	3
Pb			1	0.178	ug/l	7.13	5,301.50	1.098E-03	Pulse	1.00	3
Be			1	0.050	ug/l	83.63	2.00	1.034E-05	Pulse	2.00	3
Ag			1	0.021	ug/l	11.73	352.67	2.206E-04	Pulse	0.50	3
Ba			1	317.432	ug/l	5.12	476,301.27	2.975E-01	Pulse	0.50	3
Tl			1	0.059	ug/l	8.94	2,134.14	4.405E-04	Pulse	0.50	3
Sn			1	0.677	ug/l	8.00	2,546.86	1.591E-03	Pulse	0.30	3
Sr			1	18517.805	ug/l	5.62	55,228,260.00	3.450E+01	Analog	0.50	3
[Pb]			1	0.180	ug/l	5.74	2,505.53	5.186E-04	Pulse	0.50	3
Ca			1	135153.062	ug/l	6.93	1,844,313.42	9.355E+00	Pulse	0.50	3
Ti			1	0.719	ug/l	6.48	84.00	4.250E-04	Pulse	0.50	3
Na			1	56299.727	ug/l	6.81	40,336,980.00	2.046E+02	Analog	1.00	3
Mg			1	4087.868	ug/l	7.51	1,351,412.46	6.856E+00	Pulse	1.00	3
K			1	44821.156	ug/l	6.09	10,957,481.00	5.556E+01	Analog	1.00	3
V			1	0.179	ug/l	17.60	1,697.41	8.615E-03	Pulse	0.50	3
Mn			1	15.672	ug/l	5.29	42,061.36	2.601E-01	Pulse	0.50	3
Fe			1	49.783	ug/l	6.31	247,680.83	1.532E+00	Pulse	0.50	3
Co			1	0.505	ug/l	8.67	5,467.46	3.384E-02	Pulse	0.50	3
Ni			1	0.542	ug/l	6.73	1,705.41	1.055E-02	Pulse	0.50	3
Cu			1	0.632	ug/l	14.06	13,329.29	8.243E-02	Pulse	0.50	3
Zn			1	2.056	ug/l	6.75	4,213.14	1.710E-02	Pulse	1.00	3
Cd			1	0.012	ug/l	16.31	32.67	1.328E-04	Pulse	0.50	3
Al			1	27.241	ug/l	10.93	2,851.88	1.448E-02	Pulse	1.00	3
Se			1	0.108	ug/l	27.90	19.11	1.192E-05	Pulse	3.00	3
Sb			1	1.290	ug/l	3.96	6,134.70	2.490E-02	Pulse	1.00	3
Se			1	0.357	ug/l	64.11	28.11	2.454E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,837,901.83	4.71	91.1	Pulse	0.50	3
1	Sc		197,658.69	5.63	98.1	Pulse	0.30	3
1	Ge		161,956.54	4.18	96.7	Pulse	0.30	3
1	In		1,603,726.01	4.69	94.3	Pulse	0.30	3
1	Tb		7,084,119.50	4.21	104.0	Analog	0.50	3
1	Lu		4,028,864.75	5.56	95.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,587.54	3.54	96.6	Pulse	0.30	3
1	Te		11,481.64	2.19	77.6	Pulse	0.50	3
1	Li		1,058.92	8.10	96.8	Pulse	0.30	3

Quantitation Report

File Name 046SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 11:46
Sample Name FA55914-6
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	4.648	ug/l	0.27	27,592.18	1.764E-01	Pulse	0.50	3
As			1	140.305	ug/l	1.16	95,182.78	6.085E-01	Pulse	1.00	3
Mo			1	1.770	ug/l	3.97	7,162.05	3.031E-02	Pulse	0.50	3
Pb			1	0.294	ug/l	1.78	7,939.85	1.673E-03	Pulse	1.00	3
Be			1	0.198	ug/l	74.62	6.67	3.602E-05	Pulse	2.00	3
Ag			1	0.019	ug/l	10.89	300.67	1.963E-04	Pulse	0.50	3
Ba			1	188.153	ug/l	1.34	269,879.11	1.763E-01	Pulse	0.50	3
Tl			1	0.026	ug/l	4.57	951.36	2.005E-04	Pulse	0.50	3
Sn			1	0.609	ug/l	4.08	2,221.26	1.451E-03	Pulse	0.30	3
Sr			1	379.644	ug/l	1.28	1,082,976.87	7.076E-01	Pulse	0.50	3
[Pb]			1	0.296	ug/l	2.67	3,743.09	7.886E-04	Pulse	0.50	3
Ca			1	92589.557	ug/l	1.36	1,185,009.29	6.409E+00	Pulse	0.50	3
Ti			1	5.810	ug/l	3.05	617.35	3.337E-03	Pulse	0.50	3
Na			1	9015.364	ug/l	1.57	6,065,951.67	3.281E+01	Analog	1.00	3
Mg			1	14491.760	ug/l	1.73	4,495,074.83	2.430E+01	Mix	1.00	3
K			1	4079.894	ug/l	1.40	949,558.06	5.136E+00	Pulse	1.00	3
V			1	7.213	ug/l	2.01	31,765.79	1.718E-01	Pulse	0.50	3
Mn			1	1167.322	ug/l	1.05	3,023,157.33	1.932E+01	Pulse	0.50	3
Fe			1	18751.541	ug/l	1.08	87,772,077.33	5.611E+02	Analog	0.50	3
Co			1	0.426	ug/l	2.95	4,467.87	2.856E-02	Pulse	0.50	3
Ni			1	0.526	ug/l	6.06	1,603.40	1.025E-02	Pulse	0.50	3
Cu			1	0.313	ug/l	10.56	10,302.78	6.587E-02	Pulse	0.50	3
Zn			1	2.226	ug/l	0.73	4,227.14	1.789E-02	Pulse	1.00	3
Cd			1	0.009	ug/l	12.24	26.67	1.129E-04	Pulse	0.50	3
Al			1	133.255	ug/l	2.54	12,600.66	6.816E-02	Pulse	1.00	3
Se			1	0.420	ug/l	4.25	31.67	2.069E-05	Pulse	3.00	3
Sb			1	0.085	ug/l	4.48	500.34	2.117E-03	Pulse	1.00	3
Se			1	1.205	ug/l	37.99	43.55	3.956E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,745,927.67	1.33	89.3	Pulse	0.50	3
1	Sc		184,925.76	1.83	91.8	Pulse	0.30	3
1	Ge		156,449.71	1.32	93.4	Pulse	0.30	3
1	In		1,530,635.91	0.82	90.0	Pulse	0.30	3
1	Tb		6,810,930.33	1.59	100.0	Analog	0.50	3
1	Lu		3,885,710.42	1.36	91.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		236,264.66	1.76	92.5	Pulse	0.30	3
1	Te		11,041.37	3.26	74.6	Pulse	0.50	3
1	Li		1,034.48	13.86	94.5	Pulse	0.30	3

Quantitation Report

File Name	047SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 11:50
Sample Name	FA55914-8
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.494	ug/l	1.77	9,388.95	5.895E-02	Pulse	0.50	3
As			1	26.318	ug/l	1.18	18,197.98	1.142E-01	Pulse	1.00	3
Mo			1	1.237	ug/l	5.43	5,068.04	2.118E-02	Pulse	0.50	3
Pb			1	0.139	ug/l	1.37	4,351.89	9.042E-04	Pulse	1.00	3
Be			1	0.349	ug/l	37.77	11.50	6.214E-05	Pulse	2.00	3
Ag			1	0.016	ug/l	5.67	260.00	1.700E-04	Pulse	0.50	3
Ba			1	92.965	ug/l	1.18	133,215.24	8.713E-02	Pulse	0.50	3
Tl			1	0.013	ug/l	11.62	512.68	1.066E-04	Pulse	0.50	3
Sn			1	0.592	ug/l	3.95	2,164.59	1.416E-03	Pulse	0.30	3
Sr			1	145.070	ug/l	1.69	413,647.67	2.706E-01	Pulse	0.50	3
[Pb]			1	0.139	ug/l	6.61	2,037.46	4.234E-04	Pulse	0.50	3
Ca			1	32348.448	ug/l	2.58	413,017.30	2.240E+00	Pulse	0.50	3
Ti			1	0.463	ug/l	2.34	51.33	2.782E-04	Pulse	0.50	3
Na			1	12249.118	ug/l	3.28	8,216,458.67	4.456E+01	Analog	1.00	3
Mg			1	7522.383	ug/l	2.36	2,326,741.00	1.262E+01	Pulse	1.00	3
K			1	2046.417	ug/l	1.43	483,039.04	2.619E+00	Pulse	1.00	3
V			1	6.324	ug/l	2.80	27,883.25	1.512E-01	Pulse	0.50	3
Mn			1	1027.058	ug/l	3.27	2,707,559.50	1.700E+01	Pulse	0.50	3
Fe			1	65154.108	ug/l	2.77	310,444,512.00	1.949E+03	Analog	0.50	3
Co			1	13.667	ug/l	3.03	145,243.62	9.121E-01	Pulse	0.50	3
Ni			1	3.080	ug/l	2.64	9,169.53	5.758E-02	Pulse	0.50	3
Cu			1	0.371	ug/l	15.41	10,971.16	6.891E-02	Pulse	0.50	3
Zn			1	11.955	ug/l	1.12	15,129.93	6.322E-02	Pulse	1.00	3
Cd			1	0.020	ug/l	6.51	48.67	2.033E-04	Pulse	0.50	3
Al			1	38.735	ug/l	4.69	3,742.69	2.030E-02	Pulse	1.00	3
Se			1	1.296	ug/l	12.78	69.22	4.531E-05	Pulse	3.00	3
Sb			1	0.077	ug/l	1.95	470.01	1.964E-03	Pulse	1.00	3
Se			1	4.971	ug/l	6.94	119.33	1.063E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,812,970.00	0.84	90.6	Pulse	0.50	3
1	Sc		184,492.26	2.29	91.6	Pulse	0.30	3
1	Ge		159,310.01	2.11	95.1	Pulse	0.30	3
1	In		1,529,056.43	1.34	89.9	Pulse	0.30	3
1	Tb		6,912,634.83	0.38	101.5	Analog	0.50	3
1	Lu		3,882,592.50	1.76	91.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		239,327.09	0.94	93.7	Pulse	0.30	3
1	Te		11,230.81	0.98	75.9	Pulse	0.50	3
1	Li		1,051.14	9.72	96.0	Pulse	0.30	3

Quantitation Report

File Name 048SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 11:53
Sample Name FA55914-9
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.441	ug/l	6.09	3,208.28	1.972E-02	Pulse	0.50	3
As			1	0.126	ug/l	11.95	111.67	6.865E-04	Pulse	1.00	3
Mo			1	0.108	ug/l	6.76	460.68	1.871E-03	Pulse	0.50	3
Pb			1	0.133	ug/l	2.60	4,272.88	8.773E-04	Pulse	1.00	3
Be			1	0.011	ug/l	85.68	0.67	3.521E-06	Pulse	2.00	3
Ag			1	0.011	ug/l	2.47	192.00	1.226E-04	Pulse	0.50	3
Ba			1	20.558	ug/l	1.15	30,187.15	1.928E-02	Pulse	0.50	3
Tl			1	0.007	ug/l	12.18	326.67	6.707E-05	Pulse	0.50	3
Sn			1	0.602	ug/l	12.49	2,245.72	1.435E-03	Pulse	0.30	3
Sr			1	593.513	ug/l	2.72	1,731,537.08	1.106E+00	Pulse	0.50	3
[Pb]			1	0.130	ug/l	5.29	1,958.79	4.022E-04	Pulse	0.50	3
Ca			1	36060.981	ug/l	1.93	474,410.28	2.497E+00	Pulse	0.50	3
Ti			1	0.119	ug/l	110.67	15.33	8.127E-05	Pulse	0.50	3
Na			1	11012.996	ug/l	2.56	7,613,583.33	4.007E+01	Analog	1.00	3
Mg			1	8536.484	ug/l	2.28	2,720,436.33	1.432E+01	Pulse	1.00	3
K			1	941.253	ug/l	2.91	237,684.27	1.251E+00	Pulse	1.00	3
V			1	0.141	ug/l	16.88	1,469.39	7.735E-03	Pulse	0.50	3
Mn			1	2.813	ug/l	3.99	7,678.87	4.721E-02	Pulse	0.50	3
Fe			1	66.180	ug/l	1.58	328,959.09	2.022E+00	Pulse	0.50	3
Co			1	0.078	ug/l	7.18	869.36	5.346E-03	Pulse	0.50	3
Ni			1	0.291	ug/l	6.36	959.36	5.898E-03	Pulse	0.50	3
Cu			1	0.149	ug/l	12.03	9,335.60	5.739E-02	Pulse	0.50	3
Zn			1	7.676	ug/l	1.71	10,655.29	4.329E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	1311.74	9.33	3.783E-05	Pulse	0.50	3
Al			1	6.206	ug/l	4.76	728.02	3.830E-03	Pulse	1.00	3
Se			1	0.022	ug/l	38.78	14.89	9.509E-06	Pulse	3.00	3
Sb			1	0.024	ug/l	15.11	236.67	9.611E-04	Pulse	1.00	3
Se			1	0.045	ug/l	153.22	21.78	1.902E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,870,462.50	0.12	91.7	Pulse	0.50	3
1	Sc		190,038.06	1.22	94.3	Pulse	0.30	3
1	Ge		162,658.09	0.48	97.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,565,768.59	0.70	92.1	Pulse	0.30	3
1	Tb		7,069,187.33	0.23	103.8	Analog	0.50	3
1	Lu		3,982,742.08	0.21	94.0	Pulse	0.50	3
1	Ge		246,145.31	0.90	96.4	Pulse	0.30	3
1	Te		11,450.96	1.91	77.4	Pulse	0.50	3
1	Li		1,005.58	4.57	91.9	Pulse	0.30	3

Quantitation Report

File Name 049SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 11:57
Sample Name FA56136-22
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.496	ug/l	1.67	3,615.68	2.178E-02	Pulse	0.50	3
As			1	0.026	ug/l	36.23	42.00	2.535E-04	Pulse	1.00	3
Mo			1	0.035	ug/l	12.18	154.67	6.149E-04	Pulse	0.50	3
Pb			1	0.045	ug/l	4.96	2,202.15	4.409E-04	Pulse	1.00	3
Be			1	0.000	ug/l	16220.49	0.33	1.704E-06	Pulse	2.00	3
Ag			1	0.032	ug/l	8.13	519.34	3.207E-04	Pulse	0.50	3
Ba			1	0.575	ug/l	5.16	898.03	5.552E-04	Pulse	0.50	3
Tl			1	0.005	ug/l	22.38	248.67	4.982E-05	Pulse	0.50	3
Sn			1	0.701	ug/l	8.83	2,651.33	1.642E-03	Pulse	0.30	3
Sr			1	1.168	ug/l	3.78	4,014.45	2.483E-03	Pulse	0.50	3
[Pb]			1	0.047	ug/l	16.96	1,039.37	2.082E-04	Pulse	0.50	3
Ca			1	132.209	ug/l	10.20	1,902.77	9.733E-03	Pulse	0.50	3
Ti			1	0.209	ug/l	41.70	26.00	1.328E-04	Pulse	0.50	3
Na			1	254.610	ug/l	1.89	191,513.75	9.799E-01	Pulse	1.00	3
Mg			1	33.190	ug/l	2.89	11,084.41	5.672E-02	Pulse	1.00	3
K			1	19.740	ug/l	1.51	21,543.72	1.102E-01	Pulse	1.00	3
V			1	0.147	ug/l	26.88	1,539.40	7.865E-03	Pulse	0.50	3
Mn			1	0.758	ug/l	5.45	2,189.47	1.319E-02	Pulse	0.50	3
Fe			1	9.328	ug/l	3.57	53,359.56	3.215E-01	Pulse	0.50	3
Co			1	0.033	ug/l	5.40	388.68	2.342E-03	Pulse	0.50	3
Ni			1	0.332	ug/l	7.30	1,107.37	6.667E-03	Pulse	0.50	3
Cu			1	1.927	ug/l	2.40	24,839.97	1.496E-01	Pulse	0.50	3
Zn			1	1.342	ug/l	5.49	3,465.98	1.377E-02	Pulse	1.00	3
Cd			1	-0.001	ug/l	-117.29	7.33	2.904E-05	Pulse	0.50	3
Al			1	8.030	ug/l	5.96	928.69	4.753E-03	Pulse	1.00	3
Se			1	0.075	ug/l	89.33	17.78	1.101E-05	Pulse	3.00	3
Sb			1	0.025	ug/l	12.83	249.00	9.897E-04	Pulse	1.00	3
Se			1	0.040	ug/l	570.58	21.67	1.894E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,996,024.83	1.50	94.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		195,485.94	1.65	97.1	Pulse	0.30	3
1	Ge		166,019.06	1.75	99.1	Pulse	0.30	3
1	In		1,617,416.15	2.78	95.1	Pulse	0.30	3
1	Tb		7,104,498.67	1.90	104.3	Analog	0.50	3
1	Lu		4,035,769.58	2.44	95.2	Pulse	0.50	3
1	Ge		251,739.93	1.55	98.6	Pulse	0.30	3
1	Te		11,472.95	2.53	77.5	Pulse	0.50	3
1	Li		1,030.03	12.49	94.1	Pulse	0.30	3

Quantitation Report

File Name	050SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:01
Sample Name	FA55888-1A
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.350	ug/l	5.25	2,661.53	1.634E-02	Pulse	0.50	3
As			1	0.034	ug/l	42.54	47.00	2.890E-04	Pulse	1.00	3
Mo			1	0.019	ug/l	45.33	85.33	3.460E-04	Pulse	0.50	3
Pb			1	0.145	ug/l	2.35	4,631.97	9.366E-04	Pulse	1.00	3
Be			1	0.010	ug/l	168.03	0.67	3.479E-06	Pulse	2.00	3
Ag			1	0.008	ug/l	24.43	152.67	9.563E-05	Pulse	0.50	3
Ba			1	0.154	ug/l	11.86	256.67	1.609E-04	Pulse	0.50	3
Tl			1	0.003	ug/l	21.95	188.67	3.817E-05	Pulse	0.50	3
Sn			1	0.484	ug/l	0.41	1,900.11	1.190E-03	Pulse	0.30	3
Sr			1	0.145	ug/l	12.50	921.36	5.767E-04	Pulse	0.50	3
[Pb]			1	0.150	ug/l	4.62	2,213.49	4.477E-04	Pulse	0.50	3
Ca			1	22.370	ug/l	3.31	412.68	2.131E-03	Pulse	0.50	3
Ti			1	0.109	ug/l	62.37	14.67	7.570E-05	Pulse	0.50	3
Na			1	21.344	ug/l	4.66	25,634.32	1.324E-01	Pulse	1.00	3
Mg			1	7.589	ug/l	4.97	2,669.85	1.379E-02	Pulse	1.00	3
K			1	11.620	ug/l	10.65	19,395.50	1.002E-01	Pulse	1.00	3
V			1	0.106	ug/l	16.47	1,342.05	6.934E-03	Pulse	0.50	3
Mn			1	0.379	ug/l	3.88	1,125.37	6.910E-03	Pulse	0.50	3
Fe			1	18.662	ug/l	5.06	97,938.15	6.008E-01	Pulse	0.50	3
Co			1	0.029	ug/l	16.04	338.67	2.080E-03	Pulse	0.50	3
Ni			1	0.043	ug/l	6.61	211.33	1.298E-03	Pulse	0.50	3
Cu			1	0.591	ug/l	9.91	13,073.79	8.029E-02	Pulse	0.50	3
Zn			1	1.575	ug/l	6.34	3,680.36	1.486E-02	Pulse	1.00	3
Cd			1	-0.001	ug/l	-230.54	6.00	2.426E-05	Pulse	0.50	3
Al			1	6.362	ug/l	2.19	757.35	3.909E-03	Pulse	1.00	3
Se			1	0.066	ug/l	122.23	17.11	1.073E-05	Pulse	3.00	3
Sb			1	0.015	ug/l	6.36	200.00	8.078E-04	Pulse	1.00	3
Se			1	0.073	ug/l	128.66	22.44	1.952E-03	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,945,179.00	0.59	93.1	Pulse	0.50	3
1	Sc		193,694.68	2.14	96.2	Pulse	0.30	3
1	Ge		162,926.88	2.14	97.3	Pulse	0.30	3
1	In		1,596,974.97	1.38	93.9	Pulse	0.30	3
1	Tb		6,976,160.00	1.04	102.4	Analog	0.50	3
1	Lu		3,909,354.25	1.07	92.3	Pulse	0.50	3
1	Ge		247,599.39	1.51	97.0	Pulse	0.30	3
1	Te		11,502.31	0.89	77.7	Pulse	0.50	3
1	Li		1,016.70	6.55	92.9	Pulse	0.30	3

Quantitation Report

File Name	051SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:05
Sample Name	FA55889-1A
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.296	ug/l	8.57	2,318.15	1.435E-02	Pulse	0.50	3
As			1	0.021	ug/l	41.62	37.33	2.310E-04	Pulse	1.00	3
Mo			1	0.011	ug/l	16.30	52.67	2.121E-04	Pulse	0.50	3
Pb			1	0.021	ug/l	5.53	1,587.08	3.207E-04	Pulse	1.00	3
Be			1	0.011	ug/l	333.17	0.67	3.510E-06	Pulse	2.00	3
Ag			1	0.010	ug/l	12.02	176.00	1.108E-04	Pulse	0.50	3
Ba			1	0.024	ug/l	18.77	62.00	3.900E-05	Pulse	0.50	3
Tl			1	0.003	ug/l	14.50	170.67	3.449E-05	Pulse	0.50	3
Sn			1	0.512	ug/l	7.97	1,982.35	1.248E-03	Pulse	0.30	3
Sr			1	0.101	ug/l	14.51	786.69	4.950E-04	Pulse	0.50	3
[Pb]			1	0.022	ug/l	41.12	754.02	1.523E-04	Pulse	0.50	3
Ca			1	13.688	ug/l	13.88	292.67	1.530E-03	Pulse	0.50	3
Ti			1	0.013	ug/l	139.45	4.00	2.094E-05	Pulse	0.50	3
Na			1	14.871	ug/l	2.41	20,820.78	1.089E-01	Pulse	1.00	3
Mg			1	7.314	ug/l	2.83	2,548.17	1.333E-02	Pulse	1.00	3
K			1	8.562	ug/l	6.56	18,429.58	9.637E-02	Pulse	1.00	3
V			1	0.111	ug/l	30.08	1,345.39	7.038E-03	Pulse	0.50	3
Mn			1	0.077	ug/l	20.71	310.00	1.918E-03	Pulse	0.50	3
Fe			1	2.791	ug/l	3.53	20,349.37	1.259E-01	Pulse	0.50	3
Co			1	0.016	ug/l	10.73	196.67	1.217E-03	Pulse	0.50	3
Ni			1	0.031	ug/l	54.26	173.33	1.073E-03	Pulse	0.50	3
Cu			1	0.259	ug/l	21.54	10,190.05	6.306E-02	Pulse	0.50	3
Zn			1	3.411	ug/l	3.00	5,817.22	2.341E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	1745.85	9.33	3.747E-05	Pulse	0.50	3
Al			1	5.045	ug/l	3.25	620.01	3.242E-03	Pulse	1.00	3
Se			1	0.037	ug/l	104.52	15.78	9.940E-06	Pulse	3.00	3
Sb			1	0.014	ug/l	5.05	192.00	7.727E-04	Pulse	1.00	3
Se			1	0.267	ug/l	64.14	26.56	2.295E-03	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,949,922.50	1.22	93.2	Pulse	0.50	3
1	Sc		191,244.40	0.71	94.9	Pulse	0.30	3
1	Ge		161,596.06	0.25	96.5	Pulse	0.30	3
1	In		1,588,716.08	1.17	93.4	Pulse	0.30	3
1	Tb		7,005,301.83	0.56	102.8	Analog	0.50	3
1	Lu		3,918,405.42	0.17	92.5	Pulse	0.50	3
1	Ge		248,475.47	0.78	97.3	Pulse	0.30	3
1	Te		11,591.70	2.09	78.3	Pulse	0.50	3
1	Li		1,047.81	10.41	95.7	Pulse	0.30	3

Quantitation Report

File Name	052_MB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:08
Sample Name	MP34081-MB1
Sample Type	MB
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.060	ug/l	9.67	938.69	5.532E-03	Pulse	0.50	3
As			1	-0.010	ug/l	-49.84	17.00	1.001E-04	Pulse	1.00	3
Mo			1	0.008	ug/l	27.08	40.00	1.553E-04	Pulse	0.50	3
Pb			1	0.057	ug/l	2.04	2,531.53	4.994E-04	Pulse	1.00	3
Be			1	-0.010	ug/l	0.00	0.00	0.000E+00	Pulse	2.00	3
Ag			1	0.008	ug/l	18.79	155.33	9.326E-05	Pulse	0.50	3
Ba			1	0.049	ug/l	21.45	104.67	6.283E-05	Pulse	0.50	3
Tl			1	0.002	ug/l	18.78	147.33	2.905E-05	Pulse	0.50	3
Sn			1	0.207	ug/l	14.45	1,026.71	6.158E-04	Pulse	0.30	3
Sr			1	0.126	ug/l	34.23	902.69	5.415E-04	Pulse	0.50	3
[Pb]			1	0.056	ug/l	6.06	1,169.38	2.307E-04	Pulse	0.50	3
Ca			1	16.513	ug/l	4.53	347.33	1.726E-03	Pulse	0.50	3
Ti			1	0.040	ug/l	123.63	7.33	3.633E-05	Pulse	0.50	3
Na			1	10.852	ug/l	4.54	18,979.55	9.428E-02	Pulse	1.00	3
Mg			1	7.553	ug/l	4.59	2,762.20	1.373E-02	Pulse	1.00	3
K			1	10.756	ug/l	9.74	19,943.71	9.909E-02	Pulse	1.00	3
V			1	-0.044	ug/l	-22.55	692.01	3.439E-03	Pulse	0.50	3
Mn			1	0.156	ug/l	18.17	548.01	3.230E-03	Pulse	0.50	3
Fe			1	14.540	ug/l	1.87	81,015.96	4.775E-01	Pulse	0.50	3
Co			1	0.006	ug/l	23.02	92.00	5.421E-04	Pulse	0.50	3
Ni			1	0.026	ug/l	20.93	168.00	9.907E-04	Pulse	0.50	3
Cu			1	0.251	ug/l	1.78	10,636.29	6.268E-02	Pulse	0.50	3
Zn			1	1.455	ug/l	5.39	3,689.36	1.430E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	1388.67	10.00	3.898E-05	Pulse	0.50	3
Al			1	4.627	ug/l	2.77	610.01	3.030E-03	Pulse	1.00	3
Se			1	0.035	ug/l	185.40	16.45	9.868E-06	Pulse	3.00	3
Sb			1	0.012	ug/l	20.02	191.00	7.401E-04	Pulse	1.00	3
Se			1	-0.033	ug/l	-326.28	23.56	1.764E-03	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,068,433.50	0.79	95.4	Pulse	0.50	3
1	Sc		201,294.85	1.00	99.9	Pulse	0.30	3
1	Ge		169,698.56	1.05	101.3	Pulse	0.30	3
1	In		1,666,632.64	0.69	98.0	Pulse	0.30	3
1	Tb		7,073,129.33	0.71	103.8	Analog	0.50	3
1	Lu		4,023,538.00	0.77	94.9	Pulse	0.50	3
1	Ge		257,964.70	1.12	101.0	Pulse	0.30	3
1	Te		13,354.91	1.38	90.3	Pulse	0.50	3
1	Li		1,058.92	5.06	96.8	Pulse	0.30	3

Quantitation Report

File Name 053_BSP.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 12:12
Sample Name MP34081-B1
Sample Type BSP
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	209.059	ug/l	1.73	1,253,942.21	7.788E+00	Pulse	0.50	3
As			1	216.875	ug/l	1.00	151,430.82	9.404E-01	Pulse	1.00	3
Mo			1	205.484	ug/l	1.30	860,090.31	3.516E+00	Pulse	0.50	3
Pb			1	201.181	ug/l	0.26	4,722,525.67	9.959E-01	Pulse	1.00	3
Be			1	211.284	ug/l	1.09	7,065.06	3.657E-02	Pulse	2.00	3
Ag			1	101.601	ug/l	0.32	1,544,197.12	9.742E-01	Pulse	0.50	3
Ba			1	199.925	ug/l	1.14	296,978.71	1.874E-01	Pulse	0.50	3
Tl			1	210.092	ug/l	1.19	7,216,989.17	1.522E+00	Analog	0.50	3
Sn			1	224.274	ug/l	1.09	738,599.17	4.660E-01	Pulse	0.30	3
Sr			1	203.387	ug/l	1.42	601,069.42	3.792E-01	Pulse	0.50	3
[Pb]			1	195.107	ug/l	0.77	2,149,185.67	4.532E-01	Pulse	0.50	3
Ca			1	19384.834	ug/l	0.67	259,336.54	1.342E+00	Pulse	0.50	3
Ti			1	199.055	ug/l	1.69	22,004.37	1.139E-01	Pulse	0.50	3
Na			1	20373.259	ug/l	0.55	14,310,977.67	7.407E+01	Analog	1.00	3
Mg			1	20432.853	ug/l	0.86	6,620,370.83	3.427E+01	Analog	1.00	3
K			1	19429.617	ug/l	0.74	4,662,880.00	2.413E+01	Pulse	1.00	3
V			1	205.565	ug/l	0.51	922,331.73	4.774E+00	Pulse	0.50	3
Mn			1	202.553	ug/l	1.16	540,019.16	3.354E+00	Pulse	0.50	3
Fe			1	20888.939	ug/l	1.19	100,641,722.67	6.250E+02	Analog	0.50	3
Co			1	209.377	ug/l	1.17	2,249,633.58	1.397E+01	Pulse	0.50	3
Ni			1	206.135	ug/l	1.62	615,126.86	3.820E+00	Pulse	0.50	3
Cu			1	209.744	ug/l	1.57	1,760,233.29	1.093E+01	Pulse	0.50	3
Zn			1	201.155	ug/l	0.69	231,122.51	9.448E-01	Pulse	1.00	3
Cd			1	202.624	ug/l	0.68	404,231.21	1.652E+00	Pulse	0.50	3
Al			1	17669.789	ug/l	1.22	1,728,565.96	8.947E+00	Pulse	1.00	3
Se			1	195.159	ug/l	1.09	8,708.32	5.494E-03	Pulse	3.00	3
Sb			1	197.267	ug/l	0.87	912,280.94	3.729E+00	Pulse	1.00	3
Se			1	196.097	ug/l	1.72	4,411.51	3.491E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,742,133.83	0.30	89.3	Pulse	0.50	3
1	Sc		193,206.11	0.52	95.9	Pulse	0.30	3
1	Ge		161,035.71	1.27	96.1	Pulse	0.30	3
1	In		1,585,127.89	0.44	93.2	Pulse	0.30	3
1	Tb		6,887,391.50	0.77	101.1	Analog	0.50	3
1	Lu		3,903,389.67	1.11	92.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		244,628.25	0.87	95.8	Pulse	0.30	3
1	Te		12,638.40	1.10	85.4	Pulse	0.50	3
1	Li		1,034.48	5.85	94.5	Pulse	0.30	3

Quantitation Report

File Name 054SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 12:16
Sample Name FA56145-2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.183	ug/l	7.19	1,684.74	1.012E-02	Pulse	0.50	3
As			1	0.245	ug/l	3.33	200.67	1.205E-03	Pulse	1.00	3
Mo			1	1.187	ug/l	1.94	5,102.04	2.033E-02	Pulse	0.50	3
Pb			1	0.379	ug/l	3.69	10,215.73	2.092E-03	Pulse	1.00	3
Be			1	0.043	ug/l	156.77	1.83	9.163E-06	Pulse	2.00	3
Ag			1	0.024	ug/l	16.78	398.01	2.452E-04	Pulse	0.50	3
Ba			1	12.112	ug/l	1.17	18,456.13	1.137E-02	Pulse	0.50	3
Tl			1	0.152	ug/l	16.59	5,444.23	1.115E-03	Pulse	0.50	3
Sn			1	0.169	ug/l	5.21	870.03	5.359E-04	Pulse	0.30	3
Sr			1	251.181	ug/l	1.32	760,193.48	4.682E-01	Pulse	0.50	3
[Pb]			1	0.376	ug/l	6.88	4,755.35	9.739E-04	Pulse	0.50	3
Ca			1	34975.480	ug/l	2.32	477,536.19	2.421E+00	Pulse	0.50	3
Ti			1	0.285	ug/l	37.80	34.67	1.762E-04	Pulse	0.50	3
Na			1	13762.862	ug/l	1.66	9,872,692.67	5.006E+01	Analog	1.00	3
Mg			1	2210.462	ug/l	1.87	731,312.65	3.708E+00	Pulse	1.00	3
K			1	820.318	ug/l	1.66	217,178.55	1.101E+00	Pulse	1.00	3
V			1	0.387	ug/l	4.83	2,650.86	1.344E-02	Pulse	0.50	3
Mn			1	11.153	ug/l	2.17	30,832.38	1.853E-01	Pulse	0.50	3
Fe			1	388.846	ug/l	1.79	1,943,215.71	1.168E+01	Pulse	0.50	3
Co			1	0.418	ug/l	5.90	4,673.92	2.806E-02	Pulse	0.50	3
Ni			1	0.366	ug/l	2.87	1,212.71	7.284E-03	Pulse	0.50	3
Cu			1	2.259	ug/l	2.76	27,770.64	1.669E-01	Pulse	0.50	3
Zn			1	5.878	ug/l	0.50	8,762.33	3.491E-02	Pulse	1.00	3
Cd			1	0.009	ug/l	75.45	28.67	1.138E-04	Pulse	0.50	3
Al			1	28.591	ug/l	3.56	2,991.56	1.516E-02	Pulse	1.00	3
Se			1	0.071	ug/l	107.76	17.67	1.090E-05	Pulse	3.00	3
Sb			1	0.129	ug/l	9.86	741.02	2.951E-03	Pulse	1.00	3
Se			1	0.075	ug/l	82.27	26.00	1.956E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,884,098.83	1.33	91.9	Pulse	0.50	3
1	Sc		197,267.96	1.70	97.9	Pulse	0.30	3
1	Ge		166,452.94	1.61	99.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,623,708.03	1.54	95.5	Pulse	0.30	3
1	Tb		7,004,999.00	1.44	102.8	Analog	0.50	3
1	Lu		3,973,178.42	0.46	93.8	Pulse	0.50	3
1	Ge		251,019.85	0.97	98.3	Pulse	0.30	3
1	Te		13,302.19	2.28	89.9	Pulse	0.50	3
1	Li		1,041.14	2.87	95.1	Pulse	0.30	3

Quantitation Report

File Name	055CCVA.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:20
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	50.158	ug/l	1.90	634,513.71	3.739E+00	Pulse	0.50	3
As			1	49.718	ug/l	1.55	73,196.82	4.313E-01	Pulse	1.00	3
Mo			1	49.707	ug/l	2.32	439,814.91	1.701E+00	Pulse	0.50	3
Pb			1	48.616	ug/l	1.62	2,388,897.33	4.814E-01	Pulse	1.00	3
Be			1	49.873	ug/l	1.52	3,554.81	1.726E-02	Pulse	2.00	3
Ag			1	50.296	ug/l	1.12	1,601,845.58	9.645E-01	Pulse	0.50	3
Ba			1	48.299	ug/l	2.84	150,328.29	9.053E-02	Pulse	0.50	3
Tl			1	49.391	ug/l	1.99	3,550,658.58	7.156E-01	Pulse	0.50	3
Sn			1	49.877	ug/l	1.08	344,383.44	2.074E-01	Pulse	0.30	3
Sr			1	49.907	ug/l	2.10	309,298.58	1.863E-01	Pulse	0.50	3
[Pb]			1	49.131	ug/l	1.96	1,132,848.08	2.283E-01	Pulse	0.50	3
Ca			1	4796.451	ug/l	1.23	136,830.06	6.645E-01	Pulse	0.50	3
Ti			1	47.918	ug/l	1.44	11,292.63	5.484E-02	Pulse	0.50	3
Na			1	5020.738	ug/l	1.62	7,522,558.83	3.654E+01	Analog	1.00	3
Mg			1	4764.883	ug/l	1.24	3,290,768.08	1.598E+01	Pulse	1.00	3
K			1	4831.282	ug/l	1.71	2,480,090.50	1.205E+01	Pulse	1.00	3
V			1	49.111	ug/l	1.80	470,121.98	2.283E+00	Pulse	0.50	3
Mn			1	49.927	ug/l	1.35	280,670.87	1.654E+00	Pulse	0.50	3
Fe			1	5194.745	ug/l	2.10	52,764,600.00	3.109E+02	Analog	0.50	3
Co			1	50.314	ug/l	1.48	1,139,660.42	6.715E+00	Pulse	0.50	3
Ni			1	50.475	ug/l	2.23	317,568.02	1.871E+00	Pulse	0.50	3
Cu			1	51.215	ug/l	1.57	910,426.62	5.364E+00	Pulse	0.50	3
Zn			1	50.433	ug/l	2.27	123,457.42	4.775E-01	Pulse	1.00	3
Cd			1	49.126	ug/l	1.13	207,201.21	8.013E-01	Pulse	0.50	3
Al			1	4701.615	ug/l	2.12	980,351.46	4.762E+00	Pulse	1.00	3
Se			1	50.273	ug/l	1.16	4,707.92	2.835E-03	Pulse	3.00	3
Sb			1	47.727	ug/l	1.98	466,647.10	1.805E+00	Pulse	1.00	3
Se			1	47.918	ug/l	3.08	2,396.71	1.715E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,962,943.17	1.62	93.4	Pulse	0.50	3
1	Sc		205,920.95	1.28	102.2	Pulse	0.30	3
1	Ge		169,754.55	1.62	101.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,660,955.45	1.62	97.7	Pulse	0.30	3
1	Tb		7,170,062.00	1.80	105.2	Analog	0.50	3
1	Lu		4,073,704.17	1.26	96.1	Pulse	0.50	3
1	Ge		258,609.32	1.80	101.3	Pulse	0.30	3
1	Te		13,974.04	0.98	94.4	Pulse	0.50	3
1	Li		1,080.04	13.68	98.7	Pulse	0.30	3

Quantitation Report

File Name	056_CCV.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:24
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	101.434	ug/l	3.39	1,258,314.21	7.557E+00	Pulse	0.50	3
As			1	100.925	ug/l	3.00	145,753.29	8.753E-01	Pulse	1.00	3
Mo			1	100.573	ug/l	3.42	867,131.58	3.442E+00	Pulse	0.50	3
Pb			1	99.726	ug/l	2.48	4,675,892.00	9.873E-01	Pulse	1.00	3
Be			1	102.797	ug/l	3.31	7,075.90	3.558E-02	Pulse	2.00	3
Ag			1	102.046	ug/l	3.29	3,127,469.17	1.957E+00	Pulse	0.50	3
Ba			1	100.367	ug/l	3.74	300,619.61	1.881E-01	Pulse	0.50	3
Tl			1	107.023	ug/l	3.69	7,341,944.67	1.551E+00	Analog	0.50	3
Sn			1	103.135	ug/l	3.97	684,850.82	4.286E-01	Pulse	0.30	3
Sr			1	103.643	ug/l	3.89	617,573.71	3.865E-01	Pulse	0.50	3
[Pb]			1	100.678	ug/l	3.25	2,214,856.17	4.677E-01	Pulse	0.50	3
Ca			1	9885.446	ug/l	2.94	272,252.26	1.369E+00	Pulse	0.50	3
Ti			1	101.777	ug/l	4.13	23,155.67	1.165E-01	Pulse	0.50	3
Na			1	10297.845	ug/l	3.97	14,887,769.33	7.488E+01	Analog	1.00	3
Mg			1	10267.550	ug/l	3.38	6,847,910.67	3.444E+01	Analog	1.00	3
K			1	10420.003	ug/l	3.61	5,145,980.33	2.588E+01	Analog	1.00	3
V			1	101.307	ug/l	3.31	935,665.79	4.705E+00	Pulse	0.50	3
Mn			1	101.013	ug/l	3.61	556,944.33	3.345E+00	Pulse	0.50	3
Fe			1	10429.149	ug/l	2.60	103,933,874.67	6.241E+02	Analog	0.50	3
Co			1	101.174	ug/l	2.66	2,248,503.58	1.350E+01	Pulse	0.50	3
Ni			1	101.335	ug/l	2.45	625,534.37	3.756E+00	Pulse	0.50	3
Cu			1	101.743	ug/l	3.61	1,766,125.12	1.061E+01	Pulse	0.50	3
Zn			1	101.023	ug/l	2.97	239,095.34	9.490E-01	Pulse	1.00	3
Cd			1	98.903	ug/l	3.94	406,370.60	1.613E+00	Pulse	0.50	3
Al			1	9741.454	ug/l	4.04	1,961,339.79	9.865E+00	Pulse	1.00	3
Se			1	103.479	ug/l	4.24	9,308.49	5.826E-03	Pulse	3.00	3
Sb			1	97.392	ug/l	3.22	927,769.52	3.682E+00	Pulse	1.00	3
Se			1	99.365	ug/l	3.94	4,732.81	3.538E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,737,909.50	2.47	89.2	Pulse	0.50	3
1	Sc		199,003.01	3.50	98.8	Pulse	0.30	3
1	Ge		166,612.53	2.81	99.5	Pulse	0.30	3
1	In		1,599,270.84	3.11	94.1	Pulse	0.30	3
1	Tb		6,877,771.83	3.55	101.0	Analog	0.50	3
1	Lu		3,925,115.58	3.56	92.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		252,103.04	3.02	98.7	Pulse	0.30	3
1	Te		13,389.61	3.18	90.5	Pulse	0.50	3
1	Li		1,066.70	8.43	97.5	Pulse	0.30	3

Quantitation Report

File Name	057_CCB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:28
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.001	ug/l	49.34	578.01	3.401E-03	Pulse	0.50	3
As			1	0.002	ug/l	399.88	27.33	1.604E-04	Pulse	1.00	3
Mo			1	0.034	ug/l	9.83	298.67	1.165E-03	Pulse	0.50	3
Pb			1	0.018	ug/l	25.60	1,967.79	3.908E-04	Pulse	1.00	3
Be			1	0.014	ug/l	153.17	1.33	6.626E-06	Pulse	2.00	3
Ag			1	0.010	ug/l	14.67	330.67	1.987E-04	Pulse	0.50	3
Ba			1	0.003	ug/l	191.11	38.00	2.286E-05	Pulse	0.50	3
Tl			1	0.073	ug/l	15.88	5,390.21	1.070E-03	Pulse	0.50	3
Sn			1	0.031	ug/l	23.35	523.34	3.146E-04	Pulse	0.30	3
Sr			1	0.011	ug/l	63.12	581.34	3.493E-04	Pulse	0.50	3
[Pb]			1	0.018	ug/l	20.31	928.03	1.843E-04	Pulse	0.50	3
Ca			1	-0.293	ug/l	-162.98	109.33	5.421E-04	Pulse	0.50	3
Ti			1	0.009	ug/l	156.17	4.67	2.322E-05	Pulse	0.50	3
Na			1	2.417	ug/l	3.82	14,614.99	7.241E-02	Pulse	1.00	3
Mg			1	0.527	ug/l	38.97	571.68	2.827E-03	Pulse	1.00	3
K			1	2.846	ug/l	17.43	18,733.21	9.282E-02	Pulse	1.00	3
V			1	-0.057	ug/l	-12.40	369.34	1.831E-03	Pulse	0.50	3
Mn			1	0.005	ug/l	67.37	136.67	8.033E-04	Pulse	0.50	3
Fe			1	0.626	ug/l	46.23	13,596.34	7.990E-02	Pulse	0.50	3
Co			1	0.005	ug/l	39.84	150.00	8.809E-04	Pulse	0.50	3
Ni			1	0.004	ug/l	43.82	113.33	6.665E-04	Pulse	0.50	3
Cu			1	-0.116	ug/l	-5.06	6,385.07	3.757E-02	Pulse	0.50	3
Zn			1	-0.077	ug/l	-27.51	1,744.08	6.799E-03	Pulse	1.00	3
Cd			1	0.006	ug/l	60.79	35.33	1.375E-04	Pulse	0.50	3
Al			1	0.284	ug/l	103.22	197.33	9.756E-04	Pulse	1.00	3
Se			1	0.019	ug/l	201.01	16.56	9.949E-06	Pulse	3.00	3
Sb			1	0.007	ug/l	25.11	205.00	7.987E-04	Pulse	1.00	3
Se			1	-0.081	ug/l	-31.21	21.89	1.538E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,034,883.83	0.29	94.8	Pulse	0.50	3
1	Sc		201,843.35	1.05	100.2	Pulse	0.30	3

Quantitation Report

1	Ge		169,957.49	1.13	101.4	Pulse	0.30	3
1	In		1,663,942.37	0.64	97.9	Pulse	0.30	3
1	Tb		7,032,837.67	0.69	103.2	Analog	0.50	3
1	Lu		4,014,693.33	0.21	94.7	Pulse	0.50	3
1	Ge		256,547.13	0.89	100.5	Pulse	0.30	3
1	Te		14,238.90	0.55	96.2	Pulse	0.50	3
1	Li		1,024.48	12.18	93.6	Pulse	0.30	3

Quantitation Report

File Name 058SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 12:31
Sample Name MP34081-D1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.239	ug/l	4.78	2,014.78	1.220E-02	Pulse	0.50	3
As			1	0.240	ug/l	17.71	194.67	1.181E-03	Pulse	1.00	3
Mo			1	1.160	ug/l	3.49	5,004.02	1.987E-02	Pulse	0.50	3
Pb			1	0.328	ug/l	0.68	9,055.40	1.841E-03	Pulse	1.00	3
Be			1	0.015	ug/l	208.28	0.83	4.224E-06	Pulse	2.00	3
Ag			1	0.027	ug/l	4.30	450.68	2.760E-04	Pulse	0.50	3
Ba			1	12.326	ug/l	0.61	18,889.21	1.157E-02	Pulse	0.50	3
Tl			1	0.048	ug/l	13.71	1,790.77	3.641E-04	Pulse	0.50	3
Sn			1	0.192	ug/l	11.61	955.59	5.853E-04	Pulse	0.30	3
Sr			1	252.287	ug/l	1.81	767,940.04	4.703E-01	Pulse	0.50	3
[Pb]			1	0.342	ug/l	1.31	4,393.91	8.935E-04	Pulse	0.50	3
Ca			1	35336.079	ug/l	0.78	483,611.01	2.446E+00	Pulse	0.50	3
Ti			1	0.224	ug/l	26.87	28.00	1.416E-04	Pulse	0.50	3
Na			1	13836.127	ug/l	0.87	9,948,094.33	5.032E+01	Analog	1.00	3
Mg			1	2233.602	ug/l	0.86	740,694.29	3.747E+00	Pulse	1.00	3
K			1	832.647	ug/l	0.47	220,694.42	1.116E+00	Pulse	1.00	3
V			1	0.377	ug/l	5.84	2,613.52	1.322E-02	Pulse	0.50	3
Mn			1	11.764	ug/l	0.67	32,263.39	1.954E-01	Pulse	0.50	3
Fe			1	404.855	ug/l	0.94	2,006,961.46	1.216E+01	Pulse	0.50	3
Co			1	0.318	ug/l	3.55	3,532.34	2.140E-02	Pulse	0.50	3
Ni			1	0.371	ug/l	2.23	1,219.37	7.386E-03	Pulse	0.50	3
Cu			1	2.219	ug/l	1.56	27,207.79	1.648E-01	Pulse	0.50	3
Zn			1	6.496	ug/l	3.08	9,515.02	3.779E-02	Pulse	1.00	3
Cd			1	0.014	ug/l	63.63	37.33	1.480E-04	Pulse	0.50	3
Al			1	69.241	ug/l	10.41	7,065.61	3.575E-02	Pulse	1.00	3
Se			1	0.042	ug/l	96.81	16.44	1.007E-05	Pulse	3.00	3
Sb			1	0.122	ug/l	2.29	709.02	2.815E-03	Pulse	1.00	3
Se			1	0.169	ug/l	118.60	27.56	2.122E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,917,932.83	0.60	92.6	Pulse	0.50	3
1	Sc		197,689.16	0.40	98.1	Pulse	0.30	3
1	Ge		165,123.76	1.52	98.6	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,633,011.53	0.99	96.0	Pulse	0.30	3
1	Tb		7,024,204.83	0.44	103.1	Analog	0.50	3
1	Lu		3,941,904.33	0.33	93.0	Pulse	0.50	3
1	Ge		251,833.88	0.78	98.6	Pulse	0.30	3
1	Te		12,995.97	0.91	87.8	Pulse	0.50	3
1	Li		1,097.81	8.43	100.3	Pulse	0.30	3

Quantitation Report

File Name 059SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 12:35
Sample Name MP34081-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.216	ug/l	25.24	856.03	4.916E-03	Pulse	0.50	3
As			1	0.164	ug/l	50.49	49.33	2.833E-04	Pulse	1.00	3
Mo			1	1.204	ug/l	1.69	1,079.37	4.139E-03	Pulse	0.50	3
Pb			1	0.415	ug/l	1.58	3,149.63	6.281E-04	Pulse	1.00	3
Be			1	0.022	ug/l	558.15	0.50	2.444E-06	Pulse	2.00	3
Ag			1	0.052	ug/l	5.31	191.33	1.143E-04	Pulse	0.50	3
Ba			1	13.055	ug/l	2.24	4,122.49	2.463E-03	Pulse	0.50	3
Tl			1	0.094	ug/l	3.71	752.69	1.501E-04	Pulse	0.50	3
Sn			1	0.175	ug/l	13.58	432.23	2.583E-04	Pulse	0.30	3
Sr			1	272.529	ug/l	0.35	170,466.41	1.018E-01	Pulse	0.50	3
[Pb]			1	0.429	ug/l	4.46	1,501.41	2.994E-04	Pulse	0.50	3
Ca			1	37526.834	ug/l	0.44	107,108.45	5.201E-01	Pulse	0.50	3
Ti			1	0.706	ug/l	69.25	19.33	9.410E-05	Pulse	0.50	3
Na			1	14384.236	ug/l	0.17	2,163,902.00	1.051E+01	Pulse	1.00	3
Mg			1	2384.408	ug/l	0.40	164,925.46	8.008E-01	Pulse	1.00	3
K			1	912.979	ug/l	0.88	64,211.67	3.118E-01	Pulse	1.00	3
V			1	0.020	ug/l	123.53	938.03	4.555E-03	Pulse	0.50	3
Mn			1	12.665	ug/l	2.82	7,411.44	4.258E-02	Pulse	0.50	3
Fe			1	419.925	ug/l	0.37	444,737.70	2.555E+00	Pulse	0.50	3
Co			1	0.532	ug/l	5.07	1,264.04	7.260E-03	Pulse	0.50	3
Ni			1	0.522	ug/l	9.72	424.68	2.439E-03	Pulse	0.50	3
Cu			1	1.151	ug/l	15.99	10,717.68	6.158E-02	Pulse	0.50	3
Zn			1	12.374	ug/l	2.37	4,967.98	1.905E-02	Pulse	1.00	3
Cd			1	-0.007	ug/l	-109.54	6.67	2.561E-05	Pulse	0.50	3
Al			1	27.946	ug/l	14.49	724.35	3.518E-03	Pulse	1.00	3
Se			1	0.674	ug/l	65.97	21.22	1.268E-05	Pulse	3.00	3
Sb			1	0.131	ug/l	6.93	264.00	1.012E-03	Pulse	1.00	3
Se			1	0.103	ug/l	337.41	26.22	1.859E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,014,881.50	0.06	94.4	Pulse	0.50	3
1	Sc		205,956.78	0.60	102.3	Pulse	0.30	3
1	Ge		174,055.14	0.95	103.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,673,726.08	0.52	98.4	Pulse	0.30	3
1	Tb		7,155,169.83	1.04	105.0	Analog	0.50	3
1	Lu		4,031,061.00	0.87	95.1	Pulse	0.50	3
1	Ge		260,784.92	0.72	102.1	Pulse	0.30	3
1	Te		14,104.81	0.48	95.3	Pulse	0.50	3
1	Li		1,047.81	8.60	95.7	Pulse	0.30	3

Quantitation Report

File Name	060SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:39
Sample Name	MP34081-S1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	209.831	ug/l	1.47	1,268,350.46	7.816E+00	Pulse	0.50	3
As			1	219.501	ug/l	1.66	154,453.72	9.518E-01	Pulse	1.00	3
Mo			1	203.734	ug/l	1.33	861,062.77	3.486E+00	Pulse	0.50	3
Pb			1	199.390	ug/l	0.45	4,655,520.83	9.870E-01	Pulse	1.00	3
Be			1	205.827	ug/l	0.69	6,944.69	3.562E-02	Pulse	2.00	3
Ag			1	100.646	ug/l	1.51	1,530,235.25	9.650E-01	Pulse	0.50	3
Ba			1	211.351	ug/l	1.12	314,080.07	1.981E-01	Pulse	0.50	3
Tl			1	210.286	ug/l	1.11	7,185,347.17	1.523E+00	Analog	0.50	3
Sn			1	224.853	ug/l	1.17	740,809.92	4.672E-01	Pulse	0.30	3
Sr			1	459.057	ug/l	0.53	1,356,677.58	8.555E-01	Pulse	0.50	3
[Pb]			1	193.413	ug/l	0.63	2,119,177.83	4.493E-01	Pulse	0.50	3
Ca			1	54487.698	ug/l	1.00	735,289.90	3.772E+00	Pulse	0.50	3
Ti			1	202.732	ug/l	1.27	22,615.06	1.160E-01	Pulse	0.50	3
Na			1	33840.270	ug/l	1.31	23,976,697.33	1.230E+02	Analog	1.00	3
Mg			1	22665.175	ug/l	1.13	7,409,622.83	3.801E+01	Analog	1.00	3
K			1	21338.823	ug/l	1.46	5,165,289.50	2.650E+01	Analog	1.00	3
V			1	206.906	ug/l	1.53	936,642.27	4.805E+00	Pulse	0.50	3
Mn			1	212.710	ug/l	1.16	571,499.79	3.522E+00	Pulse	0.50	3
Fe			1	21052.761	ug/l	1.26	102,219,677.33	6.299E+02	Analog	0.50	3
Co			1	208.954	ug/l	1.33	2,262,503.42	1.394E+01	Pulse	0.50	3
Ni			1	203.865	ug/l	1.43	613,094.25	3.778E+00	Pulse	0.50	3
Cu			1	209.010	ug/l	0.98	1,767,781.54	1.089E+01	Pulse	0.50	3
Zn			1	204.049	ug/l	2.05	236,679.65	9.583E-01	Pulse	1.00	3
Cd			1	200.308	ug/l	2.44	403,455.95	1.634E+00	Pulse	0.50	3
Al			1	17833.950	ug/l	1.72	1,760,248.54	9.030E+00	Pulse	1.00	3
Se			1	198.266	ug/l	1.27	8,850.27	5.581E-03	Pulse	3.00	3
Sb			1	196.725	ug/l	1.56	918,592.86	3.719E+00	Pulse	1.00	3
Se			1	200.100	ug/l	4.55	4,507.65	3.562E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,716,794.83	0.27	88.8	Pulse	0.50	3
1	Sc		194,951.63	1.04	96.8	Pulse	0.30	3
1	Ge		162,280.61	0.80	96.9	Pulse	0.30	3
1	In		1,585,882.61	1.25	93.3	Pulse	0.30	3
1	Tb		6,918,845.50	0.47	101.6	Analog	0.50	3
1	Lu		3,889,179.25	0.55	91.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		247,009.06	0.93	96.7	Pulse	0.30	3
1	Te		12,665.08	2.66	85.6	Pulse	0.50	3
1	Li		956.70	1.52	87.4	Pulse	0.30	3

Quantitation Report

File Name 061SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 12:43
Sample Name MP34081-S2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	207.762	ug/l	1.48	1,262,363.38	7.739E+00	Pulse	0.50	3
As			1	216.995	ug/l	0.52	153,488.27	9.410E-01	Pulse	1.00	3
Mo			1	203.862	ug/l	1.65	865,565.02	3.488E+00	Pulse	0.50	3
Pb			1	198.805	ug/l	0.87	4,629,959.17	9.841E-01	Pulse	1.00	3
Be			1	203.166	ug/l	1.92	6,880.83	3.516E-02	Pulse	2.00	3
Ag			1	99.870	ug/l	1.33	1,528,299.08	9.576E-01	Pulse	0.50	3
Ba			1	207.914	ug/l	0.09	310,992.30	1.948E-01	Pulse	0.50	3
Tl			1	208.790	ug/l	1.48	7,115,772.17	1.512E+00	Analog	0.50	3
Sn			1	222.060	ug/l	0.25	736,410.33	4.614E-01	Pulse	0.30	3
Sr			1	454.012	ug/l	1.31	1,350,354.50	8.461E-01	Pulse	0.50	3
[Pb]			1	191.843	ug/l	0.50	2,096,638.08	4.456E-01	Pulse	0.50	3
Ca			1	53373.333	ug/l	0.21	723,052.10	3.695E+00	Pulse	0.50	3
Ti			1	198.678	ug/l	0.61	22,247.31	1.137E-01	Pulse	0.50	3
Na			1	33571.077	ug/l	1.05	23,877,479.33	1.220E+02	Analog	1.00	3
Mg			1	22399.295	ug/l	0.98	7,350,868.17	3.756E+01	Analog	1.00	3
K			1	20674.944	ug/l	2.49	5,025,725.67	2.568E+01	Mix	1.00	3
V			1	205.818	ug/l	1.51	935,288.54	4.780E+00	Pulse	0.50	3
Mn			1	211.605	ug/l	1.30	571,474.79	3.504E+00	Pulse	0.50	3
Fe			1	20840.407	ug/l	1.33	101,711,829.33	6.236E+02	Analog	0.50	3
Co			1	205.137	ug/l	1.16	2,232,745.17	1.369E+01	Pulse	0.50	3
Ni			1	202.917	ug/l	1.67	613,401.81	3.761E+00	Pulse	0.50	3
Cu			1	204.835	ug/l	0.68	1,741,656.21	1.068E+01	Pulse	0.50	3
Zn			1	201.041	ug/l	1.01	234,308.79	9.443E-01	Pulse	1.00	3
Cd			1	197.851	ug/l	0.96	400,375.73	1.614E+00	Pulse	0.50	3
Al			1	17723.226	ug/l	0.72	1,756,137.83	8.974E+00	Pulse	1.00	3
Se			1	196.476	ug/l	1.21	8,827.26	5.531E-03	Pulse	3.00	3
Sb			1	195.256	ug/l	0.07	915,981.73	3.691E+00	Pulse	1.00	3
Se			1	196.906	ug/l	1.53	4,414.85	3.505E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,704,879.67	0.63	88.6	Pulse	0.50	3
1	Sc		195,698.94	1.17	97.2	Pulse	0.30	3
1	Ge		163,125.83	1.05	97.4	Pulse	0.30	3
1	In		1,596,103.44	1.05	93.9	Pulse	0.30	3
1	Tb		6,915,089.50	0.46	101.5	Analog	0.50	3
1	Lu		3,944,643.67	1.10	93.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		248,137.26	0.48	97.2	Pulse	0.30	3
1	Te		12,594.37	0.29	85.1	Pulse	0.50	3
1	Li		1,000.03	1.73	91.4	Pulse	0.30	3

Quantitation Report

File Name	062SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:46
Sample Name	MP34081-PS1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	20.644	ug/l	1.10	127,252.55	7.720E-01	Pulse	0.50	3
As			1	21.392	ug/l	1.31	15,311.80	9.289E-02	Pulse	1.00	3
Mo			1	21.326	ug/l	0.26	91,524.43	3.649E-01	Pulse	0.50	3
Pb			1	20.247	ug/l	0.62	486,205.90	1.004E-01	Pulse	1.00	3
Be			1	20.734	ug/l	0.62	707.84	3.590E-03	Pulse	2.00	3
Ag			1	4.521	ug/l	2.68	69,786.38	4.337E-02	Pulse	0.50	3
Ba			1	32.155	ug/l	2.03	48,518.13	3.015E-02	Pulse	0.50	3
Tl			1	19.509	ug/l	0.78	684,314.40	1.413E-01	Pulse	0.50	3
Sn			1	22.738	ug/l	1.19	76,311.09	4.741E-02	Pulse	0.30	3
Sr			1	279.466	ug/l	1.52	838,400.23	5.209E-01	Pulse	0.50	3
[Pb]			1	19.735	ug/l	0.43	222,392.72	4.593E-02	Pulse	0.50	3
Ca			1	37673.324	ug/l	0.58	514,236.04	2.608E+00	Pulse	0.50	3
Ti			1	20.586	ug/l	1.96	2,324.81	1.179E-02	Pulse	0.50	3
Na			1	15991.349	ug/l	1.27	11,465,698.00	5.815E+01	Analog	1.00	3
Mg			1	4216.780	ug/l	0.81	1,394,491.50	7.073E+00	Pulse	1.00	3
K			1	2797.548	ug/l	0.74	699,645.58	3.548E+00	Pulse	1.00	3
V			1	20.949	ug/l	0.24	96,713.24	4.905E-01	Pulse	0.50	3
Mn			1	31.870	ug/l	0.57	87,075.55	5.282E-01	Pulse	0.50	3
Fe			1	2488.877	ug/l	1.85	12,281,745.00	7.451E+01	Analog	0.50	3
Co			1	21.133	ug/l	0.90	232,470.15	1.410E+00	Pulse	0.50	3
Ni			1	20.931	ug/l	1.57	64,019.29	3.884E-01	Pulse	0.50	3
Cu			1	23.068	ug/l	0.33	205,481.54	1.247E+00	Pulse	0.50	3
Zn			1	25.189	ug/l	1.92	31,320.35	1.249E-01	Pulse	1.00	3
Cd			1	20.014	ug/l	0.85	40,943.83	1.633E-01	Pulse	0.50	3
Al			1	1805.407	ug/l	0.57	180,366.58	9.148E-01	Pulse	1.00	3
Se			1	20.418	ug/l	2.11	937.91	5.827E-04	Pulse	3.00	3
Sb			1	18.700	ug/l	0.77	88,778.60	3.540E-01	Pulse	1.00	3
Se			1	19.879	ug/l	3.73	484.45	3.703E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,841,724.67	0.35	91.2	Pulse	0.50	3
1	Sc		197,169.37	0.25	97.9	Pulse	0.30	3
1	Ge		164,847.84	0.60	98.4	Pulse	0.30	3
1	In		1,609,659.63	1.60	94.7	Pulse	0.30	3
1	Tb		7,043,795.33	1.30	103.4	Analog	0.50	3
1	Lu		3,950,550.25	0.88	93.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		250,795.89	0.53	98.2	Pulse	0.30	3
1	Te		13,079.40	1.83	88.4	Pulse	0.50	3
1	Li		1,012.25	2.52	92.5	Pulse	0.30	3

Quantitation Report

File Name	063SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 12:50
Sample Name	FA55941-1
Sample Type	Sample
Comment	
Prep Dilution	40.000
Auto Dilution	N/A
Total Dilution	40.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.563	ug/l	17.65	748.69	4.356E-03	Pulse	0.50	3
As			1	3.516	ug/l	4.99	155.33	9.037E-04	Pulse	1.00	3
Mo			1	5.869	ug/l	3.58	1,310.05	5.040E-03	Pulse	0.50	3
Pb			1	7.645	ug/l	1.81	10,562.60	2.109E-03	Pulse	1.00	3
Be			1	-0.008	ug/l	-2030.23	0.33	1.616E-06	Pulse	2.00	3
Ag			1	0.258	ug/l	6.51	232.67	1.381E-04	Pulse	0.50	3
Ba			1	484.242	ug/l	0.59	38,259.02	2.270E-02	Pulse	0.50	3
Tl			1	0.748	ug/l	9.40	1,424.07	2.843E-04	Pulse	0.50	3
Sn			1	1.052	ug/l	27.99	496.68	2.948E-04	Pulse	0.30	3
Sr			1	12534.669	ug/l	0.60	1,967,952.42	1.168E+00	Pulse	0.50	3
[Pb]			1	7.919	ug/l	2.26	5,107.45	1.020E-03	Pulse	0.50	3
Ca			1	306053.631	ug/l	0.56	218,670.20	1.060E+00	Pulse	0.50	3
Ti			1	2.015	ug/l	41.71	14.67	7.100E-05	Pulse	0.50	3
Na			1	302775.774	ug/l	0.66	11,360,054.33	5.506E+01	Analog	1.00	3
Mg			1	49.931	ug/l	7.51	1,082.36	5.246E-03	Pulse	1.00	3
K			1	25318.142	ug/l	0.36	341,009.80	1.653E+00	Pulse	1.00	3
V			1	1.763	ug/l	13.05	1,342.72	6.508E-03	Pulse	0.50	3
Mn			1	1.860	ug/l	4.20	375.34	2.184E-03	Pulse	0.50	3
Fe			1	61.857	ug/l	2.97	23,199.86	1.350E-01	Pulse	0.50	3
Co			1	0.289	ug/l	16.83	192.67	1.121E-03	Pulse	0.50	3
Ni			1	1.936	ug/l	13.33	395.34	2.300E-03	Pulse	0.50	3
Cu			1	-3.559	ug/l	-11.04	6,945.93	4.041E-02	Pulse	0.50	3
Zn			1	17.317	ug/l	9.85	3,003.24	1.155E-02	Pulse	1.00	3
Cd			1	0.043	ug/l	245.72	14.00	5.378E-05	Pulse	0.50	3
Al			1	102.638	ug/l	3.37	678.01	3.286E-03	Pulse	1.00	3
Se			1	1.790	ug/l	53.20	19.22	1.140E-05	Pulse	3.00	3
Sb			1	2.474	ug/l	9.94	741.68	2.854E-03	Pulse	1.00	3
Se			1	-1.044	ug/l	-153.97	25.11	1.730E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,008,617.00	0.08	94.3	Pulse	0.50	3
1	Sc		206,343.66	0.51	102.4	Pulse	0.30	3
1	Ge		171,883.50	0.07	102.6	Pulse	0.30	3
1	In		1,685,091.57	0.45	99.1	Pulse	0.30	3
1	Tb		7,145,689.33	0.29	104.9	Analog	0.50	3
1	Lu		4,047,007.08	1.25	95.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		259,943.90	0.28	101.8	Pulse	0.30	3
1	Te		14,513.13	0.58	98.1	Pulse	0.50	3
1	Li		1,067.81	9.03	97.6	Pulse	0.30	3

Quantitation Report

File Name 064SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 12:54
Sample Name FA55941-2
Sample Type Sample
Comment
Prep Dilution 100.000
Auto Dilution N/A
Total Dilution 100.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.889	ug/l	12.25	683.34	3.969E-03	Pulse	0.50	3
As			1	8.438	ug/l	11.53	150.33	8.732E-04	Pulse	1.00	3
Mo			1	1.209	ug/l	17.30	112.00	4.321E-04	Pulse	0.50	3
Pb			1	1.819	ug/l	3.40	1,982.12	3.972E-04	Pulse	1.00	3
Be			1	0.685	ug/l	213.37	0.83	4.055E-06	Pulse	2.00	3
Ag			1	0.335	ug/l	14.54	132.00	7.873E-05	Pulse	0.50	3
Ba			1	1136.799	ug/l	1.60	35,735.23	2.132E-02	Pulse	0.50	3
Tl			1	0.839	ug/l	4.12	673.35	1.350E-04	Pulse	0.50	3
Sn			1	1.021	ug/l	42.21	382.23	2.280E-04	Pulse	0.30	3
Sr			1	573.465	ug/l	1.61	36,326.81	2.167E-02	Pulse	0.50	3
[Pb]			1	1.823	ug/l	5.35	922.03	1.848E-04	Pulse	0.50	3
Ca			1	118504.748	ug/l	1.27	33,845.09	1.646E-01	Pulse	0.50	3
Ti			1	14.697	ug/l	46.53	37.33	1.815E-04	Pulse	0.50	3
Na			1	1060843.449	ug/l	0.82	15,858,725.67	7.714E+01	Analog	1.00	3
Mg			1	26440.002	ug/l	1.33	182,532.93	8.879E-01	Pulse	1.00	3
K			1	4527.177	ug/l	2.23	40,674.00	1.978E-01	Pulse	1.00	3
V			1	-3.831	ug/l	-19.06	552.01	2.685E-03	Pulse	0.50	3
Mn			1	1023.686	ug/l	0.57	58,468.77	3.396E-01	Pulse	0.50	3
Fe			1	54981.117	ug/l	0.71	5,672,126.33	3.294E+01	Analog	0.50	3
Co			1	1.087	ug/l	8.32	276.67	1.607E-03	Pulse	0.50	3
Ni			1	1.549	ug/l	24.81	186.00	1.080E-03	Pulse	0.50	3
Cu			1	-9.233	ug/l	-16.02	6,897.91	4.006E-02	Pulse	0.50	3
Zn			1	7.605	ug/l	41.03	2,135.45	8.228E-03	Pulse	1.00	3
Cd			1	-0.034	ug/l	-376.29	8.00	3.093E-05	Pulse	0.50	3
Al			1	752.204	ug/l	3.44	1,707.42	8.305E-03	Pulse	1.00	3
Se			1	3.528	ug/l	4.38	18.22	1.087E-05	Pulse	3.00	3
Sb			1	1.100	ug/l	27.26	241.67	9.310E-04	Pulse	1.00	3
Se			1	-1.328	ug/l	-70.23	25.00	1.776E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,989,232.83	1.35	93.9	Pulse	0.50	3
1	Sc		205,595.21	0.49	102.1	Pulse	0.30	3
1	Ge		172,184.84	0.28	102.8	Pulse	0.30	3
1	In		1,676,215.32	1.20	98.6	Pulse	0.30	3
1	Tb		7,074,862.00	0.75	103.9	Analog	0.50	3
1	Lu		4,040,310.92	1.11	95.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		259,565.82	1.42	101.6	Pulse	0.30	3
1	Te		14,082.12	2.48	95.2	Pulse	0.50	3
1	Li		1,033.37	9.03	94.4	Pulse	0.30	3

Quantitation Report

File Name 065SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 12:58
Sample Name FA55941-2
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.283	ug/l	8.60	2,117.46	1.286E-02	Pulse	0.50	3
As			1	9.085	ug/l	2.33	1,320.72	8.019E-03	Pulse	1.00	3
Mo			1	0.488	ug/l	6.47	419.34	1.689E-03	Pulse	0.50	3
Pb			1	1.170	ug/l	1.36	6,293.50	1.375E-03	Pulse	1.00	3
Be			1	0.147	ug/l	153.87	1.33	6.782E-06	Pulse	2.00	3
Ag			1	0.044	ug/l	2.44	156.67	9.947E-05	Pulse	0.50	3
Ba			1	1274.089	ug/l	0.52	376,109.63	2.388E-01	Pulse	0.50	3
Tl			1	0.062	ug/l	8.22	470.01	1.027E-04	Pulse	0.50	3
Sn			1	0.689	ug/l	3.62	743.35	4.720E-04	Pulse	0.30	3
Sr			1	624.965	ug/l	0.18	367,238.39	2.332E-01	Pulse	0.50	3
[Pb]			1	1.228	ug/l	0.86	3,068.95	6.706E-04	Pulse	0.50	3
Ca			1	127908.750	ug/l	1.50	351,260.58	1.771E+00	Pulse	0.50	3
Ti			1	18.187	ug/l	34.04	414.02	2.094E-03	Pulse	0.50	3
Na			1	1154242.794	ug/l	1.81	166,332,544.00	8.387E+02	Analog	1.00	3
Mg			1	28479.984	ug/l	1.53	1,894,565.71	9.553E+00	Pulse	1.00	3
K			1	4637.058	ug/l	0.76	244,684.53	1.234E+00	Pulse	1.00	3
V			1	1.142	ug/l	6.82	1,936.10	9.764E-03	Pulse	0.50	3
Mn			1	1108.043	ug/l	0.78	604,303.64	3.669E+00	Pulse	0.50	3
Fe			1	60297.004	ug/l	0.51	59,431,744.00	3.609E+02	Analog	0.50	3
Co			1	0.939	ug/l	4.76	2,089.45	1.269E-02	Pulse	0.50	3
Ni			1	1.610	ug/l	3.13	1,066.03	6.473E-03	Pulse	0.50	3
Cu			1	1.477	ug/l	14.31	10,698.99	6.497E-02	Pulse	0.50	3
Zn			1	21.991	ug/l	3.61	6,957.60	2.801E-02	Pulse	1.00	3
Cd			1	0.045	ug/l	111.89	27.33	1.099E-04	Pulse	0.50	3
Al			1	851.257	ug/l	3.33	17,230.55	8.689E-02	Pulse	1.00	3
Se			1	0.502	ug/l	22.39	18.44	1.171E-05	Pulse	3.00	3
Sb			1	0.303	ug/l	8.74	412.01	1.659E-03	Pulse	1.00	3
Se			1	2.313	ug/l	45.66	32.45	2.642E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,576,663.17	0.68	86.2	Pulse	0.50	3
1	Sc		198,346.18	1.47	98.5	Pulse	0.30	3
1	Ge		164,700.94	0.61	98.3	Pulse	0.30	3
1	In		1,575,024.14	0.21	92.6	Pulse	0.30	3
1	Tb		6,865,512.17	1.08	100.8	Analog	0.50	3
1	Lu		3,912,935.00	0.56	92.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		248,398.82	0.80	97.3	Pulse	0.30	3
1	Te		12,276.82	0.50	83.0	Pulse	0.50	3
1	Li		1,027.81	6.88	93.9	Pulse	0.30	3

Quantitation Report

File Name	066SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:02
Sample Name	FA55941-6
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.535	ug/l	6.57	1,845.43	1.128E-02	Pulse	0.50	3
As			1	0.105	ug/l	22.92	53.00	3.241E-04	Pulse	1.00	3
Mo			1	0.208	ug/l	4.80	355.34	1.440E-03	Pulse	0.50	3
Pb			1	0.094	ug/l	8.53	1,941.78	4.038E-04	Pulse	1.00	3
Be			1	0.001	ug/l	5826.98	0.33	1.737E-06	Pulse	2.00	3
Ag			1	0.025	ug/l	13.38	174.67	1.095E-04	Pulse	0.50	3
Ba			1	26.649	ug/l	3.30	15,951.69	1.001E-02	Pulse	0.50	3
Tl			1	0.021	ug/l	10.86	353.34	7.349E-05	Pulse	0.50	3
Sn			1	0.623	ug/l	7.00	1,122.26	7.034E-04	Pulse	0.30	3
Sr			1	113.073	ug/l	1.25	134,847.96	8.457E-02	Pulse	0.50	3
[Pb]			1	0.107	ug/l	4.06	958.70	1.994E-04	Pulse	0.50	3
Ca			1	27657.985	ug/l	0.98	148,144.93	7.663E-01	Pulse	0.50	3
Ti			1	0.063	ug/l	167.37	5.33	2.769E-05	Pulse	0.50	3
Na			1	42093.534	ug/l	1.33	11,836,115.67	6.123E+01	Analog	1.00	3
Mg			1	12371.387	ug/l	0.90	1,604,543.42	8.300E+00	Pulse	1.00	3
K			1	2898.981	ug/l	0.95	294,053.64	1.521E+00	Pulse	1.00	3
V			1	-0.023	ug/l	-86.78	820.69	4.245E-03	Pulse	0.50	3
Mn			1	4.422	ug/l	3.52	4,899.30	2.993E-02	Pulse	0.50	3
Fe			1	16.172	ug/l	1.54	38,624.95	2.360E-01	Pulse	0.50	3
Co			1	0.078	ug/l	5.07	367.33	2.245E-03	Pulse	0.50	3
Ni			1	0.906	ug/l	0.54	1,181.37	7.218E-03	Pulse	0.50	3
Cu			1	-0.200	ug/l	-22.58	7,445.46	4.550E-02	Pulse	0.50	3
Zn			1	6.932	ug/l	2.35	5,044.33	2.044E-02	Pulse	1.00	3
Cd			1	0.014	ug/l	35.91	20.00	8.102E-05	Pulse	0.50	3
Al			1	8.802	ug/l	5.21	477.68	2.470E-03	Pulse	1.00	3
Se			1	0.215	ug/l	65.80	18.00	1.130E-05	Pulse	3.00	3
Sb			1	0.066	ug/l	3.83	249.67	1.012E-03	Pulse	1.00	3
Se			1	0.615	ug/l	43.65	28.11	2.259E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,808,626.33	0.41	90.5	Pulse	0.50	3
1	Sc		193,329.76	0.75	96.0	Pulse	0.30	3
1	Ge		163,666.49	1.35	97.7	Pulse	0.30	3
1	In		1,594,742.12	1.35	93.8	Pulse	0.30	3
1	Tb		6,936,298.33	0.32	101.8	Analog	0.50	3
1	Lu		3,921,446.42	0.70	92.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,811.38	0.57	96.6	Pulse	0.30	3
1	Te		12,455.61	1.37	84.2	Pulse	0.50	3
1	Li		1,023.37	2.28	93.5	Pulse	0.30	3

Quantitation Report

File Name	067SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:05
Sample Name	FA55941-8A
Sample Type	Sample
Comment	
Prep Dilution	20.000
Auto Dilution	N/A
Total Dilution	20.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.440	ug/l	22.17	838.02	4.945E-03	Pulse	0.50	3
As			1	0.164	ug/l	100.99	36.00	2.125E-04	Pulse	1.00	3
Mo			1	0.190	ug/l	33.95	88.00	3.430E-04	Pulse	0.50	3
Pb			1	0.259	ug/l	9.04	1,721.76	3.456E-04	Pulse	1.00	3
Be			1	-0.003	ug/l	-2708.65	0.33	1.633E-06	Pulse	2.00	3
Ag			1	0.064	ug/l	20.12	125.33	7.563E-05	Pulse	0.50	3
Ba			1	19.928	ug/l	3.70	3,121.62	1.884E-03	Pulse	0.50	3
Tl			1	0.050	ug/l	6.44	246.67	4.951E-05	Pulse	0.50	3
Sn			1	0.563	ug/l	28.76	501.12	3.024E-04	Pulse	0.30	3
Sr			1	127.274	ug/l	0.63	39,798.48	2.402E-02	Pulse	0.50	3
[Pb]			1	0.310	ug/l	0.92	858.03	1.722E-04	Pulse	0.50	3
Ca			1	36849.770	ug/l	1.77	52,141.61	2.556E-01	Pulse	0.50	3
Ti			1	0.397	ug/l	133.70	7.33	3.608E-05	Pulse	0.50	3
Na			1	156235.219	ug/l	1.33	11,588,973.67	5.682E+01	Analog	1.00	3
Mg			1	13649.371	ug/l	1.60	467,099.20	2.290E+00	Pulse	1.00	3
K			1	1666.081	ug/l	1.46	59,559.55	2.920E-01	Pulse	1.00	3
V			1	-0.704	ug/l	-23.07	577.34	2.830E-03	Pulse	0.50	3
Mn			1	1.191	ug/l	7.39	443.34	2.616E-03	Pulse	0.50	3
Fe			1	29.982	ug/l	4.41	22,393.64	1.321E-01	Pulse	0.50	3
Co			1	0.070	ug/l	11.18	106.00	6.256E-04	Pulse	0.50	3
Ni			1	0.574	ug/l	27.12	266.00	1.570E-03	Pulse	0.50	3
Cu			1	-1.971	ug/l	-2.24	6,679.17	3.942E-02	Pulse	0.50	3
Zn			1	6.211	ug/l	13.54	2,676.19	1.041E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	442466.41	9.33	3.642E-05	Pulse	0.50	3
Al			1	23.594	ug/l	6.22	384.00	1.882E-03	Pulse	1.00	3
Se			1	0.726	ug/l	100.47	18.11	1.093E-05	Pulse	3.00	3
Sb			1	0.008	ug/l	47.26	136.33	5.304E-04	Pulse	1.00	3
Se			1	0.787	ug/l	219.19	27.11	1.962E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,982,123.83	0.47	93.8	Pulse	0.50	3
1	Sc		203,992.32	1.08	101.3	Pulse	0.30	3
1	Ge		169,458.65	0.38	101.2	Pulse	0.30	3
1	In		1,657,038.27	0.17	97.5	Pulse	0.30	3
1	Tb		7,072,210.67	0.21	103.8	Analog	0.50	3
1	Lu		3,999,037.33	0.17	94.4	Pulse	0.50	3
1	Ge		257,043.72	0.87	100.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Te		13,828.59	0.91	93.5	Pulse	0.50	3
1	Li		1,044.48	1.76	95.4	Pulse	0.30	3

Quantitation Report

File Name	068CCVA.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:09
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	49.977	ug/l	0.52	629,127.35	3.725E+00	Pulse	0.50	3
As			1	49.572	ug/l	0.32	72,620.35	4.300E-01	Pulse	1.00	3
Mo			1	49.220	ug/l	1.66	429,531.64	1.684E+00	Pulse	0.50	3
Pb			1	49.274	ug/l	1.72	2,344,916.08	4.879E-01	Pulse	1.00	3
Be			1	51.014	ug/l	3.49	3,551.48	1.766E-02	Pulse	2.00	3
Ag			1	49.841	ug/l	0.91	1,562,156.29	9.558E-01	Pulse	0.50	3
Ba			1	48.810	ug/l	0.33	149,539.84	9.149E-02	Pulse	0.50	3
Tl			1	49.762	ug/l	0.66	3,465,171.83	7.210E-01	Pulse	0.50	3
Sn			1	50.298	ug/l	1.56	341,766.12	2.091E-01	Pulse	0.30	3
Sr			1	50.153	ug/l	0.41	305,920.81	1.872E-01	Pulse	0.50	3
[Pb]			1	49.963	ug/l	1.38	1,115,787.63	2.322E-01	Pulse	0.50	3
Ca			1	4878.258	ug/l	1.78	135,931.19	6.759E-01	Pulse	0.50	3
Ti			1	49.061	ug/l	3.55	11,290.62	5.615E-02	Pulse	0.50	3
Na			1	5150.757	ug/l	1.94	7,537,972.00	3.748E+01	Analog	1.00	3
Mg			1	4894.047	ug/l	1.91	3,301,425.25	1.642E+01	Pulse	1.00	3
K			1	4970.128	ug/l	1.67	2,491,837.33	1.239E+01	Pulse	1.00	3
V			1	49.920	ug/l	2.06	466,765.83	2.321E+00	Pulse	0.50	3
Mn			1	49.382	ug/l	0.60	276,230.34	1.636E+00	Pulse	0.50	3
Fe			1	5201.879	ug/l	0.94	52,576,121.33	3.113E+02	Analog	0.50	3
Co			1	49.935	ug/l	0.42	1,125,482.25	6.664E+00	Pulse	0.50	3
Ni			1	50.417	ug/l	0.75	315,650.85	1.869E+00	Pulse	0.50	3
Cu			1	50.404	ug/l	0.91	891,678.90	5.280E+00	Pulse	0.50	3
Zn			1	50.543	ug/l	1.28	122,026.37	4.785E-01	Pulse	1.00	3
Cd			1	49.056	ug/l	0.95	204,045.37	8.002E-01	Pulse	0.50	3
Al			1	4845.633	ug/l	2.15	986,939.79	4.907E+00	Pulse	1.00	3
Se			1	51.820	ug/l	0.31	4,775.49	2.922E-03	Pulse	3.00	3
Sb			1	48.111	ug/l	0.99	463,950.80	1.819E+00	Pulse	1.00	3
Se			1	49.057	ug/l	3.63	2,404.26	1.756E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,806,485.50	1.21	90.5	Pulse	0.50	3
1	Sc		201,165.73	2.00	99.9	Pulse	0.30	3
1	Ge		168,888.69	0.65	100.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,634,440.77	0.39	96.1	Pulse	0.30	3
1	Tb		7,033,194.67	0.68	103.2	Analog	0.50	3
1	Lu		3,946,748.33	0.40	93.1	Pulse	0.50	3
1	Ge		255,014.16	0.82	99.9	Pulse	0.30	3
1	Te		13,693.81	0.70	92.5	Pulse	0.50	3
1	Li		990.03	6.96	90.5	Pulse	0.30	3

Quantitation Report

File Name 069_CCV.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 13:13
Sample Name CCV
Sample Type CCV
Comment =std 5
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	99.378	ug/l	0.71	1,243,335.46	7.404E+00	Pulse	0.50	3
As			1	98.679	ug/l	0.35	143,716.66	8.558E-01	Pulse	1.00	3
Mo			1	99.069	ug/l	1.11	861,881.17	3.390E+00	Pulse	0.50	3
Pb			1	97.119	ug/l	1.10	4,600,965.50	9.615E-01	Pulse	1.00	3
Be			1	99.151	ug/l	2.47	6,952.85	3.432E-02	Pulse	2.00	3
Ag			1	98.349	ug/l	0.27	3,062,525.58	1.886E+00	Pulse	0.50	3
Ba			1	97.802	ug/l	0.70	297,659.23	1.833E-01	Pulse	0.50	3
Tl			1	105.413	ug/l	1.24	7,308,170.00	1.527E+00	Analog	0.50	3
Sn			1	101.261	ug/l	0.89	683,296.80	4.208E-01	Pulse	0.30	3
Sr			1	101.815	ug/l	0.90	616,485.13	3.797E-01	Pulse	0.50	3
[Pb]			1	97.593	ug/l	0.44	2,169,657.08	4.534E-01	Pulse	0.50	3
Ca			1	9689.637	ug/l	0.09	271,838.68	1.342E+00	Pulse	0.50	3
Ti			1	97.996	ug/l	0.67	22,716.50	1.121E-01	Pulse	0.50	3
Na			1	10112.277	ug/l	0.38	14,896,131.67	7.353E+01	Analog	1.00	3
Mg			1	10096.779	ug/l	0.47	6,860,270.50	3.387E+01	Analog	1.00	3
K			1	10318.606	ug/l	0.35	5,191,897.33	2.563E+01	Analog	1.00	3
V			1	98.612	ug/l	0.51	927,858.69	4.580E+00	Pulse	0.50	3
Mn			1	98.947	ug/l	1.78	550,218.23	3.277E+00	Pulse	0.50	3
Fe			1	10345.867	ug/l	0.86	103,968,085.33	6.191E+02	Analog	0.50	3
Co			1	99.316	ug/l	1.15	2,225,698.58	1.325E+01	Pulse	0.50	3
Ni			1	99.381	ug/l	0.92	618,604.75	3.684E+00	Pulse	0.50	3
Cu			1	99.858	ug/l	1.35	1,748,366.37	1.041E+01	Pulse	0.50	3
Zn			1	99.070	ug/l	0.69	236,607.34	9.308E-01	Pulse	1.00	3
Cd			1	97.405	ug/l	0.46	403,879.31	1.589E+00	Pulse	0.50	3
Al			1	9597.369	ug/l	0.63	1,968,847.50	9.719E+00	Pulse	1.00	3
Se			1	101.306	ug/l	0.22	9,261.35	5.703E-03	Pulse	3.00	3
Sb			1	95.631	ug/l	0.62	919,192.23	3.616E+00	Pulse	1.00	3
Se			1	98.213	ug/l	3.20	4,653.69	3.497E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,785,276.83	0.54	90.1	Pulse	0.50	3
1	Sc		202,577.19	0.54	100.6	Pulse	0.30	3
1	Ge		167,930.82	0.45	100.2	Pulse	0.30	3
1	In		1,623,827.16	0.51	95.5	Pulse	0.30	3
1	Tb		7,033,190.83	0.59	103.2	Analog	0.50	3
1	Lu		3,968,739.17	0.88	93.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		254,215.31	0.82	99.5	Pulse	0.30	3
1	Te		13,310.88	0.94	90.0	Pulse	0.50	3
1	Li		1,001.14	3.50	91.5	Pulse	0.30	3

Quantitation Report

File Name	070_CCB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:17
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.001	ug/l	243.84	566.68	3.403E-03	Pulse	0.50	3
As			1	-0.001	ug/l	-186.77	22.00	1.323E-04	Pulse	1.00	3
Mo			1	0.037	ug/l	24.30	326.67	1.285E-03	Pulse	0.50	3
Pb			1	0.015	ug/l	28.95	1,814.44	3.695E-04	Pulse	1.00	3
Be			1	0.012	ug/l	152.13	1.17	5.847E-06	Pulse	2.00	3
Ag			1	0.009	ug/l	16.27	324.00	1.964E-04	Pulse	0.50	3
Ba			1	0.002	ug/l	178.19	32.67	1.980E-05	Pulse	0.50	3
Tl			1	0.075	ug/l	13.46	5,419.55	1.103E-03	Pulse	0.50	3
Sn			1	0.029	ug/l	50.16	506.68	3.074E-04	Pulse	0.30	3
Sr			1	0.011	ug/l	101.08	576.01	3.493E-04	Pulse	0.50	3
[Pb]			1	0.016	ug/l	9.69	862.69	1.758E-04	Pulse	0.50	3
Ca			1	0.185	ug/l	65.15	121.33	6.083E-04	Pulse	0.50	3
Ti			1	0.017	ug/l	144.57	6.67	3.333E-05	Pulse	0.50	3
Na			1	3.828	ug/l	7.58	16,486.43	8.266E-02	Pulse	1.00	3
Mg			1	0.568	ug/l	37.30	591.35	2.965E-03	Pulse	1.00	3
K			1	2.454	ug/l	13.49	18,317.81	9.185E-02	Pulse	1.00	3
V			1	-0.056	ug/l	-2.27	369.33	1.852E-03	Pulse	0.50	3
Mn			1	0.011	ug/l	37.59	167.33	1.004E-03	Pulse	0.50	3
Fe			1	0.603	ug/l	43.35	13,082.62	7.852E-02	Pulse	0.50	3
Co			1	0.005	ug/l	59.40	134.67	8.078E-04	Pulse	0.50	3
Ni			1	0.005	ug/l	52.82	117.33	7.045E-04	Pulse	0.50	3
Cu			1	-0.120	ug/l	-6.44	6,191.01	3.718E-02	Pulse	0.50	3
Zn			1	-0.085	ug/l	-10.04	1,710.75	6.724E-03	Pulse	1.00	3
Cd			1	0.005	ug/l	9.44	32.00	1.258E-04	Pulse	0.50	3
Al			1	0.320	ug/l	88.85	201.67	1.011E-03	Pulse	1.00	3
Se			1	0.029	ug/l	99.68	17.33	1.051E-05	Pulse	3.00	3
Sb			1	0.007	ug/l	34.20	201.00	7.898E-04	Pulse	1.00	3
Se			1	-0.035	ug/l	-348.01	24.34	1.699E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,905,764.00	1.32	92.4	Pulse	0.50	3
1	Sc		199,446.05	0.77	99.0	Pulse	0.30	3

Quantitation Report

1	Ge		166,496.18	1.05	99.4	Pulse	0.30	3
1	In		1,649,247.23	0.43	97.0	Pulse	0.30	3
1	Tb		7,013,549.67	0.36	103.0	Analog	0.50	3
1	Lu		3,953,032.00	0.26	93.3	Pulse	0.50	3
1	Ge		254,447.65	0.68	99.6	Pulse	0.30	3
1	Te		14,356.33	1.53	97.0	Pulse	0.50	3
1	Li		1,036.70	8.38	94.7	Pulse	0.30	3

Quantitation Report

File Name 071SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 13:21
Sample Name FA55914-1
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.541	ug/l	4.37	4,239.81	2.626E-02	Pulse	0.50	3
As			1	0.416	ug/l	16.66	139.33	8.629E-04	Pulse	1.00	3
Mo			1	1.054	ug/l	6.63	1,777.43	7.235E-03	Pulse	0.50	3
Pb			1	7.026	ug/l	1.40	66,969.93	1.413E-02	Pulse	1.00	3
Be			1	0.050	ug/l	196.28	1.00	5.180E-06	Pulse	2.00	3
Ag			1	0.043	ug/l	3.22	280.67	1.780E-04	Pulse	0.50	3
Ba			1	8.339	ug/l	3.63	4,953.36	3.142E-03	Pulse	0.50	3
Tl			1	0.129	ug/l	14.88	1,837.44	3.878E-04	Pulse	0.50	3
Sn			1	0.846	ug/l	4.68	1,401.18	8.884E-04	Pulse	0.30	3
Sr			1	135.712	ug/l	1.05	159,942.67	1.014E-01	Pulse	0.50	3
[Pb]			1	6.986	ug/l	2.10	31,242.50	6.589E-03	Pulse	0.50	3
Ca			1	38649.861	ug/l	0.16	206,283.84	1.071E+00	Pulse	0.50	3
Ti			1	10.643	ug/l	27.60	471.36	2.449E-03	Pulse	0.50	3
Na			1	52455.140	ug/l	0.84	14,697,688.67	7.628E+01	Analog	1.00	3
Mg			1	25088.066	ug/l	1.20	3,242,601.83	1.683E+01	Pulse	1.00	3
K			1	2621.241	ug/l	0.67	266,570.29	1.384E+00	Pulse	1.00	3
V			1	1.505	ug/l	6.60	3,551.67	1.843E-02	Pulse	0.50	3
Mn			1	32.640	ug/l	1.66	34,998.09	2.168E-01	Pulse	0.50	3
Fe			1	1661.182	ug/l	0.91	3,216,417.42	1.992E+01	Pulse	0.50	3
Co			1	0.312	ug/l	3.23	1,367.38	8.470E-03	Pulse	0.50	3
Ni			1	2.253	ug/l	2.68	2,778.21	1.721E-02	Pulse	0.50	3
Cu			1	1.540	ug/l	4.99	13,173.84	8.160E-02	Pulse	0.50	3
Zn			1	24.532	ug/l	2.25	13,083.10	5.324E-02	Pulse	1.00	3
Cd			1	0.057	ug/l	32.36	54.67	2.222E-04	Pulse	0.50	3
Al			1	254.766	ug/l	0.93	10,073.55	5.228E-02	Pulse	1.00	3
Se			1	0.175	ug/l	70.96	17.11	1.085E-05	Pulse	3.00	3
Sb			1	0.193	ug/l	3.29	486.01	1.977E-03	Pulse	1.00	3
Se			1	0.224	ug/l	201.52	24.55	1.982E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,741,590.33	0.92	89.3	Pulse	0.50	3
1	Sc		192,676.29	0.62	95.7	Pulse	0.30	3
1	Ge		161,446.74	0.58	96.4	Pulse	0.30	3
1	In		1,576,875.60	0.98	92.7	Pulse	0.30	3
1	Tb		6,953,925.33	0.10	102.1	Analog	0.50	3
1	Lu		3,877,060.83	0.79	91.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		245,749.06	0.77	96.2	Pulse	0.30	3
1	Te		12,408.90	1.56	83.9	Pulse	0.50	3
1	Li		1,034.48	10.54	94.5	Pulse	0.30	3

Quantitation Report

File Name	072SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:24
Sample Name	FA55914-2
Sample Type	Sample
Comment	
Prep Dilution	20.000
Auto Dilution	N/A
Total Dilution	20.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.369	ug/l	25.06	788.69	4.682E-03	Pulse	0.50	3
As			1	0.234	ug/l	79.93	41.00	2.432E-04	Pulse	1.00	3
Mo			1	0.249	ug/l	21.04	114.67	4.438E-04	Pulse	0.50	3
Pb			1	0.690	ug/l	7.00	2,729.55	5.588E-04	Pulse	1.00	3
Be			1	0.232	ug/l	91.45	1.17	5.697E-06	Pulse	2.00	3
Ag			1	0.140	ug/l	12.04	247.33	1.490E-04	Pulse	0.50	3
Ba			1	47.851	ug/l	3.56	7,458.23	4.500E-03	Pulse	0.50	3
Tl			1	0.168	ug/l	9.20	660.02	1.351E-04	Pulse	0.50	3
Sn			1	0.513	ug/l	14.99	484.45	2.920E-04	Pulse	0.30	3
Sr			1	207.461	ug/l	2.73	64,564.41	3.896E-02	Pulse	0.50	3
[Pb]			1	0.661	ug/l	2.06	1,239.38	2.537E-04	Pulse	0.50	3
Ca			1	53453.907	ug/l	1.73	75,482.83	3.706E-01	Pulse	0.50	3
Ti			1	2.278	ug/l	71.50	29.33	1.437E-04	Pulse	0.50	3
Na			1	229310.255	ug/l	1.48	16,981,448.67	8.337E+01	Analog	1.00	3
Mg			1	16060.117	ug/l	1.65	548,828.44	2.694E+00	Pulse	1.00	3
K			1	2496.923	ug/l	0.43	80,435.27	3.948E-01	Pulse	1.00	3
V			1	-0.167	ug/l	-41.62	830.69	4.076E-03	Pulse	0.50	3
Mn			1	30.255	ug/l	1.34	8,549.24	5.073E-02	Pulse	0.50	3
Fe			1	207.224	ug/l	0.86	111,629.53	6.624E-01	Pulse	0.50	3
Co			1	0.251	ug/l	8.19	308.67	1.831E-03	Pulse	0.50	3
Ni			1	0.716	ug/l	13.89	308.67	1.832E-03	Pulse	0.50	3
Cu			1	-1.460	ug/l	-9.13	7,089.32	4.207E-02	Pulse	0.50	3
Zn			1	4.925	ug/l	8.17	2,532.84	9.814E-03	Pulse	1.00	3
Cd			1	0.019	ug/l	118.34	13.33	5.172E-05	Pulse	0.50	3
Al			1	67.332	ug/l	1.96	834.69	4.097E-03	Pulse	1.00	3
Se			1	0.757	ug/l	91.26	18.22	1.101E-05	Pulse	3.00	3
Sb			1	0.074	ug/l	55.40	169.33	6.559E-04	Pulse	1.00	3
Se			1	1.255	ug/l	147.93	28.11	2.045E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,884,295.83	0.17	92.0	Pulse	0.50	3
1	Sc		203,723.79	1.20	101.1	Pulse	0.30	3
1	Ge		168,520.50	0.88	100.6	Pulse	0.30	3
1	In		1,657,887.50	1.80	97.5	Pulse	0.30	3
1	Tb		7,074,662.33	0.34	103.8	Analog	0.50	3
1	Lu		3,985,179.25	0.42	94.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		258,103.10	0.95	101.1	Pulse	0.30	3
1	Te		13,750.53	1.19	92.9	Pulse	0.50	3
1	Li		1,135.59	9.11	103.8	Pulse	0.30	3

Quantitation Report

File Name 073SMPL.d
File Path D:\2018\07-July\xa073118m1.b
Method File
Method Path
Acq Time 7/31/2018 13:28
Sample Name CRIA
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 7/31/2018 9:59
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.014	ug/l	0.83	13,508.04	7.885E-02	Pulse	0.50	3
As			1	1.002	ug/l	3.77	1,512.06	8.827E-03	Pulse	1.00	3
Mo			1	0.991	ug/l	1.63	8,873.46	3.395E-02	Pulse	0.50	3
Pb			1	0.959	ug/l	0.83	48,655.87	9.709E-03	Pulse	1.00	3
Be			1	0.933	ug/l	15.67	67.00	3.246E-04	Pulse	2.00	3
Ag			1	1.013	ug/l	0.83	32,335.45	1.945E-02	Pulse	0.50	3
Ba			1	0.977	ug/l	4.37	3,070.94	1.847E-03	Pulse	0.50	3
Tl			1	0.985	ug/l	0.54	71,579.56	1.428E-02	Pulse	0.50	3
Sn			1	1.087	ug/l	4.50	7,816.16	4.700E-03	Pulse	0.30	3
Sr			1	1.015	ug/l	1.17	6,801.25	4.090E-03	Pulse	0.50	3
[Pb]			1	0.972	ug/l	0.88	23,132.98	4.616E-03	Pulse	0.50	3
Ca			1	102.052	ug/l	1.38	3,035.58	1.471E-02	Pulse	0.50	3
Ti			1	0.931	ug/l	9.35	222.67	1.079E-03	Pulse	0.50	3
Na			1	111.611	ug/l	0.93	178,685.41	8.658E-01	Pulse	1.00	3
Mg			1	99.641	ug/l	1.15	69,185.73	3.353E-01	Pulse	1.00	3
K			1	102.096	ug/l	0.50	69,857.34	3.385E-01	Pulse	1.00	3
V			1	0.939	ug/l	3.72	9,917.21	4.806E-02	Pulse	0.50	3
Mn			1	1.069	ug/l	1.05	6,172.33	3.603E-02	Pulse	0.50	3
Fe			1	100.169	ug/l	0.48	1,034,101.19	6.036E+00	Pulse	0.50	3
Co			1	1.030	ug/l	1.40	23,574.34	1.376E-01	Pulse	0.50	3
Ni			1	1.005	ug/l	2.41	6,468.44	3.776E-02	Pulse	0.50	3
Cu			1	1.134	ug/l	1.33	28,667.28	1.673E-01	Pulse	0.50	3
Zn			1	1.225	ug/l	1.69	4,949.64	1.893E-02	Pulse	1.00	3
Cd			1	0.946	ug/l	2.35	4,044.46	1.547E-02	Pulse	0.50	3
Al			1	98.430	ug/l	1.15	20,710.73	1.004E-01	Pulse	1.00	3
Se			1	1.077	ug/l	4.07	115.45	6.942E-05	Pulse	3.00	3
Sb			1	0.954	ug/l	1.53	9,561.16	3.658E-02	Pulse	1.00	3
Se			1	0.691	ug/l	12.48	61.89	4.269E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,011,289.17	0.64	94.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		206,369.66	0.47	102.5	Pulse	0.30	3
1	Ge		171,308.68	0.62	102.3	Pulse	0.30	3
1	In		1,662,888.69	0.43	97.8	Pulse	0.30	3
1	Tb		7,114,965.00	1.26	104.4	Analog	0.50	3
1	Lu		3,985,116.58	0.69	94.0	Pulse	0.50	3
1	Ge		261,420.13	0.65	102.4	Pulse	0.30	3
1	Te		14,489.77	2.36	97.9	Pulse	0.50	3
1	Li		1,015.58	7.39	92.8	Pulse	0.30	3

Quantitation Report

File Name	074SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:32
Sample Name	ICSA
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.289	ug/l	0.67	15,858.48	9.932E-02	Pulse	0.50	3
As			1	0.079	ug/l	8.39	131.67	8.245E-04	Pulse	1.00	3
Mo			1	2087.773	ug/l	1.30	16,974,390.67	7.145E+01	Analog	0.50	3
Pb			1	0.083	ug/l	4.01	4,396.57	1.038E-03	Pulse	1.00	3
Be			1	0.007	ug/l	207.96	0.83	4.185E-06	Pulse	2.00	3
Ag			1	0.036	ug/l	15.27	1,076.71	7.040E-04	Pulse	0.50	3
Ba			1	0.067	ug/l	21.55	218.67	1.427E-04	Pulse	0.50	3
Tl			1	0.007	ug/l	12.56	458.68	1.082E-04	Pulse	0.50	3
Sn			1	0.122	ug/l	13.88	1,057.82	6.907E-04	Pulse	0.30	3
Sr			1	0.912	ug/l	1.67	5,668.20	3.704E-03	Pulse	0.50	3
[Pb]			1	0.084	ug/l	4.97	2,082.80	4.915E-04	Pulse	0.50	3
Ca			1	89906.735	ug/l	0.09	2,470,538.58	1.245E+01	Pulse	0.50	3
Ti			1	1941.517	ug/l	0.48	440,949.70	2.221E+00	Pulse	0.50	3
Na			1	98067.112	ug/l	0.84	141,446,949.33	7.126E+02	Analog	1.00	3
Mg			1	97178.455	ug/l	0.92	64,693,406.67	3.259E+02	Analog	1.00	3
K			1	99986.516	ug/l	0.34	49,148,525.33	2.476E+02	Analog	1.00	3
V			1	-0.035	ug/l	-10.18	559.34	2.819E-03	Pulse	0.50	3
Mn			1	0.288	ug/l	2.71	1,626.08	1.018E-02	Pulse	0.50	3
Fe			1	100302.680	ug/l	1.02	958,314,645.33	6.002E+03	Analog	0.50	3
Co			1	0.011	ug/l	22.19	255.33	1.598E-03	Pulse	0.50	3
Ni			1	0.149	ug/l	5.36	964.03	6.038E-03	Pulse	0.50	3
Cu			1	0.107	ug/l	7.79	9,707.14	6.080E-02	Pulse	0.50	3
Zn			1	0.957	ug/l	2.39	3,904.74	1.644E-02	Pulse	1.00	3
Cd			1	0.364	ug/l	2.73	1,420.73	5.979E-03	Pulse	0.50	3
Al			1	91412.194	ug/l	1.15	18,373,177.33	9.257E+01	Analog	1.00	3
Se			1	0.077	ug/l	45.27	20.22	1.322E-05	Pulse	3.00	3
Sb			1	0.036	ug/l	13.80	443.34	1.865E-03	Pulse	1.00	3
Se			1	0.035	ug/l	158.05	23.00	1.948E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,237,112.67	0.40	79.8	Pulse	0.50	3
1	Sc		198,498.16	1.11	98.5	Pulse	0.30	3
1	Ge		159,671.99	0.62	95.3	Pulse	0.30	3
1	In		1,530,536.71	0.95	90.0	Pulse	0.30	3
1	Tb		6,641,821.17	1.15	97.5	Analog	0.50	3
1	Lu		3,761,732.92	0.61	88.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		237,591.15	1.24	93.0	Pulse	0.30	3
1	Te		11,808.50	0.59	79.8	Pulse	0.50	3
1	Li		896.69	9.64	81.9	Pulse	0.30	3

Quantitation Report

File Name	075SMPL.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:36
Sample Name	ICSAB
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	20.483	ug/l	1.08	241,310.75	1.529E+00	Pulse	0.50	3
As			1	18.867	ug/l	1.58	25,846.40	1.637E-01	Pulse	1.00	3
Mo			1	2057.181	ug/l	1.42	16,667,294.00	7.040E+01	Analog	0.50	3
Pb			1	0.085	ug/l	2.03	4,459.26	1.060E-03	Pulse	1.00	3
Be			1	0.010	ug/l	130.11	1.00	5.155E-06	Pulse	2.00	3
Ag			1	17.729	ug/l	1.49	511,252.64	3.400E-01	Pulse	0.50	3
Ba			1	0.060	ug/l	3.70	193.33	1.286E-04	Pulse	0.50	3
Tl			1	0.006	ug/l	15.39	395.34	9.397E-05	Pulse	0.50	3
Sn			1	0.193	ug/l	7.97	1,481.18	9.854E-04	Pulse	0.30	3
Sr			1	0.929	ug/l	3.35	5,664.87	3.768E-03	Pulse	0.50	3
[Pb]			1	0.090	ug/l	4.86	2,180.15	5.184E-04	Pulse	0.50	3
Ca			1	89028.908	ug/l	1.10	2,404,311.92	1.232E+01	Pulse	0.50	3
Ti			1	1920.230	ug/l	0.31	428,644.02	2.197E+00	Pulse	0.50	3
Na			1	96843.028	ug/l	2.09	137,275,189.33	7.037E+02	Analog	1.00	3
Mg			1	95895.648	ug/l	1.33	62,745,024.00	3.216E+02	Analog	1.00	3
K			1	100179.943	ug/l	1.10	48,395,880.00	2.481E+02	Analog	1.00	3
V			1	-0.037	ug/l	-4.28	532.01	2.727E-03	Pulse	0.50	3
Mn			1	19.252	ug/l	1.38	100,716.20	6.380E-01	Pulse	0.50	3
Fe			1	99669.529	ug/l	0.68	941,472,277.33	5.964E+03	Analog	0.50	3
Co			1	18.819	ug/l	0.77	396,483.50	2.512E+00	Pulse	0.50	3
Ni			1	18.351	ug/l	1.31	107,437.47	6.806E-01	Pulse	0.50	3
Cu			1	17.851	ug/l	1.57	300,236.12	1.902E+00	Pulse	0.50	3
Zn			1	18.935	ug/l	1.87	43,553.62	1.840E-01	Pulse	1.00	3
Cd			1	18.004	ug/l	1.21	69,529.77	2.937E-01	Pulse	0.50	3
Al			1	89941.856	ug/l	0.56	17,768,423.33	9.108E+01	Analog	1.00	3
Se			1	0.098	ug/l	11.17	21.67	1.440E-05	Pulse	3.00	3
Sb			1	0.037	ug/l	13.08	457.01	1.931E-03	Pulse	1.00	3
Se			1	0.006	ug/l	1681.22	21.44	1.842E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,206,032.58	0.59	79.2	Pulse	0.50	3
1	Sc		195,095.94	1.07	96.9	Pulse	0.30	3
1	Ge		157,856.79	0.39	94.2	Pulse	0.30	3
1	In		1,503,917.72	1.30	88.5	Pulse	0.30	3
1	Tb		6,603,751.00	0.50	96.9	Analog	0.50	3
1	Lu		3,722,060.58	0.62	87.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		236,755.28	0.73	92.7	Pulse	0.30	3
1	Te		11,648.41	0.62	78.7	Pulse	0.50	3
1	Li		826.69	5.65	75.5	Pulse	0.30	3

Quantitation Report

File Name	076CCVA.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:40
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	49.358	ug/l	2.07	588,627.83	3.679E+00	Pulse	0.50	3
As			1	49.476	ug/l	1.38	68,667.86	4.292E-01	Pulse	1.00	3
Mo			1	50.685	ug/l	0.70	418,064.99	1.735E+00	Pulse	0.50	3
Pb			1	49.388	ug/l	0.57	2,316,692.42	4.891E-01	Pulse	1.00	3
Be			1	49.981	ug/l	1.81	3,222.92	1.730E-02	Pulse	2.00	3
Ag			1	51.432	ug/l	0.67	1,542,051.59	9.863E-01	Pulse	0.50	3
Ba			1	49.428	ug/l	1.01	144,855.30	9.265E-02	Pulse	0.50	3
Tl			1	50.225	ug/l	0.82	3,446,937.75	7.277E-01	Pulse	0.50	3
Sn			1	50.596	ug/l	0.94	328,885.13	2.103E-01	Pulse	0.30	3
Sr			1	49.819	ug/l	0.83	290,696.05	1.859E-01	Pulse	0.50	3
[Pb]			1	49.802	ug/l	1.31	1,096,187.00	2.314E-01	Pulse	0.50	3
Ca			1	4896.705	ug/l	1.52	126,359.08	6.784E-01	Pulse	0.50	3
Ti			1	49.115	ug/l	1.27	10,470.83	5.621E-02	Pulse	0.50	3
Na			1	5115.856	ug/l	0.63	6,934,181.83	3.723E+01	Analog	1.00	3
Mg			1	4813.973	ug/l	0.68	3,007,655.25	1.615E+01	Pulse	1.00	3
K			1	4901.425	ug/l	0.96	2,275,970.25	1.222E+01	Pulse	1.00	3
V			1	49.884	ug/l	0.82	431,988.87	2.319E+00	Pulse	0.50	3
Mn			1	48.996	ug/l	1.73	259,650.71	1.623E+00	Pulse	0.50	3
Fe			1	5206.174	ug/l	1.69	49,851,753.33	3.116E+02	Analog	0.50	3
Co			1	49.985	ug/l	0.89	1,067,393.83	6.671E+00	Pulse	0.50	3
Ni			1	50.039	ug/l	2.01	296,801.64	1.855E+00	Pulse	0.50	3
Cu			1	50.881	ug/l	0.26	852,800.62	5.329E+00	Pulse	0.50	3
Zn			1	50.755	ug/l	0.78	115,809.04	4.805E-01	Pulse	1.00	3
Cd			1	50.294	ug/l	0.67	197,720.62	8.204E-01	Pulse	0.50	3
Al			1	4716.542	ug/l	0.82	889,734.06	4.777E+00	Pulse	1.00	3
Se			1	49.932	ug/l	0.79	4,402.28	2.816E-03	Pulse	3.00	3
Sb			1	49.196	ug/l	0.83	448,383.23	1.860E+00	Pulse	1.00	3
Se			1	47.672	ug/l	2.61	2,262.80	1.707E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,737,113.00	0.69	89.2	Pulse	0.50	3
1	Sc		186,273.65	1.08	92.5	Pulse	0.30	3
1	Ge		160,021.95	1.21	95.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,563,530.32	0.85	92.0	Pulse	0.30	3
1	Tb		6,891,838.00	0.99	101.2	Analog	0.50	3
1	Lu		3,842,425.50	0.13	90.7	Pulse	0.50	3
1	Ge		241,017.86	0.57	94.4	Pulse	0.30	3
1	Te		13,262.84	2.12	89.6	Pulse	0.50	3
1	Li		920.03	7.07	84.1	Pulse	0.30	3

Quantitation Report

File Name	077_CCV.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:43
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	98.559	ug/l	1.48	1,178,931.08	7.343E+00	Pulse	0.50	3
As			1	98.242	ug/l	1.58	136,793.33	8.520E-01	Pulse	1.00	3
Mo			1	100.381	ug/l	0.80	833,897.58	3.435E+00	Pulse	0.50	3
Pb			1	98.258	ug/l	0.47	4,530,238.50	9.728E-01	Pulse	1.00	3
Be			1	99.529	ug/l	2.19	6,482.87	3.445E-02	Pulse	2.00	3
Ag			1	100.254	ug/l	0.96	2,997,602.00	1.923E+00	Pulse	0.50	3
Ba			1	97.674	ug/l	1.29	285,442.26	1.831E-01	Pulse	0.50	3
Tl			1	107.509	ug/l	0.15	7,253,862.33	1.558E+00	Analog	0.50	3
Sn			1	101.163	ug/l	1.67	655,482.47	4.204E-01	Pulse	0.30	3
Sr			1	100.009	ug/l	0.60	581,486.94	3.729E-01	Pulse	0.50	3
[Pb]			1	98.918	ug/l	0.95	2,140,115.92	4.596E-01	Pulse	0.50	3
Ca			1	9716.018	ug/l	0.86	253,205.26	1.346E+00	Pulse	0.50	3
Ti			1	99.734	ug/l	2.20	21,474.46	1.141E-01	Pulse	0.50	3
Na			1	10202.754	ug/l	1.22	13,960,332.33	7.419E+01	Analog	1.00	3
Mg			1	10139.572	ug/l	1.17	6,399,540.17	3.401E+01	Analog	1.00	3
K			1	9783.937	ug/l	0.76	4,573,954.83	2.431E+01	Pulse	1.00	3
V			1	100.738	ug/l	1.05	880,489.38	4.679E+00	Pulse	0.50	3
Mn			1	97.562	ug/l	1.78	518,699.09	3.231E+00	Pulse	0.50	3
Fe			1	10357.064	ug/l	1.40	99,509,717.33	6.198E+02	Analog	0.50	3
Co			1	99.534	ug/l	1.45	2,132,662.92	1.328E+01	Pulse	0.50	3
Ni			1	99.130	ug/l	0.90	589,965.29	3.674E+00	Pulse	0.50	3
Cu			1	98.804	ug/l	1.10	1,654,115.96	1.030E+01	Pulse	0.50	3
Zn			1	98.867	ug/l	0.58	225,470.81	9.289E-01	Pulse	1.00	3
Cd			1	97.808	ug/l	1.39	387,234.01	1.595E+00	Pulse	0.50	3
Al			1	9493.216	ug/l	1.08	1,809,040.96	9.614E+00	Pulse	1.00	3
Se			1	100.433	ug/l	1.23	8,816.14	5.654E-03	Pulse	3.00	3
Sb			1	96.347	ug/l	0.27	884,283.38	3.643E+00	Pulse	1.00	3
Se			1	97.257	ug/l	1.19	4,401.84	3.463E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,657,062.00	0.39	87.7	Pulse	0.50	3
1	Sc		188,183.90	0.87	93.4	Pulse	0.30	3
1	Ge		160,573.17	1.38	95.8	Pulse	0.30	3
1	In		1,559,282.20	0.80	91.7	Pulse	0.30	3
1	Tb		6,894,457.50	0.66	101.2	Analog	0.50	3
1	Lu		3,831,317.17	0.11	90.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		242,737.15	0.41	95.0	Pulse	0.30	3
1	Te		12,712.45	1.17	85.9	Pulse	0.50	3
1	Li		952.25	14.42	87.0	Pulse	0.30	3

Quantitation Report

File Name	078_CCB.d
File Path	D:\2018\07-July\xa073118m1.b
Method File	
Method Path	
Acq Time	7/31/2018 13:47
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	7/31/2018 9:59
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.002	ug/l	-78.06	514.01	3.193E-03	Pulse	0.50	3
As			1	0.003	ug/l	173.33	26.33	1.636E-04	Pulse	1.00	3
Mo			1	0.068	ug/l	7.65	568.68	2.336E-03	Pulse	0.50	3
Pb			1	0.015	ug/l	21.74	1,790.43	3.647E-04	Pulse	1.00	3
Be			1	0.018	ug/l	73.28	1.50	7.932E-06	Pulse	2.00	3
Ag			1	0.012	ug/l	10.05	392.01	2.468E-04	Pulse	0.50	3
Ba			1	0.002	ug/l	231.14	32.67	2.057E-05	Pulse	0.50	3
Tl			1	0.075	ug/l	14.14	5,368.20	1.093E-03	Pulse	0.50	3
Sn			1	0.031	ug/l	37.90	496.68	3.126E-04	Pulse	0.30	3
Sr			1	0.004	ug/l	147.15	512.68	3.227E-04	Pulse	0.50	3
[Pb]			1	0.015	ug/l	26.88	837.36	1.706E-04	Pulse	0.50	3
Ca			1	-0.029	ug/l	-4078.10	109.33	5.786E-04	Pulse	0.50	3
Ti			1	0.001	ug/l	1691.17	2.67	1.408E-05	Pulse	0.50	3
Na			1	6.526	ug/l	5.30	19,334.97	1.023E-01	Pulse	1.00	3
Mg			1	1.249	ug/l	17.22	992.36	5.249E-03	Pulse	1.00	3
K			1	4.552	ug/l	6.21	18,346.84	9.704E-02	Pulse	1.00	3
V			1	-0.055	ug/l	-9.56	359.34	1.901E-03	Pulse	0.50	3
Mn			1	0.011	ug/l	61.78	164.67	1.022E-03	Pulse	0.50	3
Fe			1	1.012	ug/l	27.95	16,583.96	1.030E-01	Pulse	0.50	3
Co			1	0.004	ug/l	32.86	100.67	6.250E-04	Pulse	0.50	3
Ni			1	0.002	ug/l	283.57	91.33	5.669E-04	Pulse	0.50	3
Cu			1	-0.107	ug/l	-8.69	6,195.01	3.849E-02	Pulse	0.50	3
Zn			1	-0.068	ug/l	-24.47	1,676.74	6.886E-03	Pulse	1.00	3
Cd			1	0.004	ug/l	97.45	25.33	1.038E-04	Pulse	0.50	3
Al			1	0.761	ug/l	61.36	275.67	1.458E-03	Pulse	1.00	3
Se			1	-0.003	ug/l	-1311.15	13.89	8.744E-06	Pulse	3.00	3
Sb			1	0.010	ug/l	34.20	220.67	9.060E-04	Pulse	1.00	3
Se			1	-0.020	ug/l	-324.14	23.22	1.752E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,907,222.50	0.67	92.4	Pulse	0.50	3
1	Sc		189,063.67	0.34	93.9	Pulse	0.30	3

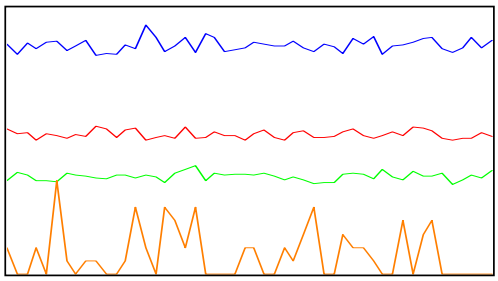
Quantitation Report

1	Ge		160,959.36	0.48	96.1	Pulse	0.30	3
1	In		1,588,741.85	0.19	93.4	Pulse	0.30	3
1	Tb		6,935,462.00	0.77	101.8	Analog	0.50	3
1	Lu		3,870,977.25	0.51	91.3	Pulse	0.50	3
1	Ge		243,522.30	0.56	95.4	Pulse	0.30	3
1	Te		13,259.50	0.23	89.6	Pulse	0.50	3
1	Li		1,005.59	7.65	91.9	Pulse	0.30	3

Tune Report

Batch Folder	D:\2018\07-July\xa073118m1.b
Acq. Date-Time	7/31/2018 8:45
Report Comment	073118TUNE2
Instrument Name	G3281A JP12151709

[2]



Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59	5000	2616	26162.73	5000.00	
89	5000	1829	18293.61	5000.00	
205	10000	8582	85822.20	5000.00	
78	20	1			

Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	
89		-	
205		-	
78		-	

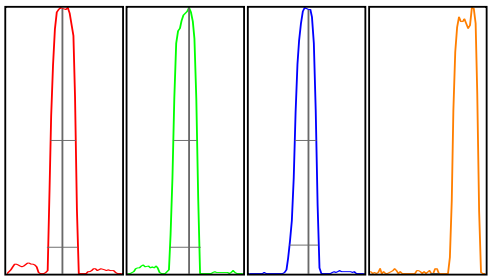
Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	2.89	8.00	
89	4.12	8.00	
205	2.77	8.00	
78	126.39		

Mass	Background (Actual)	Background (Required)	Background (Flag)
59	0.10	2	
89	0.00	2	
205	0.70	2	
78	0.00	5	

Ratio	156/140	0.268	%
Ratio	70/140	1.517	%

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.412

Tune Report



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-10% (Actual)	W-10% (Required)	W-10% (Flag)
59	2642.91	59.00	58.9 - 59.1		0.64	0.765	0.900	
89	1913.54	89.10	88.9 - 89.1		0.60	0.750	0.900	
205	8539.37	205.05	204.9 - 205.1		0.54	0.744	0.900	
78	0.00	78.15	-		0.18	0.175		

Integration Time [sec] 0.1 **Acquisition Time [sec]** 29.92 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Nebulizer Pump	0.10 rps
RF Matching	1.70 V	S/C Temp	2 ℃
Smpl Depth	9.0 mm	Gas Switch	Dilution Gas
Carrier Gas	0.80 L/min	Makeup/Dilution Gas	0.35 L/min
Option Gas	0.0 %		

Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-40 V
Extract 2	-175.0 V	Cell Exit	-70 V
Omega Bias	-85 V	Deflect	1.6 V
Omega Lens	8.7 V	Plate Bias	-60 V

Cell Parameters

Use Gas	true	OctP Bias	-18.0 V
He Flow	5.0 mL/min	OctP RF	200 V
H2 Flow	0.0 mL/min	Energy Discrimination	3.0 V
3rd Gas Flow	0 %		

History

	Sensitivity										
Created Date	Channel 1 Count	Channel 1 Mass	Channel 1 RSD%	Channel 2 Count	Channel 2 Mass	Channel 2 RSD%	Channel 3 Count	Channel 3 Mass	Channel 3 RSD%	Oxide Mass	Integration Time
7/31/2018 8:34 AM	4265.202	7	2.4514922	16275.843	89	1.9471442	14039.377	205	2.0196329	156/140	0.100 sec

History

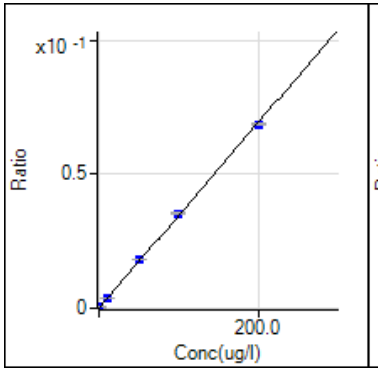
		Background										
Oxide Ratio	Sampling Period	Channel 1 Count	Channel 1 Mass	Channel 2 Count	Channel 2 Mass	Channel 3 Count	Channel 3 Mass	Acquisition Time	Channel 1 Mass	Channel 1 Axis	Channel 1 Height	Channel 1 W-10%
1.20 %	0.311 sec	2.0000002	7	2.6500003	89	13.350006	205	00:00:23	7	6.9	4227.2726	0.7770909

History

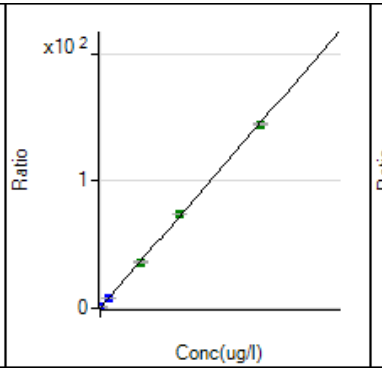
Resolution/Axis												Stand
Channel 1 W-50%	Channel 2 Mass	Channel 2 Axis	Channel 2 Height	Integration Time	Channel 2 W-10%	Channel 2 W-50%	Channel 3 Mass	Channel 3 Axis	Channel 3 Height	Channel 3 W-10%	Channel 3 W-50%	Extract 1
0.6795096	89	89.05	16059.969	0.100 sec	0.7666013	0.6167467	205	205	14174.365	0.7731726	0.5329638	0.0 V

History

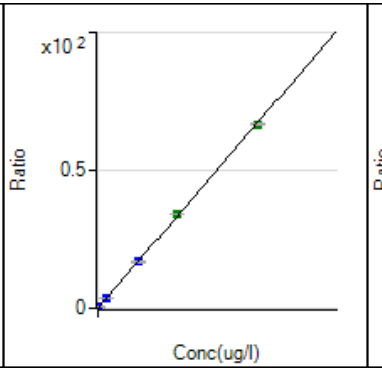
lard Tune Parameters Ion Lenses	
Extract 2	Omega Bias
-185.0 V	-80 V



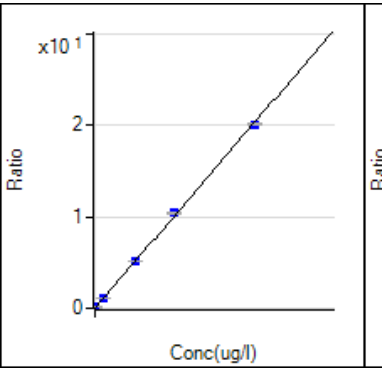
9 Be [2] / ISTD: 45 Sc
y = 3.461E-4 x + 1.685E-6
R 0.9998
DL 0.0253
BEC 0.004869



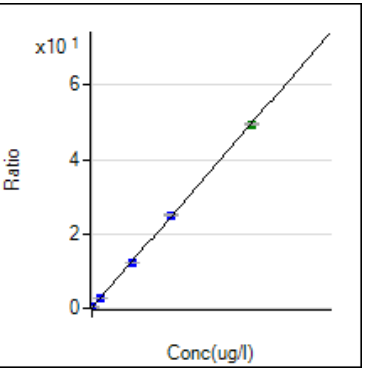
23 Na [2] / ISTD: 45 Sc
y = 7.266E-3 x + 5.485E-2
R 0.9999
DL 0.2951
BEC 7.549



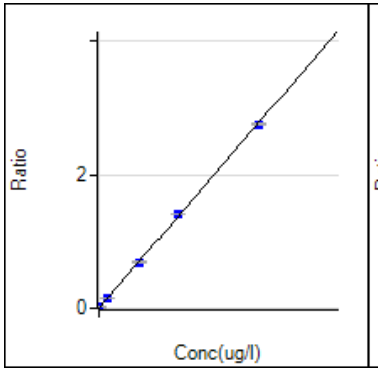
24 Mg [2] / ISTD: 45 Sc
y = 3.354E-3 x + 1.059E-3
R 0.9999
DL 0.06602
BEC 0.3159



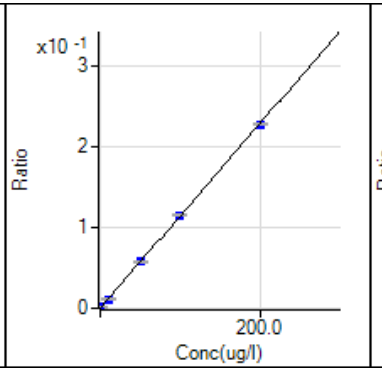
27 Al [2] / ISTD: 45 Sc
y = 1.013E-3 x + 6.878E-4
R 0.9999
DL 0.3388
BEC 0.6792



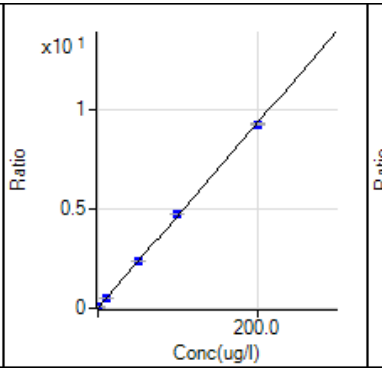
39 K [2] / ISTD: 45 Sc
y = 2.476E-3 x + 8.577E-2
R 1.0000
DL 2.298
BEC 34.65



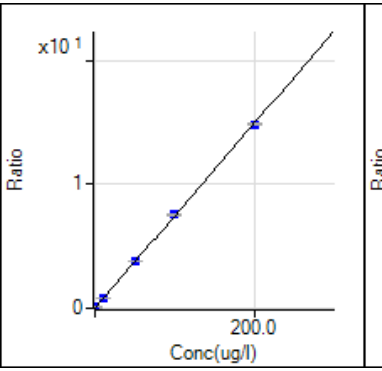
44 Ca [2] / ISTD: 45 Sc
y = 1.384E-4 x + 5.827E-4
R 0.9999
DL 0.2622
BEC 4.209



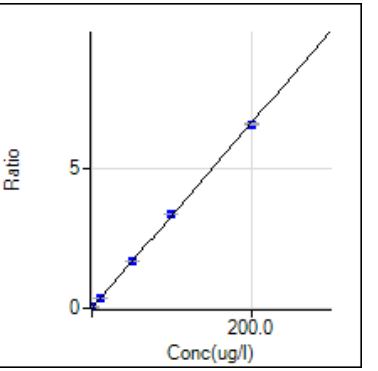
47 Ti [2] / ISTD: 45 Sc
y = 1.144E-3 x + 1.336E-5
R 1.0000
DL 0.04061
BEC 0.01168



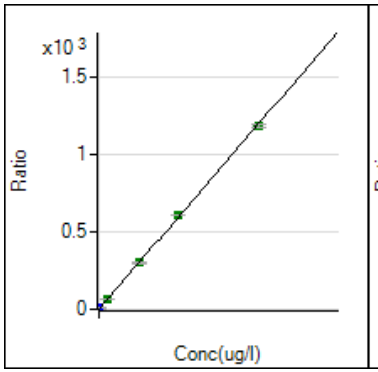
51 V [2] / ISTD: 45 Sc
y = 4.640E-2 x + 4.463E-3
R 0.9999
DL 0.01081
BEC 0.09618



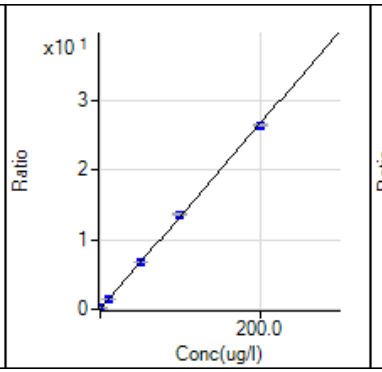
52 Cr [2] / ISTD: 72 Ge
y = 7.447E-2 x + 3.307E-3
R 1.0000
DL 0.00445
BEC 0.0444



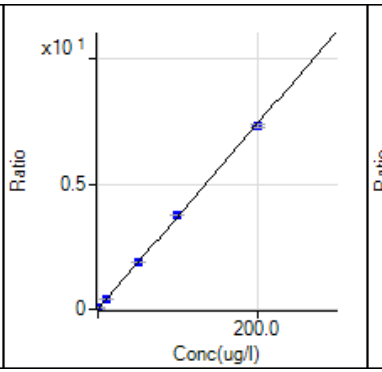
55 Mn [2] / ISTD: 72 Ge
y = 3.311E-2 x + 6.443E-4
R 0.9999
DL 0.005964
BEC 0.01946



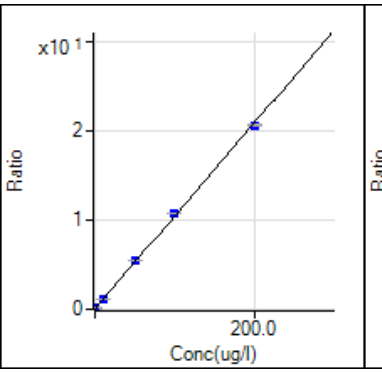
56 Fe [2] / ISTD: 72 Ge
y = 5.984E-2 x + 4.244E-2
R 0.9999
DL 0.05118
BEC 0.7092



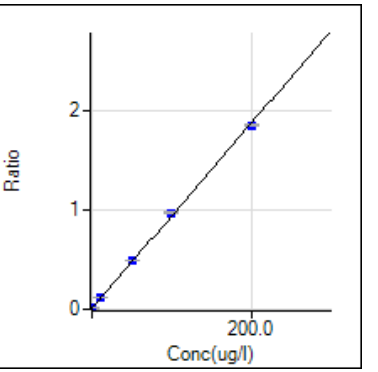
59 Co [2] / ISTD: 72 Ge
y = 1.335E-1 x + 1.554E-4
R 0.9999
DL 0.001691
BEC 0.001164



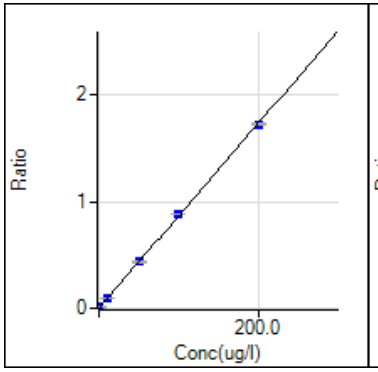
60 Ni [2] / ISTD: 72 Ge
y = 3.706E-2 x + 5.060E-4
R 0.9999
DL 0.008119
BEC 0.01365



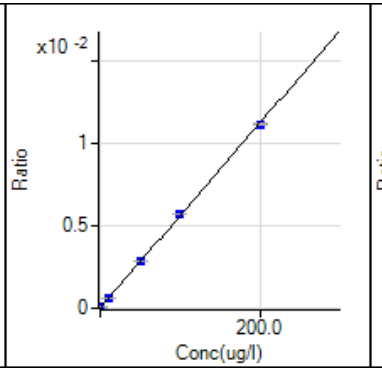
63 Cu [2] / ISTD: 72 Ge
y = 1.038E-1 x + 4.964E-2
R 0.9997
DL 0.04543
BEC 0.4784



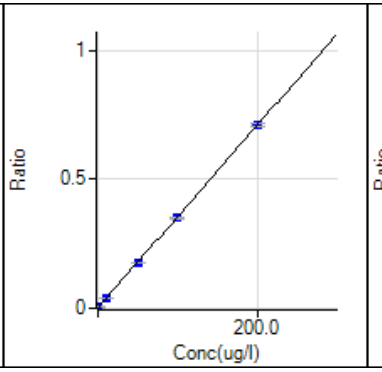
66 Zn [2] / ISTD: 74 Ge
y = 9.319E-3 x + 7.519E-3
R 0.9998
DL 0.05675
BEC 0.8069



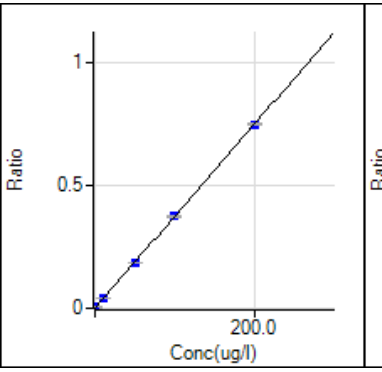
75 As [2] / ISTD: 72 Ge
y = 8.671E-3 x + 1.416E-4
R 1.0000
DL 0.01922
BEC 0.01633



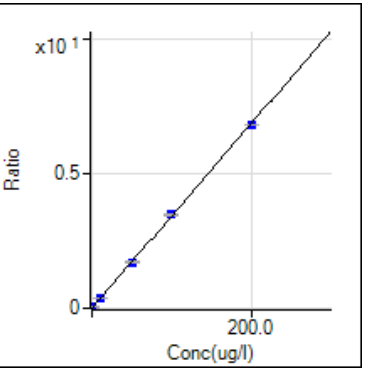
78 Se [2] / ISTD: 115 In
y = 5.621E-5 x + 8.888E-6
R 0.9999
DL 0.04294
BEC 0.1581



82 Se [2] / ISTD: 125 Te
y = 3.542E-3 x + 1.823E-3
R 0.9999
DL 0.6307
BEC 0.5146

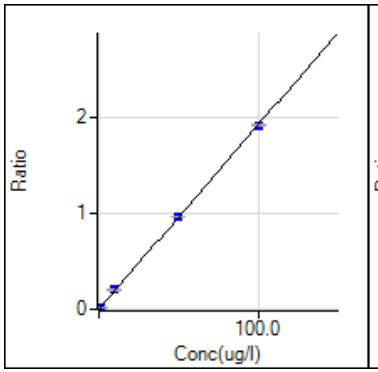


88 Sr [2] / ISTD: 115 In
y = 3.726E-3 x + 3.074E-4
R 1.0000
DL 0.00838
BEC 0.08251

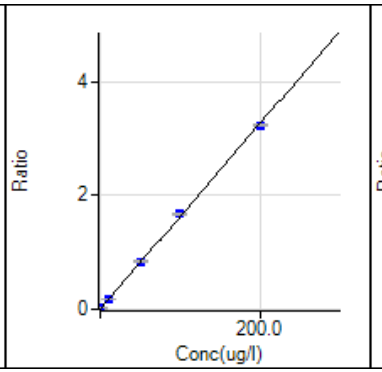


95 Mo [2] / ISTD: 74 Ge
y = 3.422E-2 x + 1.825E-5
R 1.0000
DL 0.0003837
BEC 0.0005334

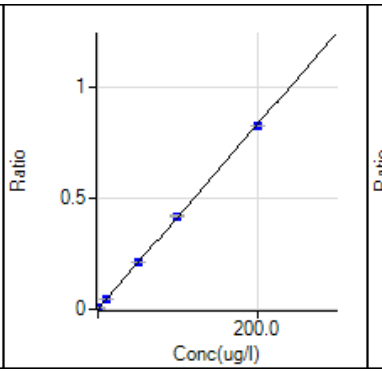
Calibration for D:\2018\07-July\xa073118m1.b\001CALB.d



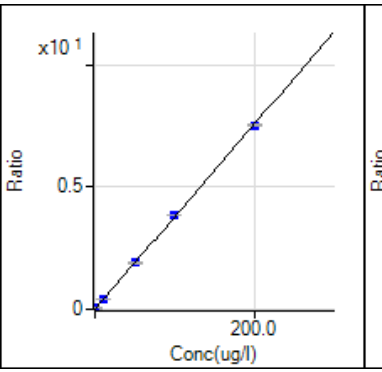
107 Ag [2] / ISTD: 115 In
y = 1.918E-2 x + 1.451E-5
R 1.0000
DL 0.0009094
BEC 0.0007567



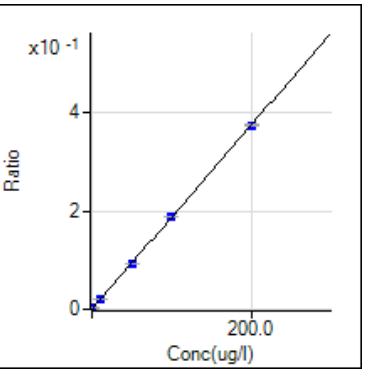
111 Cd [2] / ISTD: 74 Ge
y = 1.631E-2 x + 3.641E-5
R 0.9998
DL 0.004339
BEC 0.002233



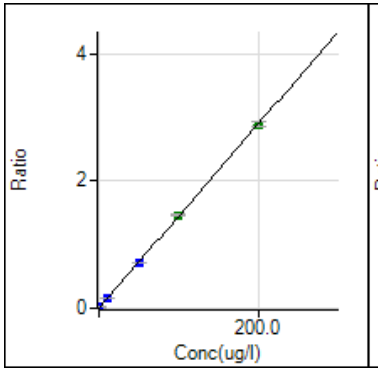
118 Sn [2] / ISTD: 115 In
y = 4.154E-3 x + 1.856E-4
R 1.0000
DL 0.01824
BEC 0.04468



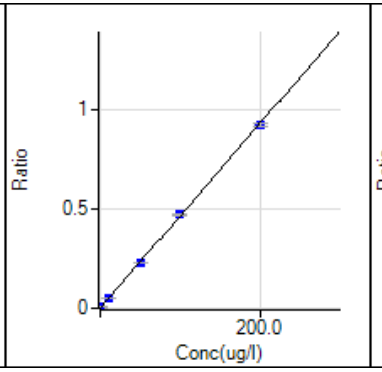
121 Sb [2] / ISTD: 74 Ge
y = 3.781E-2 x + 5.153E-4
R 0.9999
DL 0.003838
BEC 0.01363



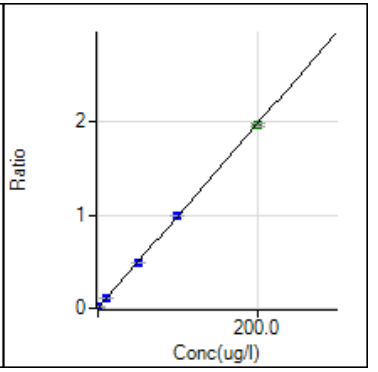
137 Ba [2] / ISTD: 115 In
y = 1.874E-3 x + 1.647E-5
R 1.0000
DL 0.005645
BEC 0.008787



205 Tl [2] / ISTD: 209 Bi
y = 1.449E-2 x + 1.343E-5
R 1.0000
DL 0.0001711
BEC 0.0009271



206 [Pb] [2] / ISTD: 209 Bi
y = 4.645E-3 x + 1.002E-4
R 0.9999
DL 9.497E-05
BEC 0.02156



208 Pb [2] / ISTD: 209 Bi
y = 9.898E-3 x + 2.172E-4
R 1.0000
DL 0.003183
BEC 0.02194

SGS Accutest - Orlando Mercury Digestion Log

Method of Digestion: SW846-7470A / 7471B / EPA 245.1 (circle one)

Matrix: Water / Soil / TCLPW / TCLPS / SPLP / Other (circle one)

MP # 34054

Analyst: JC

Date/Time started (mm/dd/yy 24:00) 07/23/18 109:40

Date/Time ended (mm/dd/yy 24:00) 07/23/18 111:40

Thermometer I.D.: MERCURY

Correction Factor(°C): -1

Temp Observed/Corrected(°C): 95, 94

HotBlock I.D.: 8 Balance ID ——

Pipette # Used: 6003294 Pipette # Used: PU08121

Digestion Tube Lot # 302316-8143154 Filter Lot #: 10197171-P

pH paper Lot#: 220416 PTFE Chips Lot #: ——

Reagents:[A]

Lot/Met#:	HNO_3	HCL	H_2SO_4	$KMnO_4$	$K_2S_2O_8$	$SnCl_2$	NaCl/NH_2OH-HCL
	0000197345	——	0000177544	MET6084	MET6074	10214100	MET6082

Sample #	Wt., g	Init.Vol(ml)	pH<2	Fin.Vol.(ml)	Comments
STD1 Cal. Blank			N/A		
STD2 0.1ml [B]			N/A		
STD3 0.5ml [B]			N/A		
STD4 1.5ml [B]			N/A		
STD5 2.5ml [B]			N/A		
STD6 3.0ml [B]			N/A		
ICV 1.5ml [F]			N/A		
ICB			N/A		
CRI 0.1ml [B]			N/A		
CCV 1.5ml [B]			N/A		
CCB			N/A		
Method Blank		50.0	N/A	50.0	
Blank Spk. 1.5ml [F]			N/A		
Matrix Spk 1.5ml [F]			✓		
Mat. Spk.Dup 1.5ml [F]			✓		
Duplicate			✓		
1QC [C] FA55967-1	[D] 11		✓		
2 -2	↓		✓		
3 -3	7		✓		
4 -4	11		✓		
5 -5	11		✓		
6 -6	12		✓		
7 -1F	↓		✓		
8 -2F	↓		✓		
9 -3F	8		✓		
10 -4F	12		✓		
11 -6F	1		NA		
12 FA55888-1A	1		NA		
13 FA55889-1A	1		✓		
14 FA55978-1	6	50.0	✓	50.0	
15 FA55941-8A					
16					
17					
18					
19					
20					
21[E]					
22[E]					
23[E]					
24[E]					

SEE PAGE 77 FOR CALIBRATION 07/23/18 JC

Analyst/Date Jordan Curet, 07/23/18

QC Rev./Date [signature] 7.23.18

10ppm int. met# 6016

10ppm int. 2nd met# 6069

100ppb(curve,bs,ms,msd,cri,ccv)met# 6080

100ppb 2nd(ICV)met# 6047

A For reagent volumes used consult SOP MET 105 or MET 106, current revision
B Amount of 100 ppb standard added (100ppb standard prepared from 10ppm Intermediate).
C Parent sample used to prepare MS, MSD, DUP
D Bottle number
E Additional Matrix QC
F Amount of 100 ppb 2nd source standard added (100ppb 2nd source standard prepared from 10ppm Intermediate 2nd).

SGS Accutest - Orlando Mercury Digestion Log

Method of Digestion: SW846-7470A / 7471B / EPA 245.1 (circle one) MP # 34076

Matrix: Water / Soil / TCLPW / TCLPS / SPLP / Other (circle one)

Analyst: JC Thermometer I.D.: MERCURY

Date/Time started (mm/dd/yy 24:00) 07/26/18 / 09:30 Correction Factor(°C): -1

Date/Time ended (mm/dd/yy/ 24:00) 07/26/18 / 11:30 Temp Observed/Corrected(°C): 93 / 92

HotBlock I.D.: 8 Balance ID —— Pipette # Used: 0U83294 Pipette # Used: PU08121

Digestion Tube Lot # 302316-8143154 Filter Lot #: 1019217J-P pH paper Lot#: 220416 PTFE Chips Lot #: ——

Reagents:[A]	HNO_3	HCL	H_2SO_4	$KMnO_4$	$K_2S_2O_8$	$SnCl_2$	NaCl/NH_2OH-HCL
Lot/Met#:	0000197345	——	0000177544	MET6084	MET6074	10214100	MET6082

Sample #	Wt., g	Init.Vol(ml)	pH<2	Fin.Vol.(ml)	Comments
STD1 Cal. Blank		50.0	N/A	50.6	
STD2 0.1ml [B]			N/A		
STD3 0.5ml [B]			N/A		
STD4 1.5ml [B]			N/A		
STD5 2.5ml [B]			N/A		
STD6 3.0ml [B]			N/A		
ICV 1.5ml [F]			N/A		
ICB			N/A		
CRI 0.1ml [B]			N/A		
CCV 1.5ml [B]			N/A		
CCB			N/A		
Method Blank		50.0	N/A	50.0	
Blank Spk. 1.5ml [F]			N/A		
Matrix Spk 1.5ml [F]			✓		
Mat. Spk.Dup 1.5ml [F]			✓		
Duplicate			✓		
1 QC [C] FA55941-5	D 7		✓		
2 -1	4		✓		
3 -2			✓		
4 -3			✓		
5 -4			✓		
6 -6			✓		
7 -7			✓		
8 -9			✓		
9 FA56082 -1	1		✓		
10 -2			✓		
11 -3			✓		
12 -4			✓		
13 -5			✓		
14 -6			✓		
15 -7			✓		
16 -8			✓		
17 FA56051 -4	8		①		① Received pH >2; preserved in lab
18 -5			①		
19 -6			✓		
20					
21 [E]					
22 [E] JC	07/26/18				
23 [E]					
24 [E]					

Analyst/Date Jordan Curro, 07/26/18 QC Rev./Date [signature] / 7.26.18

10ppm int. met# 16016 100ppb(curve,bs,ms,msd,sri,ccv)met# 16080

10ppm int. 2nd met# 16069 100ppb 2nd(ICV)met# 16047

A For reagent volumes used consult SOP MET 105 or MET 106, current revision
B Amount of 100 ppb standard added (100ppb standard prepared from 10ppm Intermediate).
C Parent sample used to prepare MS, MSD, DUP
D Bottle number
E Additional Matrix QC
F Amount of 100 ppb 2nd source standard added (100ppb 2nd source standard prepared from 10ppm Intermediate 2nd).

6020
DOD

SGS Accutest - Orlando Metals Digestion Log Water

Method of digestion(circle one): SW846-3010A / SW846-3005A / EPA 200.7 / EPA 200.8 / SM3030C

MP #: 34080

Prep Date/Time (mm/dd/yy 24:00): 07/27/18 08:30

HotBlock I.D. 7

Thermometer I.D. 213

Correction Factor (°C) -1

Temperature Observed/Corrected (°C) 95, 94

pH paper lot# 220916

Volume

Spk. Sol. [A]	Used(ml)	Pipette #
ACC1074	0.05	MU45274
ACC1051	0.2	KU15244
MET6081	1.0	↓

Dig. Tube Lot#: MP3065

Added [B]:

	HNO_3	HCL
Lot#	0000197345	0000190962

Sample #	Initial Volume(ml)	pH<2	Final Volume(ml)	Comments
Method Blank(MB)	50.0	N/A	50.0	
Spike Blank(SB)		N/A		
Matrix Spike(MS)		✓		
Matrix Spike Dup(MSD)		✓		
Duplicate(DUP)		✓		
1 QC [C] FA55941-5 [D] 8		✓		
2 -1 4		✓		
3 -2		✓		
4 -3		✓		
5 -4		✓		
6 -6		✓		
7 -7 ↓		✓		
8 -8A 6		✓		
9 -9 4		✓		
10 FA55914-1 1		✓		
11 -2		✓		
12 -3		✓		
13 -4 ↓		✓		
14 -6 4/1		(1)		(1) Received pH 12; preserved in lab
15 -8 1		✓		
16 -9 4		✓		
17 ~~FA55136-22~~ 4/1		✓		FA56136-22
18 FA55888-1A 1		✓		
19 FA55889-1A 1		✓		
20				
21 [E]				
22 [E] JC 07/27/18				
23 [E]				
24 [E]				

Analyst: Jordan Cuevas Date: 07/27/18

QC Review: Date: 7.30.18

A Used for SB, MS, MSD
B For reagent volumes used consult SOP MET 103, current revision
C Parent sample used to prepare MS, MSD, DUP
D Bottle Number
E Additional matrix QC

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

EA Engineering

SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

RB577

SGS Job Number: FA56228

Sampling Date: 07/30/18

Report to:

EA Engineering

asmith@eaest.com
hwilliams@eaest.com; tlamond@eaest.com; fdesantis@eaest.com
ATTN: Amanda Smith

Total number of pages in report: **822**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Caitlin Brice, M.S.
General Manager

Client Service contact: Ariel Hartney 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AK, AR, IA, KY, MA, MS, ND, NH, NV, OK, OR, UT, WA, WV

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Test results relate only to samples analyzed.

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Please share your ideas about
how we can serve you better at:
EHS.US.CustomerCare@sgs.com

October 18, 2018

Mr. Frank DeSantis
EA Science & Technology
6712 Brooklawn Pkwy
Suite 104
Syracuse, NY 13211

RE: SGS North America Inc. - Orlando job FA56228 Reissue

Dear Mr. DeSantis,

The final report for job number FA56228 has been edited to reflect requested corrections. These edits have been incorporated into the revised report.

Vinyl Chloride has been reported.

SGS North America Inc. - Orlando apologies for any inconvenience this may have caused. Please feel free to contact us if we can be of further assistance.

Sincerely,

SGS North America Inc. - Orlando

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SGS North America Inc.

Sample Summary

EA Engineering

Job No: FA56228

SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Project No: RB577

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA56228-1	07/30/18	09:40	DT	07/31/18	AQ	Ground Water	SB1-1
FA56228-2	07/30/18	09:35	DT	07/31/18	AQ	Ground Water	SB1-2
FA56228-3	07/30/18	08:50	DT	07/31/18	AQ	Ground Water	SB1-3
FA56228-4	07/30/18	10:50	DT	07/31/18	AQ	Ground Water	SB4-1
FA56228-5	07/30/18	11:45	DT	07/31/18	AQ	Ground Water	SB4-2
FA56228-6	07/30/18	10:45	DT	07/31/18	AQ	Ground Water	SB4-3
FA56228-7	07/30/18	11:40	DT	07/31/18	AQ	Ground Water	SB4-4
FA56228-8	07/30/18	12:00	DT	07/31/18	AQ	Field Blank Water	FB
FA56228-9	07/30/18	06:00	DT	07/31/18	AQ	Trip Blank Water	TB
FA56228-10	07/30/18	07:50	DT	07/31/18	AQ	Ground Water	SB1-5

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: EA Engineering **Job No:** FA56228

Site: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ **Report Date:** 8/10/2018 12:23:27

8 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) were collected on 07/30/2018 and were received at SGS North America Inc - Orlando on 07/31/2018 properly preserved, at 4.7 Deg. C and intact. These Samples received an SGS Orlando job number of FA56228. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Please refer to the QC Evaluation: DOD QSM5 Limits Summary Section for recoveries or RPDs exceeding control limits.

MS Volatiles By Method SW846 8260C

Matrix: AQ **Batch ID:** VI1694

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA56349-1MS, FA56349-1MSD were used as the QC samples indicated.

Matrix Spike/Matrix Spike Duplicate Recovery(s) for Acetone are outside control limits. Probable cause is due to matrix interference.

FA56228-1 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA56228-2 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA56228-3 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA56228-4 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA56228-5 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA56228-6 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA56228-7 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA56228-8 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

FA56228-9 for 2,2-Dichloropropane: Associated CCV outside of control limits high, sample was ND.

GC/LC Semi-volatiles By Method SW846 8330A

Matrix: AQ **Batch ID:** OP71202

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA56228-2MS, FA56228-2MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for 2,4,6-Trinitrotoluene was outside lab control limits but was within DOD QSM control limits.

Matrix Spike Recovery(s) for HMX, p-Nitrotoluene are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for HMX are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for 2,6-Dinitrotoluene are outside control limits for sample OP71202-MSD. Probable cause is due to sample non-homogeneity.

FA56228-8 for Tetryl: Associated CCV outside of DoD control limits low.

Metals Analysis By Method SW846 6020A

Matrix: AQ **Batch ID:** MP34108

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) FA56168-8DUP, FA56168-8MS, FA56168-8MSD, FA56168-8SDL were used as the QC samples for metals.

Matrix Spike/Matrix Spike Duplicate Recovery(s) for Calcium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

RPD(s) for Duplicate for Lead, Thallium, Zinc are outside control limits for sample MP34108-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Lead, Manganese, Thallium, Vanadium, Zinc are outside control limits for sample MP34108-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP34108-B1 for Silver: Outside DOD QSM control limits. Positive bias, but all sample results <MDL.

Metals Analysis By Method SW846 7470A

Matrix: AQ **Batch ID:** MP34103

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA56103-26FDUP, FA56103-26FMS, FA56103-26FMSD, FA56103-26FSDL were used as the QC samples for metals.

Matrix: AQ **Batch ID:** MP34123

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA56168-8DUP, FA56168-8MS, FA56168-8MSD, FA56168-8SDL were used as the QC samples for metals.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____

Kim Benham, Client Services (signature on file)

Summary of Hits

Job Number: FA56228
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/30/18

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA56228-1	**SB1-1**					
Aluminum		22.6 J	200	50	ug/l	SW846 6020A
Barium		49.6	2.0	1.0	ug/l	SW846 6020A
Calcium		37500	200	100	ug/l	SW846 6020A
Chromium		0.77 J	2.0	1.0	ug/l	SW846 6020A
Iron		61.7 J	200	50	ug/l	SW846 6020A
Lead		1.3 J	2.0	1.0	ug/l	SW846 6020A
Magnesium		15600	200	50	ug/l	SW846 6020A
Manganese		3.2	2.0	1.0	ug/l	SW846 6020A
Nickel		1.3 J	2.0	1.0	ug/l	SW846 6020A
Potassium		1740	200	100	ug/l	SW846 6020A
Selenium		0.24 J	2.0	1.0	ug/l	SW846 6020A
Sodium		147000	2000	1000	ug/l	SW846 6020A
Vanadium		0.25 J	2.0	1.0	ug/l	SW846 6020A
FA56228-2	**SB1-2**					
Arsenic		0.22 J	2.0	1.0	ug/l	SW846 6020A
Barium		57.0	2.0	1.0	ug/l	SW846 6020A
Calcium		53200	2000	1000	ug/l	SW846 6020A
Chromium		1.3 J	2.0	1.0	ug/l	SW846 6020A
Copper		0.27 J	20	1.0	ug/l	SW846 6020A
Iron		122 J	200	50	ug/l	SW846 6020A
Lead		0.22 J	2.0	1.0	ug/l	SW846 6020A
Magnesium		13200	200	50	ug/l	SW846 6020A
Manganese		42.3	2.0	1.0	ug/l	SW846 6020A
Nickel		0.87 J	2.0	1.0	ug/l	SW846 6020A
Potassium		3100	200	100	ug/l	SW846 6020A
Selenium		0.43 J	2.0	1.0	ug/l	SW846 6020A
Sodium		223000	2000	1000	ug/l	SW846 6020A
Vanadium		0.37 J	2.0	1.0	ug/l	SW846 6020A
Zinc		6.7 J	20	2.0	ug/l	SW846 6020A
FA56228-3	**SB1-3**					
Barium		39.0	2.0	1.0	ug/l	SW846 6020A
Calcium		47800	2000	1000	ug/l	SW846 6020A
Chromium		1.0 J	2.0	1.0	ug/l	SW846 6020A
Cobalt		0.24 J	2.0	1.0	ug/l	SW846 6020A
Iron		334	200	50	ug/l	SW846 6020A
Lead		1.4 J	2.0	1.0	ug/l	SW846 6020A
Magnesium		16300	200	50	ug/l	SW846 6020A
Manganese		4.4	2.0	1.0	ug/l	SW846 6020A
Nickel		0.83 J	2.0	1.0	ug/l	SW846 6020A

Summary of Hits

Job Number: FA56228
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/30/18

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
Potassium		2250	200	100	ug/l	SW846 6020A
Selenium		1.4 J	2.0	1.0	ug/l	SW846 6020A
Sodium		244000	2000	1000	ug/l	SW846 6020A
Vanadium		0.49 J	2.0	1.0	ug/l	SW846 6020A
Zinc		2.6 J	20	2.0	ug/l	SW846 6020A
FA56228-4	**SB4-1**					
Benzene		0.56 J	1.0	0.50	ug/l	SW846 8260C
Antimony		1.4 J	2.0	1.0	ug/l	SW846 6020A
Arsenic		0.26 J	2.0	1.0	ug/l	SW846 6020A
Barium		8.3	2.0	1.0	ug/l	SW846 6020A
Calcium		3480	200	100	ug/l	SW846 6020A
Chromium		1.9 J	2.0	1.0	ug/l	SW846 6020A
Magnesium		486	200	50	ug/l	SW846 6020A
Manganese		0.65 J	2.0	1.0	ug/l	SW846 6020A
Nickel		1.2 J	2.0	1.0	ug/l	SW846 6020A
Potassium		34400	200	100	ug/l	SW846 6020A
Sodium		18000	200	100	ug/l	SW846 6020A
Vanadium		0.33 J	2.0	1.0	ug/l	SW846 6020A
Zinc		2.3 J	20	2.0	ug/l	SW846 6020A
FA56228-5	**SB4-2**					
Barium		10.3	2.0	1.0	ug/l	SW846 6020A
Calcium		23900	200	100	ug/l	SW846 6020A
Chromium		0.83 J	2.0	1.0	ug/l	SW846 6020A
Iron		205	200	50	ug/l	SW846 6020A
Magnesium		14900	200	50	ug/l	SW846 6020A
Manganese		4.6	2.0	1.0	ug/l	SW846 6020A
Nickel		2.6	2.0	1.0	ug/l	SW846 6020A
Potassium		1110	200	100	ug/l	SW846 6020A
Selenium		0.51 J	2.0	1.0	ug/l	SW846 6020A
Sodium		4150	200	100	ug/l	SW846 6020A
Vanadium		0.39 J	2.0	1.0	ug/l	SW846 6020A
Zinc		4.9 J	20	2.0	ug/l	SW846 6020A
FA56228-6	**SB4-3**					
Methyl Tert Butyl Ether		0.27 J	1.0	0.50	ug/l	SW846 8260C
Aluminum		131 J	200	50	ug/l	SW846 6020A
Arsenic		1.3 J	2.0	1.0	ug/l	SW846 6020A
Barium		469	20	10	ug/l	SW846 6020A
Calcium		138000	2000	1000	ug/l	SW846 6020A
Chromium		3.8	2.0	1.0	ug/l	SW846 6020A

Summary of Hits

Job Number: FA56228
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/30/18

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
Cobalt		1.2 J	2.0	1.0	ug/l	SW846 6020A
Iron		6860	200	50	ug/l	SW846 6020A
Lead		0.26 J	2.0	1.0	ug/l	SW846 6020A
Magnesium		67900	2000	500	ug/l	SW846 6020A
Manganese		1230	20	10	ug/l	SW846 6020A
Nickel		3.5	2.0	1.0	ug/l	SW846 6020A
Potassium		2510	200	100	ug/l	SW846 6020A
Sodium		173000	2000	1000	ug/l	SW846 6020A
Vanadium		0.74 J	2.0	1.0	ug/l	SW846 6020A
Zinc		4.3 J	20	2.0	ug/l	SW846 6020A
FA56228-7	**SB4-4**					
Arsenic		1.4 J	2.0	1.0	ug/l	SW846 6020A
Barium		12.4	2.0	1.0	ug/l	SW846 6020A
Calcium		24600	200	100	ug/l	SW846 6020A
Chromium		0.66 J	2.0	1.0	ug/l	SW846 6020A
Copper		0.58 J	20	1.0	ug/l	SW846 6020A
Iron		35.6 J	200	50	ug/l	SW846 6020A
Magnesium		2220	200	50	ug/l	SW846 6020A
Manganese		46.4	2.0	1.0	ug/l	SW846 6020A
Nickel		0.22 J	2.0	1.0	ug/l	SW846 6020A
Potassium		1720	200	100	ug/l	SW846 6020A
Sodium		14800	200	100	ug/l	SW846 6020A
Vanadium		0.58 J	2.0	1.0	ug/l	SW846 6020A
Zinc		1.7 J	20	2.0	ug/l	SW846 6020A
FA56228-8	**FB**					
Aluminum		36.2 J	200	50	ug/l	SW846 6020A
Barium		20.1	2.0	1.0	ug/l	SW846 6020A
Calcium		34400	200	100	ug/l	SW846 6020A
Chromium		0.33 J	2.0	1.0	ug/l	SW846 6020A
Iron		58.1 J	200	50	ug/l	SW846 6020A
Magnesium		8590	200	50	ug/l	SW846 6020A
Manganese		1.7 J	2.0	1.0	ug/l	SW846 6020A
Nickel		0.45 J	2.0	1.0	ug/l	SW846 6020A
Potassium		915	200	100	ug/l	SW846 6020A
Sodium		10400	200	100	ug/l	SW846 6020A
Vanadium		0.30 J	2.0	1.0	ug/l	SW846 6020A
Zinc		8.9 J	20	2.0	ug/l	SW846 6020A
FA56228-9	**TB**					

No hits reported in this sample.

Summary of Hits

Job Number: FA56228
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/30/18

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method

FA56228-10 **SB1-5**

No hits reported in this sample.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB1-1		
Lab Sample ID:	FA56228-1	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56599.D	1	08/08/18 10:11	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

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LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB1-1		
Lab Sample ID:	FA56228-1	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB1-1		
Lab Sample ID:	FA56228-1	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	99%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

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LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: SB1-1
Lab Sample ID: FA56228-1 **Date Sampled:** 07/30/18
Matrix: AQ - Ground Water **Date Received:** 07/31/18
Method: SW846 8330A SW846 3535A **Percent Solids:** n/a
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060386.D	1	08/06/18 15:57	WH	08/05/18 09:00	OP71202	GBB1757
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.097 U	0.19	0.097	0.078	ug/l	
121-82-4	RDX	0.097 U	0.19	0.097	0.078	ug/l	
99-65-0	1,3-Dinitrobenzene	0.097 U	0.19	0.097	0.078	ug/l	
606-20-2	2,6-Dinitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
121-14-2	2,4-Dinitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
98-95-3	Nitrobenzene	0.097 U	0.19	0.097	0.094	ug/l	
88-72-2	o-Nitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
99-08-1	m-Nitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
99-99-0	p-Nitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
479-45-8	Tetryl	0.097 U	0.19	0.097	0.078	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.097 U	0.19	0.097	0.096	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
78-11-5	PETN	0.97 U	1.9	0.97	0.49	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	91%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB1-1
Lab Sample ID: FA56228-1 **Date Sampled:** 07/30/18
Matrix: AQ - Ground Water **Date Received:** 07/31/18
Percent Solids: n/a
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	22.6 J	200	50	22	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Antimony	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Arsenic	1.0 U	2.0	1.0	0.21	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Barium	49.6	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Calcium	37500	200	100	36	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Chromium	0.77 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cobalt	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Copper	1.0 U	20	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Iron	61.7 J	200	50	23	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Lead	1.3 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Magnesium	15600	200	50	19	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Manganese	3.2	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	08/02/18	08/02/18	JC	SW846 7470A [1]	SW846 7470A [3]
Nickel	1.3 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Potassium	1740	200	100	75	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Selenium	0.24 J	2.0	1.0	0.22	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Sodium	147000	2000	1000	240	ug/l	20	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Vanadium	0.25 J	2.0	1.0	0.24	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Zinc	2.0 U	20	2.0	1.7	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA15087
(2) Instrument QC Batch: MA15100
(3) Prep QC Batch: MP34103
(4) Prep QC Batch: MP34108

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB1-2		
Lab Sample ID:	FA56228-2	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56600.D	1	08/08/18 10:35	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB1-2		
Lab Sample ID:	FA56228-2	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB1-2		
Lab Sample ID:	FA56228-2	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	103%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: SB1-2
Lab Sample ID: FA56228-2 **Date Sampled:** 07/30/18
Matrix: AQ - Ground Water **Date Received:** 07/31/18
Method: SW846 8330A SW846 3535A **Percent Solids:** n/a
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060387.D	1	08/06/18 16:27	WH	08/05/18 09:00	OP71202	GBB1757
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.096 U	0.19	0.096	0.077	ug/l	
121-82-4	RDX	0.096 U	0.19	0.096	0.077	ug/l	
99-65-0	1,3-Dinitrobenzene	0.096 U	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
98-95-3	Nitrobenzene	0.096 U	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-08-1	m-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
479-45-8	Tetryl	0.096 U	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.096 U	0.19	0.096	0.095	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
78-11-5	PETN	0.96 U	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	85%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB1-2
Lab Sample ID: FA56228-2
Matrix: AQ - Ground Water
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Date Sampled: 07/30/18
Date Received: 07/31/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	50 U	200	50	22	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Antimony	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Arsenic	0.22 J	2.0	1.0	0.21	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Barium	57.0	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Calcium	53200	2000	1000	360	ug/l	20	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Chromium	1.3 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cobalt	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Copper	0.27 J	20	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Iron	122 J	200	50	23	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Lead	0.22 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Magnesium	13200	200	50	19	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Manganese	42.3	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	08/02/18	08/02/18	JC	SW846 7470A [1]	SW846 7470A [3]
Nickel	0.87 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Potassium	3100	200	100	75	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Selenium	0.43 J	2.0	1.0	0.22	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Sodium	223000	2000	1000	240	ug/l	20	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Vanadium	0.37 J	2.0	1.0	0.24	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Zinc	6.7 J	20	2.0	1.7	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA15087
(2) Instrument QC Batch: MA15100
(3) Prep QC Batch: MP34103
(4) Prep QC Batch: MP34108

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB1-3		
Lab Sample ID:	FA56228-3	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56601.D	1	08/08/18 10:59	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB1-3		
Lab Sample ID:	FA56228-3	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB1-3		
Lab Sample ID:	FA56228-3	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB1-3		
Lab Sample ID:	FA56228-3	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8330A SW846 3535A	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060388.D	1	08/06/18 16:55	WH	08/05/18 09:00	OP71202	GBB1757
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.096 U	0.19	0.096	0.077	ug/l	
121-82-4	RDX	0.096 U	0.19	0.096	0.077	ug/l	
99-65-0	1,3-Dinitrobenzene	0.096 U	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
98-95-3	Nitrobenzene	0.096 U	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-08-1	m-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
479-45-8	Tetryl	0.096 U	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.096 U	0.19	0.096	0.095	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
78-11-5	PETN	0.96 U	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	89%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB1-3
Lab Sample ID: FA56228-3
Matrix: AQ - Ground Water
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Date Sampled: 07/30/18
Date Received: 07/31/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	50 U	200	50	22	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Antimony	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Arsenic	1.0 U	2.0	1.0	0.21	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Barium	39.0	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Calcium	47800	2000	1000	360	ug/l	20	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Chromium	1.0 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Cobalt	0.24 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Copper	1.0 U	20	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Iron	334	200	50	23	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Lead	1.4 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Magnesium	16300	200	50	19	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Manganese	4.4	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	08/02/18	08/02/18	JC	SW846 7470A [1]	SW846 7470A [3]
Nickel	0.83 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Potassium	2250	200	100	75	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Selenium	1.4 J	2.0	1.0	0.22	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Sodium	244000	2000	1000	240	ug/l	20	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Vanadium	0.49 J	2.0	1.0	0.24	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]
Zinc	2.6 J	20	2.0	1.7	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA15087
(2) Instrument QC Batch: MA15100
(3) Prep QC Batch: MP34103
(4) Prep QC Batch: MP34108

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB4-1		
Lab Sample ID:	FA56228-4	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56602.D	1	08/08/18 11:23	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.56	1.0	0.50	0.31	ug/l	J
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB4-1		
Lab Sample ID:	FA56228-4	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB4-1		
Lab Sample ID:	FA56228-4	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB4-1		
Lab Sample ID:	FA56228-4	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8330A SW846 3535A	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060389.D	1	08/06/18 17:25	WH	08/05/18 09:00	OP71202	GBB1757
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.096 U	0.19	0.096	0.077	ug/l	
121-82-4	RDX	0.096 U	0.19	0.096	0.077	ug/l	
99-65-0	1,3-Dinitrobenzene	0.096 U	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
98-95-3	Nitrobenzene	0.096 U	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-08-1	m-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
479-45-8	Tetryl	0.096 U	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.096 U	0.19	0.096	0.095	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
78-11-5	PETN	0.96 U	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	90%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB4-1
Lab Sample ID: FA56228-4 **Date Sampled:** 07/30/18
Matrix: AQ - Ground Water **Date Received:** 07/31/18
Percent Solids: n/a
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	50 U	200	50	22	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Antimony	1.4 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Arsenic	0.26 J	2.0	1.0	0.21	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Barium	8.3	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Calcium	3480	200	100	36	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Chromium	1.9 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Cobalt	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Copper	1.0 U	20	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Iron	50 U	200	50	23	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Lead	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Magnesium	486	200	50	19	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Manganese	0.65 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	08/06/18	08/06/18	JC	SW846 7470A [1]	SW846 7470A [4]
Nickel	1.2 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Potassium	34400	200	100	75	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Selenium	1.0 U	2.0	1.0	0.22	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Sodium	18000	200	100	24	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Vanadium	0.33 J	2.0	1.0	0.24	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Zinc	2.3 J	20	2.0	1.7	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA15095
(2) Instrument QC Batch: MA15100
(3) Prep QC Batch: MP34108
(4) Prep QC Batch: MP34123

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB4-2		
Lab Sample ID:	FA56228-5	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56603.D	1	08/08/18 11:46	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB4-2		
Lab Sample ID:	FA56228-5	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB4-2		
Lab Sample ID:	FA56228-5	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	106%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: SB4-2
Lab Sample ID: FA56228-5 **Date Sampled:** 07/30/18
Matrix: AQ - Ground Water **Date Received:** 07/31/18
Method: SW846 8330A SW846 3535A **Percent Solids:** n/a
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060390.D	1	08/06/18 17:55	WH	08/05/18 09:00	OP71202	GBB1757
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.097 U	0.19	0.097	0.078	ug/l	
121-82-4	RDX	0.097 U	0.19	0.097	0.078	ug/l	
99-65-0	1,3-Dinitrobenzene	0.097 U	0.19	0.097	0.078	ug/l	
606-20-2	2,6-Dinitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
121-14-2	2,4-Dinitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
98-95-3	Nitrobenzene	0.097 U	0.19	0.097	0.094	ug/l	
88-72-2	o-Nitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
99-08-1	m-Nitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
99-99-0	p-Nitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
479-45-8	Tetryl	0.097 U	0.19	0.097	0.078	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.097 U	0.19	0.097	0.096	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
78-11-5	PETN	0.97 U	1.9	0.97	0.49	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	85%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB4-2
Lab Sample ID: FA56228-5
Matrix: AQ - Ground Water
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Date Sampled: 07/30/18
Date Received: 07/31/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	50 U	200	50	22	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Antimony	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Arsenic	1.0 U	2.0	1.0	0.21	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Barium	10.3	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Calcium	23900	200	100	36	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Chromium	0.83 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Cobalt	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Copper	1.0 U	20	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Iron	205	200	50	23	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Lead	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Magnesium	14900	200	50	19	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Manganese	4.6	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	08/06/18	08/06/18	JC	SW846 7470A [1]	SW846 7470A [4]
Nickel	2.6	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Potassium	1110	200	100	75	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Selenium	0.51 J	2.0	1.0	0.22	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Sodium	4150	200	100	24	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Vanadium	0.39 J	2.0	1.0	0.24	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Zinc	4.9 J	20	2.0	1.7	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA15095
(2) Instrument QC Batch: MA15100
(3) Prep QC Batch: MP34108
(4) Prep QC Batch: MP34123

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB4-3		
Lab Sample ID:	FA56228-6	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56604.D	1	08/08/18 12:10	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB4-3		
Lab Sample ID:	FA56228-6	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.27	1.0	0.50	0.23	ug/l	J
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB4-3		
Lab Sample ID:	FA56228-6	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	107%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: SB4-3
Lab Sample ID: FA56228-6 **Date Sampled:** 07/30/18
Matrix: AQ - Ground Water **Date Received:** 07/31/18
Method: SW846 8330A SW846 3535A **Percent Solids:** n/a
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060391.D	1	08/06/18 18:25	WH	08/05/18 09:00	OP71202	GBB1757
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.097 U	0.19	0.097	0.078	ug/l	
121-82-4	RDX	0.097 U	0.19	0.097	0.078	ug/l	
99-65-0	1,3-Dinitrobenzene	0.097 U	0.19	0.097	0.078	ug/l	
606-20-2	2,6-Dinitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
121-14-2	2,4-Dinitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
98-95-3	Nitrobenzene	0.097 U	0.19	0.097	0.094	ug/l	
88-72-2	o-Nitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
99-08-1	m-Nitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
99-99-0	p-Nitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
479-45-8	Tetryl	0.097 U	0.19	0.097	0.078	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.097 U	0.19	0.097	0.096	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.097 U	0.19	0.097	0.078	ug/l	
78-11-5	PETN	0.97 U	1.9	0.97	0.49	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	85%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB4-3
Lab Sample ID: FA56228-6
Matrix: AQ - Ground Water
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Date Sampled: 07/30/18
Date Received: 07/31/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	131 J	200	50	22	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Antimony	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Arsenic	1.3 J	2.0	1.0	0.21	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Barium	469	20	10	2.0	ug/l	20	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Calcium	138000	2000	1000	360	ug/l	20	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Chromium	3.8	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Cobalt	1.2 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Copper	1.0 U	20	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Iron	6860	200	50	23	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Lead	0.26 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Magnesium	67900	2000	500	190	ug/l	20	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Manganese	1230	20	10	2.0	ug/l	20	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	08/06/18	08/06/18	JC	SW846 7470A [1]	SW846 7470A [4]
Nickel	3.5	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Potassium	2510	200	100	75	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Selenium	1.0 U	2.0	1.0	0.22	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Sodium	173000	2000	1000	240	ug/l	20	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Vanadium	0.74 J	2.0	1.0	0.24	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Zinc	4.3 J	20	2.0	1.7	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA15095
(2) Instrument QC Batch: MA15100
(3) Prep QC Batch: MP34108
(4) Prep QC Batch: MP34123

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB4-4		
Lab Sample ID:	FA56228-7	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56605.D	1	08/08/18 12:34	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB4-4		
Lab Sample ID:	FA56228-7	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB4-4		
Lab Sample ID:	FA56228-7	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	105%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB4-4		
Lab Sample ID:	FA56228-7	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8330A SW846 3535A	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060392.D	1	08/06/18 18:55	WH	08/05/18 09:00	OP71202	GBB1757
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.096 U	0.19	0.096	0.077	ug/l	
121-82-4	RDX	0.096 U	0.19	0.096	0.077	ug/l	
99-65-0	1,3-Dinitrobenzene	0.096 U	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
98-95-3	Nitrobenzene	0.096 U	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-08-1	m-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
479-45-8	Tetryl	0.096 U	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.096 U	0.19	0.096	0.095	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
78-11-5	PETN	0.96 U	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	84%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB4-4
Lab Sample ID: FA56228-7
Matrix: AQ - Ground Water
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Date Sampled: 07/30/18
Date Received: 07/31/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	50 U	200	50	22	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Antimony	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Arsenic	1.4 J	2.0	1.0	0.21	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Barium	12.4	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Calcium	24600	200	100	36	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Chromium	0.66 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Cobalt	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Copper	0.58 J	20	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Iron	35.6 J	200	50	23	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Lead	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Magnesium	2220	200	50	19	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Manganese	46.4	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	08/06/18	08/06/18	JC	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.22 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Potassium	1720	200	100	75	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Selenium	1.0 U	2.0	1.0	0.22	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Sodium	14800	200	100	24	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Vanadium	0.58 J	2.0	1.0	0.24	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Zinc	1.7 J	20	2.0	1.7	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA15095
(2) Instrument QC Batch: MA15100
(3) Prep QC Batch: MP34108
(4) Prep QC Batch: MP34123

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	FB		
Lab Sample ID:	FA56228-8	**Date Sampled:**	07/30/18
Matrix:	AQ - Field Blank Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56606.D	1	08/08/18 12:58	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB		
Lab Sample ID:	FA56228-8	**Date Sampled:**	07/30/18
Matrix:	AQ - Field Blank Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB		
Lab Sample ID:	FA56228-8	**Date Sampled:**	07/30/18
Matrix:	AQ - Field Blank Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	107%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FB		
Lab Sample ID:	FA56228-8	**Date Sampled:**	07/30/18
Matrix:	AQ - Field Blank Water	**Date Received:**	07/31/18
Method:	SW846 8330A SW846 3535A	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060393.D	1	08/06/18 19:25	WH	08/05/18 09:00	OP71202	GBB1757
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.095 U	0.19	0.095	0.076	ug/l	
121-82-4	RDX	0.095 U	0.19	0.095	0.076	ug/l	
99-65-0	1,3-Dinitrobenzene	0.095 U	0.19	0.095	0.076	ug/l	
606-20-2	2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
121-14-2	2,4-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
98-95-3	Nitrobenzene	0.095 U	0.19	0.095	0.092	ug/l	
88-72-2	o-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-08-1	m-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
99-99-0	p-Nitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
479-45-8	Tetryl [a]	0.095 U	0.19	0.095	0.076	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.095 U	0.19	0.095	0.094	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.095 U	0.19	0.095	0.076	ug/l	
78-11-5	PETN	0.95 U	1.9	0.95	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	80%		70-136%

(a) Associated CCV outside of DoD control limits low.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: FB
Lab Sample ID: FA56228-8
Matrix: AQ - Field Blank Water
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Date Sampled: 07/30/18
Date Received: 07/31/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	36.2 J	200	50	22	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Antimony	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Arsenic	1.0 U	2.0	1.0	0.21	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Barium	20.1	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Beryllium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Cadmium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Calcium	34400	200	100	36	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Chromium	0.33 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Cobalt	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Copper	1.0 U	20	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Iron	58.1 J	200	50	23	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Lead	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Magnesium	8590	200	50	19	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Manganese	1.7 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Mercury	0.10 U	0.50	0.10	0.030	ug/l	1	08/06/18	08/06/18	JC	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.45 J	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Potassium	915	200	100	75	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Selenium	1.0 U	2.0	1.0	0.22	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Silver	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Sodium	10400	200	100	24	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Thallium	1.0 U	2.0	1.0	0.20	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Vanadium	0.30 J	2.0	1.0	0.24	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]
Zinc	8.9 J	20	2.0	1.7	ug/l	2	08/02/18	08/07/18	DM	SW846 6020A [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA15095
(2) Instrument QC Batch: MA15100
(3) Prep QC Batch: MP34108
(4) Prep QC Batch: MP34123

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

SGS North America Inc.

Report of Analysis

Client Sample ID:	TB		
Lab Sample ID:	FA56228-9	**Date Sampled:**	07/30/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I56607.D	1	08/08/18 13:22	AJ	n/a	n/a	VI1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	20 U	25	20	10	ug/l	
71-43-2	Benzene	0.50 U	1.0	0.50	0.31	ug/l	
108-86-1	Bromobenzene	0.50 U	1.0	0.50	0.37	ug/l	
74-97-5	Bromochloromethane	0.50 U	1.0	0.50	0.45	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	0.24	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	0.41	ug/l	
78-93-3	2-Butanone (MEK)	3.5 U	5.0	3.5	2.0	ug/l	
104-51-8	n-Butylbenzene	0.50 U	1.0	0.50	0.23	ug/l	
135-98-8	sec-Butylbenzene	0.50 U	1.0	0.50	0.24	ug/l	
98-06-6	tert-Butylbenzene	0.50 U	1.0	0.50	0.31	ug/l	
75-15-0	Carbon Disulfide	1.0 U	2.0	1.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	0.50 U	1.0	0.50	0.36	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	0.20	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	0.67	ug/l	
67-66-3	Chloroform	0.50 U	1.0	0.50	0.30	ug/l	
95-49-8	o-Chlorotoluene	0.50 U	1.0	0.50	0.22	ug/l	
106-43-4	p-Chlorotoluene	0.50 U	1.0	0.50	0.31	ug/l	
124-48-1	Dibromochloromethane	0.50 U	1.0	0.50	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U	5.0	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	1.0 U	2.0	1.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	0.50 U	1.0	0.50	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	0.50 U	1.0	0.50	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.50 U	1.0	0.50	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	0.34	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	0.43	ug/l	
142-28-9	1,3-Dichloropropane	0.50 U	1.0	0.50	0.31	ug/l	
594-20-7	2,2-Dichloropropane [a]	0.50 U	1.0	0.50	0.24	ug/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB		
Lab Sample ID:	FA56228-9	**Date Sampled:**	07/30/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	0.50 U	1.0	0.50	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.50 U	1.0	0.50	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.50 U	1.0	0.50	0.21	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	0.36	ug/l	
87-68-3	Hexachlorobutadiene	1.0 U	2.0	1.0	0.30	ug/l	
591-78-6	2-Hexanone	5.0 U	10	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	0.22	ug/l	
99-87-6	p-Isopropyltoluene	0.50 U	1.0	0.50	0.21	ug/l	
74-83-9	Methyl Bromide	1.0 U	2.0	1.0	0.59	ug/l	
74-87-3	Methyl Chloride	1.0 U	2.0	1.0	0.50	ug/l	
74-88-4	Methyl Iodide	0.50 U	1.0	0.50	0.27	ug/l	
74-95-3	Methylene Bromide	0.50 U	2.0	0.50	0.37	ug/l	
75-09-2	Methylene Chloride	4.0 U	5.0	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	2.0 U	5.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	0.23	ug/l	
91-20-3	Naphthalene	2.0 U	5.0	2.0	1.0	ug/l	
103-65-1	n-Propylbenzene	0.50 U	1.0	0.50	0.29	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.50 U	1.0	0.50	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U	1.0	0.50	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	0.22	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.0 U	2.0	1.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	1.0 U	2.0	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	0.47	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	0.35	ug/l	
75-69-4	Trichlorofluoromethane	1.0 U	2.0	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	1.0 U	2.0	1.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.50 U	1.0	0.50	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.50 U	1.0	0.50	0.27	ug/l	
108-05-4	Vinyl Acetate	5.0 U	10	5.0	2.0	ug/l	
75-01-4	Vinyl Chloride	0.50 U	1.0	0.50	0.41	ug/l	
	m,p-Xylene	1.0 U	2.0	1.0	0.47	ug/l	
95-47-6	o-Xylene	0.50 U	1.0	0.50	0.26	ug/l	
1330-20-7	Xylene (total)	1.5 U	3.0	1.5	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		83-118%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB		
Lab Sample ID:	FA56228-9	**Date Sampled:**	07/30/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	07/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	107%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	SB1-5		
Lab Sample ID:	FA56228-10	**Date Sampled:**	07/30/18
Matrix:	AQ - Ground Water	**Date Received:**	07/31/18
Method:	SW846 8330A SW846 3535A	**Percent Solids:**	n/a
Project:	SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB060396.D	1	08/06/18 20:55	WH	08/05/18 09:00	OP71202	GBB1757
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	0.096 U	0.19	0.096	0.077	ug/l	
121-82-4	RDX	0.096 U	0.19	0.096	0.077	ug/l	
99-65-0	1,3-Dinitrobenzene	0.096 U	0.19	0.096	0.077	ug/l	
606-20-2	2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
121-14-2	2,4-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
98-95-3	Nitrobenzene	0.096 U	0.19	0.096	0.093	ug/l	
88-72-2	o-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-08-1	m-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
99-99-0	p-Nitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
479-45-8	Tetryl	0.096 U	0.19	0.096	0.077	ug/l	
99-35-4	1,3,5-Trinitrobenzene	0.096 U	0.19	0.096	0.095	ug/l	
118-96-7	2,4,6-Trinitrotoluene	0.096 U	0.19	0.096	0.077	ug/l	
78-11-5	PETN	0.96 U	1.9	0.96	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	77%		70-136%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5 Limits

ACCUTEST LABORATORIES

CHAIN OF CUSTODY FA56228

PAGE 1 OF 1

www.accutest.com

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job #

Client / Reporting Information

Company Name: EA. Science & Technology
Street Address: 6712 Brooklawn Prkway Suite 104
City / State / Zip: Syracuse, NY 13211
Project Contact / E-mail: Frank DeSantis Jr
Phone # / Fax #: 315 - 565 - 6554
Sampler(s) Name(s) / Phone #: Doug Thompson and Aaron Roppoli

Project Information

Project Name: Picatinny Arsenal
Street: Rte. 15, Picatinny Arsenal
City / State:
Project #: RB577
Client Purchase Order #:
Project Manager:

Billing Information (If different from Report to)

Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	H3PO4	Explosives by EPA 8330	VOCs by EPA 8260	TAL Metals by EPA 6020/7470A	DOC by method 5310B	Alkalinity by SM2320B	Nitrate/Nitrite by 300.0	Dissolved Gases by RSK-175	Dissolved Iron by EPA 6020	Total Metals by EPA 6020	Dissolved Metals by EPA 6020	Total Iron by 6020	LAB USE ONLY
1	SB1-1		7/30/18	0940	DT	GW	6	3		1		1				X	X	X									
2	SB1-2			0935																							
3	SB1-3			0850																							
4	SB4-1			1050																							
5	SB4-2			1145																							
6	SB4-3			1045																							
7	SB4-4			1140																							
8	FB			1200		FB	6																				
9	TB			0600		TB	2									X											
10	SB1-5		7/30/18	0750		GW	2					2				X											

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Waste Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Turnaround Time (Business days)

- [x] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other
- [ ] *NJ Data of Known Quality Protocol Reporting*

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

SHIP ALL SAMPLES TO ORLANDO, FL LAB.

collected by: (SCI - Sovereign Consulting) Z COOLERS

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	7/30/18 16:45	1 [signature]	2 [signature]	7/30/18 18:05	2 Fed Ex
3 Relinquished by Sampler: Fed EX	Date Time:	3 [signature] 07/31/18 915	4 Relinquished By:	Date Time:	4 Received By:
5 Relinquished by:	Date Time:	5 Received By:	Custody Seal # 013461	☐ Intact ☐ Not intact	Preserved where applicable ☐ 4.3 4.7 On Ice ☑ Cooler Temp. 1.900 3.700

5.1

5

FA56228: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA56228 **Client:** EA. SCIENCE & TECH **Project:** PICATINNY ARSENAL

Date / Time Received: 7/31/2018 9:15:00 AM **Delivery Method:** FED EX **Airbill #'s:** 1001891734510003281100563393520694

Therm ID: IR 1; **Therm CF:** 0.1; **# of Coolers:** 2

Cooler Temps (Raw Measured) °C: Cooler 1: (4.2); Cooler 2: (4.6);

Cooler Temps (Corrected) °C: Cooler 1: (4.3); Cooler 2: (4.7);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☑		☐	☐
2. Trip Blank listed on COC	☑		☐	☐

	W	or	S	N/A
3. Type Of TB Received	☑		☐	☐

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☑	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: SHAYLAP Date: 7/31/2018 9:15:00 AM Reviewer: P.H Date: 7/31/2018

QC Evaluation: DOD QSM5 Limits

Job Number: FA56228
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/30/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VI1694	SW846 8260C						
VI1694-BS	67-64-1	Acetone	BSP	REC	99	%	39-160
VI1694-BS	71-43-2	Benzene	BSP	REC	98	%	79-120
VI1694-BS	108-86-1	Bromobenzene	BSP	REC	102	%	80-120
VI1694-BS	74-97-5	Bromochloromethane	BSP	REC	99	%	78-123
VI1694-BS	75-27-4	Bromodichloromethane	BSP	REC	109	%	79-125
VI1694-BS	75-25-2	Bromoform	BSP	REC	106	%	66-130
VI1694-BS	78-93-3	2-Butanone (MEK)	BSP	REC	98	%	56-143
VI1694-BS	104-51-8	n-Butylbenzene	BSP	REC	116	%	75-128
VI1694-BS	135-98-8	sec-Butylbenzene	BSP	REC	109	%	77-126
VI1694-BS	98-06-6	tert-Butylbenzene	BSP	REC	105	%	78-124
VI1694-BS	75-15-0	Carbon Disulfide	BSP	REC	98	%	64-133
VI1694-BS	56-23-5	Carbon Tetrachloride	BSP	REC	116	%	72-136
VI1694-BS	108-90-7	Chlorobenzene	BSP	REC	100	%	82-118
VI1694-BS	75-00-3	Chloroethane	BSP	REC	109	%	60-138
VI1694-BS	67-66-3	Chloroform	BSP	REC	102	%	79-124
VI1694-BS	95-49-8	o-Chlorotoluene	BSP	REC	104	%	79-122
VI1694-BS	106-43-4	p-Chlorotoluene	BSP	REC	104	%	78-122
VI1694-BS	124-48-1	Dibromochloromethane	BSP	REC	110	%	74-126
VI1694-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	104	%	62-128
VI1694-BS	106-93-4	1,2-Dibromoethane	BSP	REC	102	%	77-121
VI1694-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	134	%	32-152
VI1694-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	102	%	80-119
VI1694-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	105	%	80-119
VI1694-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	100	%	79-118
VI1694-BS	75-34-3	1,1-Dichloroethane	BSP	REC	104	%	77-125
VI1694-BS	107-06-2	1,2-Dichloroethane	BSP	REC	98	%	73-128
VI1694-BS	75-35-4	1,1-Dichloroethylene	BSP	REC	98	%	71-131
VI1694-BS	156-59-2	cis-1,2-Dichloroethylene	BSP	REC	98	%	78-123
VI1694-BS	156-60-5	trans-1,2-Dichloroethylene	BSP	REC	99	%	75-124
VI1694-BS	78-87-5	1,2-Dichloropropane	BSP	REC	104	%	78-122
VI1694-BS	142-28-9	1,3-Dichloropropane	BSP	REC	97	%	80-119
VI1694-BS	594-20-7	2,2-Dichloropropane	BSP	REC	131	%	60-139
VI1694-BS	563-58-6	1,1-Dichloropropene	BSP	REC	102	%	79-125
VI1694-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	105	%	75-124
VI1694-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	107	%	73-127
VI1694-BS	100-41-4	Ethylbenzene	BSP	REC	102	%	79-121
VI1694-BS	87-68-3	Hexachlorobutadiene	BSP	REC	111	%	66-134
VI1694-BS	591-78-6	2-Hexanone	BSP	REC	102	%	57-139
VI1694-BS	98-82-8	Isopropylbenzene	BSP	REC	111	%	72-131
VI1694-BS	99-87-6	p-Isopropyltoluene	BSP	REC	110	%	77-127
VI1694-BS	74-83-9	Methyl Bromide	BSP	REC	109	%	53-141
VI1694-BS	74-87-3	Methyl Chloride	BSP	REC	110	%	50-139

* Sample used for QC is not from job FA56228

QC Evaluation: DOD QSM5 Limits

Job Number: FA56228
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/30/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VI1694-BS	74-88-4	Methyl Iodide	BSP	REC	88	%	69-131
VI1694-BS	74-95-3	Methylene Bromide	BSP	REC	100	%	79-123
VI1694-BS	75-09-2	Methylene Chloride	BSP	REC	102	%	74-124
VI1694-BS	108-10-1	4-Methyl-2-pentanone (MIBK)	BSP	REC	101	%	67-130
VI1694-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	96	%	71-124
VI1694-BS	91-20-3	Naphthalene	BSP	REC	97	%	61-128
VI1694-BS	103-65-1	n-Propylbenzene	BSP	REC	106	%	76-126
VI1694-BS	100-42-5	Styrene	BSP	REC	106	%	78-123
VI1694-BS	630-20-6	1,1,1,2-Tetrachloroethane	BSP	REC	111	%	78-124
VI1694-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	106	%	71-121
VI1694-BS	127-18-4	Tetrachloroethylene	BSP	REC	104	%	74-129
VI1694-BS	108-88-3	Toluene	BSP	REC	99	%	80-121
VI1694-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	105	%	69-129
VI1694-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	105	%	69-130
VI1694-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	104	%	74-131
VI1694-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	105	%	80-119
VI1694-BS	79-01-6	Trichloroethylene	BSP	REC	102	%	79-123
VI1694-BS	75-69-4	Trichlorofluoromethane	BSP	REC	116	%	65-141
VI1694-BS	96-18-4	1,2,3-Trichloropropane	BSP	REC	100	%	73-122
VI1694-BS	95-63-6	1,2,4-Trimethylbenzene	BSP	REC	104	%	76-124
VI1694-BS	108-67-8	1,3,5-Trimethylbenzene	BSP	REC	107	%	75-124
VI1694-BS	108-05-4	Vinyl Acetate	BSP	REC	93	%	54-146
VI1694-BS	75-01-4	Vinyl Chloride	BSP	REC	114	%	58-137
VI1694-BS		m,p-Xylene	BSP	REC	105	%	80-121
VI1694-BS	95-47-6	o-Xylene	BSP	REC	103	%	78-122
VI1694-BS	1330-20-7	Xylene (total)	BSP	REC	104	%	79-121
VI1694-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	102	%	80-119
VI1694-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	102	%	81-118
VI1694-BS	2037-26-5	Toluene-D8	BSP	SURR	99	%	89-112
VI1694-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	98	%	85-114
FA56349-1MS*	67-64-1	Acetone	MS	REC	171	%	39-160
FA56349-1MS*	71-43-2	Benzene	MS	REC	92	%	79-120
FA56349-1MS*	108-86-1	Bromobenzene	MS	REC	97	%	80-120
FA56349-1MS*	74-97-5	Bromochloromethane	MS	REC	92	%	78-123
FA56349-1MS*	75-27-4	Bromodichloromethane	MS	REC	101	%	79-125
FA56349-1MS*	75-25-2	Bromoform	MS	REC	97	%	66-130
FA56349-1MS*	78-93-3	2-Butanone (MEK)	MS	REC	102	%	56-143
FA56349-1MS*	104-51-8	n-Butylbenzene	MS	REC	107	%	75-128
FA56349-1MS*	135-98-8	sec-Butylbenzene	MS	REC	102	%	77-126
FA56349-1MS*	98-06-6	tert-Butylbenzene	MS	REC	98	%	78-124
FA56349-1MS*	75-15-0	Carbon Disulfide	MS	REC	75	%	64-133
FA56349-1MS*	56-23-5	Carbon Tetrachloride	MS	REC	105	%	72-136
FA56349-1MS*	108-90-7	Chlorobenzene	MS	REC	94	%	82-118
FA56349-1MS*	75-00-3	Chloroethane	MS	REC	103	%	60-138
FA56349-1MS*	67-66-3	Chloroform	MS	REC	93	%	79-124

* Sample used for QC is not from job FA56228

QC Evaluation: DOD QSM5 Limits

Job Number: FA56228
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/30/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56349-1MS*	95-49-8	o-Chlorotoluene	MS	REC	98	%	79-122
FA56349-1MS*	106-43-4	p-Chlorotoluene	MS	REC	98	%	78-122
FA56349-1MS*	124-48-1	Dibromochloromethane	MS	REC	100	%	74-126
FA56349-1MS*	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	104	%	62-128
FA56349-1MS*	106-93-4	1,2-Dibromoethane	MS	REC	96	%	77-121
FA56349-1MS*	75-71-8	Dichlorodifluoromethane	MS	REC	127	%	32-152
FA56349-1MS*	95-50-1	1,2-Dichlorobenzene	MS	REC	96	%	80-119
FA56349-1MS*	541-73-1	1,3-Dichlorobenzene	MS	REC	99	%	80-119
FA56349-1MS*	106-46-7	1,4-Dichlorobenzene	MS	REC	96	%	79-118
FA56349-1MS*	75-34-3	1,1-Dichloroethane	MS	REC	97	%	77-125
FA56349-1MS*	107-06-2	1,2-Dichloroethane	MS	REC	94	%	73-128
FA56349-1MS*	75-35-4	1,1-Dichloroethylene	MS	REC	86	%	71-131
FA56349-1MS*	156-59-2	cis-1,2-Dichloroethylene	MS	REC	89	%	78-123
FA56349-1MS*	156-60-5	trans-1,2-Dichloroethylene	MS	REC	91	%	75-124
FA56349-1MS*	78-87-5	1,2-Dichloropropane	MS	REC	98	%	78-122
FA56349-1MS*	142-28-9	1,3-Dichloropropane	MS	REC	92	%	80-119
FA56349-1MS*	594-20-7	2,2-Dichloropropane	MS	REC	114	%	60-139
FA56349-1MS*	563-58-6	1,1-Dichloropropene	MS	REC	93	%	79-125
FA56349-1MS*	10061-01-5	cis-1,3-Dichloropropene	MS	REC	85	%	75-124
FA56349-1MS*	10061-02-6	trans-1,3-Dichloropropene	MS	REC	103	%	73-127
FA56349-1MS*	100-41-4	Ethylbenzene	MS	REC	97	%	79-121
FA56349-1MS*	87-68-3	Hexachlorobutadiene	MS	REC	100	%	66-134
FA56349-1MS*	591-78-6	2-Hexanone	MS	REC	106	%	57-139
FA56349-1MS*	98-82-8	Isopropylbenzene	MS	REC	104	%	72-131
FA56349-1MS*	99-87-6	p-Isopropyltoluene	MS	REC	102	%	77-127
FA56349-1MS*	74-83-9	Methyl Bromide	MS	REC	98	%	53-141
FA56349-1MS*	74-87-3	Methyl Chloride	MS	REC	101	%	50-139
FA56349-1MS*	74-88-4	Methyl Iodide	MS	REC	76	%	69-131
FA56349-1MS*	74-95-3	Methylene Bromide	MS	REC	97	%	79-123
FA56349-1MS*	75-09-2	Methylene Chloride	MS	REC	98	%	74-124
FA56349-1MS*	108-10-1	4-Methyl-2-pentanone (MIBK)	MS	REC	104	%	67-130
FA56349-1MS*	1634-04-4	Methyl Tert Butyl Ether	MS	REC	86	%	71-124
FA56349-1MS*	91-20-3	Naphthalene	MS	REC	91	%	61-128
FA56349-1MS*	103-65-1	n-Propylbenzene	MS	REC	99	%	76-126
FA56349-1MS*	100-42-5	Styrene	MS	REC	99	%	78-123
FA56349-1MS*	630-20-6	1,1,1,2-Tetrachloroethane	MS	REC	105	%	78-124
FA56349-1MS*	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	106	%	71-121
FA56349-1MS*	127-18-4	Tetrachloroethylene	MS	REC	90	%	74-129
FA56349-1MS*	108-88-3	Toluene	MS	REC	92	%	80-121
FA56349-1MS*	87-61-6	1,2,3-Trichlorobenzene	MS	REC	98	%	69-129
FA56349-1MS*	120-82-1	1,2,4-Trichlorobenzene	MS	REC	96	%	69-130
FA56349-1MS*	71-55-6	1,1,1-Trichloroethane	MS	REC	96	%	74-131
FA56349-1MS*	79-00-5	1,1,2-Trichloroethane	MS	REC	100	%	80-119
FA56349-1MS*	79-01-6	Trichloroethylene	MS	REC	98	%	79-123
FA56349-1MS*	75-69-4	Trichlorofluoromethane	MS	REC	115	%	65-141

* Sample used for QC is not from job FA56228

QC Evaluation: DOD QSM5 Limits

Job Number: FA56228
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/30/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56349-1MS*	96-18-4	1,2,3-Trichloropropane	MS	REC	101	%	73-122
FA56349-1MS*	95-63-6	1,2,4-Trimethylbenzene	MS	REC	98	%	76-124
FA56349-1MS*	108-67-8	1,3,5-Trimethylbenzene	MS	REC	100	%	75-124
FA56349-1MS*	108-05-4	Vinyl Acetate	MS	REC	86	%	54-146
FA56349-1MS*	75-01-4	Vinyl Chloride	MS	REC	100	%	58-137
FA56349-1MS*		m,p-Xylene	MS	REC	97	%	80-121
FA56349-1MS*	95-47-6	o-Xylene	MS	REC	96	%	78-122
FA56349-1MS*	1330-20-7	Xylene (total)	MS	REC	97	%	79-121
FA56349-1MS*	1868-53-7	Dibromofluoromethane	MS	SURR	103	%	80-119
FA56349-1MS*	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	105	%	81-118
FA56349-1MS*	2037-26-5	Toluene-D8	MS	SURR	97	%	89-112
FA56349-1MS*	460-00-4	4-Bromofluorobenzene	MS	SURR	96	%	85-114
FA56349-1MSD*	67-64-1	Acetone	MSD	REC	179	%	39-160
FA56349-1MSD*	67-64-1	Acetone	MSD	RPD	5	%	20
FA56349-1MSD*	71-43-2	Benzene	MSD	REC	95	%	79-120
FA56349-1MSD*	71-43-2	Benzene	MSD	RPD	3	%	20
FA56349-1MSD*	108-86-1	Bromobenzene	MSD	REC	99	%	80-120
FA56349-1MSD*	108-86-1	Bromobenzene	MSD	RPD	2	%	20
FA56349-1MSD*	74-97-5	Bromochloromethane	MSD	REC	95	%	78-123
FA56349-1MSD*	74-97-5	Bromochloromethane	MSD	RPD	3	%	20
FA56349-1MSD*	75-27-4	Bromodichloromethane	MSD	REC	105	%	79-125
FA56349-1MSD*	75-27-4	Bromodichloromethane	MSD	RPD	3	%	20
FA56349-1MSD*	75-25-2	Bromoform	MSD	REC	100	%	66-130
FA56349-1MSD*	75-25-2	Bromoform	MSD	RPD	3	%	20
FA56349-1MSD*	78-93-3	2-Butanone (MEK)	MSD	REC	107	%	56-143
FA56349-1MSD*	78-93-3	2-Butanone (MEK)	MSD	RPD	5	%	20
FA56349-1MSD*	104-51-8	n-Butylbenzene	MSD	REC	110	%	75-128
FA56349-1MSD*	104-51-8	n-Butylbenzene	MSD	RPD	3	%	20
FA56349-1MSD*	135-98-8	sec-Butylbenzene	MSD	REC	105	%	77-126
FA56349-1MSD*	135-98-8	sec-Butylbenzene	MSD	RPD	3	%	20
FA56349-1MSD*	98-06-6	tert-Butylbenzene	MSD	REC	102	%	78-124
FA56349-1MSD*	98-06-6	tert-Butylbenzene	MSD	RPD	4	%	20
FA56349-1MSD*	75-15-0	Carbon Disulfide	MSD	REC	76	%	64-133
FA56349-1MSD*	75-15-0	Carbon Disulfide	MSD	RPD	1	%	20
FA56349-1MSD*	56-23-5	Carbon Tetrachloride	MSD	REC	108	%	72-136
FA56349-1MSD*	56-23-5	Carbon Tetrachloride	MSD	RPD	3	%	20
FA56349-1MSD*	108-90-7	Chlorobenzene	MSD	REC	97	%	82-118
FA56349-1MSD*	108-90-7	Chlorobenzene	MSD	RPD	3	%	20
FA56349-1MSD*	75-00-3	Chloroethane	MSD	REC	100	%	60-138
FA56349-1MSD*	75-00-3	Chloroethane	MSD	RPD	3	%	20
FA56349-1MSD*	67-66-3	Chloroform	MSD	REC	96	%	79-124
FA56349-1MSD*	67-66-3	Chloroform	MSD	RPD	4	%	20
FA56349-1MSD*	95-49-8	o-Chlorotoluene	MSD	REC	101	%	79-122
FA56349-1MSD*	95-49-8	o-Chlorotoluene	MSD	RPD	3	%	20
FA56349-1MSD*	106-43-4	p-Chlorotoluene	MSD	REC	101	%	78-122

* Sample used for QC is not from job FA56228

QC Evaluation: DOD QSM5 Limits

Job Number: FA56228
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/30/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56349-1MSD*	106-43-4	p-Chlorotoluene	MSD	RPD	3	%	20
FA56349-1MSD*	124-48-1	Dibromochloromethane	MSD	REC	103	%	74-126
FA56349-1MSD*	124-48-1	Dibromochloromethane	MSD	RPD	3	%	20
FA56349-1MSD*	96-12-8	1,2-Dibromo-3-chloropropane	MSD	REC	108	%	62-128
FA56349-1MSD*	96-12-8	1,2-Dibromo-3-chloropropane	MSD	RPD	3	%	20
FA56349-1MSD*	106-93-4	1,2-Dibromoethane	MSD	REC	100	%	77-121
FA56349-1MSD*	106-93-4	1,2-Dibromoethane	MSD	RPD	4	%	20
FA56349-1MSD*	75-71-8	Dichlorodifluoromethane	MSD	REC	130	%	32-152
FA56349-1MSD*	75-71-8	Dichlorodifluoromethane	MSD	RPD	2	%	20
FA56349-1MSD*	95-50-1	1,2-Dichlorobenzene	MSD	REC	99	%	80-119
FA56349-1MSD*	95-50-1	1,2-Dichlorobenzene	MSD	RPD	3	%	20
FA56349-1MSD*	541-73-1	1,3-Dichlorobenzene	MSD	REC	101	%	80-119
FA56349-1MSD*	541-73-1	1,3-Dichlorobenzene	MSD	RPD	2	%	20
FA56349-1MSD*	106-46-7	1,4-Dichlorobenzene	MSD	REC	98	%	79-118
FA56349-1MSD*	106-46-7	1,4-Dichlorobenzene	MSD	RPD	1	%	20
FA56349-1MSD*	75-34-3	1,1-Dichloroethane	MSD	REC	101	%	77-125
FA56349-1MSD*	75-34-3	1,1-Dichloroethane	MSD	RPD	4	%	20
FA56349-1MSD*	107-06-2	1,2-Dichloroethane	MSD	REC	97	%	73-128
FA56349-1MSD*	107-06-2	1,2-Dichloroethane	MSD	RPD	3	%	20
FA56349-1MSD*	75-35-4	1,1-Dichloroethylene	MSD	REC	90	%	71-131
FA56349-1MSD*	75-35-4	1,1-Dichloroethylene	MSD	RPD	5	%	20
FA56349-1MSD*	156-59-2	cis-1,2-Dichloroethylene	MSD	REC	93	%	78-123
FA56349-1MSD*	156-59-2	cis-1,2-Dichloroethylene	MSD	RPD	4	%	20
FA56349-1MSD*	156-60-5	trans-1,2-Dichloroethylene	MSD	REC	95	%	75-124
FA56349-1MSD*	156-60-5	trans-1,2-Dichloroethylene	MSD	RPD	4	%	20
FA56349-1MSD*	78-87-5	1,2-Dichloropropane	MSD	REC	100	%	78-122
FA56349-1MSD*	78-87-5	1,2-Dichloropropane	MSD	RPD	2	%	20
FA56349-1MSD*	142-28-9	1,3-Dichloropropane	MSD	REC	96	%	80-119
FA56349-1MSD*	142-28-9	1,3-Dichloropropane	MSD	RPD	4	%	20
FA56349-1MSD*	594-20-7	2,2-Dichloropropane	MSD	REC	120	%	60-139
FA56349-1MSD*	594-20-7	2,2-Dichloropropane	MSD	RPD	4	%	20
FA56349-1MSD*	563-58-6	1,1-Dichloropropene	MSD	REC	97	%	79-125
FA56349-1MSD*	563-58-6	1,1-Dichloropropene	MSD	RPD	4	%	20
FA56349-1MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	88	%	75-124
FA56349-1MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	3	%	20
FA56349-1MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	110	%	73-127
FA56349-1MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	6	%	20
FA56349-1MSD*	100-41-4	Ethylbenzene	MSD	REC	100	%	79-121
FA56349-1MSD*	100-41-4	Ethylbenzene	MSD	RPD	3	%	20
FA56349-1MSD*	87-68-3	Hexachlorobutadiene	MSD	REC	103	%	66-134
FA56349-1MSD*	87-68-3	Hexachlorobutadiene	MSD	RPD	3	%	20
FA56349-1MSD*	591-78-6	2-Hexanone	MSD	REC	111	%	57-139
FA56349-1MSD*	591-78-6	2-Hexanone	MSD	RPD	4	%	20
FA56349-1MSD*	98-82-8	Isopropylbenzene	MSD	REC	108	%	72-131
FA56349-1MSD*	98-82-8	Isopropylbenzene	MSD	RPD	4	%	20

* Sample used for QC is not from job FA56228

QC Evaluation: DOD QSM5 Limits

Job Number: FA56228
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/30/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56349-1MSD*	99-87-6	p-Isopropyltoluene	MSD	REC	105	%	77-127
FA56349-1MSD*	99-87-6	p-Isopropyltoluene	MSD	RPD	3	%	20
FA56349-1MSD*	74-83-9	Methyl Bromide	MSD	REC	101	%	53-141
FA56349-1MSD*	74-83-9	Methyl Bromide	MSD	RPD	3	%	20
FA56349-1MSD*	74-87-3	Methyl Chloride	MSD	REC	106	%	50-139
FA56349-1MSD*	74-87-3	Methyl Chloride	MSD	RPD	5	%	20
FA56349-1MSD*	74-88-4	Methyl Iodide	MSD	REC	80	%	69-131
FA56349-1MSD*	74-88-4	Methyl Iodide	MSD	RPD	4	%	20
FA56349-1MSD*	74-95-3	Methylene Bromide	MSD	REC	100	%	79-123
FA56349-1MSD*	74-95-3	Methylene Bromide	MSD	RPD	3	%	20
FA56349-1MSD*	75-09-2	Methylene Chloride	MSD	REC	99	%	74-124
FA56349-1MSD*	75-09-2	Methylene Chloride	MSD	RPD	2	%	20
FA56349-1MSD*	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	REC	110	%	67-130
FA56349-1MSD*	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	RPD	5	%	20
FA56349-1MSD*	1634-04-4	Methyl Tert Butyl Ether	MSD	REC	92	%	71-124
FA56349-1MSD*	1634-04-4	Methyl Tert Butyl Ether	MSD	RPD	7	%	20
FA56349-1MSD*	91-20-3	Naphthalene	MSD	REC	96	%	61-128
FA56349-1MSD*	91-20-3	Naphthalene	MSD	RPD	5	%	20
FA56349-1MSD*	103-65-1	n-Propylbenzene	MSD	REC	102	%	76-126
FA56349-1MSD*	103-65-1	n-Propylbenzene	MSD	RPD	3	%	20
FA56349-1MSD*	100-42-5	Styrene	MSD	REC	103	%	78-123
FA56349-1MSD*	100-42-5	Styrene	MSD	RPD	4	%	20
FA56349-1MSD*	630-20-6	1,1,1,2-Tetrachloroethane	MSD	REC	108	%	78-124
FA56349-1MSD*	630-20-6	1,1,1,2-Tetrachloroethane	MSD	RPD	3	%	20
FA56349-1MSD*	79-34-5	1,1,2,2-Tetrachloroethane	MSD	REC	109	%	71-121
FA56349-1MSD*	79-34-5	1,1,2,2-Tetrachloroethane	MSD	RPD	3	%	20
FA56349-1MSD*	127-18-4	Tetrachloroethylene	MSD	REC	93	%	74-129
FA56349-1MSD*	127-18-4	Tetrachloroethylene	MSD	RPD	3	%	20
FA56349-1MSD*	108-88-3	Toluene	MSD	REC	95	%	80-121
FA56349-1MSD*	108-88-3	Toluene	MSD	RPD	3	%	20
FA56349-1MSD*	87-61-6	1,2,3-Trichlorobenzene	MSD	REC	101	%	69-129
FA56349-1MSD*	87-61-6	1,2,3-Trichlorobenzene	MSD	RPD	4	%	20
FA56349-1MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	100	%	69-130
FA56349-1MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	4	%	20
FA56349-1MSD*	71-55-6	1,1,1-Trichloroethane	MSD	REC	101	%	74-131
FA56349-1MSD*	71-55-6	1,1,1-Trichloroethane	MSD	RPD	5	%	20
FA56349-1MSD*	79-00-5	1,1,2-Trichloroethane	MSD	REC	104	%	80-119
FA56349-1MSD*	79-00-5	1,1,2-Trichloroethane	MSD	RPD	4	%	20
FA56349-1MSD*	79-01-6	Trichloroethylene	MSD	REC	100	%	79-123
FA56349-1MSD*	79-01-6	Trichloroethylene	MSD	RPD	2	%	20
FA56349-1MSD*	75-69-4	Trichlorofluoromethane	MSD	REC	118	%	65-141
FA56349-1MSD*	75-69-4	Trichlorofluoromethane	MSD	RPD	3	%	20
FA56349-1MSD*	96-18-4	1,2,3-Trichloropropane	MSD	REC	102	%	73-122
FA56349-1MSD*	96-18-4	1,2,3-Trichloropropane	MSD	RPD	2	%	20
FA56349-1MSD*	95-63-6	1,2,4-Trimethylbenzene	MSD	REC	100	%	76-124

* Sample used for QC is not from job FA56228

QC Evaluation: DOD QSM5 Limits

Job Number: FA56228
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/30/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56349-1MSD*	95-63-6	1,2,4-Trimethylbenzene	MSD	RPD	3	%	20
FA56349-1MSD*	108-67-8	1,3,5-Trimethylbenzene	MSD	REC	104	%	75-124
FA56349-1MSD*	108-67-8	1,3,5-Trimethylbenzene	MSD	RPD	4	%	20
FA56349-1MSD*	108-05-4	Vinyl Acetate	MSD	REC	93	%	54-146
FA56349-1MSD*	108-05-4	Vinyl Acetate	MSD	RPD	7	%	20
FA56349-1MSD*	75-01-4	Vinyl Chloride	MSD	REC	107	%	58-137
FA56349-1MSD*	75-01-4	Vinyl Chloride	MSD	RPD	7	%	20
FA56349-1MSD*		m,p-Xylene	MSD	REC	102	%	80-121
FA56349-1MSD*		m,p-Xylene	MSD	RPD	4	%	20
FA56349-1MSD*	95-47-6	o-Xylene	MSD	REC	100	%	78-122
FA56349-1MSD*	95-47-6	o-Xylene	MSD	RPD	4	%	20
FA56349-1MSD*	1330-20-7	Xylene (total)	MSD	REC	101	%	79-121
FA56349-1MSD*	1330-20-7	Xylene (total)	MSD	RPD	4	%	20
FA56349-1MSD*	1868-53-7	Dibromofluoromethane	MSD	SURR	104	%	80-119
FA56349-1MSD*	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	104	%	81-118
FA56349-1MSD*	2037-26-5	Toluene-D8	MSD	SURR	98	%	89-112
FA56349-1MSD*	460-00-4	4-Bromofluorobenzene	MSD	SURR	97	%	85-114
VI1694-MB	1868-53-7	Dibromofluoromethane	MB	SURR	99	%	80-119
VI1694-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	104	%	81-118
VI1694-MB	2037-26-5	Toluene-D8	MB	SURR	98	%	89-112
VI1694-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	98	%	85-114
FA56228-1	1868-53-7	Dibromofluoromethane	SAMP	SURR	99	%	80-119
FA56228-1	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	102	%	81-118
FA56228-1	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA56228-1	460-00-4	4-Bromofluorobenzene	SAMP	SURR	99	%	85-114
FA56228-2	1868-53-7	Dibromofluoromethane	SAMP	SURR	100	%	80-119
FA56228-2	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	81-118
FA56228-2	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
FA56228-2	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114
FA56228-3	1868-53-7	Dibromofluoromethane	SAMP	SURR	100	%	80-119
FA56228-3	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	104	%	81-118
FA56228-3	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA56228-3	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114
FA56228-4	1868-53-7	Dibromofluoromethane	SAMP	SURR	100	%	80-119
FA56228-4	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	104	%	81-118
FA56228-4	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA56228-4	460-00-4	4-Bromofluorobenzene	SAMP	SURR	96	%	85-114
FA56228-5	1868-53-7	Dibromofluoromethane	SAMP	SURR	101	%	80-119
FA56228-5	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	106	%	81-118
FA56228-5	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA56228-5	460-00-4	4-Bromofluorobenzene	SAMP	SURR	96	%	85-114
FA56228-6	1868-53-7	Dibromofluoromethane	SAMP	SURR	102	%	80-119
FA56228-6	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	107	%	81-118
FA56228-6	2037-26-5	Toluene-D8	SAMP	SURR	96	%	89-112
FA56228-6	460-00-4	4-Bromofluorobenzene	SAMP	SURR	96	%	85-114

* Sample used for QC is not from job FA56228

QC Evaluation: DOD QSM5 Limits

Job Number: FA56228
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/30/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA56228-7	1868-53-7	Dibromofluoromethane	SAMP	SURR	102	%	80-119
FA56228-7	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	105	%	81-118
FA56228-7	2037-26-5	Toluene-D8	SAMP	SURR	98	%	89-112
FA56228-7	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114
FA56228-8	1868-53-7	Dibromofluoromethane	SAMP	SURR	102	%	80-119
FA56228-8	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	107	%	81-118
FA56228-8	2037-26-5	Toluene-D8	SAMP	SURR	100	%	89-112
FA56228-8	460-00-4	4-Bromofluorobenzene	SAMP	SURR	95	%	85-114
FA56228-9	1868-53-7	Dibromofluoromethane	SAMP	SURR	102	%	80-119
FA56228-9	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	107	%	81-118
FA56228-9	2037-26-5	Toluene-D8	SAMP	SURR	99	%	89-112
FA56228-9	460-00-4	4-Bromofluorobenzene	SAMP	SURR	97	%	85-114
OP71202	SW846 8330A						
OP71202-BS	2691-41-0	HMX	BSP	REC	86	%	65-135
OP71202-BS	121-82-4	RDX	BSP	REC	92	%	68-130
OP71202-BS	99-65-0	1,3-Dinitrobenzene	BSP	REC	92	%	78-120
OP71202-BS	606-20-2	2,6-Dinitrotoluene	BSP	REC	98	%	77-127
OP71202-BS	121-14-2	2,4-Dinitrotoluene	BSP	REC	94	%	78-120
OP71202-BS	35572-78-2	2-amino-4,6-Dinitrotoluene	BSP	REC	96	%	79-120
OP71202-BS	19406-51-0	4-amino-2,6-Dinitrotoluene	BSP	REC	108	%	76-125
OP71202-BS	98-95-3	Nitrobenzene	BSP	REC	94	%	65-134
OP71202-BS	88-72-2	o-Nitrotoluene	BSP	REC	104	%	70-127
OP71202-BS	99-08-1	m-Nitrotoluene	BSP	REC	110	%	73-125
OP71202-BS	99-99-0	p-Nitrotoluene	BSP	REC	98	%	71-127
OP71202-BS	479-45-8	Tetryl	BSP	REC	100	%	64-128
OP71202-BS	99-35-4	1,3,5-Trinitrobenzene	BSP	REC	98	%	73-125
OP71202-BS	118-96-7	2,4,6-Trinitrotoluene	BSP	REC	114	%	71-123
OP71202-BS	78-11-5	PETN	BSP	REC	126	%	73-127
OP71202-MS	2691-41-0	HMX	MS	REC	76	%	65-135
OP71202-MS	121-82-4	RDX	MS	REC	90	%	68-130
OP71202-MS	99-65-0	1,3-Dinitrobenzene	MS	REC	90	%	78-120
OP71202-MS	606-20-2	2,6-Dinitrotoluene	MS	REC	119	%	77-127
OP71202-MS	121-14-2	2,4-Dinitrotoluene	MS	REC	101	%	78-120
OP71202-MS	35572-78-2	2-amino-4,6-Dinitrotoluene	MS	REC	94	%	79-120
OP71202-MS	19406-51-0	4-amino-2,6-Dinitrotoluene	MS	REC	104	%	76-125
OP71202-MS	98-95-3	Nitrobenzene	MS	REC	90	%	65-134
OP71202-MS	88-72-2	o-Nitrotoluene	MS	REC	97	%	70-127
OP71202-MS	99-08-1	m-Nitrotoluene	MS	REC	82	%	73-125
OP71202-MS	99-99-0	p-Nitrotoluene	MS	REC	75	%	71-127
OP71202-MS	479-45-8	Tetryl	MS	REC	96	%	64-128
OP71202-MS	99-35-4	1,3,5-Trinitrobenzene	MS	REC	106	%	73-125
OP71202-MS	118-96-7	2,4,6-Trinitrotoluene	MS	REC	107	%	71-123
OP71202-MS	78-11-5	PETN	MS	REC	121	%	73-127

* Sample used for QC is not from job FA56228

QC Evaluation: DOD QSM5 Limits

Job Number: FA56228
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/30/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP71202-MSD	2691-41-0	HMX	MSD	REC	73	%	65-135
OP71202-MSD	2691-41-0	HMX	MSD	RPD	4	%	30
OP71202-MSD	121-82-4	RDX	MSD	REC	93	%	68-130
OP71202-MSD	121-82-4	RDX	MSD	RPD	2	%	30
OP71202-MSD	99-65-0	1,3-Dinitrobenzene	MSD	REC	94	%	78-120
OP71202-MSD	99-65-0	1,3-Dinitrobenzene	MSD	RPD	3	%	30
OP71202-MSD	606-20-2	2,6-Dinitrotoluene	MSD	REC	94	%	77-127
OP71202-MSD	606-20-2	2,6-Dinitrotoluene	MSD	RPD	24	%	30
OP71202-MSD	121-14-2	2,4-Dinitrotoluene	MSD	REC	88	%	78-120
OP71202-MSD	121-14-2	2,4-Dinitrotoluene	MSD	RPD	13	%	30
OP71202-MSD	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	REC	85	%	79-120
OP71202-MSD	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	RPD	9	%	30
OP71202-MSD	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	REC	90	%	76-125
OP71202-MSD	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	RPD	14	%	30
OP71202-MSD	98-95-3	Nitrobenzene	MSD	REC	90	%	65-134
OP71202-MSD	98-95-3	Nitrobenzene	MSD	RPD	0	%	30
OP71202-MSD	88-72-2	o-Nitrotoluene	MSD	REC	95	%	70-127
OP71202-MSD	88-72-2	o-Nitrotoluene	MSD	RPD	2	%	30
OP71202-MSD	99-08-1	m-Nitrotoluene	MSD	REC	94	%	73-125
OP71202-MSD	99-08-1	m-Nitrotoluene	MSD	RPD	13	%	30
OP71202-MSD	99-99-0	p-Nitrotoluene	MSD	REC	85	%	71-127
OP71202-MSD	99-99-0	p-Nitrotoluene	MSD	RPD	13	%	30
OP71202-MSD	479-45-8	Tetryl	MSD	REC	97	%	64-128
OP71202-MSD	479-45-8	Tetryl	MSD	RPD	1	%	30
OP71202-MSD	99-35-4	1,3,5-Trinitrobenzene	MSD	REC	96	%	73-125
OP71202-MSD	99-35-4	1,3,5-Trinitrobenzene	MSD	RPD	10	%	30
OP71202-MSD	118-96-7	2,4,6-Trinitrotoluene	MSD	REC	104	%	71-123
OP71202-MSD	118-96-7	2,4,6-Trinitrotoluene	MSD	RPD	3	%	30
OP71202-MSD	78-11-5	PETN	MSD	REC	118	%	73-127
OP71202-MSD	78-11-5	PETN	MSD	RPD	3	%	30
MP34103	SW846 7470A						
MP34103-B1	7439-97-6	Mercury	BSP	REC	100	%	82-119
MP34103-S1*	7439-97-6	Mercury	MS	REC	96.7	%	82-119
MP34103-S2*	7439-97-6	Mercury	MSD	REC	100	%	82-119
MP34103-S2*	7439-97-6	Mercury	MSD	RPD	3.4	%	20
MP34103-D1*	7439-97-6	Mercury	DUP	RPD	0	%	20
MP34108	SW846 6020A						
MP34108-B1	7429-90-5	Aluminum	BSP	REC	85	%	84-117
MP34108-B1	7440-36-0	Antimony	BSP	REC	94	%	85-117
MP34108-B1	7440-38-2	Arsenic	BSP	REC	93.5	%	84-116
MP34108-B1	7440-39-3	Barium	BSP	REC	95.5	%	86-114

* Sample used for QC is not from job FA56228

QC Evaluation: DOD QSM5 Limits

Job Number: FA56228
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/30/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP34108-B1	7440-41-7	Beryllium	BSP	REC	103	%	83-121
MP34108-B1	7440-43-9	Cadmium	BSP	REC	95.5	%	87-115
MP34108-B1	7440-70-2	Calcium	BSP	REC	93	%	87-118
MP34108-B1	7440-47-3	Chromium	BSP	REC	96	%	85-116
MP34108-B1	7440-48-4	Cobalt	BSP	REC	98.5	%	86-115
MP34108-B1	7440-50-8	Copper	BSP	REC	98	%	85-118
MP34108-B1	7439-89-6	Iron	BSP	REC	99	%	87-118
MP34108-B1	7439-92-1	Lead	BSP	REC	97.5	%	88-115
MP34108-B1	7439-95-4	Magnesium	BSP	REC	96.5	%	83-118
MP34108-B1	7439-96-5	Manganese	BSP	REC	96	%	87-115
MP34108-B1	7440-02-0	Nickel	BSP	REC	97.5	%	85-117
MP34108-B1	7440-09-7	Potassium	BSP	REC	90.5	%	87-115
MP34108-B1	7782-49-2	Selenium	BSP	REC	81.5	%	80-120
MP34108-B1	7440-22-4	Silver	BSP	REC	119 [a]	%	85-116
MP34108-B1	7440-23-5	Sodium	BSP	REC	96	%	85-117
MP34108-B1	7440-28-0	Thallium	BSP	REC	101	%	82-116
MP34108-B1	7440-62-2	Vanadium	BSP	REC	96	%	86-115
MP34108-B1	7440-66-6	Zinc	BSP	REC	89	%	83-119
MP34108-S1*	7429-90-5	Aluminum	MS	REC	90.1	%	84-117
MP34108-S1*	7440-36-0	Antimony	MS	REC	98	%	85-117
MP34108-S1*	7440-38-2	Arsenic	MS	REC	98.8	%	84-116
MP34108-S1*	7440-39-3	Barium	MS	REC	105.5	%	86-114
MP34108-S1*	7440-41-7	Beryllium	MS	REC	108.5	%	83-121
MP34108-S1*	7440-43-9	Cadmium	MS	REC	98	%	87-115
MP34108-S1*	7440-70-2	Calcium	MS	REC	125 [b]	%	87-118
MP34108-S1*	7440-47-3	Chromium	MS	REC	102	%	85-116
MP34108-S1*	7440-48-4	Cobalt	MS	REC	103.4	%	86-115
MP34108-S1*	7440-50-8	Copper	MS	REC	100	%	85-118
MP34108-S1*	7439-89-6	Iron	MS	REC	105	%	87-118
MP34108-S1*	7439-92-1	Lead	MS	REC	100.4	%	88-115
MP34108-S1*	7439-95-4	Magnesium	MS	REC	100.7	%	83-118
MP34108-S1*	7439-96-5	Manganese	MS	REC	101.7	%	87-115
MP34108-S1*	7440-02-0	Nickel	MS	REC	99.9	%	85-117
MP34108-S1*	7440-09-7	Potassium	MS	REC	107	%	87-115
MP34108-S1*	7782-49-2	Selenium	MS	REC	86.5	%	80-120
MP34108-S1*	7440-22-4	Silver	MS	REC	120	%	85-116
MP34108-S1*	7440-23-5	Sodium	MS	REC	106	%	85-117
MP34108-S1*	7440-28-0	Thallium	MS	REC	106.4	%	82-116
MP34108-S1*	7440-62-2	Vanadium	MS	REC	103.5	%	86-115
MP34108-S1*	7440-66-6	Zinc	MS	REC	91.4	%	83-119
MP34108-S2*	7429-90-5	Aluminum	MSD	REC	86.6	%	84-117
MP34108-S2*	7429-90-5	Aluminum	MSD	RPD	3.9	%	20
MP34108-S2*	7440-36-0	Antimony	MSD	REC	93	%	85-117
MP34108-S2*	7440-36-0	Antimony	MSD	RPD	5.2	%	20
MP34108-S2*	7440-38-2	Arsenic	MSD	REC	94.8	%	84-116

* Sample used for QC is not from job FA56228

QC Evaluation: DOD QSM5 Limits

Job Number: FA56228
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/30/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP34108-S2*	7440-38-2	Arsenic	MSD	RPD	4.1	%	20
MP34108-S2*	7440-39-3	Barium	MSD	REC	92.5	%	86-114
MP34108-S2*	7440-39-3	Barium	MSD	RPD	5.9	%	20
MP34108-S2*	7440-41-7	Beryllium	MSD	REC	100.5	%	83-121
MP34108-S2*	7440-41-7	Beryllium	MSD	RPD	7.7	%	20
MP34108-S2*	7440-43-9	Cadmium	MSD	REC	93	%	87-115
MP34108-S2*	7440-43-9	Cadmium	MSD	RPD	5.2	%	20
MP34108-S2*	7440-70-2	Calcium	MSD	REC	65 [b]	%	87-118
MP34108-S2*	7440-70-2	Calcium	MSD	RPD	5.8	%	20
MP34108-S2*	7440-47-3	Chromium	MSD	REC	97.5	%	85-116
MP34108-S2*	7440-47-3	Chromium	MSD	RPD	4.5	%	20
MP34108-S2*	7440-48-4	Cobalt	MSD	REC	96.9	%	86-115
MP34108-S2*	7440-48-4	Cobalt	MSD	RPD	6.5	%	20
MP34108-S2*	7440-50-8	Copper	MSD	REC	95	%	85-118
MP34108-S2*	7440-50-8	Copper	MSD	RPD	5.1	%	20
MP34108-S2*	7439-89-6	Iron	MSD	REC	99.5	%	87-118
MP34108-S2*	7439-89-6	Iron	MSD	RPD	5.4	%	20
MP34108-S2*	7439-92-1	Lead	MSD	REC	94.4	%	88-115
MP34108-S2*	7439-92-1	Lead	MSD	RPD	6.2	%	20
MP34108-S2*	7439-95-4	Magnesium	MSD	REC	95.2	%	83-118
MP34108-S2*	7439-95-4	Magnesium	MSD	RPD	5.6	%	20
MP34108-S2*	7439-96-5	Manganese	MSD	REC	96.2	%	87-115
MP34108-S2*	7439-96-5	Manganese	MSD	RPD	5.5	%	20
MP34108-S2*	7440-02-0	Nickel	MSD	REC	94.4	%	85-117
MP34108-S2*	7440-02-0	Nickel	MSD	RPD	5.6	%	20
MP34108-S2*	7440-09-7	Potassium	MSD	REC	99	%	87-115
MP34108-S2*	7440-09-7	Potassium	MSD	RPD	4.4	%	20
MP34108-S2*	7782-49-2	Selenium	MSD	REC	82	%	80-120
MP34108-S2*	7782-49-2	Selenium	MSD	RPD	5.3	%	20
MP34108-S2*	7440-22-4	Silver	MSD	REC	101	%	85-116
MP34108-S2*	7440-22-4	Silver	MSD	RPD	17.2	%	20
MP34108-S2*	7440-23-5	Sodium	MSD	REC	95.5	%	85-117
MP34108-S2*	7440-23-5	Sodium	MSD	RPD	5.4	%	20
MP34108-S2*	7440-28-0	Thallium	MSD	REC	102.4	%	82-116
MP34108-S2*	7440-28-0	Thallium	MSD	RPD	3.8	%	20
MP34108-S2*	7440-62-2	Vanadium	MSD	REC	98	%	86-115
MP34108-S2*	7440-62-2	Vanadium	MSD	RPD	5.4	%	20
MP34108-S2*	7440-66-6	Zinc	MSD	REC	86.4	%	83-119
MP34108-S2*	7440-66-6	Zinc	MSD	RPD	5.5	%	20
MP34108-D1*	7429-90-5	Aluminum	DUP	RPD	5.4	%	20
MP34108-D1*	7440-36-0	Antimony	DUP	RPD	0	%	20
MP34108-D1*	7440-38-2	Arsenic	DUP	RPD	2.8	%	20
MP34108-D1*	7440-39-3	Barium	DUP	RPD	8.7	%	20
MP34108-D1*	7440-41-7	Beryllium	DUP	RPD	0	%	20
MP34108-D1*	7440-43-9	Cadmium	DUP	RPD	0	%	20

* Sample used for QC is not from job FA56228

QC Evaluation: DOD QSM5 Limits

Job Number: FA56228
Account: EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ
Collected: 07/30/18

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP34108-D1*	7440-70-2	Calcium	DUP	RPD	5.7	%	20
MP34108-D1*	7440-47-3	Chromium	DUP	RPD	8.7	%	20
MP34108-D1*	7440-48-4	Cobalt	DUP	RPD	8	%	20
MP34108-D1*	7440-50-8	Copper	DUP	RPD	0	%	20
MP34108-D1*	7439-89-6	Iron	DUP	RPD	0	%	20
MP34108-D1*	7439-92-1	Lead	DUP	RPD	200 c	%	20
MP34108-D1*	7439-95-4	Magnesium	DUP	RPD	12.7	%	20
MP34108-D1*	7439-96-5	Manganese	DUP	RPD	19.4	%	20
MP34108-D1*	7440-02-0	Nickel	DUP	RPD	6.1	%	20
MP34108-D1*	7440-09-7	Potassium	DUP	RPD	9	%	20
MP34108-D1*	7782-49-2	Selenium	DUP	RPD	0	%	20
MP34108-D1*	7440-22-4	Silver	DUP	RPD	0	%	20
MP34108-D1*	7440-23-5	Sodium	DUP	RPD	5.7	%	20
MP34108-D1*	7440-28-0	Thallium	DUP	RPD	200 c	%	20
MP34108-D1*	7440-62-2	Vanadium	DUP	RPD	16.7	%	20
MP34108-D1*	7440-66-6	Zinc	DUP	RPD	33.3 c	%	20
MP34123	SW846 7470A						
MP34123-B1	7439-97-6	Mercury	BSP	REC	100	%	82-119
MP34123-S1*	7439-97-6	Mercury	MS	REC	96.7	%	82-119
MP34123-S2*	7439-97-6	Mercury	MSD	REC	100	%	82-119
MP34123-S2*	7439-97-6	Mercury	MSD	RPD	3.4	%	20
MP34123-D1*	7439-97-6	Mercury	DUP	RPD	0	%	20

(a) Outside DOD QSM control limits. Positive bias, but all sample results < MDL.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(c) RPD acceptable due to low duplicate and sample concentrations.

* Sample used for QC is not from job FA56228

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1694-MB	I56598.D	1	08/08/18	AJ	n/a	n/a	VI1694

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56228-1, FA56228-2, FA56228-3, FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8, FA56228-9

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.37	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.23	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.24	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.31	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.31	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.24	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	

Method Blank Summary

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1694-MB	I56598.D	1	08/08/18	AJ	n/a	n/a	VI1694

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56228-1, FA56228-2, FA56228-3, FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8, FA56228-9

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	0.41	2.0	0.30	ug/l	J
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl Iodide	ND	1.0	0.27	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.37	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.29	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.27	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	2.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

Method Blank Summary

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1694-MB	I56598.D	1	08/08/18	AJ	n/a	n/a	VI1694

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56228-1, FA56228-2, FA56228-3, FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8, FA56228-9

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

Blank Spike Summary

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1694-BS	I56597.D	1	08/08/18	AJ	n/a	n/a	VI1694

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56228-1, FA56228-2, FA56228-3, FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8, FA56228-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	124	99	50-147
71-43-2	Benzene	25	24.6	98	81-122
108-86-1	Bromobenzene	25	25.6	102	80-121
74-97-5	Bromochloromethane	25	24.8	99	76-123
75-27-4	Bromodichloromethane	25	27.3	109	79-123
75-25-2	Bromoform	25	26.5	106	66-123
78-93-3	2-Butanone (MEK)	125	123	98	56-143
104-51-8	n-Butylbenzene	25	28.9	116	79-126
135-98-8	sec-Butylbenzene	25	27.2	109	83-133
98-06-6	tert-Butylbenzene	25	26.2	105	80-133
75-15-0	Carbon Disulfide	25	24.5	98	66-148
56-23-5	Carbon Tetrachloride	25	29.0	116	76-136
108-90-7	Chlorobenzene	25	24.9	100	82-124
75-00-3	Chloroethane	25	27.3	109	62-144
67-66-3	Chloroform	25	25.4	102	80-124
95-49-8	o-Chlorotoluene	25	26.0	104	81-127
106-43-4	p-Chlorotoluene	25	26.0	104	83-130
124-48-1	Dibromochloromethane	25	27.6	110	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	25.9	104	64-123
106-93-4	1,2-Dibromoethane	25	25.4	102	75-120
75-71-8	Dichlorodifluoromethane	25	33.4	134	42-167
95-50-1	1,2-Dichlorobenzene	25	25.5	102	82-124
541-73-1	1,3-Dichlorobenzene	25	26.2	105	84-125
106-46-7	1,4-Dichlorobenzene	25	25.0	100	78-120
75-34-3	1,1-Dichloroethane	25	26.1	104	81-122
107-06-2	1,2-Dichloroethane	25	24.4	98	75-125
75-35-4	1,1-Dichloroethylene	25	24.4	98	78-137
156-59-2	cis-1,2-Dichloroethylene	25	24.6	98	78-120
156-60-5	trans-1,2-Dichloroethylene	25	24.8	99	76-127
78-87-5	1,2-Dichloropropane	25	26.1	104	76-124
142-28-9	1,3-Dichloropropane	25	24.3	97	80-118
594-20-7	2,2-Dichloropropane	25	32.7	131	74-139
563-58-6	1,1-Dichloropropene	25	25.4	102	79-131
10061-01-5	cis-1,3-Dichloropropene	25	26.3	105	75-118
10061-02-6	trans-1,3-Dichloropropene	25	26.7	107	80-120
100-41-4	Ethylbenzene	25	25.5	102	81-121

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1694-BS	I56597.D	1	08/08/18	AJ	n/a	n/a	VI1694

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56228-1, FA56228-2, FA56228-3, FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8, FA56228-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
87-68-3	Hexachlorobutadiene	25	27.7	111	75-142
591-78-6	2-Hexanone	125	127	102	61-129
98-82-8	Isopropylbenzene	25	27.7	111	83-132
99-87-6	p-Isopropyltoluene	25	27.4	110	79-130
74-83-9	Methyl Bromide	25	27.2	109	59-143
74-87-3	Methyl Chloride	25	27.4	110	50-159
74-88-4	Methyl Iodide	25	21.9	88	73-123
74-95-3	Methylene Bromide	25	25.0	100	78-119
75-09-2	Methylene Chloride	25	25.6	102	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	126	101	66-122
1634-04-4	Methyl Tert Butyl Ether	25	24.0	96	72-117
91-20-3	Naphthalene	25	24.3	97	63-132
103-65-1	n-Propylbenzene	25	26.4	106	82-133
100-42-5	Styrene	25	26.5	106	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	27.8	111	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	26.6	106	72-120
127-18-4	Tetrachloroethylene	25	25.9	104	76-135
108-88-3	Toluene	25	24.7	99	80-120
87-61-6	1,2,3-Trichlorobenzene	25	26.3	105	68-131
120-82-1	1,2,4-Trichlorobenzene	25	26.3	105	73-129
71-55-6	1,1,1-Trichloroethane	25	26.1	104	75-130
79-00-5	1,1,2-Trichloroethane	25	26.3	105	76-119
79-01-6	Trichloroethylene	25	25.5	102	81-126
75-69-4	Trichlorofluoromethane	25	29.1	116	71-156
96-18-4	1,2,3-Trichloropropane	25	25.1	100	77-120
95-63-6	1,2,4-Trimethylbenzene	25	26.0	104	79-120
108-67-8	1,3,5-Trimethylbenzene	25	26.8	107	79-120
108-05-4	Vinyl Acetate	125	116	93	43-154
75-01-4	Vinyl Chloride	25	28.4	114	69-159
	m,p-Xylene	50	52.3	105	79-126
95-47-6	o-Xylene	25	25.8	103	80-127
1330-20-7	Xylene (total)	75	78.1	104	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1694-BS	I56597.D	1	08/08/18	AJ	n/a	n/a	VI1694

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56228-1, FA56228-2, FA56228-3, FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8, FA56228-9

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA56349-1MS	I56611.D	1	08/08/18	AJ	n/a	n/a	VI1694
FA56349-1MSD	I56612.D	1	08/08/18	AJ	n/a	n/a	VI1694
FA56349-1	I56608.D	1	08/08/18	AJ	n/a	n/a	VI1694

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56228-1, FA56228-2, FA56228-3, FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8, FA56228-9

CAS No.	Compound	FA56349-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25 U		125	214	171*	125	224	179*	5	50-147/21
71-43-2	Benzene	1.0 U		25	23.1	92	25	23.7	95	3	81-122/14
108-86-1	Bromobenzene	1.0 U		25	24.3	97	25	24.8	99	2	80-121/14
74-97-5	Bromochloromethane	1.0 U		25	23.0	92	25	23.7	95	3	76-123/14
75-27-4	Bromodichloromethane	1.0 U		25	25.3	101	25	26.2	105	3	79-123/19
75-25-2	Bromoform	1.0 U		25	24.2	97	25	24.9	100	3	66-123/21
78-93-3	2-Butanone (MEK)	5.0 U		125	127	102	125	134	107	5	56-143/18
104-51-8	n-Butylbenzene	1.0 U		25	26.7	107	25	27.5	110	3	79-126/16
135-98-8	sec-Butylbenzene	1.0 U		25	25.4	102	25	26.2	105	3	83-133/16
98-06-6	tert-Butylbenzene	1.0 U		25	24.4	98	25	25.4	102	4	80-133/16
75-15-0	Carbon Disulfide	2.0 U		25	18.8	75	25	18.9	76	1	66-148/23
56-23-5	Carbon Tetrachloride	1.0 U		25	26.3	105	25	27.0	108	3	76-136/23
108-90-7	Chlorobenzene	1.0 U		25	23.6	94	25	24.3	97	3	82-124/14
75-00-3	Chloroethane	2.0 U		25	25.7	103	25	25.0	100	3	62-144/20
67-66-3	Chloroform	1.0 U		25	23.2	93	25	24.1	96	4	80-124/15
95-49-8	o-Chlorotoluene	1.0 U		25	24.4	98	25	25.2	101	3	81-127/15
106-43-4	p-Chlorotoluene	1.0 U		25	24.4	98	25	25.2	101	3	83-130/15
124-48-1	Dibromochloromethane	1.0 U		25	25.0	100	25	25.8	103	3	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U		25	26.0	104	25	26.9	108	3	64-123/18
106-93-4	1,2-Dibromoethane	2.0 U		25	24.0	96	25	25.0	100	4	75-120/13
75-71-8	Dichlorodifluoromethane	2.0 U		25	31.7	127	25	32.4	130	2	42-167/19
95-50-1	1,2-Dichlorobenzene	1.0 U		25	24.0	96	25	24.7	99	3	82-124/14
541-73-1	1,3-Dichlorobenzene	1.0 U		25	24.8	99	25	25.3	101	2	84-125/14
106-46-7	1,4-Dichlorobenzene	1.0 U		25	24.1	96	25	24.4	98	1	78-120/15
75-34-3	1,1-Dichloroethane	1.0 U		25	24.3	97	25	25.3	101	4	81-122/15
107-06-2	1,2-Dichloroethane	1.0 U		25	23.4	94	25	24.2	97	3	75-125/14
75-35-4	1,1-Dichloroethylene	1.0 U		25	21.5	86	25	22.6	90	5	78-137/18
156-59-2	cis-1,2-Dichloroethylene	1.0 U		25	22.3	89	25	23.2	93	4	78-120/15
156-60-5	trans-1,2-Dichloroethylene	1.0 U		25	22.8	91	25	23.8	95	4	76-127/17
78-87-5	1,2-Dichloropropane	1.0 U		25	24.5	98	25	25.0	100	2	76-124/14
142-28-9	1,3-Dichloropropane	1.0 U		25	23.0	92	25	23.9	96	4	80-118/13
594-20-7	2,2-Dichloropropane	1.0 U		25	28.6	114	25	29.9	120	4	74-139/17
563-58-6	1,1-Dichloropropene	1.0 U		25	23.2	93	25	24.2	97	4	79-131/16
10061-01-5	cis-1,3-Dichloropropene	1.0 U		25	21.2	85	25	21.9	88	3	75-118/23
10061-02-6	trans-1,3-Dichloropropene	1.0 U		25	25.7	103	25	27.4	110	6	80-120/22
100-41-4	Ethylbenzene	1.0 U		25	24.2	97	25	25.0	100	3	81-121/14

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA56349-1MS	I56611.D	1	08/08/18	AJ	n/a	n/a	VI1694
FA56349-1MSD	I56612.D	1	08/08/18	AJ	n/a	n/a	VI1694
FA56349-1	I56608.D	1	08/08/18	AJ	n/a	n/a	VI1694

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56228-1, FA56228-2, FA56228-3, FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8, FA56228-9

CAS No.	Compound	FA56349-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	2.0 U		25	25.0	100	25	25.8	103	3	75-142/19
591-78-6	2-Hexanone	10 U		125	133	106	125	139	111	4	61-129/18
98-82-8	Isopropylbenzene	1.0 U		25	25.9	104	25	27.0	108	4	83-132/15
99-87-6	p-Isopropyltoluene	1.0 U		25	25.5	102	25	26.3	105	3	79-130/16
74-83-9	Methyl Bromide	2.0 U		25	24.5	98	25	25.3	101	3	59-143/19
74-87-3	Methyl Chloride	2.0 U		25	25.2	101	25	26.5	106	5	50-159/19
74-88-4	Methyl Iodide	1.0 U		25	19.1	76	25	19.9	80	4	73-123/16
74-95-3	Methylene Bromide	2.0 U		25	24.2	97	25	25.0	100	3	78-119/14
75-09-2	Methylene Chloride	5.0 U		25	24.4	98	25	24.8	99	2	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U		125	130	104	125	137	110	5	66-122/16
1634-04-4	Methyl Tert Butyl Ether	1.0 U		25	21.6	86	25	23.1	92	7	72-117/14
91-20-3	Naphthalene	5.0 U		25	22.8	91	25	24.0	96	5	63-132/25
103-65-1	n-Propylbenzene	1.0 U		25	24.8	99	25	25.5	102	3	82-133/15
100-42-5	Styrene	1.0 U		25	24.8	99	25	25.7	103	4	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U		25	26.2	105	25	27.1	108	3	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		25	26.6	106	25	27.3	109	3	72-120/14
127-18-4	Tetrachloroethylene	1.0 U		25	22.6	90	25	23.3	93	3	76-135/16
108-88-3	Toluene	1.0 U		25	23.0	92	25	23.7	95	3	80-120/14
87-61-6	1,2,3-Trichlorobenzene	2.0 U		25	24.4	98	25	25.3	101	4	68-131/25
120-82-1	1,2,4-Trichlorobenzene	2.0 U		25	24.0	96	25	24.9	100	4	73-129/20
71-55-6	1,1,1-Trichloroethane	1.0 U		25	23.9	96	25	25.2	101	5	75-130/16
79-00-5	1,1,2-Trichloroethane	1.0 U		25	25.1	100	25	26.0	104	4	76-119/14
79-01-6	Trichloroethylene	1.0 U		25	24.5	98	25	25.0	100	2	81-126/15
75-69-4	Trichlorofluoromethane	2.0 U		25	28.8	115	25	29.6	118	3	71-156/21
96-18-4	1,2,3-Trichloropropane	2.0 U		25	25.2	101	25	25.6	102	2	77-120/16
95-63-6	1,2,4-Trimethylbenzene	1.0 U		25	24.4	98	25	25.1	100	3	79-120/18
108-67-8	1,3,5-Trimethylbenzene	1.0 U		25	25.0	100	25	25.9	104	4	79-120/19
108-05-4	Vinyl Acetate	10 U		125	108	86	125	116	93	7	43-154/14
75-01-4	Vinyl Chloride	1.0 U		25	25.0	100	25	26.8	107	7	69-159/18
	m,p-Xylene	2.0 U		50	48.7	97	50	50.8	102	4	79-126/15
95-47-6	o-Xylene	1.0 U		25	24.0	96	25	25.1	100	4	80-127/14
1330-20-7	Xylene (total)	3.0 U		75	72.7	97	75	75.9	101	4	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA56349-1MS	I56611.D	1	08/08/18	AJ	n/a	n/a	VI1694
FA56349-1MSD	I56612.D	1	08/08/18	AJ	n/a	n/a	VI1694
FA56349-1	I56608.D	1	08/08/18	AJ	n/a	n/a	VI1694

The QC reported here applies to the following samples: **Method:** SW846 8260C

FA56228-1, FA56228-2, FA56228-3, FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8, FA56228-9

CAS No.	Surrogate Recoveries	MS	MSD	FA56349-1	Limits
1868-53-7	Dibromofluoromethane	103%	104%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	104%	107%	79-125%
2037-26-5	Toluene-D8	97%	98%	97%	85-112%
460-00-4	4-Bromofluorobenzene	96%	97%	95%	83-118%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample: VI1683-BFB
Lab File ID: I56313.D
Instrument ID: GCMSI
Injection Date: 07/25/18
Injection Time: 14:36

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	74779	24.9		Pass
75	30.0 - 60.0% of mass 95	151371	50.4		Pass
95	Base peak, 100% relative abundance	300437	100.0		Pass
96	5.0 - 9.0% of mass 95	21401	7.12		Pass
173	Less than 2.0% of mass 174	1809	0.60	(0.84) [a]	Pass
174	50.0 - 100.0% of mass 95	215941	71.9		Pass
175	5.0 - 9.0% of mass 174	15559	5.18	(7.21) [a]	Pass
176	95.0 - 101.0% of mass 174	207501	69.1	(96.1) [a]	Pass
177	5.0 - 9.0% of mass 176	13778	4.59	(6.64) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VI1683-IC1683	I56314.D	07/25/18	15:14	00:38	Initial cal 1
VI1683-IC1683	I56315.D	07/25/18	15:37	01:01	Initial cal 2
VI1683-IC1683	I56316.D	07/25/18	16:01	01:25	Initial cal 3
VI1683-IC1683	I56317.D	07/25/18	16:25	01:49	Initial cal 4
VI1683-ICC1683	I56318.D	07/25/18	16:49	02:13	Initial cal 5
VI1683-IC1683	I56319.D	07/25/18	17:13	02:37	Initial cal 6
VI1683-IC1683	I56320.D	07/25/18	17:36	03:00	Initial cal 7
VI1683-ICV1683	I56322.D	07/25/18	18:24	03:48	Initial cal verification 5
VI1683-BS	I56323.D	07/25/18	18:48	04:12	Blank Spike
VI1683-MB	I56324.D	07/25/18	19:12	04:36	Method Blank

Instrument Performance Check (BFB)

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample: VI1694-BFB
Lab File ID: I56595.D
Instrument ID: GCMSI
Injection Date: 08/08/18
Injection Time: 08:17

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	74563	25.7		Pass
75	30.0 - 60.0% of mass 95	147696	50.9		Pass
95	Base peak, 100% relative abundance	289920	100.0		Pass
96	5.0 - 9.0% of mass 95	19783	6.82		Pass
173	Less than 2.0% of mass 174	1808	0.62	(0.86) [a]	Pass
174	50.0 - 100.0% of mass 95	211013	72.8		Pass
175	5.0 - 9.0% of mass 174	15554	5.36	(7.37) [a]	Pass
176	95.0 - 101.0% of mass 174	203589	70.2	(96.5) [a]	Pass
177	5.0 - 9.0% of mass 176	13319	4.59	(6.54) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VI1694-CC1683	I56596.D	08/08/18	08:41	00:24	Continuing cal 5
VI1694-BS	I56597.D	08/08/18	09:13	00:56	Blank Spike
VI1694-MB	I56598.D	08/08/18	09:37	01:20	Method Blank
FA56228-1	I56599.D	08/08/18	10:11	01:54	SB1-1
FA56228-2	I56600.D	08/08/18	10:35	02:18	SB1-2
FA56228-3	I56601.D	08/08/18	10:59	02:42	SB1-3
FA56228-4	I56602.D	08/08/18	11:23	03:06	SB4-1
FA56228-5	I56603.D	08/08/18	11:46	03:29	SB4-2
FA56228-6	I56604.D	08/08/18	12:10	03:53	SB4-3
FA56228-7	I56605.D	08/08/18	12:34	04:17	SB4-4
FA56228-8	I56606.D	08/08/18	12:58	04:41	FB
FA56228-9	I56607.D	08/08/18	13:22	05:05	TB
FA56349-1	I56608.D	08/08/18	13:45	05:28	(used for QC only; not part of job FA56228)
ZZZZZZ	I56609.D	08/08/18	14:31	06:14	(unrelated sample)
ZZZZZZ	I56610.D	08/08/18	14:55	06:38	(unrelated sample)
FA56349-1MS	I56611.D	08/08/18	15:19	07:02	Matrix Spike
FA56349-1MSD	I56612.D	08/08/18	15:43	07:26	Matrix Spike Duplicate
ZZZZZZ	I56614.D	08/08/18	16:30	08:13	(unrelated sample)
ZZZZZZ	I56615.D	08/08/18	16:54	08:37	(unrelated sample)
ZZZZZZ	I56616.D	08/08/18	17:18	09:01	(unrelated sample)
ZZZZZZ	I56617.D	08/08/18	17:42	09:25	(unrelated sample)
ZZZZZZ	I56618.D	08/08/18	18:06	09:49	(unrelated sample)
ZZZZZZ	I56619.D	08/08/18	18:29	10:12	(unrelated sample)
ZZZZZZ	I56620.D	08/08/18	18:53	10:36	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample:	VI1694-BFB	**Injection Date:**	08/08/18
Lab File ID:	I56595.D	**Injection Time:**	08:17
Instrument ID:	GCMSI		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	I56621.D	08/08/18	19:17	11:00	(unrelated sample)
VI1694-ECC1683	I56622.D	08/08/18	19:41	11:24	Ending cal 5

Internal Standard Area Summary

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Check Std:	VI1694-CC1683	**Injection Date:**	08/08/18
Lab File ID:	I56596.D	**Injection Time:**	08:41
Instrument ID:	GCMSI	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Initial Cal [a]	1197770	9.42	847395	12.46	427469	14.13	101391	5.62
Check Std [b]	1112012	9.41	812808	12.46	415980	14.13	97054	5.61
Upper Limit [c]	2224024	9.58	1625616	12.63	831960	14.30	194108	5.78
Lower Limit [d]	556006	9.24	406404	12.29	207990	13.96	48527	5.44

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VI1694-BS	1159021	9.41	826881	12.46	422069	14.13	105695	5.61
VI1694-MB	1128546	9.41	804908	12.46	408061	14.13	90318	5.60
FA56228-1	1107608	9.41	771175	12.46	388977	14.13	65882	5.60
FA56228-2	1069763	9.42	756761	12.46	384341	14.13	70103	5.60
FA56228-3	1063976	9.42	759560	12.46	382412	14.13	71152	5.60
FA56228-4	1044919	9.42	744625	12.46	380455	14.13	72621	5.60
FA56228-5	1044846	9.42	740524	12.46	376989	14.13	75568	5.60
FA56228-6	1037933	9.42	740619	12.46	378297	14.13	78583	5.62
FA56228-7	1015484	9.42	729014	12.46	370901	14.13	74902	5.62
FA56228-8	1019456	9.42	721059	12.46	370811	14.13	72716	5.60
FA56228-9	1010958	9.42	724524	12.46	365010	14.13	78310	5.60
FA56349-1	998579	9.42	716992	12.46	366106	14.13	77972	5.61
ZZZZZZ	979688	9.41	697327	12.46	366470	14.13	84376	5.61
ZZZZZZ	988300	9.42	708204	12.46	360160	14.13	81529	5.60
FA56349-1MS	1068873	9.42	775842	12.46	400629	14.13	100608	5.62
FA56349-1MSD	1109107	9.42	795128	12.46	411562	14.13	110095	5.62
ZZZZZZ	1044824	9.42	742172	12.46	378072	14.13	94100	5.61
ZZZZZZ	1050443	9.42	748773	12.46	379900	14.13	96465	5.62
ZZZZZZ	1032055	9.42	741657	12.46	375728	14.13	88465	5.60
ZZZZZZ	1009989	9.42	724267	12.46	368183	14.13	91233	5.61
ZZZZZZ	1019560	9.42	718102	12.46	370630	14.13	89209	5.60
ZZZZZZ	1026516	9.42	729689	12.46	374274	14.13	91060	5.60
ZZZZZZ	1009971	9.42	719541	12.46	364422	14.13	84572	5.60
ZZZZZZ	1004297	9.42	713639	12.46	366111	14.13	87094	5.60
VI1694-ECC1683	1081258	9.42	791366	12.46	404551	14.13	99293	5.62

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Initial Cal is: VI1683-ICC1683 I56318.D 07/25/18 16:49
(b) Check Std Limit = -50 to + 100% of initial cal area.

Internal Standard Area Summary

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Check Std:	VI1694-CC1683	**Injection Date:**	08/08/18
Lab File ID:	I56596.D	**Injection Time:**	08:41
Instrument ID:	GCMSI	**Method:**	SW846 8260C

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT	IS 3 AREA	IS 3 RT	IS 4 AREA	IS 4 RT

(c) Upper Limit = + 100% of check standard area; Retention time + 0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

Surrogate Recovery Summary

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Method: SW846 8260C **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
FA56228-1	I56599.D	99	102	99	99
FA56228-2	I56600.D	100	103	98	97
FA56228-3	I56601.D	100	104	99	97
FA56228-4	I56602.D	100	104	99	96
FA56228-5	I56603.D	101	106	99	96
FA56228-6	I56604.D	102	107	96	96
FA56228-7	I56605.D	102	105	98	97
FA56228-8	I56606.D	102	107	100	95
FA56228-9	I56607.D	102	107	99	97
FA56349-1MS	I56611.D	103	105	97	96
FA56349-1MSD	I56612.D	104	104	98	97
VI1694-BS	I56597.D	102	102	99	98
VI1694-MB	I56598.D	99	104	98	98

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	83-118%
S2 = 1,2-Dichloroethane-D4	79-125%
S3 = Toluene-D8	85-112%
S4 = 4-Bromofluorobenzene	83-118%

Initial Calibration Summary

Job Number: FA56228 **Sample:** VI1683-ICC1683
Account: EAENYS EA Engineering **Lab FileID:** I56318.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Response Factor Report MSVOA16

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Calibration Files
1 =I56314.D 2 =I56315.D 3 =I56316.D 4 =I56317.D
5 =I56318.D 6 =I56319.D 7 =I56320.D

Compound	1	2	3	4	5	6	7	Avg	%RSD
1) I Fluorobenzene	----------ISTD----------								
2) Dichlorodifluorom	0.274	0.308	0.275	0.288	0.282	0.279	0.287	0.285	4.07
3)P Chloromethane	0.439	0.418	0.390	0.384	0.365	0.372	0.369	0.391	7.09
4) 1,3-Butadiene	0.243	0.200	0.180	0.199	0.216	0.213	0.224	0.211	9.50
5)C Vinyl Chloride	0.339	0.331	0.304	0.327	0.330	0.329	0.342	0.329	3.79
6) Bromomethane	0.215	0.184	0.175	0.163	0.159	0.157	0.152	0.172	12.56
7) Chloroethane	0.195	0.163	0.138	0.102	0.084	0.070		0.126	38.75
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9922									
Response Ratio = 0.00000 + 0.11744 *A + -0.03433 *A^2									
8) Trichlorofluorome	0.416	0.422	0.374	0.398	0.356	0.352	0.326	0.378	9.50
9) Ethyl Ether	0.287	0.284	0.290	0.295	0.295	0.291	0.298	0.291	1.65
10) 1,2-Dichlorotrifl	0.349	0.365	0.335	0.354	0.348	0.346	0.352	0.350	2.61
11)C 1,1-Dichloroethen	0.470	0.459	0.442	0.470	0.475	0.473	0.485	0.468	2.95
12) Freon 113	0.264	0.274	0.251	0.261	0.262	0.255	0.261	0.261	2.85
13) Carbon Disulfide	0.691	0.709	0.684	0.748	0.769	0.780	0.809	0.741	6.48
14) Iodomethane	0.407	0.394	0.376	0.402	0.403	0.405	0.418	0.401	3.23
15) Allyl chloride	0.345	0.385	0.375	0.412	0.424	0.433	0.442	0.402	8.77
16) Methylene Chlorid	0.695	0.509	0.486	0.470	0.463	0.452	0.456	0.504	17.15
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
Response Ratio = 0.00000 + 0.46608 *A + -0.00604 *A^2									
17) Acetone	0.077	0.079	0.081	0.085	0.089	0.085	0.086	0.083	5.21
18) Methyl acetate	0.106	0.153	0.179	0.205	0.210	0.207	0.213	0.182	22.04
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997									
Response Ratio = 0.00000 + 0.19960 *A + 0.00134 *A^2									
19) trans-1,2-Dichlor	0.434	0.448	0.441	0.468	0.473	0.475	0.487	0.461	4.29
20) Hexane	0.375	0.374	0.347	0.362	0.349	0.335	0.334	0.354	4.75
21) Methyl Tert Butyl	0.521	0.540	0.544	0.584	0.597	0.602	0.626	0.573	6.78
22) Acetonitrile		0.024	0.025	0.030	0.032	0.031	0.031	0.029	12.16
23) Di-isopropyl ethe	0.960	0.979	0.979	1.061	1.064	1.075	1.093	1.030	5.34
24) Chloroprene	0.388	0.442	0.438	0.497	0.505	0.522	0.527	0.474	10.97
25)P 1,1-Dichloroethan	0.559	0.554	0.538	0.555	0.555	0.557	0.568	0.555	1.61
26) Acrylonitrile	0.021	0.079	0.098	0.118	0.125	0.126	0.131	0.100	39.36
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996									
Response Ratio = 0.00000 + 0.11541 *A + 0.00153 *A^2									
27) ETBE	0.692	0.772	0.796	0.867	0.881	0.891	0.916	0.831	9.68
28) Vinyl acetate	0.361	0.527	0.591	0.664	0.662	0.697	0.699	0.600	20.36
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997									
Response Ratio = 0.00000 + 0.64932 *A + 0.00524 *A^2									
29) cis-1,2-Dichloroe	0.233	0.262	0.258	0.272	0.271	0.277	0.287	0.266	6.54
30) 2,2-Dichloropropa	0.197	0.207	0.206	0.240	0.248	0.269	0.284	0.236	14.34
31) Bromochloromethan	0.111	0.127	0.126	0.133	0.133	0.137	0.140	0.130	7.26

Initial Calibration Summary

Job Number: FA56228 **Sample:** VI1683-ICC1683
Account: EAENYS EA Engineering **Lab FileID:** I56318.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

32)	Cyclohexane	0.574	0.619	0.589	0.636	0.633	0.622	0.635	0.615	3.98
33)C	Chloroform	0.524	0.481	0.457	0.469	0.467	0.469	0.479	0.478	4.58
34)	Ethyl acetate	0.133	0.239	0.263	0.291	0.292	0.293	0.297	0.258	22.86
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 0.28449 *A + 0.00127 *A^2									
35)	Tetrahydrofuran	0.135	0.164	0.180	0.186	0.187	0.182	0.183	0.174	10.81
36)S	Dibromofluorometh	0.258	0.258	0.262	0.266	0.268	0.269	0.269	0.264	1.85
37)	Carbon Tetrachlor	0.270	0.283	0.266	0.291	0.295	0.299	0.310	0.288	5.54
38)	1,1,1-Trichloroet	0.363	0.369	0.358	0.390	0.398	0.401	0.415	0.385	5.62
39)	2-Butanone	0.068	0.097	0.111	0.124	0.129	0.128	0.132	0.113	20.61
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998									
	Response Ratio = 0.00000 + 0.12222 *A + 0.00095 *A^2									
40)	1,1-Dichloroprope	0.303	0.331	0.322	0.355	0.354	0.357	0.364	0.341	6.63
41)	tert-Butyl format	0.071	0.073	0.081	0.097	0.110	0.128	0.143	0.100	27.67
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998									
	Response Ratio = 0.00000 + 0.08592 *A + 0.00287 *A^2									
42)	Propionitrile	0.034	0.041	0.044	0.047	0.048	0.046	0.046	0.044	11.50
43)	Methacrylonitrile	0.155	0.175	0.173	0.181	0.179	0.169	0.166	0.171	5.14
44)	Benzene	1.055	1.024	0.986	1.021	1.005	1.009	1.026	1.018	2.10
45)	TAME	0.455	0.507	0.518	0.576	0.590	0.606	0.632	0.555	11.39
46)S	1,2-Dichloroethan	0.359	0.360	0.358	0.357	0.356	0.354	0.355	0.357	0.69
47)	1,2-Dichloroethan	0.449	0.447	0.432	0.442	0.434	0.435	0.438	0.440	1.50
48)	Trichloroethene	0.266	0.268	0.258	0.272	0.270	0.272	0.276	0.269	2.16
49)	Methylcyclohexane	0.427	0.432	0.417	0.449	0.450	0.446	0.458	0.440	3.35
50)	Dibromomethane	0.152	0.160	0.162	0.171	0.170	0.173	0.176	0.166	5.13
51)C	1,2-Dichloropropa	0.307	0.318	0.314	0.334	0.331	0.335	0.338	0.325	3.74
52)	Bromodichlorometh	0.283	0.300	0.306	0.334	0.336	0.346	0.354	0.323	8.20
53)	Methyl methacryla	0.126	0.161	0.190	0.224	0.240	0.250	0.255	0.206	23.73
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996									
	Response Ratio = 0.00000 + 0.22300 *A + 0.01651 *A^2									
54)	2-Chloroethyl vin	0.138	0.176	0.190	0.206	0.211	0.212	0.209	0.192	14.08
55)	cis-1,3-Dichlorop	0.281	0.335	0.351	0.407	0.416	0.429	0.443	0.380	15.61
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 0.39225 *A + 0.02559 *A^2									
56) I	Chlorobenzene-d5	----------ISTD----------								
57)S	Toluene-d8	1.379	1.375	1.386	1.372	1.371	1.393	1.383	1.380	0.57
58)C	Toluene	1.621	1.533	1.488	1.546	1.506	1.552	1.565	1.544	2.79
59)	2-Nitropropane	0.052	0.060	0.069	0.083	0.085	0.088	0.091	0.076	20.26
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997									
	Response Ratio = 0.00000 + 0.08026 *A + 0.00110 *A^2									
60)	4-Methyl-2-pentan	0.414	0.399	0.412	0.428	0.425	0.411	0.402	0.413	2.56
61)	trans-1,3-Dichlor	0.026	0.029	0.032	0.033	0.031	0.030	0.031	0.030	7.78
62)	Tetrachloroethene	0.376	0.400	0.391	0.417	0.431	0.384	0.388	0.398	4.90
63)	Ethyl methacrylat	0.241	0.347	0.372	0.435	0.454	0.471	0.481	0.400	21.58
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998									
	Response Ratio = 0.00000 + 0.42779 *A + 0.02741 *A^2									
64)	1,1,2-Trichloroet	0.270	0.289	0.292	0.300	0.289	0.294	0.295	0.290	3.33
65)	Dibromochlorometh	0.259	0.319	0.328	0.363	0.366	0.381	0.388	0.344	13.19
66)	1,3-Dichloropropa	0.559	0.574	0.571	0.598	0.587	0.593	0.598	0.583	2.59
67)	1,2-Dibromoethane	0.267	0.298	0.312	0.336	0.334	0.340	0.348	0.319	9.04
68)	2-hexanone	0.345	0.331	0.343	0.360	0.361	0.336	0.319	0.342	4.40
69)	1-Chlorohexane	0.533	0.513	0.498	0.522	0.540	0.540	0.564	0.530	4.07

Initial Calibration Summary

Job Number: FA56228 **Sample:** VI1683-ICC1683
Account: EAENYS EA Engineering **Lab FileID:** I56318.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

70)C	Ethylbenzene	1.789	1.768	1.700	1.795	1.745	1.796	1.772	1.766	1.95
71)P	Chlorobenzene	1.095	1.025	0.972	0.997	0.967	0.986	0.991	1.005	4.39
72)	1,1,1,2-Tetrachlo	0.271	0.296	0.292	0.320	0.319	0.331	0.339	0.310	7.87
73)	m,p-Xylene	1.272	1.355	1.304	1.386	1.362	1.377	1.362	1.345	3.08
74)	o-Xylene	1.170	1.298	1.302	1.411	1.391	1.428	1.445	1.349	7.28
75)	Styrene	0.708	0.900	0.904	1.009	1.009	1.046	1.062	0.948	13.06
76)P	Bromoform	0.150	0.176	0.186	0.215	0.220	0.230	0.238	0.202	15.84

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999
Response Ratio = 0.00000 + 0.20580 *A + 0.01648 *A^2

77)	Isopropylbenzene	1.255	1.458	1.435	1.558	1.540	1.579	1.583	1.487	7.91
78) I	1,4-Dichlorobenzene-d	----------ISTD----------								
79)S	4-Bromofluorobenz	0.771	0.777	0.783	0.795	0.793	0.803	0.805	0.790	1.66
80)	cis-1,4-Dichloro-	0.266	0.277	0.273	0.321	0.331	0.341	0.344	0.308	11.12
81)	n-Propylbenzene	3.811	3.967	3.861	4.158	4.076	4.078	4.070	4.003	3.19
82)	Bromobenzene	0.747	0.769	0.745	0.787	0.786	0.796	0.800	0.776	2.90
83)P	1,1,2,2-Tetrachlo	0.863	0.881	0.853	0.895	0.880	0.868	0.876	0.874	1.59
84)	1,3,5-Trimethylbe	2.158	2.462	2.447	2.652	2.630	2.656	2.652	2.523	7.33
85)	2-Chlorotoluene	2.301	2.386	2.324	2.479	2.477	2.517	2.540	2.432	3.91
86)	trans-1,4-Dichlor	0.222	0.250	0.273	0.310	0.311	0.312	0.318	0.285	13.13
87)	1,2,3-Trichloropr	0.209	0.246	0.228	0.246	0.241	0.238	0.239	0.235	5.62
88)	Cyclohexanone	0.028	0.035	0.036	0.042	0.042	0.040	0.039	0.037	13.12
89)	4-Chlorotoluene	2.301	2.386	2.324	2.479	2.477	2.517	2.540	2.432	3.91
90)	tert-Butylbenzene	1.426	1.509	1.485	1.608	1.615	1.635	1.651	1.561	5.55
91)	a-Methyl styrene			0.019					0.019	0.00
92)	1,2,4-Trimethylbe	2.186	2.557	2.549	2.731	2.717	2.751	2.772	2.609	7.96
93)	Pentachloroethane	0.332	0.368	0.364	0.409	0.388	0.491	0.500	0.407	15.90

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9973
Response Ratio = 0.00000 + 0.37152 *A + 0.06751 *A^2

94)	sec-Butylbenzene	2.894	3.181	3.101	3.351	3.326	3.329	3.363	3.221	5.42
95)	4-Isopropyltoluen	2.192	2.514	2.513	2.743	2.738	2.763	2.811	2.611	8.45
96)	1,3-Dichlorobenze	1.420	1.396	1.381	1.465	1.450	1.473	1.495	1.440	2.92
97)	1,4-Dichlorobenze	1.690	1.579	1.523	1.567	1.516	1.539	1.556	1.567	3.75
98)	n-Butylbenzene	1.268	1.415	1.422	1.577	1.584	1.610	1.647	1.503	9.16
99)	Benzyl Chloride	0.060	0.100	0.116	0.174	0.187	0.227	0.245	0.158	43.26

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9990
Response Ratio = 0.00000 + 0.15325 *A + 0.04719 *A^2

100)	1,2-Dichlorobenze	1.367	1.373	1.341	1.429	1.419	1.434	1.454	1.402	2.99
101)	1,2-Dibromo-3-Chl	0.097	0.110	0.117	0.142	0.146	0.149	0.156	0.131	17.38

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998
Response Ratio = 0.00000 + 0.13512 *A + 0.01035 *A^2

102)	Hexachlorobutadie	0.452	0.437	0.427	0.472	0.477	0.486	0.510	0.466	6.25
103)	1,2,4-Trichlorobe	0.819	0.854	0.871	0.964	0.977	0.999	1.032	0.931	8.78
104)	Naphthalene	1.500	1.903	2.074	2.394	2.447	2.466	2.529	2.188	17.42

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998
Response Ratio = 0.00000 + 2.33042 *A + 0.09975 *A^2

105)	1,2,3-Trichlorobe	0.797	0.809	0.839	0.893	0.907	0.917	0.948	0.873	6.64
106) I	Tert Butyl Alcohol-d1	----------ISTD----------								
107)	Ethanol		0.048	0.180	0.189	0.188	0.188	0.181	0.182	0.165	31.33

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998
Response Ratio = 0.00000 + 0.18817 *A + -0.00089 *A^2

108)	Acrolein		1.222	3.681	3.841	4.096	4.035	4.093	3.992	3.566	29.28

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998

Initial Calibration Summary

Job Number: FA56228 **Sample:** VI1683-ICC1683
Account: EAENYS EA Engineering **Lab FileID:** I56318.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

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               Response Ratio = 0.00000 + 4.12258 *A + -0.05810 *A^2

109)  Tert Butyl Alcoho 1.600 1.540 1.597 1.658 1.616 1.584 1.621 1.602   2.27
110)  Isobutyl alcohol  0.649 0.563 0.600 0.707 0.700 0.707 0.711 0.662   9.07
111)  Tert Amyl Alcohol 0.768 0.848 0.914 1.091 1.077 1.100 1.159 0.994  15.04
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9997
               Response Ratio = 0.00000 + 1.00771 *A + 0.03719 *A^2

112)  1,4-Dioxane       0.060 0.132 0.142 0.171 0.160 0.158 0.157 0.140  26.92
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9994
               Response Ratio = 0.00000 + 0.16309 *A + -0.00084 *A^2

113)  3,3-Dimethyl-1-bu 1.650 1.596 1.594 1.790 1.873 1.748 1.682 1.705   6.10
 ----------------------------------------------------------------------------
 (#) = Out of Range

          I-July2518.M        Thu Jul 26 08:21:24 2018
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Initial Calibration Verification

Job Number: FA56228 **Sample:** VI1683-ICV1683
Account: EAENYS EA Engineering **Lab FileID:** I56322.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\2\DATA\072518\I56322.D Vial: 9
Acq On : 25 Jul 2018 6:24 pm Operator: ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Jul 26 08:15:52 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	104	0.00	9.42
2		Dichlorodifluoromethane	0.285	0.296	-3.9	109	0.00	2.25
3	P	Chloromethane	0.391	0.351	10.2	100	-0.01	2.53
4		1,3-Butadiene	0.211	0.180	14.7	86	-0.01	2.64
5	C	Vinyl Chloride	0.329	0.320	2.7	101	-0.01	2.66
6		Bromomethane	0.172	0.172	0.0	112	-0.01	3.10
		----------	Amount	Calc.	%Drift		----------	
7		Chloroethane	40.000	32.088	19.8	95	-0.02	3.26
		----------	AvgRF	CCRF	%Dev		----------	
8		Trichlorofluoromethane	0.378	0.389	-2.9	113	-0.01	3.51
9		Ethyl Ether	0.291	0.297	-2.1	105	0.00	3.92
10		1,2-Dichlorotrifluoroetha	0.350	0.353	-0.9	105	0.00	4.23
11	C	1,1-Dichloroethene	0.468	0.490	-4.7	107	-0.01	4.21
12		Freon 113	0.261	0.236	9.6	94	-0.01	4.31
13		Carbon Disulfide	0.741	0.817	-10.3	110	-0.02	4.26
14		Iodomethane	0.401	0.409	-2.0	105	-0.01	4.42
15		Allyl chloride	0.402	0.403	-0.2	99	-0.01	4.92
		----------	Amount	Calc.	%Drift		----------	
16		Methylene Chloride	40.000	41.556	-3.9	107	0.00	5.10
		----------	AvgRF	CCRF	%Dev		----------	
17		Acetone	0.083	0.084	-1.2	98	0.00	5.16
		----------	Amount	Calc.	%Drift		----------	
18		Methyl acetate	200.000	206.883	-3.4	105	0.00	5.37
		----------	AvgRF	CCRF	%Dev		----------	
19		trans-1,2-Dichloroethene	0.461	0.477	-3.5	104	0.00	5.35
20		Hexane	0.354	0.340	4.0	101	0.00	5.49
21		Methyl Tert Butyl Ether	0.573	0.622	-8.6	108	-0.01	5.55
22		Acetonitrile	0.029	0.032	-10.3	104	0.00	5.88
23		Di-isopropyl ether	1.030	1.099	-6.7	107	0.00	6.18
24		Chloroprene	0.474	0.484	-2.1	100	0.00	6.31
25	P	1,1-Dichloroethane	0.555	0.584	-5.2	109	0.00	6.34
		----------	Amount	Calc.	%Drift		----------	
26		Acrylonitrile	200.000	205.471	-2.7	104	0.00	6.39
		----------	AvgRF	CCRF	%Dev		----------	

Initial Calibration Verification

Job Number: FA56228 **Sample:** VI1683-ICV1683
Account: EAENYS EA Engineering **Lab FileID:** I56322.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

27		ETBE	0.831	0.930	-11.9	110	0.00	6.80
			Amount	Calc.	%Drift			
28		Vinyl acetate	200.000	194.769	2.6	102	0.00	6.77
			AvgRF	CCRF	%Dev			
29		cis-1,2-Dichloroethene	0.266	0.279	-4.9	107	-0.01	7.26
30		2,2-Dichloropropane	0.236	0.259	-9.7	108	-0.01	7.45
31		Bromochloromethane	0.130	0.135	-3.8	105	0.00	7.61
32		Cyclohexane	0.615	0.632	-2.8	104	0.00	7.65
33	C	Chloroform	0.478	0.475	0.6	105	-0.01	7.76
			Amount	Calc.	%Drift			
34		Ethyl acetate	200.000	201.997	-1.0	104	0.00	8.00
			AvgRF	CCRF	%Dev			
35		Tetrahydrofuran	0.174	0.187	-7.5	104	0.00	8.03
36	S	Dibromofluoromethane	0.264	0.264	0.0	102	0.00	8.09
37		Carbon Tetrachloride	0.288	0.277	3.8	98	0.00	8.02
38		1,1,1-Trichloroethane	0.385	0.387	-0.5	101	0.00	8.13
			Amount	Calc.	%Drift			
39		2-Butanone	200.000	209.892	-4.9	106	0.00	8.30
			AvgRF	CCRF	%Dev			
40		1,1-Dichloropropene	0.341	0.358	-5.0	105	0.00	8.36
			Amount	Calc.	%Drift			
41		tert-Butyl formate	400.000	296.136	26.0#	72	0.00	8.57
			AvgRF	CCRF	%Dev			
42		Propionitrile	0.044	0.047	-6.8	101	0.00	8.79
43		Methacrylonitrile	0.171	0.176	-2.9	102	0.00	8.84
44		Benzene	1.018	1.030	-1.2	106	0.00	8.79
45		TAME	0.555	0.608	-9.5	107	0.00	9.02
46	S	1,2-Dichloroethane-d4	0.357	0.353	1.1	103	0.00	8.99
47		1,2-Dichloroethane	0.440	0.441	-0.2	105	0.00	9.10
48		Trichloroethene	0.269	0.273	-1.5	105	0.00	9.66
49		Methylcyclohexane	0.440	0.461	-4.8	106	0.00	9.65
50		Dibromomethane	0.166	0.175	-5.4	107	0.00	10.15
51	C	1,2-Dichloropropane	0.325	0.342	-5.2	107	0.00	10.25
52		Bromodichloromethane	0.323	0.346	-7.1	107	0.00	10.34
			Amount	Calc.	%Drift			
53		Methyl methacrylate	40.000	39.888	0.3	102	0.00	10.51
			AvgRF	CCRF	%Dev			
54		2-Chloroethyl vinyl ether	0.192	0.226	-17.7	111	0.00	10.91
			Amount	Calc.	%Drift			
55		cis-1,3-Dichloropropene	40.000	39.535	1.2	102	0.00	10.98
			AvgRF	CCRF	%Dev			
56	I	Chlorobenzene-d5	1.000	1.000	0.0	104	0.00	12.46
57	S	Toluene-d8	1.380	1.375	0.4	104	0.00	11.15
58	C	Toluene	1.544	1.553	-0.6	107	0.00	11.20
			Amount	Calc.	%Drift			
59		2-Nitropropane	200.000	178.791	10.6	91	0.00	11.38

Initial Calibration Verification

Job Number: FA56228 **Sample:** VI1683-ICV1683
Account: EAENYS EA Engineering **Lab FileID:** I56322.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			AvgRF	CCRF	%Dev			
60		4-Methyl-2-pentanone	0.413	0.434	-5.1	106	0.00	11.52
61		trans-1,3-Dichloropropene	0.030	0.032	-6.7	108	0.00	11.93
62		Tetrachloroethene	0.398	0.390	2.0	94	0.00	11.55
			Amount	Calc.	%Drift			
63		Ethyl methacrylate	40.000	41.227	-3.1	106	0.00	11.70
			AvgRF	CCRF	%Dev			
64		1,1,2-Trichloroethane	0.290	0.304	-4.8	109	0.00	11.70
65		Dibromochloromethane	0.344	0.376	-9.3	106	0.00	11.86
66		1,3-Dichloropropane	0.583	0.587	-0.7	104	0.00	11.93
67		1,2-Dibromoethane	0.319	0.342	-7.2	106	0.00	12.05
68		2-hexanone	0.342	0.357	-4.4	102	0.00	12.21
69		1-Chlorohexane	0.530	0.549	-3.6	105	0.00	12.44
70	C	Ethylbenzene	1.766	1.790	-1.4	106	0.00	12.48
71	P	Chlorobenzene	1.005	0.998	0.7	107	0.00	12.47
72		1,1,1,2-Tetrachloroethane	0.310	0.320	-3.2	104	0.00	12.52
73		m,p-Xylene	1.345	1.401	-4.2	107	0.00	12.59
74		o-Xylene	1.349	1.441	-6.8	107	0.00	12.91
75		Styrene	0.948	1.057	-11.5	109	0.00	12.95
			Amount	Calc.	%Drift			
76	P	Bromoform	40.000	40.604	-1.5	105	0.00	12.99
			AvgRF	CCRF	%Dev			
77		Isopropylbenzene	1.487	1.662	-11.8	112	0.00	13.13
78	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	14.13
79	S	4-Bromofluorobenzene	0.790	0.799	-1.1	105	0.00	13.35
80		cis-1,4-Dichloro-2-butene	0.308	0.304	1.3	96	0.00	13.38
81		n-Propylbenzene	4.003	4.146	-3.6	106	0.00	13.43
82		Bromobenzene	0.776	0.811	-4.5	107	0.00	13.44
83	P	1,1,2,2-Tetrachloroethane	0.874	0.934	-6.9	111	0.00	13.47
84		1,3,5-Trimethylbenzene	2.523	2.727	-8.1	108	0.00	13.55
85		2-Chlorotoluene	2.432	2.551	-4.9	107	0.00	13.67
86		trans-1,4-Dichloro-2-Bute	0.285	0.285	0.0	96	0.00	13.60
87		1,2,3-Trichloropropane	0.235	0.248	-5.5	107	0.00	13.58
88		Cyclohexanone	0.037	0.032	13.5	80	0.00	13.62
89		4-Chlorotoluene	2.432	2.551	-4.9	107	0.00	13.67
90		tert-Butylbenzene	1.561	1.631	-4.5	105	0.00	13.79
91		a-Methyl styrene		----------NA----------				
92		1,2,4-Trimethylbenzene	2.609	2.724	-4.4	104	0.00	13.83
			Amount	Calc.	%Drift			
93		Pentachloroethane	40.000	39.863	0.3	114	0.00	13.82
			AvgRF	CCRF	%Dev			
94		sec-Butylbenzene	3.221	3.389	-5.2	106	0.00	13.91
95		4-Isopropyltoluene	2.611	2.841	-8.8	108	0.00	13.99
96		1,3-Dichlorobenzene	1.440	1.524	-5.8	110	0.00	14.08
97		1,4-Dichlorobenzene	1.567	1.568	-0.1	108	0.00	14.14
98		n-Butylbenzene	1.503	1.640	-9.1	108	0.00	14.29
			Amount	Calc.	%Drift			
99		Benzyl Chloride	40.000	39.157	2.1	104	0.00	14.30
			AvgRF	CCRF	%Dev			
100		1,2-Dichlorobenzene	1.402	1.449	-3.4	106	0.00	14.43

Initial Calibration Verification

Job Number: FA56228 **Sample:** VI1683-ICV1683
Account: EAENYS EA Engineering **Lab FileID:** I56322.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			Amount	Calc.	%Drift			
101		1,2-Dibromo-3-Chloropropa	40.000	40.578	-1.4	104	0.00	14.96
			AvgRF	CCRF	%Dev			
102		Hexachlorobutadiene	0.466	0.493	-5.8	108	0.00	15.38
103		1,2,4-Trichlorobenzene	0.931	1.019	-9.5	109	0.00	15.41
			Amount	Calc.	%Drift			
104		Naphthalene	40.000	41.942	-4.9	108	0.00	15.63
			AvgRF	CCRF	%Dev			
105		1,2,3-Trichlorobenzene	0.873	0.937	-7.3	108	0.00	15.75
106	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	106	0.00	5.62
			Amount	Calc.	%Drift			
107		Ethanol	800.000	819.004	-2.4	107	0.00	4.23
108		Acrolein	200.000	151.695	24.2#	81	0.00	4.70
			AvgRF	CCRF	%Dev			
109		Tert Butyl Alcohol	1.602	1.841	-14.9	121	0.00	5.73
110		Isobutyl alcohol	0.662	0.700	-5.7	106	0.00	9.21
			Amount	Calc.	%Drift			
111		Tert Amyl Alcohol	400.000	416.240	-4.1	110	0.00	9.33
112		1,4-Dioxane	800.000	823.330	-2.9	110	0.00	10.55
			AvgRF	CCRF	%Dev			
113		3,3-Dimethyl-1-butanol	1.705	1.738	-1.9	98	0.00	12.20

(#) = Out of Range SPCC's out = 0 CCC's out = 0
I56318.D I-July2518.M Thu Jul 26 08:21:15 2018

Continuing Calibration Summary

Job Number: FA56228 **Sample:** VI1694-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56596.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\2\DATA\080818\I56596.D Vial: 1
Acq On : 8 Aug 2018 8:41 am Operator: ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40961,VI1694,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Jul 26 08:15:52 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	93	0.00	9.41
2		Dichlorodifluoromethane	0.285	0.283	0.7	93	0.00	2.25
3	P	Chloromethane	0.391	0.401	-2.6	102	-0.01	2.53
4		1,3-Butadiene	0.211	0.220	-4.3	94	-0.01	2.64
5	C	Vinyl Chloride	0.329	0.331	-0.6	93	-0.01	2.66
6		Bromomethane	0.172	0.156	9.3	91	0.00	3.11
			Amount	Calc.	%Drift			
7		Chloroethane	40.000	38.837	2.9	98	-0.01	3.26
			AvgRF	CCRF	%Dev			
8		Trichlorofluoromethane	0.378	0.393	-4.0	102	0.00	3.51
9		Ethyl Ether	0.291	0.277	4.8	87	0.00	3.92
10		1,2-Dichlorotrifluoroetha	0.350	0.337	3.7	90	0.00	4.23
11	C	1,1-Dichloroethene	0.468	0.420	10.3	82	-0.01	4.21
12		Freon 113	0.261	0.230	11.9	81	0.00	4.32
13		Carbon Disulfide	0.741	0.661	10.8	80	-0.02	4.26
14		Iodomethane	0.401	0.345	14.0	80	-0.01	4.42
15		Allyl chloride	0.402	0.449	-11.7	98	0.00	4.93
			Amount	Calc.	%Drift			
16		Methylene Chloride	40.000	39.980	0.1	93	0.00	5.10
			AvgRF	CCRF	%Dev			
17		Acetone	0.083	0.091	-9.6	95	0.00	5.16
			Amount	Calc.	%Drift			
18		Methyl acetate	200.000	197.775	1.1	90	0.00	5.37
			AvgRF	CCRF	%Dev			
19		trans-1,2-Dichloroethene	0.461	0.437	5.2	86	0.00	5.35
20		Hexane	0.354	0.318	10.2	85	0.00	5.49
21		Methyl Tert Butyl Ether	0.573	0.556	3.0	87	0.00	5.56
22		Acetonitrile	0.029	0.033	-13.8	97	0.00	5.88
23		Di-isopropyl ether	1.030	1.030	0.0	90	0.00	6.18
24		Chloroprene	0.474	0.475	-0.2	87	0.00	6.31
25	P	1,1-Dichloroethane	0.555	0.540	2.7	90	0.00	6.33
			Amount	Calc.	%Drift			
26		Acrylonitrile	200.000	208.680	-4.3	95	0.00	6.39
			AvgRF	CCRF	%Dev			

Continuing Calibration Summary

Job Number: FA56228 **Sample:** VI1694-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56596.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

27		ETBE	0.831	0.897	-7.9	95	0.00	6.80
			Amount	Calc.	%Drift			
28		Vinyl acetate	200.000	217.411	-8.7	102	0.00	6.77
			AvgRF	CCRF	%Dev			
29		cis-1,2-Dichloroethene	0.266	0.255	4.1	87	-0.01	7.26
30		2,2-Dichloropropane	0.236	0.288	-22.0#	108	-0.01	7.45
31		Bromochloromethane	0.130	0.129	0.8	90	0.00	7.61
32		Cyclohexane	0.615	0.574	6.7	84	0.00	7.64
33	C	Chloroform	0.478	0.452	5.4	90	-0.01	7.76
			Amount	Calc.	%Drift			
34		Ethyl acetate	200.000	206.642	-3.3	95	0.00	7.99
			AvgRF	CCRF	%Dev			
35		Tetrahydrofuran	0.174	0.185	-6.3	92	0.00	8.03
36	S	Dibromofluoromethane	0.264	0.274	-3.8	95	0.00	8.09
37		Carbon Tetrachloride	0.288	0.310	-7.6	97	0.00	8.02
38		1,1,1-Trichloroethane	0.385	0.388	-0.8	91	0.00	8.13
			Amount	Calc.	%Drift			
39		2-Butanone	200.000	203.698	-1.8	92	0.00	8.31
			AvgRF	CCRF	%Dev			
40		1,1-Dichloropropene	0.341	0.326	4.4	85	0.00	8.36
			Amount	Calc.	%Drift			
41		tert-Butyl formate	400.000	607.428	-51.9#	155	0.00	8.57
			AvgRF	CCRF	%Dev			
42		Propionitrile	0.044	0.049	-11.4	94	0.00	8.79
43		Methacrylonitrile	0.171	0.188	-9.9	97	0.00	8.84
44		Benzene	1.018	0.963	5.4	89	0.00	8.79
45		TAME	0.555	0.575	-3.6	91	0.00	9.02
46	S	1,2-Dichloroethane-d4	0.357	0.368	-3.1	96	0.00	8.99
47		1,2-Dichloroethane	0.440	0.428	2.7	91	0.00	9.10
48		Trichloroethene	0.269	0.259	3.7	89	0.00	9.65
49		Methylcyclohexane	0.440	0.411	6.6	85	0.00	9.65
50		Dibromomethane	0.166	0.165	0.6	90	0.00	10.15
51	C	1,2-Dichloropropane	0.325	0.324	0.3	91	0.00	10.25
52		Bromodichloromethane	0.323	0.335	-3.7	92	0.00	10.34
			Amount	Calc.	%Drift			
53		Methyl methacrylate	40.000	38.584	3.5	88	0.00	10.51
			AvgRF	CCRF	%Dev			
54		2-Chloroethyl vinyl ether	0.192	0.214	-11.5	94	0.00	10.91
			Amount	Calc.	%Drift			
55		cis-1,3-Dichloropropene	40.000	41.809	-4.5	97	0.00	10.98
			AvgRF	CCRF	%Dev			
56	I	Chlorobenzene-d5	1.000	1.000	0.0	96	0.00	12.46
57	S	Toluene-d8	1.380	1.341	2.8	94	0.00	11.15
58	C	Toluene	1.544	1.421	8.0	90	0.00	11.19
			Amount	Calc.	%Drift			
59		2-Nitropropane	200.000	219.262	-9.6	105	0.00	11.38

Continuing Calibration Summary

Job Number: FA56228 **Sample:** VI1694-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56596.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			AvgRF	CCRF	%Dev			
60		4-Methyl-2-pentanone	0.413	0.426	-3.1	96	0.00	11.52
61		trans-1,3-Dichloropropene	0.030	0.031	-3.3	97	0.00	11.93
62		Tetrachloroethene	0.398	0.353	11.3	78	0.00	11.55
			Amount	Calc.	%Drift			
63		Ethyl methacrylate	40.000	37.192	7.0	88	0.00	11.69
			AvgRF	CCRF	%Dev			
64		1,1,2-Trichloroethane	0.290	0.284	2.1	94	0.00	11.70
65		Dibromochloromethane	0.344	0.354	-2.9	93	0.00	11.86
66		1,3-Dichloropropane	0.583	0.563	3.4	92	0.00	11.93
67		1,2-Dibromoethane	0.319	0.317	0.6	91	0.00	12.05
68		2-hexanone	0.342	0.362	-5.8	96	0.00	12.21
69		1-Chlorohexane	0.530	0.486	8.3	86	0.00	12.44
70	C	Ethylbenzene	1.766	1.671	5.4	92	0.00	12.48
71	P	Chlorobenzene	1.005	0.940	6.5	93	0.00	12.47
72		1,1,1,2-Tetrachloroethane	0.310	0.322	-3.9	97	0.00	12.52
73		m,p-Xylene	1.345	1.294	3.8	91	0.00	12.59
74		o-Xylene	1.349	1.309	3.0	90	0.00	12.91
75		Styrene	0.948	0.958	-1.1	91	0.00	12.95
			Amount	Calc.	%Drift			
76	P	Bromoform	40.000	40.671	-1.7	97	0.00	12.99
			AvgRF	CCRF	%Dev			
77		Isopropylbenzene	1.487	1.450	2.5	90	0.00	13.13
78	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	14.13
79	S	4-Bromofluorobenzene	0.790	0.773	2.2	95	0.00	13.35
80		cis-1,4-Dichloro-2-butene	0.308	0.350	-13.6	103	0.00	13.38
81		n-Propylbenzene	4.003	3.889	2.8	93	0.00	13.43
82		Bromobenzene	0.776	0.746	3.9	92	0.00	13.43
83	P	1,1,2,2-Tetrachloroethane	0.874	0.848	3.0	94	0.00	13.47
84		1,3,5-Trimethylbenzene	2.523	2.481	1.7	92	0.00	13.55
85		2-Chlorotoluene	2.432	2.371	2.5	93	0.00	13.67
86		trans-1,4-Dichloro-2-Bute	0.285	0.328	-15.1	103	0.00	13.59
87		1,2,3-Trichloropropane	0.235	0.228	3.0	92	0.00	13.58
88		Cyclohexanone	0.037	0.043	-16.2	100	0.00	13.62
89		4-Chlorotoluene	2.432	2.371	2.5	93	0.00	13.67
90		tert-Butylbenzene	1.561	1.509	3.3	91	0.00	13.79
91		a-Methyl styrene		----------NA----------				
92		1,2,4-Trimethylbenzene	2.609	2.579	1.1	92	0.00	13.83
			Amount	Calc.	%Drift			
93		Pentachloroethane	40.000	44.529	-11.3	121	0.00	13.82
			AvgRF	CCRF	%Dev			
94		sec-Butylbenzene	3.221	3.146	2.3	92	0.00	13.91
95		4-Isopropyltoluene	2.611	2.561	1.9	91	0.00	13.99
96		1,3-Dichlorobenzene	1.440	1.382	4.0	93	0.00	14.08
97		1,4-Dichlorobenzene	1.567	1.463	6.6	94	0.00	14.14
98		n-Butylbenzene	1.503	1.550	-3.1	95	0.00	14.28
			Amount	Calc.	%Drift			
99		Benzyl Chloride	40.000	52.350	-30.9#	138	0.00	14.30
			AvgRF	CCRF	%Dev			
100		1,2-Dichlorobenzene	1.402	1.338	4.6	92	0.00	14.43

Continuing Calibration Summary

Job Number: FA56228 **Sample:** VI1694-CC1683
Account: EAENYS EA Engineering **Lab FileID:** I56596.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			Amount	Calc.	%Drift			
101		1,2-Dibromo-3-Chloropropa	40.000	39.225	1.9	94	0.00	14.96
			AvgRF	CCRF	%Dev			
102		Hexachlorobutadiene	0.466	0.445	4.5	91	0.00	15.38
103		1,2,4-Trichlorobenzene	0.931	0.902	3.1	90	0.00	15.41
			Amount	Calc.	%Drift			
104		Naphthalene	40.000	36.719	8.2	88	0.00	15.63
			AvgRF	CCRF	%Dev			
105		1,2,3-Trichlorobenzene	0.873	0.845	3.2	91	0.00	15.76
106	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	96	-0.01	5.61
			Amount	Calc.	%Drift			
107		Ethanol	800.000	783.889	2.0	92	0.00	4.22
108		Acrolein	200.000	185.806	7.1	90	0.00	4.70
			AvgRF	CCRF	%Dev			
109		Tert Butyl Alcohol	1.602	1.578	1.5	94	0.00	5.73
110		Isobutyl alcohol	0.662	0.668	-0.9	91	0.00	9.20
			Amount	Calc.	%Drift			
111		Tert Amyl Alcohol	400.000	384.548	3.9	91	0.00	9.33
112		1,4-Dioxane	800.000	722.942	9.6	87	0.00	10.54
			AvgRF	CCRF	%Dev			
113		3,3-Dimethyl-1-butanol	1.705	1.800	-5.6	92	0.00	12.19

(#) = Out of Range SPCC's out = 0 CCC's out = 0
I56318.D I-July2518.M Wed Aug 08 08:58:15 2018

Continuing Calibration Summary

Job Number: FA56228 **Sample:** VI1694-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56622.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\2\DATA\080818\I56622.D Vial: 24
Acq On : 8 Aug 2018 7:41 pm Operator: ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40987,VI1694,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Jul 26 08:15:52 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	90	0.00	9.42
2		Dichlorodifluoromethane	0.285	0.268	6.0	86	0.00	2.25
3	P	Chloromethane	0.391	0.373	4.6	92	-0.01	2.53
4		1,3-Butadiene	0.211	0.209	0.9	87	0.00	2.64
5	C	Vinyl Chloride	0.329	0.316	4.0	86	-0.01	2.66
6		Bromomethane	0.172	0.156	9.3	88	0.00	3.10
		----------	Amount	Calc.	%Drift		----------	
7		Chloroethane	40.000	38.190	4.5	94	-0.01	3.26
		----------	AvgRF	CCRF	%Dev		----------	
8		Trichlorofluoromethane	0.378	0.355	6.1	90	-0.01	3.51
9		Ethyl Ether	0.291	0.263	9.6	81	0.00	3.92
10		1,2-Dichlorotrifluoroetha	0.350	0.319	8.9	83	0.00	4.23
11	C	1,1-Dichloroethene	0.468	0.397	15.2	75	0.00	4.22
12		Freon 113	0.261	0.218	16.5	75	-0.01	4.31
13		Carbon Disulfide	0.741	0.605	18.4	71	0.00	4.27
14		Iodomethane	0.401	0.320	20.2	72	0.00	4.43
15		Allyl chloride	0.402	0.391	2.7	83	0.00	4.93
		----------	Amount	Calc.	%Drift		----------	
16		Methylene Chloride	40.000	37.906	5.2	85	0.00	5.10
		----------	AvgRF	CCRF	%Dev		----------	
17		Acetone	0.083	0.085	-2.4	86	0.00	5.17
		----------	Amount	Calc.	%Drift		----------	
18		Methyl acetate	200.000	196.383	1.8	87	0.00	5.37
		----------	AvgRF	CCRF	%Dev		----------	
19		trans-1,2-Dichloroethene	0.461	0.421	8.7	80	0.00	5.36
20		Hexane	0.354	0.300	15.3	78	0.00	5.49
21		Methyl Tert Butyl Ether	0.573	0.535	6.6	81	0.00	5.56
22		Acetonitrile	0.029	0.030	-3.4	87	0.00	5.89
23		Di-isopropyl ether	1.030	0.957	7.1	81	0.00	6.18
24		Chloroprene	0.474	0.438	7.6	78	0.00	6.31
25	P	1,1-Dichloroethane	0.555	0.522	5.9	85	0.00	6.34
		----------	Amount	Calc.	%Drift		----------	
26		Acrylonitrile	200.000	198.734	0.6	87	0.00	6.40
		----------	AvgRF	CCRF	%Dev		----------	

Continuing Calibration Summary

Job Number: FA56228 **Sample:** VI1694-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56622.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

27		ETBE	0.831	0.850	-2.3	87	0.00	6.80
			Amount	Calc.	%Drift			
28		Vinyl acetate	200.000	196.652	1.7	90	0.00	6.77
			AvgRF	CCRF	%Dev			
29		cis-1,2-Dichloroethene	0.266	0.243	8.6	81	0.00	7.27
30		2,2-Dichloropropane	0.236	0.257	-8.9	93	0.00	7.46
31		Bromochloromethane	0.130	0.126	3.1	86	0.00	7.61
32		Cyclohexane	0.615	0.562	8.6	80	0.00	7.65
33	C	Chloroform	0.478	0.454	5.0	88	0.00	7.77
			Amount	Calc.	%Drift			
34		Ethyl acetate	200.000	210.613	-5.3	94	0.00	8.00
			AvgRF	CCRF	%Dev			
35		Tetrahydrofuran	0.174	0.196	-12.6	95	0.00	8.04
36	S	Dibromofluoromethane	0.264	0.263	0.4	89	0.00	8.09
37		Carbon Tetrachloride	0.288	0.322	-11.8	99	0.00	8.02
38		1,1,1-Trichloroethane	0.385	0.404	-4.9	92	0.00	8.13
			Amount	Calc.	%Drift			
39		2-Butanone	200.000	217.247	-8.6	96	0.00	8.31
			AvgRF	CCRF	%Dev			
40		1,1-Dichloropropene	0.341	0.348	-2.1	89	0.00	8.37
			Amount	Calc.	%Drift			
41		tert-Butyl formate	400.000	607.434	-51.9#	151	0.00	8.57
			AvgRF	CCRF	%Dev			
42		Propionitrile	0.044	0.053	-20.5	99	0.00	8.79
43		Methacrylonitrile	0.171	0.204	-19.3	103	0.00	8.84
44		Benzene	1.018	1.025	-0.7	92	0.00	8.79
45		TAME	0.555	0.601	-8.3	92	0.00	9.03
46	S	1,2-Dichloroethane-d4	0.357	0.377	-5.6	96	0.00	9.00
47		1,2-Dichloroethane	0.440	0.463	-5.2	96	0.00	9.10
48		Trichloroethene	0.269	0.279	-3.7	93	0.00	9.66
49		Methylcyclohexane	0.440	0.426	3.2	85	0.00	9.65
50		Dibromomethane	0.166	0.178	-7.2	94	0.00	10.15
51	C	1,2-Dichloropropane	0.325	0.343	-5.5	94	0.00	10.25
52		Bromodichloromethane	0.323	0.355	-9.9	95	0.00	10.34
			Amount	Calc.	%Drift			
53		Methyl methacrylate	40.000	41.248	-3.1	92	0.00	10.52
			AvgRF	CCRF	%Dev			
54		2-Chloroethyl vinyl ether	0.192	0.222	-15.6	95	0.00	10.91
			Amount	Calc.	%Drift			
55		cis-1,3-Dichloropropene	40.000	42.945	-7.4	97	0.00	10.98
			AvgRF	CCRF	%Dev			
56	I	Chlorobenzene-d5	1.000	1.000	0.0	93	0.00	12.46
57	S	Toluene-d8	1.380	1.348	2.3	92	0.00	11.15
58	C	Toluene	1.544	1.520	1.6	94	0.00	11.20
			Amount	Calc.	%Drift			
59		2-Nitropropane	200.000	236.540	-18.3	111	0.00	11.38

Continuing Calibration Summary

Job Number: FA56228 **Sample:** VI1694-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56622.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			AvgRF	CCRF	%Dev			
60		4-Methyl-2-pentanone	0.413	0.462	-11.9	102	0.00	11.52
61		trans-1,3-Dichloropropene	0.030	0.031	-3.3	95	0.00	11.93
62		Tetrachloroethene	0.398	0.404	-1.5	88	0.00	11.55
			Amount	Calc.	%Drift			
63		Ethyl methacrylate	40.000	38.318	4.2	88	0.00	11.70
			AvgRF	CCRF	%Dev			
64		1,1,2-Trichloroethane	0.290	0.307	-5.9	99	0.00	11.70
65		Dibromochloromethane	0.344	0.373	-8.4	95	0.00	11.87
66		1,3-Dichloropropane	0.583	0.598	-2.6	95	0.00	11.93
67		1,2-Dibromoethane	0.319	0.336	-5.3	94	0.00	12.05
68		2-hexanone	0.342	0.403	-17.8	104	0.00	12.21
69		1-Chlorohexane	0.530	0.516	2.6	89	0.00	12.44
70	C	Ethylbenzene	1.766	1.767	-0.1	95	0.00	12.48
71	P	Chlorobenzene	1.005	0.986	1.9	95	0.00	12.47
72		1,1,1,2-Tetrachloroethane	0.310	0.340	-9.7	100	0.00	12.52
73		m,p-Xylene	1.345	1.372	-2.0	94	0.00	12.59
74		o-Xylene	1.349	1.380	-2.3	93	0.00	12.91
75		Styrene	0.948	0.996	-5.1	92	0.00	12.95
			Amount	Calc.	%Drift			
76	P	Bromoform	40.000	42.205	-5.5	98	0.00	12.99
			AvgRF	CCRF	%Dev			
77		Isopropylbenzene	1.487	1.527	-2.7	93	0.00	13.14
78	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	95	0.00	14.13
79	S	4-Bromofluorobenzene	0.790	0.767	2.9	91	0.00	13.35
80		cis-1,4-Dichloro-2-butene	0.308	0.350	-13.6	100	0.00	13.38
81		n-Propylbenzene	4.003	4.098	-2.4	95	0.00	13.43
82		Bromobenzene	0.776	0.789	-1.7	95	0.00	13.44
83	P	1,1,2,2-Tetrachloroethane	0.874	0.931	-6.5	100	0.00	13.47
84		1,3,5-Trimethylbenzene	2.523	2.634	-4.4	95	0.00	13.55
85		2-Chlorotoluene	2.432	2.470	-1.6	94	0.00	13.67
86		trans-1,4-Dichloro-2-Bute	0.285	0.339	-18.9	103	0.00	13.60
87		1,2,3-Trichloropropane	0.235	0.254	-8.1	100	0.00	13.58
88		Cyclohexanone	0.037	0.046	-24.3	103	0.00	13.62
89		4-Chlorotoluene	2.432	2.470	-1.6	94	0.00	13.67
90		tert-Butylbenzene	1.561	1.601	-2.6	94	0.00	13.79
91		a-Methyl styrene		----------NA----------				
92		1,2,4-Trimethylbenzene	2.609	2.711	-3.9	94	0.00	13.83
			Amount	Calc.	%Drift			
93		Pentachloroethane	40.000	40.674	-1.7	106	0.00	13.82
			AvgRF	CCRF	%Dev			
94		sec-Butylbenzene	3.221	3.306	-2.6	94	0.00	13.91
95		4-Isopropyltoluene	2.611	2.700	-3.4	93	0.00	13.99
96		1,3-Dichlorobenzene	1.440	1.446	-0.4	94	0.00	14.08
97		1,4-Dichlorobenzene	1.567	1.537	1.9	96	0.00	14.14
98		n-Butylbenzene	1.503	1.599	-6.4	96	0.00	14.29
			Amount	Calc.	%Drift			
99		Benzyl Chloride	40.000	47.423	-18.6	119	0.00	14.30
			AvgRF	CCRF	%Dev			
100		1,2-Dichlorobenzene	1.402	1.415	-0.9	94	0.00	14.43

Continuing Calibration Summary

Job Number: FA56228 **Sample:** VI1694-ECC1683
Account: EAENYS EA Engineering **Lab FileID:** I56622.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

			Amount	Calc.	%Drift			
101		1,2-Dibromo-3-Chloropropa	40.000	43.436	-8.6	102	0.00	14.96
			AvgRF	CCRF	%Dev			
102		Hexachlorobutadiene	0.466	0.455	2.4	90	0.00	15.38
103		1,2,4-Trichlorobenzene	0.931	0.934	-0.3	90	0.00	15.41
			Amount	Calc.	%Drift			
104		Naphthalene	40.000	39.994	0.0	93	0.00	15.63
			AvgRF	CCRF	%Dev			
105		1,2,3-Trichlorobenzene	0.873	0.885	-1.4	92	0.00	15.76
106	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	98	0.00	5.62
			Amount	Calc.	%Drift			
107		Ethanol	800.000	747.495	6.6	90	0.00	4.22
108		Acrolein	200.000	148.132	25.9	73	0.00	4.71
			AvgRF	CCRF	%Dev			
109		Tert Butyl Alcohol	1.602	1.564	2.4	95	0.00	5.74
110		Isobutyl alcohol	0.662	0.731	-10.4	102	0.00	9.21
			Amount	Calc.	%Drift			
111		Tert Amyl Alcohol	400.000	437.233	-9.3	107	0.00	9.34
112		1,4-Dioxane	800.000	766.204	4.2	94	0.00	10.55
			AvgRF	CCRF	%Dev			
113		3,3-Dimethyl-1-butanol	1.705	2.043	-19.8	107	0.00	12.20

(#) = Out of Range SPCC's out = 0 CCC's out = 0
I56318.D I-July2518.M Thu Aug 09 11:01:57 2018

MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56599.D
Acq On : 8 Aug 2018 10:11 am
Operator : ANAJ
Sample : FA56228-1 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 08 10:34:51 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

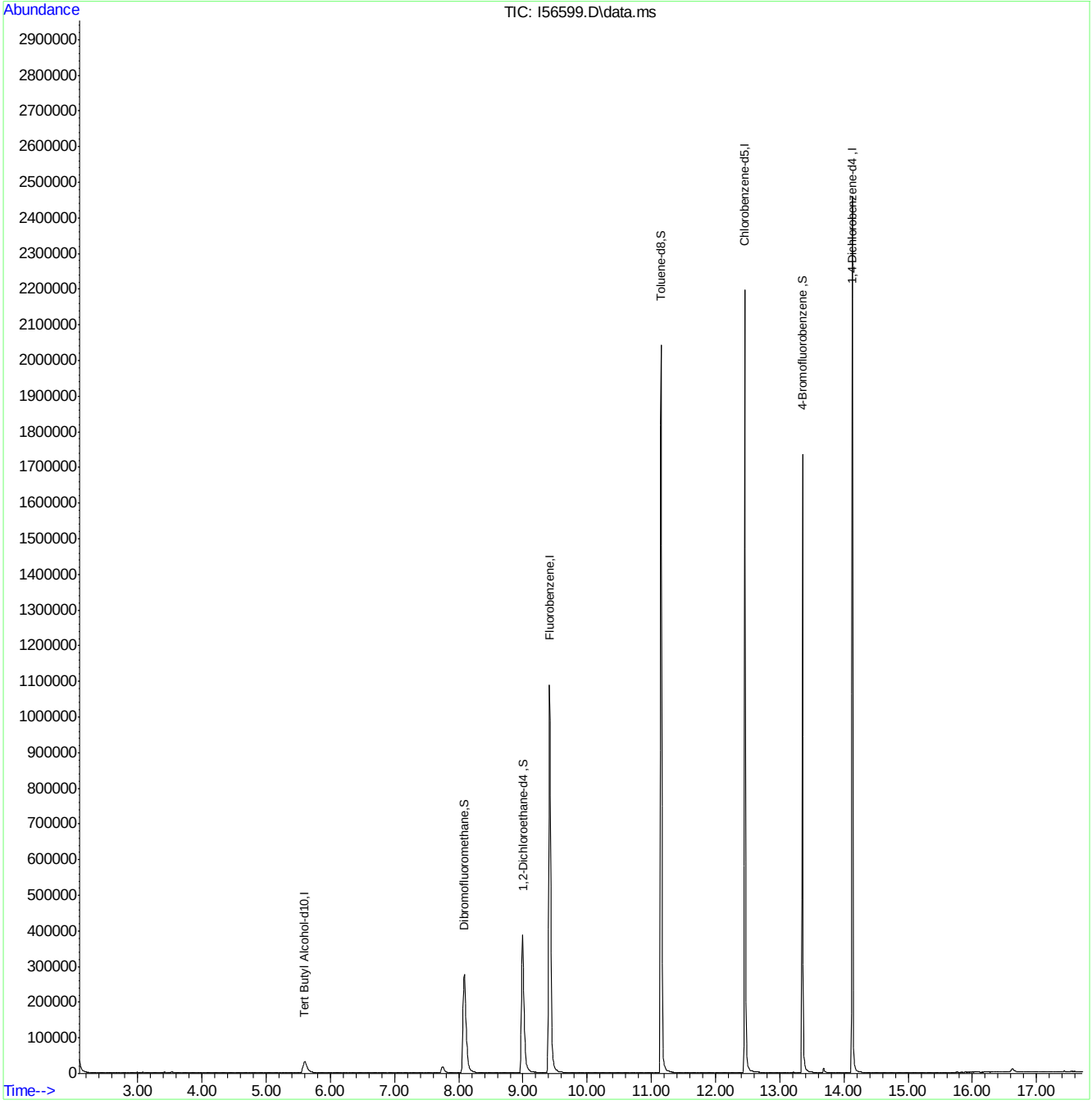
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.415	96	1107608	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	771175	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	388977	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	65882	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	288661	49.36	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.72%			
46) 1,2-Dichloroethane-d4	8.994	65	403079	50.97	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.94%			
57) Toluene-d8	11.152	98	1055756	49.61	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.22%			
79) 4-Bromofluorobenzene	13.353	174	302817	49.29	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.58%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56599.D
Acq On : 8 Aug 2018 10:11 am
Operator : ANAJ
Sample : FA56228-1 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 08 10:34:51 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56600.D
Acq On : 8 Aug 2018 10:35 am
Operator : ANAJ
Sample : FA56228-2 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 08 10:54:22 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

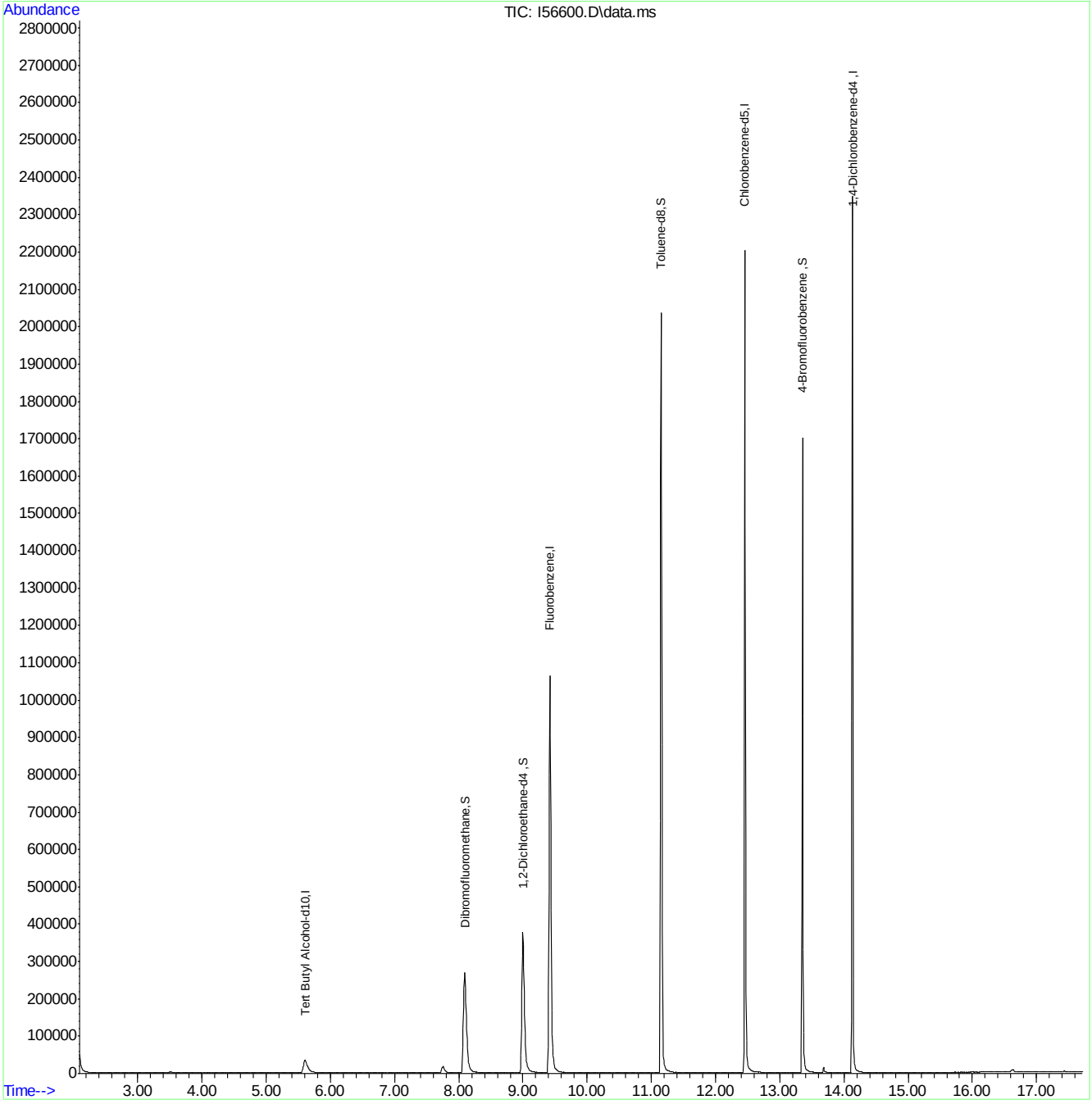
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1069763	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	756761	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	384341	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	70103	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	282991	50.10	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.20%			
46) 1,2-Dichloroethane-d4	8.994	65	394902	51.71	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 103.42%			
57) Toluene-d8	11.152	98	1027859	49.22	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.44%			
79) 4-Bromofluorobenzene	13.353	174	295906	48.75	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.50%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56600.D
Acq On : 8 Aug 2018 10:35 am
Operator : ANAJ
Sample : FA56228-2 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 08 10:54:22 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56601.D
Acq On : 8 Aug 2018 10:59 am
Operator : ANAJ
Sample : FA56228-3 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 08 11:20:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

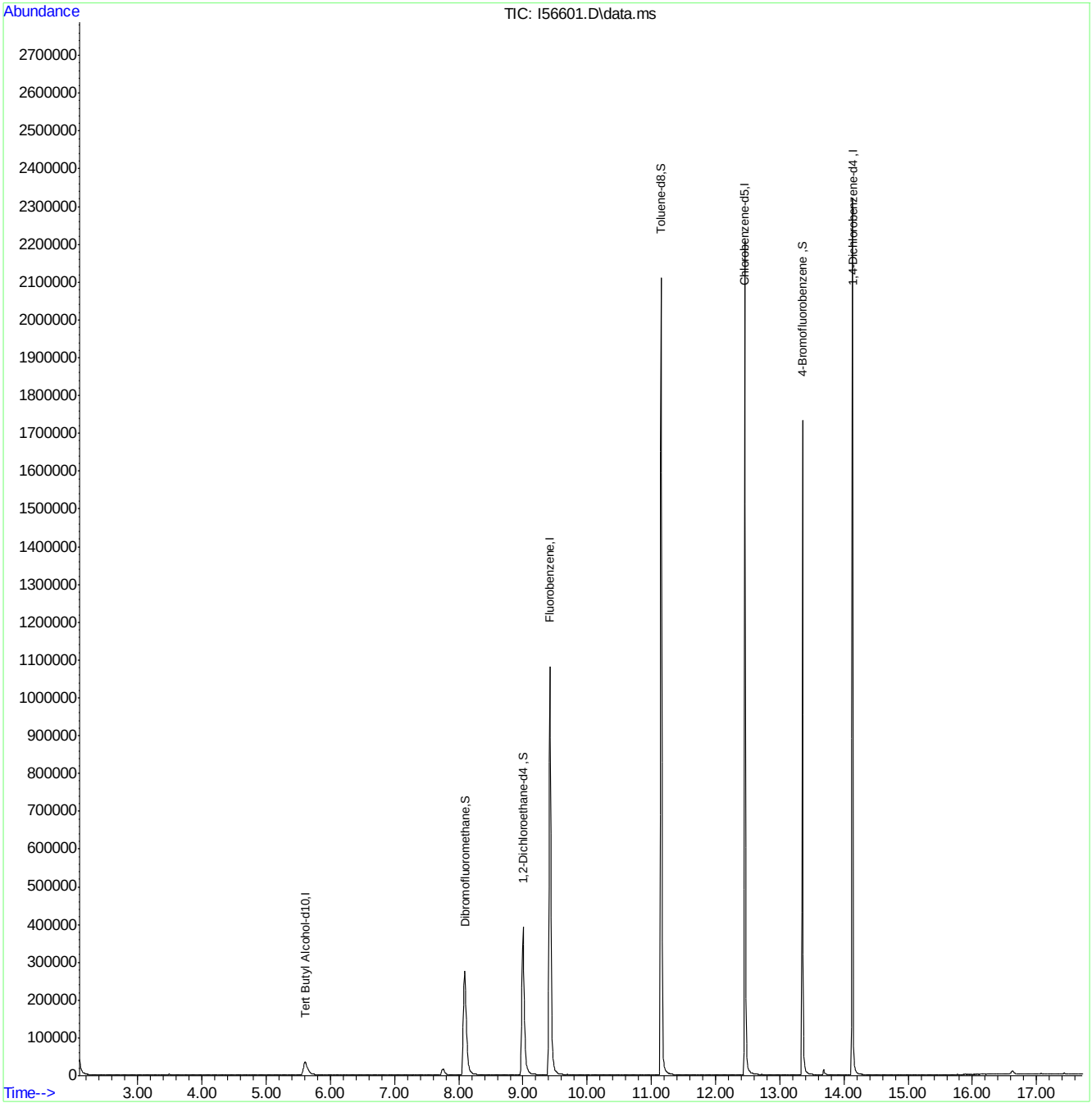
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1063976	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	759560	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	382412	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	71152	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	280455	49.93	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.86%			
46) 1,2-Dichloroethane-d4	8.994	65	394960	52.00	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 104.00%			
57) Toluene-d8	11.152	98	1032987	49.28	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.56%			
79) 4-Bromofluorobenzene	13.353	174	294253	48.72	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.44%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56601.D
Acq On : 8 Aug 2018 10:59 am
Operator : ANAJ
Sample : FA56228-3 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 08 11:20:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56602.D
Acq On : 8 Aug 2018 11:23 am
Operator : ANAJ
Sample : FA56228-4 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 08 11:47:05 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

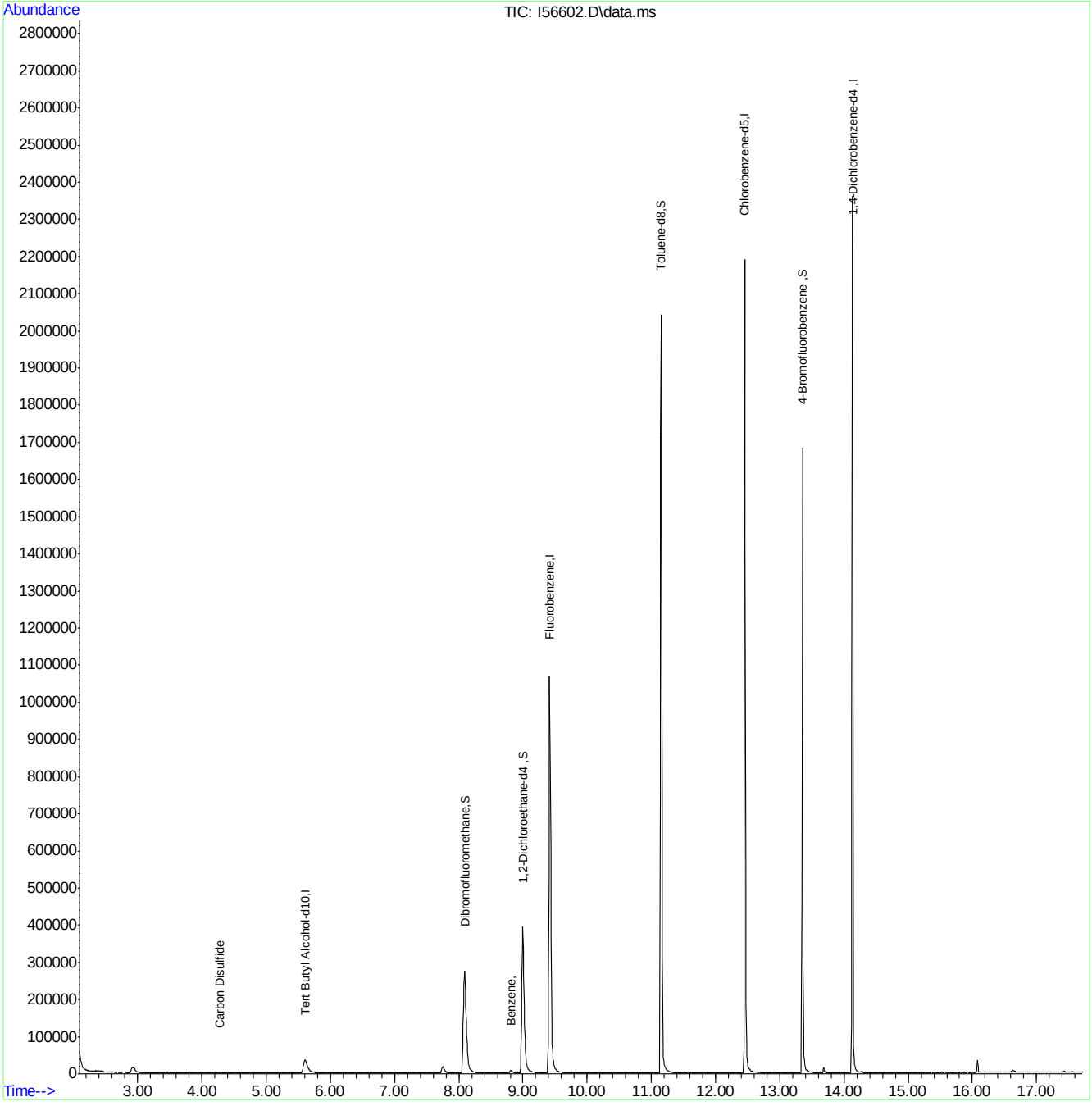
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1044919	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	744625	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	380455	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.605	65	72621	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	276207	50.07	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.14%			
46) 1,2-Dichloroethane-d4	8.994	65	389717	52.24	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 104.48%			
57) Toluene-d8	11.152	98	1013030	49.30	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.60%			
79) 4-Bromofluorobenzene	13.353	174	289613	48.20	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.40%			
Target Compounds						Qvalue
13) Carbon Disulfide	4.276	76	5275	0.34	ug/L	78
44) Benzene	8.811	78	11892	0.56	ug/L	92

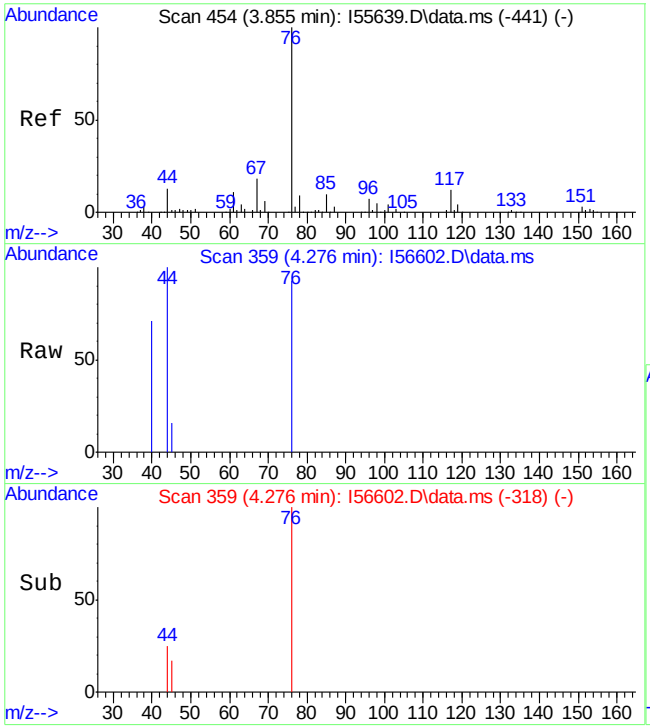
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56602.D
Acq On : 8 Aug 2018 11:23 am
Operator : ANAJ
Sample : FA56228-4 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 08 11:47:05 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

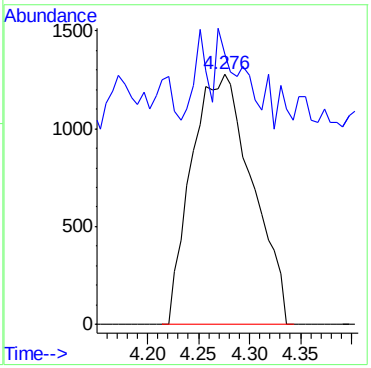


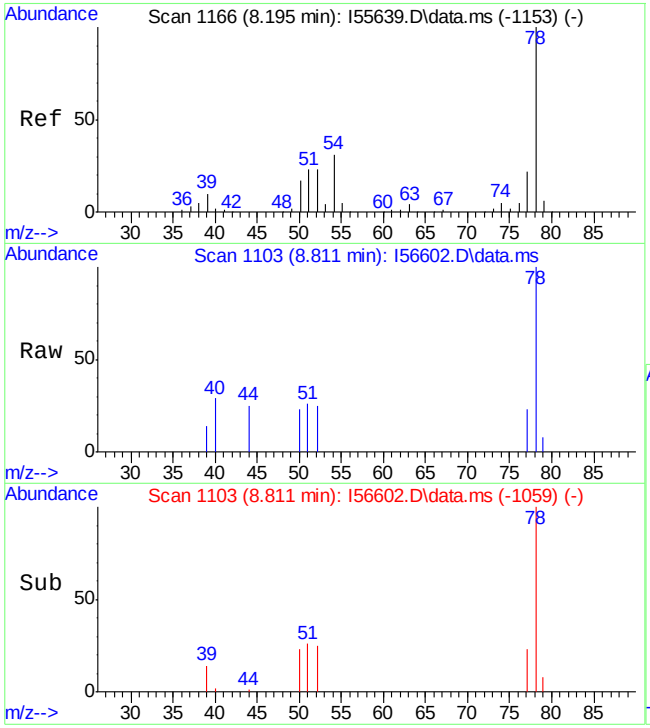


#13
Carbon Disulfide
Concen: 0.34 ug/L
RT: 4.276 min Scan# 359
Delta R.T. 0.000 min
Lab File: I56602.D
Acq: 8 Aug 2018 11:23 am

Tgt Ion: 76 Resp: 5275

Ion	Ratio	Lower	Upper
76	100		
44	26.5	0.0	47.0

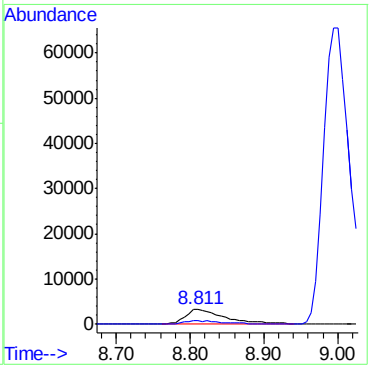




#44
Benzene
Concen: 0.56 ug/L
RT: 8.811 min Scan# 1103
Delta R.T. 0.019 min
Lab File: I56602.D
Acq: 8 Aug 2018 11:23 am

Tgt Ion: 78 Resp: 11892

Ion	Ratio	Lower	Upper
78	100		
51	25.7	0.1	60.1



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56603.D
Acq On : 8 Aug 2018 11:46 am
Operator : ANAJ
Sample : FA56228-5 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 08 12:21:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

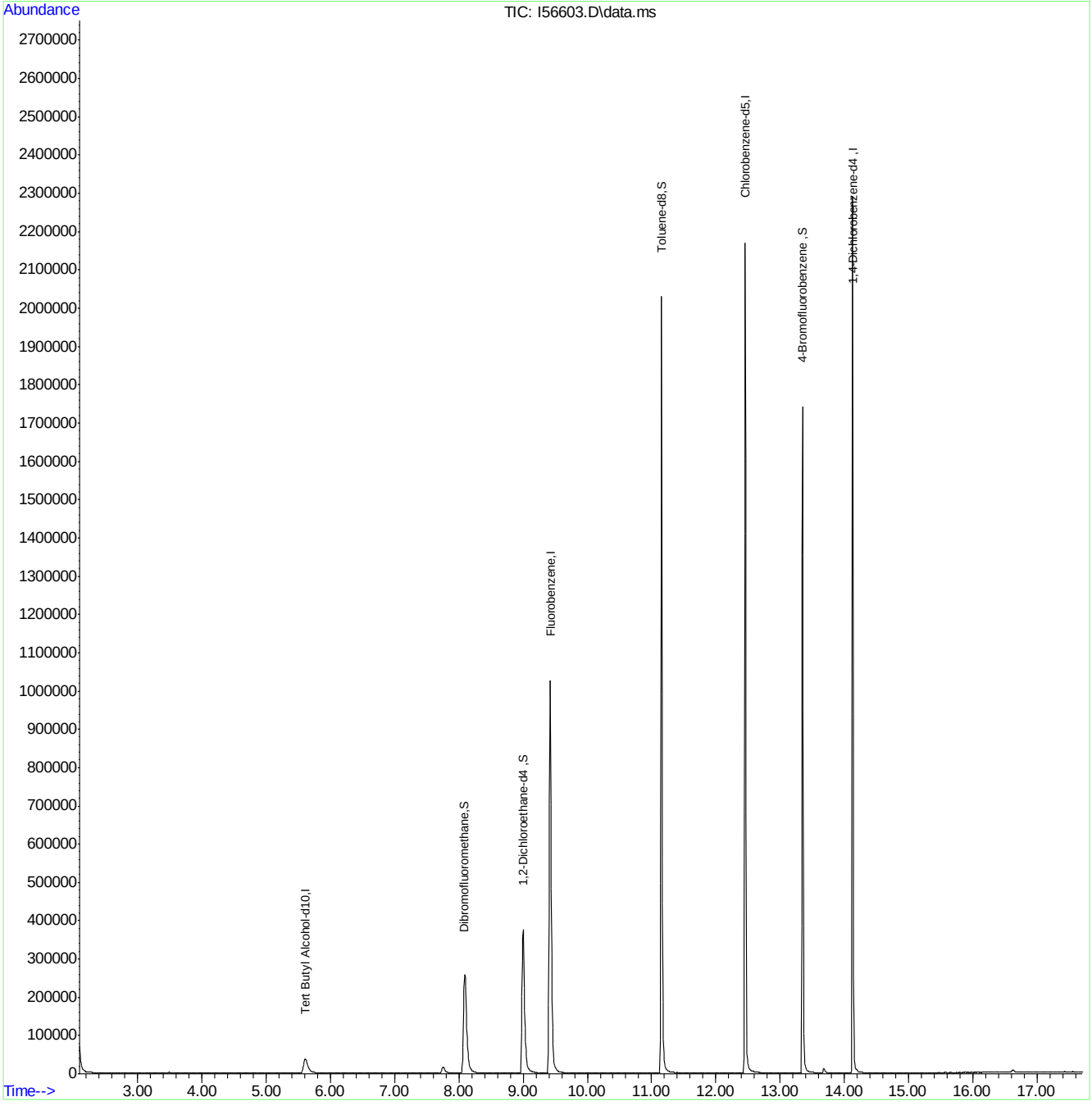
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1044846	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	740524	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	376989	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.605	65	75568	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	278511	50.49	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 100.98%			
46) 1,2-Dichloroethane-d4	9.000	65	393523	52.76	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 105.52%			
57) Toluene-d8	11.152	98	1013065	49.57	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.14%			
79) 4-Bromofluorobenzene	13.353	174	287289	48.25	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.50%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56603.D
Acq On : 8 Aug 2018 11:46 am
Operator : ANAJ
Sample : FA56228-5 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 08 12:21:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56604.D
Acq On : 8 Aug 2018 12:10 pm
Operator : ANAJ
Sample : FA56228-6 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 08 12:26:45 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

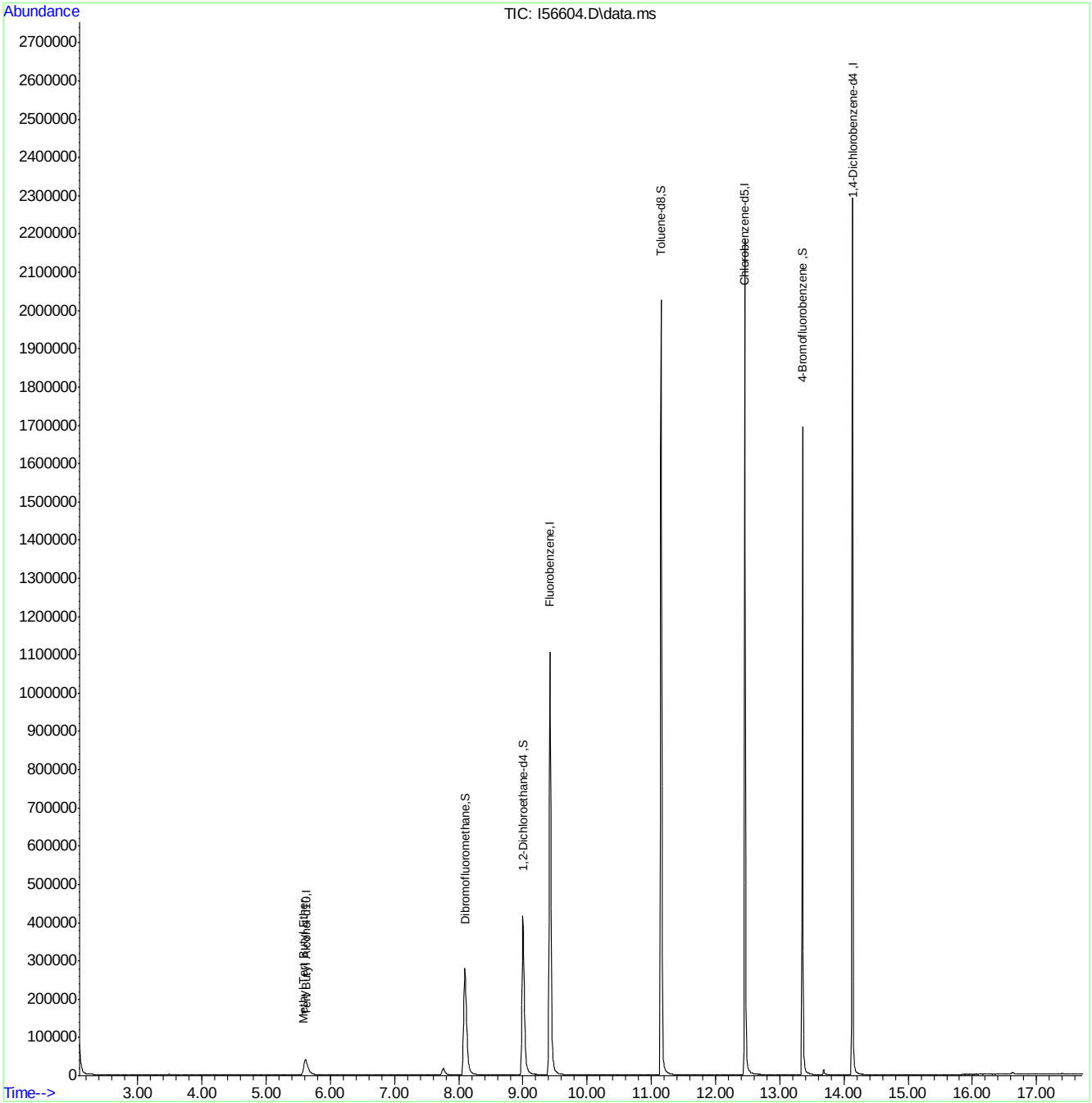
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1037933	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	740619	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	378297	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.617	65	78583	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	279141	50.94	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.88%			
46) 1,2-Dichloroethane-d4	9.000	65	395287	53.35	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 106.70%			
57) Toluene-d8	11.152	98	978742	47.89	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 95.78%			
79) 4-Bromofluorobenzene	13.353	174	286784	48.00	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.00%			
Target Compounds						Qvalue
21) Methyl Tert Butyl Ether	5.580	73	3235	0.27	ug/L	75

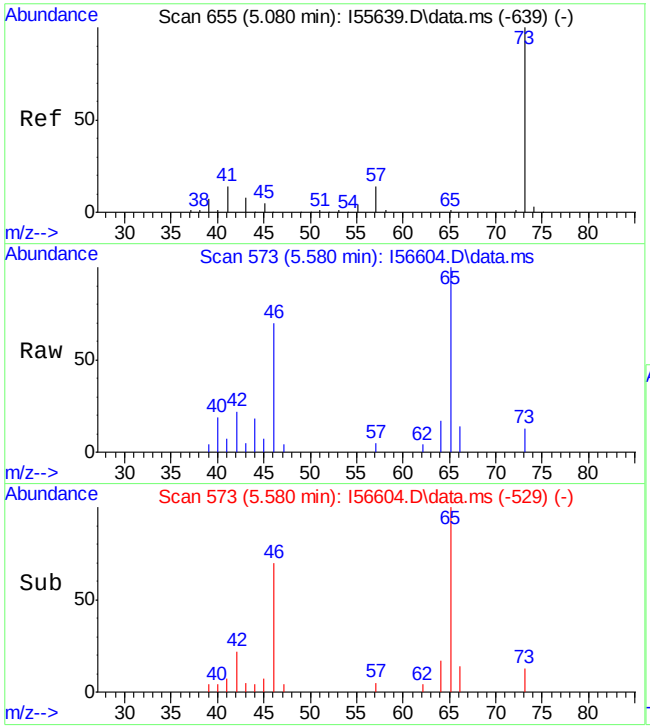
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56604.D
Acq On : 8 Aug 2018 12:10 pm
Operator : ANAJ
Sample : FA56228-6 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 08 12:26:45 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

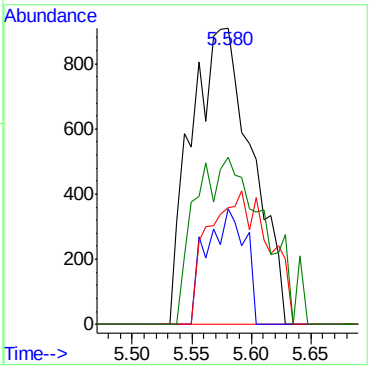




#21
Methyl Tert Butyl Ether
Concen: 0.27 ug/L
RT: 5.580 min Scan# 573
Delta R.T. 0.019 min
Lab File: I56604.D
Acq: 8 Aug 2018 12:10 pm

Tgt Ion: 73 Resp: 3235

Ion	Ratio	Lower	Upper
73	100		
57	38.9	5.5	65.5
43	39.5	0.0	58.0
41	56.5	0.0	59.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56605.D
Acq On : 8 Aug 2018 12:34 pm
Operator : ANAJ
Sample : FA56228-7 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 08 13:06:13 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

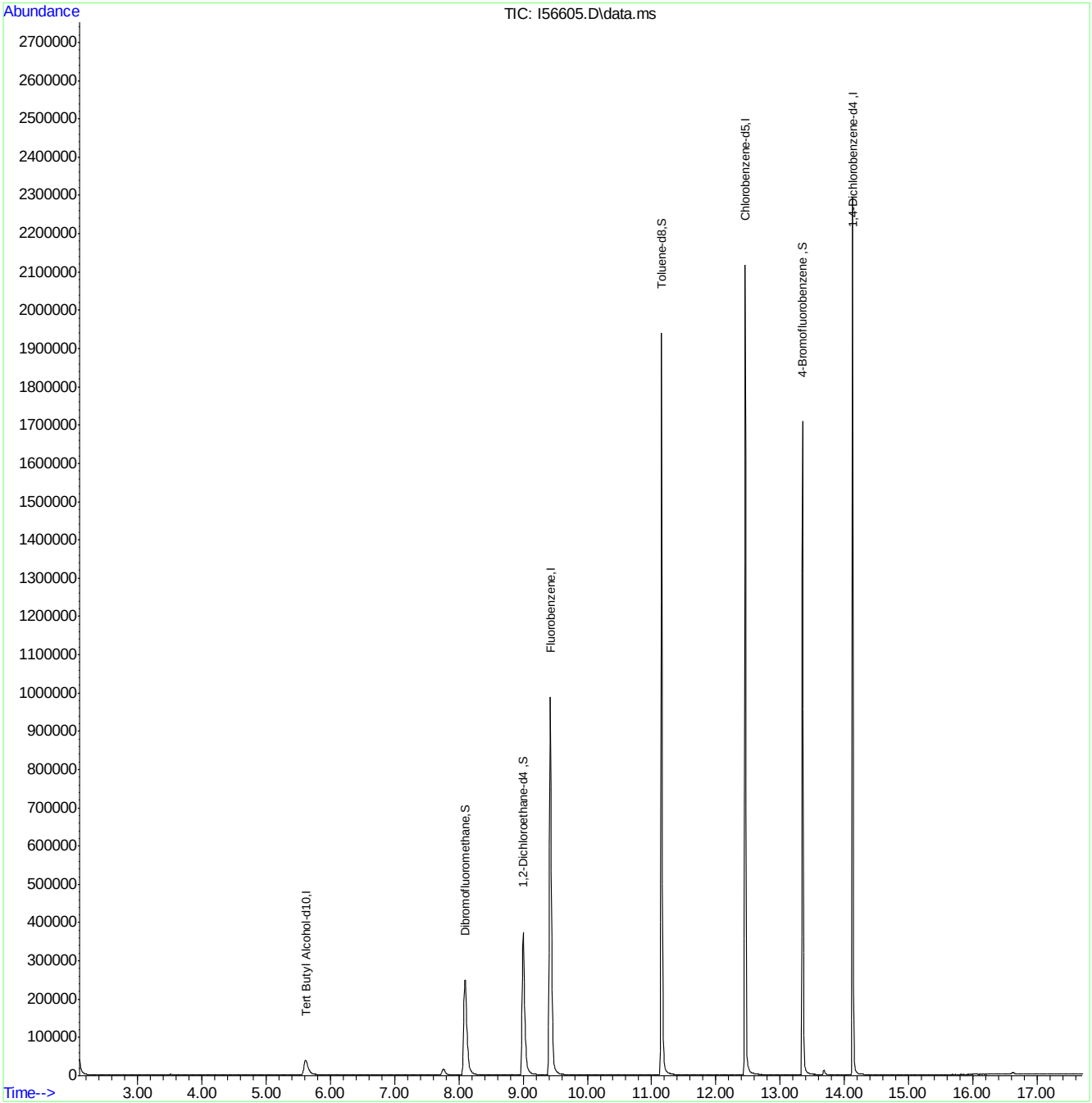
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1015484	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	729014	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	370901	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.617	65	74902	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.098	113	273142	50.95	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.90%			
46) 1,2-Dichloroethane-d4	9.000	65	380527	52.49	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 104.98%			
57) Toluene-d8	11.152	98	990710	49.25	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.50%			
79) 4-Bromofluorobenzene	13.353	174	283156	48.34	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.68%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56605.D
Acq On : 8 Aug 2018 12:34 pm
Operator : ANAJ
Sample : FA56228-7 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 08 13:06:13 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56606.D
Acq On : 8 Aug 2018 12:58 pm
Operator : ANAJ
Sample : FA56228-8 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 08 13:14:30 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

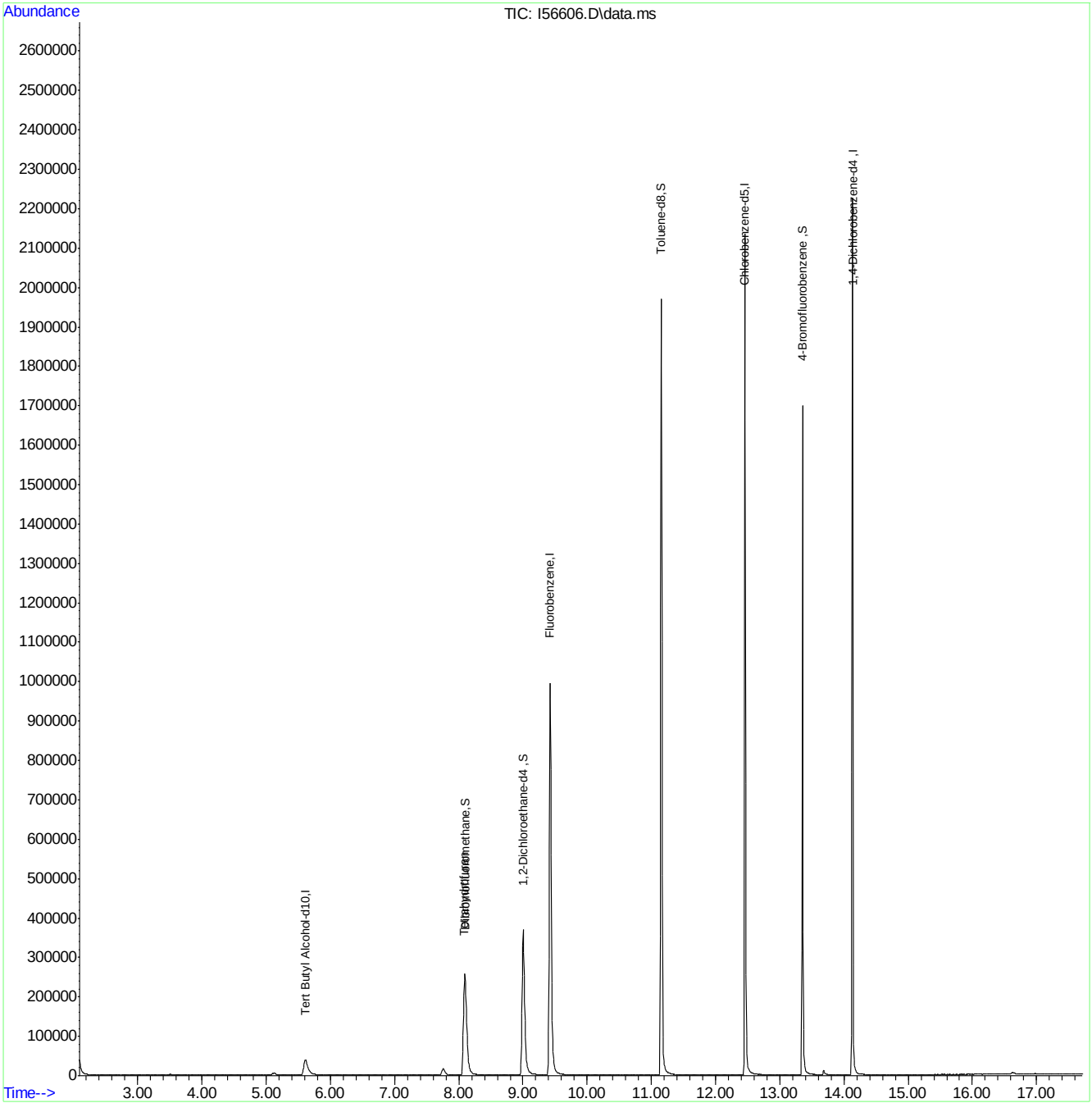
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1019456	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	721059	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	370811	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	72716	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.098	113	273614	50.83	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.66%			
46) 1,2-Dichloroethane-d4	9.000	65	388602	53.39	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 106.78%			
57) Toluene-d8	11.152	98	992014	49.85	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.70%			
79) 4-Bromofluorobenzene	13.353	174	277970	47.46	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.92%			
Target Compounds						Qvalue
35) Tetrahydrofuran	8.086	42	7423	2.10	ug/L	# 68

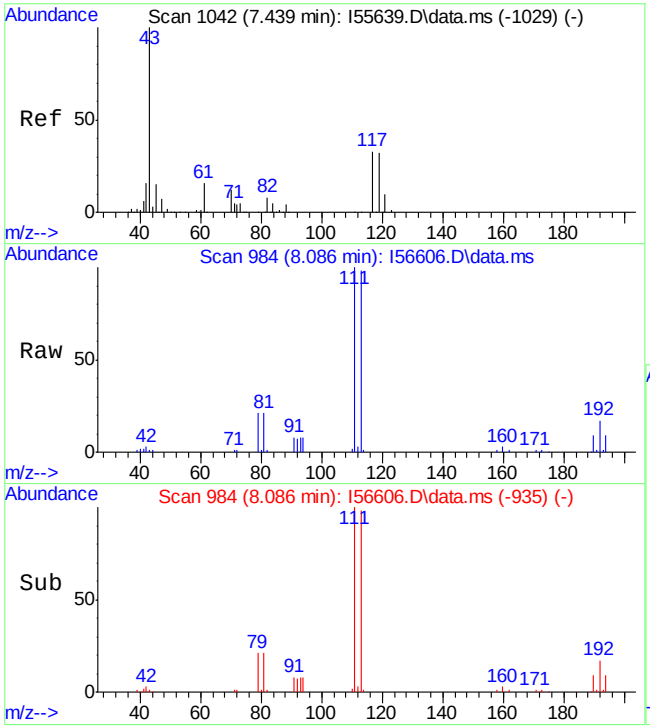
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56606.D
Acq On : 8 Aug 2018 12:58 pm
Operator : ANAJ
Sample : FA56228-8 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 08 13:14:30 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

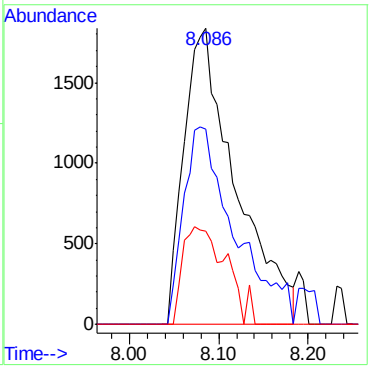




#35
Tetrahydrofuran
Concen: 2.10 ug/L
RT: 8.086 min Scan# 984
Delta R.T. 0.049 min
Lab File: I56606.D
Acq: 8 Aug 2018 12:58 pm

Tgt Ion: 42 Resp: 7423

Ion	Ratio	Lower	Upper
42	100		
41	66.1	20.4	60.4#
72	31.5	3.5	43.5



7.1.8

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56607.D
Acq On : 8 Aug 2018 1:22 pm
Operator : ANAJ
Sample : FA56228-9 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 08 13:39:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1010958	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	724524	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	365010	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	78310	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	272907	51.13	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 102.26%			
46) 1,2-Dichloroethane-d4	9.000	65	385947	53.47	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 106.94%			
57) Toluene-d8	11.152	98	987102	49.37	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.74%			
79) 4-Bromofluorobenzene	13.353	174	278867	48.37	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.74%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

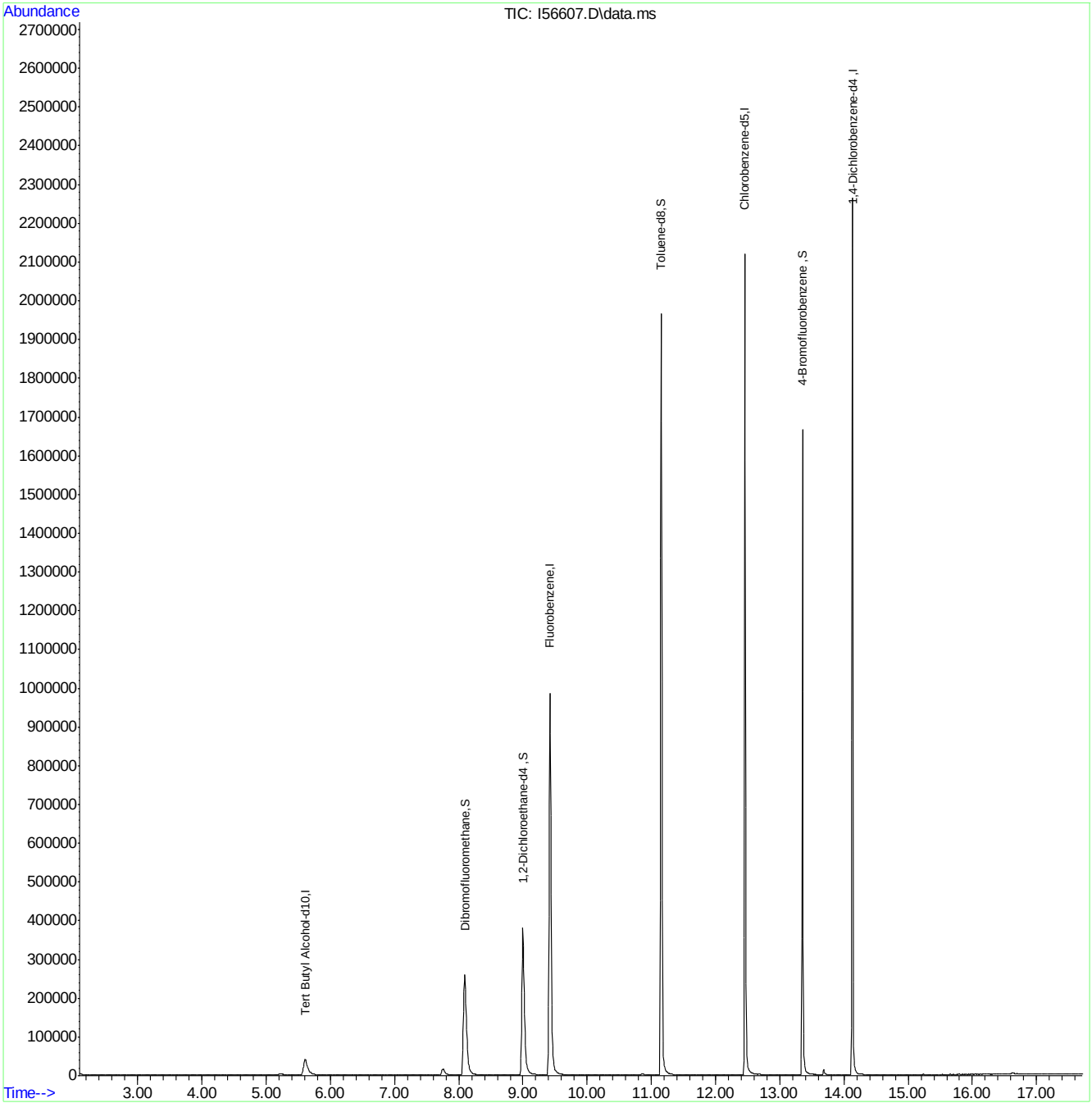
7.1.9

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56607.D
Acq On : 8 Aug 2018 1:22 pm
Operator : ANAJ
Sample : FA56228-9 MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 08 13:39:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56598.D
Acq On : 8 Aug 2018 9:37 am
Operator : ANAJ
Sample : MB MA Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 08 10:05:40 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

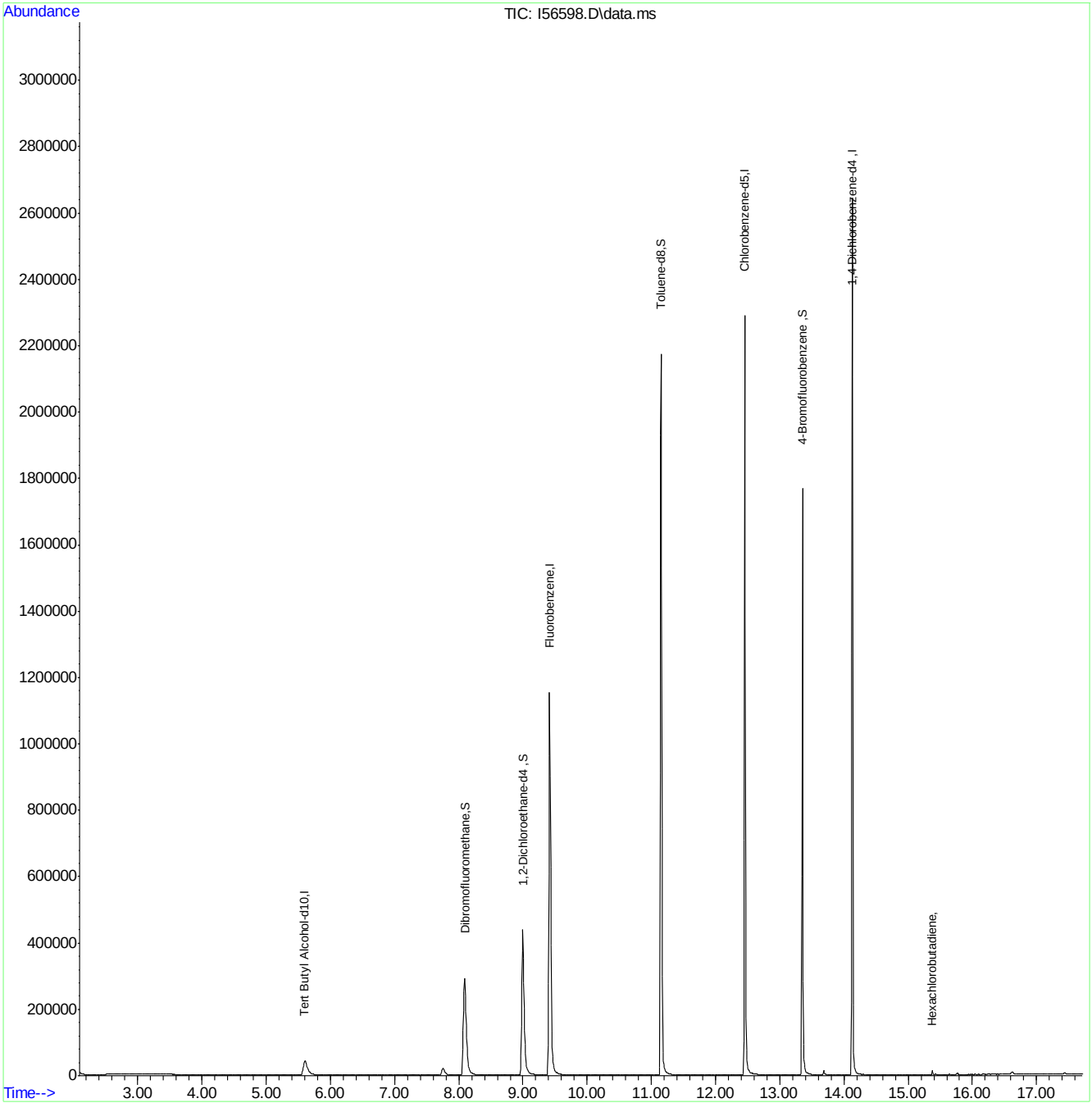
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.415	96	1128546	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	804908	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	408061	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	90318	250.00	ug/L	-0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	294951	49.50	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.00%			
46) 1,2-Dichloroethane-d4	8.994	65	418980	52.00	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 104.00%			
57) Toluene-d8	11.152	98	1086721	48.93	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.86%			
79) 4-Bromofluorobenzene	13.353	174	316897	49.17	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.34%			
Target Compounds						Qvalue
102) Hexachlorobutadiene	15.377	225	1564	0.41	ug/L	90

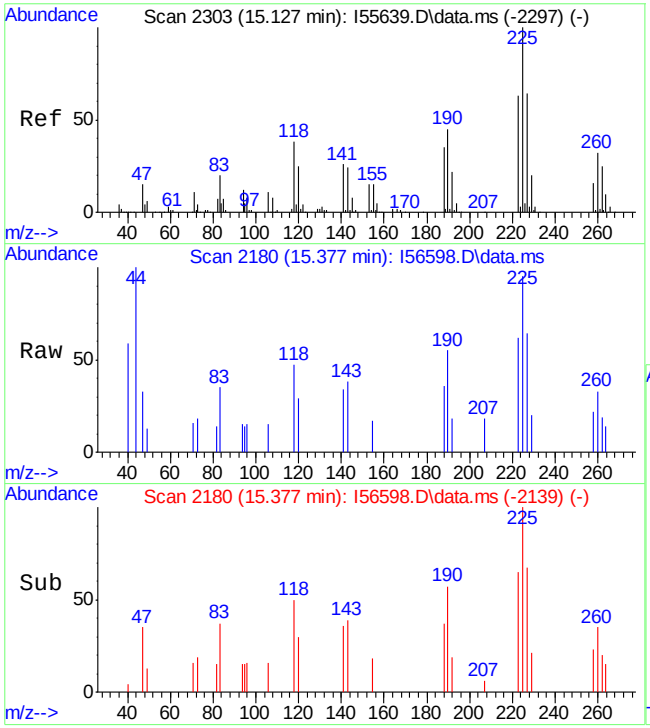
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56598.D
Acq On : 8 Aug 2018 9:37 am
Operator : ANAJ
Sample : MB MA Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 08 10:05:40 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

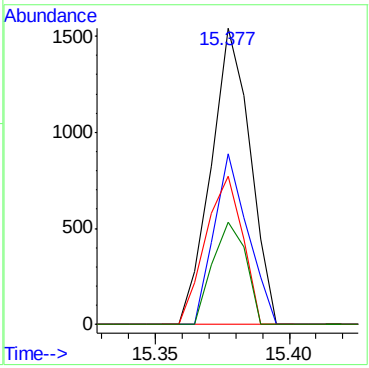




#102
Hexachlorobutadiene
Concen: 0.41 ug/L
RT: 15.377 min Scan# 2180
Delta R.T. 0.000 min
Lab File: I56598.D
Acq: 8 Aug 2018 9:37 am

Tgt Ion:225 Resp: 1564

Ion	Ratio	Lower	Upper
225	100		
190	57.5	18.6	78.6
118	50.0	15.2	75.2
260	34.7	0.0	59.9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56597.D
Acq On : 8 Aug 2018 9:13 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 08 09:29:51 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.415	96	1159021	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	826881	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	422069	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.611	65	105695	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	311778	50.95	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.90%			
46) 1,2-Dichloroethane-d4	8.994	65	422237	51.03	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.06%			
57) Toluene-d8	11.152	98	1128468	49.45	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 98.90%			
79) 4-Bromofluorobenzene	13.353	174	326768	49.02	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.04%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.252	85	220379	33.39	ug/L	100
3) Chloromethane	2.526	50	248511	27.42	ug/L	97
4) 1,3-Butadiene	2.642	39	148345	30.35	ug/L	99
5) Vinyl Chloride	2.660	62	216387	28.39	ug/L	99
6) Bromomethane	3.105	94	108443	27.17	ug/L	97
7) Chloroethane	3.264	64	62540	27.34	ug/L	98
8) Trichlorofluoromethane	3.507	101	254663	29.08	ug/L	100
9) Ethyl Ether	3.922	59	158018	23.40	ug/L	98
10) 1,2-Dichlorotrifluoroe...	4.233	67	207387	25.57	ug/L	98
11) 1,1-Dichloroethene	4.215	61	264834	24.43	ug/L	98
12) Freon 113	4.318	101	132199	21.83	ug/L	97
13) Carbon Disulfide	4.263	76	420686	24.48	ug/L	98
14) Iodomethane	4.422	142	202966	21.85	ug/L	99
15) Allyl chloride	4.928	41	268404	28.79	ug/L	98
16) Methylene Chloride	5.099	49	274408	25.57	ug/L	96
17) Acetone	5.166	43	237904	123.63	ug/L	100
18) Methyl acetate	5.367	43	560063	119.14	ug/L	98
19) trans-1,2-Dichloroethene	5.355	61	264700	24.77	ug/L	99
20) Hexane	5.495	56	195128	23.81	ug/L	95
21) Methyl Tert Butyl Ether	5.550	73	318560	23.97	ug/L	93
22) Acetonitrile	5.885	41	189476	286.05	ug/L	98
23) Di-isopropyl ether	6.178	45	602953	25.25	ug/L	99
24) Chloroprene	6.306	53	302572	27.54	ug/L	99
25) 1,1-Dichloroethane	6.330	63	335847	26.09	ug/L	97
26) Acrylonitrile	6.397	53	322202	116.82	ug/L	98
27) ETBE	6.793	59	520773	27.05	ug/L	99
28) Vinyl acetate	6.775	43	1774973	115.76	ug/L	100
29) cis-1,2-Dichloroethene	7.269	96	151835	24.65	ug/L	98
30) 2,2-Dichloropropane	7.458	77	179042	32.71	ug/L	100
31) Bromochloromethane	7.610	128	74455	24.80	ug/L	94
32) Cyclohexane	7.647	56	352608	24.71	ug/L	98
33) Chloroform	7.763	83	281554	25.41	ug/L	97
34) Ethyl acetate	8.000	43	781396	117.26	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56597.D
Acq On : 8 Aug 2018 9:13 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 08 09:29:51 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.037	42	102030	25.34	ug/L		97
37) Carbon Tetrachloride	8.013	117	193229	28.98	ug/L		97
38) 1,1,1-Trichloroethane	8.128	97	233059	26.13	ug/L		98
39) 2-Butanone	8.311	43	354004	122.61	ug/L		97
40) 1,1-Dichloropropene	8.360	75	200223	25.35	ug/L		97
41) tert-Butyl formate	8.573	59	834684	341.35	ug/L	#	74
42) Propionitrile	8.793	54	265390	261.92	ug/L		93
43) Methacrylonitrile	8.836	41	1069380	269.46	ug/L		99
44) Benzene	8.793	78	580159	24.58	ug/L		97
45) TAME	9.025	73	326891	25.42	ug/L		98
47) 1,2-Dichloroethane	9.098	62	248882	24.42	ug/L		98
48) Trichloroethene	9.659	95	158739	25.47	ug/L		99
49) Methylcyclohexane	9.646	83	259382	25.43	ug/L		95
50) Dibromomethane	10.146	93	96415	25.02	ug/L		97
51) 1,2-Dichloropropane	10.250	63	196528	26.06	ug/L		98
52) Bromodichloromethane	10.335	83	204155	27.28	ug/L		97
53) Methyl methacrylate	10.518	41	122866	22.99	ug/L		97
54) 2-Chloroethyl vinyl ether	10.914	63	638782	143.58	ug/L		96
55) cis-1,3-Dichloropropene	10.975	75	247205	26.29	ug/L		98
58) Toluene	11.201	91	632013	24.75	ug/L		99
59) 2-Nitropropane	11.384	41	178549	129.91	ug/L		98
60) 4-Methyl-2-pentanone	11.524	43	862116	126.27	ug/L		97
61) trans-1,3-Dichloropropene	11.926	75	13393	26.73	ug/L		90
62) Tetrachloroethene	11.555	166	170781	25.94	ug/L		98
63) Ethyl methacrylate	11.701	69	166100	22.81	ug/L		94
64) 1,1,2-Trichloroethane	11.701	83	126234	26.34	ug/L		96
65) Dibromochloromethane	11.859	129	156965	27.62	ug/L		100
66) 1,3-Dichloropropane	11.926	76	234017	24.28	ug/L		94
67) 1,2-Dibromoethane	12.055	107	134047	25.39	ug/L		98
68) 2-hexanone	12.207	43	717108	126.71	ug/L		93
69) 1-Chlorohexane	12.439	91	227510	25.96	ug/L		94
70) Ethylbenzene	12.481	91	743834	25.46	ug/L		100
71) Chlorobenzene	12.469	112	413450	24.88	ug/L		98
72) 1,1,1,2-Tetrachloroethane	12.518	131	142633	27.84	ug/L		99
73) m,p-Xylene	12.591	91	1163196	52.28	ug/L		98
74) o-Xylene	12.914	91	576229	25.83	ug/L		100
75) Styrene	12.951	104	415671	26.51	ug/L		98
76) Bromoform	12.987	173	93907	26.47	ug/L		98
77) Isopropylbenzene	13.134	105	681872	27.73	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.377	53	67756	26.09	ug/L		93
81) n-Propylbenzene	13.432	91	892051	26.40	ug/L		100
82) Bromobenzene	13.438	156	167647	25.61	ug/L		97
83) 1,1,2,2-Tetrachloroethane	13.475	83	195959	26.57	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	570438	26.79	ug/L		100
85) 2-Chlorotoluene	13.670	91	533578	25.99	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.597	53	65062	27.05	ug/L		97
87) 1,2,3-Trichloropropane	13.579	110	49776	25.06	ug/L		99
88) Cyclohexanone	13.621	55	31757	100.33	ug/L		98
89) 4-Chlorotoluene	13.670	91	533578	25.99	ug/L		99
90) tert-Butylbenzene	13.786	91	345623	26.23	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56597.D
Acq On : 8 Aug 2018 9:13 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 08 09:29:51 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

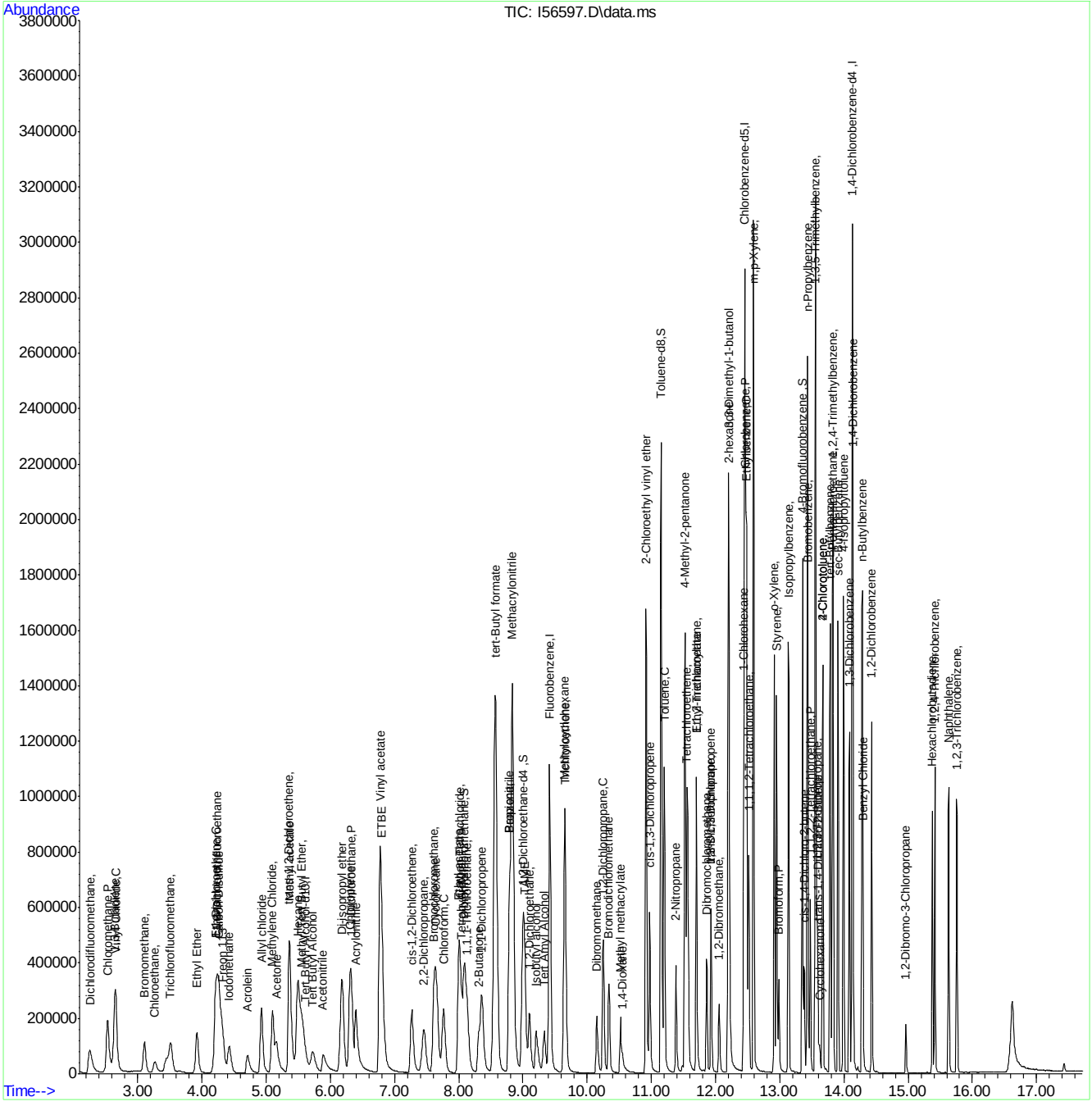
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.829	105	573380	26.04	ug/L		100
93) Pentachloroethane	13.822	167	86308	25.21	ug/L		98
94) sec-Butylbenzene	13.908	105	739036	27.18	ug/L		99
95) 4-Isopropyltoluene	13.993	119	603730	27.40	ug/L		99
96) 1,3-Dichlorobenzene	14.085	146	318701	26.22	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	331383	25.05	ug/L		99
98) n-Butylbenzene	14.280	92	366232	28.86	ug/L		92
99) Benzyl Chloride	14.298	126	53279	34.05	ug/L	#	86
100) 1,2-Dichlorobenzene	14.432	146	301856	25.50	ug/L		99
101) 1,2-Dibromo-3-Chloropr...	14.962	75	30724	25.91	ug/L		81
102) Hexachlorobutadiene	15.377	225	108846	27.68	ug/L		100
103) 1,2,4-Trichlorobenzene	15.414	180	206810	26.32	ug/L		99
104) Naphthalene	15.633	128	487802	24.29	ug/L		100
105) 1,2,3-Trichlorobenzene	15.761	180	193635	26.28	ug/L		99
107) Ethanol	4.215	45	35276	447.18	ug/L		96
108) Acrolein	4.708	56	124114	71.50	ug/L		100
109) Tert Butyl Alcohol	5.726	59	178052	262.84	ug/L		95
110) Isobutyl alcohol	9.201	43	126813	452.86	ug/L		97
111) Tert Amyl Alcohol	9.329	59	108156	245.00	ug/L		93
112) 1,4-Dioxane	10.549	88	28952	423.57	ug/L		96
113) 3,3-Dimethyl-1-butanol	12.201	57	829562	1151.09	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56597.D
Acq On : 8 Aug 2018 9:13 am
Operator : ANAJ
Sample : BS MA Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 08 09:29:51 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56611.D
Acq On : 8 Aug 2018 3:19 pm
Operator : ANAJ
Sample : FA56349-1ms MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 08 15:36:48 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1068873	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	775842	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	400629	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.617	65	100608	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	291180	51.60	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 103.20%			
46) 1,2-Dichloroethane-d4	9.000	65	399025	52.29	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 104.58%			
57) Toluene-d8	11.152	98	1034241	48.31	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 96.62%			
79) 4-Bromofluorobenzene	13.353	174	304854	48.18	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.36%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	192668	31.65	ug/L	96
3) Chloromethane	2.538	50	210911	25.24	ug/L	99
4) 1,3-Butadiene	2.642	39	143015	31.73	ug/L	98
5) Vinyl Chloride	2.666	62	176038	25.04	ug/L	98
6) Bromomethane	3.111	94	90297	24.53	ug/L	99
7) Chloroethane	3.269	64	54764	25.66	ug/L	99
8) Trichlorofluoromethane	3.513	101	232635	28.81	ug/L	99
9) Ethyl Ether	3.928	59	133691	21.47	ug/L	95
10) 1,2-Dichlorotrifluoroe...	4.239	67	180536	24.14	ug/L	99
11) 1,1-Dichloroethene	4.227	61	215300	21.53	ug/L	99
12) Freon 113	4.318	101	114018	20.42	ug/L	96
13) Carbon Disulfide	4.281	76	298124	18.81	ug/L	95
14) Iodomethane	4.434	142	163860	19.13	ug/L	99
15) Allyl chloride	4.928	41	201244	23.41	ug/L	97
16) Methylene Chloride	5.104	49	242015	24.44	ug/L	94
17) Acetone	5.165	43	380520	214.43	ug/L	99
18) Methyl acetate	5.379	43	488382	112.75	ug/L	99
19) trans-1,2-Dichloroethene	5.361	61	224293	22.76	ug/L	99
20) Hexane	5.495	56	166034	21.97	ug/L	94
21) Methyl Tert Butyl Ether	5.556	73	265193	21.64	ug/L	93
22) Acetonitrile	5.891	41	172020	281.60	ug/L	99
23) Di-isopropyl ether	6.184	45	490681	22.28	ug/L	98
24) Chloroprene	6.312	53	259937	25.65	ug/L	99
25) 1,1-Dichloroethane	6.336	63	287872	24.25	ug/L	99
26) Acrylonitrile	6.403	53	286490	112.75	ug/L	100
27) ETBE	6.805	59	436307	24.57	ug/L	99
28) Vinyl acetate	6.781	43	1520955	107.70	ug/L	99
29) cis-1,2-Dichloroethene	7.275	96	126896	22.34	ug/L	97
30) 2,2-Dichloropropane	7.458	77	144283	28.58	ug/L	98
31) Bromochloromethane	7.616	128	63609	22.97	ug/L	91
32) Cyclohexane	7.653	56	293830	22.33	ug/L	97
33) Chloroform	7.775	83	237264	23.22	ug/L	98
34) Ethyl acetate	8.006	43	749495	121.91	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56611.D
Acq On : 8 Aug 2018 3:19 pm
Operator : ANAJ
Sample : FA56349-1ms MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 08 15:36:48 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.049	42	98330	26.48	ug/L		93
37) Carbon Tetrachloride	8.025	117	161525	26.27	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	196234	23.86	ug/L		95
39) 2-Butanone	8.317	43	338302	126.97	ug/L		99
40) 1,1-Dichloropropene	8.366	75	168657	23.16	ug/L		97
41) tert-Butyl formate	8.579	59	247643	124.49	ug/L	#	87
42) Propionitrile	8.799	54	253472	271.25	ug/L		97
43) Methacrylonitrile	8.842	41	1021751	279.17	ug/L		99
44) Benzene	8.799	78	502398	23.08	ug/L		97
45) TAME	9.031	73	268053	22.60	ug/L		92
47) 1,2-Dichloroethane	9.104	62	219737	23.37	ug/L		98
48) Trichloroethene	9.658	95	140538	24.45	ug/L		98
49) Methylcyclohexane	9.652	83	214017	22.75	ug/L		95
50) Dibromomethane	10.152	93	86161	24.24	ug/L		97
51) 1,2-Dichloropropane	10.250	63	170255	24.48	ug/L		97
52) Bromodichloromethane	10.341	83	174883	25.34	ug/L		98
53) Methyl methacrylate	10.518	41	104689	21.29	ug/L		95
54) 2-Chloroethyl vinyl ether	10.981	63	1333	0.32	ug/L	#	42
55) cis-1,3-Dichloropropene	10.981	75	182801	21.21	ug/L		98
58) Toluene	11.201	91	551978	23.04	ug/L		99
59) 2-Nitropropane	11.384	41	158411	123.06	ug/L		97
60) 4-Methyl-2-pentanone	11.524	43	830569	129.65	ug/L		97
61) trans-1,3-Dichloropropene	11.932	75	12093	25.73	ug/L		97
62) Tetrachloroethene	11.561	166	139687	22.62	ug/L		96
63) Ethyl methacrylate	11.701	69	145859	21.39	ug/L		90
64) 1,1,2-Trichloroethane	11.707	83	112754	25.08	ug/L		97
65) Dibromochloromethane	11.865	129	133328	25.01	ug/L		99
66) 1,3-Dichloropropane	11.932	76	207873	22.99	ug/L		98
67) 1,2-Dibromoethane	12.054	107	118828	23.99	ug/L		99
68) 2-hexanone	12.213	43	707254	133.19	ug/L	#	77
69) 1-Chlorohexane	12.445	91	190524	23.17	ug/L		97
70) Ethylbenzene	12.481	91	662018	24.15	ug/L		100
71) Chlorobenzene	12.469	112	367384	23.56	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.518	131	125928	26.20	ug/L		98
73) m,p-Xylene	12.591	91	1017129	48.72	ug/L		99
74) o-Xylene	12.914	91	502139	23.99	ug/L		99
75) Styrene	12.951	104	364213	24.76	ug/L		97
76) Bromoform	12.987	173	80428	24.24	ug/L		99
77) Isopropylbenzene	13.140	105	598243	25.93	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.383	53	51162	20.76	ug/L		94
81) n-Propylbenzene	13.432	91	794459	24.77	ug/L		99
82) Bromobenzene	13.438	156	151226	24.33	ug/L		98
83) 1,1,2,2-Tetrachloroethane	13.475	83	185978	26.56	ug/L		98
84) 1,3,5-Trimethylbenzene	13.554	105	505829	25.03	ug/L		99
85) 2-Chlorotoluene	13.670	91	476287	24.44	ug/L		99
86) trans-1,4-Dichloro-2-B...	13.597	53	52000	22.78	ug/L		93
87) 1,2,3-Trichloropropane	13.578	110	47575	25.23	ug/L		95
88) Cyclohexanone	13.621	55	29538	98.32	ug/L		96
89) 4-Chlorotoluene	13.670	91	476287	24.44	ug/L		99
90) tert-Butylbenzene	13.786	91	304938	24.38	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56611.D
Acq On : 8 Aug 2018 3:19 pm
Operator : ANAJ
Sample : FA56349-1ms MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 08 15:36:48 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

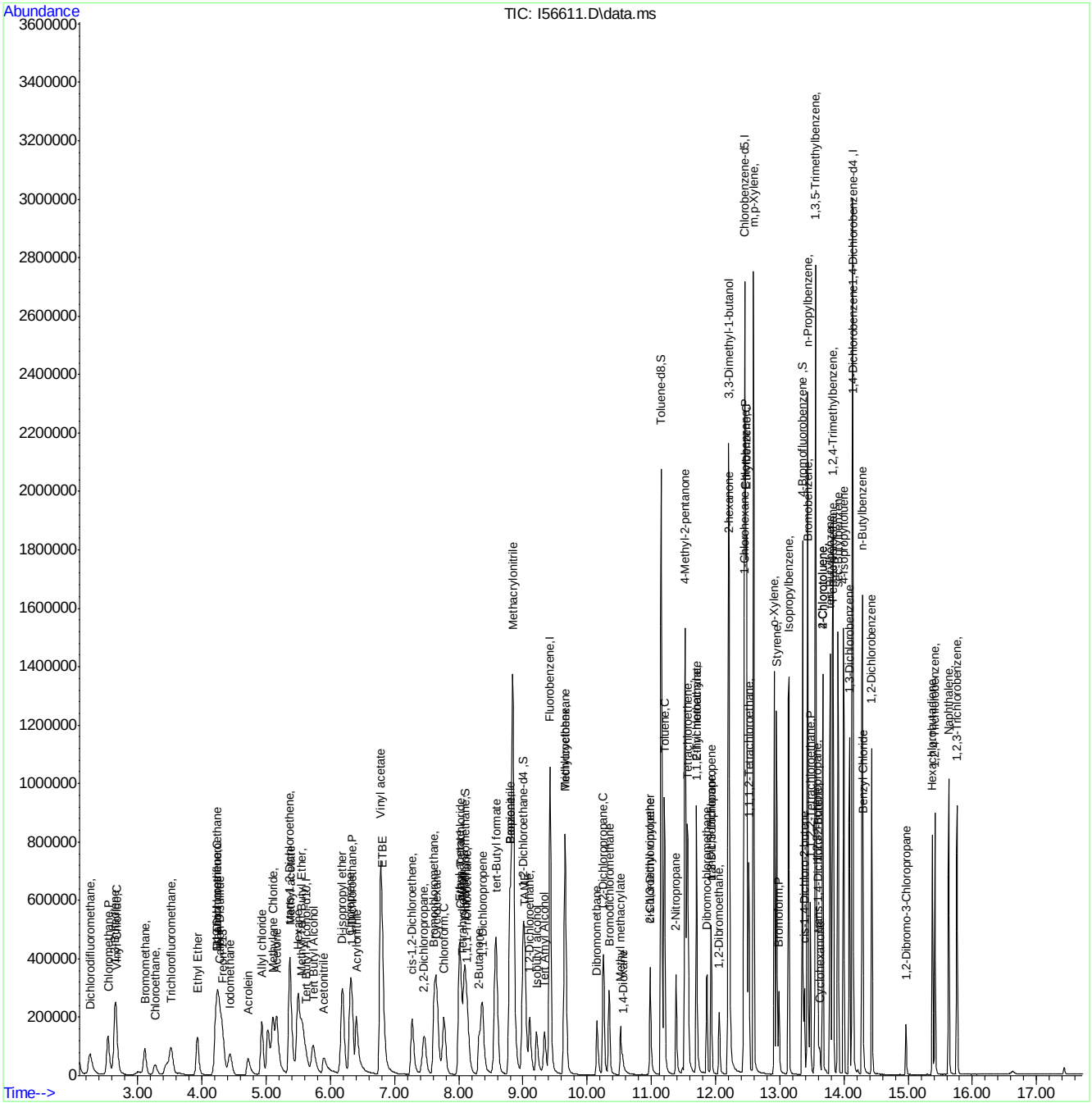
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	509588	24.38	ug/L	98
93) Pentachloroethane	13.822	167	83504	25.66	ug/L	97
94) sec-Butylbenzene	13.908	105	655214	25.39	ug/L	100
95) 4-Isopropyltoluene	13.993	119	534193	25.54	ug/L	100
96) 1,3-Dichlorobenzene	14.084	146	286396	24.82	ug/L	99
97) 1,4-Dichlorobenzene	14.139	146	302222	24.07	ug/L	98
98) n-Butylbenzene	14.286	92	322110	26.74	ug/L	99
99) Benzyl Chloride	14.298	126	45640	31.18	ug/L	98
100) 1,2-Dichlorobenzene	14.432	146	269300	23.97	ug/L	97
101) 1,2-Dibromo-3-Chloropr...	14.968	75	29300	26.03	ug/L	95
102) Hexachlorobutadiene	15.377	225	93467	25.04	ug/L	97
103) 1,2,4-Trichlorobenzene	15.420	180	179108	24.02	ug/L	97
104) Naphthalene	15.633	128	434876	22.84	ug/L	100
105) 1,2,3-Trichlorobenzene	15.761	180	170837	24.43	ug/L	98
107) Ethanol	4.227	45	34901	464.95	ug/L	94
108) Acrolein	4.720	56	110648	66.95	ug/L	99
109) Tert Butyl Alcohol	5.732	59	197308	306.00	ug/L	97
110) Isobutyl alcohol	9.213	43	115242	432.35	ug/L	98
111) Tert Amyl Alcohol	9.335	59	94249	224.94	ug/L	96
112) 1,4-Dioxane	10.555	88	25320	388.88	ug/L	95
113) 3,3-Dimethyl-1-butanol	12.201	57	826613	1204.99	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56611.D
Acq On : 8 Aug 2018 3:19 pm
Operator : ANAJ
Sample : FA56349-1ms MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 08 15:36:48 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 08/09/18 15:40

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56612.D
Acq On : 8 Aug 2018 3:43 pm
Operator : ANAJ
Sample : FA56349-1msd MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 08 16:03:35 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1109107	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	795128	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	411562	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.617	65	110095	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	303723	51.87	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 103.74%			
46) 1,2-Dichloroethane-d4	9.000	65	413510	52.22	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 104.44%			
57) Toluene-d8	11.152	98	1074914	48.99	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.98%			
79) 4-Bromofluorobenzene	13.353	174	315712	48.57	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.14%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.251	85	204471	32.37	ug/L	100
3) Chloromethane	2.532	50	229458	26.46	ug/L	100
4) 1,3-Butadiene	2.642	39	154968	33.13	ug/L	96
5) Vinyl Chloride	2.666	62	195381	26.79	ug/L	98
6) Bromomethane	3.111	94	96782	25.34	ug/L	98
7) Chloroethane	3.269	64	55650	25.02	ug/L	97
8) Trichlorofluoromethane	3.513	101	248398	29.64	ug/L	98
9) Ethyl Ether	3.928	59	145543	22.52	ug/L	96
10) 1,2-Dichlorotrifluoroe...	4.239	67	190304	24.52	ug/L	99
11) 1,1-Dichloroethene	4.227	61	234088	22.56	ug/L	99
12) Freon 113	4.324	101	121182	20.92	ug/L	98
13) Carbon Disulfide	4.281	76	310406	18.87	ug/L	98
14) Iodomethane	4.434	142	177128	19.93	ug/L	99
15) Allyl chloride	4.934	41	222405	24.93	ug/L	96
16) Methylene Chloride	5.104	49	254612	24.79	ug/L	96
17) Acetone	5.165	43	412992	224.28	ug/L	99
18) Methyl acetate	5.379	43	535828	119.11	ug/L	98
19) trans-1,2-Dichloroethene	5.361	61	243060	23.77	ug/L	98
20) Hexane	5.495	56	176178	22.47	ug/L	93
21) Methyl Tert Butyl Ether	5.556	73	293500	23.08	ug/L	96
22) Acetonitrile	5.897	41	188975	298.13	ug/L	99
23) Di-isopropyl ether	6.190	45	543206	23.78	ug/L	98
24) Chloroprene	6.312	53	287780	27.37	ug/L	97
25) 1,1-Dichloroethane	6.336	63	311252	25.27	ug/L	98
26) Acrylonitrile	6.403	53	321838	121.78	ug/L	100
27) ETBE	6.805	59	478205	25.95	ug/L	98
28) Vinyl acetate	6.781	43	1706233	116.28	ug/L	100
29) cis-1,2-Dichloroethene	7.275	96	136818	23.21	ug/L	96
30) 2,2-Dichloropropane	7.458	77	156429	29.87	ug/L	99
31) Bromochloromethane	7.616	128	68040	23.68	ug/L	92
32) Cyclohexane	7.653	56	319788	23.42	ug/L	96
33) Chloroform	7.775	83	255482	24.10	ug/L	97
34) Ethyl acetate	8.006	43	843391	132.09	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56612.D
Acq On : 8 Aug 2018 3:43 pm
Operator : ANAJ
Sample : FA56349-1msd MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 08 16:03:35 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.043	42	107426	27.88	ug/L		99
37) Carbon Tetrachloride	8.019	117	172315	27.01	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	214688	25.16	ug/L		99
39) 2-Butanone	8.317	43	370266	133.78	ug/L		95
40) 1,1-Dichloropropene	8.366	75	183132	24.23	ug/L		95
41) tert-Butyl formate	8.579	59	191941	94.72	ug/L	#	86
42) Propionitrile	8.799	54	274321	282.91	ug/L		100
43) Methacrylonitrile	8.842	41	1091069	287.30	ug/L		99
44) Benzene	8.793	78	536043	23.74	ug/L		97
45) TAME	9.031	73	293069	23.81	ug/L		93
47) 1,2-Dichloroethane	9.104	62	235740	24.17	ug/L		99
48) Trichloroethene	9.658	95	148895	24.97	ug/L		99
49) Methylcyclohexane	9.652	83	230853	23.65	ug/L		95
50) Dibromomethane	10.152	93	92117	24.98	ug/L		99
51) 1,2-Dichloropropane	10.250	63	180538	25.01	ug/L		97
52) Bromodichloromethane	10.341	83	187325	26.16	ug/L		98
53) Methyl methacrylate	10.518	41	115694	22.63	ug/L		97
54) 2-Chloroethyl vinyl ether	10.981	63	1272	0.30	ug/L	#	42
55) cis-1,3-Dichloropropene	10.981	75	196059	21.91	ug/L		97
58) Toluene	11.201	91	581198	23.67	ug/L		99
59) 2-Nitropropane	11.384	41	168566	127.62	ug/L		97
60) 4-Methyl-2-pentanone	11.524	43	896236	136.51	ug/L		97
61) trans-1,3-Dichloropropene	11.926	75	13214	27.43	ug/L		98
62) Tetrachloroethene	11.554	166	147449	23.29	ug/L		99
63) Ethyl methacrylate	11.701	69	161517	23.06	ug/L		94
64) 1,1,2-Trichloroethane	11.701	83	119966	26.04	ug/L		96
65) Dibromochloromethane	11.859	129	141147	25.83	ug/L		100
66) 1,3-Dichloropropane	11.932	76	221392	23.89	ug/L		99
67) 1,2-Dibromoethane	12.054	107	127176	25.05	ug/L		99
68) 2-hexanone	12.213	43	756088	138.94	ug/L	#	78
69) 1-Chlorohexane	12.445	91	207414	24.61	ug/L		99
70) Ethylbenzene	12.481	91	703141	25.03	ug/L		100
71) Chlorobenzene	12.469	112	388170	24.29	ug/L		98
72) 1,1,1,2-Tetrachloroethane	12.518	131	133657	27.13	ug/L		99
73) m,p-Xylene	12.591	91	1086744	50.79	ug/L		100
74) o-Xylene	12.914	91	537748	25.06	ug/L		100
75) Styrene	12.951	104	387534	25.70	ug/L		98
76) Bromoform	12.987	173	84644	24.87	ug/L		98
77) Isopropylbenzene	13.140	105	637486	26.96	ug/L		98
80) cis-1,4-Dichloro-2-butene	13.383	53	54726	21.61	ug/L		89
81) n-Propylbenzene	13.432	91	839468	25.48	ug/L		98
82) Bromobenzene	13.438	156	158635	24.85	ug/L		97
83) 1,1,2,2-Tetrachloroethane	13.475	83	196176	27.28	ug/L		98
84) 1,3,5-Trimethylbenzene	13.554	105	536958	25.86	ug/L		98
85) 2-Chlorotoluene	13.670	91	503470	25.15	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.597	53	53629	22.87	ug/L		91
87) 1,2,3-Trichloropropane	13.578	110	49591	25.60	ug/L		96
88) Cyclohexanone	13.621	55	33048	107.08	ug/L		97
89) 4-Chlorotoluene	13.670	91	503470	25.15	ug/L		99
90) tert-Butylbenzene	13.786	91	326895	25.44	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56612.D
Acq On : 8 Aug 2018 3:43 pm
Operator : ANAJ
Sample : FA56349-1msd MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 08 16:03:35 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

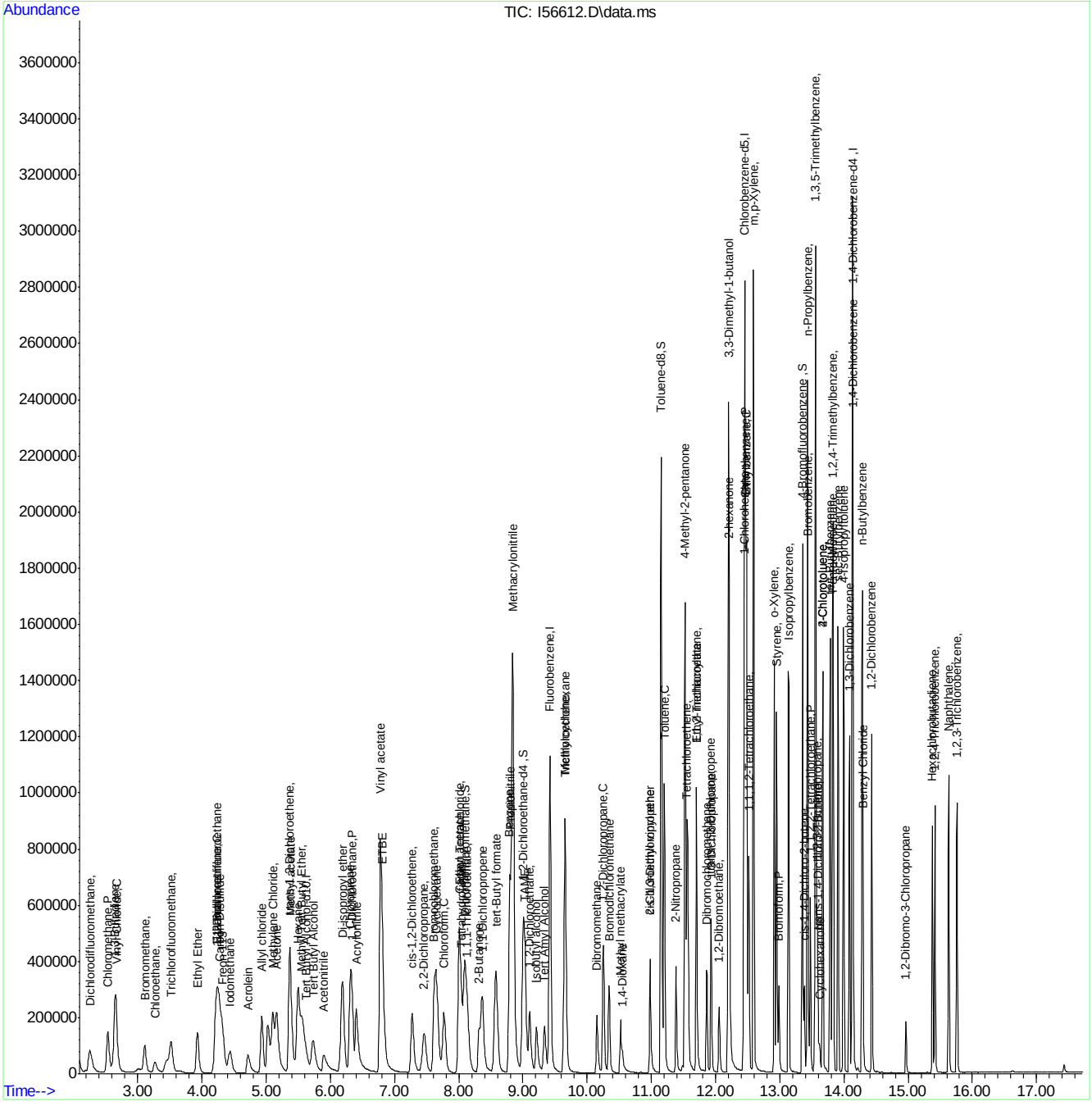
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92)	1,2,4-Trimethylbenzene	13.828	105	538025	25.05	ug/L	99
93)	Pentachloroethane	13.822	167	87917	26.25	ug/L	95
94)	sec-Butylbenzene	13.908	105	693265	26.15	ug/L	99
95)	4-Isopropyltoluene	13.993	119	566114	26.34	ug/L	100
96)	1,3-Dichlorobenzene	14.084	146	300082	25.32	ug/L	99
97)	1,4-Dichlorobenzene	14.139	146	314730	24.40	ug/L	99
98)	n-Butylbenzene	14.286	92	340180	27.49	ug/L	98
99)	Benzyl Chloride	14.298	126	49153	32.47	ug/L	98
100)	1,2-Dichlorobenzene	14.432	146	285484	24.73	ug/L	98
101)	1,2-Dibromo-3-Chloropr...	14.962	75	31112	26.87	ug/L	75
102)	Hexachlorobutadiene	15.377	225	98924	25.80	ug/L	97
103)	1,2,4-Trichlorobenzene	15.420	180	190669	24.89	ug/L	96
104)	Naphthalene	15.633	128	469287	23.97	ug/L	98
105)	1,2,3-Trichlorobenzene	15.761	180	182032	25.34	ug/L	99
107)	Ethanol	4.233	45	39456m	480.48	ug/L	
108)	Acrolein	4.714	56	125321	69.30	ug/L	100
109)	Tert Butyl Alcohol	5.732	59	236123	334.64	ug/L	98
110)	Isobutyl alcohol	9.207	43	127927	438.58	ug/L	97
111)	Tert Amyl Alcohol	9.335	59	110883	241.27	ug/L	98
112)	1,4-Dioxane	10.549	88	28799	404.33	ug/L	88
113)	3,3-Dimethyl-1-butanol	12.201	57	897059	1195.00	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56612.D
Acq On : 8 Aug 2018 3:43 pm
Operator : ANAJ
Sample : FA56349-1msd MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 08 16:03:35 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Manual Integration Approval Summary

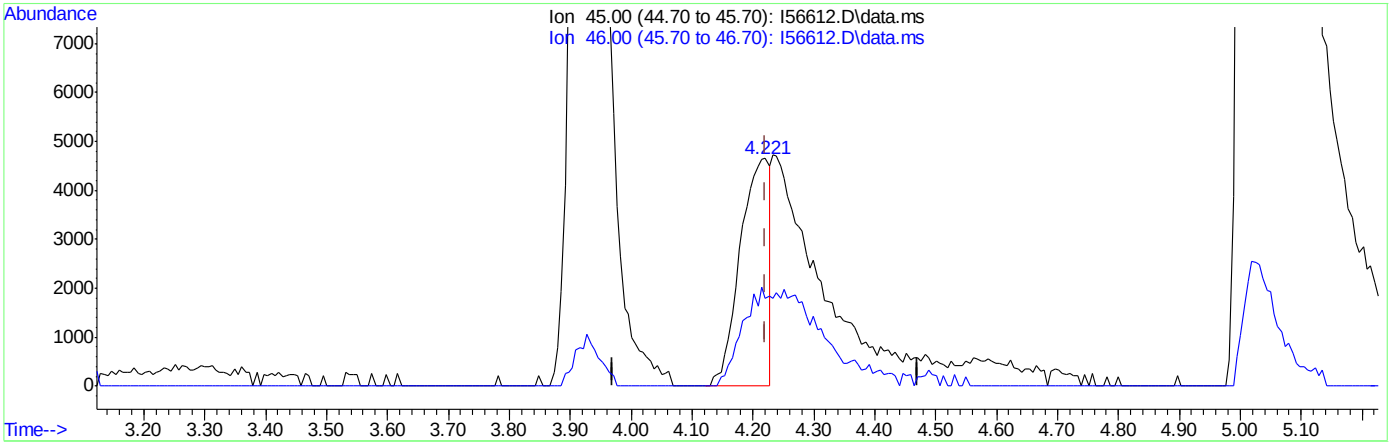
Sample Number: FA56349-1MSD
Lab FileID: I56612.D
Injection Time: 08/08/18 15:43
Method: SW846 8260C
Analyst approved: 08/09/18 11:20 Ana Jimenez
Supervisor approved: 08/09/18 15:40 Melissa Mangual

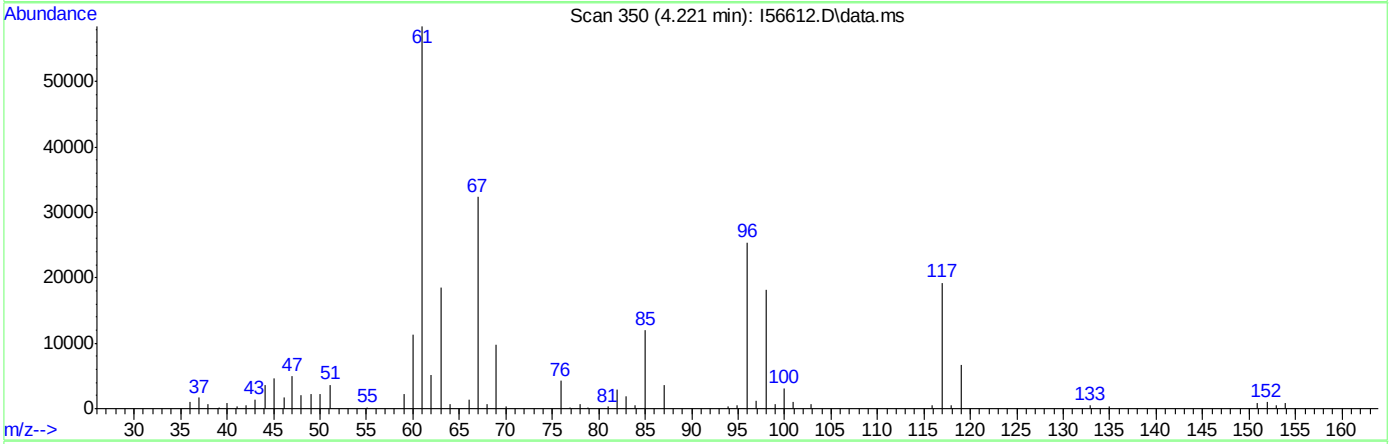
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		4.23	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56612.D
Acq On : 8 Aug 2018 3:43 pm
Operator : ANAJ
Sample : FA56349-1msd MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 08 16:03:00 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration





TIC: I56612.D\data.ms

(107) Ethanol

4.221min (+0.000) 187.18ug/L

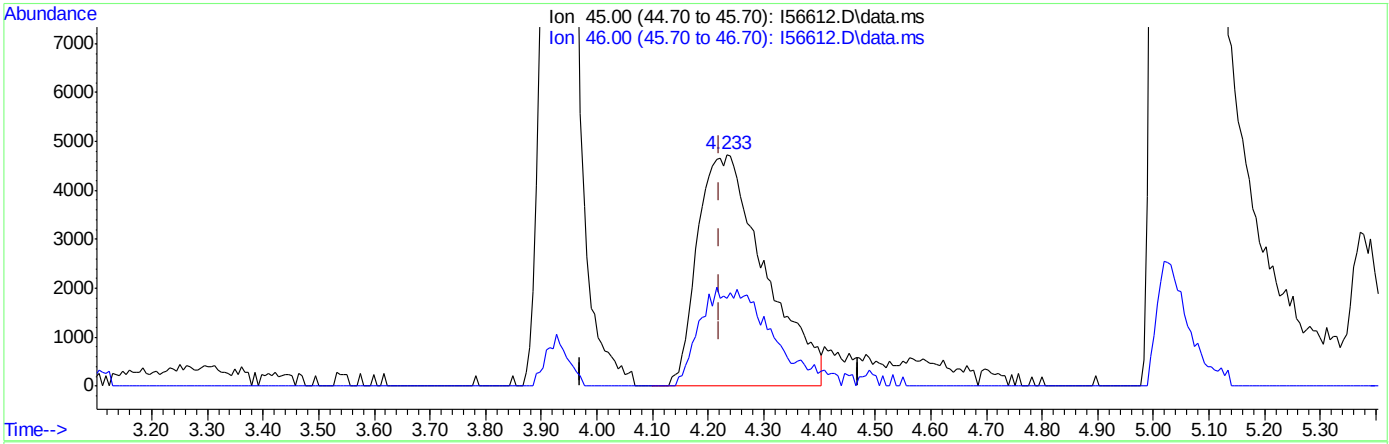
response 15456

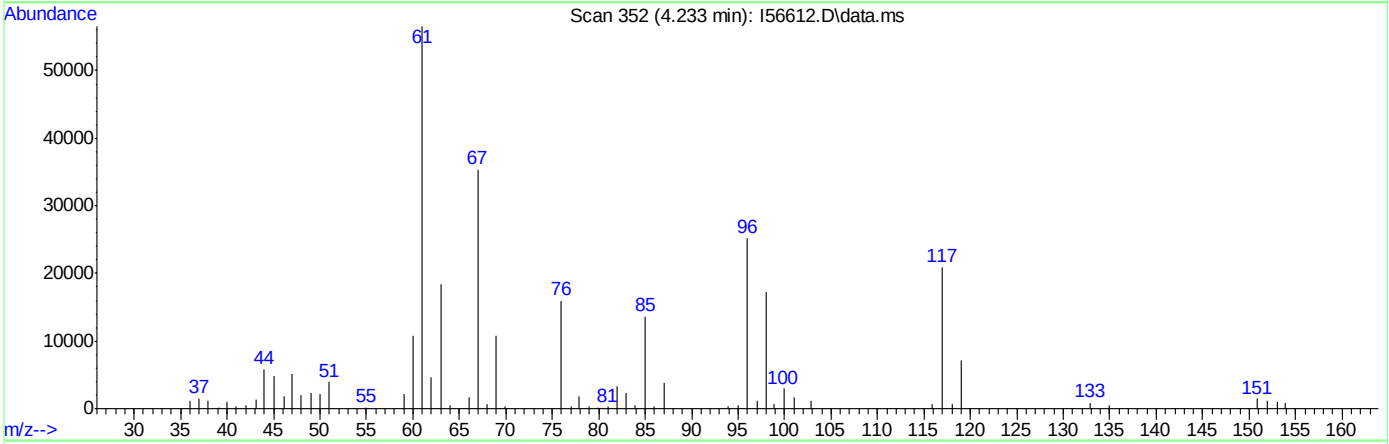
Ion	Exp%	Act%
45.00	100	100
46.00	38.30	38.77
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56612.D
Acq On : 8 Aug 2018 3:43 pm
Operator : ANAJ
Sample : FA56349-1msd MA Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 08 16:03:35 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration





TIC: I56612.D\data.ms

(107) Ethanol

4.233min (+0.012) 480.48ug/L m

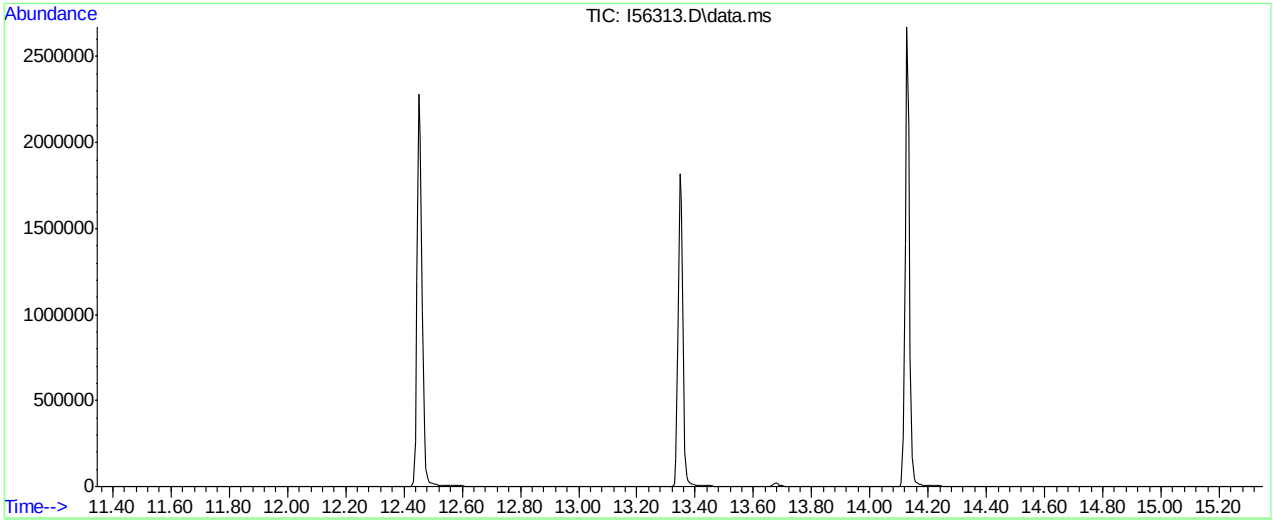
response 39456

Ion	Exp%	Act%
45.00	100	100
46.00	38.30	38.13
0.00	0.00	0.00
0.00	0.00	0.00

Methods: SW-846 8260B

Data File : C:\msdchem\2\DATA\072518\I56313.D Vial: 1
Acq On : 25 Jul 2018 2:36 pm Operator: ANAJ
Sample : BFB Inst : MSVOA16
Misc : MS40872,VI1683,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B



AutoFind: Scans 2010, 2011, 2012; Background Corrected with Scan 2005

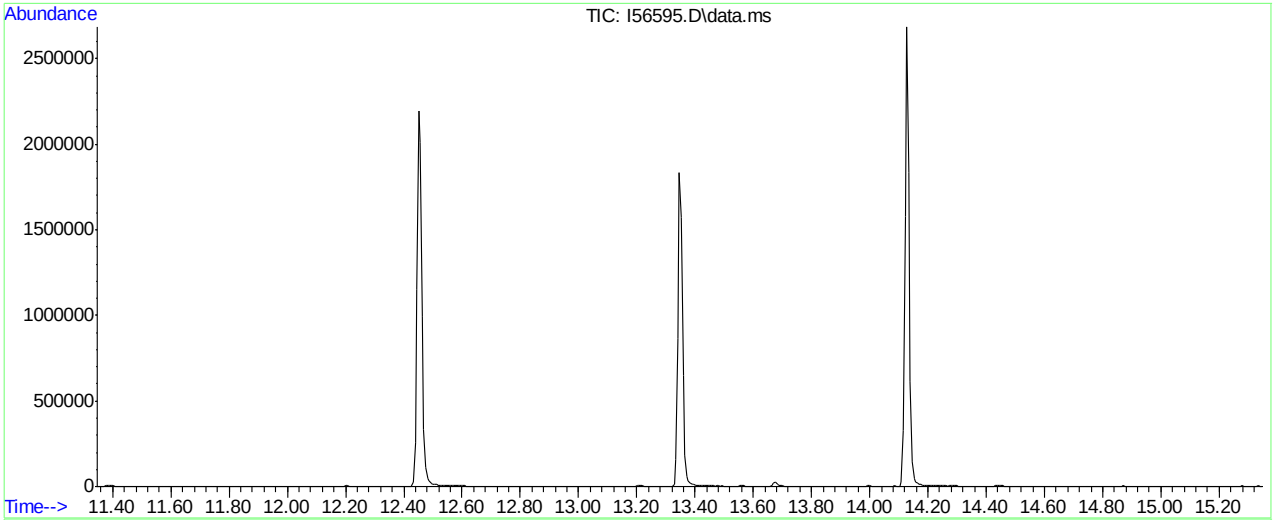
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.9	74779	PASS
75	95	30	60	50.4	151371	PASS
95	95	100	100	100.0	300437	PASS
96	95	5	9	7.1	21401	PASS
173	174	0.00	2	0.8	1809	PASS
174	95	50	100	71.9	215941	PASS
175	174	5	9	7.2	15559	PASS
176	174	95	101	96.1	207501	PASS
177	176	5	9	6.6	13778	PASS

I56313.D I-July2518.M Thu Jul 26 07:51:42 2018

Methods: SW-846 8260B

Data File : C:\msdchem\2\DATA\080818\I56595.D Vial: 1
Acq On : 8 Aug 2018 8:17 am Operator: ANAJ
Sample : BFB Inst : MSVOA16
Misc : MS40961,VI1694,,,,, Multiplr: 1.00
MS Integration Params: med.p

Method : C:\msdchem\2\METHODS\I-July2518.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B



AutoFind: Scans 1846, 1847, 1848; Background Corrected with Scan 1841

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.7	74563	PASS
75	95	30	60	50.9	147696	PASS
95	95	100	100	100.0	289920	PASS
96	95	5	9	6.8	19783	PASS
173	174	0.00	2	0.9	1808	PASS
174	95	50	100	72.8	211013	PASS
175	174	5	9	7.4	15554	PASS
176	174	95	101	96.5	203589	PASS
177	176	5	9	6.5	13319	PASS

I56595.D I-July2518.M Wed Aug 08 08:37:23 2018

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:49:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	9.414	96	1178758	50.00	ug/L		0.00
56) Chlorobenzene-d5	12.456	117	823712	50.00	ug/L		0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	417514	50.00	ug/L		0.00
106) Tert Butyl Alcohol-d10	5.598	65	81030	250.00	ug/L		-0.01
System Monitoring Compounds							
36) Dibromofluoromethane	8.079	113	303832	47.18	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.36%				
46) 1,2-Dichloroethane-d4	8.994	65	423388	51.55	ug/L		0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 103.10%				
57) Toluene-d8	11.152	98	1135661	50.58	ug/L		0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 101.16%				
79) 4-Bromofluorobenzene	13.353	174	321741	46.88	ug/L		0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 93.76%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.263	85	6470	1.01	ug/L		91
3) Chloromethane	2.538	50	10356	1.77	ug/L		89
4) 1,3-Butadiene	2.647	39	5718	1.40	ug/L		84
5) Vinyl Chloride	2.666	62	8002	1.41	ug/L		93
6) Bromomethane	3.111	94	5059	1.52	ug/L		86
7) Chloroethane	3.275	64	4608	2.20	ug/L		89
8) Trichlorofluoromethane	3.519	101	9819m	1.29	ug/L		
9) Ethyl Ether	3.928	59	6761	1.16	ug/L		92
10) 1,2-Dichlorotrifluoroe...	4.232	67	8233	1.05	ug/L		92
11) 1,1-Dichloroethene	4.214	61	11083	1.06	ug/L		98
12) Freon 113	4.318	101	6220	0.98	ug/L		91
13) Carbon Disulfide	4.275	76	16288	0.95	ug/L		96
14) Iodomethane	4.428	142	9590	0.95	ug/L		98
15) Allyl chloride	4.927	41	8131	1.15	ug/L		92
16) Methylene Chloride	5.104	49	16395	1.69	ug/L		93
17) Acetone	5.202	43	9056	4.83	ug/L		94
18) Methyl acetate	5.409	43	12443	2.65	ug/L		97
19) trans-1,2-Dichloroethene	5.372	61	10229	1.00	ug/L		95
20) Hexane	5.494	56	8830	1.28	ug/L	#	84
21) Methyl Tert Butyl Ether	5.561	73	12273	0.88	ug/L		90
23) Di-isopropyl ether	6.177	45	22633	1.14	ug/L		92
24) Chloroprene	6.311	53	9155	0.84	ug/L		91
25) 1,1-Dichloroethane	6.336	63	13170	1.08	ug/L		100
26) Acrylonitrile	6.500	53	2477	0.94	ug/L		80
27) ETBE	6.811	59	16309	0.85	ug/L		94
28) Vinyl acetate	6.817	43	42549	8.47	ug/L		88
29) cis-1,2-Dichloroethene	7.287	96	5482	0.87	ug/L		86
30) 2,2-Dichloropropane	7.457	77	4643	1.37	ug/L		88
31) Bromochloromethane	7.640	128	2625	0.83	ug/L		93
32) Cyclohexane	7.653	56	13529	1.07	ug/L		97
33) Chloroform	7.768	83	12358	1.13	ug/L		78
34) Ethyl acetate	8.037	43	15723	2.64	ug/L		98
35) Tetrahydrofuran	8.067	42	3178	0.83	ug/L	#	75

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:49:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) Carbon Tetrachloride	8.024	117	6369	0.86	ug/L		87
38) 1,1,1-Trichloroethane	8.128	97	8558	0.91	ug/L		92
39) 2-Butanone	8.366	43	8037	3.00	ug/L		94
40) 1,1-Dichloropropene	8.366	75	7136	0.91	ug/L		92
41) tert-Butyl formate	8.573	59	16754	14.35	ug/L	#	17
42) Propionitrile	8.829	54	7933	10.70	ug/L	#	1
43) Methacrylonitrile	8.854	41	36482	11.52	ug/L		87
44) Benzene	8.805	78	24872	1.09	ug/L		89
45) TAME	9.024	73	10724	0.79	ug/L	#	65
47) 1,2-Dichloroethane	9.116	62	10596	1.07	ug/L		95
48) Trichloroethene	9.664	95	6279	0.97	ug/L		96
49) Methylcyclohexane	9.646	83	10061	1.05	ug/L		94
50) Dibromomethane	10.164	93	3576	0.89	ug/L		96
51) 1,2-Dichloropropane	10.256	63	7237	1.01	ug/L		88
52) Bromodichloromethane	10.341	83	6682	0.89	ug/L		97
53) Methyl methacrylate	10.548	41	2970	0.61	ug/L	#	86
54) 2-Chloroethyl vinyl ether	10.932	63	16313	3.06	ug/L		96
55) cis-1,3-Dichloropropene	10.987	75	6614	0.76	ug/L		92
58) Toluene	11.201	91	26702	1.08	ug/L		97
59) 2-Nitropropane	11.384	41	4288	3.95	ug/L		88
60) 4-Methyl-2-pentanone	11.530	43	34107	6.52	ug/L		95
62) Tetrachloroethene	11.560	166	6197	0.67	ug/L		95
63) Ethyl methacrylate	11.713	69	3966	0.58	ug/L	#	77
64) 1,1,2-Trichloroethane	11.707	83	4441	0.92	ug/L		89
65) Dibromochloromethane	11.865	129	4260	0.72	ug/L		97
66) 1,3-Dichloropropane	11.932	76	9210	0.98	ug/L		96
67) 1,2-Dibromoethane	12.066	107	4403	0.79	ug/L		95
68) 2-hexanone	12.219	43	28428	6.33	ug/L		77
69) 1-Chlorohexane	12.444	91	8783	1.07	ug/L	#	53
70) Ethylbenzene	12.481	91	29467	1.01	ug/L		98
71) Chlorobenzene	12.469	112	18043	1.09	ug/L		96
72) 1,1,1,2-Tetrachloroethane	12.517	131	4460	0.83	ug/L		83
73) m,p-Xylene	12.591	91	41920	1.97	ug/L		100
74) o-Xylene	12.914	91	19271	0.88	ug/L		98
75) Styrene	12.956	104	11657	0.72	ug/L		96
76) Bromoform	12.993	173	2477	0.70	ug/L		95
77) Isopropylbenzene	13.139	105	20667	0.85	ug/L		94
80) cis-1,4-Dichloro-2-butene	13.383	53	2223	1.15	ug/L	#	65
81) n-Propylbenzene	13.432	91	31826	1.04	ug/L		98
82) Bromobenzene	13.438	156	6239	0.96	ug/L		92
83) 1,1,2,2-Tetrachloroethane	13.475	83	7208	1.01	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	18018	0.90	ug/L		97
85) 2-Chlorotoluene	13.670	91	19216	0.94	ug/L		96
86) trans-1,4-Dichloro-2-B...	13.603	53	1852	0.98	ug/L	#	50
87) 1,2,3-Trichloropropane	13.578	110	1743	0.87	ug/L		95
88) Cyclohexanone	13.621	55	1169	4.81	ug/L		84
89) 4-Chlorotoluene	13.670	91	19216	0.99	ug/L		96
90) tert-Butylbenzene	13.785	91	11910	0.97	ug/L		92
92) 1,2,4-Trimethylbenzene	13.828	105	18251	0.88	ug/L		94
93) Pentachloroethane	13.822	167	2770	0.71	ug/L		93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:49:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
94)	sec-Butylbenzene	13.907	105	24167	0.96	ug/L		99
95)	4-Isopropyltoluene	13.993	119	18302	0.89	ug/L		99
96)	1,3-Dichlorobenzene	14.084	146	11857	0.99	ug/L		94
97)	1,4-Dichlorobenzene	14.139	146	14115m	1.10	ug/L		
98)	n-Butylbenzene	14.285	92	10587	0.91	ug/L		99
99)	Benzyl Chloride	14.298	126	504	0.74	ug/L	#	85
100)	1,2-Dichlorobenzene	14.438	146	11416	0.96	ug/L		95
101)	1,2-Dibromo-3-Chloropr...	14.962	75	806	0.69	ug/L		77
102)	Hexachlorobutadiene	15.377	225	3778	0.95	ug/L		97
103)	1,2,4-Trichlorobenzene	15.419	180	6838	0.84	ug/L		95
104)	Naphthalene	15.633	128	12522	0.61	ug/L		100
105)	1,2,3-Trichlorobenzene	15.761	180	6652	0.84	ug/L		99
107)	Ethanol	4.214	45	312m	6.57	ug/L		
108)	Acrolein	4.738	56	1981	2.15	ug/L		88
109)	Tert Butyl Alcohol	5.738	59	5186	9.77	ug/L	#	57
110)	Isobutyl alcohol	9.231	43	4204	25.03	ug/L		89
111)	Tert Amyl Alcohol	9.341	59	2488	7.90	ug/L		86
112)	1,4-Dioxane	10.579	88	386m	7.69	ug/L		
113)	3,3-Dimethyl-1-butanol	12.194	57	26739	59.13	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
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Acq On : 25 Jul 2018 3:14 pm
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Misc : MS40872,VI1683,,,,,
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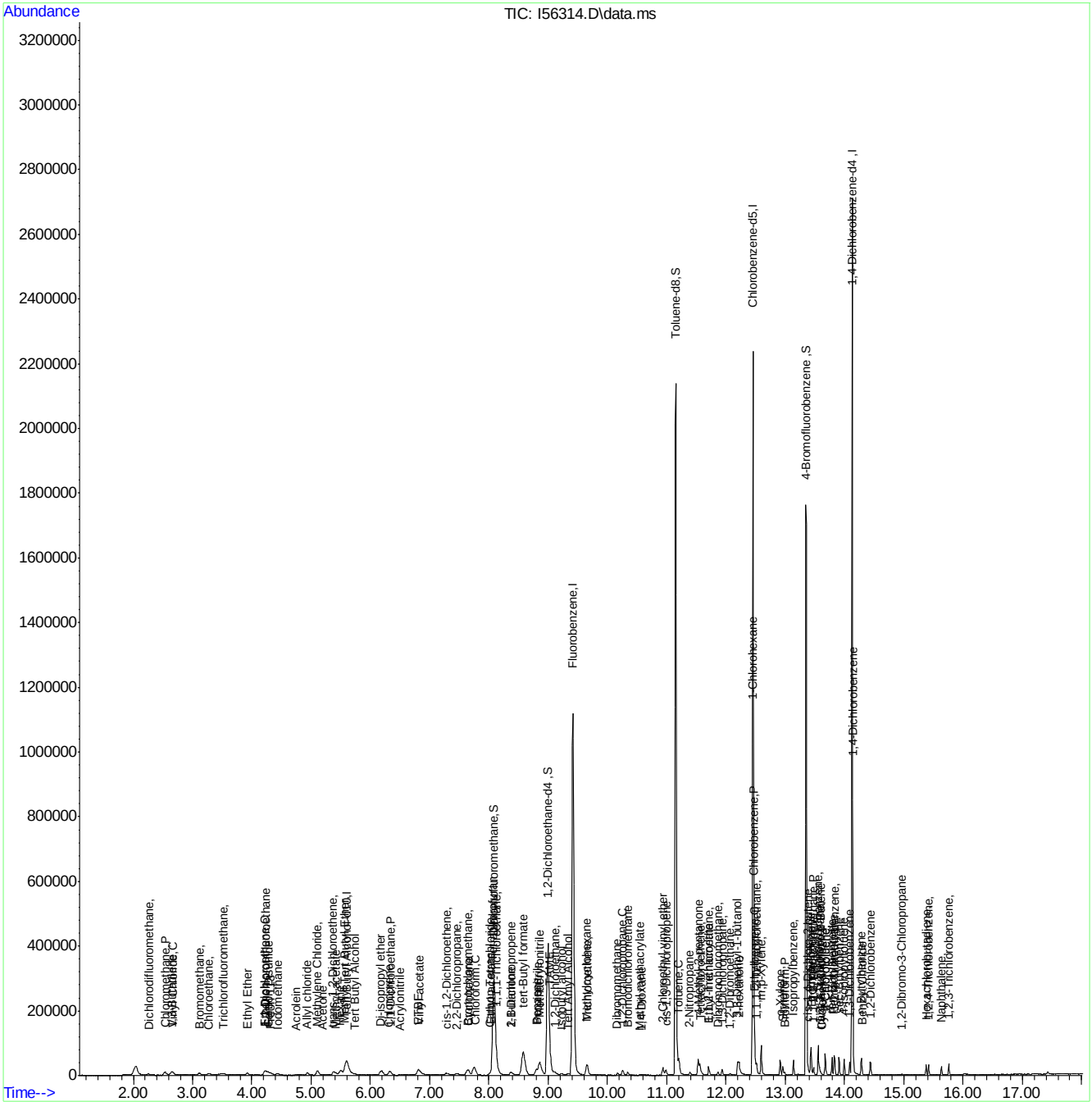
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

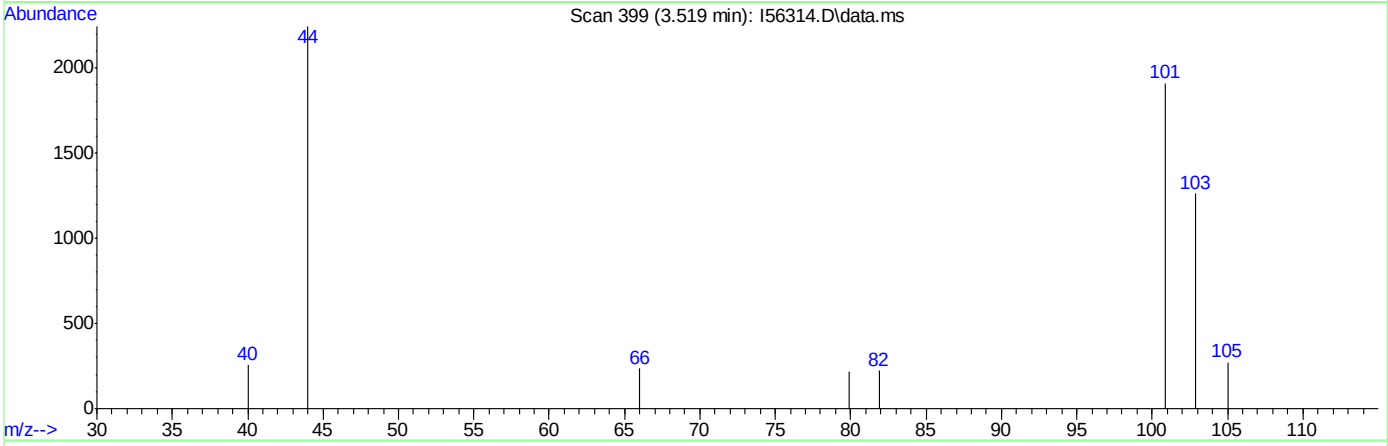
Sample Number: VI1683-IC1683
Lab FileID: I56314.D
Injection Time: 07/25/18 15:14
Method: SW846 8260B
Analyst approved: 07/26/18 08:26 Ana Jimenez
Supervisor approved: 07/31/18 15:11 Melissa Mangual

Parameter	CAS	Sig#	R.T. (min.)	Reason
Trichlorofluoromethane	75-69-4		3.52	Split peak
Ethyl Alcohol	64-17-5		4.21	Missed peak
1,4-Dioxane	123-91-1		10.58	Missed peak
1,4-Dichlorobenzene	106-46-7		14.14	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



TIC: I56314.D\data.ms

(8) Trichlorofluoromethane ( )

3.519min (+0.006) 0.98ug/L

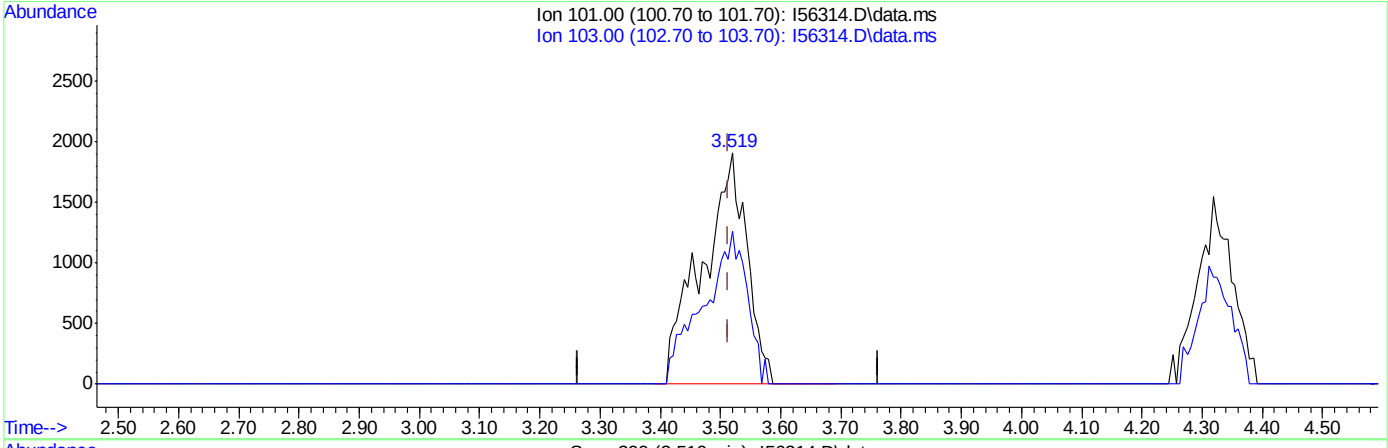
response 7458

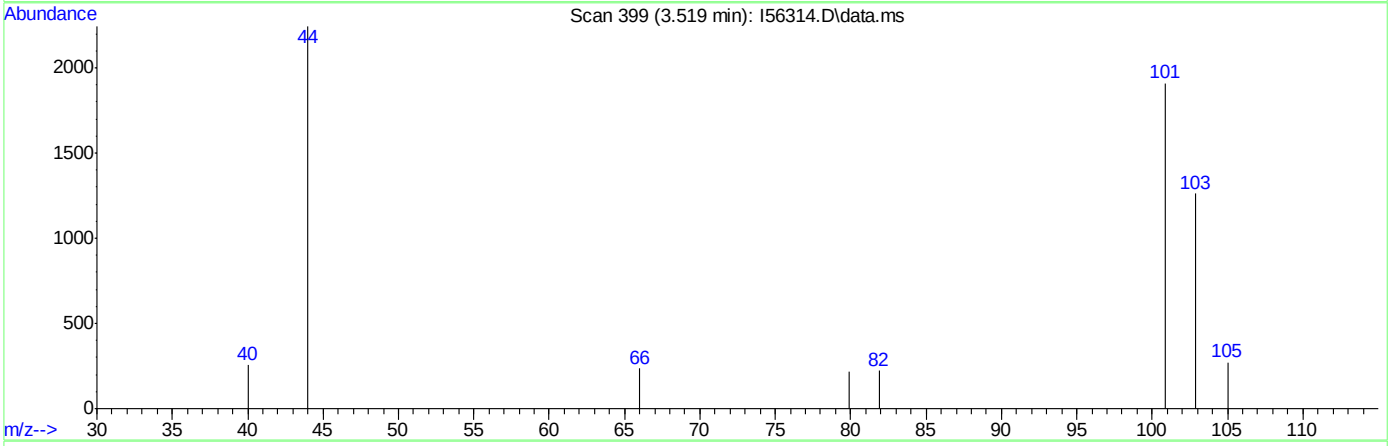
Ion	Exp%	Act%
101.00	100	100
103.00	63.30	66.07
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(8) Trichlorofluoromethane ( )

3.519min (+0.006) 1.29ug/L m

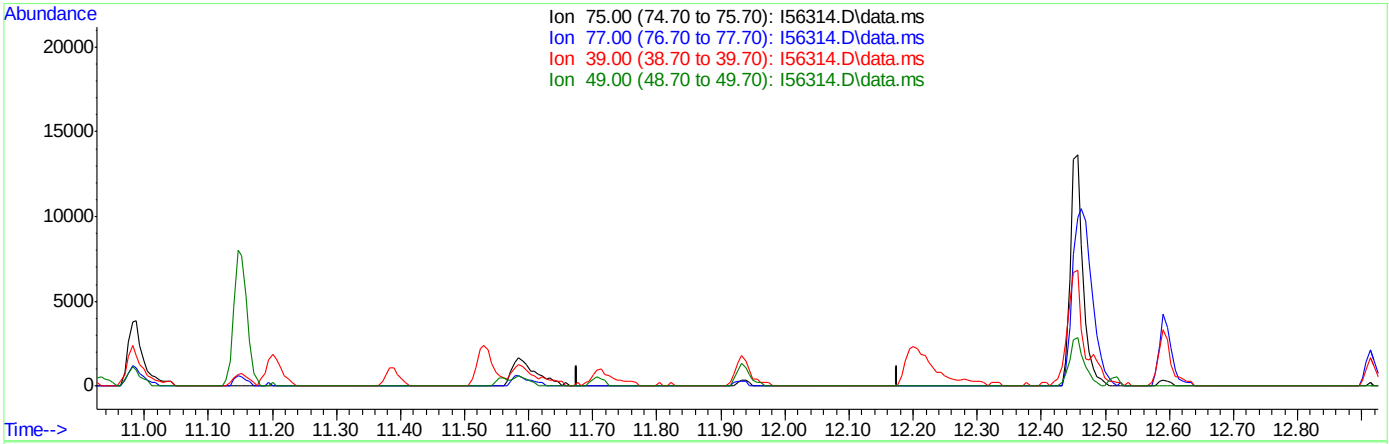
response 9819

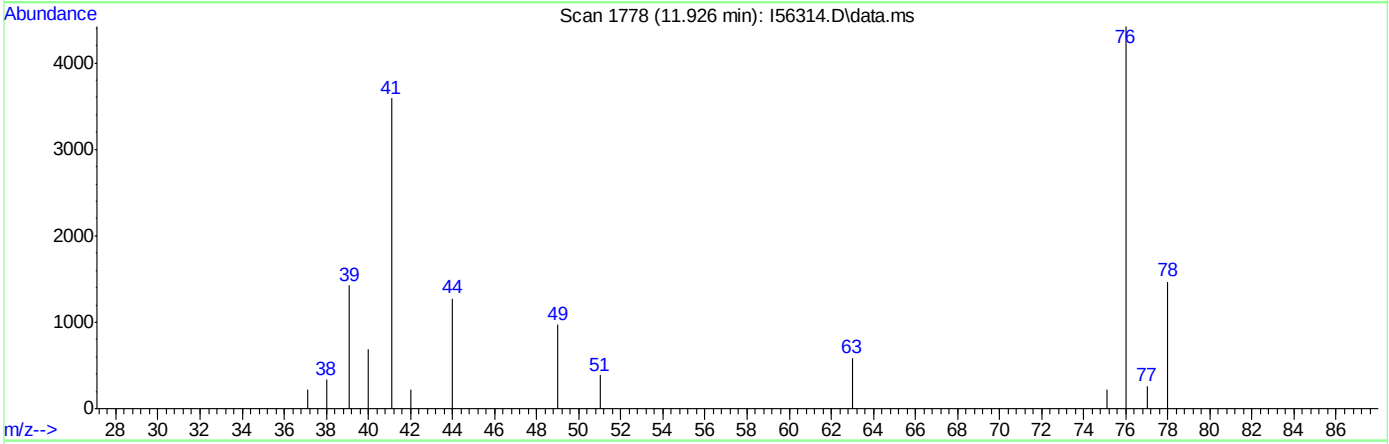
Ion	Exp%	Act%
101.00	100	100
103.00	63.30	66.07
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(61) trans-1,3-Dichloropropene

11.926min (-11.926) 0.00ug/L

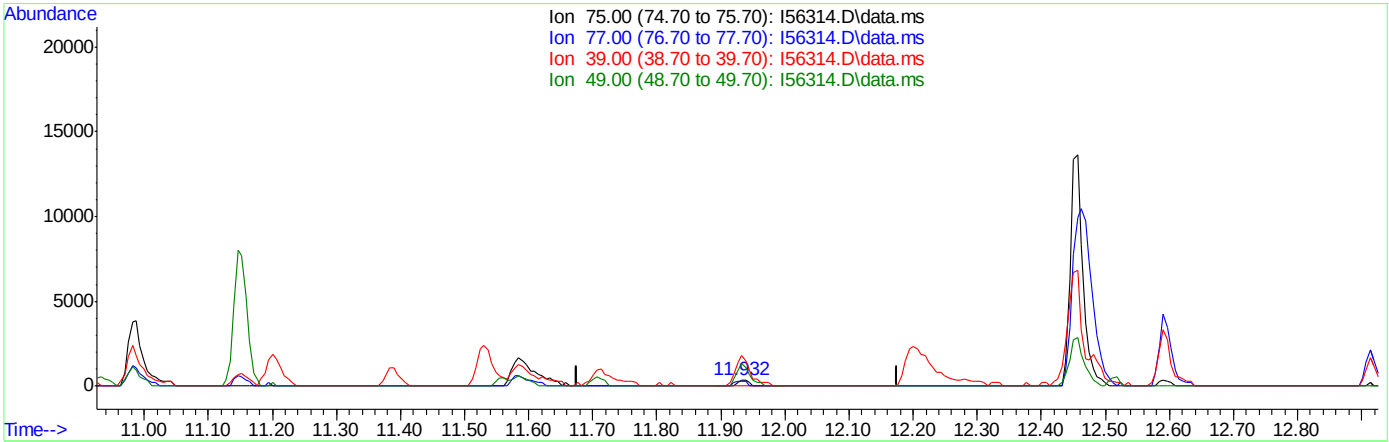
response 0

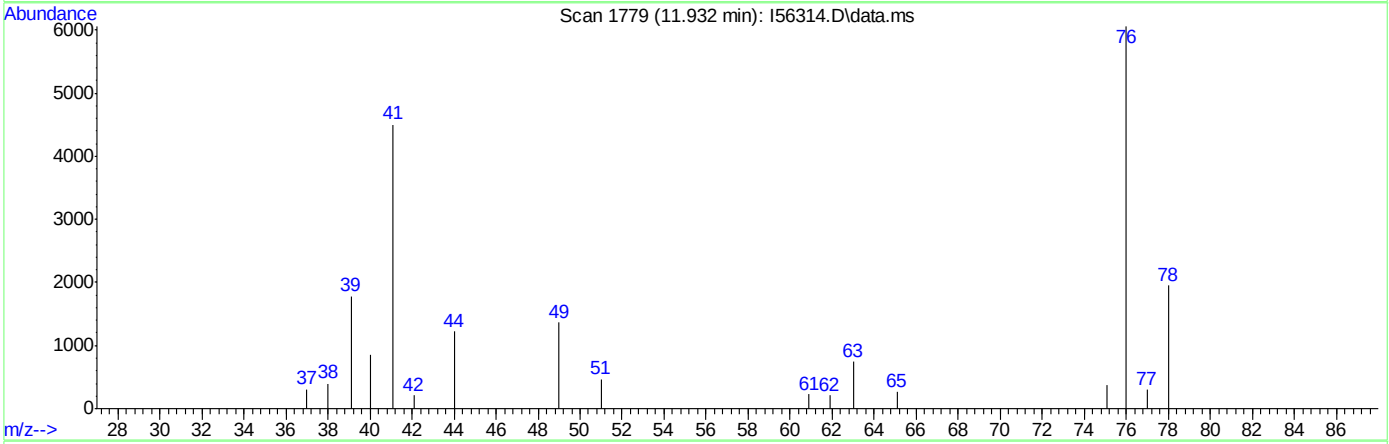
Ion	Exp%	Act%
75.00	100	0.00
77.00	103.00	0.00#
39.00	522.70	0.00#
49.00	420.40	0.00#

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(61) trans-1,3-Dichloropropene

11.932min (+0.006) 0.16ug/L m

response 428

Ion	Exp%	Act%
75.00	100	100
77.00	103.00	78.25
39.00	522.70	472.94#
49.00	420.40	362.07#

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
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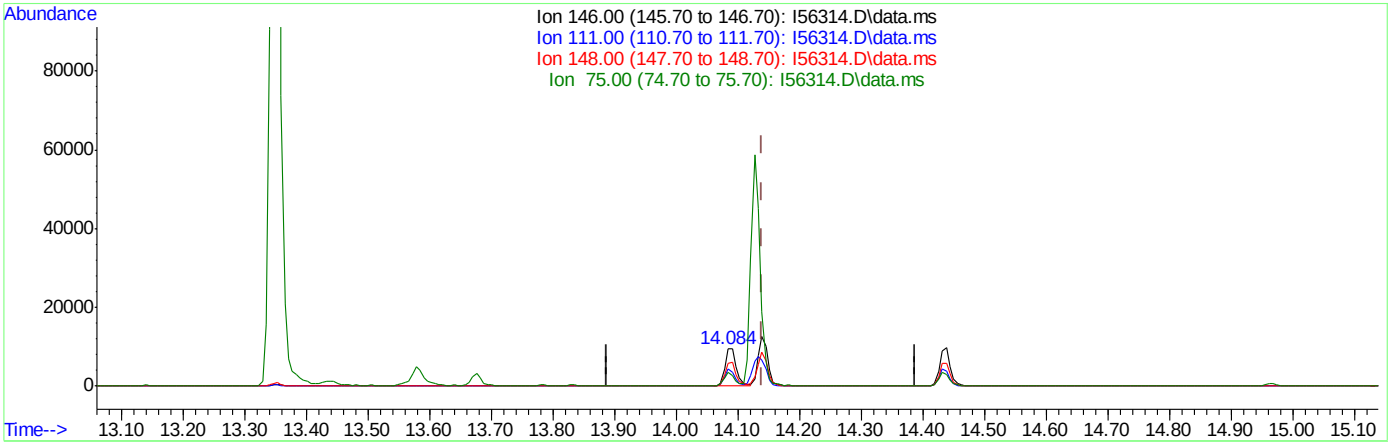
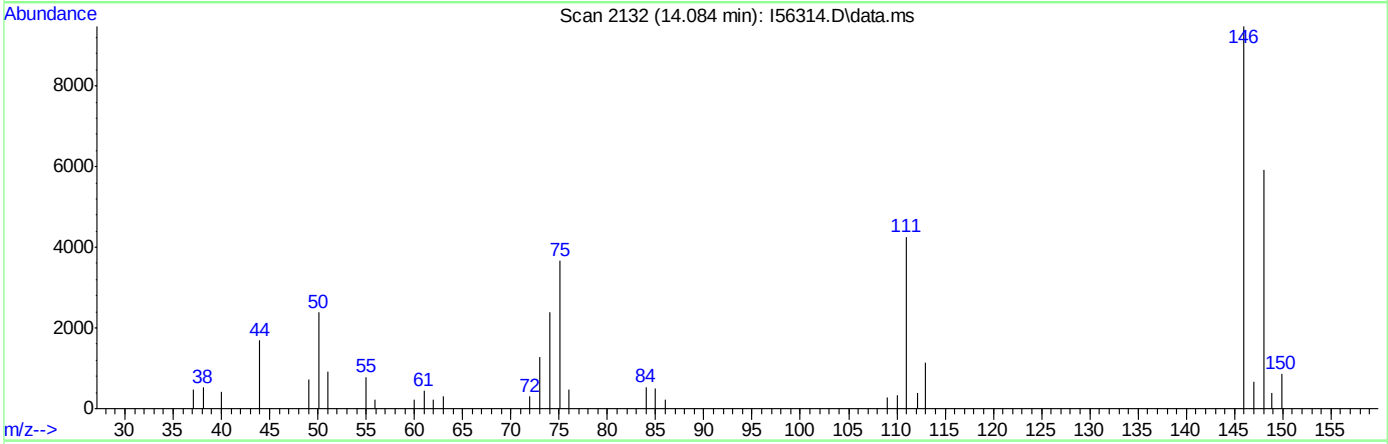




TIC: I56314.D\data.ms

(97) 1,4-Dichlorobenzene

14.084min (-0.055) 0.92ug/L

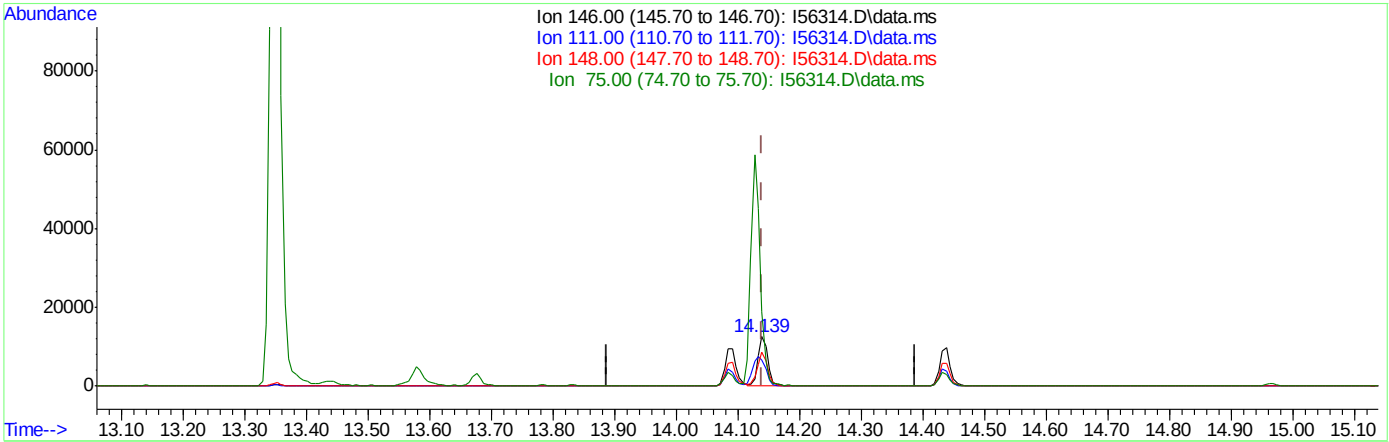
response 11857

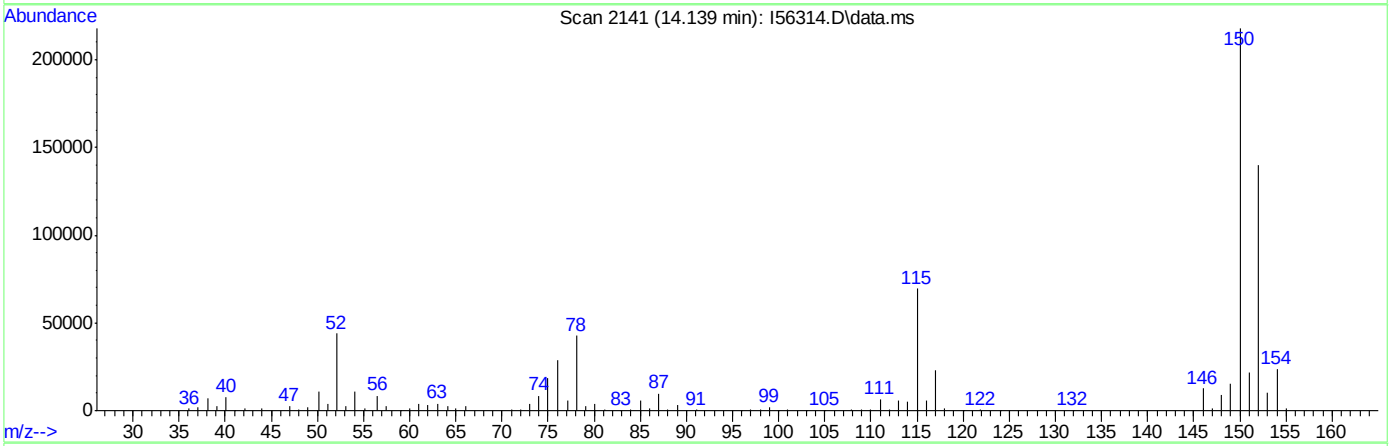
Ion	Exp%	Act%
146.00	100	100
111.00	40.90	44.88
148.00	63.00	62.35
75.00	35.90	38.59

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(97) 1,4-Dichlorobenzene

14.139min (+0.000) 1.10ug/L m

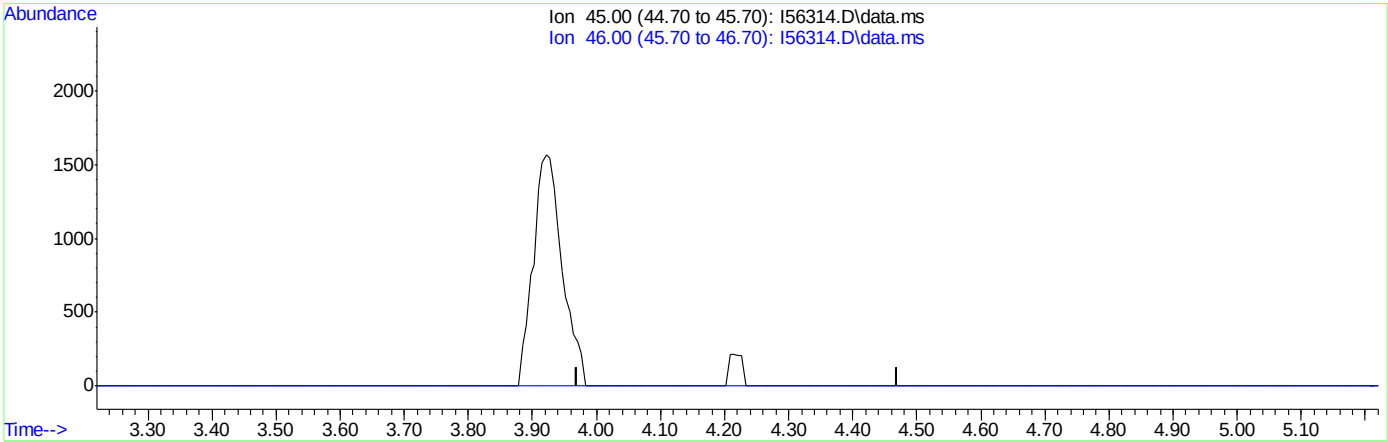
response 14115

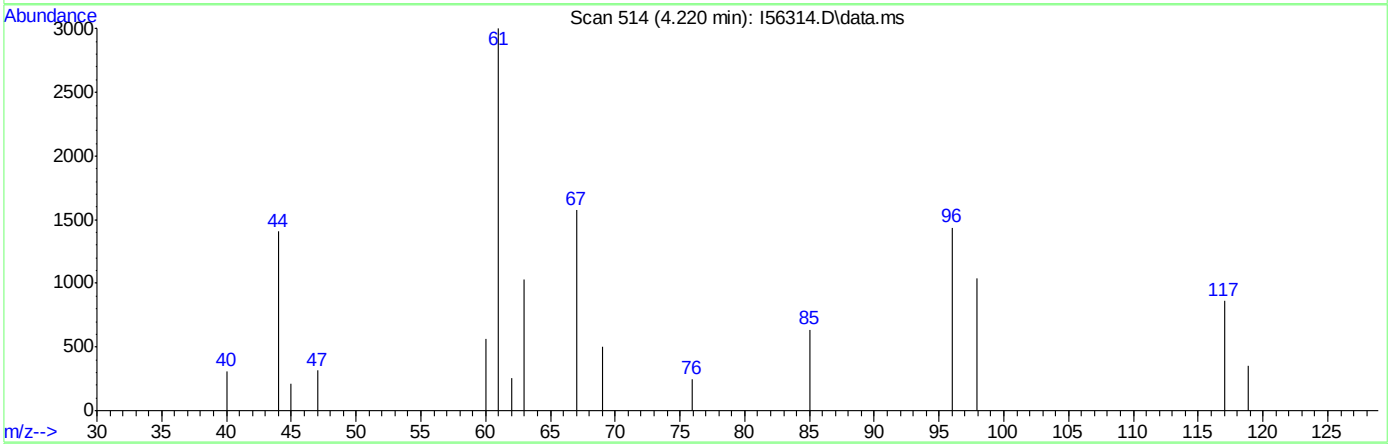
Ion	Exp%	Act%
146.00	100	100
111.00	40.90	52.06
148.00	63.00	69.44
75.00	35.90	150.46#

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(107) Ethanol

4.220min (-4.220) 0.00ug/L

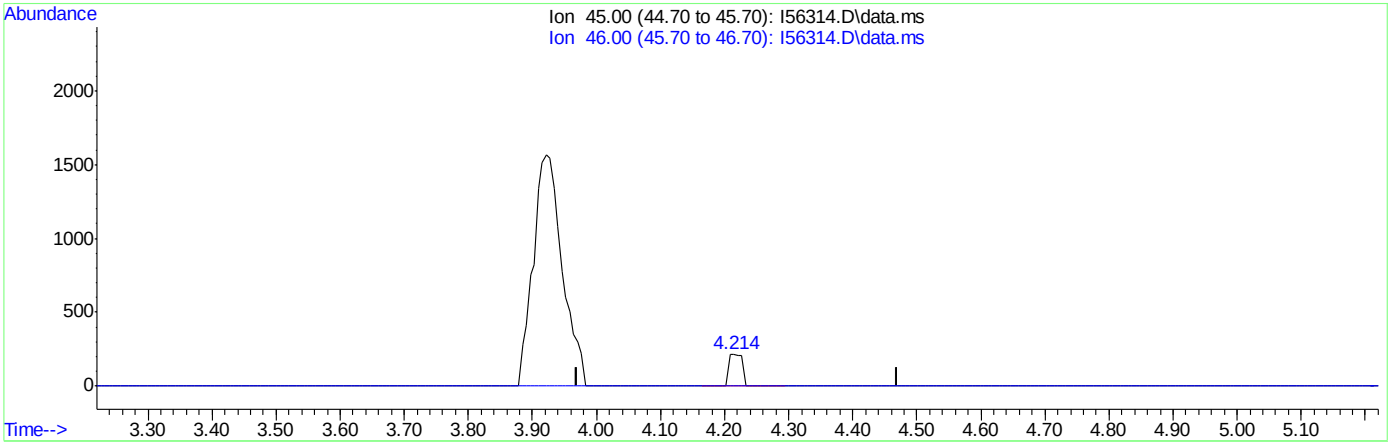
response 0

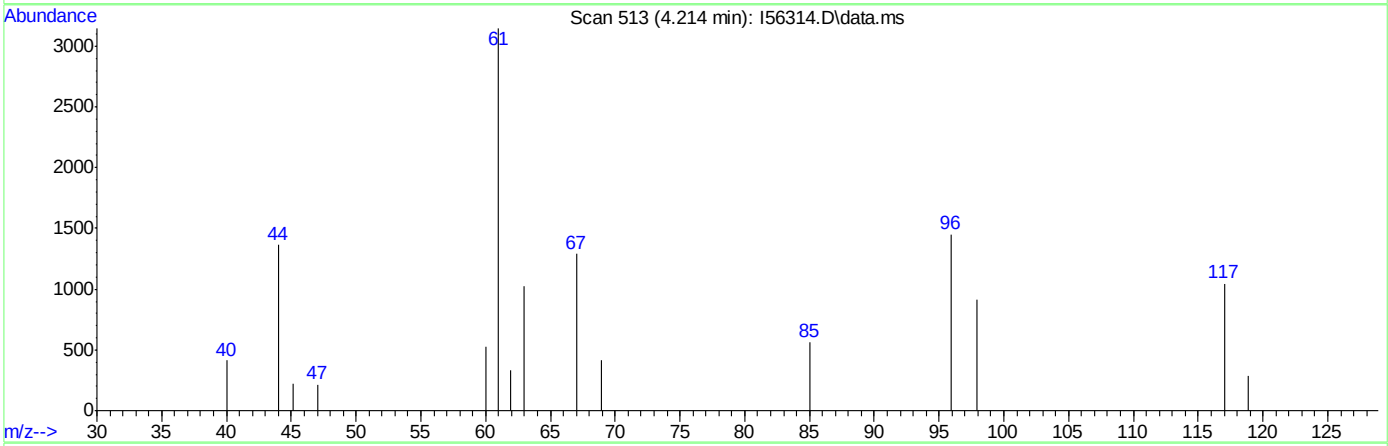
Ion	Exp%	Act%
45.00	100	0.00
46.00	35.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(107) Ethanol

4.214min (-0.006) 6.57ug/L m

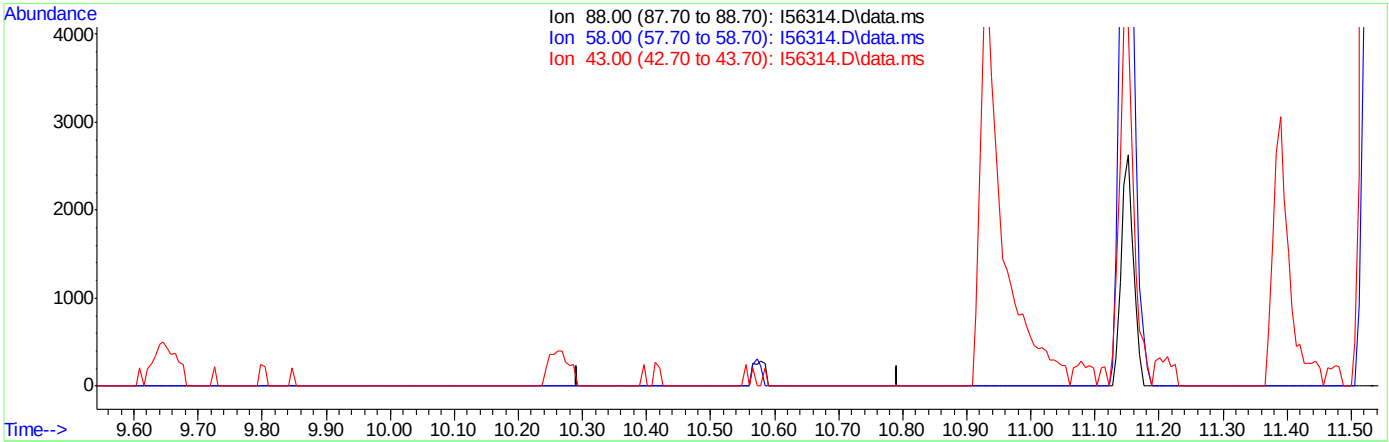
response 312

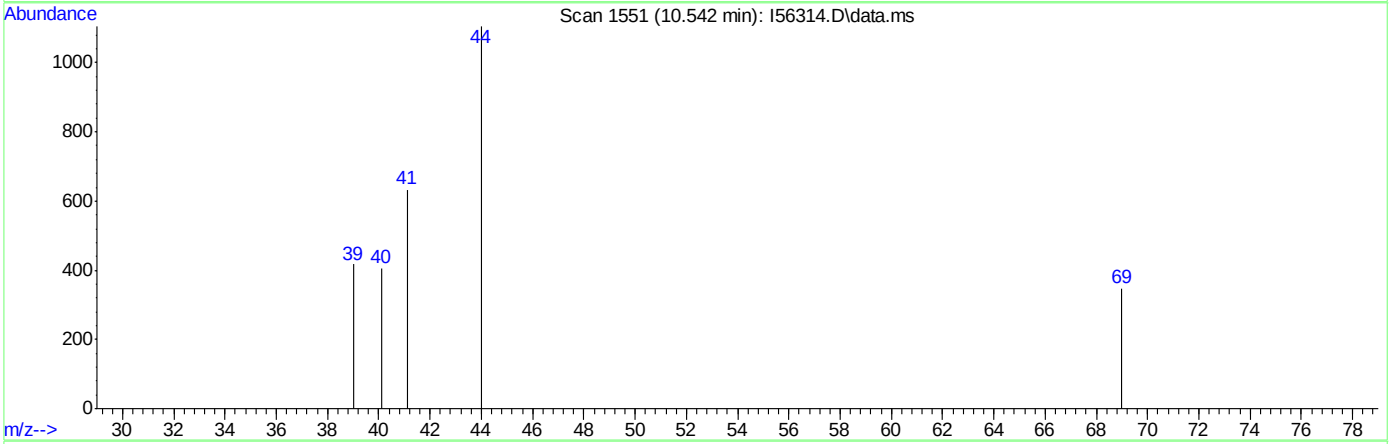
Ion	Exp%	Act%
45.00	100	100
46.00	35.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(112) 1,4-Dioxane

10.542min (-10.542) 0.00ug/L

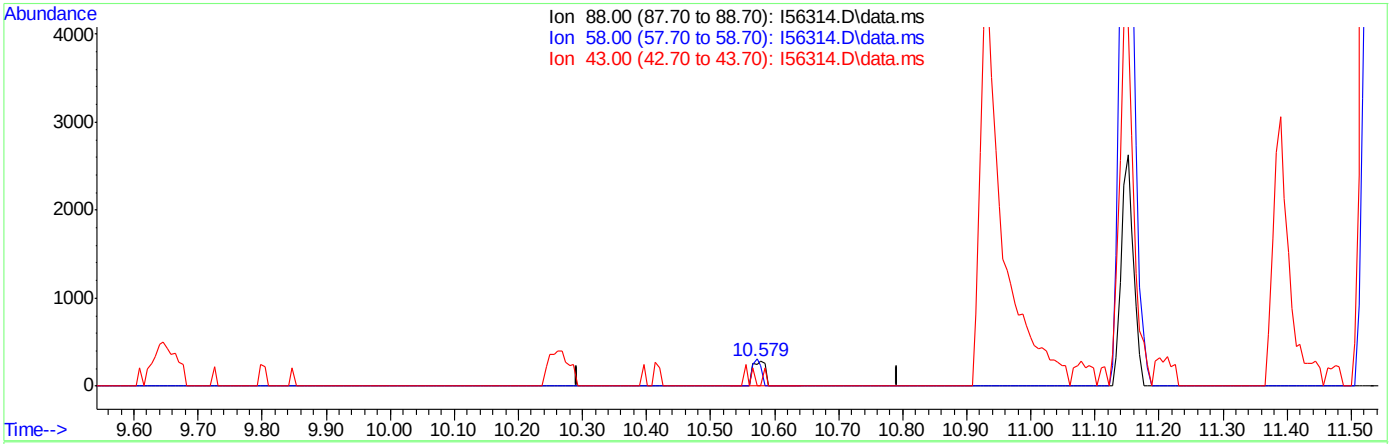
response 0

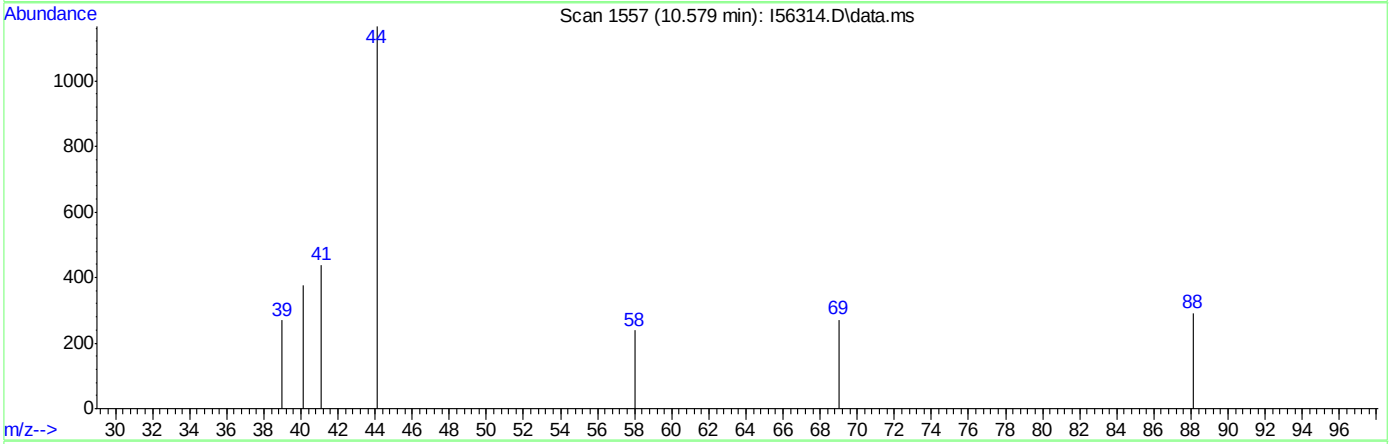
Ion	Exp%	Act%
88.00	100	0.00
58.00	90.10	0.00#
43.00	34.60	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56314.D
Acq On : 25 Jul 2018 3:14 pm
Operator : ANAJ
Sample : IC1683-1 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 26 07:25:58 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56314.D\data.ms

(112) 1,4-Dioxane

10.579min (+0.037) 7.69ug/L m

response 386

Ion	Exp%	Act%
88.00	100	100
58.00	90.10	82.13
43.00	34.60	0.00#
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:53:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.414	96	1174301	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	820971	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	420628	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.598	65	87673	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.085	113	302635	47.17	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.34%			
46) 1,2-Dichloroethane-d4	8.994	65	423232	51.72	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 103.44%			
57) Toluene-d8	11.152	98	1128905	50.44	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.88%			
79) 4-Bromofluorobenzene	13.353	174	326886	47.27	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 94.54%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.245	85	36189	5.66	ug/L	97
3) Chloromethane	2.525	50	49045	8.44	ug/L	98
4) 1,3-Butadiene	2.641	39	23478	5.78	ug/L	97
5) Vinyl Chloride	2.654	62	38854	6.87	ug/L	97
6) Bromomethane	3.105	94	21605	6.51	ug/L	95
7) Chloroethane	3.263	64	19183	9.42	ug/L	96
8) Trichlorofluoromethane	3.507	101	49582m	6.53	ug/L	
9) Ethyl Ether	3.922	59	33369	5.72	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.226	67	42909	5.47	ug/L	98
11) 1,1-Dichloroethene	4.220	61	53914	5.17	ug/L	97
12) Freon 113	4.318	101	32228	5.11	ug/L	93
13) Carbon Disulfide	4.263	76	83280	4.85	ug/L	97
14) Iodomethane	4.428	142	46277	4.60	ug/L	97
15) Allyl chloride	4.927	41	45160	6.40	ug/L	99
16) Methylene Chloride	5.098	49	59817	6.19	ug/L	97
17) Acetone	5.171	43	46414	24.97	ug/L	100
18) Methyl acetate	5.385	43	89659	19.26	ug/L	97
19) trans-1,2-Dichloroethene	5.360	61	52638	5.15	ug/L	97
20) Hexane	5.501	56	43867	6.40	ug/L	97
21) Methyl Tert Butyl Ether	5.549	73	63365	4.55	ug/L	95
22) Acetonitrile	5.927	41	27632	41.56	ug/L	99
23) Di-isopropyl ether	6.183	45	114930	5.79	ug/L	100
24) Chloroprene	6.311	53	51892	4.79	ug/L	97
25) 1,1-Dichloroethane	6.336	63	65042	5.37	ug/L	99
26) Acrylonitrile	6.427	53	46411	17.70	ug/L	96
27) ETBE	6.799	59	90663	4.73	ug/L	97
28) Vinyl acetate	6.787	43	309659	54.66	ug/L	85
29) cis-1,2-Dichloroethene	7.281	96	30784	4.91	ug/L	96
30) 2,2-Dichloropropane	7.457	77	24335	6.75	ug/L	98
31) Bromochloromethane	7.622	128	14916	4.72	ug/L	93
32) Cyclohexane	7.646	56	72666	5.78	ug/L	97
33) Chloroform	7.768	83	56462	5.20	ug/L	96
34) Ethyl acetate	8.012	43	140470	23.78	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:53:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.049	42	19250	5.09	ug/L		92
37) Carbon Tetrachloride	8.018	117	33200	4.50	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	43324	4.63	ug/L		98
39) 2-Butanone	8.329	43	56839	21.38	ug/L		97
40) 1,1-Dichloropropene	8.366	75	38852	4.95	ug/L		96
41) tert-Butyl formate	8.573	59	86111	66.05	ug/L	#	77
42) Propionitrile	8.805	54	48038	65.05	ug/L	#	1
43) Methacrylonitrile	8.841	41	205491	65.16	ug/L		98
44) Benzene	8.793	78	120244	5.28	ug/L		92
45) TAME	9.030	73	59527	4.41	ug/L		87
47) 1,2-Dichloroethane	9.103	62	52471	5.29	ug/L		99
48) Trichloroethene	9.658	95	31438	4.86	ug/L		98
49) Methylcyclohexane	9.652	83	50753	5.30	ug/L		96
50) Dibromomethane	10.158	93	18826	4.68	ug/L		96
51) 1,2-Dichloropropane	10.250	63	37354	5.24	ug/L		94
52) Bromodichloromethane	10.341	83	35181	4.72	ug/L		97
53) Methyl methacrylate	10.524	41	18906	3.89	ug/L		96
54) 2-Chloroethyl vinyl ether	10.920	63	103489	19.65	ug/L		97
55) cis-1,3-Dichloropropene	10.975	75	39389	4.50	ug/L		95
58) Toluene	11.201	91	125814	5.12	ug/L		98
59) 2-Nitropropane	11.384	41	24476	22.45	ug/L		97
60) 4-Methyl-2-pentanone	11.524	43	163864	31.44	ug/L		96
61) trans-1,3-Dichloropropene	11.926	75	2346	0.88	ug/L		93
62) Tetrachloroethene	11.554	166	32804	3.59	ug/L		97
63) Ethyl methacrylate	11.701	69	28466	4.15	ug/L	#	81
64) 1,1,2-Trichloroethane	11.701	83	23759	4.91	ug/L		95
65) Dibromochloromethane	11.865	129	26229	4.39	ug/L		99
66) 1,3-Dichloropropane	11.932	76	47108	5.05	ug/L		97
67) 1,2-Dibromoethane	12.060	107	24427	4.41	ug/L		98
68) 2-hexanone	12.213	43	136039	30.40	ug/L		84
69) 1-Chlorohexane	12.438	91	42077	5.14	ug/L		91
70) Ethylbenzene	12.481	91	145187	5.01	ug/L		99
71) Chlorobenzene	12.469	112	84152	5.09	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.517	131	24290	4.51	ug/L		100
73) m,p-Xylene	12.591	91	222431	10.48	ug/L		100
74) o-Xylene	12.914	91	106558	4.86	ug/L		99
75) Styrene	12.950	104	73864	4.55	ug/L		96
76) Bromoform	12.987	173	14480	4.05	ug/L		98
77) Isopropylbenzene	13.139	105	119732	4.92	ug/L		98
80) cis-1,4-Dichloro-2-butene	13.383	53	11645	5.89	ug/L		80
81) n-Propylbenzene	13.432	91	166867	5.39	ug/L		99
82) Bromobenzene	13.438	156	32353	4.94	ug/L		97
83) 1,1,2,2-Tetrachloroethane	13.475	83	37069	5.15	ug/L		97
84) 1,3,5-Trimethylbenzene	13.554	105	103578	5.15	ug/L		99
85) 2-Chlorotoluene	13.670	91	100346	4.88	ug/L		98
86) trans-1,4-Dichloro-2-B...	13.597	53	10530	5.49	ug/L	#	40
87) 1,2,3-Trichloropropane	13.578	110	10362	5.13	ug/L		97
88) Cyclohexanone	13.621	55	7399	30.23	ug/L		96
89) 4-Chlorotoluene	13.670	91	100346	5.16	ug/L		99
90) tert-Butylbenzene	13.785	91	63472	5.11	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:53:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

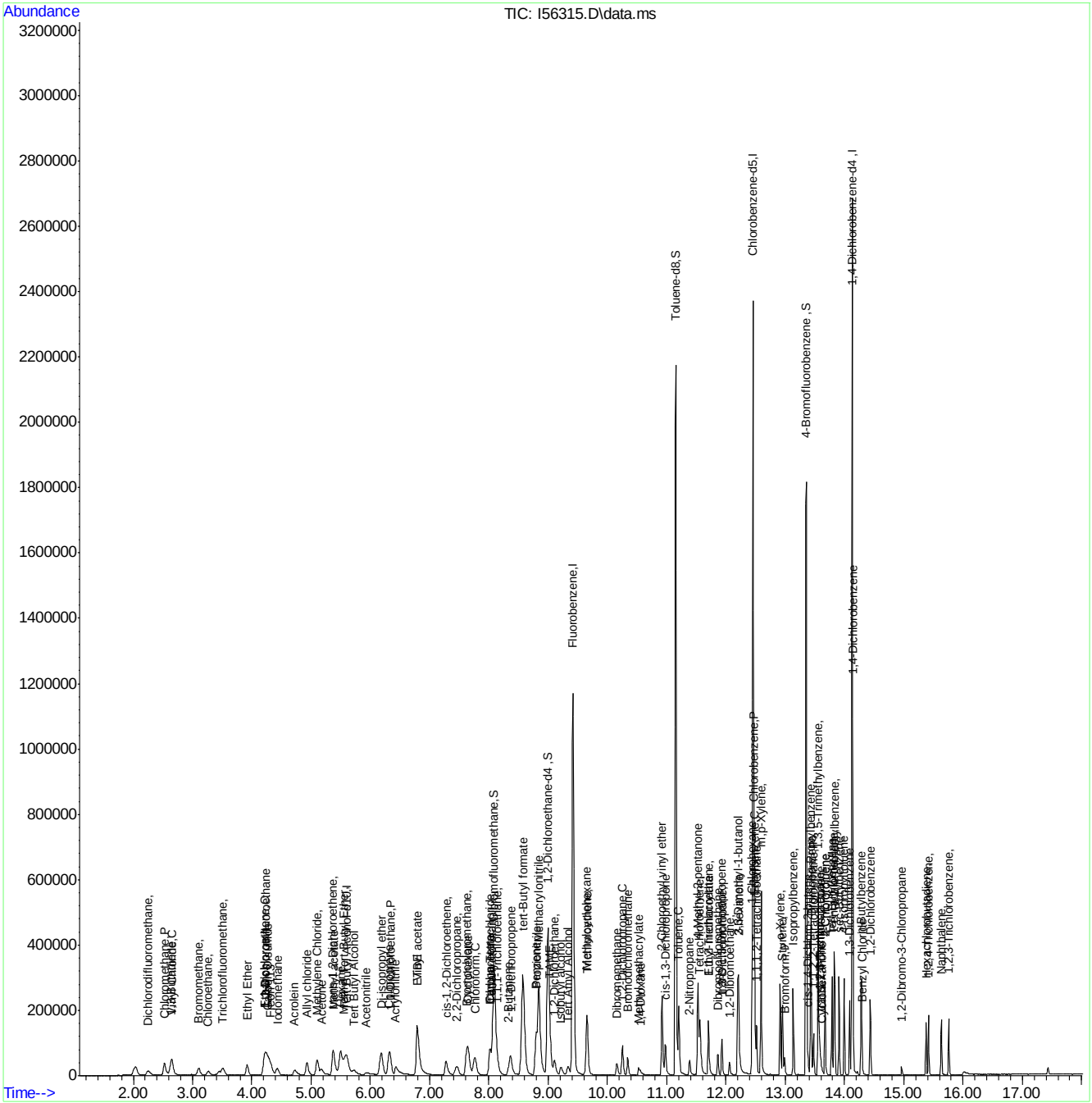
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	107541	5.15	ug/L		96
93) Pentachloroethane	13.822	167	15492	3.96	ug/L		87
94) sec-Butylbenzene	13.907	105	133807	5.29	ug/L		99
95) 4-Isopropyltoluene	13.993	119	105730	5.08	ug/L		99
96) 1,3-Dichlorobenzene	14.084	146	58728	4.87	ug/L		98
97) 1,4-Dichlorobenzene	14.139	146	66431	5.13	ug/L		89
98) n-Butylbenzene	14.285	92	59516	5.08	ug/L		95
99) Benzyl Chloride	14.298	126	4194	5.44	ug/L	#	43
100) 1,2-Dichlorobenzene	14.432	146	57770	4.81	ug/L		97
101) 1,2-Dibromo-3-Chloropr...	14.968	75	4634	3.90	ug/L		88
102) Hexachlorobutadiene	15.377	225	18366	4.56	ug/L		97
103) 1,2,4-Trichlorobenzene	15.419	180	35906	4.36	ug/L		95
104) Naphthalene	15.633	128	80065	3.85	ug/L		99
105) 1,2,3-Trichlorobenzene	15.761	180	34036	4.25	ug/L		98
107) Ethanol	4.220	45	6295m	122.47	ug/L		
108) Acrolein	4.714	56	32275	32.38	ug/L		94
109) Tert Butyl Alcohol	5.720	59	26996	47.00	ug/L		92
110) Isobutyl alcohol	9.213	43	19745	108.64	ug/L		95
111) Tert Amyl Alcohol	9.335	59	14861	43.64	ug/L	#	78
112) 1,4-Dioxane	10.554	88	4632	85.44	ug/L		95
113) 3,3-Dimethyl-1-butanol	12.200	57	139946	286.02	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:53:41 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number: VI1683-IC1683
Lab FileID: I56315.D
Injection Time: 07/25/18 15:37

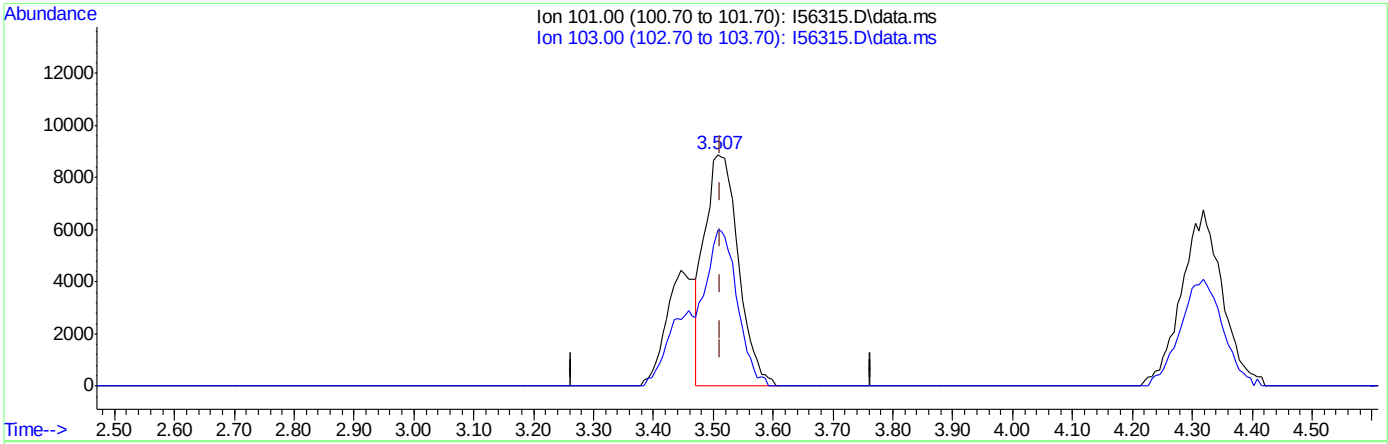
Method: SW846 8260B
Analyst approved: 07/26/18 08:26 Ana Jimenez
Supervisor approved: 07/31/18 15:11 Melissa Mangual

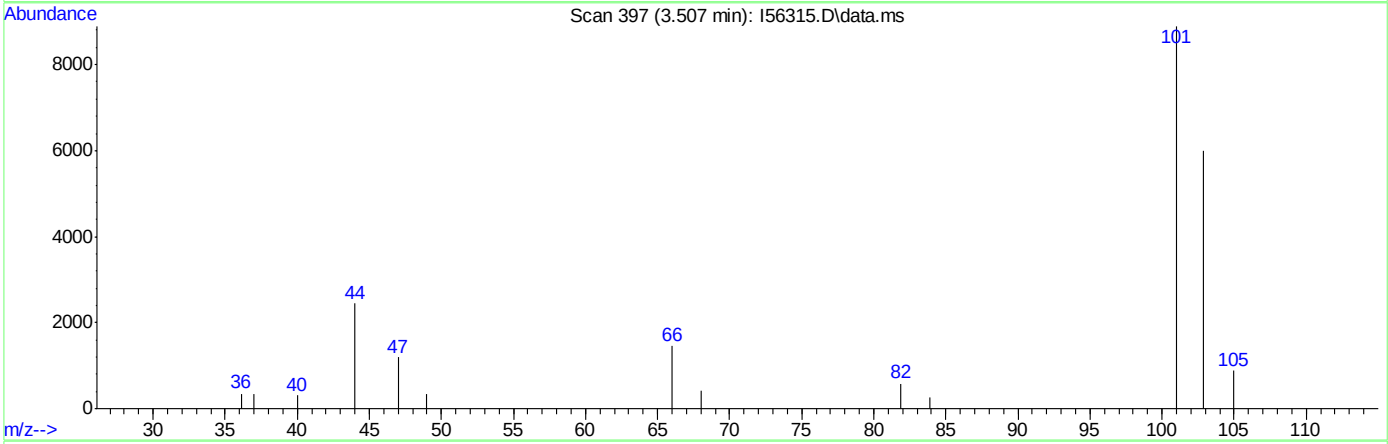
Parameter	CAS	Sig#	R.T. (min.)	Reason
Trichlorofluoromethane	75-69-4		3.51	Split peak
Ethyl Alcohol	64-17-5		4.22	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:26:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56315.D\data.ms

(8) Trichlorofluoromethane ( )

3.507min (-0.006) 4.59ug/L

response 34888

Ion	Exp%	Act%
101.00	100	100
103.00	63.30	67.57
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
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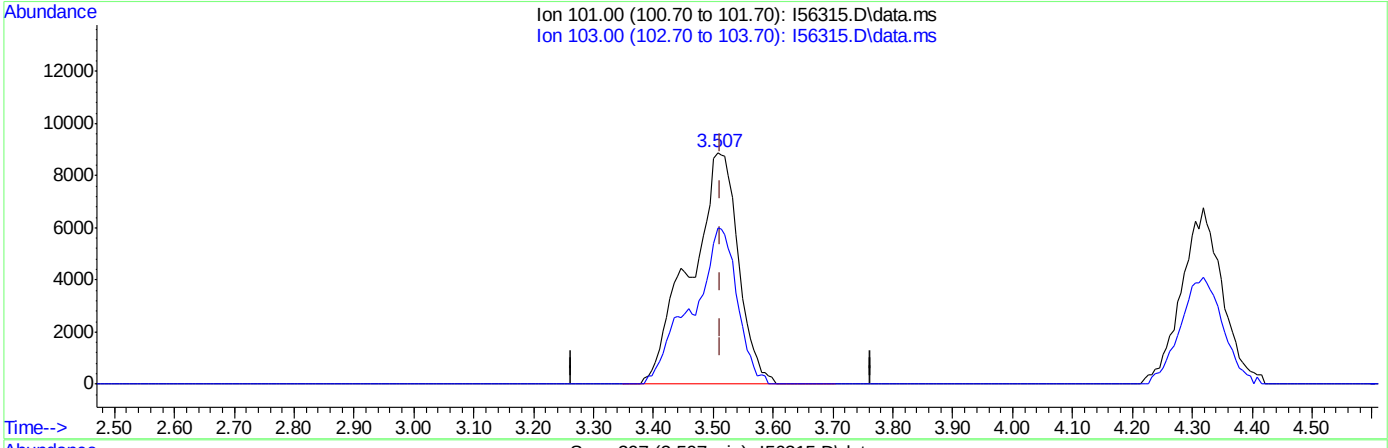
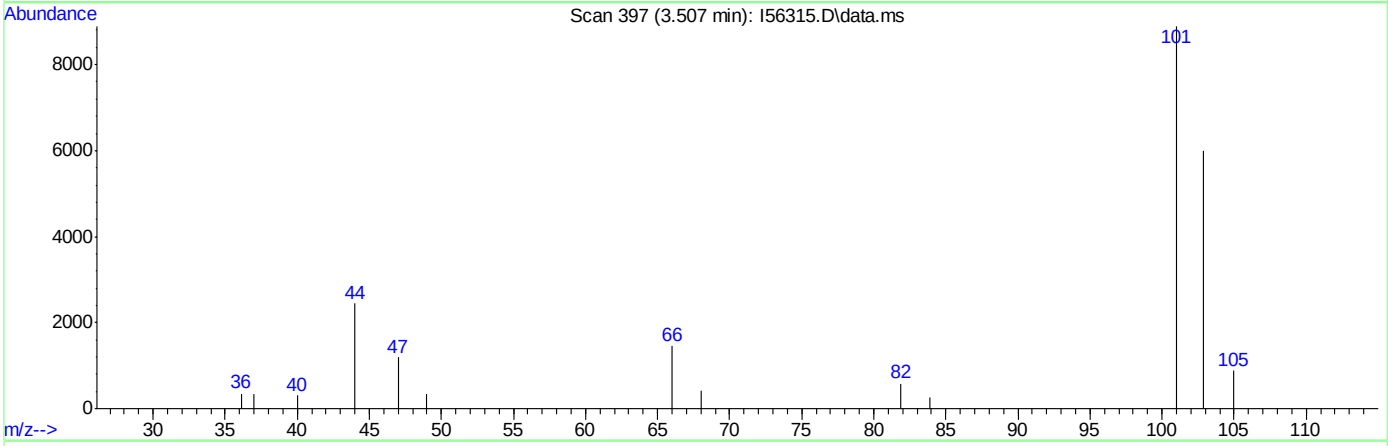




TIC: I56315.D\data.ms

(8) Trichlorofluoromethane ( )

3.507min (-0.006) 6.53ug/L m

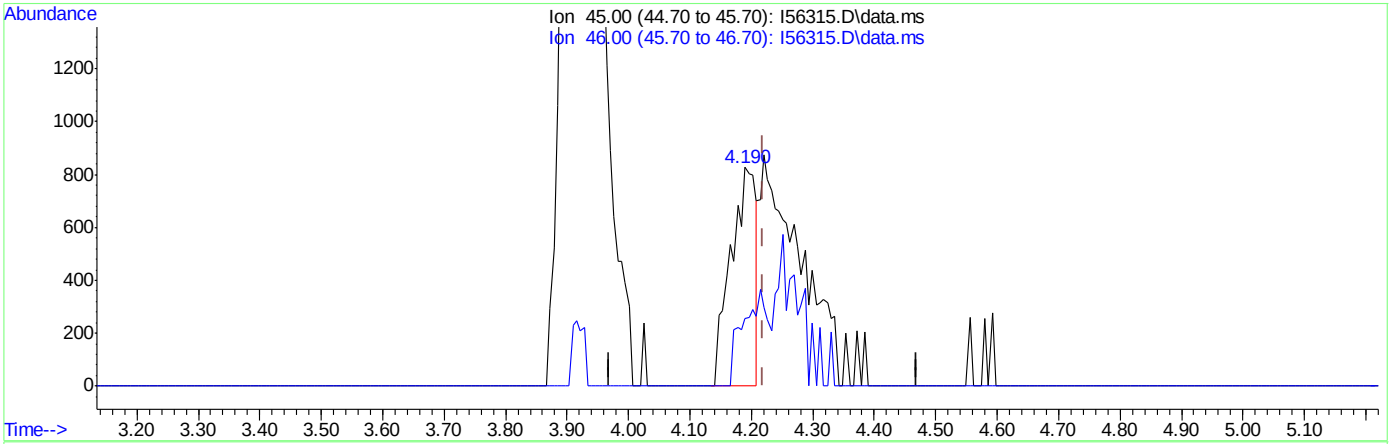
response 49582

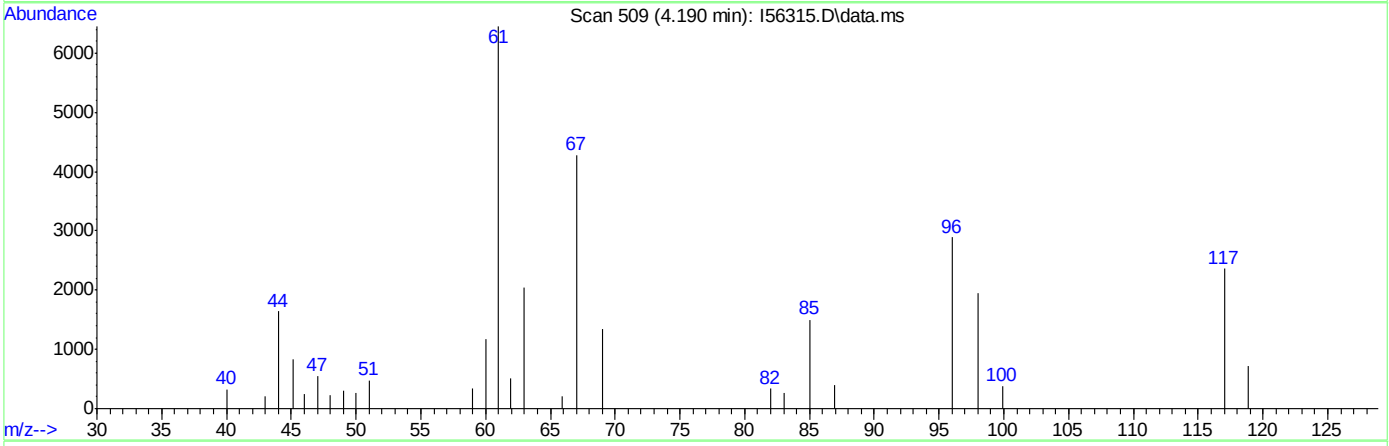
Ion	Exp%	Act%
101.00	100	100
103.00	63.30	67.57
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 26 07:26:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56315.D\data.ms

(107) Ethanol

4.190min (-0.030) 45.47ug/L

response 2337

Ion	Exp%	Act%
45.00	100	100
46.00	35.80	30.83
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56315.D
Acq On : 25 Jul 2018 3:37 pm
Operator : ANAJ
Sample : IC1683-2 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
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Quant Time: Jul 26 07:26:02 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
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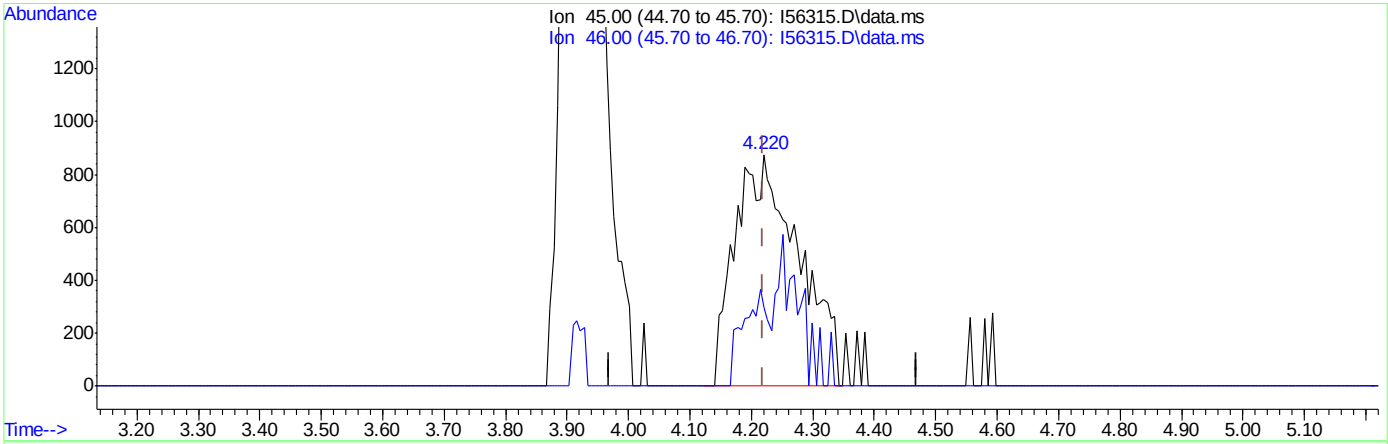
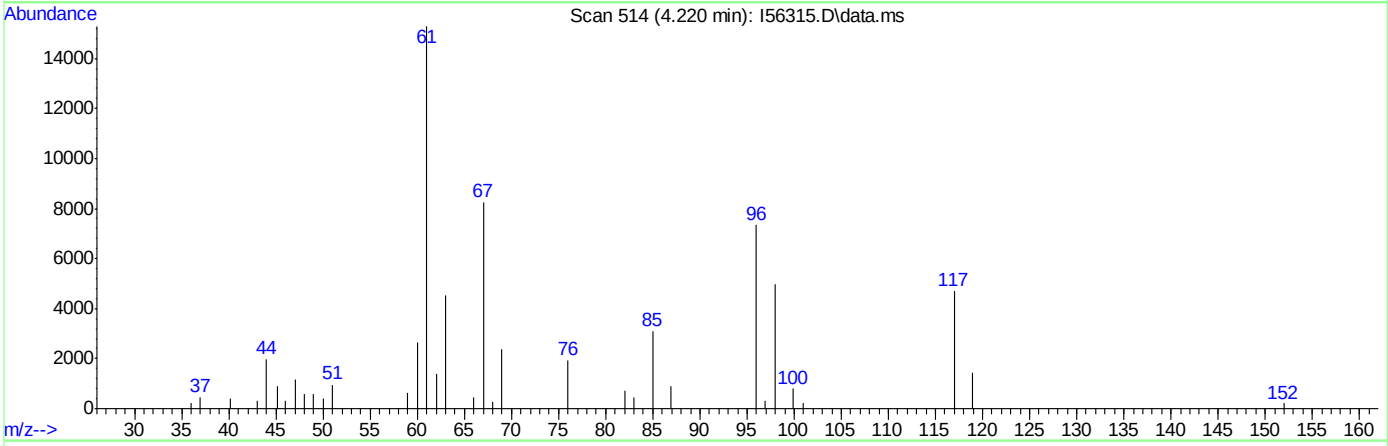
Response via : Initial Calibration





TIC: I56315.D\data.ms

(107) Ethanol

4.220min (+0.000) 122.47ug/L m

response 6295

Ion	Exp%	Act%
45.00	100	100
46.00	35.80	34.13
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:54:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1188171	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	827532	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	421155	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.604	65	93674	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	311075	47.92	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.84%			
46) 1,2-Dichloroethane-d4	8.994	65	425687	51.42	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.84%			
57) Toluene-d8	11.152	98	1146655	50.83	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 101.66%			
79) 4-Bromofluorobenzene	13.353	174	329891	47.65	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 95.30%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	65368	10.09	ug/L	94
3) Chloromethane	2.526	50	92568	15.74	ug/L	99
4) 1,3-Butadiene	2.635	39	42842	10.44	ug/L	96
5) Vinyl Chloride	2.660	62	72171	12.61	ug/L	98
6) Bromomethane	3.105	94	41522	12.37	ug/L	97
7) Chloroethane	3.269	64	32912	16.38	ug/L	95
8) Trichlorofluoromethane	3.513	101	88783	11.55	ug/L	99
9) Ethyl Ether	3.916	59	68894	11.68	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.227	67	79625	10.04	ug/L	93
11) 1,1-Dichloroethene	4.214	61	104999	9.95	ug/L	96
12) Freon 113	4.318	101	59534	9.33	ug/L	97
13) Carbon Disulfide	4.269	76	162464	9.27	ug/L	98
14) Iodomethane	4.428	142	89357	8.78	ug/L	99
15) Allyl chloride	4.928	41	89012	12.48	ug/L	98
16) Methylene Chloride	5.098	49	115428	11.80	ug/L	97
17) Acetone	5.165	43	95675	51.23	ug/L	100
18) Methyl acetate	5.373	43	212277	45.41	ug/L	98
19) trans-1,2-Dichloroethene	5.361	61	104902	10.15	ug/L	99
20) Hexane	5.495	56	82394	11.88	ug/L	99
21) Methyl Tert Butyl Ether	5.556	73	129199	9.17	ug/L	97
22) Acetonitrile	5.909	41	58883	88.49	ug/L	96
23) Di-isopropyl ether	6.184	45	232647	11.58	ug/L	99
24) Chloroprene	6.305	53	104050	9.52	ug/L	97
25) 1,1-Dichloroethane	6.336	63	127861	10.43	ug/L	99
26) Acrylonitrile	6.415	53	116807	44.09	ug/L	99
27) ETBE	6.799	59	189060	9.75	ug/L	99
28) Vinyl acetate	6.781	43	702335	108.00	ug/L	83
29) cis-1,2-Dichloroethene	7.275	96	61351	9.67	ug/L	99
30) 2,2-Dichloropropane	7.458	77	48978	12.54	ug/L	97
31) Bromochloromethane	7.622	128	29943	9.37	ug/L	96
32) Cyclohexane	7.641	56	140021	11.00	ug/L	95
33) Chloroform	7.769	83	108530	9.89	ug/L	97
34) Ethyl acetate	8.012	43	312124	52.66	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:54:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.049	42	42685	11.23	ug/L		96
37) Carbon Tetrachloride	8.019	117	63111	8.45	ug/L		98
38) 1,1,1-Trichloroethane	8.134	97	85033	8.97	ug/L		97
39) 2-Butanone	8.317	43	132290	49.51	ug/L		97
40) 1,1-Dichloropropene	8.366	75	76533	9.61	ug/L		98
41) tert-Butyl formate	8.573	59	191740	128.56	ug/L		91
42) Propionitrile	8.805	54	104197	139.45	ug/L	#	1
43) Methacrylonitrile	8.842	41	412253	129.19	ug/L		100
44) Benzene	8.793	78	234317	10.18	ug/L		96
45) TAME	9.024	73	123033	9.01	ug/L		93
47) 1,2-Dichloroethane	9.104	62	102766	10.25	ug/L		99
48) Trichloroethene	9.658	95	61269	9.37	ug/L		98
49) Methylcyclohexane	9.646	83	99174	10.23	ug/L		96
50) Dibromomethane	10.152	93	38503	9.47	ug/L		97
51) 1,2-Dichloropropane	10.250	63	74627	10.35	ug/L		96
52) Bromodichloromethane	10.341	83	72742	9.64	ug/L		97
53) Methyl methacrylate	10.524	41	45204	9.21	ug/L		96
54) 2-Chloroethyl vinyl ether	10.920	63	226330	42.92	ug/L		96
55) cis-1,3-Dichloropropene	10.975	75	83293	9.32	ug/L		96
58) Toluene	11.201	91	246293	9.94	ug/L		99
59) 2-Nitropropane	11.384	41	57350	51.64	ug/L		93
60) 4-Methyl-2-pentanone	11.524	43	340691	64.85	ug/L		98
61) trans-1,3-Dichloropropene	11.926	75	5255	1.91	ug/L	#	91
62) Tetrachloroethene	11.554	166	64653	7.07	ug/L		98
63) Ethyl methacrylate	11.701	69	61488	8.84	ug/L		91
64) 1,1,2-Trichloroethane	11.707	83	48277	9.90	ug/L		95
65) Dibromochloromethane	11.865	129	54367	8.95	ug/L		97
66) 1,3-Dichloropropane	11.932	76	94499	10.06	ug/L		99
67) 1,2-Dibromoethane	12.060	107	51606	9.25	ug/L		97
68) 2-hexanone	12.213	43	283655	62.89	ug/L		85
69) 1-Chlorohexane	12.444	91	82389	9.98	ug/L		96
70) Ethylbenzene	12.481	91	281342	9.64	ug/L		99
71) Chlorobenzene	12.469	112	160825	9.65	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.518	131	48327	8.91	ug/L		97
73) m,p-Xylene	12.591	91	431764	20.18	ug/L		99
74) o-Xylene	12.914	91	215543	9.76	ug/L		99
75) Styrene	12.950	104	149578	9.10	ug/L		97
76) Bromoform	12.987	173	30841	8.44	ug/L		98
77) Isopropylbenzene	13.139	105	237557	9.64	ug/L		100
80) cis-1,4-Dichloro-2-butene	13.383	53	22995	11.45	ug/L		86
81) n-Propylbenzene	13.432	91	325205	10.50	ug/L		98
82) Bromobenzene	13.438	156	62714	9.57	ug/L		100
83) 1,1,2,2-Tetrachloroethane	13.475	83	71819	9.96	ug/L		98
84) 1,3,5-Trimethylbenzene	13.554	105	206149	10.23	ug/L		99
85) 2-Chlorotoluene	13.670	91	195726	9.50	ug/L		98
86) trans-1,4-Dichloro-2-B...	13.597	53	22971	11.78	ug/L	#	55
87) 1,2,3-Trichloropropane	13.578	110	19202	9.50	ug/L		94
88) Cyclohexanone	13.621	55	15216	62.08	ug/L		97
89) 4-Chlorotoluene	13.670	91	195726	10.05	ug/L		99
90) tert-Butylbenzene	13.786	91	125125	10.06	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:54:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

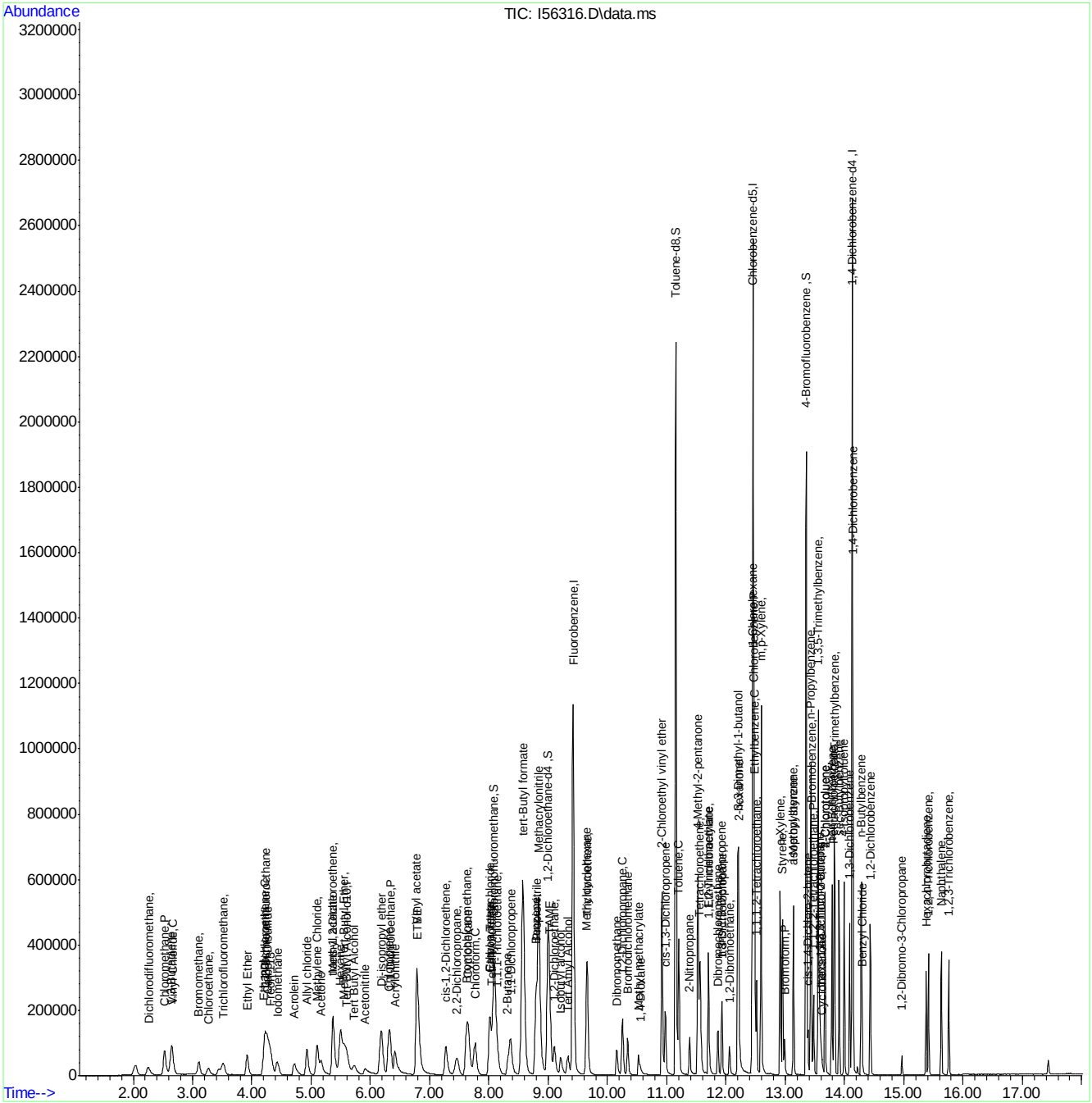
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
91) a-Methyl styrene	13.133	118	1605	20.99	ug/L	#	1
92) 1,2,4-Trimethylbenzene	13.828	105	214701	10.26	ug/L		97
93) Pentachloroethane	13.822	167	30638	7.83	ug/L		90
94) sec-Butylbenzene	13.908	105	261171	10.31	ug/L		99
95) 4-Isopropyltoluene	13.993	119	211670	10.15	ug/L		98
96) 1,3-Dichlorobenzene	14.084	146	116318	9.63	ug/L		98
97) 1,4-Dichlorobenzene	14.139	146	128277	9.89	ug/L		94
98) n-Butylbenzene	14.286	92	119746	10.22	ug/L		94
99) Benzyl Chloride	14.298	126	9746	11.10	ug/L	#	47
100) 1,2-Dichlorobenzene	14.432	146	112915	9.40	ug/L		98
101) 1,2-Dibromo-3-Chloropr...	14.968	75	9836	8.20	ug/L		86
102) Hexachlorobutadiene	15.377	225	35925	8.92	ug/L		96
103) 1,2,4-Trichlorobenzene	15.420	180	73365	8.91	ug/L		95
104) Naphthalene	15.633	128	174701	8.40	ug/L		99
105) 1,2,3-Trichlorobenzene	15.761	180	70673	8.82	ug/L		98
107) Ethanol	4.202	45	14189m	258.36	ug/L		
108) Acrolein	4.708	56	71951	67.56	ug/L		99
109) Tert Butyl Alcohol	5.726	59	59835	97.50	ug/L		92
110) Isobutyl alcohol	9.213	43	44980	231.62	ug/L		99
111) Tert Amyl Alcohol	9.329	59	34243	94.11	ug/L		90
112) 1,4-Dioxane	10.555	88	10606	183.47	ug/L		91
113) 3,3-Dimethyl-1-butanol	12.201	57	298636	571.24	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:54:36 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

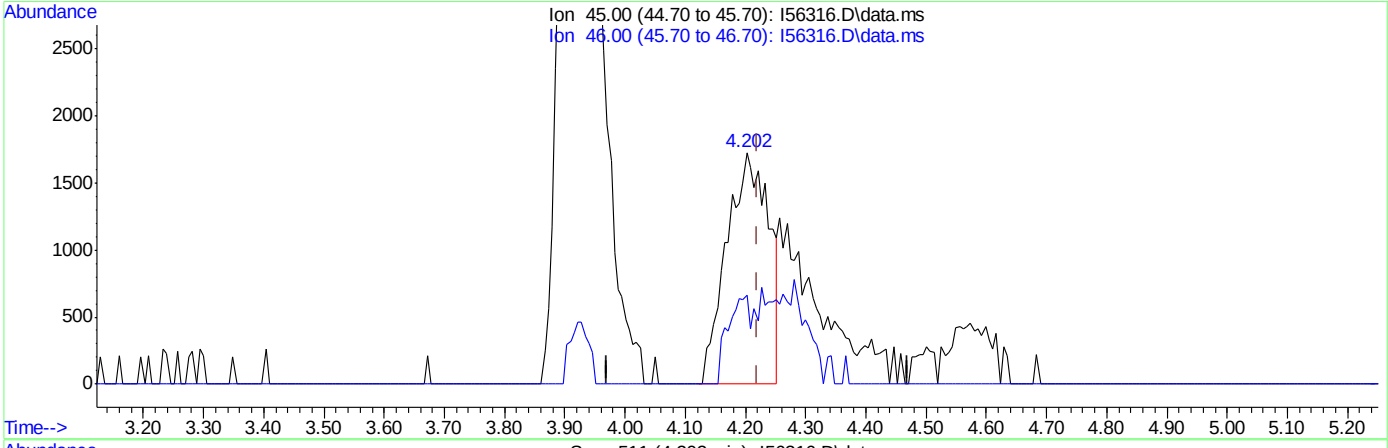
Sample Number: VI1683-IC1683
Lab FileID: I56316.D
Injection Time: 07/25/18 16:01
Method: SW846 8260B
Analyst approved: 07/26/18 08:26 Ana Jimenez
Supervisor approved: 07/31/18 15:11 Melissa Mangual

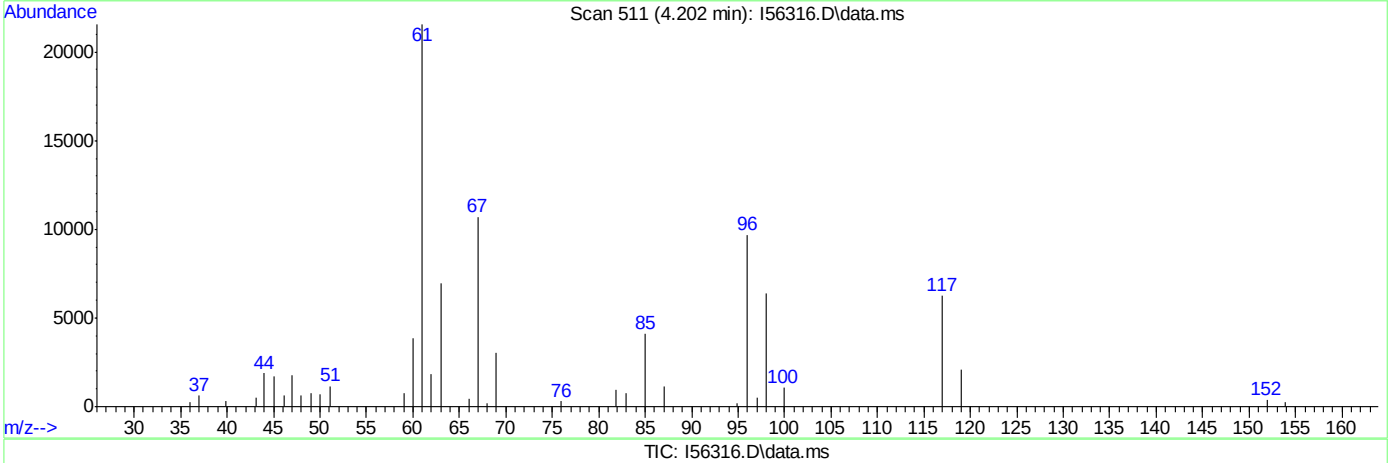
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		4.20	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:26:05 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56316.D\data.ms

(107) Ethanol

4.202min (-0.018) 151.55ug/L

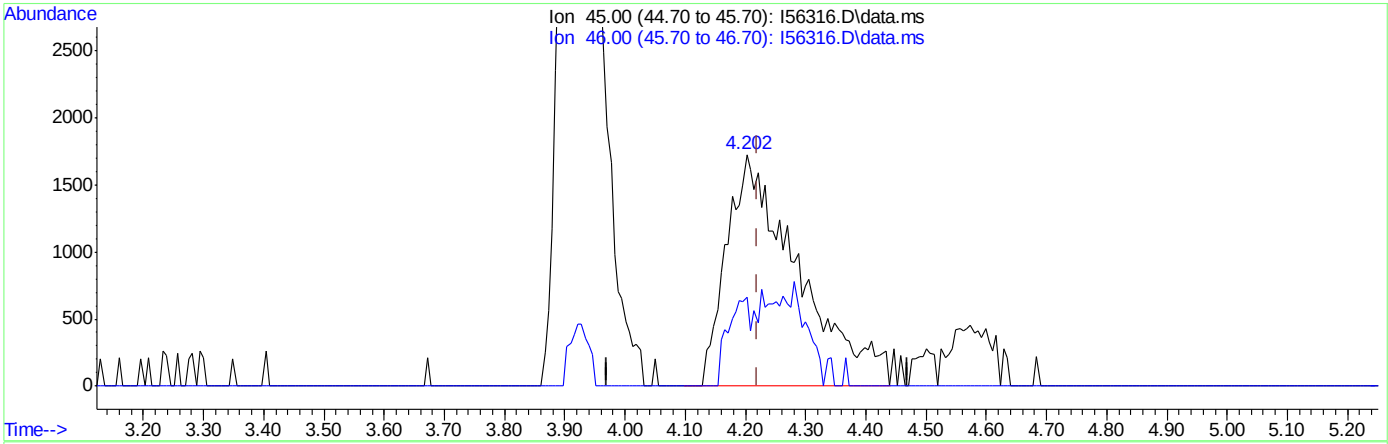
response 8323

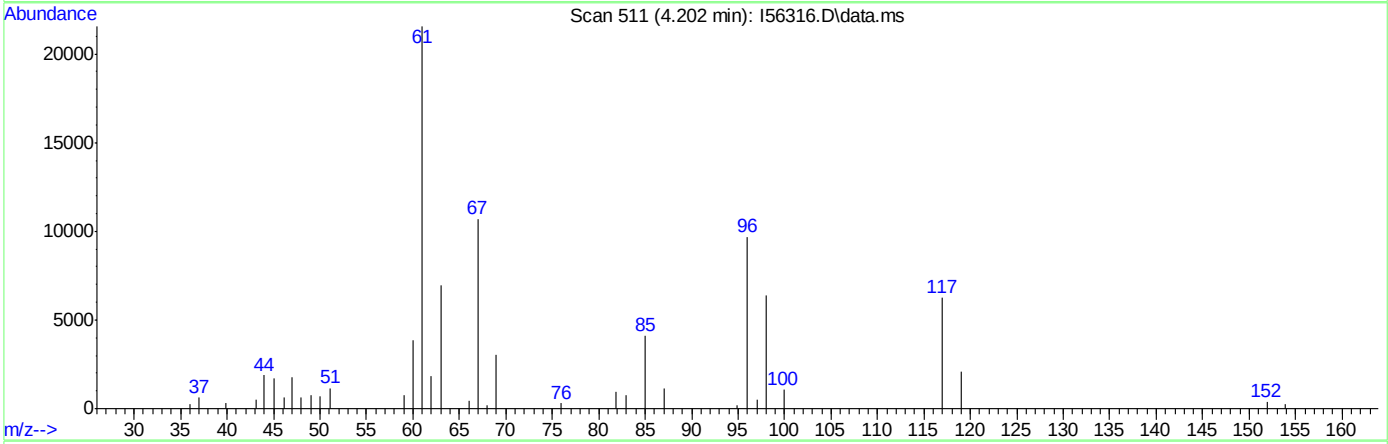
Ion	Exp%	Act%
45.00	100	100
46.00	35.80	38.45
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56316.D
Acq On : 25 Jul 2018 4:01 pm
Operator : ANAJ
Sample : IC1683-3 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 26 07:26:05 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56316.D\data.ms

(107) Ethanol

4.202min (-0.018) 258.36ug/L m

response 14189

Ion	Exp%	Act%
45.00	100	100
46.00	35.80	38.45
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 08:04:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1187789	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	833915	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	422900	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.610	65	95487	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	315544	48.62	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.24%			
46) 1,2-Dichloroethane-d4	8.994	65	423727	51.20	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.40%			
57) Toluene-d8	11.152	98	1144174	50.33	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.66%			
79) 4-Bromofluorobenzene	13.353	174	336250	48.37	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.74%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	171014	26.32	ug/L	95
3) Chloromethane	2.532	50	228004	38.77	ug/L	100
4) 1,3-Butadiene	2.641	39	118335	29.08	ug/L	96
5) Vinyl Chloride	2.666	62	194288	33.96	ug/L	100
6) Bromomethane	3.105	94	96545	28.76	ug/L	99
7) Chloroethane	3.269	64	60507	32.00	ug/L	97
8) Trichlorofluoromethane	3.513	101	236325	30.75	ug/L	98
9) Ethyl Ether	3.922	59	175010	29.67	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.239	67	210096	26.49	ug/L	99
11) 1,1-Dichloroethene	4.220	61	279025	26.44	ug/L	97
12) Freon 113	4.318	101	155288	24.36	ug/L	98
13) Carbon Disulfide	4.269	76	444363	24.70	ug/L	98
14) Iodomethane	4.434	142	238944	23.49	ug/L	99
15) Allyl chloride	4.928	41	244771	34.32	ug/L	98
16) Methylene Chloride	5.104	49	278989	28.54	ug/L	100
17) Acetone	5.165	43	252625	138.61	ug/L	100
18) Methyl acetate	5.373	43	607770	133.42	ug/L	99
19) trans-1,2-Dichloroethene	5.360	61	277830	26.88	ug/L	99
20) Hexane	5.495	56	214757	30.98	ug/L	98
21) Methyl Tert Butyl Ether	5.555	73	347014	24.65	ug/L	98
22) Acetonitrile	5.891	41	179052	282.01	ug/L	100
23) Di-isopropyl ether	6.183	45	630130	31.36	ug/L	98
24) Chloroprene	6.305	53	295165	27.39	ug/L	99
25) 1,1-Dichloroethane	6.336	63	329776	26.91	ug/L	99
26) Acrylonitrile	6.397	53	350191	132.74	ug/L	99
27) ETBE	6.805	59	514679	26.55	ug/L	99
28) Vinyl acetate	6.775	43	1973067	236.24	ug/L	82
29) cis-1,2-Dichloroethene	7.269	96	161786	25.51	ug/L	95
30) 2,2-Dichloropropane	7.458	77	142755	30.38	ug/L	98
31) Bromochloromethane	7.610	128	78826	24.66	ug/L	97
32) Cyclohexane	7.653	56	377491	29.66	ug/L	100
33) Chloroform	7.768	83	278697	25.40	ug/L	98
34) Ethyl acetate	8.000	43	864970	150.14	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 08:04:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.037	42	110528m	29.77	ug/L		
37) Carbon Tetrachloride	8.024	117	172593	23.10	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	231376	24.43	ug/L		97
39) 2-Butanone	8.311	43	368463	141.13	ug/L		100
40) 1,1-Dichloropropene	8.360	75	210697	26.16	ug/L		99
41) tert-Butyl formate	8.579	59	573132	294.26	ug/L	#	80
42) Propionitrile	8.793	54	278427m	372.74	ug/L		
43) Methacrylonitrile	8.835	41	1072501	336.21	ug/L		99
44) Benzene	8.793	78	606413	26.35	ug/L		100
45) TAME	9.030	73	342268	25.08	ug/L		97
47) 1,2-Dichloroethane	9.104	62	262623	26.20	ug/L		99
48) Trichloroethene	9.658	95	161835	24.75	ug/L		99
49) Methylcyclohexane	9.652	83	266657	27.51	ug/L		98
50) Dibromomethane	10.146	93	101719	25.02	ug/L		99
51) 1,2-Dichloropropane	10.250	63	198340	27.51	ug/L		98
52) Bromodichloromethane	10.341	83	198642	26.35	ug/L		99
53) Methyl methacrylate	10.512	41	132963	27.38	ug/L		98
54) 2-Chloroethyl vinyl ether	10.914	63	613040	120.50	ug/L		97
55) cis-1,3-Dichloropropene	10.975	75	241610	26.22	ug/L		99
58) Toluene	11.201	91	644416	25.80	ug/L		100
59) 2-Nitropropane	11.384	41	173832	150.08	ug/L		98
60) 4-Methyl-2-pentanone	11.524	43	891306	168.36	ug/L		98
61) trans-1,3-Dichloropropene	11.926	75	13809	4.65	ug/L		97
62) Tetrachloroethene	11.554	166	173745	19.40	ug/L		99
63) Ethyl methacrylate	11.701	69	181372	25.40	ug/L		90
64) 1,1,2-Trichloroethane	11.701	83	125040	25.45	ug/L		97
65) Dibromochloromethane	11.859	129	151361	24.08	ug/L		98
66) 1,3-Dichloropropane	11.926	76	249441	26.35	ug/L		97
67) 1,2-Dibromoethane	12.054	107	140147	24.93	ug/L		97
68) 2-hexanone	12.207	43	749583	164.91	ug/L		97
69) 1-Chlorohexane	12.438	91	217455	26.14	ug/L		99
70) Ethylbenzene	12.481	91	748561	25.44	ug/L		99
71) Chlorobenzene	12.469	112	415841	24.76	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.518	131	133450	24.41	ug/L		99
73) m,p-Xylene	12.591	91	1155600	53.60	ug/L		100
74) o-Xylene	12.914	91	588232	26.42	ug/L		99
75) Styrene	12.950	104	420727	25.04	ug/L		99
76) Bromoform	12.987	173	89793	23.35	ug/L		99
77) Isopropylbenzene	13.133	105	649513	25.78	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.377	53	67861	31.92	ug/L		85
81) n-Propylbenzene	13.432	91	879177	28.26	ug/L		99
82) Bromobenzene	13.438	156	166446	25.30	ug/L		99
83) 1,1,2,2-Tetrachloroethane	13.475	83	189353	26.15	ug/L		100
84) 1,3,5-Trimethylbenzene	13.554	105	560790	27.72	ug/L		100
85) 2-Chlorotoluene	13.670	91	524217	25.35	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.597	53	65548	31.94	ug/L	#	65
87) 1,2,3-Trichloropropane	13.578	110	51940	25.58	ug/L		97
88) Cyclohexanone	13.621	55	43986	178.72	ug/L		98
89) 4-Chlorotoluene	13.670	91	524217	26.80	ug/L		100
90) tert-Butylbenzene	13.786	91	339960	27.22	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 08:04:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

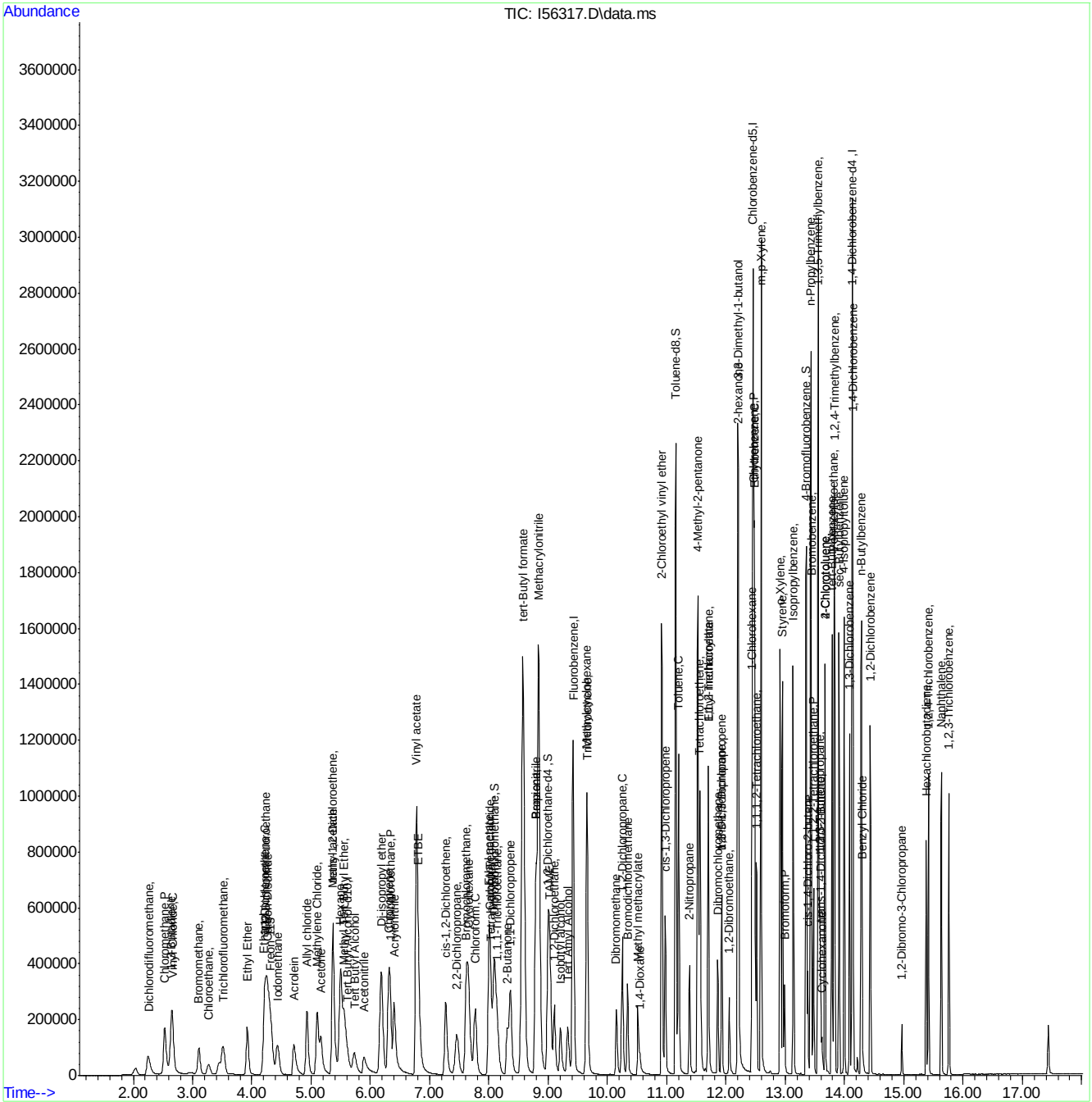
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	577530	27.49	ug/L		97
93) Pentachloroethane	13.822	167	86505	22.08	ug/L		87
94) sec-Butylbenzene	13.908	105	708570	27.84	ug/L		100
95) 4-Isopropyltoluene	13.993	119	580069	27.71	ug/L		100
96) 1,3-Dichlorobenzene	14.084	146	309758	25.53	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	331259	25.44	ug/L		99
98) n-Butylbenzene	14.285	92	333353	28.33	ug/L		92
99) Benzyl Chloride	14.298	126	36846	29.89	ug/L	#	25
100) 1,2-Dichlorobenzene	14.432	146	302159	25.04	ug/L		98
101) 1,2-Dibromo-3-Chloropr...	14.968	75	29930	24.11	ug/L		88
102) Hexachlorobutadiene	15.377	225	99788	24.67	ug/L		99
103) 1,2,4-Trichlorobenzene	15.413	180	203788	24.63	ug/L		99
104) Naphthalene	15.633	128	506198	24.23	ug/L		100
105) 1,2,3-Trichlorobenzene	15.761	180	188794	23.46	ug/L		97
107) Ethanol	4.208	45	35828	639.98	ug/L		92
108) Acrolein	4.708	56	195542	180.13	ug/L		99
109) Tert Butyl Alcohol	5.732	59	158363	253.14	ug/L		88
110) Isobutyl alcohol	9.207	43	134984	681.90	ug/L		97
111) Tert Amyl Alcohol	9.329	59	104219	280.99	ug/L		99
112) 1,4-Dioxane	10.548	88	32745	559.90	ug/L		94
113) 3,3-Dimethyl-1-butanol	12.201	57	854393	1603.28	ug/L		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 08:04:09 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

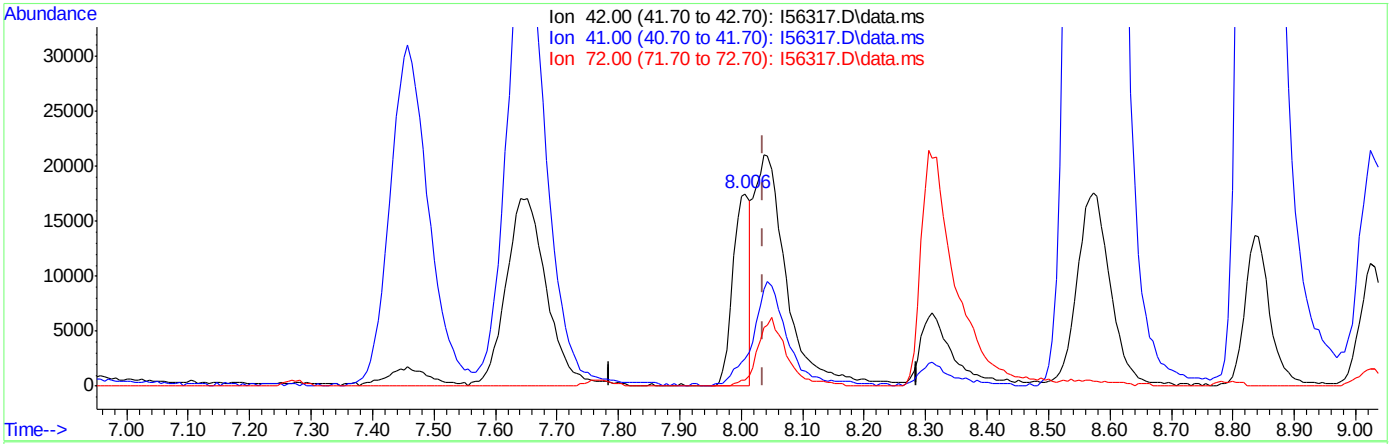
Sample Number: VI1683-IC1683
Lab FileID: I56317.D
Injection Time: 07/25/18 16:25
Method: SW846 8260B
Analyst approved: 07/26/18 08:26 Ana Jimenez
Supervisor approved: 07/31/18 15:11 Melissa Mangual

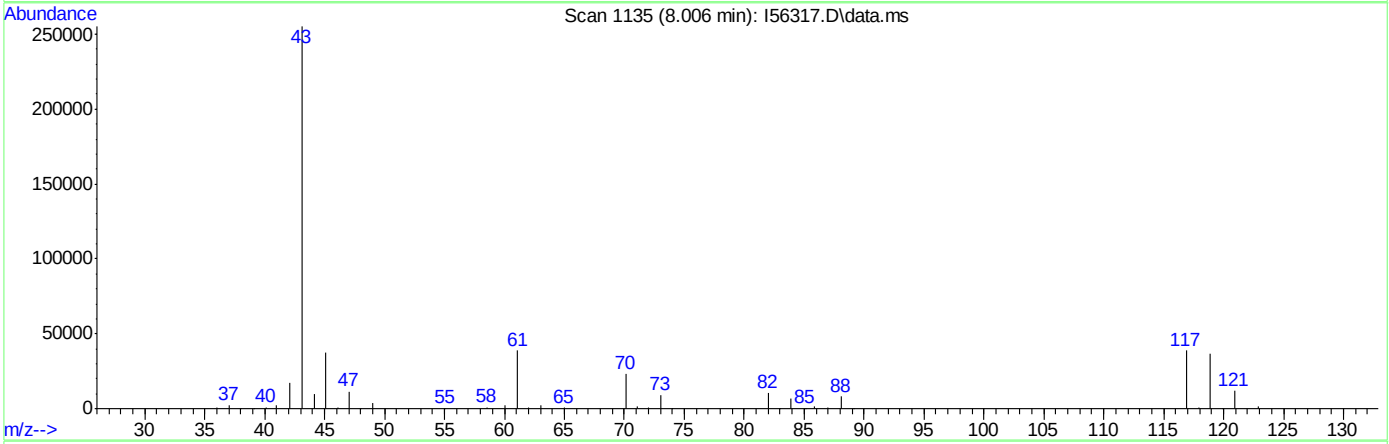
Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrahydrofuran	109-99-9		8.04	Missed peak
Propionitrile	107-12-0		8.79	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 07:54:55 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56317.D\data.ms

(35) Tetrahydrofuran

8.006min (-0.030) 8.74ug/L

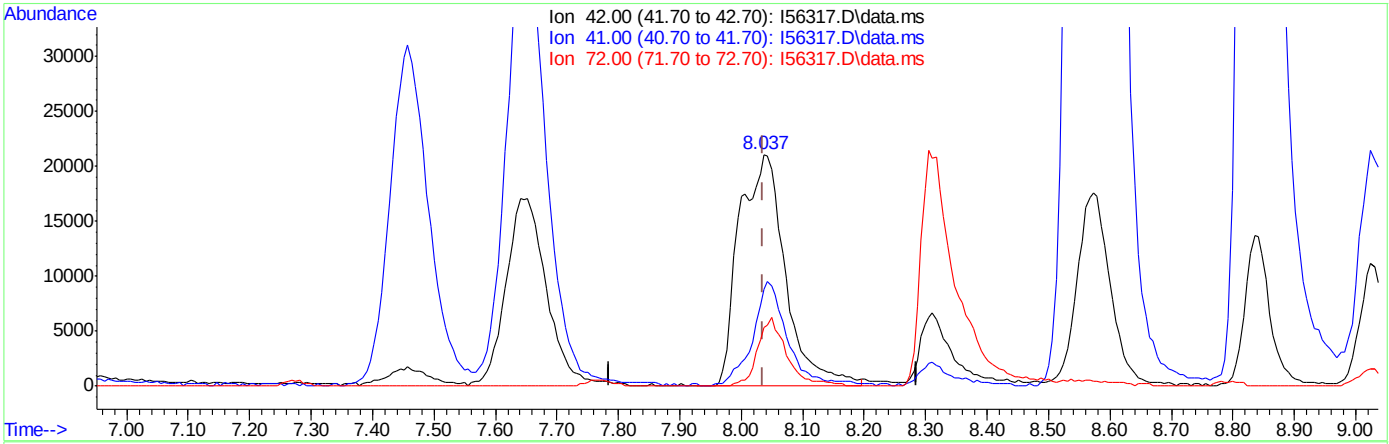
response 33296

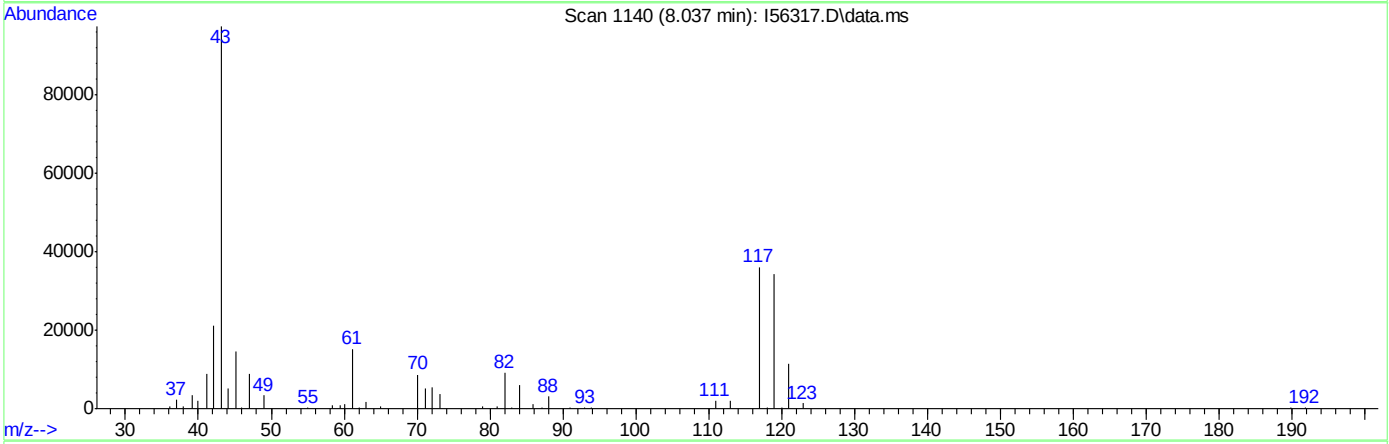
Ion	Exp%	Act%
42.00	100	100
41.00	43.50	14.08#
72.00	26.50	2.93#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 07:54:55 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56317.D\data.ms

(35) Tetrahydrofuran

8.037min (+0.000) 29.77ug/L m

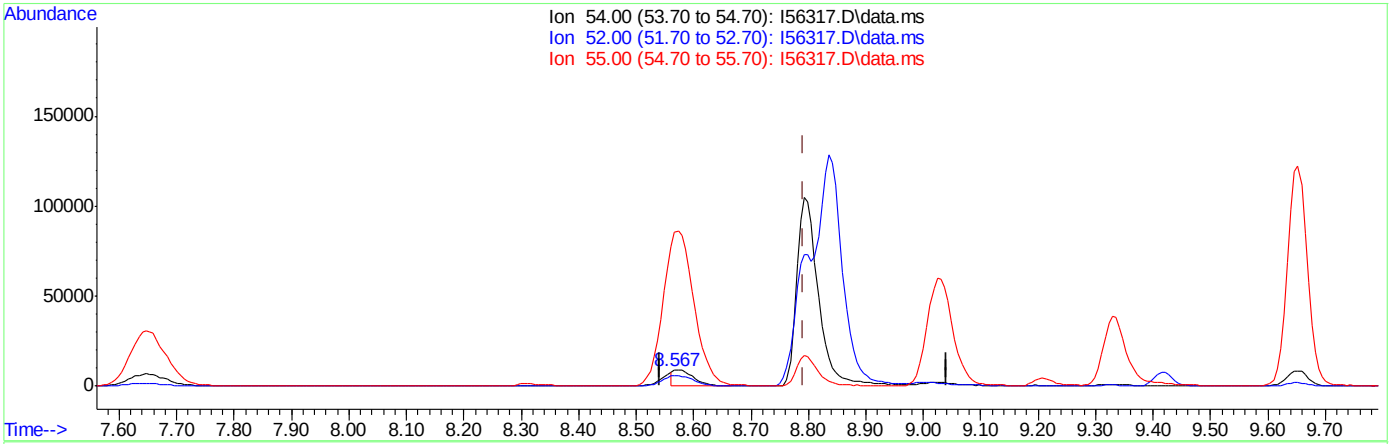
response 110528

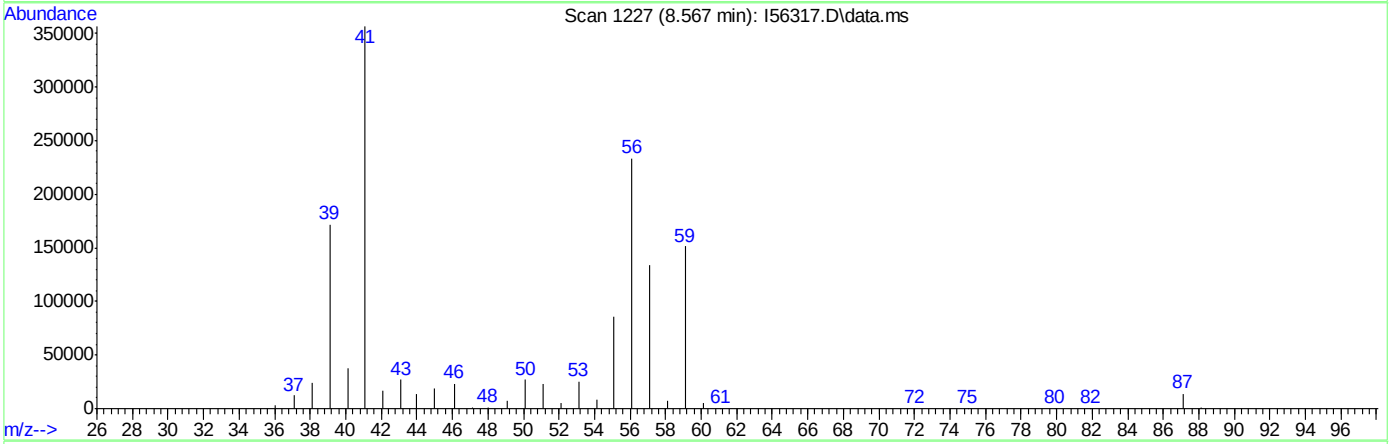
Ion	Exp%	Act%
42.00	100	100
41.00	43.50	41.79
72.00	26.50	25.42
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 07:54:55 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56317.D\data.ms

(42) Propionitrile

8.567min (-0.225) 28.82ug/L

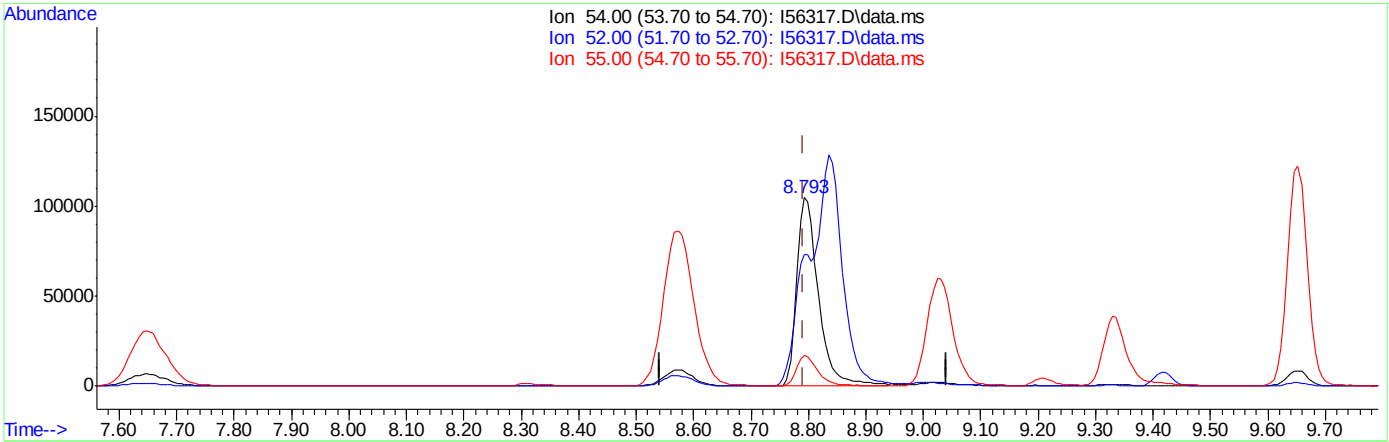
response 21529

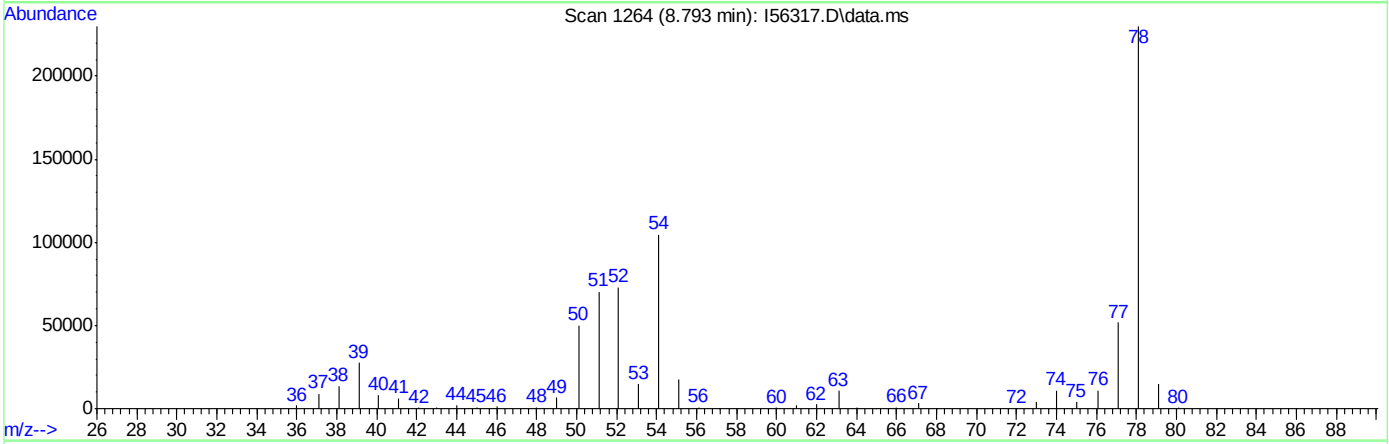
Ion	Exp%	Act%
54.00	100	100
52.00	72.00	62.57
55.00	936.40	944.20
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56317.D
Acq On : 25 Jul 2018 4:25 pm
Operator : ANAJ
Sample : IC1683-4 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 26 07:54:55 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56317.D\data.ms

(42) Propionitrile

8.793min (+0.001) 372.74ug/L m

response 278427

Ion	Exp%	Act%
54.00	100	100
52.00	72.00	69.88
55.00	936.40	16.59#
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 07/31/18 15:11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.420	96	1197770	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	847395	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	427469	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.622	65	101391	250.00	ug/L	0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.091	113	320406	48.96	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.92%			
46) 1,2-Dichloroethane-d4	9.000	65	426438	51.10	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.20%			
57) Toluene-d8	11.152	98	1161852	50.30	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 100.60%			
79) 4-Bromofluorobenzene	13.353	174	339161	48.26	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 96.52%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	269748	41.02	ug/L	99
3) Chloromethane	2.538	50	349931	59.01	ug/L	100
4) 1,3-Butadiene	2.647	39	207338	51.00	ug/L	94
5) Vinyl Chloride	2.672	62	316050	54.79	ug/L	99
6) Bromomethane	3.111	94	152715	45.12	ug/L	98
7) Chloroethane	3.275	64	80260	44.26	ug/L	95
8) Trichlorofluoromethane	3.519	101	341564	44.07	ug/L	100
9) Ethyl Ether	3.928	59	282284	47.46	ug/L	100
10) 1,2-Dichlorotrifluoroe...	4.239	67	333047	41.64	ug/L	99
11) 1,1-Dichloroethene	4.226	61	455426	42.79	ug/L	98
12) Freon 113	4.324	101	251148	39.06	ug/L	99
13) Carbon Disulfide	4.275	76	737059	39.62	ug/L	98
14) Iodomethane	4.434	142	385865	37.61	ug/L	99
15) Allyl chloride	4.934	41	406190	56.48	ug/L	100
16) Methylene Chloride	5.104	49	443311	44.97	ug/L	98
17) Acetone	5.165	43	426831	238.88	ug/L	99
18) Methyl acetate	5.372	43	1005514	224.94	ug/L	100
19) trans-1,2-Dichloroethene	5.360	61	453662	43.53	ug/L	99
20) Hexane	5.500	56	334136	47.80	ug/L	97
21) Methyl Tert Butyl Ether	5.561	73	571827	40.28	ug/L	95
22) Acetonitrile	5.885	41	302092	498.44	ug/L	98
23) Di-isopropyl ether	6.183	45	1019299	50.31	ug/L	100
24) Chloroprene	6.311	53	483479	45.10	ug/L	98
25) 1,1-Dichloroethane	6.336	63	532201	43.07	ug/L	100
26) Acrylonitrile	6.397	53	598041	225.71	ug/L	99
27) ETBE	6.799	59	843810	43.17	ug/L	99
28) Vinyl acetate	6.775	43	3172433	326.06	ug/L	82
29) cis-1,2-Dichloroethene	7.275	96	260142	40.68	ug/L	99
30) 2,2-Dichloropropane	7.464	77	238030	44.35	ug/L	97
31) Bromochloromethane	7.616	128	127605	39.59	ug/L	96
32) Cyclohexane	7.646	56	606813	47.29	ug/L	98
33) Chloroform	7.774	83	447448	40.43	ug/L	98
34) Ethyl acetate	8.000	43	1401056	248.30	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.037	42	178761	48.90	ug/L		95
37) Carbon Tetrachloride	8.024	117	282742	37.53	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	381586	39.95	ug/L		99
39) 2-Butanone	8.311	43	618739	241.07	ug/L		99
40) 1,1-Dichloropropene	8.366	75	339085	41.32	ug/L		99
41) tert-Butyl formate	8.579	59	1052189	442.70	ug/L	#	70
42) Propionitrile	8.793	54	460083	610.80	ug/L	#	1
43) Methacrylonitrile	8.841	41	1714141	532.88	ug/L		99
44) Benzene	8.793	78	962873	41.49	ug/L		99
45) TAME	9.030	73	565392	41.09	ug/L		95
47) 1,2-Dichloroethane	9.103	62	415956	41.15	ug/L		99
48) Trichloroethene	9.658	95	258338	39.18	ug/L		99
49) Methylcyclohexane	9.652	83	431420	44.14	ug/L		97
50) Dibromomethane	10.146	93	162965	39.75	ug/L		99
51) 1,2-Dichloropropane	10.250	63	317247	43.64	ug/L		99
52) Bromodichloromethane	10.341	83	321893	42.34	ug/L		99
53) Methyl methacrylate	10.512	41	229558	47.41	ug/L		100
54) 2-Chloroethyl vinyl ether	10.914	63	1009003	204.72	ug/L		99
55) cis-1,3-Dichloropropene	10.975	75	398548	41.74	ug/L		99
58) Toluene	11.201	91	1020914	40.22	ug/L		99
59) 2-Nitropropane	11.383	41	289107	238.42	ug/L		98
60) 4-Methyl-2-pentanone	11.524	43	1439325	267.56	ug/L		99
61) trans-1,3-Dichloropropene	11.926	75	21044	6.65	ug/L		98
62) Tetrachloroethene	11.554	166	292334	33.20	ug/L		97
63) Ethyl methacrylate	11.701	69	307851	41.67	ug/L		91
64) 1,1,2-Trichloroethane	11.701	83	195905	39.24	ug/L		99
65) Dibromochloromethane	11.859	129	248456	37.99	ug/L		99
66) 1,3-Dichloropropane	11.926	76	397819	41.36	ug/L		98
67) 1,2-Dibromoethane	12.054	107	226316	39.62	ug/L		100
68) 2-hexanone	12.207	43	1224604	265.13	ug/L		88
69) 1-Chlorohexane	12.438	91	366183	43.33	ug/L		99
70) Ethylbenzene	12.481	91	1182795	39.56	ug/L		99
71) Chlorobenzene	12.469	112	655881	38.43	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.517	131	216200	38.92	ug/L		99
73) m,p-Xylene	12.591	91	1846344	84.27	ug/L		100
74) o-Xylene	12.914	91	942734	41.67	ug/L		99
75) Styrene	12.950	104	683982	39.55	ug/L		99
76) Bromoform	12.987	173	149177	36.75	ug/L		99
77) Isopropylbenzene	13.133	105	1043689	40.25	ug/L		100
80) cis-1,4-Dichloro-2-butene	13.377	53	113292	50.37	ug/L		91
81) n-Propylbenzene	13.432	91	1393875	44.32	ug/L		100
82) Bromobenzene	13.438	156	268764	40.42	ug/L		99
83) 1,1,2,2-Tetrachloroethane	13.475	83	300838	41.11	ug/L		98
84) 1,3,5-Trimethylbenzene	13.554	105	899266	43.97	ug/L		99
85) 2-Chlorotoluene	13.670	91	847092	40.52	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.596	53	106216	49.25	ug/L	#	67
87) 1,2,3-Trichloropropane	13.578	110	82561	40.23	ug/L		98
88) Cyclohexanone	13.621	55	71672	288.10	ug/L		99
89) 4-Chlorotoluene	13.670	91	847092	42.84	ug/L		100
90) tert-Butylbenzene	13.785	91	552121	43.73	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

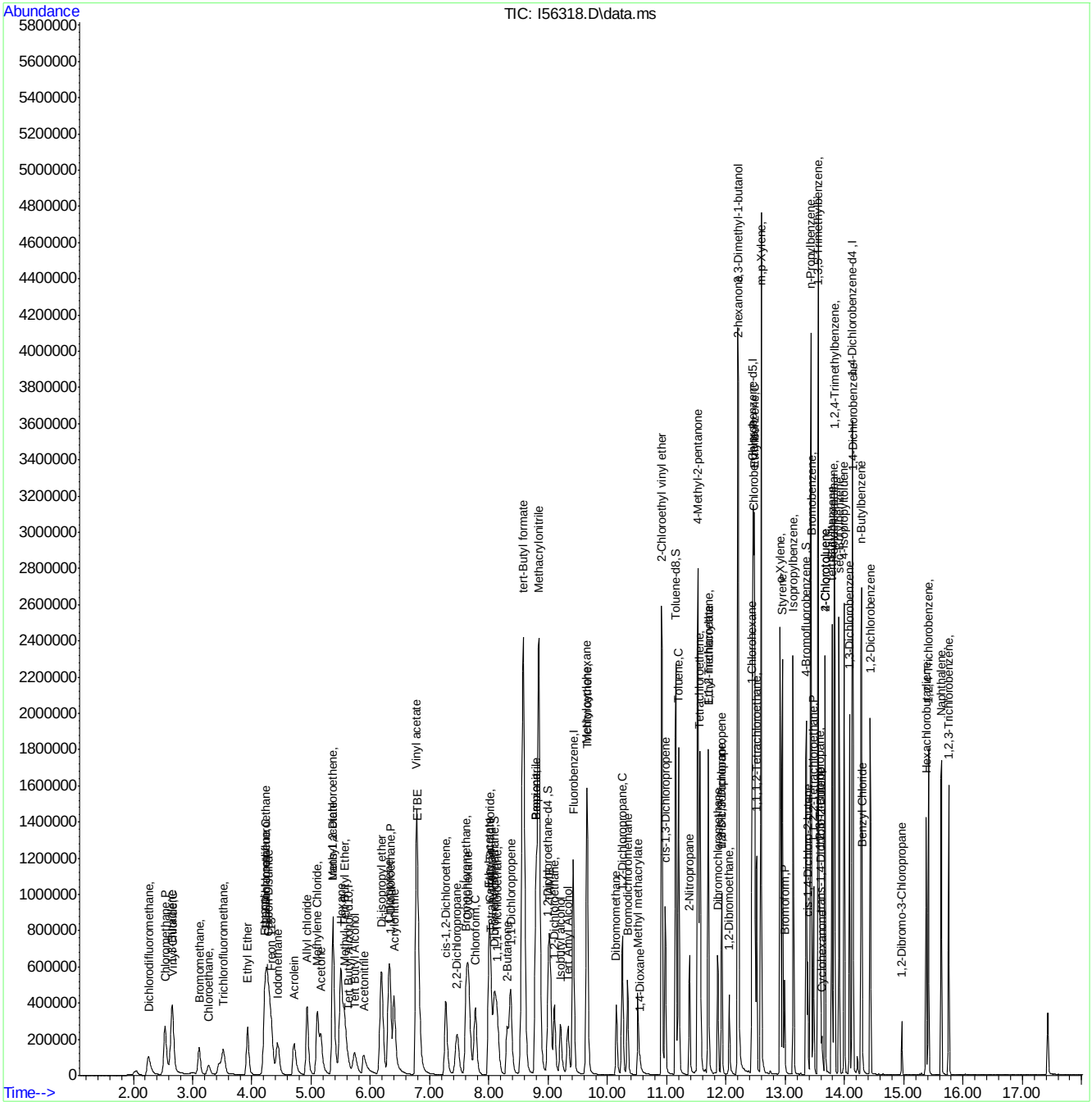
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	929216	43.76	ug/L		96
93) Pentachloroethane	13.822	167	132556	33.57	ug/L	#	86
94) sec-Butylbenzene	13.907	105	1137301	44.21	ug/L		99
95) 4-Isopropyltoluene	13.993	119	936301	44.25	ug/L		100
96) 1,3-Dichlorobenzene	14.084	146	495696	40.42	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	518535	39.40	ug/L		98
98) n-Butylbenzene	14.285	92	541621	45.53	ug/L		91
99) Benzyl Chloride	14.298	126	63928	42.86	ug/L	#	23
100) 1,2-Dichlorobenzene	14.432	146	485102	39.77	ug/L		99
101) 1,2-Dibromo-3-Chloropr...	14.968	75	49793	38.65	ug/L		86
102) Hexachlorobutadiene	15.377	225	163234	39.92	ug/L		99
103) 1,2,4-Trichlorobenzene	15.413	180	334178	39.96	ug/L		99
104) Naphthalene	15.633	128	836749	39.62	ug/L		100
105) 1,2,3-Trichlorobenzene	15.761	180	310052	38.11	ug/L		99
107) Ethanol	4.220	45	61069m	1027.33	ug/L		
108) Acrolein	4.708	56	327318	283.97	ug/L		99
109) Tert Butyl Alcohol	5.732	59	262125	394.61	ug/L		89
110) Isobutyl alcohol	9.207	43	227223	1081.02	ug/L		98
111) Tert Amyl Alcohol	9.335	59	174704	443.60	ug/L		92
112) 1,4-Dioxane	10.548	88	51803	838.89	ug/L		100
113) 3,3-Dimethyl-1-butanol	12.200	57	1518899	2684.27	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:55:20 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Manual Integration Approval Summary

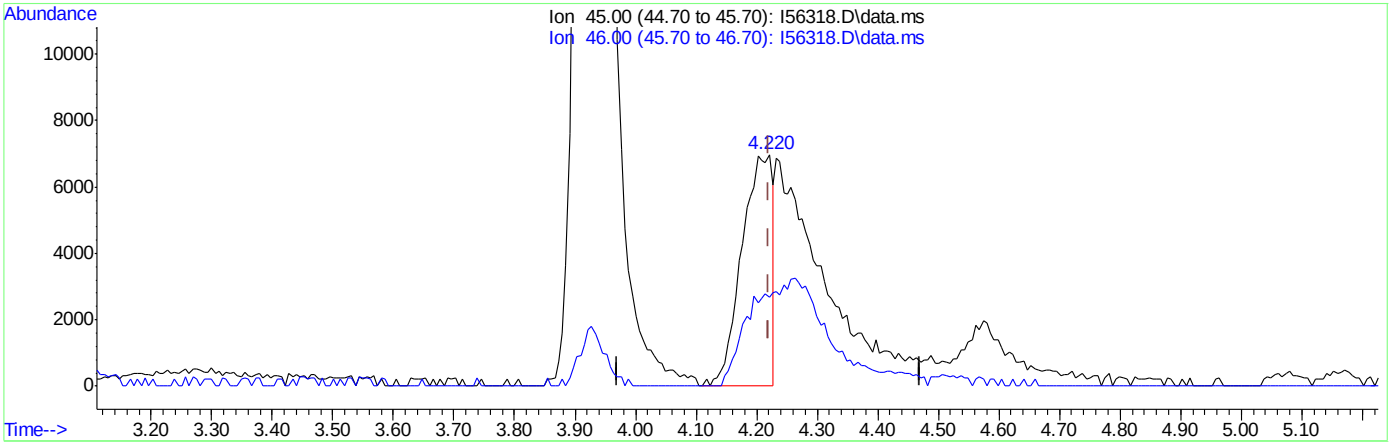
Sample Number: VI1683-ICC1683
Lab FileID: I56318.D
Injection Time: 07/25/18 16:49
Method: SW846 8260B
Analyst approved: 07/26/18 08:26 Ana Jimenez
Supervisor approved: 07/31/18 15:11 Melissa Mangual

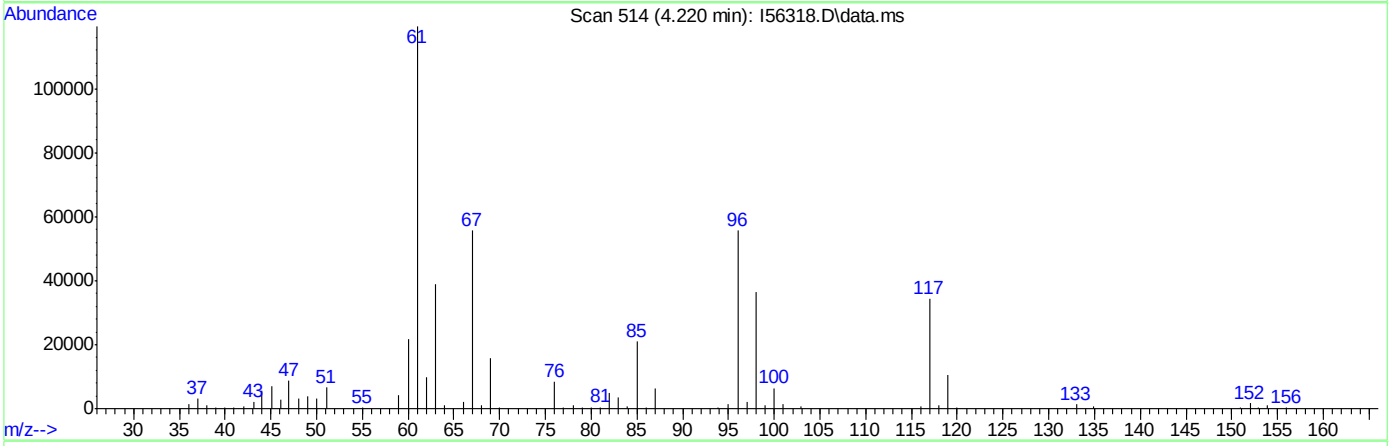
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethyl Alcohol	64-17-5		4.22	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:26:11 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56318.D\data.ms

(107) Ethanol

4.220min (+0.000) 408.87ug/L

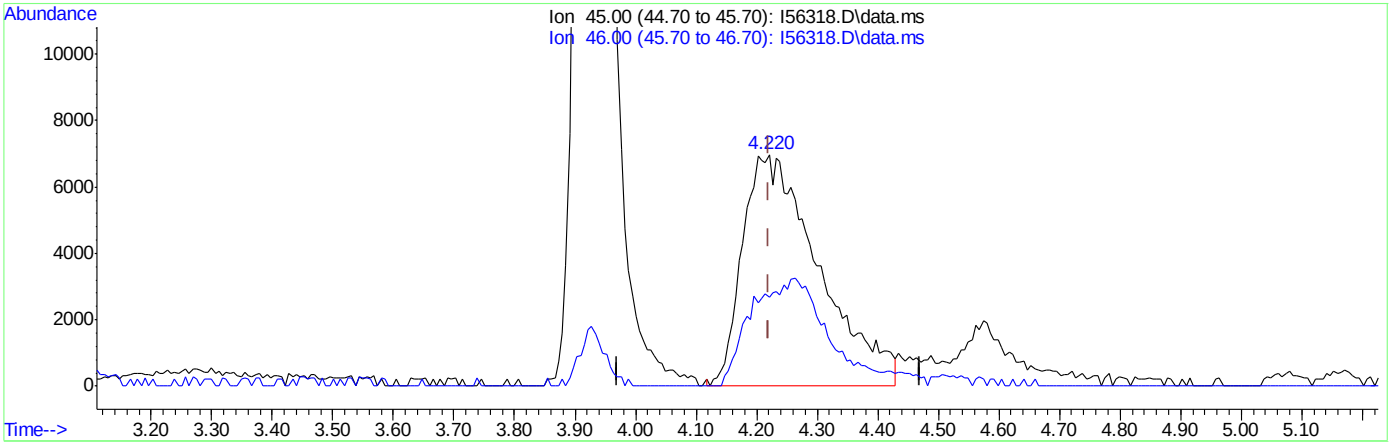
response 24305

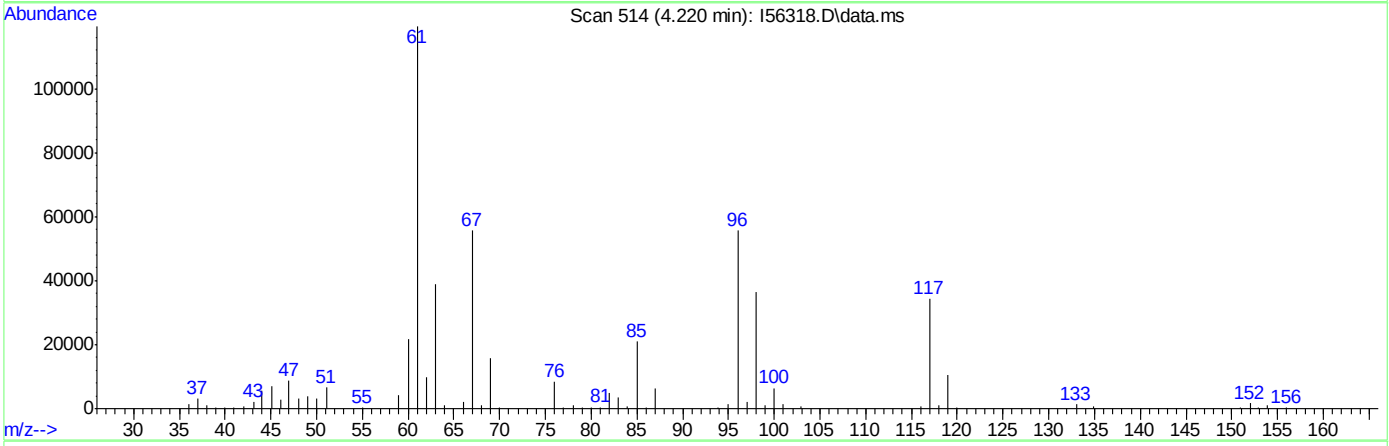
Ion	Exp%	Act%
45.00	100	100
46.00	35.80	38.35
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56318.D
Acq On : 25 Jul 2018 4:49 pm
Operator : ANAJ
Sample : ICC1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 26 07:26:11 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration





TIC: I56318.D\data.ms

(107) Ethanol

4.220min (+0.000) 1027.33ug/L m

response 61069

Ion	Exp%	Act%
45.00	100	100
46.00	35.80	38.35
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56319.D
Acq On : 25 Jul 2018 5:13 pm
Operator : ANAJ
Sample : IC1683-6 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 26 07:55:30 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.420	96	1224599	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.456	117	846332	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	431455	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.629	65	104360	250.00	ug/L	0.02
System Monitoring Compounds						
36) Dibromofluoromethane	8.091	113	328966	49.17	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.34%			
46) 1,2-Dichloroethane-d4	9.000	65	433000	50.75	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.50%			
57) Toluene-d8	11.152	98	1178592	51.09	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 102.18%			
79) 4-Bromofluorobenzene	13.353	174	346477	48.85	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.70%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.245	85	478777	70.72	ug/L	99
3) Chloromethane	2.525	50	638582	105.32	ug/L	99
4) 1,3-Butadiene	2.635	39	365929	89.53	ug/L	92
5) Vinyl Chloride	2.654	62	563354	95.52	ug/L	99
6) Bromomethane	3.099	94	269900	78.00	ug/L	98
7) Chloroethane	3.263	64	120640	74.48	ug/L	99
8) Trichlorofluoromethane	3.507	101	603719	76.20	ug/L	98
9) Ethyl Ether	3.928	59	499406	82.13	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.226	67	593249	72.55	ug/L	100
11) 1,1-Dichloroethene	4.214	61	810388	74.47	ug/L	99
12) Freon 113	4.312	101	437798	66.60	ug/L	98
13) Carbon Disulfide	4.263	76	1336507	67.19	ug/L	97
14) Iodomethane	4.428	142	694313	66.20	ug/L	99
15) Allyl chloride	4.927	41	742762	101.01	ug/L	98
16) Methylene Chloride	5.098	49	775679	76.96	ug/L	99
17) Acetone	5.159	43	724826	418.16	ug/L	99
18) Methyl acetate	5.372	43	1778172	412.37	ug/L	100
19) trans-1,2-Dichloroethene	5.354	61	814355	76.42	ug/L	100
20) Hexane	5.488	56	575133	80.47	ug/L	97
21) Methyl Tert Butyl Ether	5.555	73	1031337	71.06	ug/L	93
22) Acetonitrile	5.872	41	524607	963.28	ug/L	98
23) Di-isopropyl ether	6.183	45	1842203	88.94	ug/L	99
24) Chloroprene	6.305	53	894794	84.19	ug/L	99
25) 1,1-Dichloroethane	6.336	63	955250	75.61	ug/L	99
26) Acrylonitrile	6.391	53	1081784	402.45	ug/L	99
27) ETBE	6.799	59	1527729	76.45	ug/L	99
28) Vinyl acetate	6.769	43	5972626	485.03	ug/L	82
29) cis-1,2-Dichloroethene	7.262	96	474654	72.60	ug/L	97
30) 2,2-Dichloropropane	7.457	77	461854	69.51	ug/L	97
31) Bromochloromethane	7.610	128	234260	71.10	ug/L	97
32) Cyclohexane	7.646	56	1066819	81.31	ug/L	98
33) Chloroform	7.768	83	804052	71.06	ug/L	99
34) Ethyl acetate	8.000	43	2508134	465.20	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56319.D
Acq On : 25 Jul 2018 5:13 pm
Operator : ANAJ
Sample : IC1683-6 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 26 07:55:30 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.031	42	312046	87.84	ug/L		97
37) Carbon Tetrachloride	8.018	117	513266	66.64	ug/L		99
38) 1,1,1-Trichloroethane	8.128	97	687462	70.40	ug/L		99
39) 2-Butanone	8.305	43	1099000	441.64	ug/L		100
40) 1,1-Dichloropropene	8.360	75	612051	71.45	ug/L		100
41) tert-Butyl formate	8.579	59	2186678	694.91	ug/L	#	59
42) Propionitrile	8.793	54	792266	1028.75	ug/L	#	1
43) Methacrylonitrile	8.841	41	2903377	882.81	ug/L		100
44) Benzene	8.793	78	1730232	72.92	ug/L		98
45) TAME	9.030	73	1038671	73.83	ug/L		92
47) 1,2-Dichloroethane	9.097	62	746020	72.19	ug/L		100
48) Trichloroethene	9.652	95	466943	69.26	ug/L		99
49) Methylcyclohexane	9.652	83	765287	76.59	ug/L		98
50) Dibromomethane	10.146	93	295867	70.59	ug/L		99
51) 1,2-Dichloropropane	10.250	63	574917	77.35	ug/L		98
52) Bromodichloromethane	10.335	83	594004	76.41	ug/L		99
53) Methyl methacrylate	10.512	41	427905	88.49	ug/L		99
54) 2-Chloroethyl vinyl ether	10.914	63	1820584	398.95	ug/L		99
55) cis-1,3-Dichloropropene	10.975	75	736071	71.67	ug/L		99
58) Toluene	11.201	91	1838665	72.53	ug/L		99
59) 2-Nitropropane	11.384	41	524282	409.61	ug/L		100
60) 4-Methyl-2-pentanone	11.524	43	2434277	453.08	ug/L		99
61) trans-1,3-Dichloropropene	11.926	75	35835	10.44	ug/L		94
62) Tetrachloroethene	11.554	166	455454	54.62	ug/L		99
63) Ethyl methacrylate	11.694	69	557630	73.07	ug/L		98
64) 1,1,2-Trichloroethane	11.701	83	348360	69.86	ug/L		97
65) Dibromochloromethane	11.859	129	450988	65.95	ug/L		99
66) 1,3-Dichloropropane	11.926	76	702765	73.15	ug/L		99
67) 1,2-Dibromoethane	12.054	107	402856	70.62	ug/L		100
68) 2-hexanone	12.207	43	1991904	431.79	ug/L		86
69) 1-Chlorohexane	12.438	91	639739	75.79	ug/L		97
70) Ethylbenzene	12.481	91	2127699	71.25	ug/L		100
71) Chlorobenzene	12.469	112	1167793	68.50	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.517	131	392553	70.76	ug/L		99
73) m,p-Xylene	12.591	91	3263546	149.15	ug/L		100
74) o-Xylene	12.914	91	1691717	74.87	ug/L		100
75) Styrene	12.950	104	1239350	69.89	ug/L		100
76) Bromoform	12.987	173	272167	62.63	ug/L		99
77) Isopropylbenzene	13.133	105	1871091	70.38	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.377	53	206019	83.96	ug/L		98
81) n-Propylbenzene	13.432	91	2463023	77.60	ug/L		100
82) Bromobenzene	13.438	156	480641	71.61	ug/L		100
83) 1,1,2,2-Tetrachloroethane	13.475	83	524113	70.95	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	1604360	77.73	ug/L		99
85) 2-Chlorotoluene	13.670	91	1520360	72.06	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.596	53	188173	80.85	ug/L	#	71
87) 1,2,3-Trichloropropane	13.578	110	143737	69.39	ug/L		99
88) Cyclohexanone	13.621	55	122017	485.94	ug/L		99
89) 4-Chlorotoluene	13.670	91	1520360	76.18	ug/L		100
90) tert-Butylbenzene	13.785	91	987701	77.52	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56319.D
Acq On : 25 Jul 2018 5:13 pm
Operator : ANAJ
Sample : IC1683-6 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 26 07:55:30 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

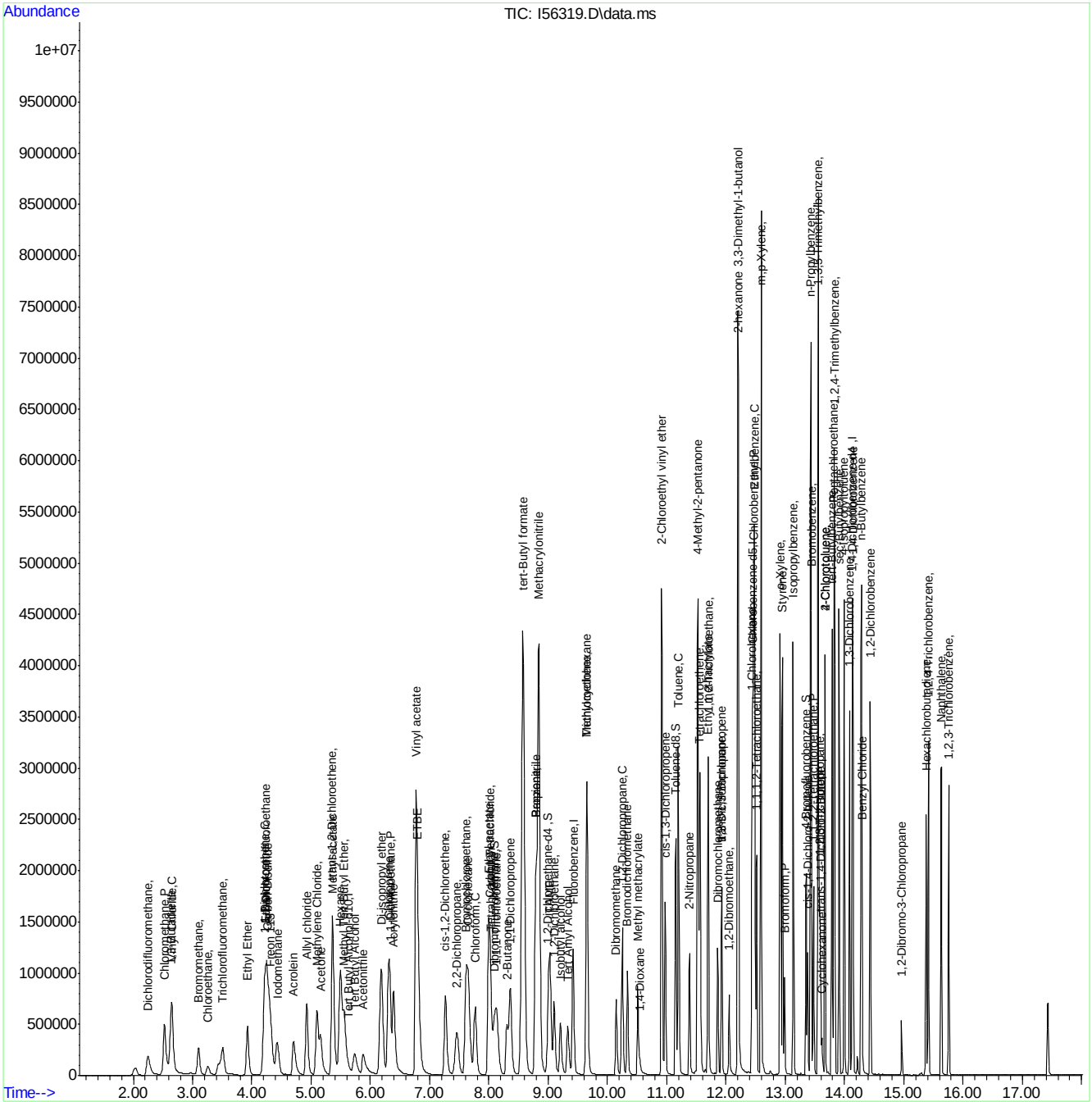
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	1,2,4-Trimethylbenzene	13.828	105	1661547	77.53	ug/L		95
93)	Pentachloroethane	13.822	167	296615	75.14	ug/L		90
94)	sec-Butylbenzene	13.907	105	2010682	77.45	ug/L		100
95)	4-Isopropyltoluene	13.993	119	1669243	78.16	ug/L		100
96)	1,3-Dichlorobenzene	14.084	146	889902	71.90	ug/L		99
97)	1,4-Dichlorobenzene	14.139	146	929666	69.98	ug/L		100
98)	n-Butylbenzene	14.285	92	972263	80.98	ug/L		89
99)	Benzyl Chloride	14.298	126	136916	68.59	ug/L	#	14
100)	1,2-Dichlorobenzene	14.432	146	866226	70.36	ug/L		99
101)	1,2-Dibromo-3-Chloropr...	14.962	75	90286	66.16	ug/L		98
102)	Hexachlorobutadiene	15.377	225	293701	71.16	ug/L		98
103)	1,2,4-Trichlorobenzene	15.413	180	603152	71.47	ug/L		99
104)	Naphthalene	15.633	128	1489773	69.90	ug/L		99
105)	1,2,3-Trichlorobenzene	15.761	180	553877	67.45	ug/L		98
107)	Ethanol	4.226	45	105813	1729.38	ug/L		84
108)	Acrolein	4.702	56	597961	504.01	ug/L		99
109)	Tert Butyl Alcohol	5.732	59	462996	677.17	ug/L		91
110)	Isobutyl alcohol	9.207	43	413139	1909.61	ug/L		99
111)	Tert Amyl Alcohol	9.329	59	321485	793.08	ug/L		87
112)	1,4-Dioxane	10.542	88	92069	1467.19	ug/L		98
113)	3,3-Dimethyl-1-butanol	12.200	57	2553858	4384.89	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56319.D
Acq On : 25 Jul 2018 5:13 pm
Operator : ANAJ
Sample : IC1683-6 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 26 07:55:30 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56320.D
Acq On : 25 Jul 2018 5:36 pm
Operator : ANAJ
Sample : IC1683-7 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 26 07:55:44 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1232467	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	858751	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	436199	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.641	65	108370	250.00	ug/L	0.03
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	331321	49.21	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 98.42%			
46) 1,2-Dichloroethane-d4	9.000	65	436917	50.88	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 101.76%			
57) Toluene-d8	11.152	98	1187898	50.75	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 101.50%			
79) 4-Bromofluorobenzene	13.353	174	351289	48.99	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.98%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.257	85	707171	103.00	ug/L	97
3) Chloromethane	2.532	50	908453	148.88	ug/L	100
4) 1,3-Butadiene	2.648	39	552419	137.16	ug/L	93
5) Vinyl Chloride	2.666	62	843597	142.12	ug/L	100
6) Bromomethane	3.111	94	375809	107.91	ug/L	99
7) Chloroethane	3.263	64	169374	Below Cal		98
8) Trichlorofluoromethane	3.507	101	802507	100.64	ug/L	99
9) Ethyl Ether	3.934	59	734158	119.96	ug/L	98
10) 1,2-Dichlorotrifluoroe...	4.245	67	867100	105.36	ug/L	99
11) 1,1-Dichloroethene	4.227	61	1196010	109.21	ug/L	99
12) Freon 113	4.318	101	642357	97.10	ug/L	99
13) Carbon Disulfide	4.269	76	1995351	95.40	ug/L	98
14) Iodomethane	4.434	142	1029666	97.55	ug/L	99
15) Allyl chloride	4.928	41	1089264	147.19	ug/L	99
16) Methylene Chloride	5.104	49	1122934	110.70	ug/L	99
17) Acetone	5.171	43	1059505	653.63	ug/L	100
18) Methyl acetate	5.379	43	2628095	656.91	ug/L	99
19) trans-1,2-Dichloroethene	5.360	61	1200134	111.90	ug/L	99
20) Hexane	5.495	56	823054	114.43	ug/L	97
21) Methyl Tert Butyl Ether	5.562	73	1543794	105.68	ug/L	88
22) Acetonitrile	5.879	41	760844	2031.60	ug/L	97
23) Di-isopropyl ether	6.190	45	2693986	129.23	ug/L	99
24) Chloroprene	6.305	53	1298270	125.52	ug/L	99
25) 1,1-Dichloroethane	6.342	63	1400311	110.13	ug/L	99
26) Acrylonitrile	6.397	53	1608693	599.88	ug/L	99
27) ETBE	6.805	59	2259030	112.33	ug/L	99
28) Vinyl acetate	6.775	43	8609915	606.07	ug/L	82
29) cis-1,2-Dichloroethene	7.269	96	706773	107.42	ug/L	98
30) 2,2-Dichloropropane	7.464	77	701077	91.18	ug/L	99
31) Bromochloromethane	7.610	128	344761	103.97	ug/L	97
32) Cyclohexane	7.653	56	1566277	118.62	ug/L	98
33) Chloroform	7.769	83	1179958	103.62	ug/L	98
34) Ethyl acetate	8.006	43	3663144	741.04	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56320.D
Acq On : 25 Jul 2018 5:36 pm
Operator : ANAJ
Sample : IC1683-7 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 26 07:55:44 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35)	Tetrahydrofuran	8.037	42	450535	134.38	ug/L		95
37)	Carbon Tetrachloride	8.025	117	764304	98.60	ug/L		99
38)	1,1,1-Trichloroethane	8.134	97	1021781	103.97	ug/L		98
39)	2-Butanone	8.305	43	1624568	697.10	ug/L		100
40)	1,1-Dichloropropene	8.360	75	896617	101.90	ug/L		99
41)	tert-Butyl formate	8.585	59	3518374	921.93	ug/L	#	51
42)	Propionitrile	8.799	54	1145494	1477.92	ug/L	#	1
43)	Methacrylonitrile	8.848	41	4101548	1239.16	ug/L		100
44)	Benzene	8.799	78	2529606	105.92	ug/L		99
45)	TAME	9.030	73	1558344	110.07	ug/L		89
47)	1,2-Dichloroethane	9.104	62	1079954	103.83	ug/L		100
48)	Trichloroethene	9.658	95	679644	100.17	ug/L		100
49)	Methylcyclohexane	9.652	83	1129016	112.27	ug/L		100
50)	Dibromomethane	10.146	93	433432	102.75	ug/L		98
51)	1,2-Dichloropropane	10.250	63	833327	111.40	ug/L		99
52)	Bromodichloromethane	10.341	83	872487	111.52	ug/L		99
53)	Methyl methacrylate	10.512	41	628034	132.38	ug/L		98
54)	2-Chloroethyl vinyl ether	10.920	63	2574820	646.50	ug/L		97
55)	cis-1,3-Dichloropropene	10.975	75	1091557	100.76	ug/L		100
58)	Toluene	11.201	91	2687927	104.49	ug/L		99
59)	2-Nitropropane	11.384	41	781511	572.43	ug/L		99
60)	4-Methyl-2-pentanone	11.524	43	3451137	633.05	ug/L		98
61)	trans-1,3-Dichloropropene	11.926	75	53831	14.30	ug/L		98
62)	Tetrachloroethene	11.554	166	665687	85.38	ug/L		99
63)	Ethyl methacrylate	11.695	69	826075	103.37	ug/L		95
64)	1,1,2-Trichloroethane	11.701	83	506205	100.05	ug/L		98
65)	Dibromochloromethane	11.859	129	667147	92.25	ug/L		98
66)	1,3-Dichloropropane	11.926	76	1026474	105.30	ug/L		99
67)	1,2-Dibromoethane	12.054	107	598015	103.31	ug/L		99
68)	2-hexanone	12.207	43	2739987	585.37	ug/L	#	75
69)	1-Chlorohexane	12.444	91	968975	113.13	ug/L		87
70)	Ethylbenzene	12.481	91	3042980	100.43	ug/L		100
71)	Chlorobenzene	12.469	112	1702800	98.44	ug/L		98
72)	1,1,1,2-Tetrachloroethane	12.518	131	582940	103.56	ug/L		99
73)	m,p-Xylene	12.591	91	4678317	210.71	ug/L		99
74)	o-Xylene	12.914	91	2481112	108.22	ug/L		99
75)	Styrene	12.950	104	1823224	98.88	ug/L		99
76)	Bromoform	12.987	173	409499	87.29	ug/L		98
77)	Isopropylbenzene	13.133	105	2718592	98.41	ug/L		100
80)	cis-1,4-Dichloro-2-butene	13.377	53	299940	113.46	ug/L		98
81)	n-Propylbenzene	13.432	91	3550764	110.65	ug/L		100
82)	Bromobenzene	13.438	156	697657	102.82	ug/L		100
83)	1,1,2,2-Tetrachloroethane	13.475	83	764362	102.35	ug/L		99
84)	1,3,5-Trimethylbenzene	13.554	105	2313858	110.88	ug/L		99
85)	2-Chlorotoluene	13.670	91	2215879	103.88	ug/L		100
86)	trans-1,4-Dichloro-2-B...	13.597	53	277072	110.92	ug/L	#	72
87)	1,2,3-Trichloropropane	13.578	110	208803	99.70	ug/L		99
88)	Cyclohexanone	13.621	55	171147	674.19	ug/L		98
89)	4-Chlorotoluene	13.670	91	2215879	109.82	ug/L		100
90)	tert-Butylbenzene	13.786	91	1439893	111.78	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56320.D
Acq On : 25 Jul 2018 5:36 pm
Operator : ANAJ
Sample : IC1683-7 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 26 07:55:44 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration

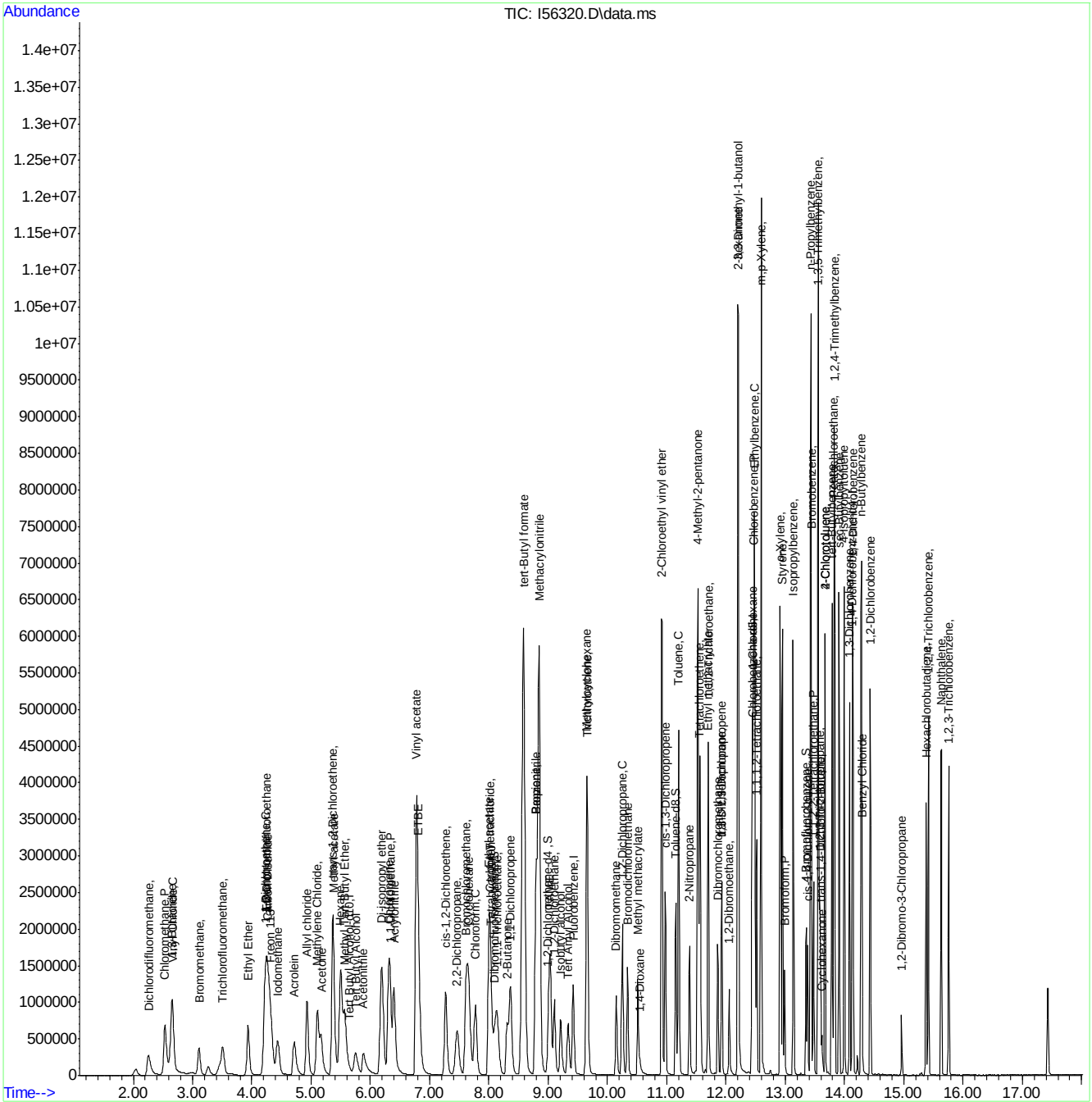
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	2418470	111.63	ug/L		95
93) Pentachloroethane	13.822	167	436498	110.27	ug/L		91
94) sec-Butylbenzene	13.908	105	2934202	111.79	ug/L		100
95) 4-Isopropyltoluene	13.993	119	2452650	113.59	ug/L		99
96) 1,3-Dichlorobenzene	14.084	146	1304168	104.22	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	1357681	101.09	ug/L		99
98) n-Butylbenzene	14.286	92	1437223	118.41	ug/L		86
99) Benzyl Chloride	14.298	126	214134	88.88	ug/L	#	11
100) 1,2-Dichlorobenzene	14.432	146	1268430	101.90	ug/L		99
101) 1,2-Dibromo-3-Chloropr...	14.962	75	135864	94.00	ug/L		97
102) Hexachlorobutadiene	15.377	225	444555	106.54	ug/L		97
103) 1,2,4-Trichlorobenzene	15.413	180	900091	105.49	ug/L		99
104) Naphthalene	15.633	128	2206265	102.39	ug/L		99
105) 1,2,3-Trichlorobenzene	15.761	180	827018	99.62	ug/L		99
107) Ethanol	4.251	45	157460	2478.27	ug/L		76
108) Acrolein	4.714	56	865143	702.23	ug/L		99
109) Tert Butyl Alcohol	5.751	59	702491	989.44	ug/L		87
110) Isobutyl alcohol	9.207	43	616018	2741.99	ug/L		98
111) Tert Amyl Alcohol	9.335	59	502512	1193.79	ug/L		82
112) 1,4-Dioxane	10.542	88	135779	2111.55	ug/L		96
113) 3,3-Dimethyl-1-butanol	12.201	57	3645623	6027.80	ug/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56320.D
Acq On : 25 Jul 2018 5:36 pm
Operator : ANAJ
Sample : IC1683-7 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 26 07:55:44 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Wed Jul 25 10:34:06 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56322.D
Acq On : 25 Jul 2018 6:24 pm
Operator : ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 26 08:16:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1242489	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	877903	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	445362	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.617	65	107505	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	327577	49.94	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.88%			
46) 1,2-Dichloroethane-d4	8.994	65	438822	49.47	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 98.94%			
57) Toluene-d8	11.152	98	1207197	49.83	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 99.66%			
79) 4-Bromofluorobenzene	13.353	174	355689	50.57	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 101.14%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.251	85	294585	41.63	ug/L	98
3) Chloromethane	2.526	50	348861	35.91	ug/L	99
4) 1,3-Butadiene	2.635	39	178528	34.07	ug/L	100
5) Vinyl Chloride	2.660	62	317837	38.90	ug/L	100
6) Bromomethane	3.099	94	170621	39.88	ug/L	99
7) Chloroethane	3.257	64	76077	32.09	ug/L	96
8) Trichlorofluoromethane	3.507	101	386725	41.20	ug/L	100
9) Ethyl Ether	3.922	59	295338	40.80	ug/L	99
10) 1,2-Dichlorotrifluoroe...	4.233	67	351269	40.41	ug/L	98
11) 1,1-Dichloroethene	4.214	61	487365	41.93	ug/L	99
12) Freon 113	4.312	101	234919	36.19	ug/L	98
13) Carbon Disulfide	4.257	76	812538	44.10	ug/L	100
14) Iodomethane	4.422	142	406797	40.86	ug/L	99
15) Allyl chloride	4.922	41	400834	40.11	ug/L	99
16) Methylene Chloride	5.098	49	476113	41.56	ug/L	99
17) Acetone	5.159	43	417475	202.38	ug/L	99
18) Methyl acetate	5.367	43	1054675	206.88	ug/L	100
19) trans-1,2-Dichloroethene	5.354	61	473951	41.38	ug/L	100
20) Hexane	5.495	56	337981	38.47	ug/L	97
21) Methyl Tert Butyl Ether	5.549	73	618137	43.39	ug/L	98
22) Acetonitrile	5.885	41	313270	441.17	ug/L	97
23) Di-isopropyl ether	6.177	45	1092178	42.67	ug/L	99
24) Chloroprene	6.305	53	481281	40.86	ug/L	98
25) 1,1-Dichloroethane	6.336	63	580119	42.05	ug/L	98
26) Acrylonitrile	6.391	53	621391	205.47	ug/L	100
27) ETBE	6.799	59	924736	44.80	ug/L	99
28) Vinyl acetate	6.769	43	3241476	194.77	ug/L	100
29) cis-1,2-Dichloroethene	7.263	96	277497	42.02	ug/L	100
30) 2,2-Dichloropropane	7.452	77	257056	43.81	ug/L	98
31) Bromochloromethane	7.610	128	134427	41.76	ug/L	94
32) Cyclohexane	7.647	56	628227	41.07	ug/L	99
33) Chloroform	7.762	83	471687	39.71	ug/L	99
34) Ethyl acetate	8.000	43	1453732	202.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56322.D
Acq On : 25 Jul 2018 6:24 pm
Operator : ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 26 08:16:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) Tetrahydrofuran	8.031	42	185588	43.00	ug/L	97
37) Carbon Tetrachloride	8.018	117	275699	38.57	ug/L	99
38) 1,1,1-Trichloroethane	8.128	97	384959	40.27	ug/L	99
39) 2-Butanone	8.305	43	658339	209.89	ug/L	100
40) 1,1-Dichloropropene	8.360	75	355841	42.03	ug/L	98
41) tert-Butyl formate	8.573	59	757194	296.14	ug/L	96
42) Propionitrile	8.793	54	463846	427.02	ug/L	95
43) Methacrylonitrile	8.835	41	1750209	411.39	ug/L	100
44) Benzene	8.793	78	1023642	40.46	ug/L	99
45) TAME	9.024	73	604203	43.82	ug/L	98
47) 1,2-Dichloroethane	9.104	62	438151	40.09	ug/L	99
48) Trichloroethene	9.658	95	271719	40.67	ug/L	98
49) Methylcyclohexane	9.652	83	457891	41.88	ug/L	99
50) Dibromomethane	10.146	93	173646	42.03	ug/L	99
51) 1,2-Dichloropropane	10.250	63	339735	42.02	ug/L	99
52) Bromodichloromethane	10.335	83	343984	42.88	ug/L	99
53) Methyl methacrylate	10.512	41	234100	39.89	ug/L	99
54) 2-Chloroethyl vinyl ether	10.914	63	1125015	235.89	ug/L	100
55) cis-1,3-Dichloropropene	10.975	75	405251	39.54	ug/L	99
58) Toluene	11.201	91	1090858	40.23	ug/L	100
59) 2-Nitropropane	11.384	41	264269	178.79	ug/L	100
60) 4-Methyl-2-pentanone	11.524	43	1525686	210.48	ug/L	99
61) trans-1,3-Dichloropropene	11.926	75	22728	42.73	ug/L	96
62) Tetrachloroethene	11.554	166	273646	39.15	ug/L	98
63) Ethyl methacrylate	11.701	69	326019	41.23	ug/L	99
64) 1,1,2-Trichloroethane	11.701	83	213172	41.90	ug/L	99
65) Dibromochloromethane	11.859	129	263760	43.72	ug/L	100
66) 1,3-Dichloropropane	11.926	76	412281	40.29	ug/L	99
67) 1,2-Dibromoethane	12.054	107	239989	42.81	ug/L	100
68) 2-hexanone	12.207	43	1254491	208.79	ug/L	95
69) 1-Chlorohexane	12.438	91	385550	41.44	ug/L	98
70) Ethylbenzene	12.481	91	1257384	40.54	ug/L	99
71) Chlorobenzene	12.469	112	700795	39.72	ug/L	99
72) 1,1,1,2-Tetrachloroethane	12.518	131	224787	41.33	ug/L	99
73) m,p-Xylene	12.591	91	1968051	83.31	ug/L	100
74) o-Xylene	12.914	91	1012204	42.73	ug/L	99
75) Styrene	12.950	104	742335	44.59	ug/L	99
76) Bromoform	12.987	173	156265	40.60	ug/L	99
77) Isopropylbenzene	13.133	105	1167078	44.71	ug/L	100
80) cis-1,4-Dichloro-2-butene	13.377	53	108376	39.56	ug/L	96
81) n-Propylbenzene	13.432	91	1477044	41.43	ug/L	100
82) Bromobenzene	13.438	156	288838	41.81	ug/L	98
83) 1,1,2,2-Tetrachloroethane	13.475	83	332841	42.77	ug/L	99
84) 1,3,5-Trimethylbenzene	13.554	105	971531	43.24	ug/L	100
85) 2-Chlorotoluene	13.670	91	909011	41.96	ug/L	100
86) trans-1,4-Dichloro-2-B...	13.597	53	101595	40.03	ug/L	100
87) 1,2,3-Trichloropropane	13.578	110	88474	42.21	ug/L	98
88) Cyclohexanone	13.621	55	57595	172.45	ug/L	98
89) 4-Chlorotoluene	13.670	91	909011	41.96	ug/L	99
90) tert-Butylbenzene	13.786	91	581012	41.78	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56322.D
Acq On : 25 Jul 2018 6:24 pm
Operator : ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 26 08:16:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

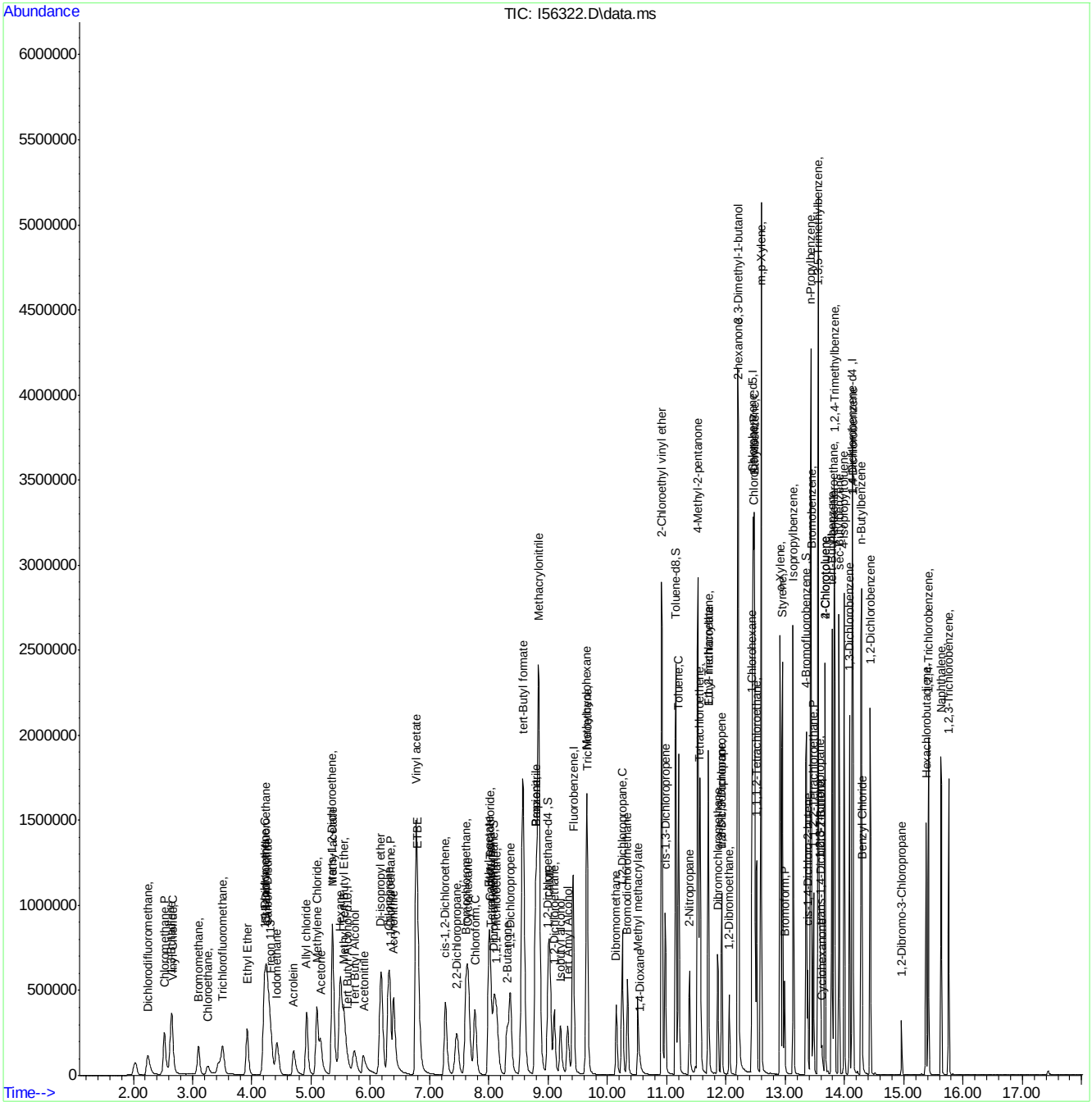
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	970686	41.77	ug/L	100
93) Pentachloroethane	13.822	167	151026	39.86	ug/L	98
94) sec-Butylbenzene	13.908	105	1207326	42.09	ug/L	99
95) 4-Isopropyltoluene	13.993	119	1012141	43.53	ug/L	99
96) 1,3-Dichlorobenzene	14.084	146	542908	42.33	ug/L	100
97) 1,4-Dichlorobenzene	14.139	146	558805	40.03	ug/L	98
98) n-Butylbenzene	14.286	92	584452	43.65	ug/L	98
99) Benzyl Chloride	14.298	126	66339	39.16	ug/L	97
100) 1,2-Dichlorobenzene	14.432	146	516357	41.34	ug/L	99
101) 1,2-Dibromo-3-Chloropr...	14.962	75	51874	40.58	ug/L	85
102) Hexachlorobutadiene	15.377	225	175673	42.34	ug/L	98
103) 1,2,4-Trichlorobenzene	15.413	180	363080	43.80	ug/L	99
104) Naphthalene	15.627	128	901875	41.94	ug/L	100
105) 1,2,3-Trichlorobenzene	15.755	180	333802	42.94	ug/L	95
107) Ethanol	4.227	45	65250	819.00	ug/L	92
108) Acrolein	4.702	56	266623	151.69	ug/L	99
109) Tert Butyl Alcohol	5.732	59	316687	459.63	ug/L	98
110) Isobutyl alcohol	9.207	43	240694	845.07	ug/L	99
111) Tert Amyl Alcohol	9.329	59	191455	416.24	ug/L	98
112) 1,4-Dioxane	10.548	88	56767	823.33	ug/L	97
113) 3,3-Dimethyl-1-butanol	12.201	57	1495112	2039.66	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\072518\
Data File : I56322.D
Acq On : 25 Jul 2018 6:24 pm
Operator : ANAJ
Sample : ICV1683-5 Inst : MSVOA16
Misc : MS40872,VI1683,,,,,
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 26 08:16:03 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 08/09/18 15:39

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56596.D
Acq On : 8 Aug 2018 8:41 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 08 08:57:54 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.415	96	1112012	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	812808	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.127	152	415980	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.611	65	97054	250.00	ug/L	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.086	113	305068	51.96	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 103.92%			
46) 1,2-Dichloroethane-d4	8.994	65	408740	51.49	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 102.98%			
57) Toluene-d8	11.152	98	1089586	48.58	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.16%			
79) 4-Bromofluorobenzene	13.353	174	321427	48.92	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.84%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.252	85	251516	39.71	ug/L	99
3) Chloromethane	2.526	50	356663	41.02	ug/L	100
4) 1,3-Butadiene	2.636	39	195435	41.68	ug/L	99
5) Vinyl Chloride	2.660	62	294538	40.27	ug/L	99
6) Bromomethane	3.105	94	139213	36.36	ug/L	97
7) Chloroethane	3.264	64	78406	38.84	ug/L	98
8) Trichlorofluoromethane	3.513	101	349436	41.59	ug/L	99
9) Ethyl Ether	3.922	59	246353	38.02	ug/L	96
10) 1,2-Dichlorotrifluoroe...	4.233	67	299936	38.55	ug/L	98
11) 1,1-Dichloroethene	4.215	61	373306	35.89	ug/L	98
12) Freon 113	4.318	101	204325	35.17	ug/L	97
13) Carbon Disulfide	4.257	76	587858	35.65	ug/L	96
14) Iodomethane	4.422	142	307042	34.46	ug/L	99
15) Allyl chloride	4.928	41	399354	44.65	ug/L	97
16) Methylene Chloride	5.098	49	410131	39.98	ug/L	97
17) Acetone	5.159	43	406844	220.37	ug/L	99
18) Methyl acetate	5.367	43	901290	197.77	ug/L	98
19) trans-1,2-Dichloroethene	5.355	61	388959	37.94	ug/L	99
20) Hexane	5.495	56	282767	35.97	ug/L	97
21) Methyl Tert Butyl Ether	5.556	73	494747	38.81	ug/L	98
22) Acetonitrile	5.879	41	292145	459.70	ug/L	99
23) Di-isopropyl ether	6.178	45	916660	40.02	ug/L	98
24) Chloroprene	6.306	53	422699	40.09	ug/L	97
25) 1,1-Dichloroethane	6.330	63	480798	38.94	ug/L	99
26) Acrylonitrile	6.391	53	565279	208.68	ug/L	100
27) ETBE	6.799	59	797550	43.17	ug/L	98
28) Vinyl acetate	6.769	43	3249800	217.41	ug/L	100
29) cis-1,2-Dichloroethene	7.263	96	226752	38.36	ug/L	96
30) 2,2-Dichloropropane	7.452	77	256139	48.77	ug/L	99
31) Bromochloromethane	7.610	128	114345	39.69	ug/L	96
32) Cyclohexane	7.641	56	510859	37.32	ug/L	97
33) Chloroform	7.763	83	402318	37.85	ug/L	96
34) Ethyl acetate	7.994	43	1331530	206.64	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56596.D
Acq On : 8 Aug 2018 8:41 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 08 08:57:54 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.031	42	164426m	42.57	ug/L		
37) Carbon Tetrachloride	8.019	117	275560	43.07	ug/L		99
38) 1,1,1-Trichloroethane	8.128	97	345519	40.38	ug/L		97
39) 2-Butanone	8.305	43	571283	203.70	ug/L		97
40) 1,1-Dichloropropene	8.360	75	289797	38.24	ug/L		96
41) tert-Butyl formate	8.573	59	1631100	607.43	ug/L	#	73
42) Propionitrile	8.787	54	432810	445.20	ug/L		99
43) Methacrylonitrile	8.836	41	1669053	438.34	ug/L		99
44) Benzene	8.787	78	856497	37.83	ug/L		97
45) TAME	9.025	73	511709	41.47	ug/L		97
47) 1,2-Dichloroethane	9.098	62	380440	38.90	ug/L		99
48) Trichloroethene	9.652	95	230677	38.58	ug/L		99
49) Methylcyclohexane	9.646	83	365414	37.34	ug/L		97
50) Dibromomethane	10.146	93	146775	39.70	ug/L		100
51) 1,2-Dichloropropane	10.250	63	287989	39.80	ug/L		98
52) Bromodichloromethane	10.335	83	297736	41.47	ug/L		99
53) Methyl methacrylate	10.512	41	202299	38.58	ug/L		97
54) 2-Chloroethyl vinyl ether	10.914	63	953097	223.29	ug/L		97
55) cis-1,3-Dichloropropene	10.975	75	384638	41.81	ug/L		99
58) Toluene	11.195	91	923890	36.80	ug/L		99
59) 2-Nitropropane	11.384	41	303222	219.26	ug/L		100
60) 4-Methyl-2-pentanone	11.524	43	1386496	206.59	ug/L		98
61) trans-1,3-Dichloropropene	11.926	75	20441	41.51	ug/L		90
62) Tetrachloroethene	11.555	166	229337	35.44	ug/L		98
63) Ethyl methacrylate	11.695	69	270969	37.19	ug/L		88
64) 1,1,2-Trichloroethane	11.701	83	184498	39.17	ug/L		97
65) Dibromochloromethane	11.859	129	229971	41.17	ug/L		100
66) 1,3-Dichloropropane	11.926	76	366199	38.65	ug/L		97
67) 1,2-Dibromoethane	12.054	107	206026	39.70	ug/L		99
68) 2-hexanone	12.207	43	1178102	211.78	ug/L		90
69) 1-Chlorohexane	12.439	91	316195	36.71	ug/L		97
70) Ethylbenzene	12.481	91	1086374	37.83	ug/L		100
71) Chlorobenzene	12.469	112	610998	37.40	ug/L		99
72) 1,1,1,2-Tetrachloroethane	12.518	131	209449	41.60	ug/L		99
73) m,p-Xylene	12.591	91	1682888	76.94	ug/L		100
74) o-Xylene	12.914	91	851308	38.82	ug/L		99
75) Styrene	12.951	104	623130	40.43	ug/L		99
76) Bromoform	12.987	173	144934	40.67	ug/L		99
77) Isopropylbenzene	13.134	105	942768	39.01	ug/L		100
80) cis-1,4-Dichloro-2-butene	13.377	53	116426	45.50	ug/L		89
81) n-Propylbenzene	13.426	91	1294085	38.86	ug/L		96
82) Bromobenzene	13.432	156	248394	38.49	ug/L		99
83) 1,1,2,2-Tetrachloroethane	13.475	83	282133	38.81	ug/L		99
84) 1,3,5-Trimethylbenzene	13.554	105	825684	39.34	ug/L		100
85) 2-Chlorotoluene	13.670	91	789022	39.00	ug/L		100
86) trans-1,4-Dichloro-2-B...	13.591	53	109136	46.04	ug/L	#	78
87) 1,2,3-Trichloropropane	13.579	110	75887	38.76	ug/L		98
88) Cyclohexanone	13.615	55	71534	229.32	ug/L		95
89) 4-Chlorotoluene	13.670	91	789022	39.00	ug/L		100
90) tert-Butylbenzene	13.786	91	502324	38.67	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56596.D
Acq On : 8 Aug 2018 8:41 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 08 08:57:54 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration

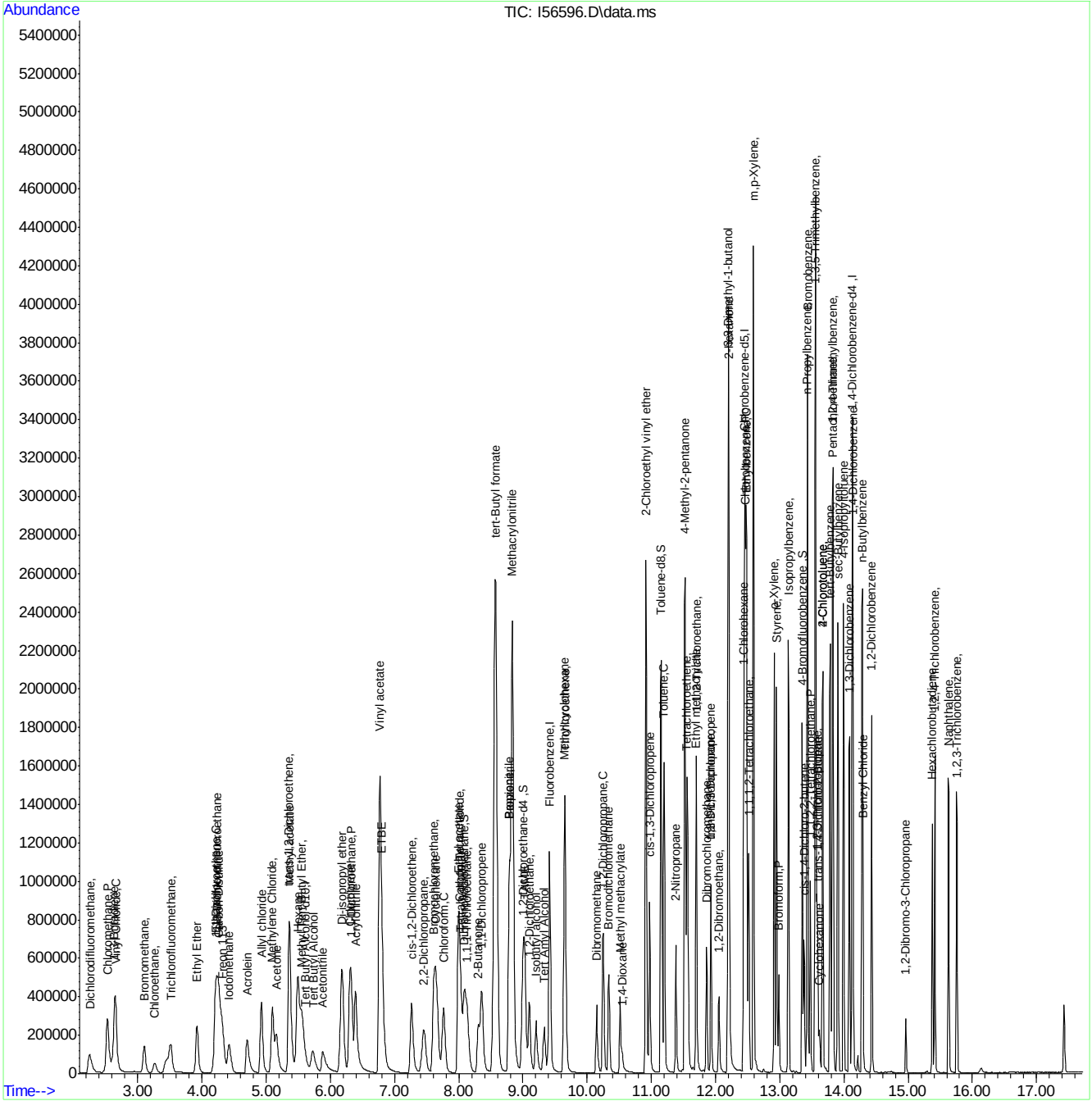
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92)	1,2,4-Trimethylbenzene	13.829	105	858108	39.53	ug/L		100
93)	Pentachloroethane	13.822	167	159908	44.53	ug/L		99
94)	sec-Butylbenzene	13.908	105	1046919	39.07	ug/L		100
95)	4-Isopropyltoluene	13.993	119	852319	39.24	ug/L		99
96)	1,3-Dichlorobenzene	14.085	146	459895	38.39	ug/L		100
97)	1,4-Dichlorobenzene	14.139	146	487019	37.35	ug/L		98
98)	n-Butylbenzene	14.280	92	515687	41.24	ug/L		94
99)	Benzyl Chloride	14.298	126	88262	52.35	ug/L	#	76
100)	1,2-Dichlorobenzene	14.432	146	445180	38.16	ug/L		98
101)	1,2-Dibromo-3-Chloropr...	14.962	75	46744	39.22	ug/L		85
102)	Hexachlorobutadiene	15.377	225	148063	38.21	ug/L		99
103)	1,2,4-Trichlorobenzene	15.414	180	300252	38.78	ug/L		99
104)	Naphthalene	15.633	128	734299	36.72	ug/L		99
105)	1,2,3-Trichlorobenzene	15.761	180	281098	38.71	ug/L		100
107)	Ethanol	4.221	45	56419	783.89	ug/L		98
108)	Acrolein	4.702	56	294258	185.81	ug/L		98
109)	Tert Butyl Alcohol	5.733	59	245118	394.06	ug/L		97
110)	Isobutyl alcohol	9.201	43	207346	806.38	ug/L		97
111)	Tert Amyl Alcohol	9.329	59	158979	384.55	ug/L		92
112)	1,4-Dioxane	10.543	88	45094	722.94	ug/L		91
113)	3,3-Dimethyl-1-butanol	12.195	57	1397798	2112.25	ug/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56596.D
Acq On : 8 Aug 2018 8:41 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 08 08:57:54 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration



Manual Integration Approval Summary

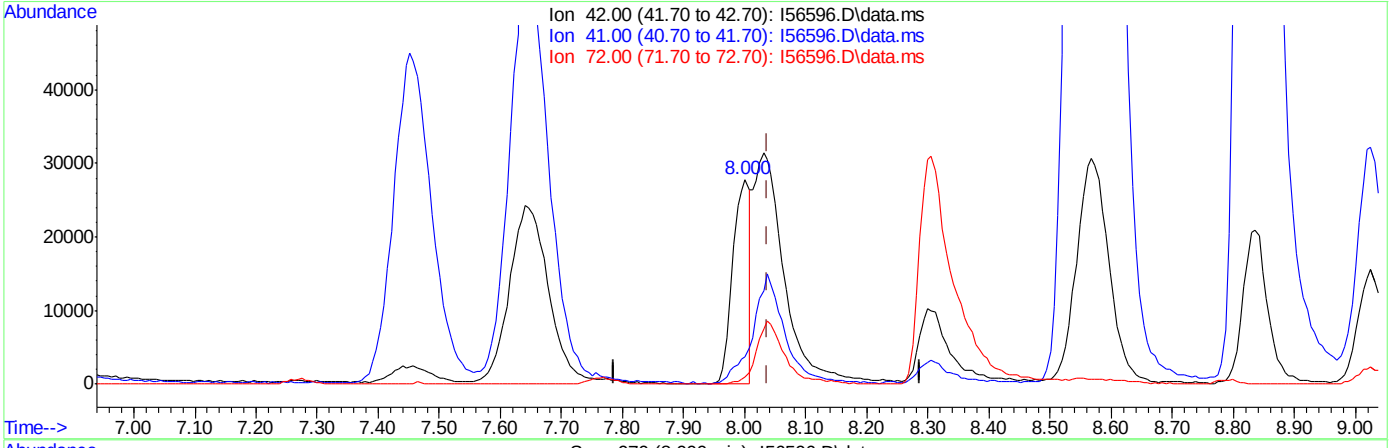
Sample Number:	VI1694-CC1683	**Method:**	SW846 8260B
Lab FileID:	I56596.D	**Analyst approved:**	08/08/18 09:02 Ana Jimenez
Injection Time:	08/08/18 08:41	**Supervisor approved:**	08/09/18 15:39 Melissa Mangual

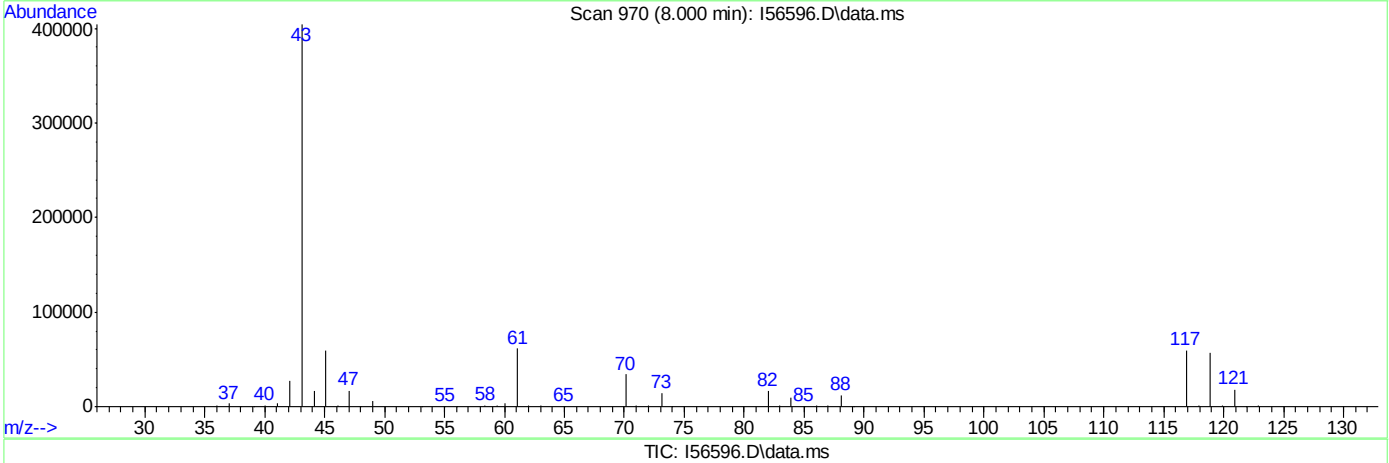
Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrahydrofuran	109-99-9		8.03	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56596.D
Acq On : 8 Aug 2018 8:41 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 08 08:57:26 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration





TIC: I56596.D\data.ms

(35) Tetrahydrofuran

8.000min (-0.037) 13.74ug/L

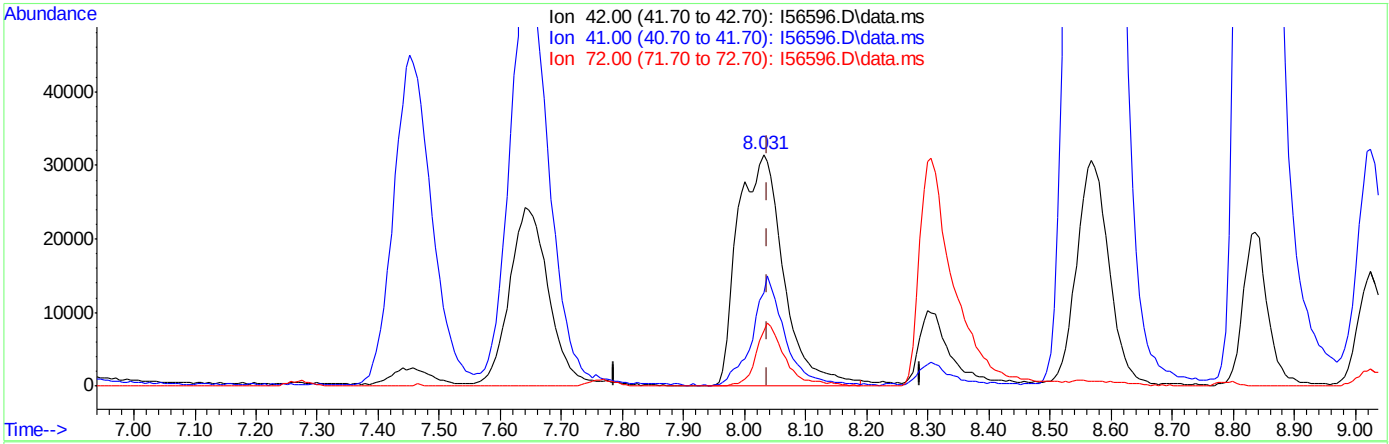
response 53071

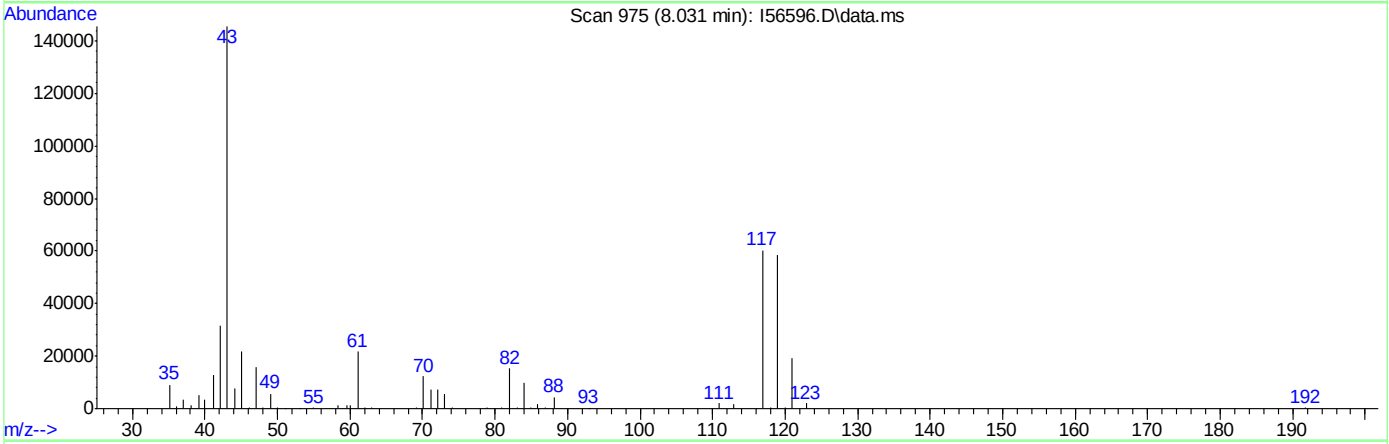
Ion	Exp%	Act%
42.00	100	100
41.00	40.40	13.35#
72.00	23.50	3.31#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56596.D
Acq On : 8 Aug 2018 8:41 am
Operator : ANAJ
Sample : CC1683-5 Inst : MSVOA16
Misc : MS40961,VI1694,,,,,
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 08 08:57:26 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:04:45 2018
Response via : Initial Calibration





TIC: I56596.D\data.ms

(35) Tetrahydrofuran

8.031min (-0.006) 42.57ug/L m

response 164426

Ion	Exp%	Act%
42.00	100	100
41.00	40.40	40.57
72.00	23.50	23.69
0.00	0.00	0.00

Manual Integrations APPROVED
(compounds with "m" flag)
Melissa Mangual
08/09/18 15:41

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56622.D
Acq On : 8 Aug 2018 7:41 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 09 10:58:37 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	9.421	96	1081258	50.00	ug/L	0.00
56) Chlorobenzene-d5	12.457	117	791366	50.00	ug/L	0.00
78) 1,4-Dichlorobenzene-d4	14.133	152	404551	50.00	ug/L	0.00
106) Tert Butyl Alcohol-d10	5.623	65	99293	250.00	ug/L	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.092	113	284102	49.77	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 99.54%			
46) 1,2-Dichloroethane-d4	9.000	65	407819	52.83	ug/L	0.00
Spiked Amount 50.000	Range 79 - 125		Recovery = 105.66%			
57) Toluene-d8	11.152	98	1066851	48.85	ug/L	0.00
Spiked Amount 50.000	Range 85 - 112		Recovery = 97.70%			
79) 4-Bromofluorobenzene	13.353	174	310151	48.54	ug/L	0.00
Spiked Amount 50.000	Range 83 - 118		Recovery = 97.08%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.251	85	231490	37.59	ug/L	97
3) Chloromethane	2.526	50	322491	38.15	ug/L	99
4) 1,3-Butadiene	2.642	39	181060	39.71	ug/L	100
5) Vinyl Chloride	2.660	62	273097	38.40	ug/L	98
6) Bromomethane	3.105	94	134649	36.17	ug/L	98
7) Chloroethane	3.263	64	75335	38.19	ug/L	95
8) Trichlorofluoromethane	3.507	101	307318m	37.62	ug/L	
9) Ethyl Ether	3.922	59	227775	36.16	ug/L	98
10) 1,2-Dichlorotrifluoroe...	4.233	67	275856	36.46	ug/L	98
11) 1,1-Dichloroethene	4.221	61	343789	33.99	ug/L	97
12) Freon 113	4.312	101	188621	33.39	ug/L	98
13) Carbon Disulfide	4.269	76	523605	32.66	ug/L	97
14) Iodomethane	4.428	142	276772	31.94	ug/L	95
15) Allyl chloride	4.928	41	338152	38.88	ug/L	97
16) Methylene Chloride	5.105	49	378306	37.91	ug/L	96
17) Acetone	5.166	43	366572	204.20	ug/L	98
18) Methyl acetate	5.373	43	870040	196.38	ug/L	99
19) trans-1,2-Dichloroethene	5.361	61	364340	36.55	ug/L	97
20) Hexane	5.495	56	259608	33.96	ug/L	97
21) Methyl Tert Butyl Ether	5.556	73	462585	37.31	ug/L	97
22) Acetonitrile	5.891	41	261869	423.78	ug/L	98
23) Di-isopropyl ether	6.184	45	827730	37.16	ug/L	98
24) Chloroprene	6.306	53	379288	37.00	ug/L	97
25) 1,1-Dichloroethane	6.336	63	451666	37.62	ug/L	98
26) Acrylonitrile	6.397	53	522140	198.73	ug/L	100
27) ETBE	6.799	59	735505	40.95	ug/L	100
28) Vinyl acetate	6.775	43	2848957	196.65	ug/L	99
29) cis-1,2-Dichloroethene	7.269	96	210565	36.64	ug/L	92
30) 2,2-Dichloropropane	7.458	77	222296	43.53	ug/L	100
31) Bromochloromethane	7.610	128	109338	39.03	ug/L	94
32) Cyclohexane	7.647	56	486068	36.52	ug/L	97
33) Chloroform	7.769	83	393063	38.03	ug/L	98
34) Ethyl acetate	8.000	43	1320045	210.61	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56622.D
Acq On : 8 Aug 2018 7:41 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 09 10:58:37 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) Tetrahydrofuran	8.037	42	169568	45.15	ug/L		100
37) Carbon Tetrachloride	8.019	117	278541	44.78	ug/L		99
38) 1,1,1-Trichloroethane	8.134	97	349384	41.99	ug/L		99
39) 2-Butanone	8.311	43	593644	217.25	ug/L		98
40) 1,1-Dichloropropene	8.366	75	301067	40.86	ug/L		97
41) tert-Butyl formate	8.573	59	1586010	607.43	ug/L	#	74
42) Propionitrile	8.793	54	455693	482.07	ug/L		100
43) Methacrylonitrile	8.842	41	1760774	475.58	ug/L		99
44) Benzene	8.793	78	886840	40.28	ug/L		95
45) TAME	9.031	73	519522	43.30	ug/L		96
47) 1,2-Dichloroethane	9.104	62	400144	42.08	ug/L		99
48) Trichloroethene	9.659	95	241515	41.54	ug/L		99
49) Methylcyclohexane	9.652	83	368124	38.69	ug/L		96
50) Dibromomethane	10.146	93	153641	42.73	ug/L		97
51) 1,2-Dichloropropane	10.250	63	296981	42.21	ug/L		97
52) Bromodichloromethane	10.341	83	306930	43.96	ug/L		99
53) Methyl methacrylate	10.518	41	211072	41.25	ug/L		98
54) 2-Chloroethyl vinyl ether	10.914	63	959004	231.06	ug/L		96
55) cis-1,3-Dichloropropene	10.975	75	384694	42.94	ug/L		96
58) Toluene	11.201	91	962451	39.38	ug/L		99
59) 2-Nitropropane	11.384	41	319906	236.54	ug/L		98
60) 4-Methyl-2-pentanone	11.524	43	1463773	224.02	ug/L		98
61) trans-1,3-Dichloropropene	11.926	75	19887	41.48	ug/L	#	84
62) Tetrachloroethene	11.555	166	255879	40.62	ug/L		99
63) Ethyl methacrylate	11.701	69	272180	38.32	ug/L		94
64) 1,1,2-Trichloroethane	11.701	83	194468	42.40	ug/L		97
65) Dibromochloromethane	11.865	129	236236	43.44	ug/L		99
66) 1,3-Dichloropropane	11.926	76	378882	41.07	ug/L		94
67) 1,2-Dibromoethane	12.054	107	212795	42.11	ug/L		99
68) 2-hexanone	12.213	43	1275835	235.56	ug/L	#	79
69) 1-Chlorohexane	12.445	91	326453	38.92	ug/L		99
70) Ethylbenzene	12.481	91	1118971	40.02	ug/L		100
71) Chlorobenzene	12.469	112	624397	39.26	ug/L		98
72) 1,1,1,2-Tetrachloroethane	12.518	131	215459	43.95	ug/L		99
73) m,p-Xylene	12.591	91	1737418	81.59	ug/L		99
74) o-Xylene	12.914	91	873603	40.91	ug/L		100
75) Styrene	12.951	104	630524	42.02	ug/L		98
76) Bromoform	12.987	173	146770	42.21	ug/L		98
77) Isopropylbenzene	13.140	105	966678	41.08	ug/L		99
80) cis-1,4-Dichloro-2-butene	13.383	53	113179	45.48	ug/L		85
81) n-Propylbenzene	13.432	91	1326401	40.95	ug/L		98
82) Bromobenzene	13.438	156	255385	40.70	ug/L		99
83) 1,1,2,2-Tetrachloroethane	13.475	83	301186	42.60	ug/L		100
84) 1,3,5-Trimethylbenzene	13.554	105	852484	41.77	ug/L		99
85) 2-Chlorotoluene	13.670	91	799277	40.62	ug/L		99
86) trans-1,4-Dichloro-2-B...	13.597	53	109869	47.66	ug/L		97
87) 1,2,3-Trichloropropane	13.579	110	82275	43.21	ug/L		98
88) Cyclohexanone	13.621	55	73643	242.75	ug/L		97
89) 4-Chlorotoluene	13.670	91	799277	40.62	ug/L		99
90) tert-Butylbenzene	13.786	91	518046	41.01	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56622.D
Acq On : 8 Aug 2018 7:41 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 09 10:58:37 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration

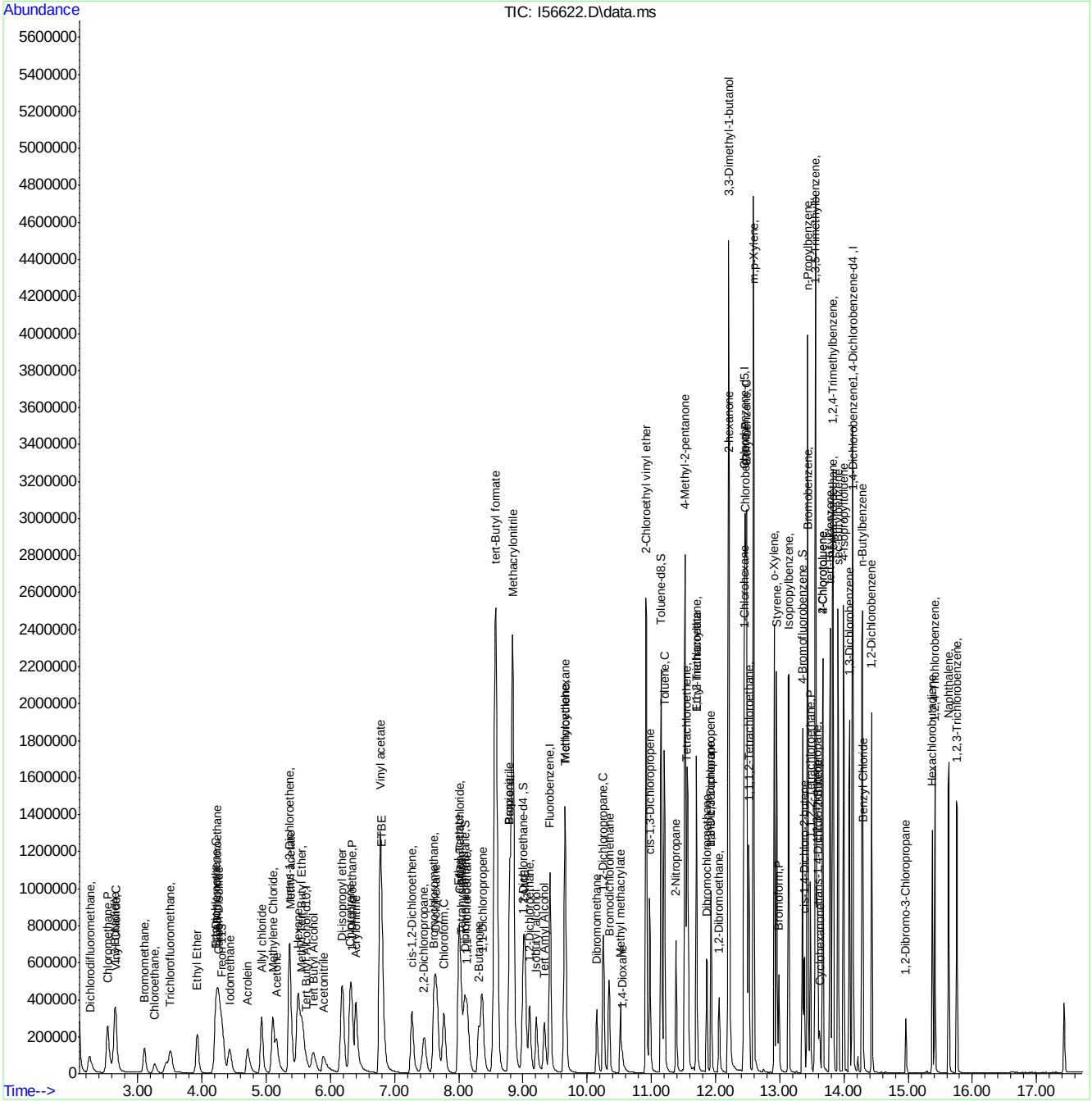
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
92) 1,2,4-Trimethylbenzene	13.828	105	877347	41.56	ug/L		99
93) Pentachloroethane	13.822	167	140338	40.67	ug/L		98
94) sec-Butylbenzene	13.908	105	1070072	41.06	ug/L		100
95) 4-Isopropyltoluene	13.993	119	873914	41.37	ug/L		100
96) 1,3-Dichlorobenzene	14.085	146	468044	40.17	ug/L		99
97) 1,4-Dichlorobenzene	14.139	146	497293	39.22	ug/L		99
98) n-Butylbenzene	14.286	92	517348	42.54	ug/L		97
99) Benzyl Chloride	14.298	126	75974	47.42	ug/L	#	90
100) 1,2-Dichlorobenzene	14.432	146	457995	40.36	ug/L		99
101) 1,2-Dibromo-3-Chloropr...	14.962	75	50647	43.44	ug/L		79
102) Hexachlorobutadiene	15.377	225	147410	39.11	ug/L		99
103) 1,2,4-Trichlorobenzene	15.414	180	302220	40.13	ug/L		99
104) Naphthalene	15.633	128	779927	39.99	ug/L		100
105) 1,2,3-Trichlorobenzene	15.761	180	286355	40.55	ug/L		98
107) Ethanol	4.221	45	55079	747.50	ug/L		98
108) Acrolein	4.708	56	240522	148.13	ug/L		97
109) Tert Butyl Alcohol	5.739	59	248518	390.52	ug/L		97
110) Isobutyl alcohol	9.207	43	232236	882.81	ug/L		97
111) Tert Amyl Alcohol	9.335	59	186291	437.23	ug/L		92
112) 1,4-Dioxane	10.549	88	48851	766.20	ug/L		95
113) 3,3-Dimethyl-1-butanol	12.201	57	1622575	2396.62	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56622.D
Acq On : 8 Aug 2018 7:41 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 09 10:58:37 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration



Manual Integration Approval Summary

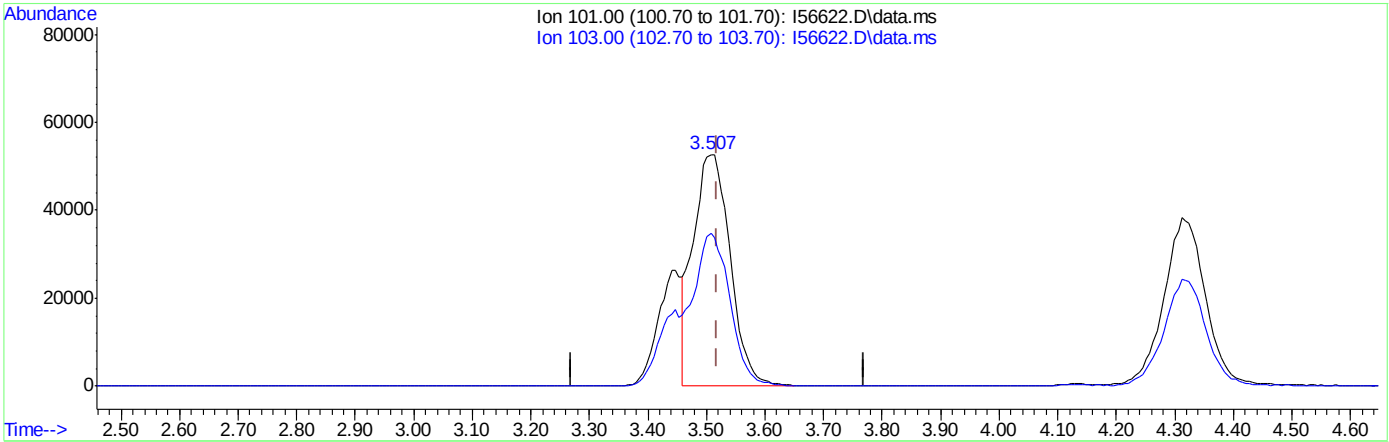
Sample Number: VI1694-ECC1683
Lab FileID: I56622.D
Injection Time: 08/08/18 19:41
Method: SW846 8260B
Analyst approved: 08/09/18 11:20 Ana Jimenez
Supervisor approved: 08/09/18 15:41 Melissa Mangual

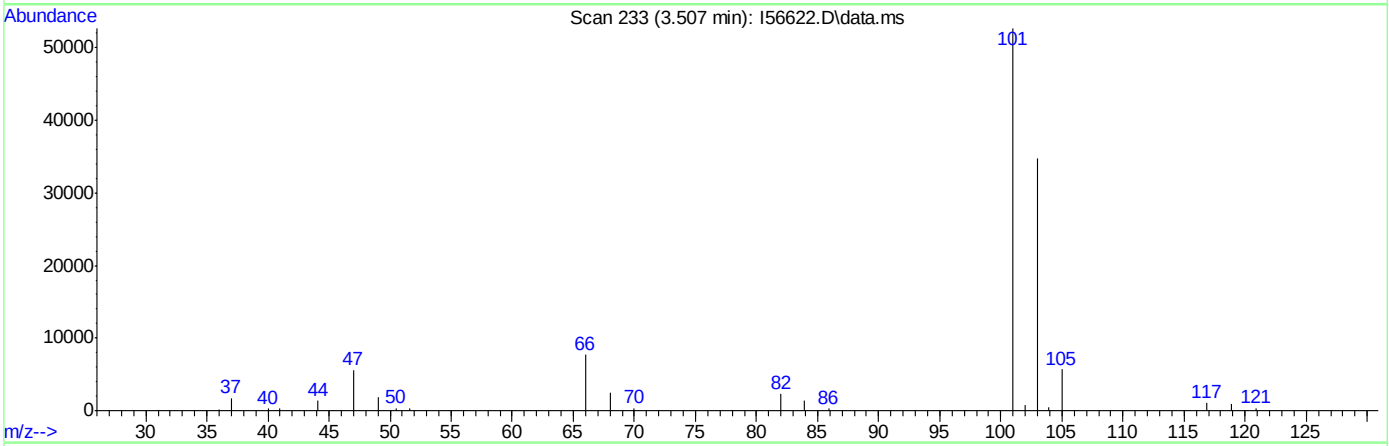
Parameter	CAS	Sig#	R.T. (min.)	Reason
Trichlorofluoromethane	75-69-4		3.51	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56622.D
Acq On : 8 Aug 2018 7:41 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 09 10:23:25 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration





TIC: I56622.D\data.ms

(8) Trichlorofluoromethane ( )

3.507min (-0.012) 28.30ug/L

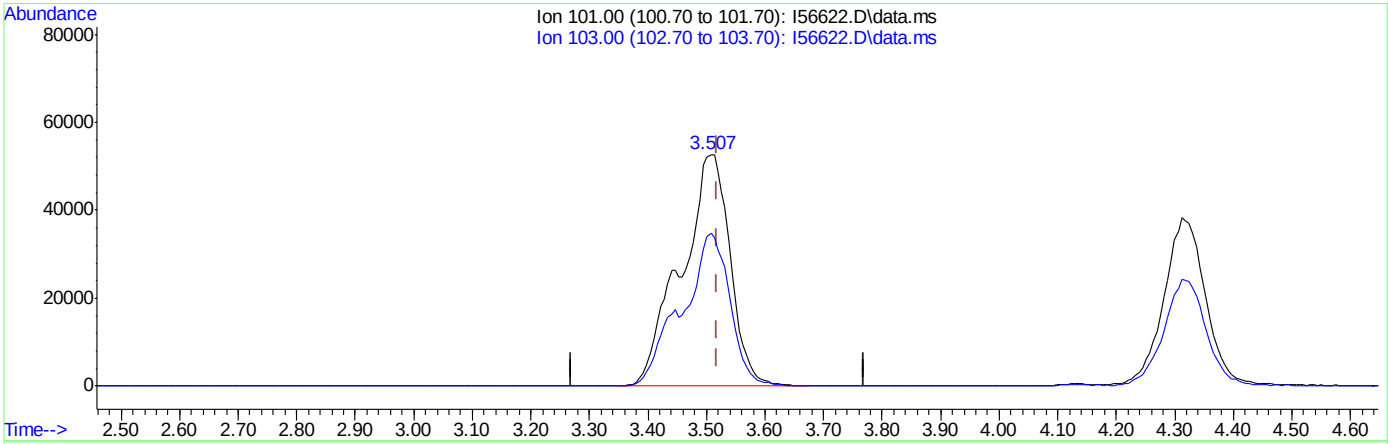
response 231179

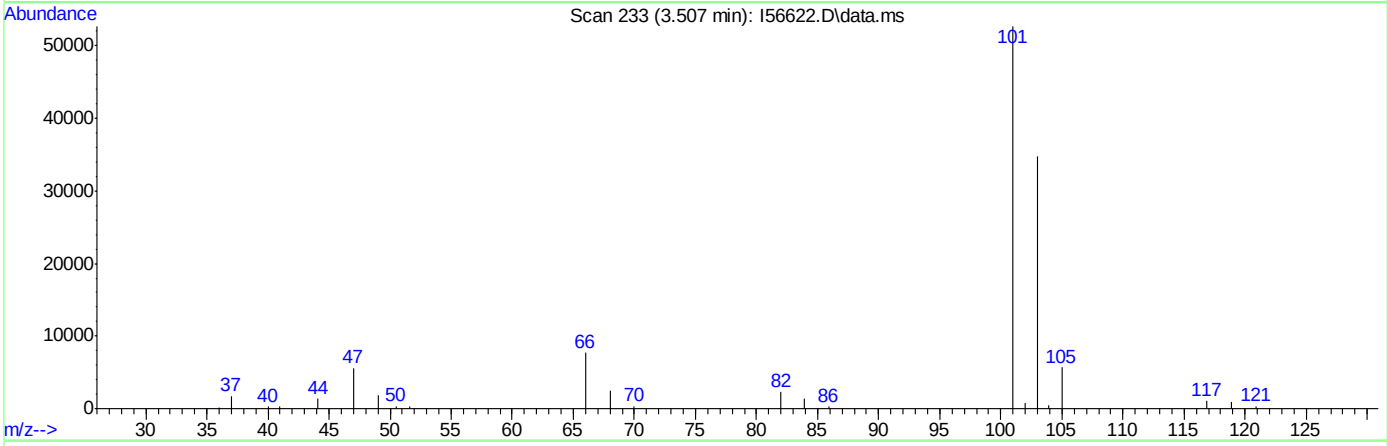
Ion	Exp%	Act%
101.00	100	100
103.00	63.50	65.98
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\2\DATA\080818\
Data File : I56622.D
Acq On : 8 Aug 2018 7:41 pm
Operator : ANAJ
Sample : ECC1683-5 Inst : MSVOA16
Misc : MS40987,VI1694,,,,,
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 09 10:23:25 2018
Quant Method : C:\msdchem\2\METHODS\I-July2518.M
Quant Title : SW-846 Method 5035A/8260B
QLast Update : Thu Jul 26 08:15:52 2018
Response via : Initial Calibration





TIC: I56622.D\data.ms

(8) Trichlorofluoromethane ( )

3.507min (-0.012) 37.62ug/L m

response 307318

Ion	Exp%	Act%
101.00	100	100
103.00	63.50	65.98
0.00	0.00	0.00
0.00	0.00	0.00

SGS-ORLANDO ANALYSIS LOG

MSVOA16-I-ANALYSIS LOG

DATE:	7/25/2018
COLUMN TYPE:	RTXVMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA4-B
PURGE PRESSURE:	6.7psi
PURGE VOLUME:	5mL
ANALYST:	ANAJ

METHODS:*	8260
METHOD FILE:	I-July2518.M
CALIB. DATE:	7/252018
EM VOLTAGE:	1624V
BFB RESPONSE	2063466
RUN ID	***VI1683***

BFB: V23957
ICAL/CC: V23908, V23907, V23864
V23865,V23860,V23859,V23874,V23909
ISTD/SURR: V23957
ICV/QC: V23905,V23863, V23828
V23924, V23872, V23921, V23852,
V23853, V23910

PH LOT: 1/12pH:230814
0/3pH:200416
KI PAPER LOT: 06517
SAMPLE ID VERIFIED BY:
ANAJ
DATE VERIFIED: 07/25/2018

Data File	Sample ID	DIL.	VIAL #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONAL, PEAK #	PH	CL ?	RR	COMMENTS
I56313	BFB	N/A	N/A	w	1	8260		N/A	N/A		✓ Passed (AF)
I56314	IC1683-1	N/A	N/A	w	1	8260	7SP,61MP,97MP,107MP,112MP	N/A	N/A		✓ Passed 10mL(IC2)-->50mL
I56315	IC1683-2	N/A	N/A	w	2	8260	7SP , 107PII	N/A	N/A		✓ Passed 5uL-->100mL
I56316	IC1683-3	N/A	N/A	w	3	8260		N/A	N/A		✓ Passed 5uL-->50mL
I56317	IC1683-4	N/A	N/A	w	4	8260	35MP, 42MP	N/A	N/A		✓ Passed 12.5uL-->50mL
I56318	ICC1683-5	N/A	N/A	w	5	8260		N/A	N/A		✓ Passed 20uL-->50mL
I56319	IC1683-6	N/A	N/A	w	6	8260		N/A	N/A		✓ Passed 35uL-->50mL
I56320	IC1683-7	N/A	N/A	w	7	8260		N/A	N/A		✓ Passed 50uL-->50mL
I56321	Blank	N/A	N/A	w	8	8260		N/A	N/A		✓
I56322	ICV1683-5	N/A	N/A	w	9	8260		N/A	N/A		✓ Passed 25uL-->50mL
I56323	BS	N/A	N/A	w	10	8260		N/A	N/A		✓ Passed 12.5uL-->40mL
I56324	MB	N/A	N/A	w	11	8260		N/A	N/A		✓ Hexachlorobutadiene

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

Manual Integration Rational SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument

Analyst's Signature:

SGS -ORLANDO

MSVOA16-I-ANALYSIS LOG

DATE:	8/8/2018
COLUMN TYPE:	RTXVMS
DETECTOR:	5973 MSD
INSTRUMENT:	MSVOA4-B
PURGE PRESSURE:	6.7psi
PURGE VOLUME:	5mL
ANALYST:	ANAJ

METHODS:*	8260
METHOD FILE:	I-July2518.M
CALIB. DATE:	7/25/2018
EM VOLTAGE:	1624V
BFB RESPONSE	1976762
RUN ID	***VI1694***

BFB: V23957
ICAL/CC: V23908, V23997, V23945
V23946,V23947,V23948,V23949,V23984
ISTD/SURR: V23957
ICV/QC: V24007,V23952, V23954
V23924, V23987, V23921, V23988,
V23989, V23975

PH LOT: 1/12pH:230814
0/3pH:200416
KI PAPER LOT: 06517
SAMPLE ID VERIFIED BY:
ANAJ
DATE VERIFIED: 08/09/2018

Data File	Sample ID	DIL.	VIAL #	MATRIX	ALS POS.	SAMPLE METHOD	MANUALLY INTEGRATED PEAKS RATIONAL, PEAK #	PH	CL ?	RR	COMMENTS
I56595	BFB	N/A	N/A	w	1	8260		N/A	N/A		✓ Passed (AF)
I56596	CC1683-5	N/A	N/A	w	1	8260	35SP	N/A	N/A		✓ Passed 20uL-->50mL
I56597	BS	N/A	N/A	w	2	8260		N/A	N/A		✓ Passed 12.5uL-->40mL
I56598	MB	N/A	N/A	w	3	8260		N/A	N/A		✓ Hexachlorobutadiene
I56599	FA56228-1	1x	1	w	1	8260		1	N		✓ ND
I56600	FA56228-2	1x	1	w	2	8260		1	N		✓ ND
I56601	FA56228-3	1x	1	w	3	8260		1	N		✓ ND
I56602	FA56228-4	1x	1	w	4	8260		1	N		✓
I56603	FA56228-5	1x	2	w	5	8260		1	N		✓ ND
I56604	FA56228-6	1x	1	w	6	8260		1	N		✓
I56605	FA56228-7	1x	1	w	7	8260		1	N		✓ ND
I56606	FA56228-8	1x	2	w	8	8260		1	N		✓
I56607	FA56228-9	1x	2	w	9	8260		1	N		✓ ND
I56608	FA56349-1	1x	2	w	10	8260		1	N		✓ ND
I56609	FA56349-2,hs	1x	2	w	11	8260	All vials with headspace.	1	N		✓ ND
I56610	FA56349-3	1x	2	w	12	8260		1	N		✓
I56611	FA56349-1ms	1x	4	w	13	8260		1	N		✓ 12.5uL-->40mL
I56612	FA56349-1msd	1x	5	w	14	8260		1	N		✓ 12.5uL-->40mL
I56613	Blank	N/A	N/A	w	15	8260		N/A	N/A		✓
I56614	FA56349-4	1x	2	w	16	8260		1	N		✓
I56615	FA56349-5	1x	2	w	17	8260		1	N		✓
I56616	FA56349-6	1x	2	w	18	8260		1	N		✓
I56617	FA56349-7	1x	2	w	19	8260		1	N		✓
I56618	FA56349-8	1x	2	w	20	8260		1	N		✓
I56619	FA56349-9	1x	3	w	21	8260		1	N		✓
I56620	FA56349-10	1x	1	w	22	8260		1	N		✓
I56621	FA56349-11	1x	2	w	23	8260		1	N		✓
I56622	ECC1683-5	N/A	N/A	w	24	8260	8SP	N/A	N/A		✓ Passed 20uL-->50mL

* For NELAC purposes, Method 8260 includes analytes by SOP MS005 Matrix: Designate "W" for Water "S" for soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate.

Manual Integration Rational SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument

Analyst's Signature:

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71202-MB	BB060385.D	1	08/06/18	WH	08/05/18	OP71202	GBB1757

The QC reported here applies to the following samples: **Method:** SW846 8330A

FA56228-1, FA56228-2, FA56228-3, FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8, FA56228-10

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	0.20	0.080	ug/l	
121-82-4	RDX	ND	0.20	0.080	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	0.20	0.080	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.080	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	0.20	0.080	ug/l	
98-95-3	Nitrobenzene	ND	0.20	0.097	ug/l	
88-72-2	o-Nitrotoluene	ND	0.20	0.080	ug/l	
99-08-1	m-Nitrotoluene	ND	0.20	0.080	ug/l	
99-99-0	p-Nitrotoluene	ND	0.20	0.080	ug/l	
479-45-8	Tetryl	ND	0.20	0.080	ug/l	
99-35-4	1,3,5-Trinitrobenzene	ND	0.20	0.099	ug/l	
118-96-7	2,4,6-Trinitrotoluene	ND	0.20	0.080	ug/l	
78-11-5	PETN	ND	2.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
610-39-9	3,4-Dinitrotoluene	89%	70-136%

Blank Spike Summary

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71202-BS	BB060384.D	1	08/06/18	WH	08/05/18	OP71202	GBB1757

The QC reported here applies to the following samples: **Method:** SW846 8330A

FA56228-1, FA56228-2, FA56228-3, FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8, FA56228-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
2691-41-0	HMX	5	4.3	86	77-144
121-82-4	RDX	5	4.6	92	77-125
99-65-0	1,3-Dinitrobenzene	5	4.6	92	79-122
606-20-2	2,6-Dinitrotoluene	5	4.9	98	81-131
121-14-2	2,4-Dinitrotoluene	5	4.7	94	80-123
35572-78-2	2-amino-4,6-Dinitrotoluene	5	4.8	96	81-120
19406-51-0	4-amino-2,6-Dinitrotoluene	5	5.4	108	79-119
98-95-3	Nitrobenzene	5	4.7	94	78-130
88-72-2	o-Nitrotoluene	5	5.2	104	76-131
99-08-1	m-Nitrotoluene	5	5.5	110	78-122
99-99-0	p-Nitrotoluene	5	4.9	98	79-124
479-45-8	Tetryl	5	5.0	100	65-124
99-35-4	1,3,5-Trinitrobenzene	5	4.9	98	79-128
118-96-7	2,4,6-Trinitrotoluene	5	5.7	114*	72-112
78-11-5	PETN	25	31.6	126	73-145

CAS No.	Surrogate Recoveries	BSP	Limits
610-39-9	3,4-Dinitrotoluene	95%	70-136%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71202-MS	BB060397.D	1	08/06/18	WH	08/05/18	OP71202	GBB1757
OP71202-MSD	BB060398.D	1	08/06/18	WH	08/05/18	OP71202	GBB1757
FA56228-2	BB060387.D	1	08/06/18	WH	08/05/18	OP71202	GBB1757

The QC reported here applies to the following samples: **Method:** SW846 8330A

FA56228-1, FA56228-2, FA56228-3, FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8, FA56228-10

CAS No.	Compound	FA56228-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
2691-41-0	HMX	0.19	U	9.62	7.3	76*	9.62	7.0	73*	4	77-144/21
121-82-4	RDX	0.19	U	9.62	8.7	90	9.62	8.9	93	2	77-125/19
99-65-0	1,3-Dinitrobenzene	0.19	U	9.62	8.7	90	9.62	9.0	94	3	79-122/17
606-20-2	2,6-Dinitrotoluene	0.19	U	9.62	11.4	119	9.62	9.0	94	24*	81-131/17
121-14-2	2,4-Dinitrotoluene	0.19	U	9.62	9.7	101	9.62	8.5	88	13	80-123/19
35572-78-2	2-amino-4,6-Dinitrotoluene	0.19	U	9.62	9.0	94	9.62	8.2	85	9	81-120/19
19406-51-0	4-amino-2,6-Dinitrotoluene	0.19	U	9.62	10.0	104	9.62	8.7	90	14	79-119/20
98-95-3	Nitrobenzene	0.19	U	9.62	8.7	90	9.62	8.7	90	0	78-130/19
88-72-2	o-Nitrotoluene	0.19	U	9.62	9.3	97	9.62	9.1	95	2	76-131/20
99-08-1	m-Nitrotoluene	0.19	U	9.62	7.9	82	9.62	9.0	94	13	78-122/18
99-99-0	p-Nitrotoluene	0.19	U	9.62	7.2	75*	9.62	8.2	85	13	79-124/18
479-45-8	Tetryl	0.19	U	9.62	9.2	96	9.62	9.3	97	1	65-124/20
99-35-4	1,3,5-Trinitrobenzene	0.19	U	9.62	10.2	106	9.62	9.2	96	10	79-128/16
118-96-7	2,4,6-Trinitrotoluene	0.19	U	9.62	10.3	107	9.62	10.0	104	3	72-112/16
78-11-5	PETN	1.9	U	48.1	58.1	121	48.1	56.5	118	3	73-145/18

CAS No.	Surrogate Recoveries	MS	MSD	FA56228-2	Limits
610-39-9	3,4-Dinitrotoluene	95%	76%	85%	70-136%

* = Outside of Control Limits.

Surrogate Recovery Summary

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Method: SW846 8330A **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
FA56228-1	BB060386.D	91
FA56228-2	BB060387.D	85
FA56228-3	BB060388.D	89
FA56228-4	BB060389.D	90
FA56228-5	BB060390.D	85
FA56228-6	BB060391.D	85
FA56228-7	BB060392.D	84
FA56228-8	BB060393.D	80
FA56228-10	BB060396.D	77
OP71202-BS	BB060384.D	95
OP71202-MB	BB060385.D	89
OP71202-MS	BB060397.D	95
OP71202-MSD	BB060398.D	76

Surrogate Compounds	Recovery Limits
S1 = 3,4-Dinitrotoluene	70-136%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Check Std:	GBB1757-CC1748	**Injection Date:**	08/06/18
Lab File ID:	BB060383.D	**Injection Time:**	14:27
Instrument ID:	GCBB	**Method:**	SW846 8330A

	S1 [a] **RT**
Check Std	11.88

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**
OP71202-BS	BB060384.D	08/06/18	14:57	11.85
OP71202-MB	BB060385.D	08/06/18	15:27	11.88
FA56228-1	BB060386.D	08/06/18	15:57	11.89
FA56228-2	BB060387.D	08/06/18	16:27	11.89
FA56228-3	BB060388.D	08/06/18	16:55	11.89
FA56228-4	BB060389.D	08/06/18	17:25	11.90
FA56228-5	BB060390.D	08/06/18	17:55	11.89
FA56228-6	BB060391.D	08/06/18	18:25	11.91
FA56228-7	BB060392.D	08/06/18	18:55	11.88
FA56228-8	BB060393.D	08/06/18	19:25	11.91

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Check Std:	GBB1757-CC1748	**Injection Date:**	08/06/18
Lab File ID:	BB060394.D	**Injection Time:**	19:55
Instrument ID:	GCBB	**Method:**	SW846 8330A

	S1 [a] **RT**	**S1** [b] **RT**
Check Std	11.91	11.91

Lab Sample ID	**Lab File ID**	**Date Analyzed**	**Time Analyzed**	**S1** [a] **RT**	**S1** [b] **RT**
FA56228-10	BB060396.D	08/06/18	20:55		11.89
OP71202-MS	BB060397.D	08/06/18	21:25		11.87
OP71202-MSD	BB060398.D	08/06/18	21:55		11.89
GBB1757-ECC1748	BB060400.D	08/06/18	22:55	11.89	11.89

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

Initial Calibration Summary

Job Number: FA56228 **Sample:** GBB1748-ICC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060205.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Response Factor Report G1315B

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Initial Calibration

Calibration Files
20 =BB060200.D 50 =BB060201.D 100 =BB060202.D 200 =BB060203.D
500 =BB060204.D 1000=BB060205.D 2000=BB060206.D

	Compound	20	50	100	200	500	1000	2000	Avg	%RSD
1)	TNX	5.295	5.051	4.969	5.069	5.080	5.067	5.053	5.083 E3	1.98
2)	HMX	2.484	2.057	1.890	1.838	1.733	1.747	1.742	1.927 E3	14.06
3)	DNX	3.927	3.622	2.937	2.775	2.576	2.600	2.628	3.009 E3	18.09
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 2600.86703 *A + 0.01241 *A^2									
4)	MNX	3.466	2.711	3.128	2.801	2.713	2.681	2.679	2.883 E3	10.48
5)	RDX	2.297	2.322	1.865	1.972	2.053	1.965	1.960	2.062 E3	8.63
6)	1,3,5-Trinitroben	6.046	4.471	3.918	4.301	4.303	4.294	4.257	4.513 E3	15.43
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 4317.79032 *A + -0.03008 *A^2									
7)	1,3-Dinitrobenzen	6.788	5.975	5.491	5.524	5.575	5.535	5.519	5.772 E3	8.29
8)	3,5-Dinitroanilin	6.758	4.775	4.938	4.827	4.725	4.629	4.667	5.046 E3	15.10
	---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000									
	Response Ratio = 0.00000 + 4672.73046 *A + -0.00479 *A^2									
9)	Nitrobenzene	4.849	3.909	3.358	3.652	3.505	3.385	3.399	3.722 E3	14.33
10)	Nitroglycerin								0.000	-1.00
11)	Tetryl	2.648	3.342	2.989	2.741	2.671	2.570	2.549	2.787 E3	10.23
12)	2,4,6-Trinitrotol	5.074	3.801	3.556	3.503	3.527	3.401	3.371	3.748 E3	16.05
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 3493.30846 *A + -0.06229 *A^2									
13)	2-Amino-4,6-Dinit	4.336	4.347	3.690	3.820	3.721	3.651	3.655	3.889 E3	8.09
14)	4-Amino-2,6-Dinit	2.789	3.023	2.450	2.614	2.701	2.556	2.541	2.668 E3	7.20
15)S	3,4-Dinitrotoluen	3.656	3.489	2.435	2.599	2.653	2.562	2.558	2.850 E3	17.55
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998									
	Response Ratio = 0.00000 + 2611.53715 *A + -0.02783 *A^2									
16)	2,4-Dinitrotoluen	6.845	5.928	4.990	5.145	5.249	5.046	5.030	5.462 E3	12.63
17)	2,6-Dinitrotoluen	5.453	3.245	3.017	2.989	3.142	3.109	3.067	3.432 E3	26.09
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
	Response Ratio = 0.00000 + 3142.71234 *A + -0.03778 *A^2									
18)	o-Nitrotoluene	1.847	2.623	2.737	2.326	2.401	2.354	2.351	2.377 E3	11.83
19)	p-Nitrotoluene	3.980	4.501	3.946	3.740	3.750	3.781	3.805	3.929 E3	6.85
20)	m-Nitrotoluene	7.319	5.252	4.193	3.746	3.633	3.465	3.561	4.453 E3	31.58
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997									
	Response Ratio = 0.00000 + 3528.47663 *A + 0.01265 *A^2									
21)	PETN								0.000	-1.00

Signal #2

1)	TNX	8.181	7.928	7.721	7.945	7.868	7.812	7.724	7.883 E3	2.01
2)	HMX	5.227	7.103	5.019	5.432	4.864	4.810	4.875	5.333 E3	15.22

8.6.1

8

Initial Calibration Summary

Job Number: FA56228 **Sample:** GBB1748-ICC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060205.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

```
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9997
              Response Ratio = 0.00000 + 4861.72975 *A + 0.00342 *A^2

 3)  DNX               5.026 5.117 4.322 4.702 4.164 4.210 4.225 4.538 E3   8.96
 4)  MNX               5.295 4.049 4.174 4.122 4.172 4.205 4.149 4.309 E3  10.15
 5)  RDX               4.300 3.451 3.289 3.373 3.179 3.162 3.128 3.412 E3  12.00
 6)  1,3,5-Trinitroben 9.403 8.377 8.009 8.039 8.183 8.184 8.206 8.343 E3   5.79
 7)  1,3-Dinitrobenzen 7.071 4.624 4.056 3.703 3.934 3.857 3.751 4.428 E3  27.22
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 3961.91891 *A + -0.10522 *A^2

 8)  3,5-Dinitroanilin 1.225 0.822 0.844 0.831 0.799 0.779 0.792 0.870 E4  18.17
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 7857.34507 *A + 0.02741 *A^2

 9)  Nitrobenzene      5.654 3.892 3.296 3.386 3.370 3.206 3.258 3.723 E3  23.68
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 3267.05430 *A + -0.00707 *A^2

10)  Nitroglycerin     1.394 1.334 1.256 1.270 1.303 1.288 1.287 1.304 E3   3.56
11)  Tetryl            7.190 3.467 3.958 3.796 4.008 4.001 4.075 4.356 E3  29.07
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 3934.44421 *A + 0.07034 *A^2

12)  2,4,6-Trinitrotol 6.385 3.801 3.631 3.908 3.988 4.071 4.086 4.267 E3  22.20
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 3999.71030 *A + 0.04469 *A^2

13)  2-Amino-4,6-Dinit 5.904 4.281 4.606 4.707 5.266 5.325 5.484 5.082 E3  11.19
14)  4-Amino-2,6-Dinit 5.187 3.451 3.951 4.505 5.057 5.059 5.266 4.639 E3  15.11
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 4833.55467 *A + 0.21739 *A^2

15)S 3,4-Dinitrotoluen 4.178 3.553 3.371 3.694 4.020 4.299 4.527 3.949 E3  10.69
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 3941.90916 *A + 0.29547 *A^2

16)  2,4-Dinitrotoluen 2.226 2.919 3.150 2.810 3.034 3.053 3.104 2.900 E3  10.98
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 2989.77647 *A + 0.05753 *A^2

17)  2,6-Dinitrotoluen 5.506 4.092 4.121 3.576 3.819 3.923 4.035 4.153 E3  15.06
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 3777.35270 *A + 0.12957 *A^2

18)  o-Nitrotoluene          2.638 3.639 3.081 3.407 3.313 3.270 3.225 E3  10.56
19)  p-Nitrotoluene          3.923 3.943 3.298 3.414 3.193 3.228 3.500 E3   9.82
20)  m-Nitrotoluene          3.679 2.948 3.257 3.943 3.889 3.959 3.613 E3  11.59
21)  PETN             1.548 1.393 1.410 1.425 1.427 1.415 1.429 1.435 E3   3.58
-------------------------------------------------------------------------------
(#) = Out of Range

          8330B_0707PLUS.M        Mon Jul 09 11:02:38 2018
```

8.6.1

8

Initial Calibration Verification

Job Number: FA56228 **Sample:** GBB1748-ICV1748
Account: EAENYS EA Engineering **Lab FileID:** BB060207.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On    : 06-Jul-2018, 19:02:56                    Operator: kismetl
Sample    : icv1748-1000                             Inst    : G1315B
Misc      :                                          Multiplr: 1.00
IntFile Signal #1: events.e     IntFile Signal #2: events2.e

Method       : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title        : Explosives by 8330A,8330B,8332
Last Update  : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  15%     Max. Rel. Area : 200%
```

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	888.280	11.2	89	0.00	1.10- 1.70
2	HMX	1000.000	1043.978	-4.4	115	0.00	1.24- 1.84
	Amount	Calc.	%Drift				
3	DNX	1000.000	965.091	3.5	97	0.00	1.49- 2.09
	Amount	Calc.	%Drift				
4	MNX	1000.000	908.873	9.1	98	0.00	2.09- 2.69
5	RDX	1000.000	1088.039	-8.8	114	0.00	2.62- 3.42
	Amount	Calc.	%Drift				
6	1,3,5-Trinitrobenzene	1000.000	1122.936	-12.3	112	0.00	4.42- 5.22
	Amount	Calc.	%Drift				
7	1,3-Dinitrobenzene	1000.000	1067.478	-6.7	111	0.00	5.65- 6.45
	Amount	Calc.	%Drift				
8	3,5-Dinitroaniline	1000.000	933.611	6.6	94	0.00	6.00- 6.80
	Amount	Calc.	%Drift				
9	Nitrobenzene	1000.000	1003.720	-0.4	110	0.00	7.29- 8.09
10	Nitroglycerin		----------NA----------				
11	Tetryl		----------NA----------				
	Amount	Calc.	%Drift				
12	2,4,6-Trinitrotoluene		----------NA----------				
	Amount	Calc.	%Drift				
13	2-Amino-4,6-Dinitrotoluen		----------NA----------				
14	4-Amino-2,6-Dinitrotoluen		----------NA----------				
	Amount	Calc.	%Drift				
15 S	3,4-Dinitrotoluene		----------NA----------				
	Amount	Calc.	%Drift				
16	2,4-Dinitrotoluene	1000.000	1020.089	-2.0	110	-0.02	11.68-12.48
	Amount	Calc.	%Drift				
17	2,6-Dinitrotoluene		----------NA----------				
	Amount	Calc.	%Drift				

Initial Calibration Verification

Job Number: FA56228 **Sample:** GBB1748-ICV1748
Account: EAENYS EA Engineering **Lab FileID:** BB060207.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

18	o-Nitrotoluene	1000.000	1120.494	-12.0	113	-0.02	15.43-16.30
19	p-Nitrotoluene	1000.000	1066.427	-6.6	111	-0.02	15.91-16.91
		Amount	Calc.	%Drift			
20	m-Nitrotoluene			NA			
		Amount	Calc.	%Drift			
21	PETN			NA			

***** Signal #2 *****

1	TNX	1000.000	881.147	11.9	89	0.00	1.10- 1.70
		Amount	Calc.	%Drift			
2	HMX	1000.000	1137.187	-13.7	115	0.00	1.24- 1.84
		Amount	Calc.	%Drift			
3	DNX	1000.000	889.408	11.1	96	0.00	1.49- 2.09
4	MNX	1000.000	939.824	6.0	96	0.00	2.09- 2.69
5	RDX	1000.000	1056.691	-5.7	114	0.00	2.62- 3.42
6	1,3,5-Trinitrobenzene	1000.000	1101.772	-10.2	112	0.00	4.42- 5.22
		Amount	Calc.	%Drift			
7	1,3-Dinitrobenzene	1000.000	1117.069	-11.7	111	0.00	5.65- 6.45
8	3,5-Dinitroaniline	1000.000	945.674	5.4	96	0.00	6.00- 6.80
9	Nitrobenzene	1000.000	1112.210	-11.2	113	-0.01	7.29- 8.09
		Amount	Calc.	%Drift			
10	Nitroglycerin	5000.000	4813.802	3.7	97	0.00	8.53- 9.53
		Amount	Calc.	%Drift			
11	Tetryl			NA			
12	2,4,6-Trinitrotoluene			NA			
		Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotoluen			NA			
		Amount	Calc.	%Drift			
14	4-Amino-2,6-Dinitrotoluen			NA			
15 S	3,4-Dinitrotoluene			NA			
16	2,4-Dinitrotoluene	1000.000	1133.416	-13.3	113	-0.02	11.68-12.48
17	2,6-Dinitrotoluene			NA			
		Amount	Calc.	%Drift			
18	o-Nitrotoluene	1000.000	1116.301	-11.6	109	-0.01	15.30-16.30
19	p-Nitrotoluene	1000.000	1019.236	-1.9	112	-0.02	15.91-16.91
20	m-Nitrotoluene			NA			
21	PETN	5000.000	5002.949	-0.1	101	0.00	18.30-19.50

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB060205.D 8330B_0707PLUS.M Mon Jul 09 11:17:48 2018

Initial Calibration Verification

Job Number: FA56228 **Sample:** GBB1748-ICV1748
Account: EAENYS EA Engineering **Lab FileID:** BB060208.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1A.ch
Acq On    : 06-Jul-2018, 19:32:55                    Operator: kismetl
Sample    : icv1748-1000 spk                         Inst    : G1315B
Misc      :                                          Multiplr: 1.00
IntFile Signal #1: events.e     IntFile Signal #2: events2.e

Method       : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title        : Explosives by 8330A,8330B,8332
Last Update  : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  15%     Max. Rel. Area : 200%
```

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX		NA				
2	HMX		NA				
	Amount	Calc.	%Drift				
3	DNX		NA				
	Amount	Calc.	%Drift				
4	MNX		NA				
5	RDX		NA				
	Amount	Calc.	%Drift				
6	1,3,5-Trinitrobenzene		NA				
	Amount	Calc.	%Drift				
7	1,3-Dinitrobenzene		NA				
	Amount	Calc.	%Drift				
8	3,5-Dinitroaniline		NA				
	Amount	Calc.	%Drift				
9	Nitrobenzene		NA				
10	Nitroglycerin		NA				
11	Tetryl	1000.000	982.234	1.8	107	0.00	9.15- 9.95
	Amount	Calc.	%Drift				
12	2,4,6-Trinitrotoluene	1000.000	1000.138	-0.0	101	0.00	9.63-10.43
	Amount	Calc.	%Drift				
13	2-Amino-4,6-Dinitrotol	1000.000	913.856	8.6	97	0.00	10.03-10.83
14	4-Amino-2,6-Dinitrotol	1000.000	994.624	0.5	104	0.00	10.52-11.32
	Amount	Calc.	%Drift				
15 S	3,4-Dinitrotoluene		NA				
	Amount	Calc.	%Drift				
16	2,4-Dinitrotoluene		NA				
	Amount	Calc.	%Drift				
17	2,6-Dinitrotoluene	1000.000	958.888	4.1	96	-0.02	12.12-12.92
	Amount	Calc.	%Drift				

Initial Calibration Verification

Job Number: FA56228 **Sample:** GBB1748-ICV1748
Account: EAENYS EA Engineering **Lab FileID:** BB060208.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

18	o-Nitrotoluene		----------NA----------				
19	p-Nitrotoluene		----------NA----------				
	----------	Amount	Calc.	%Drift			
20	m-Nitrotoluene	1000.000	956.540	4.3	98	0.00	16.88-17.88
	----------	Amount	Calc.	%Drift			
21	PETN		----------NA----------				
*****	Signal #2 *****						
1	TNX		----------NA----------				
	----------	Amount	Calc.	%Drift			
2	HMX		----------NA----------				
	----------	Amount	Calc.	%Drift			
3	DNX		----------NA----------				
4	MNX		----------NA----------				
5	RDX		----------NA----------				
6	1,3,5-Trinitrobenzene		----------NA----------				
	----------	Amount	Calc.	%Drift			
7	1,3-Dinitrobenzene		----------NA----------				
8	3,5-Dinitroaniline		----------NA----------				
9	Nitrobenzene		----------NA----------				
	----------	Amount	Calc.	%Drift			
10	Nitroglycerin		----------NA----------				
	----------	Amount	Calc.	%Drift			
11	Tetryl	1000.000	1095.709	-9.6	110	0.00	9.15- 9.95
12	2,4,6-Trinitrotoluene	1000.000	1053.616	-5.4	105	0.00	9.63-10.43
	----------	Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotol	1000.000	1033.000	-3.3	99	0.00	10.04-10.84
	----------	Amount	Calc.	%Drift			
14	4-Amino-2,6-Dinitrotol	1000.000	1058.821	-5.9	106	0.00	10.53-11.33
15 S	3,4-Dinitrotoluene		----------NA----------				
16	2,4-Dinitrotoluene		----------NA----------				
17	2,6-Dinitrotoluene	1000.000	1024.395	-2.4	102	0.00	12.13-12.93
	----------	Amount	Calc.	%Drift			
18	o-Nitrotoluene		----------NA----------				
19	p-Nitrotoluene		----------NA----------				
20	m-Nitrotoluene	1000.000	1002.550	-0.3	93	0.00	16.88-17.88
21	PETN		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB060205.D 8330B_0707PLUS.M Mon Jul 09 11:16:37 2018

8.6.3

8

Continuing Calibration Summary

Job Number: FA56228 **Sample:** GBB1757-CC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060383.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060383.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060383.D\dad1A.ch
Acq On : 06-Aug-2018, 14:27:47 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	963.104	3.7	97	0.00	1.13- 1.73
2	HMX	1000.000	937.878	6.2	103	0.00	1.26- 1.86
	---------- Amount	Calc.	%Drift	----------			
3	DNX	1000.000	936.516	6.3	94	0.00	1.54- 2.14
	---------- Amount	Calc.	%Drift	----------			
4	MNX	1000.000	911.666	8.8	98	0.00	2.17- 2.77
5	RDX	1000.000	953.646	4.6	100	0.00	2.72- 3.52
	---------- Amount	Calc.	%Drift	----------			
6	1,3,5-Trinitrobenzene	1000.000	973.591	2.6	97	0.00	4.55- 5.35
	---------- Amount	Calc.	%Drift	----------			
7	1,3-Dinitrobenzene	1000.000	923.637	7.6	96	0.00	5.86- 6.66
	---------- Amount	Calc.	%Drift	----------			
8	3,5-Dinitroaniline	1000.000	991.474	0.9	100	0.00	6.16- 6.96
	---------- Amount	Calc.	%Drift	----------			
9	Nitrobenzene	1000.000	895.931	10.4	99	0.00	7.52- 8.32
10	Nitroglycerin	----------NA----------					
11	Tetryl	1000.000	782.090	21.8#	85	0.00	9.49-10.29
	---------- Amount	Calc.	%Drift	----------			
12	2,4,6-Trinitrotoluene	1000.000	968.367	3.2	98	0.00	9.96-10.76
	---------- Amount	Calc.	%Drift	----------			
13	2-Amino-4,6-Dinitrotol	1000.000	892.948	10.7	95	0.00	10.36-11.16
14	4-Amino-2,6-Dinitrotol	1000.000	1019.050	-1.9	106	0.00	10.82-11.62
	---------- Amount	Calc.	%Drift	----------			
15 S	3,4-Dinitrotoluene	1000.000	905.232	9.5	91	0.00	11.48-12.28
	---------- Amount	Calc.	%Drift	----------			
16	2,4-Dinitrotoluene	1000.000	915.155	8.5	99	0.00	12.14-12.94
	---------- Amount	Calc.	%Drift	----------			
17	2,6-Dinitrotoluene	1000.000	918.430	8.2	92	0.00	12.54-13.34
	---------- Amount	Calc.	%Drift	----------			

Continuing Calibration Summary

Job Number: FA56228 **Sample:** GBB1757-CC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060383.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

18	o-Nitrotoluene	1000.000	989.788	1.0	100	0.00	15.80-16.68
19	p-Nitrotoluene	1000.000	963.232	3.7	100	0.00	16.31-17.31
		Amount	Calc.	%Drift			
20	m-Nitrotoluene	1000.000	1015.251	-1.5	104	0.00	17.21-18.21
		Amount	Calc.	%Drift			
21	PETN		----------NA----------				
*****	Signal #2 *****						
1	TNX	1000.000	956.241	4.4	96	0.00	1.13- 1.73
		Amount	Calc.	%Drift			
2	HMX	1000.000	1021.163	-2.1	103	0.00	1.26- 1.86
		Amount	Calc.	%Drift			
3	DNX	1000.000	862.875	13.7	93	0.00	1.54- 2.14
4	MNX	1000.000	945.849	5.4	97	0.00	2.17- 2.77
5	RDX	1000.000	919.453	8.1	99	0.00	2.72- 3.52
6	1,3,5-Trinitrobenzene	1000.000	964.943	3.5	98	0.00	4.55- 5.35
		Amount	Calc.	%Drift			
7	1,3-Dinitrobenzene	1000.000	955.505	4.4	96	0.00	5.86- 6.66
8	3,5-Dinitroaniline	1000.000	983.337	1.7	100	0.00	6.16- 6.96
9	Nitrobenzene	1000.000	988.422	1.2	101	0.00	7.52- 8.32
		Amount	Calc.	%Drift			
10	Nitroglycerin	5000.000	4793.274	4.1	97	0.00	8.96- 9.96
		Amount	Calc.	%Drift			
11	Tetryl	1000.000	896.748	10.3	90	0.00	9.49-10.29
12	2,4,6-Trinitrotoluene	1000.000	998.215	0.2	99	0.00	9.96-10.76
		Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotol	1000.000	1009.707	-1.0	96	0.00	10.36-11.16
		Amount	Calc.	%Drift			
14	4-Amino-2,6-Dinitrotol	1000.000	1049.328	-4.9	105	0.00	10.83-11.63
15 S	3,4-Dinitrotoluene	1000.000	954.711	4.5	94	0.00	11.48-12.28
16	2,4-Dinitrotoluene	1000.000	1003.042	-0.3	100	0.00	12.14-12.94
17	2,6-Dinitrotoluene	1000.000	981.269	1.9	98	0.00	12.53-13.33
		Amount	Calc.	%Drift			
18	o-Nitrotoluene	1000.000	950.204	5.0	92	0.00	15.68-16.68
19	p-Nitrotoluene	1000.000	833.245	16.7#	91	0.00	16.31-17.31
20	m-Nitrotoluene	1000.000	1129.242	-12.9	105	0.00	17.21-18.21
21	PETN	5000.000	5045.809	-0.9	102	0.00	18.62-19.82

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB060205.D 8330B_0707PLUS.M Tue Aug 07 13:51:53 2018

Continuing Calibration Summary

Job Number: FA56228 **Sample:** GBB1757-CC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060394.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060394.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060394.D\dad1A.ch
Acq On : 06-Aug-2018, 19:55:31 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71202,gbb1757,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	961.288	3.9	96	0.00	1.13- 1.73
2	HMX	1000.000	946.940	5.3	104	0.00	1.26- 1.86
	----------	Amount	Calc.	%Drift	----------		
3	DNX	1000.000	952.820	4.7	96	0.00	1.54- 2.14
	----------	Amount	Calc.	%Drift	----------		
4	MNX	1000.000	918.657	8.1	99	0.01	2.17- 2.77
5	RDX	1000.000	971.404	2.9	102	0.01	2.72- 3.52
	----------	Amount	Calc.	%Drift	----------		
6	1,3,5-Trinitrobenzene	1000.000	961.020	3.9	96	0.01	4.55- 5.35
	----------	Amount	Calc.	%Drift	----------		
7	1,3-Dinitrobenzene	1000.000	919.165	8.1	96	0.02	5.86- 6.66
	----------	Amount	Calc.	%Drift	----------		
8	3,5-Dinitroaniline	1000.000	982.372	1.8	99	0.02	6.16- 6.96
	----------	Amount	Calc.	%Drift	----------		
9	Nitrobenzene	1000.000	905.973	9.4	100	0.02	7.52- 8.32
10	Nitroglycerin		----------NA----------				
11	Tetryl	1000.000	790.688	20.9#	86	0.03	9.49-10.29
	----------	Amount	Calc.	%Drift	----------		
12	2,4,6-Trinitrotoluene	1000.000	981.451	1.9	99	0.04	9.96-10.76
	----------	Amount	Calc.	%Drift	----------		
13	2-Amino-4,6-Dinitrotol	1000.000	911.487	8.9	97	0.05	10.36-11.16
14	4-Amino-2,6-Dinitrotol	1000.000	1040.173	-4.0	109	0.05	10.82-11.62
	----------	Amount	Calc.	%Drift	----------		
15 S	3,4-Dinitrotoluene	1000.000	926.690	7.3	94	0.03	11.48-12.28
	----------	Amount	Calc.	%Drift	----------		
16	2,4-Dinitrotoluene	1000.000	907.344	9.3	98	0.04	12.14-12.94
	----------	Amount	Calc.	%Drift	----------		
17	2,6-Dinitrotoluene	1000.000	1017.305	-1.7	102	0.02	12.54-13.34
	----------	Amount	Calc.	%Drift	----------		

Continuing Calibration Summary

Job Number: FA56228 **Sample:** GBB1757-CC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060394.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

18	o-Nitrotoluene	1000.000	1015.967	-1.6	103	0.05	15.80-16.68
19	p-Nitrotoluene	1000.000	993.004	0.7	103	0.04	16.31-17.31
		Amount	Calc.	%Drift			
20	m-Nitrotoluene	1000.000	1057.275	-5.7	108	0.04	17.21-18.21
		Amount	Calc.	%Drift			
21	PETN		----------NA----------				
*****	Signal #2 *****						
1	TNX	1000.000	954.682	4.5	96	0.00	1.13- 1.73
		Amount	Calc.	%Drift			
2	HMX	1000.000	1018.625	-1.9	103	0.00	1.26- 1.86
		Amount	Calc.	%Drift			
3	DNX	1000.000	872.603	12.7	94	0.00	1.54- 2.14
4	MNX	1000.000	955.769	4.4	98	0.00	2.17- 2.77
5	RDX	1000.000	918.182	8.2	99	0.01	2.72- 3.52
6	1,3,5-Trinitrobenzene	1000.000	964.093	3.6	98	0.01	4.55- 5.35
		Amount	Calc.	%Drift			
7	1,3-Dinitrobenzene	1000.000	960.781	3.9	96	0.02	5.86- 6.66
8	3,5-Dinitroaniline	1000.000	977.802	2.2	99	0.02	6.16- 6.96
9	Nitrobenzene	1000.000	975.569	2.4	99	0.02	7.52- 8.32
		Amount	Calc.	%Drift			
10	Nitroglycerin	5000.000	4668.881	6.6	95	0.02	8.96- 9.96
		Amount	Calc.	%Drift			
11	Tetryl	1000.000	891.717	10.8	89	0.03	9.49-10.29
12	2,4,6-Trinitrotoluene	1000.000	996.817	0.3	99	0.03	9.96-10.76
		Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotol	1000.000	1002.906	-0.3	96	0.05	10.36-11.16
		Amount	Calc.	%Drift			
14	4-Amino-2,6-Dinitrotol	1000.000	1051.919	-5.2	105	0.05	10.83-11.63
15 S	3,4-Dinitrotoluene	1000.000	966.253	3.4	95	0.03	11.48-12.28
16	2,4-Dinitrotoluene	1000.000	988.482	1.2	99	0.03	12.14-12.94
17	2,6-Dinitrotoluene	1000.000	1021.568	-2.2	102	0.05	12.53-13.33
		Amount	Calc.	%Drift			
18	o-Nitrotoluene	1000.000	970.624	2.9	94	0.04	15.68-16.68
19	p-Nitrotoluene	1000.000	771.577	22.8#	85	0.06	16.31-17.31
20	m-Nitrotoluene	1000.000	1160.917	-16.1#	108	0.04	17.21-18.21
21	PETN	5000.000	4914.047	1.7	100	0.01	18.62-19.82

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB060205.D 8330B_0707PLUS.M Tue Aug 07 14:53:59 2018

Continuing Calibration Summary

Job Number: FA56228 **Sample:** GBB1757-ECC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060400.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060400.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060400.D\dad1A.ch
Acq On : 06-Aug-2018, 22:55:16 Operator: williamh
Sample : ecc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	TNX	1000.000	958.012	4.2	96	0.00	1.13- 1.73
2	HMX	1000.000	939.118	6.1	104	0.00	1.26- 1.86
	---------- Amount	Calc.	%Drift	----------			
3	DNX	1000.000	952.422	4.8	96	0.00	1.54- 2.14
	---------- Amount	Calc.	%Drift	----------			
4	MNX	1000.000	899.031	10.1	97	0.00	2.17- 2.77
5	RDX	1000.000	933.336	6.7	98	0.00	2.72- 3.52
	---------- Amount	Calc.	%Drift	----------			
6	1,3,5-Trinitrobenzene	1000.000	948.674	5.1	95	0.00	4.55- 5.35
	---------- Amount	Calc.	%Drift	----------			
7	1,3-Dinitrobenzene	1000.000	915.937	8.4	96	0.00	5.86- 6.66
	---------- Amount	Calc.	%Drift	----------			
8	3,5-Dinitroaniline	1000.000	985.631	1.4	99	0.02	6.16- 6.96
	---------- Amount	Calc.	%Drift	----------			
9	Nitrobenzene	1000.000	911.198	8.9	100	0.01	7.52- 8.32
10	Nitroglycerin	----------	NA	----------			
11	Tetryl	1000.000	776.777	22.3#	84	0.02	9.49-10.29
	---------- Amount	Calc.	%Drift	----------			
12	2,4,6-Trinitrotoluene	1000.000	956.598	4.3	97	0.01	9.96-10.76
	---------- Amount	Calc.	%Drift	----------			
13	2-Amino-4,6-Dinitrotol	1000.000	896.085	10.4	95	0.03	10.36-11.16
14	4-Amino-2,6-Dinitrotol	1000.000	1016.058	-1.6	106	0.03	10.82-11.62
	---------- Amount	Calc.	%Drift	----------			
15 S	3,4-Dinitrotoluene	1000.000	897.249	10.3	91	0.00	11.48-12.28
	---------- Amount	Calc.	%Drift	----------			
16	2,4-Dinitrotoluene	1000.000	887.062	11.3	96	0.02	12.14-12.94
	---------- Amount	Calc.	%Drift	----------			
17	2,6-Dinitrotoluene	1000.000	960.012	4.0	96	0.00	12.54-13.34
	---------- Amount	Calc.	%Drift	----------			

Continuing Calibration Summary

Job Number: FA56228 **Sample:** GBB1757-ECC1748
Account: EAENYS EA Engineering **Lab FileID:** BB060400.D
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

18	o-Nitrotoluene	1000.000	986.963	1.3	100	0.03	15.80-16.68
19	p-Nitrotoluene	1000.000	950.564	4.9	99	0.03	16.31-17.31
		Amount	Calc.	%Drift			
20	m-Nitrotoluene	1000.000	1008.953	-0.9	103	0.03	17.21-18.21
		Amount	Calc.	%Drift			
21	PETN		----------NA----------				

***** Signal #2 *****

1	TNX	1000.000	949.571	5.0	96	0.00	1.13- 1.73
		Amount	Calc.	%Drift			
2	HMX	1000.000	1016.242	-1.6	103	0.00	1.26- 1.86
		Amount	Calc.	%Drift			
3	DNX	1000.000	869.471	13.1	94	0.00	1.54- 2.14
4	MNX	1000.000	941.606	5.8	96	0.00	2.17- 2.77
5	RDX	1000.000	916.255	8.4	99	0.00	2.72- 3.52
6	1,3,5-Trinitrobenzene	1000.000	962.109	3.8	98	0.00	4.55- 5.35
		Amount	Calc.	%Drift			
7	1,3-Dinitrobenzene	1000.000	993.019	0.7	99	0.00	5.86- 6.66
8	3,5-Dinitroaniline	1000.000	976.097	2.4	99	0.02	6.16- 6.96
9	Nitrobenzene	1000.000	996.337	0.4	101	0.01	7.52- 8.32
		Amount	Calc.	%Drift			
10	Nitroglycerin	5000.000	4634.077	7.3	94	0.00	8.96- 9.96
		Amount	Calc.	%Drift			
11	Tetryl	1000.000	878.114	12.2	88	0.02	9.49-10.29
12	2,4,6-Trinitrotoluene	1000.000	982.660	1.7	98	0.02	9.96-10.76
		Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotol	1000.000	993.342	0.7	95	0.03	10.36-11.16
		Amount	Calc.	%Drift			
14	4-Amino-2,6-Dinitrotol	1000.000	1036.690	-3.7	104	0.03	10.83-11.63
15 S	3,4-Dinitrotoluene	1000.000	942.944	5.7	93	0.01	11.48-12.28
16	2,4-Dinitrotoluene	1000.000	975.825	2.4	97	0.01	12.14-12.94
17	2,6-Dinitrotoluene	1000.000	991.226	0.9	99	0.03	12.53-13.33
		Amount	Calc.	%Drift			
18	o-Nitrotoluene	1000.000	953.422	4.7	93	0.02	15.68-16.68
19	p-Nitrotoluene	1000.000	783.543	21.6#	86	0.04	16.31-17.31
20	m-Nitrotoluene	1000.000	1130.329	-13.0	105	0.03	17.21-18.21
21	PETN	5000.000	5017.065	-0.3	102	0.00	18.62-19.82

(#) = Out of Range SPCC's out = 0 CCC's out = 0
BB060205.D 8330B_0707PLUS.M Tue Aug 07 13:51:55 2018

8.6.6

GC/LC Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060386.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060386.D\dad1A.ch
Acq On : 06-Aug-2018, 15:57:33 Operator: williamh
Sample : FA56228-1 Inst : G1315B
Misc : OP71202,gbb1757,1030,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 07 09:53:43 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.89	11.88	1187135	2008442	456.797	491.410
	Spiked Amount 500.000	Range 70 - 136		Recovery =		91.36%	98.28%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D.	N.D.
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	0.00	0.00	0	0	N.D.	N.D.
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D.	N.D.
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D.	N.D.
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D.
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D.
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D.
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D.
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D.
21)	PETN	19.22	0.00	80933	0	NoCal	N.D.

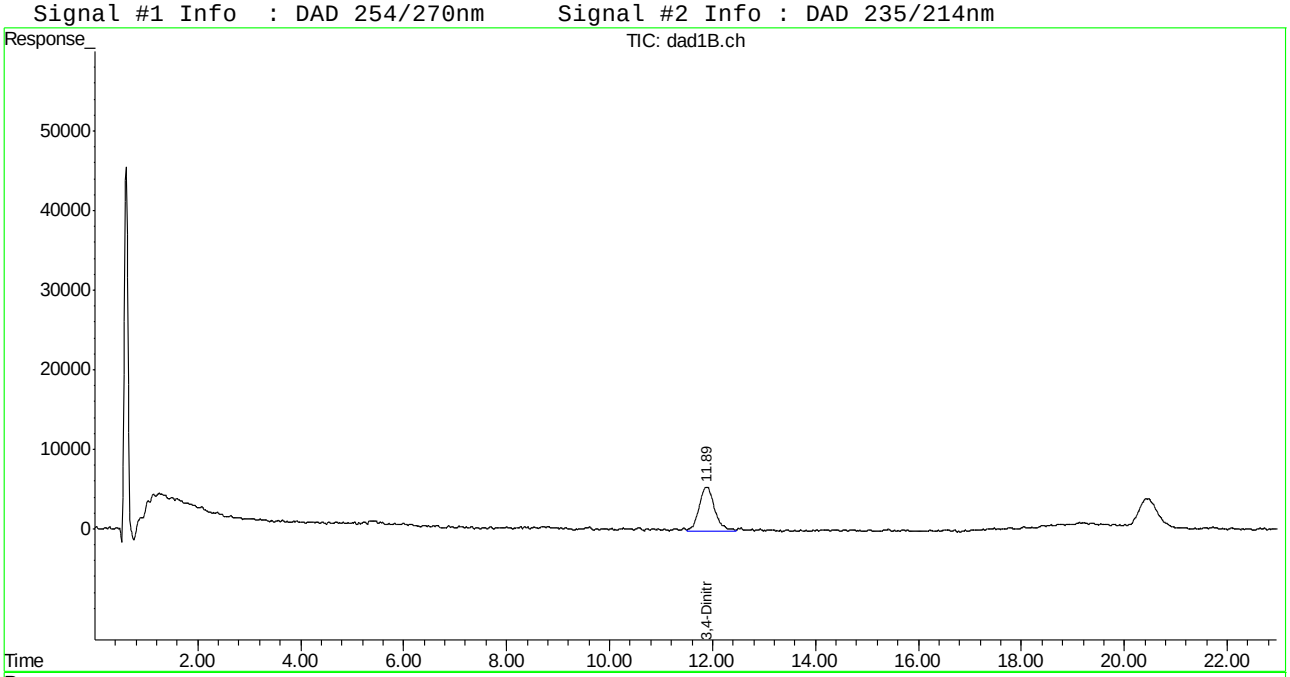
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060386.D 8330B_0707PLUS.M Tue Aug 07 14:42:48 2018 Page 1

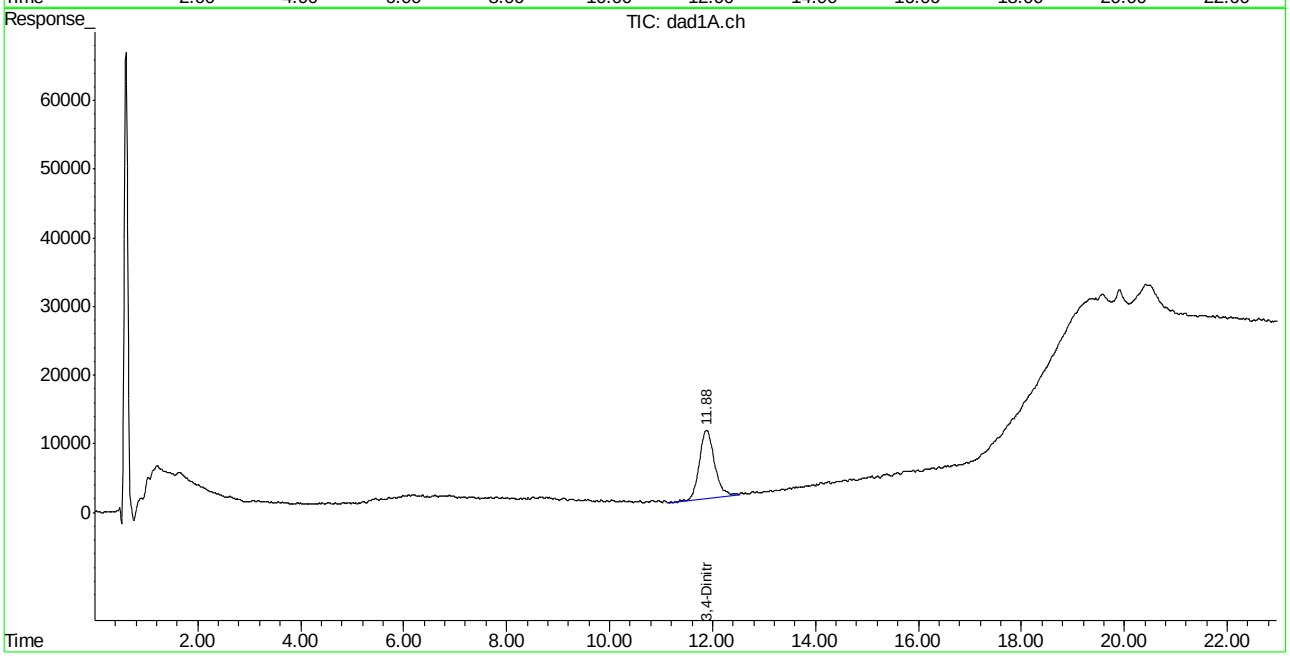
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060386.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060386.D\dad1A.ch
Acq On : 06-Aug-2018, 15:57:33 Operator: williamh
Sample : FA56228-1 Inst : G1315B
Misc : OP71202,gbb1757,1030,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 13:30 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060387.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060387.D\dad1A.ch
Acq On : 06-Aug-2018, 16:27:29 Operator: williamh
Sample : FA56228-2 Inst : G1315B
Misc : OP71202,gbb1757,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 07 09:53:44 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.89	11.89	1105416	1894323	425.208	464.395
	Spiked Amount 500.000	Range 70 - 136		Recovery =		85.04%	92.88%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D.	N.D.
2)	HMX	0.00	0.00	0	0	N.D.	N.D.
3)	DNX	0.00	0.00	0	0	N.D.	N.D.
4)	MNX	0.00	0.00	0	0	N.D. d	N.D.
5)	RDX	0.00	0.00	0	0	N.D. d	N.D.
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D.
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D.	N.D.
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D.
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D.
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D.
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D.
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D.
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

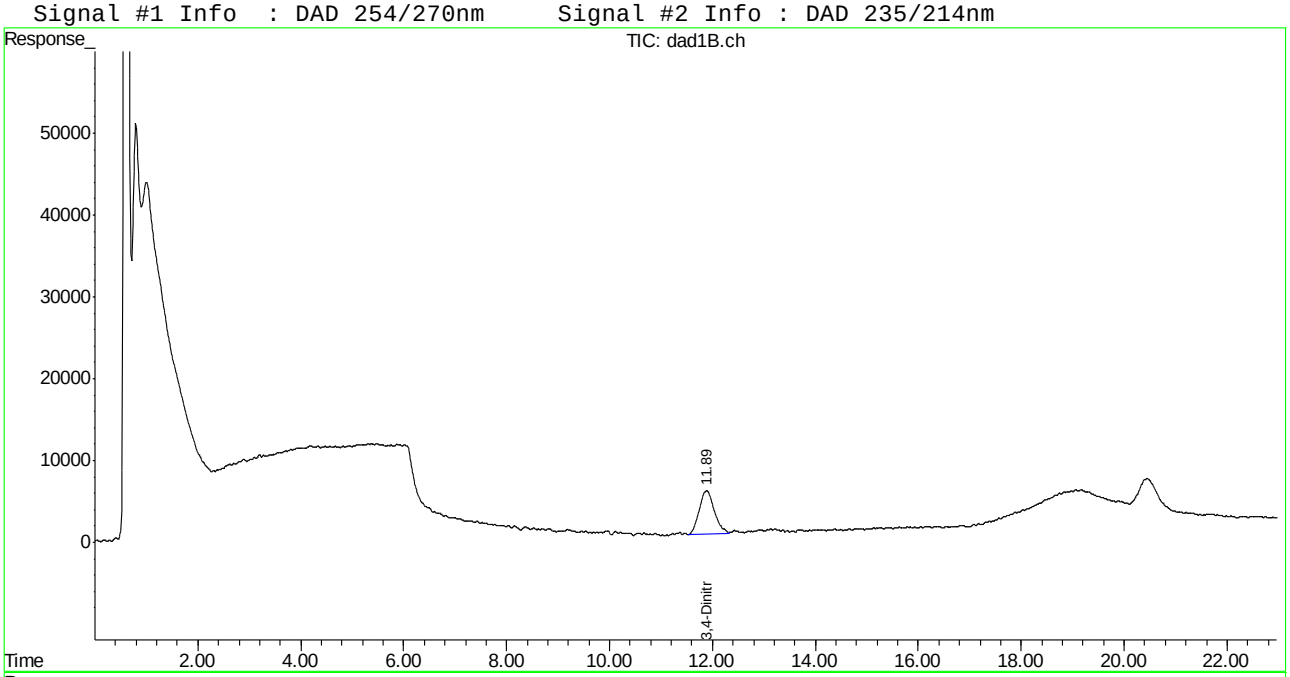
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060387.D 8330B_0707PLUS.M Tue Aug 07 15:16:44 2018 Page 1

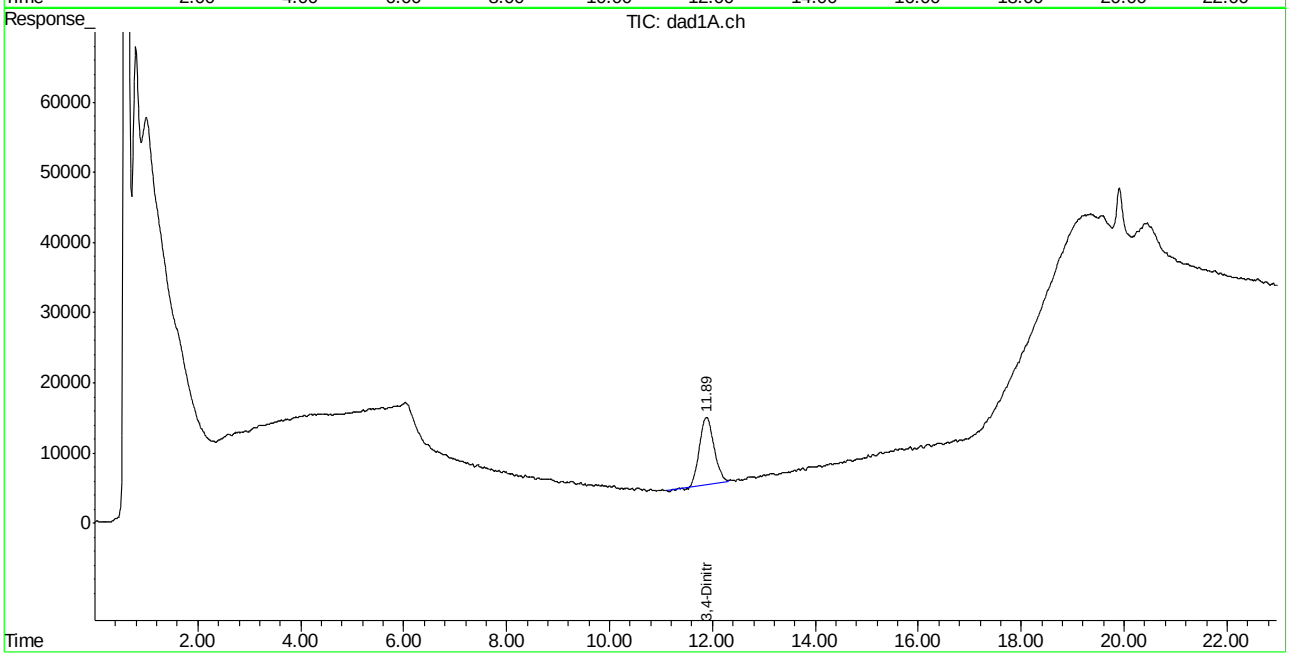
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060387.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060387.D\dad1A.ch
Acq On : 06-Aug-2018, 16:27:29 Operator: williamh
Sample : FA56228-2 Inst : G1315B
Misc : OP71202,gbb1757,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 15:16 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060388.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060388.D\dad1A.ch
Acq On : 06-Aug-2018, 16:55:46 Operator: williamh
Sample : FA56228-3 Inst : G1315B
Misc : OP71202,gbb1757,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 07 09:53:45 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.89	11.90	1156676	1917879	445.020	469.980
	Spiked Amount 500.000	Range 70 - 136		Recovery =		89.00%	94.00%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D.
2)	HMX	0.00	0.00	0	0	N.D. d	N.D.
3)	DNX	0.00	0.00	0	0	N.D.	N.D.
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	0.00	0.00	0	0	N.D.	N.D.
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D.	N.D.
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D.	N.D.
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D.
10)	Nitroglycerin	9.43	0.00	31994	0	NoCal	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D.
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D.
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D.
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D.
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D.
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D.
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D.
21)	PETN	19.24	0.00	61733	0	NoCal	N.D.

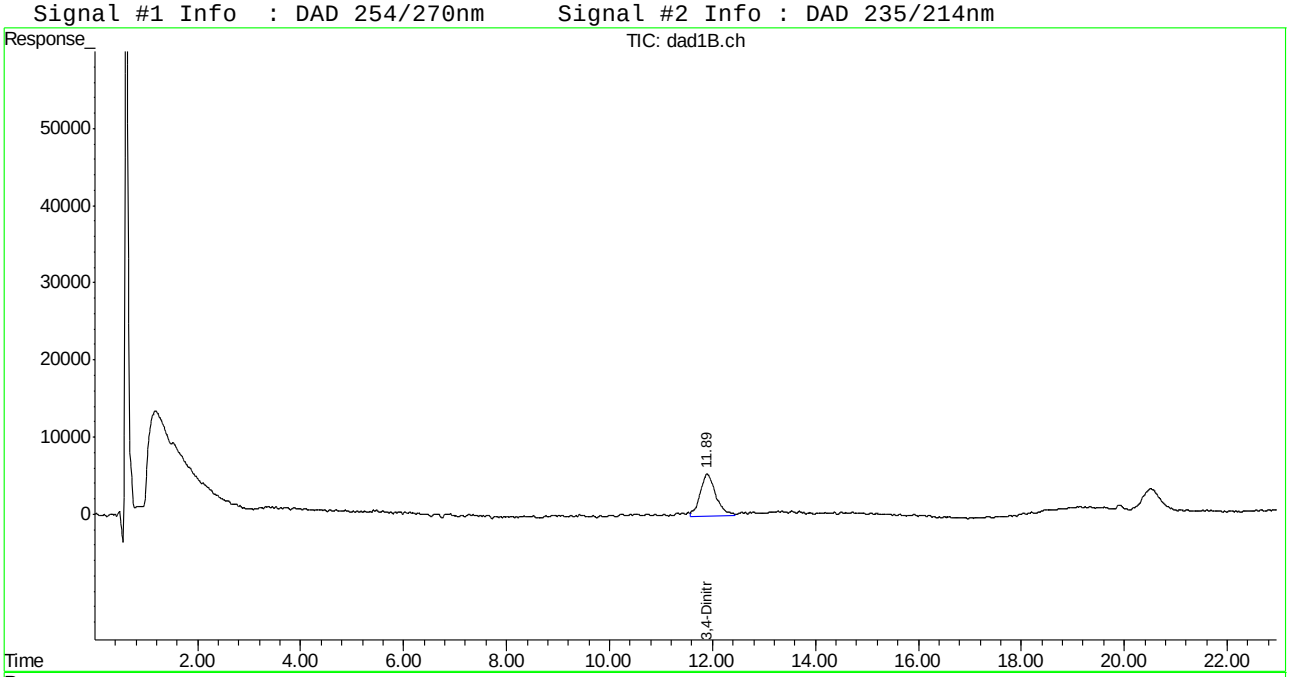
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060388.D 8330B_0707PLUS.M Tue Aug 07 14:42:50 2018 Page 1

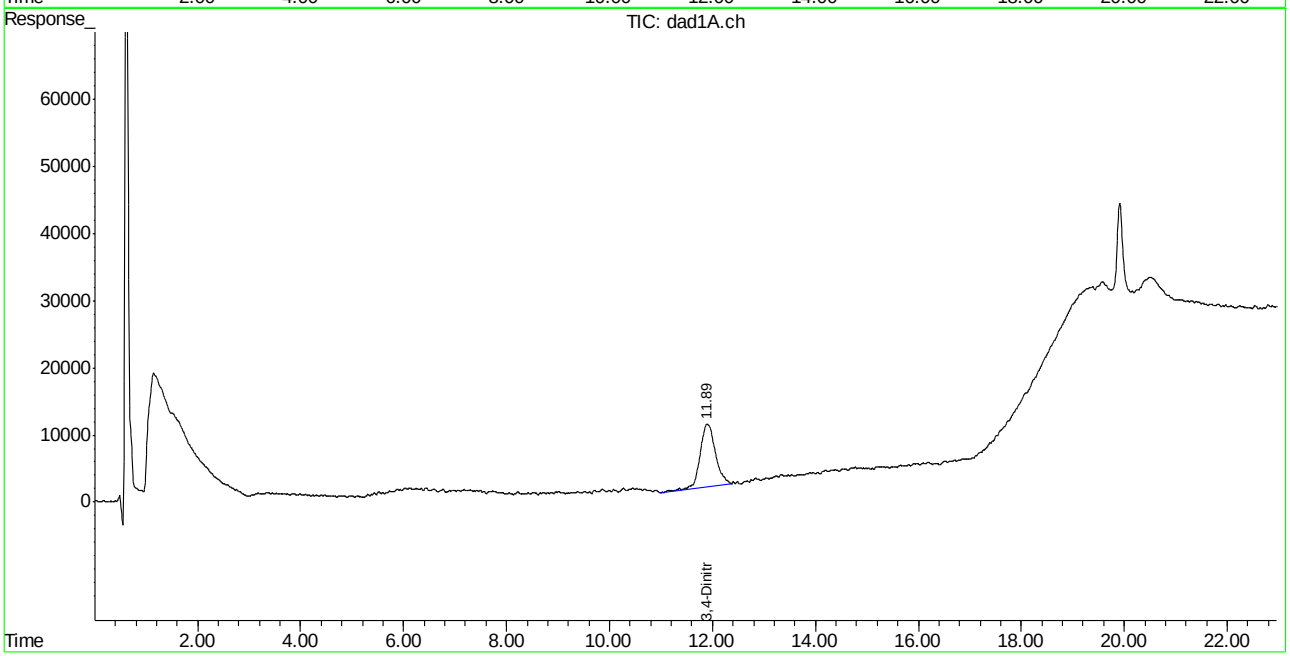
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060388.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060388.D\dad1A.ch
Acq On : 06-Aug-2018, 16:55:46 Operator: williamh
Sample : FA56228-3 Inst : G1315B
Misc : OP71202,gbb1757,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 13:31 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





BB060388.D 8330B_0707PLUS.M Tue Aug 07 14:42:50 2018 Page 2

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060389.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060389.D\dad1A.ch
Acq On : 06-Aug-2018, 17:25:44 Operator: williamh
Sample : FA56228-4 Inst : G1315B
Misc : OP71202,gbb1757,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 07 13:34:00 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.90	11.89	1163586	1937059	447.692	474.523
	Spiked Amount 500.000	Range 70 - 136		Recovery =		89.54%	94.90%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

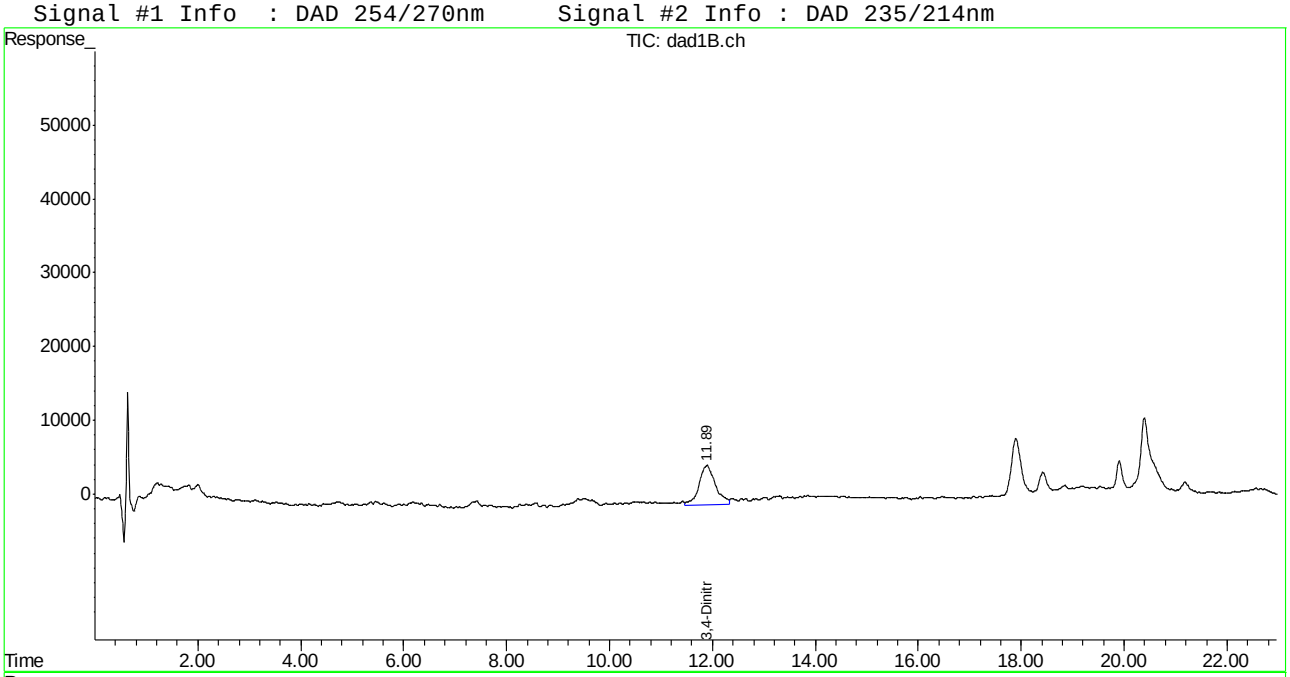
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060389.D 8330B_0707PLUS.M Tue Aug 07 14:42:51 2018 Page 1

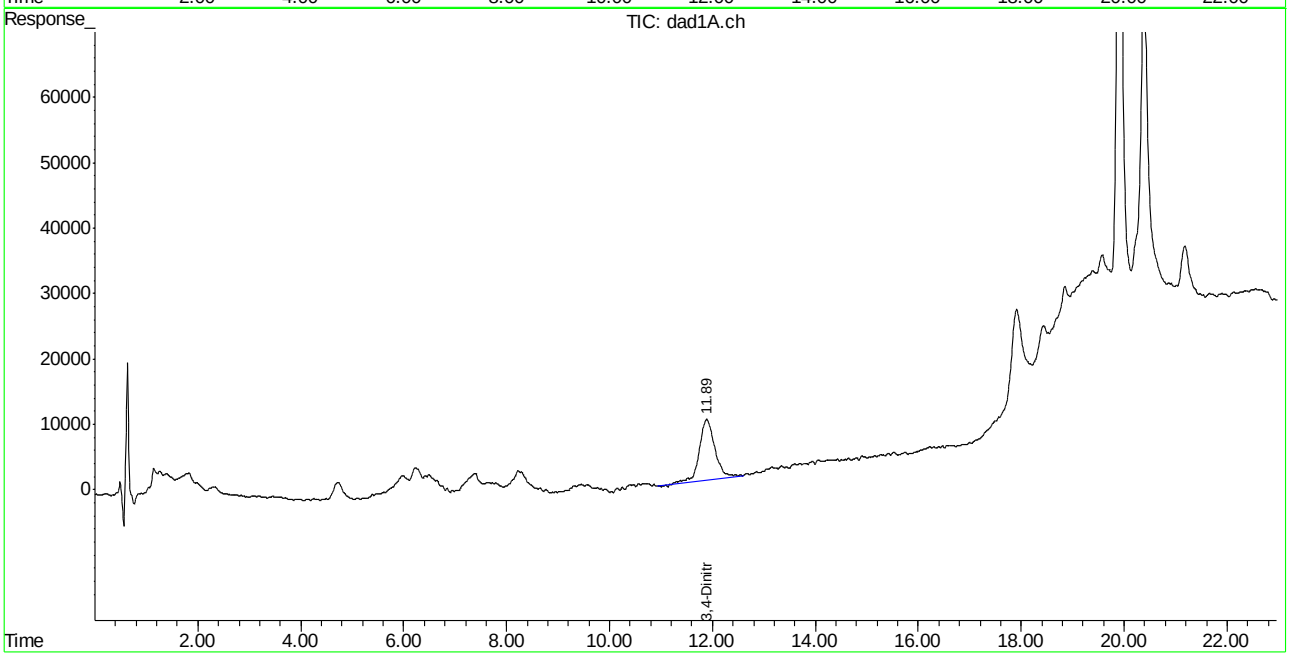
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060389.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060389.D\dad1A.ch
Acq On : 06-Aug-2018, 17:25:44 Operator: williamh
Sample : FA56228-4 Inst : G1315B
Misc : OP71202,gbb1757,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 13:34 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





BB060389.D 8330B_0707PLUS.M Tue Aug 07 14:42:51 2018 Page 2

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060390.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060390.D\dad1A.ch
Acq On : 06-Aug-2018, 17:55:42 Operator: williamh
Sample : FA56228-5 Inst : G1315B
Misc : OP71202,gbb1757,1030,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 07 09:53:47 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.89	11.89	1104530	1878359	424.866	460.608
	Spiked Amount 500.000	Range 70 - 136		Recovery =		84.97%	92.12%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D.	N.D.
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

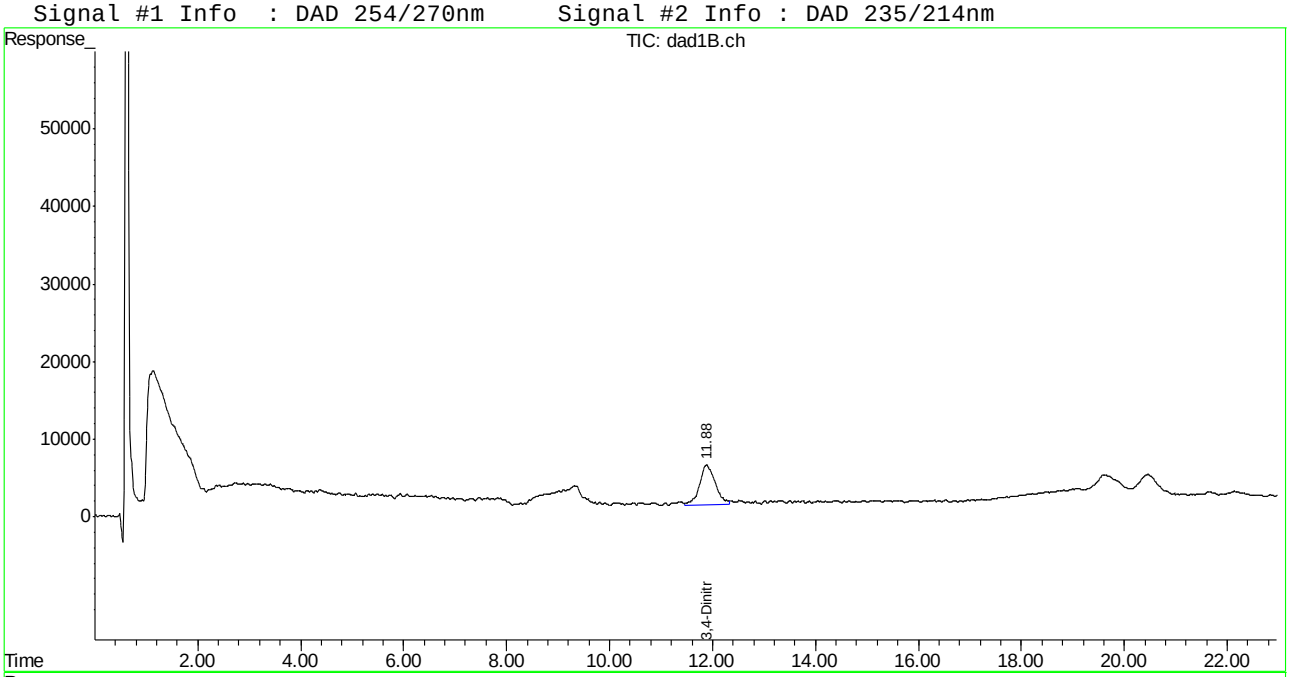
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060390.D 8330B_0707PLUS.M Tue Aug 07 14:42:52 2018 Page 1

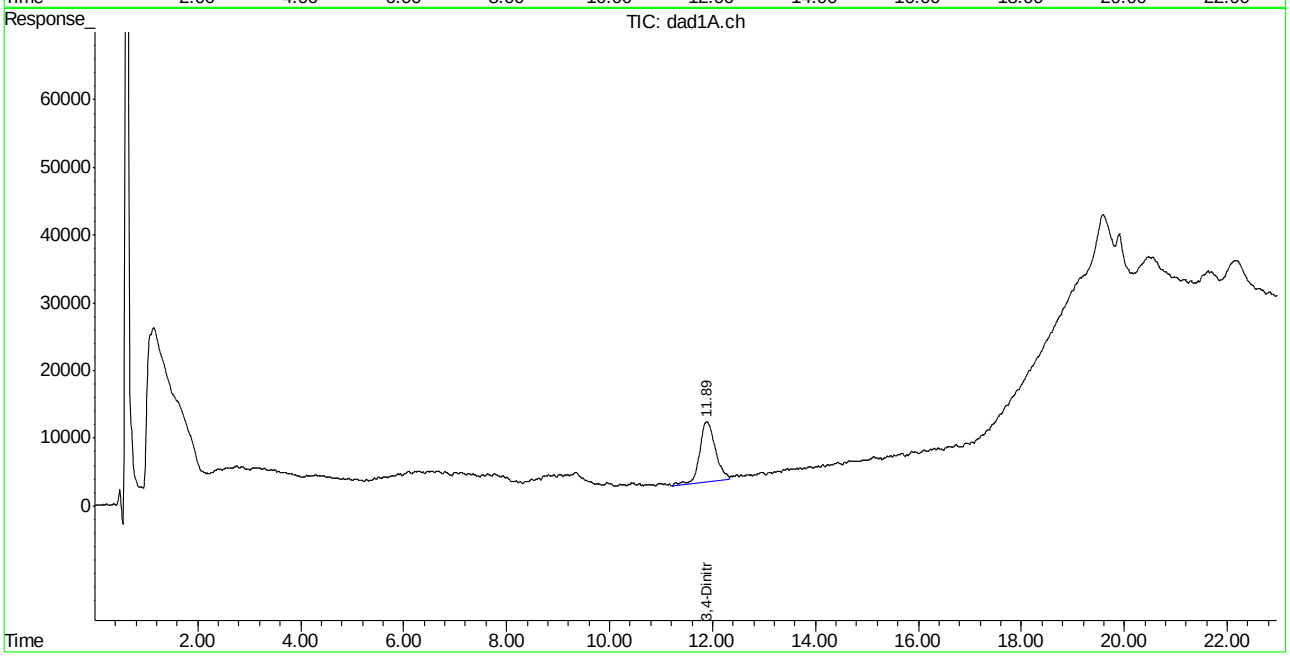
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060390.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060390.D\dad1A.ch
Acq On : 06-Aug-2018, 17:55:42 Operator: williamh
Sample : FA56228-5 Inst : G1315B
Misc : OP71202,gbb1757,1030,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 13:34 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060391.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060391.D\dad1A.ch
Acq On : 06-Aug-2018, 18:25:39 Operator: williamh
Sample : FA56228-6 Inst : G1315B
Misc : OP71202,gbb1757,1030,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 07 09:53:48 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.91	11.89	1107558	1987297	426.036	486.412
	Spiked Amount 500.000	Range 70 - 136		Recovery =		85.21%	97.28%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

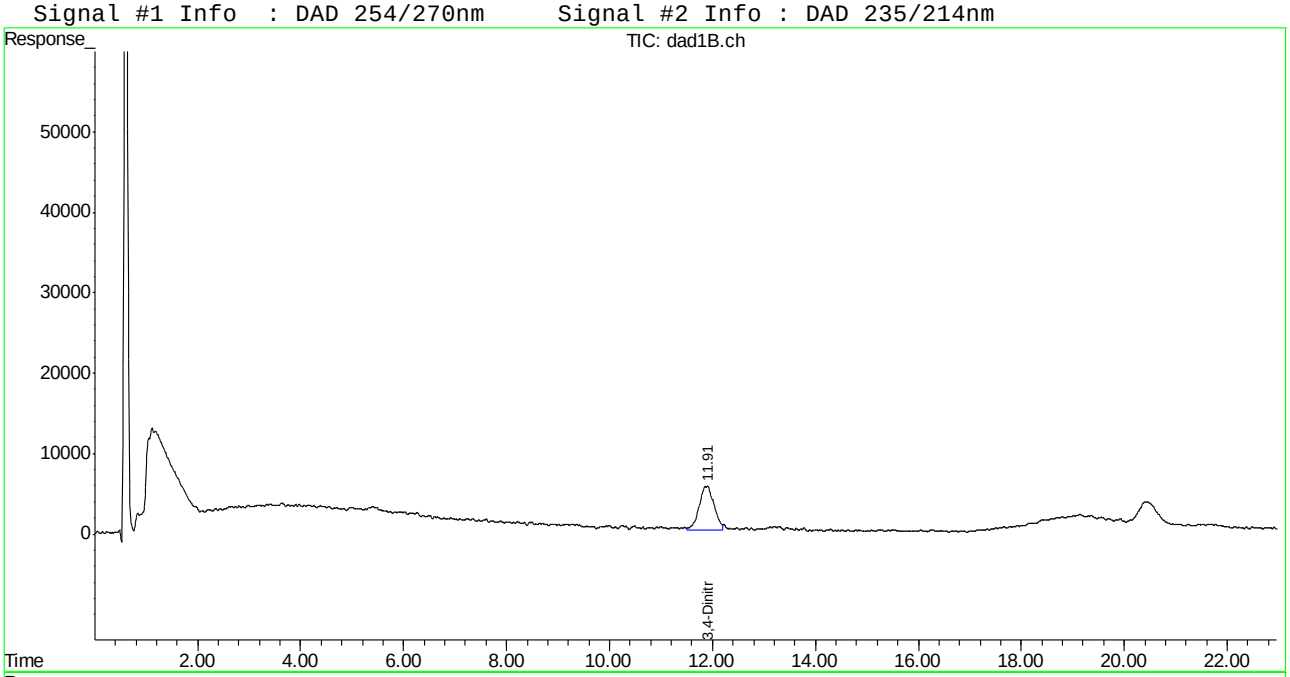
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060391.D 8330B_0707PLUS.M Tue Aug 07 14:42:53 2018 Page 1

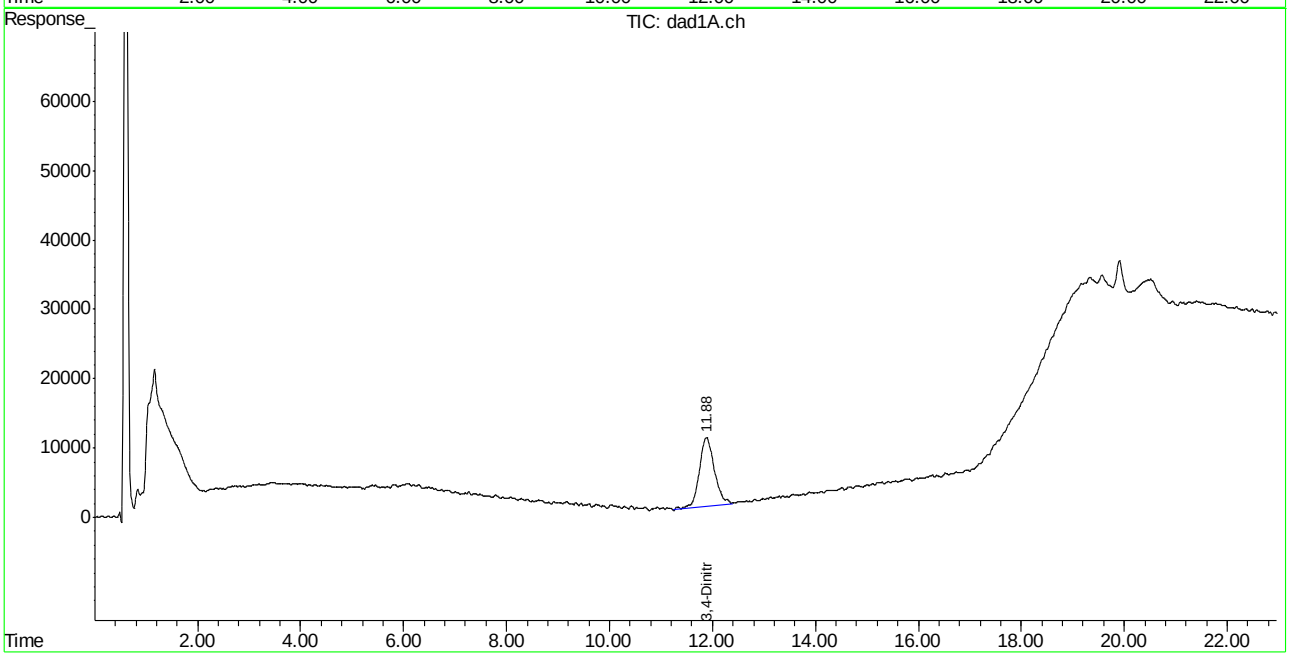
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060391.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060391.D\dad1A.ch
Acq On : 06-Aug-2018, 18:25:39 Operator: williamh
Sample : FA56228-6 Inst : G1315B
Misc : OP71202,gbb1757,1030,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 13:35 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





BB060391.D 8330B_0707PLUS.M Tue Aug 07 14:42:53 2018 Page 2

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060392.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060392.D\dad1A.ch
Acq On : 06-Aug-2018, 18:55:37 Operator: williamh
Sample : FA56228-7 Inst : G1315B
Misc : OP71202,gbb1757,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 07 09:53:49 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.88	11.90	1094983	1857534	421.177	455.664
	Spiked Amount 500.000	Range 70 - 136		Recovery =		84.24%	91.13%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

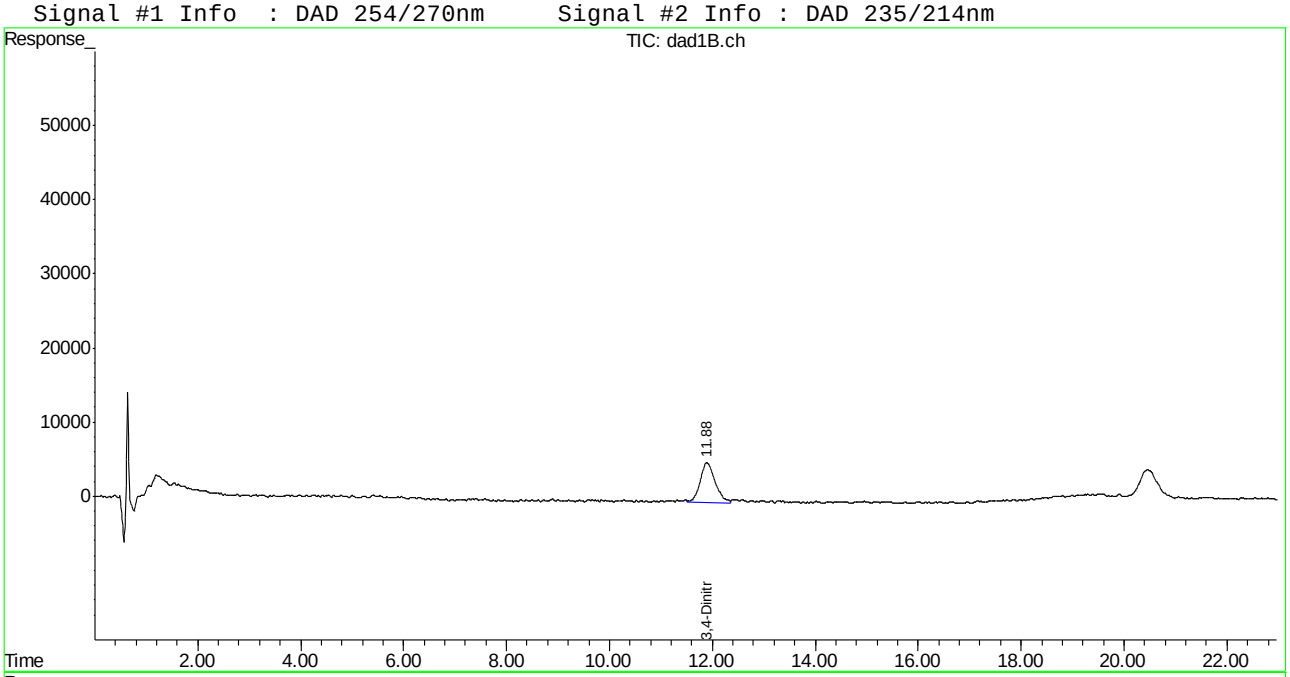
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060392.D 8330B_0707PLUS.M Tue Aug 07 16:50:23 2018 Page 1

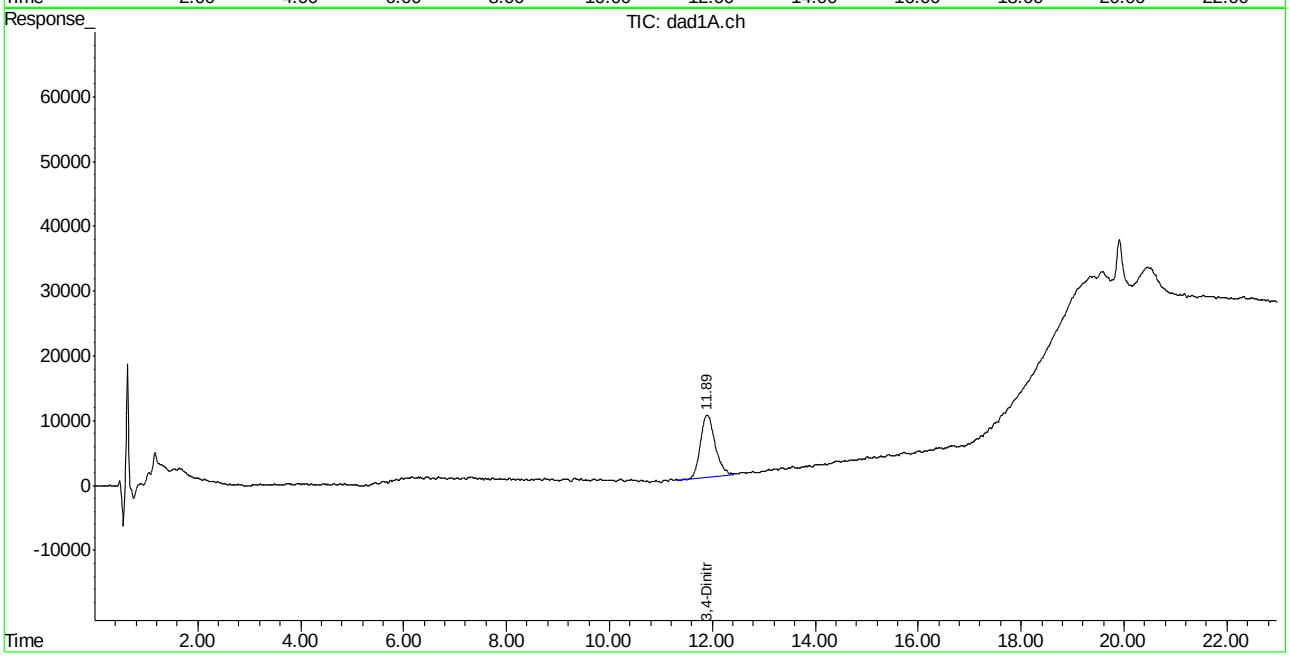
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060392.D\dad1B.ch Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060392.D\dad1A.ch
Acq On : 06-Aug-2018, 18:55:37 Operator: williamh
Sample : FA56228-7 Inst : G1315B
Misc : OP71202,gbb1757,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 16:49 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060393.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060393.D\dad1A.ch
Acq On : 06-Aug-2018, 19:25:34 Operator: williamh
Sample : FA56228-8 Inst : G1315B
Misc : OP71202,gbb1757,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 07 09:53:50 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.91	11.90	1037389	1880659	398.929	461.153
	Spiked Amount 500.000	Range 70 - 136		Recovery =		79.79%	92.23%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

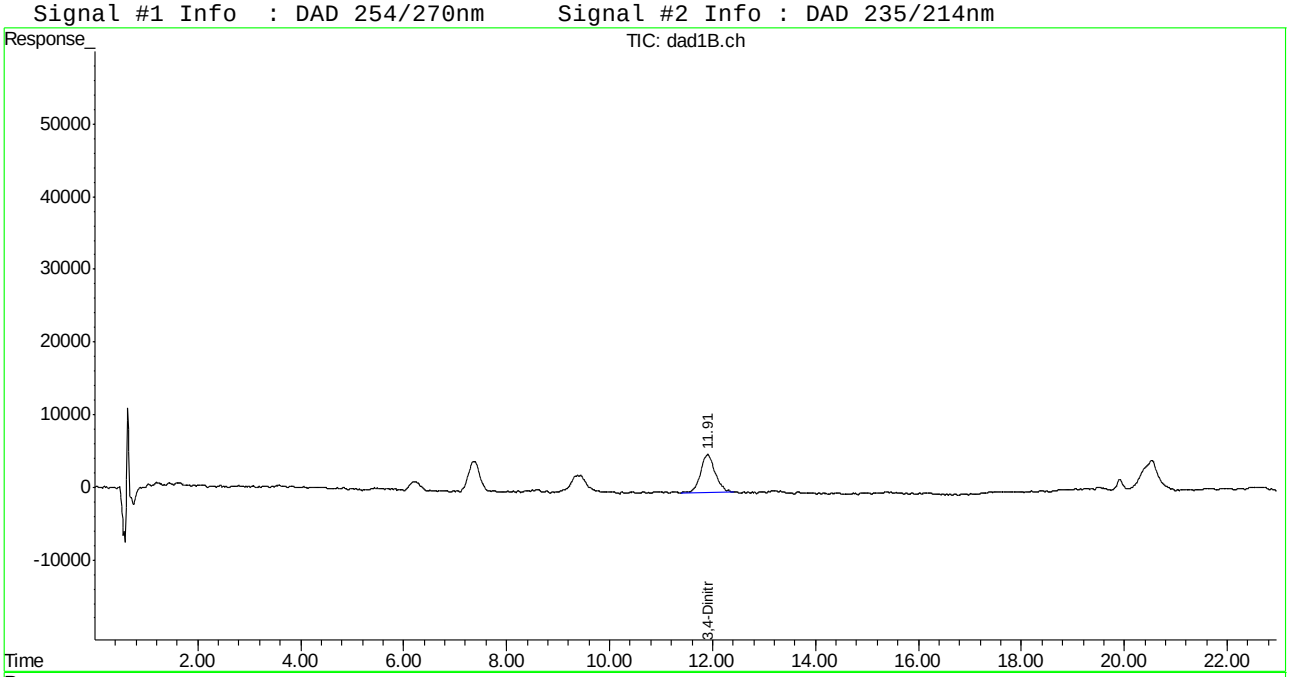
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060393.D 8330B_0707PLUS.M Thu Aug 09 11:04:43 2018 Page 1

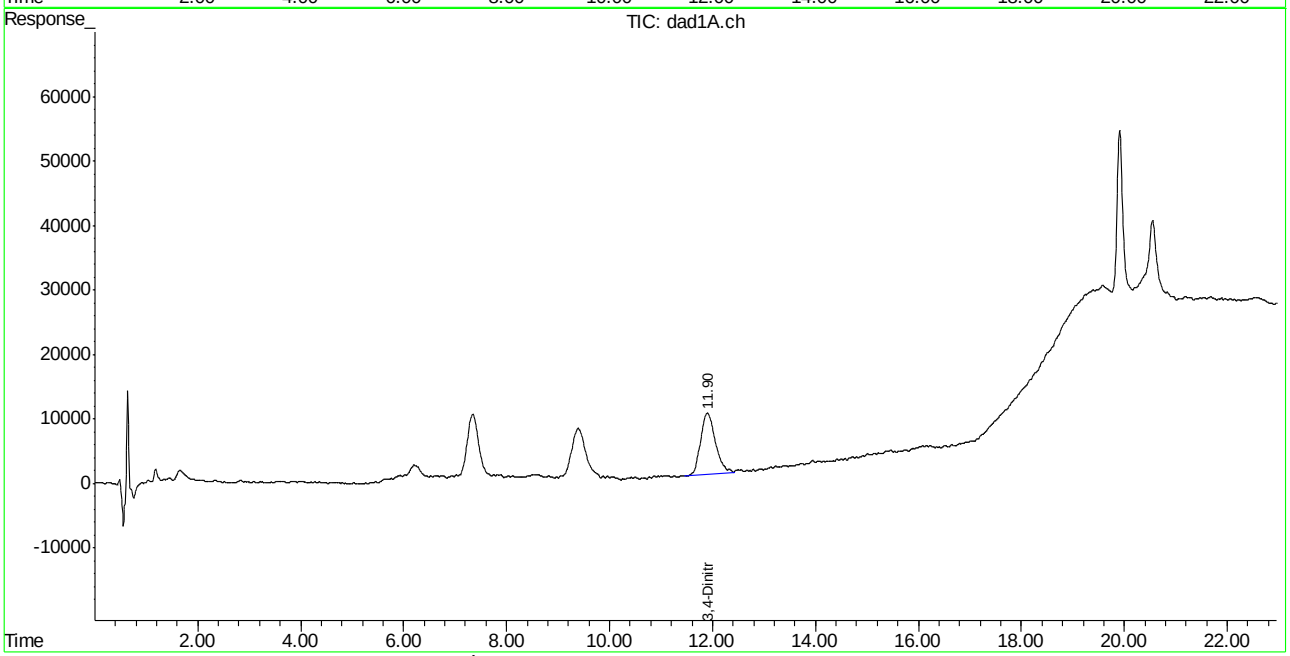
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060393.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060393.D\dad1A.ch
Acq On : 06-Aug-2018, 19:25:34 Operator: williamh
Sample : FA56228-8 Inst : G1315B
Misc : OP71202,gbb1757,1050,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 9 11:04 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

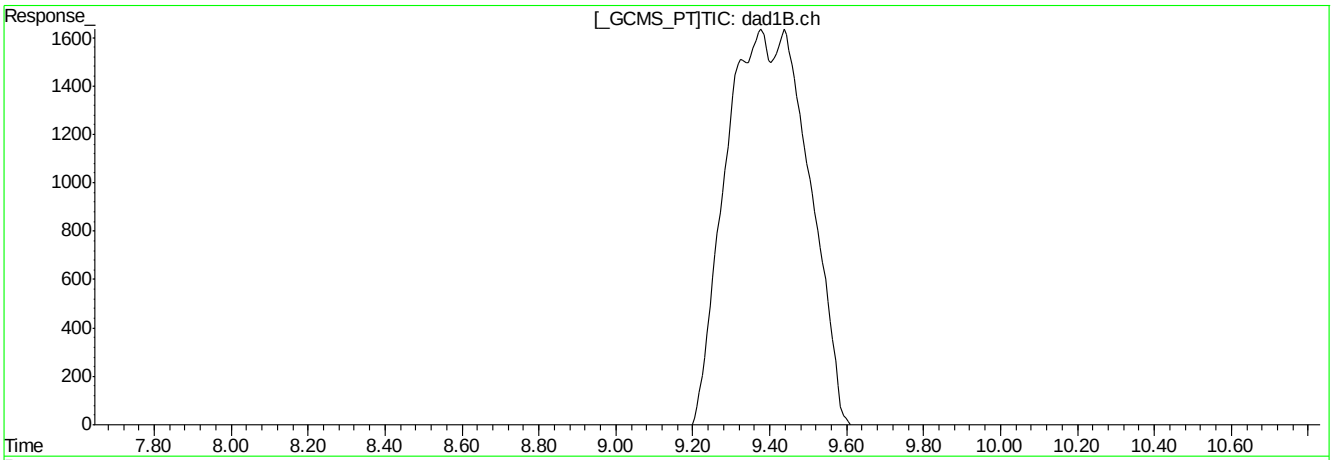


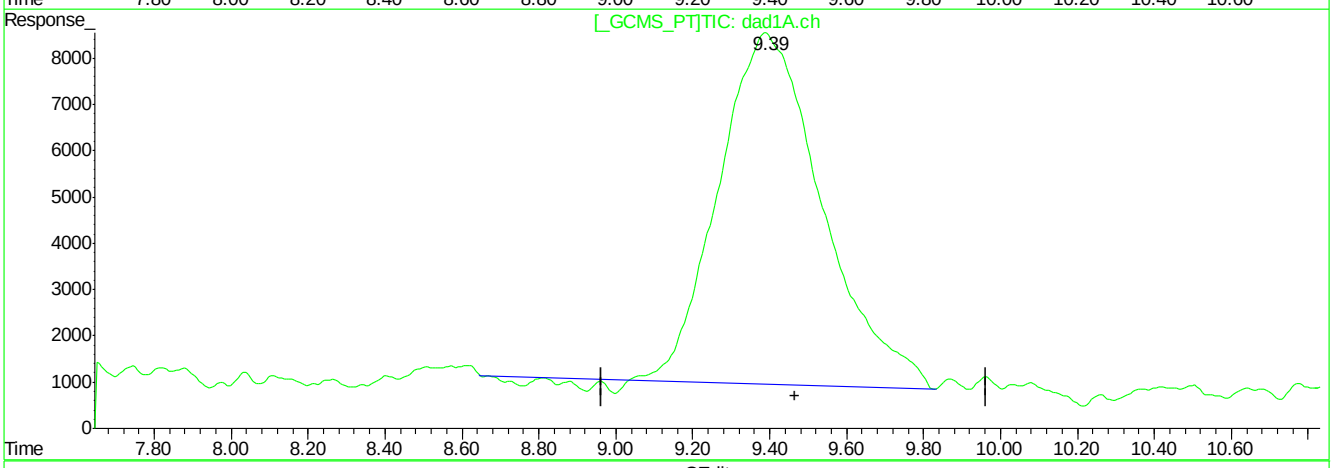


Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060393.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060393.D\dad1A.ch
Acq On : 06-Aug-2018, 19:25:34 Operator: williamh
Sample : FA56228-8 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb d

response 0

(10) Nitroglycerin #2

9.39min 1066.953ppb

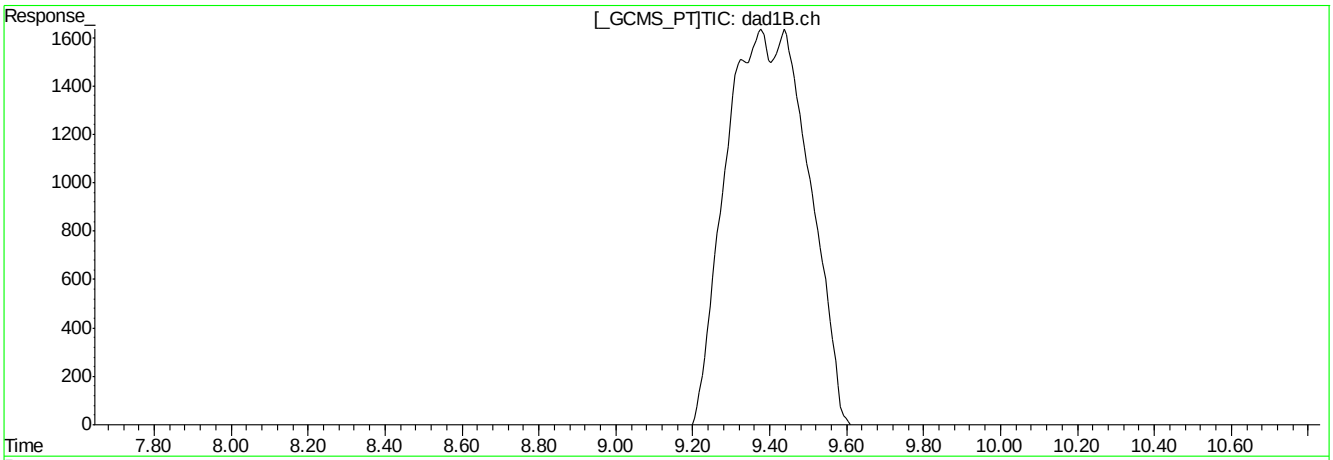
response 1391828

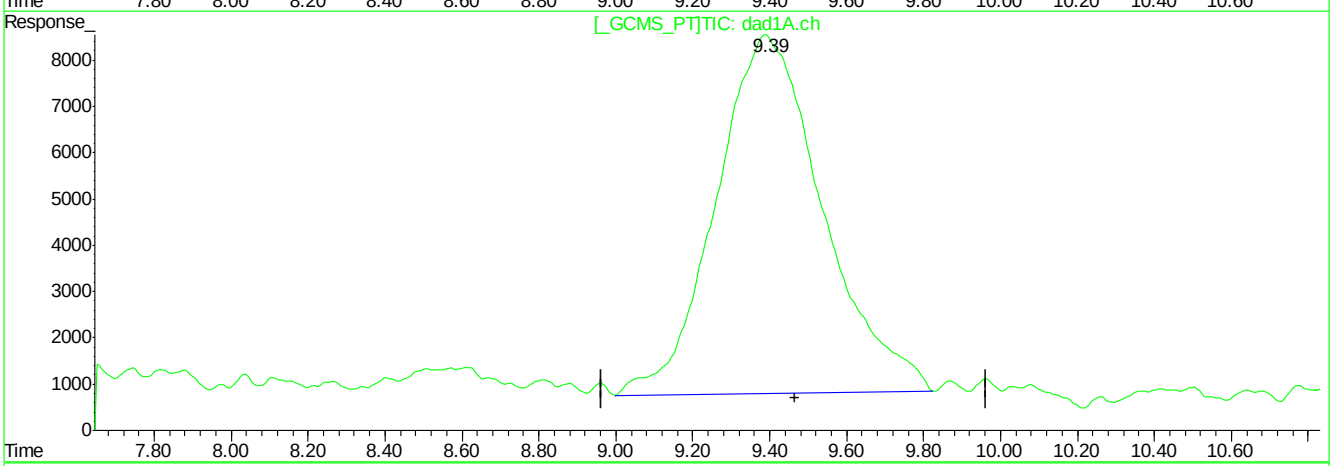
(+) = Expected Retention Time
BB060393.D 8330B_0707PLUS.M Tue Aug 07 13:37:39 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060393.D\dad1B.ch Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060393.D\dad1A.ch
Acq On : 06-Aug-2018, 19:25:34 Operator: williamh
Sample : FA56228-8 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

0.00min 0.000ppb d

response 0

(10) Nitroglycerin #2

9.39min 1146.553ppb m

response 1495666

(+) = Expected Retention Time
BB060393.D 8330B_0707PLUS.M Tue Aug 07 13:37:51 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/09/18 15:42

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060396.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060396.D\dad1A.ch
Acq On : 06-Aug-2018, 20:55:24 Operator: williamh
Sample : FA56228-10 Inst : G1315B
Misc : OP71202,gbb1757,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 07 09:53:53 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.89	11.89	1000240	1813186	384.584	445.125m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		76.92%	89.03%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

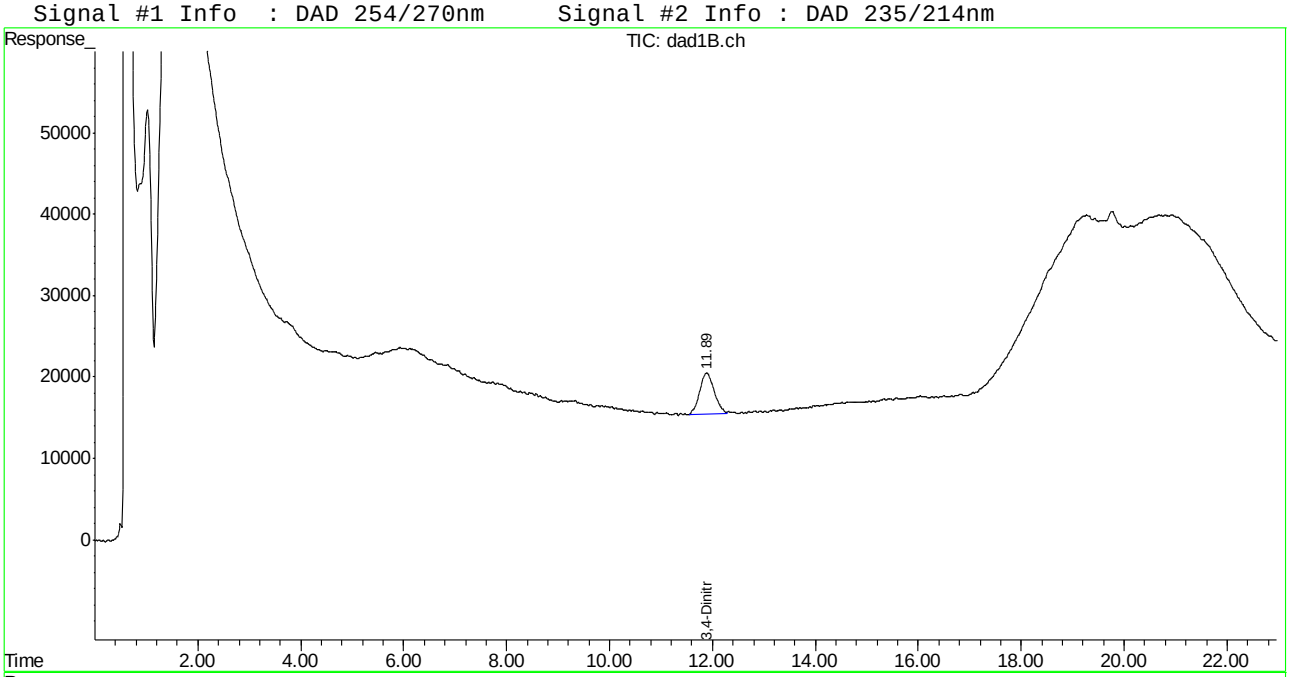
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060396.D 8330B_0707PLUS.M Tue Aug 07 14:42:57 2018 Page 1

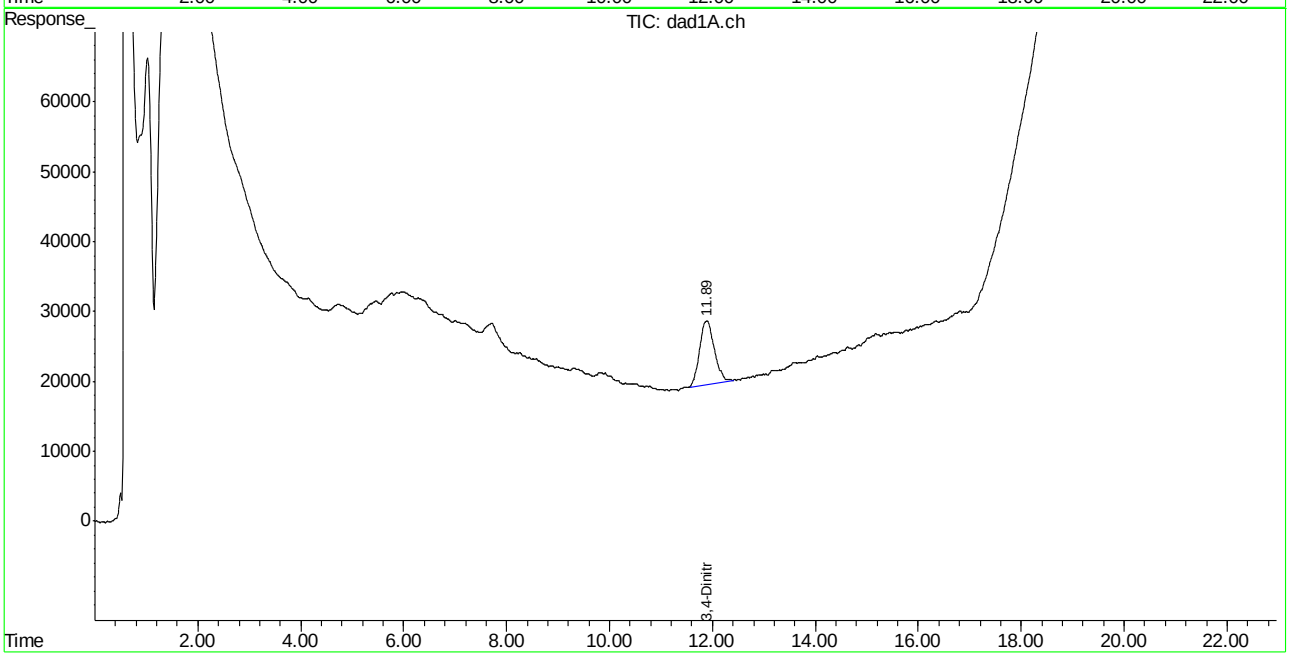
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060396.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060396.D\dad1A.ch
Acq On : 06-Aug-2018, 20:55:24 Operator: williamh
Sample : FA56228-10 Inst : G1315B
Misc : OP71202,gbb1757,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 13:39 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





BB060396.D 8330B_0707PLUS.M Tue Aug 07 14:42:57 2018 Page 2

Manual Integration Approval Summary

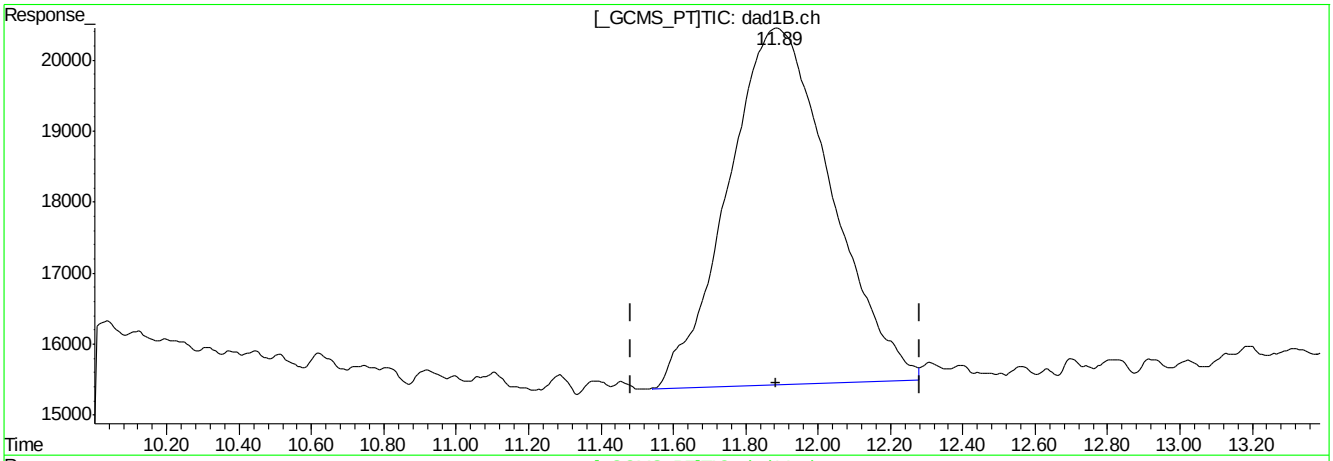
Sample Number:	FA56228-10	**Method:**	SW846 8330A
Lab FileID:	BB060396.D	**Analyst approved:**	08/07/18 15:02 William Hustedde
Injection Time:	08/06/18 20:55	**Supervisor approved:**	08/09/18 15:42 Mike Eger

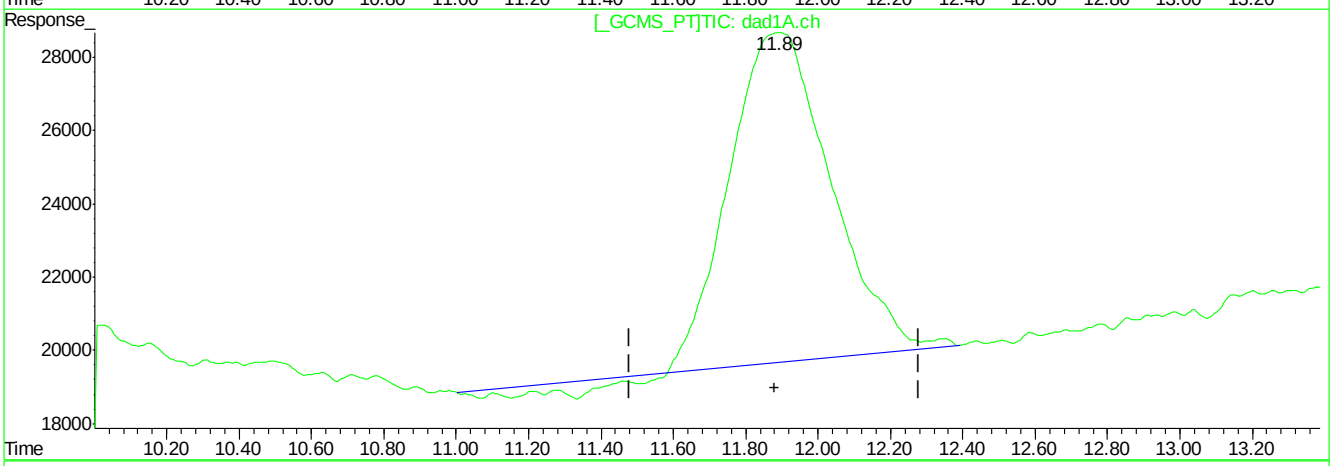
Parameter	CAS	Sig#	R.T. (min.)	Reason
3,4-Dinitrotoluene	610-39-9	2	11.89	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060396.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060396.D\dad1A.ch
Acq On : 06-Aug-2018, 20:55:24 Operator: williamh
Sample : FA56228-10 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.89min 384.584ppb

response 1000240

(15) 3,4-Dinitrotoluene #2 (S)

11.89min 417.386ppb

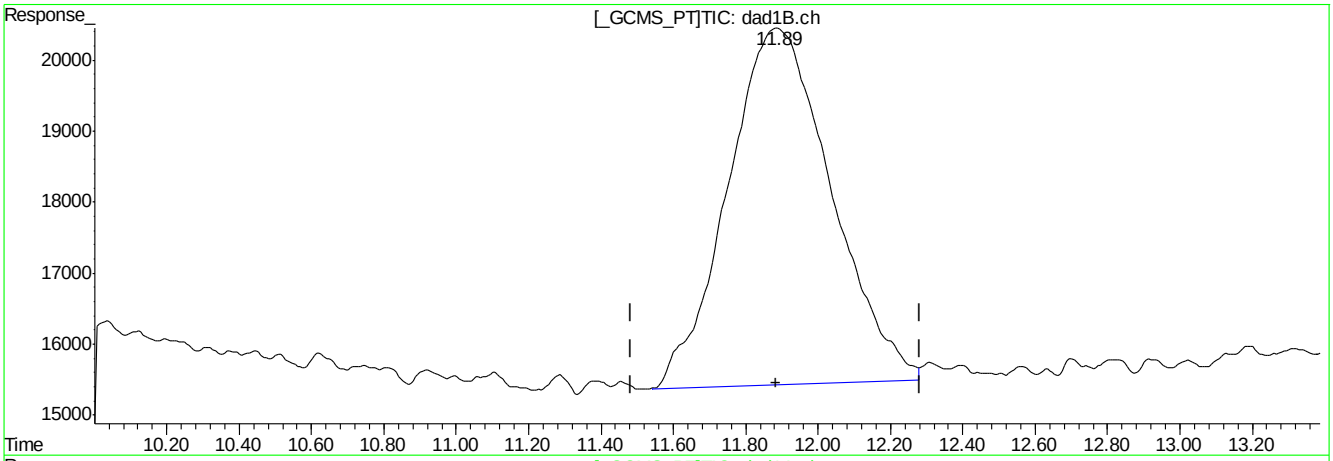
response 1696772

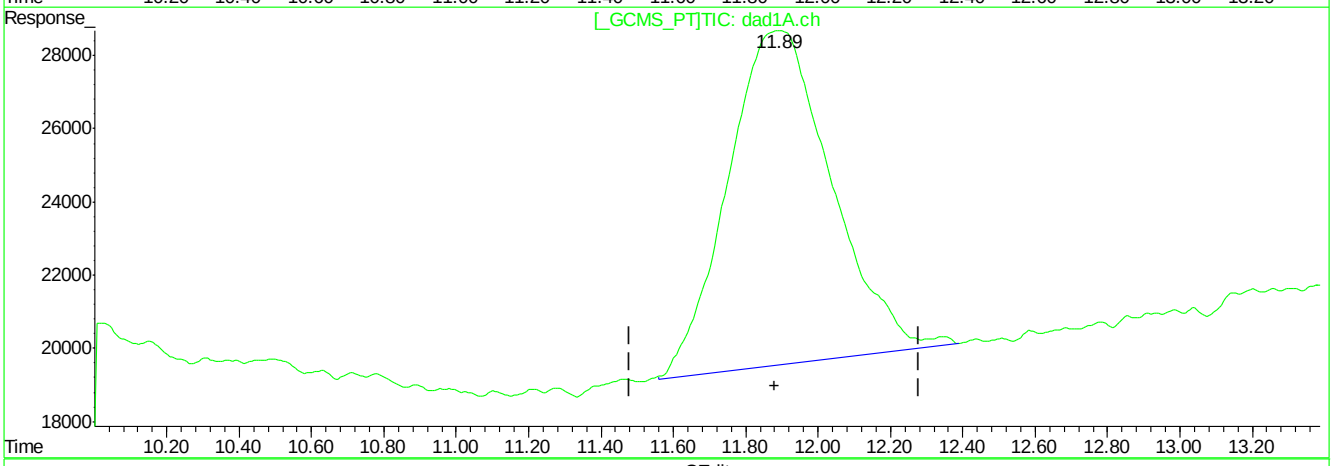
(+) = Expected Retention Time
BB060396.D 8330B_0707PLUS.M Tue Aug 07 13:39:07 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060396.D\dad1B.ch Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060396.D\dad1A.ch
Acq On : 06-Aug-2018, 20:55:24 Operator: williamh
Sample : FA56228-10 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.89min 384.584ppb

response 1000240

(15) 3,4-Dinitrotoluene #2 (S)

11.89min 445.125ppb m

response 1813186

(+) = Expected Retention Time
BB060396.D 8330B_0707PLUS.M Tue Aug 07 13:39:12 2018

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060385.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060385.D\dad1A.ch
Acq On : 06-Aug-2018, 15:27:38 Operator: williamh
Sample : op71202-MB Inst : G1315B
Misc : OP71202,gbb1757,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 07 09:53:42 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.88	11.88	1157719	1926391	445.424	471.996
	Spiked Amount 500.000	Range 70 - 136		Recovery =		89.08%	94.40%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D.	N.D.
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	0.00	0.00	0	0	N.D.	N.D.
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D.	N.D.
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D.	N.D.
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D.	N.D.
9)	Nitrobenzene	0.00	0.00	0	0	N.D.	N.D.
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D.	N.D.
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	19.13	0.00	41286	0	NoCal	N.D.

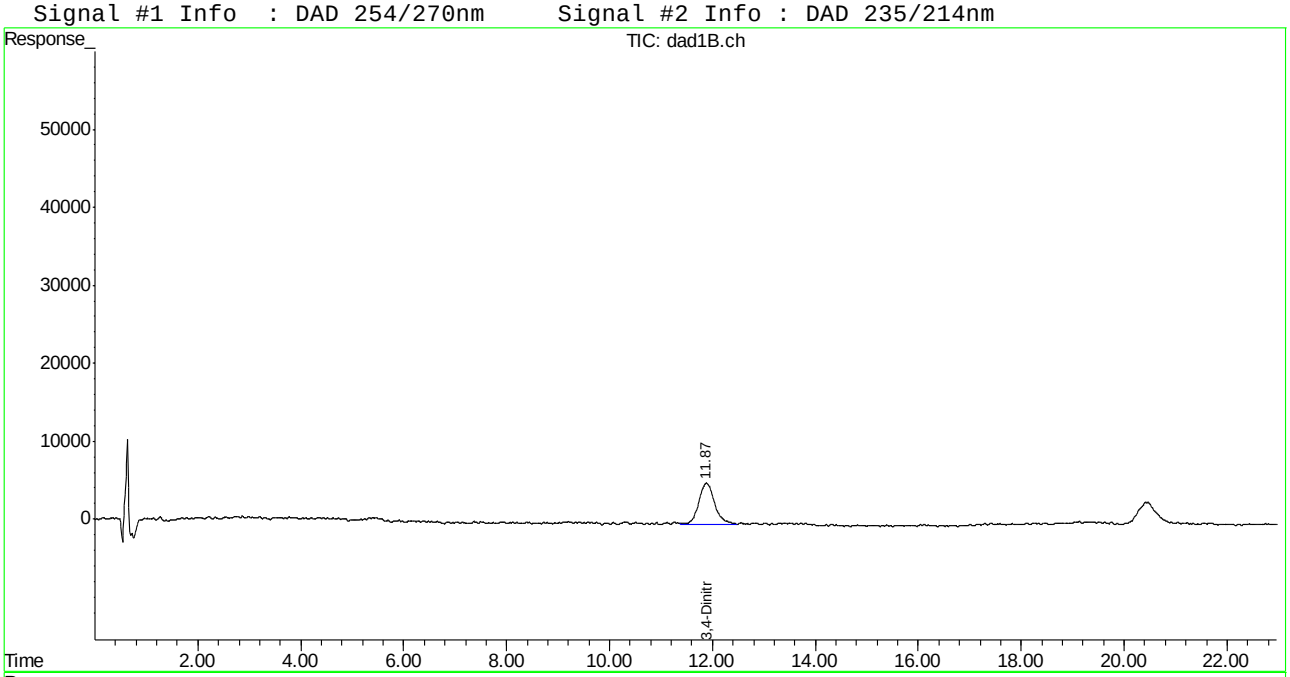
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060385.D 8330B_0707PLUS.M Tue Aug 07 14:42:47 2018 Page 1

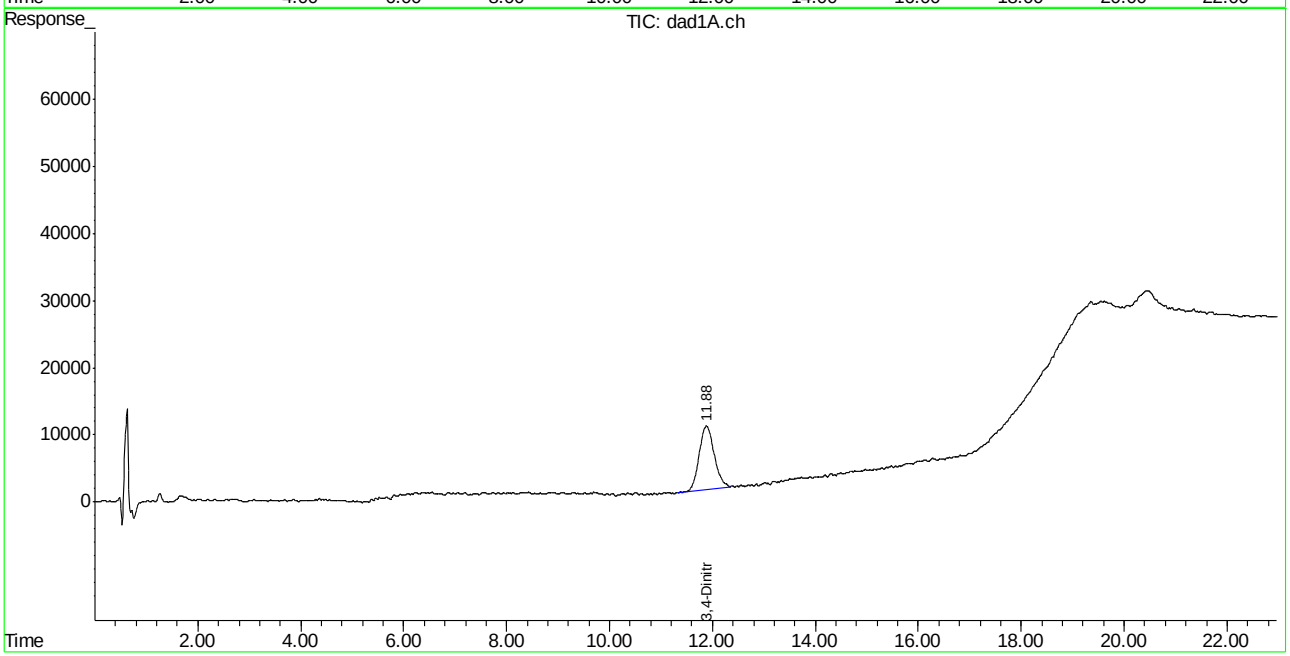
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060385.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060385.D\dad1A.ch
Acq On : 06-Aug-2018, 15:27:38 Operator: williamh
Sample : op71202-MB Inst : G1315B
Misc : OP71202,gbb1757,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 13:29 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/09/18 15:42

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060384.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060384.D\dad1A.ch
Acq On : 06-Aug-2018, 14:57:42 Operator: williamh
Sample : op71202-BS Inst : G1315B
Misc : OP71202,gbb1757,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 07 09:53:41 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.85	11.85	1233141	1828955	474.590	448.874
	Spiked Amount 500.000	Range 70 - 136		Recovery =		94.92%	89.77%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.56	1.56	832686	2331255	432.074	479.350
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	3.09	3.09	943933	1540485	457.771	451.521
6)	1,3,5-Trinitrobe	4.93	4.93	2102969	3958718	488.711	474.502
7)	1,3-Dinitrobenze	6.23	6.23	2678567	1850761	464.026	473.081
8)	3,5-Dinitroanili	6.53	6.53	2227640	3811527	476.965	484.273
9)	Nitrobenzene	7.89	7.89	1760329	1647840	472.892	504.932
10)	Nitroglycerin	0.00	9.45	0	3678337	N.D. d	2819.753
11)	Tetryl	9.88	9.87	1317947	1977002	472.855	498.051
12)	2,4,6-Trinitroto	10.34	10.35	1954405	2222224	565.167	552.190
13)	2-Amino-4,6-Dini	10.73	10.72	1860389	2561556	478.415	504.051
14)	4-Amino-2,6-Dini	11.19	11.21	1444958	2524171	541.675	510.498
16)	2,4-Dinitrotolue	12.51	12.51	2548059	1443356	466.525	478.361
17)	2,6-Dinitrotolue	12.90	12.90	1535007	1911004	491.336	497.423
18)	o-Nitrotoluene	16.14	16.14	1226299	1545300	515.905	479.223m
19)	p-Nitrotoluene	16.79	16.79	1931212	1261662	491.542	360.497
20)	m-Nitrotoluene	17.70	17.71	1946729	1971031	550.632	545.583
21)	PETN	0.00	19.22	0	4534677	N.D. d	3159.350m

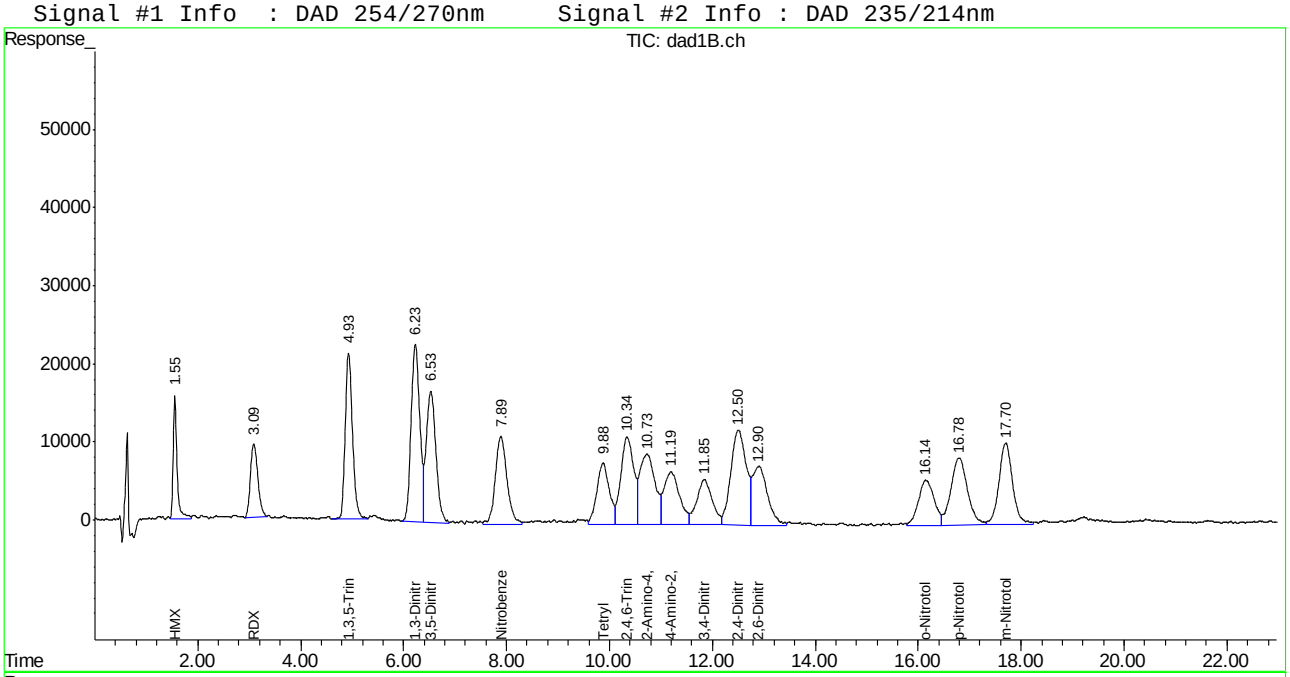
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060384.D 8330B_0707PLUS.M Tue Aug 07 14:42:46 2018 Page 1

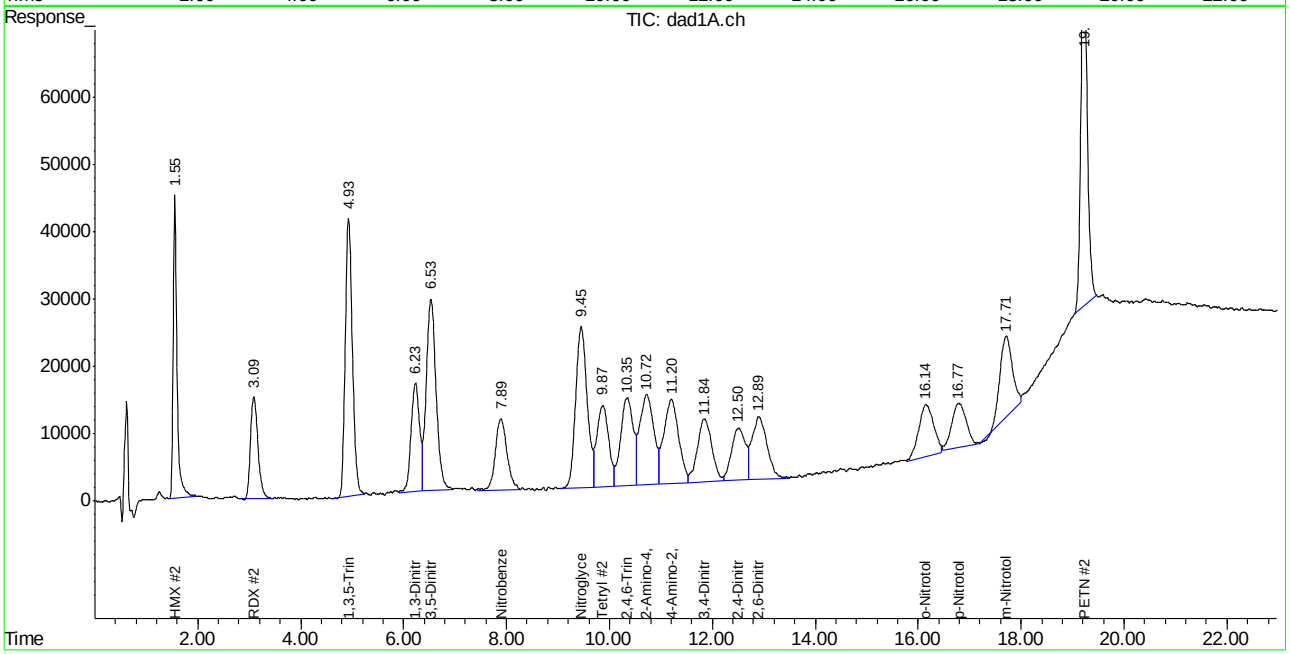
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060384.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060384.D\dad1A.ch
Acq On : 06-Aug-2018, 14:57:42 Operator: williamh
Sample : op71202-BS Inst : G1315B
Misc : OP71202,gbb1757,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 13:29 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

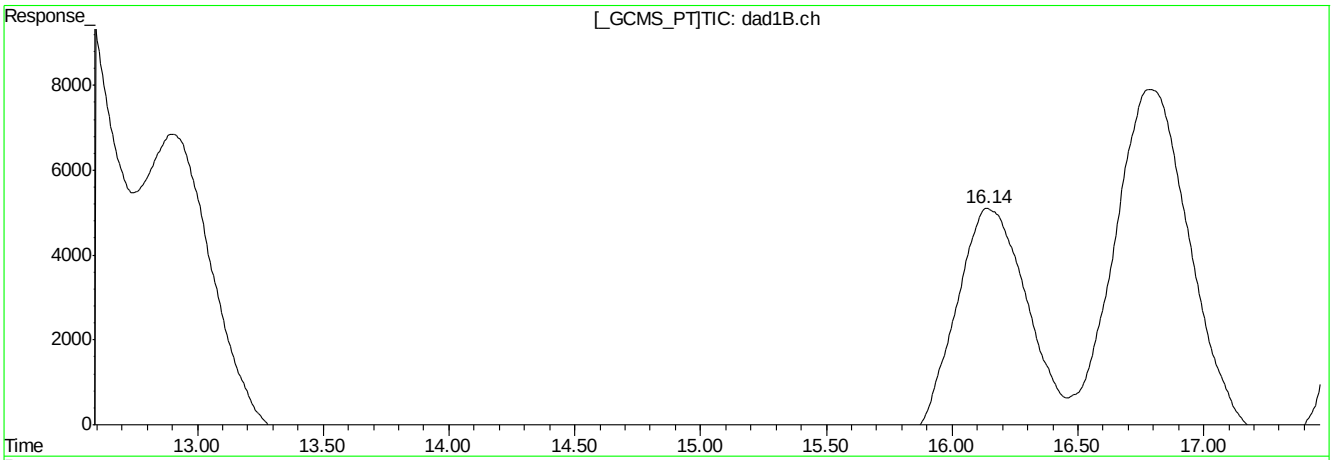
Sample Number:	OP71202-BS	**Method:**	SW846 8330A
Lab FileID:	BB060384.D	**Analyst approved:**	08/07/18 14:57 William Hustedde
Injection Time:	08/06/18 14:57	**Supervisor approved:**	08/09/18 15:42 Mike Eger

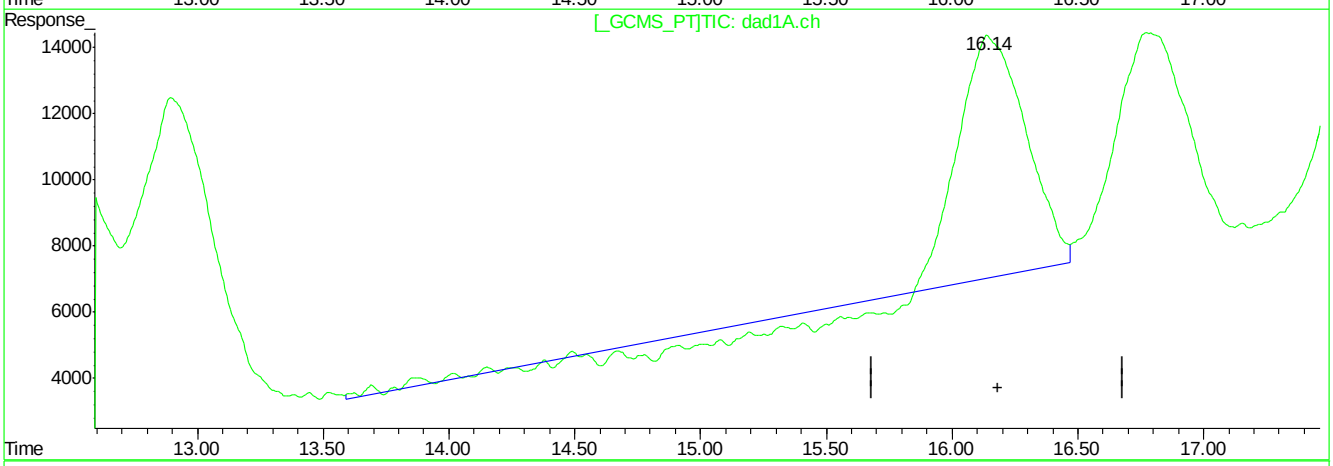
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	16.14	Poor instrument integration
PETN	78-11-5	2	19.22	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060384.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060384.D\dad1A.ch
Acq On : 06-Aug-2018, 14:57:42 Operator: williamh
Sample : op71202-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

16.14min 515.905ppb

response 1226299

(18) o-Nitrotoluene #2

16.15min 333.679ppb

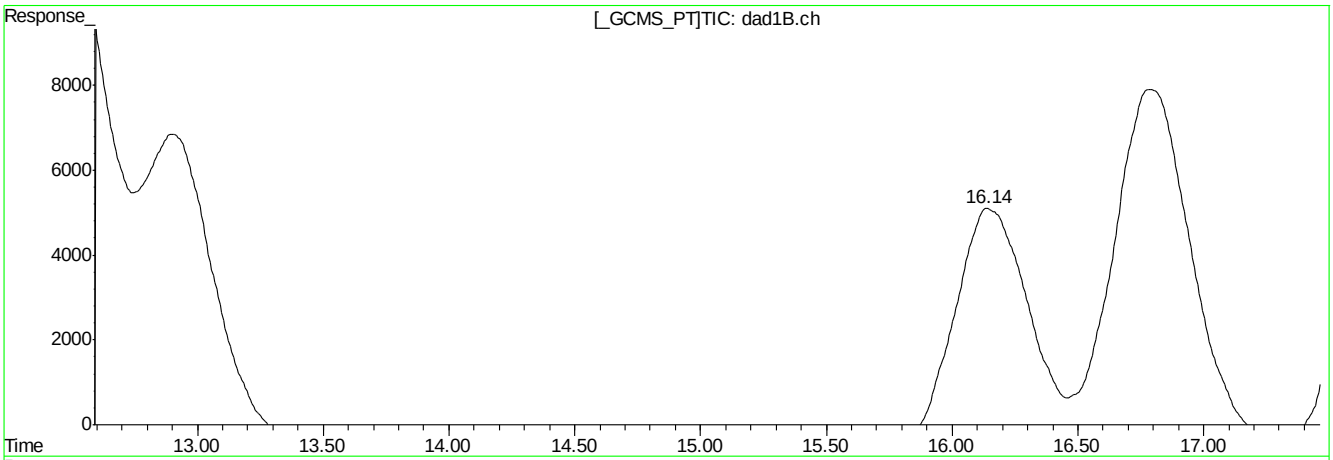
response 1075978

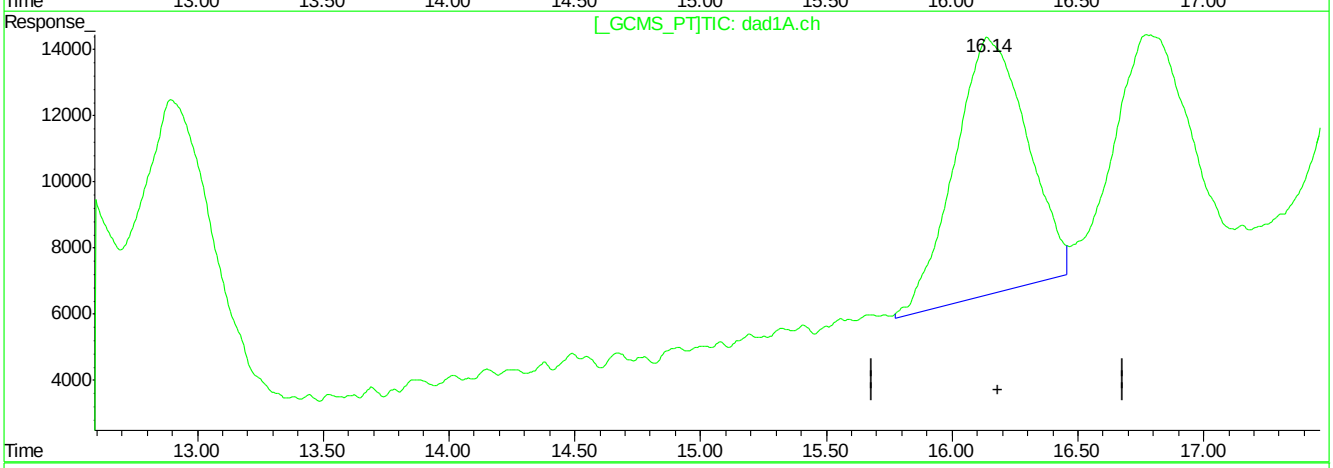
(+) = Expected Retention Time
BB060384.D 8330B_0707PLUS.M Tue Aug 07 13:28:44 2018

Quantitation Report (Qedit)

```
Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060384.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060384.D\dad1A.ch
Acq On    : 06-Aug-2018, 14:57:42                    Operator: williamh
Sample    : op71202-BS                               Inst    : G1315B
Misc      :                                          Multiplr: 1.00
IntFile Signal #1: events.e     IntFile Signal #2: events2.e
Quant Time: Aug  7  9:53 2018  Quant Results File: 8330B_0707PLUS.RES


Method       : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title        : Explosives by 8330A,8330B,8332
Last Update  : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration
```





QEdit

(18) o-Nitrotoluene

16.14min 515.905ppb

response 1226299

(18) o-Nitrotoluene #2

16.14min 479.223ppb m

response 1545300

(+) = Expected Retention Time

BB060384.D 8330B_0707PLUS.M Tue Aug 07 13:28:53 2018

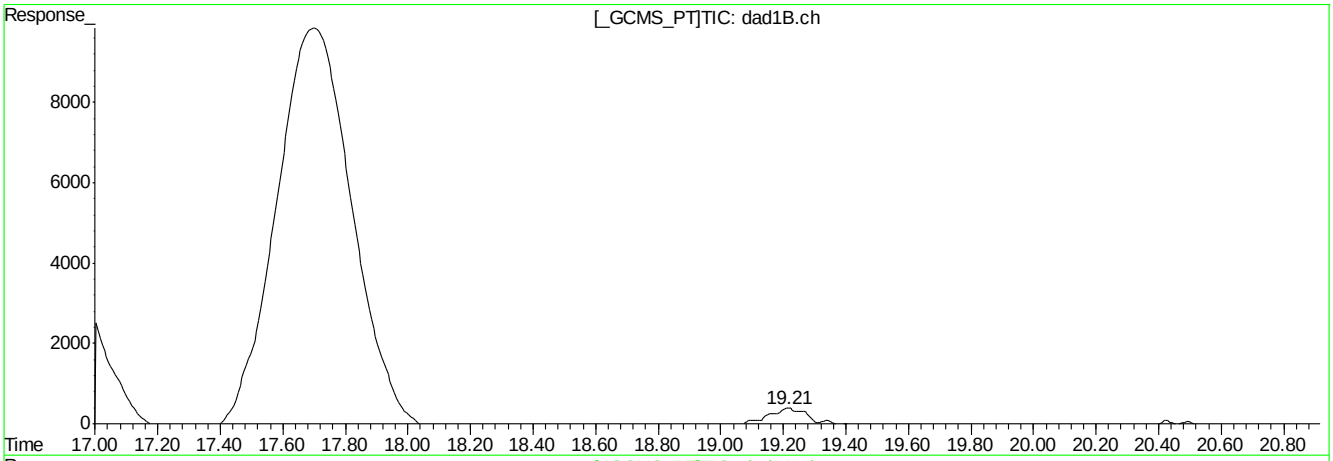
9.3.1.3

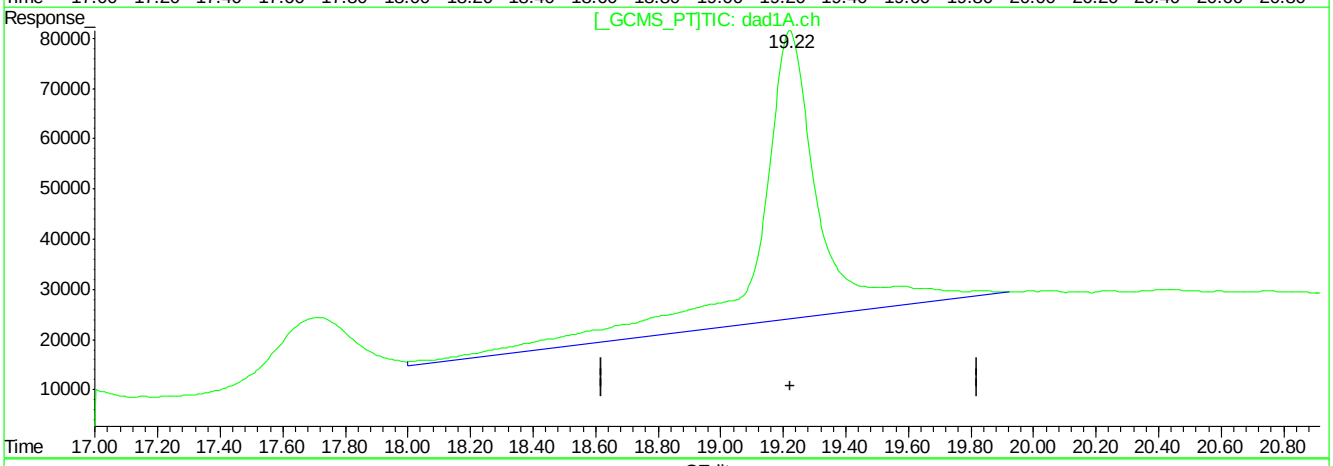
9

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060384.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060384.D\dad1A.ch
Acq On : 06-Aug-2018, 14:57:42 Operator: williamh
Sample : op71202-BS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

19.22min 0.000ppb

response 164058

(21) PETN #2

19.22min 5486.017ppb

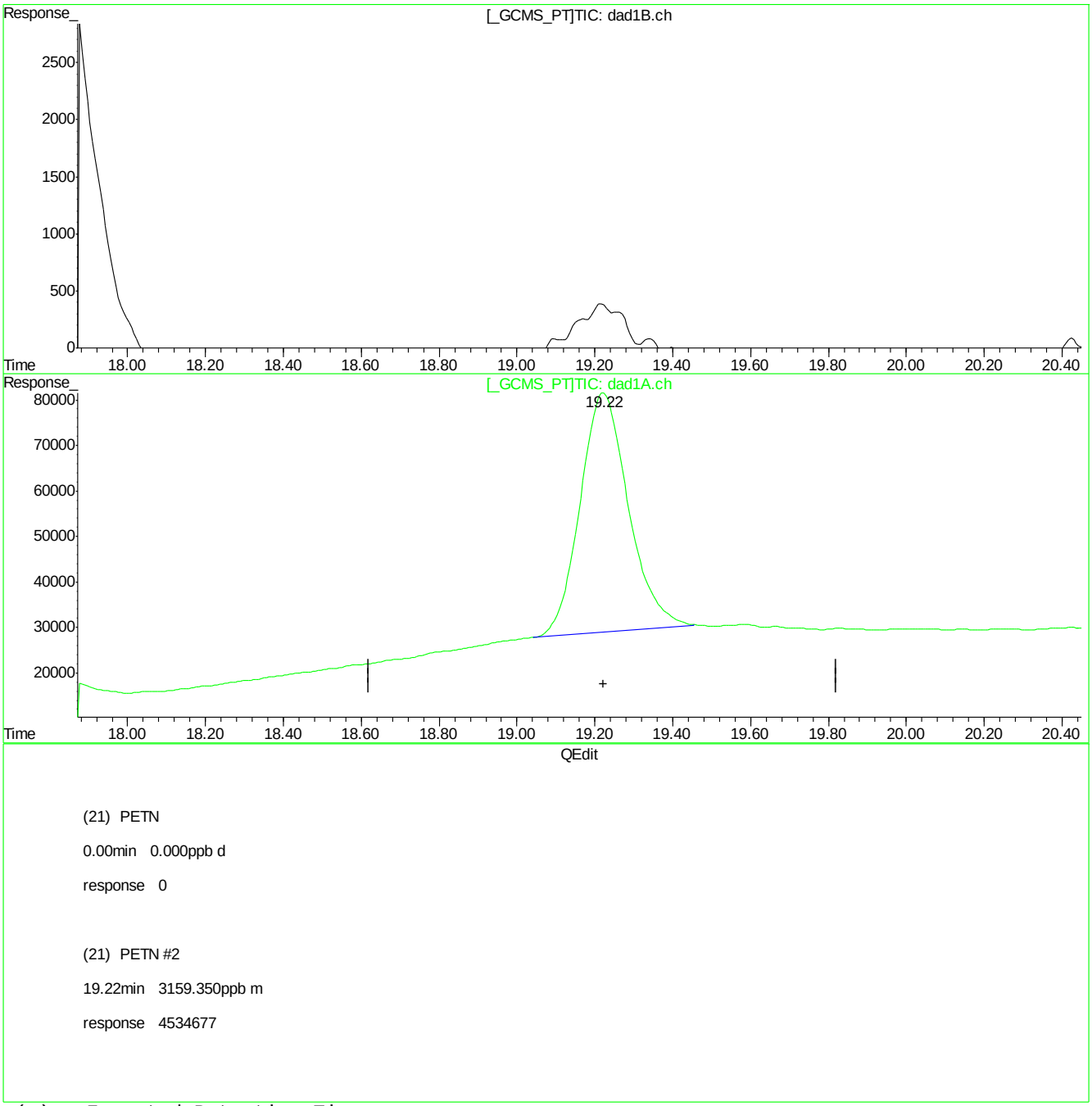
response 7874187

(+) = Expected Retention Time
BB060384.D 8330B_0707PLUS.M Tue Aug 07 13:29:06 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060384.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060384.D\dad1A.ch
Acq On : 06-Aug-2018, 14:57:42 Operator: williamh
Sample : op71202-BS Inst : G1315B
Misc : OP71202,gbb1757,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 13:29 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration



(+) = Expected Retention Time
BB060384.D 8330B_0707PLUS.M Tue Aug 07 14:59:51 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/09/18 15:42

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1A.ch
Acq On : 06-Aug-2018, 21:25:23 Operator: williamh
Sample : op71202-MS Inst : G1315B
Misc : OP71202,gbb1757,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 07 09:53:54 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.87	11.88	1233516	1530777	474.735	377.644
Spiked Amount	500.000	Range	70 - 136	Recovery	=	94.95%	75.53%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.56	1.56	732204	2204219	379.935m	453.237m
3)	DNX	0.00	0.00	0	0	N.D.	N.D.
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	3.10	3.10	937665	1538738	454.731	451.009
6)	1,3,5-Trinitrobe	4.94	4.94	2279510	4012230	529.890	480.916
7)	1,3-Dinitrobenze	6.24	6.24	2624949	1832766	454.737m	468.423m
8)	3,5-Dinitroanili	6.55	6.55	2393125	4016632	512.416	510.286
9)	Nitrobenzene	7.91	7.91	1681819	1634417	451.801	500.815
10)	Nitroglycerin	0.00	9.47	0	3586622	N.D. d	2749.446
11)	Tetryl	9.90	9.89	1199457	1890802	430.343	476.517
12)	2,4,6-Trinitroto	10.36	10.37	1855559	2065804	536.304	513.542
13)	2-Amino-4,6-Dini	10.76	10.75	1823682	2345849	468.976	461.605
14)	4-Amino-2,6-Dini	11.26	11.24	1389851	2178016	521.017	441.824
16)	2,4-Dinitrotolue	12.55	12.55	2744013	1276892	502.402	423.633
17)	2,6-Dinitrotolue	12.93	12.95	1850446	1899598	593.033	494.503
18)	o-Nitrotoluene	16.19	16.18	1152693	1618279	484.939m	501.855m
19)	p-Nitrotoluene	16.83	16.84	1472621	1228275	374.819m	350.958
20)	m-Nitrotoluene	17.74	17.75	1456916	1695158	412.293	469.221m
21)	PETN	0.00	19.23	0	4338820	N.D. d	3022.895m

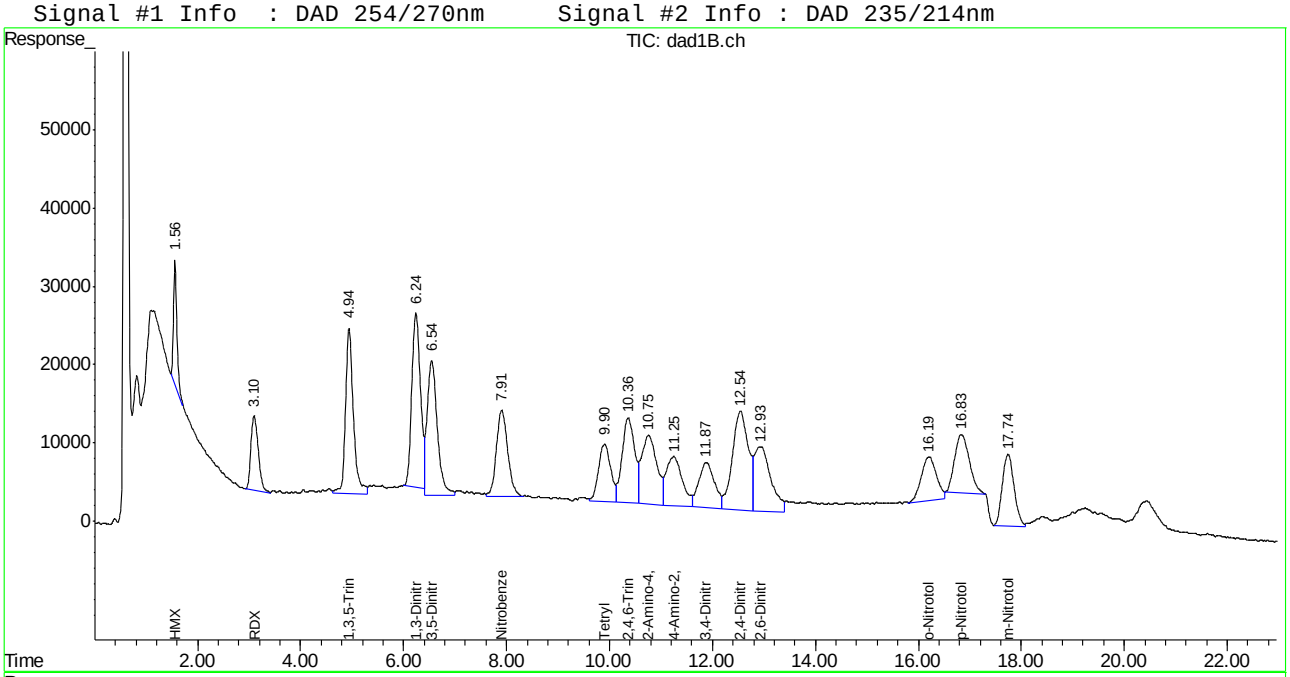
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060397.D 8330B_0707PLUS.M Tue Aug 07 15:20:11 2018 Page 1

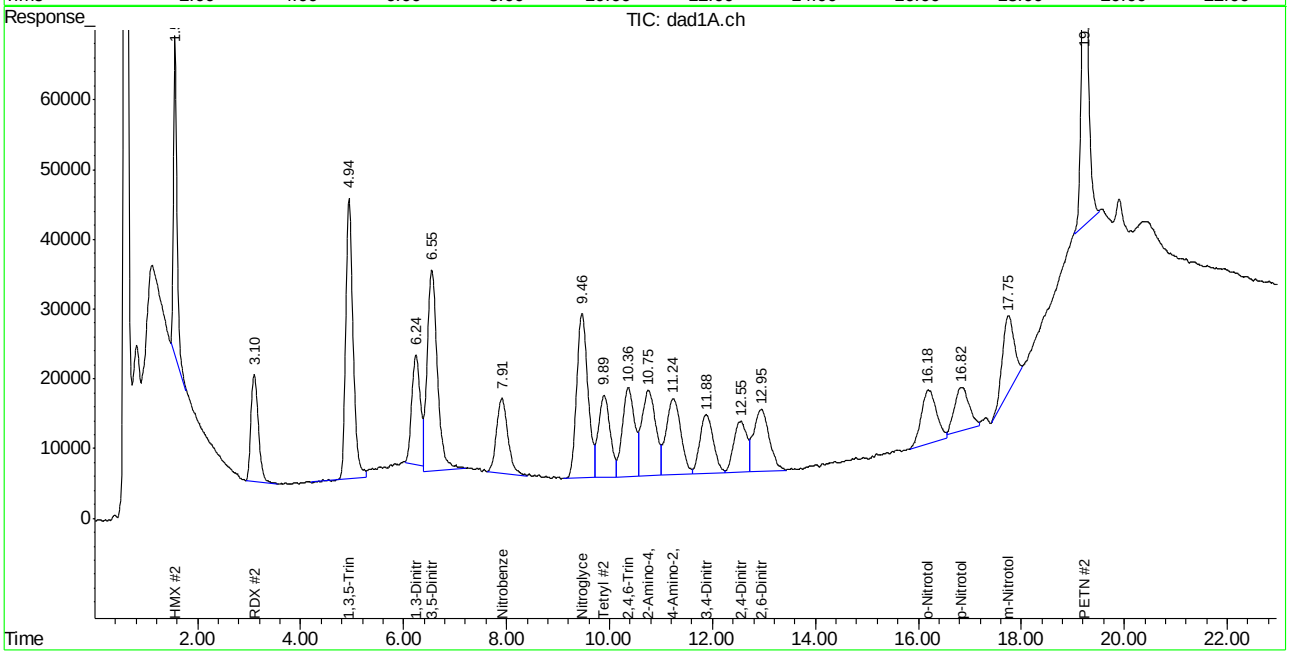
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1A.ch
Acq On : 06-Aug-2018, 21:25:23 Operator: williamh
Sample : op71202-MS Inst : G1315B
Misc : OP71202,gbb1757,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 13:41 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

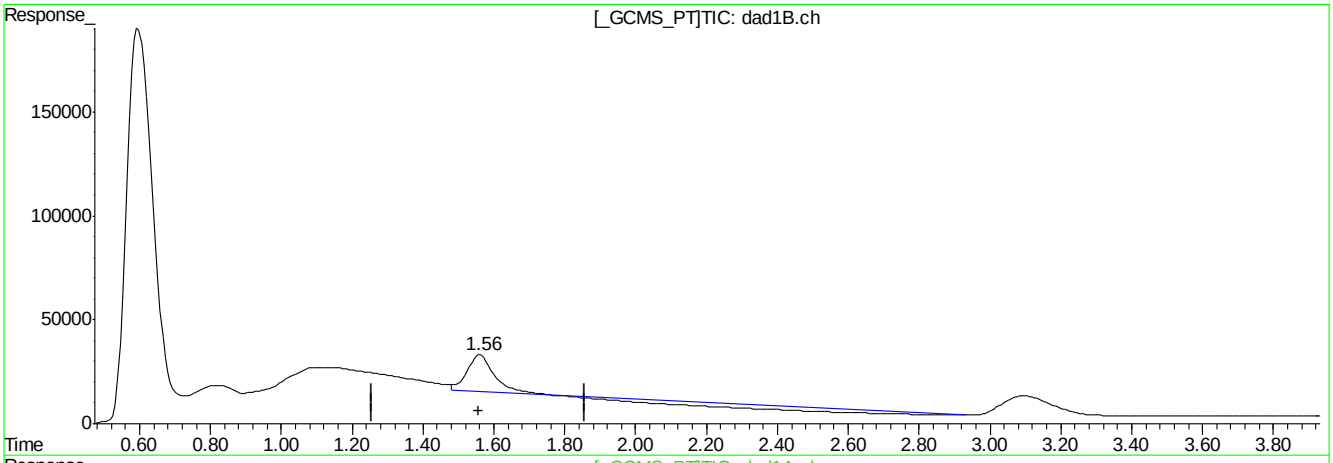
Sample Number: OP71202-MS
Lab FileID: BB060397.D
Injection Time: 08/06/18 21:25
Method: SW846 8330A
Analyst approved: 08/07/18 15:21 William Hustedde
Supervisor approved: 08/09/18 15:42 Mike Eger

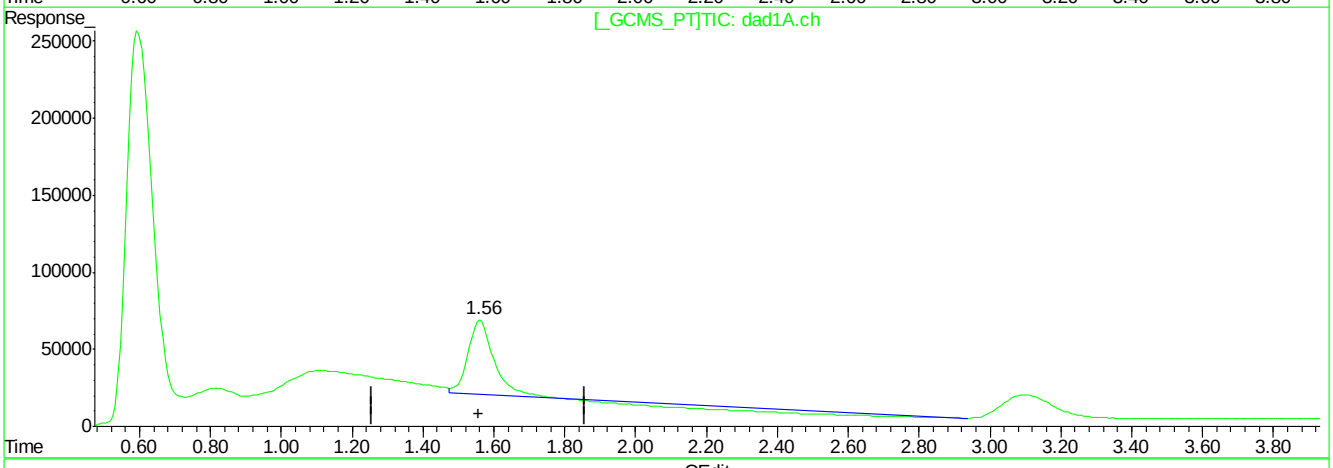
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.56	Poor instrument integration
HMX	2691-41-0	2	1.56	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	6.24	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.24	Poor instrument integration
o-Nitrotoluene	88-72-2	2	16.18	Poor instrument integration
o-Nitrotoluene	88-72-2	1	16.19	Poor instrument integration
p-Nitrotoluene	99-99-0	1	16.83	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.75	Poor instrument integration
PETN	78-11-5	2	19.23	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1A.ch
Acq On : 06-Aug-2018, 21:25:23 Operator: williamh
Sample : op71202-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.56min 15.853ppb

response 30552

(2) HMX #2

1.56min 308.535ppb

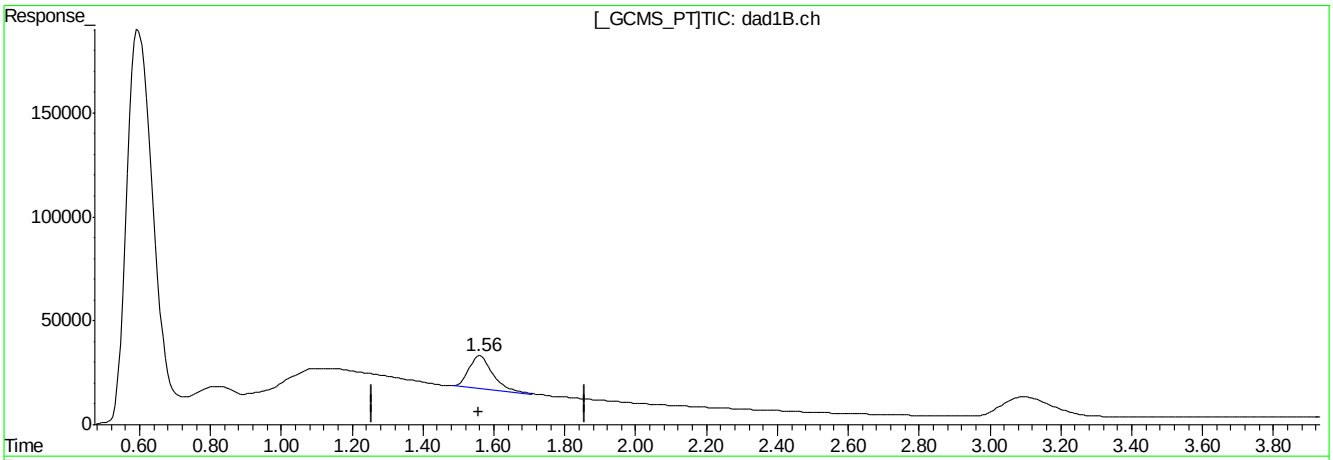
response 1500341

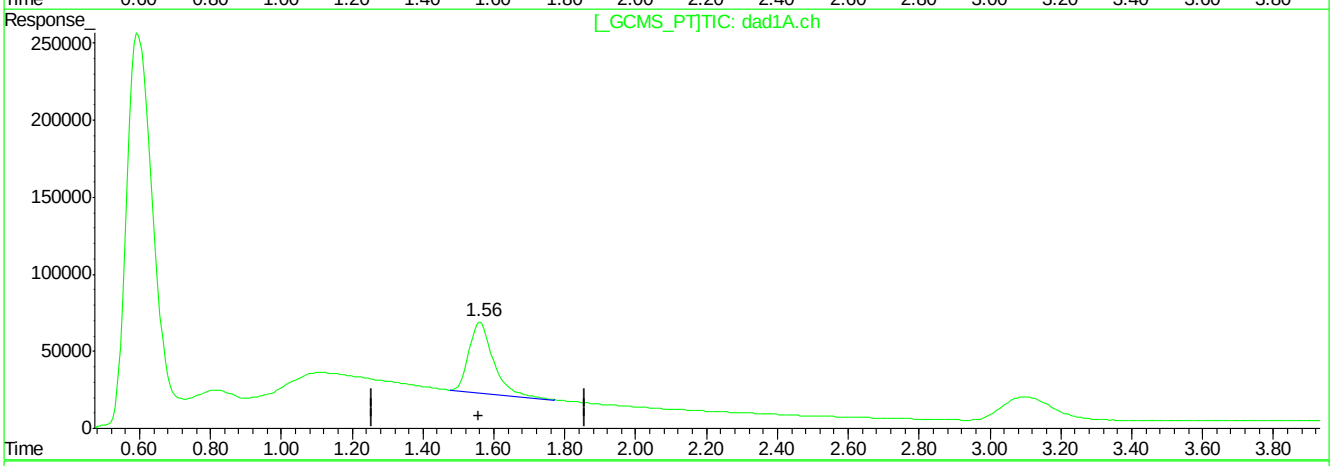
(+) = Expected Retention Time
BB060397.D 8330B_0707PLUS.M Tue Aug 07 13:39:37 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1A.ch
Acq On : 06-Aug-2018, 21:25:23 Operator: williamh
Sample : op71202-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.56min 379.935ppb m

response 732204

(2) HMX #2

1.56min 453.237ppb m

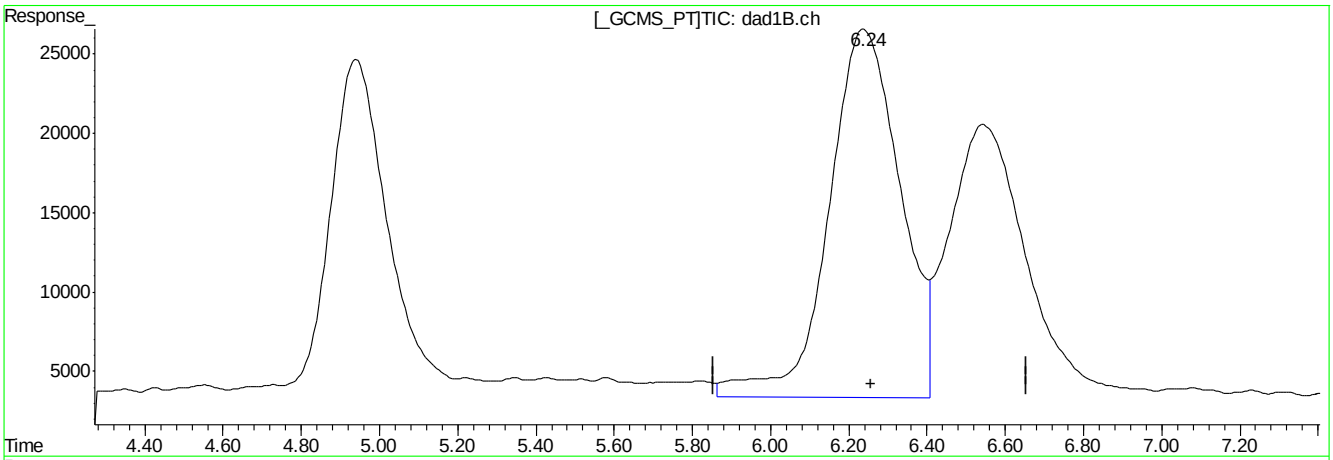
response 2204219

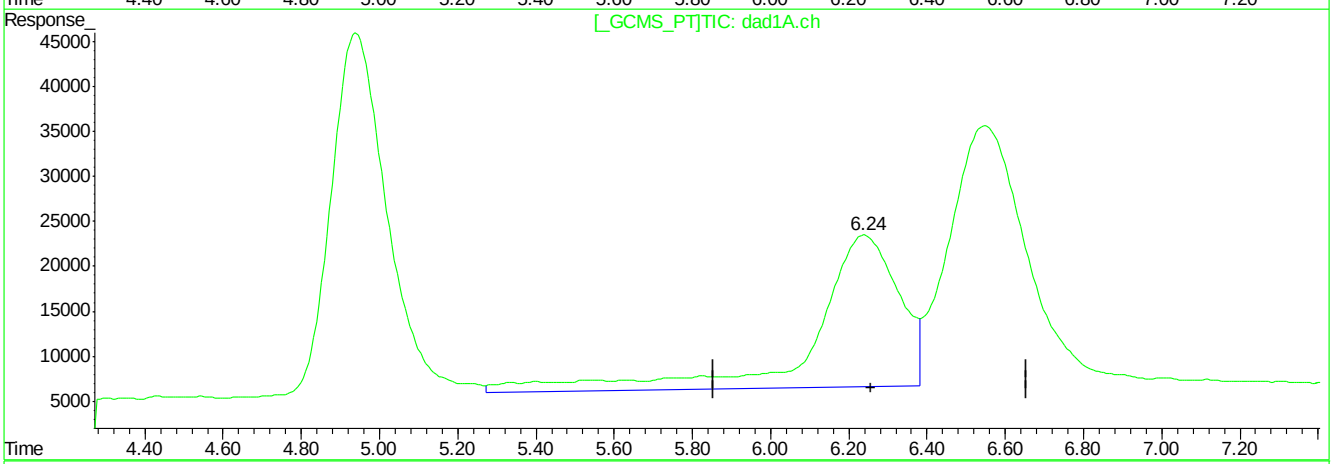
(+) = Expected Retention Time
BB060397.D 8330B_0707PLUS.M Tue Aug 07 13:39:54 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1A.ch
Acq On : 06-Aug-2018, 21:25:23 Operator: williamh
Sample : op71202-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.24min 509.237ppb

response 2939545

(7) 1,3-Dinitrobenzene #2

6.24min 675.955ppb

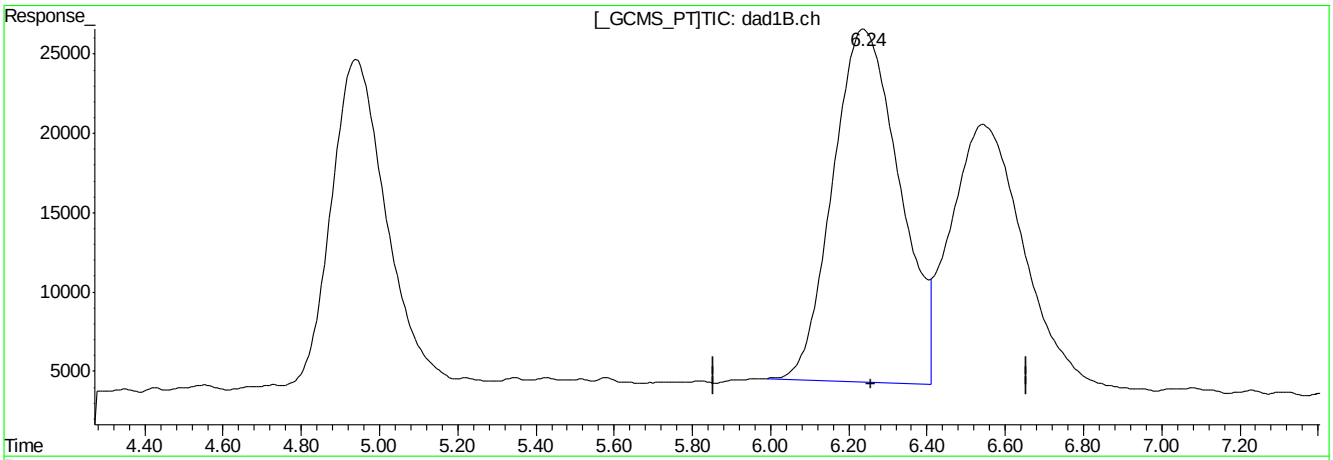
response 2630004

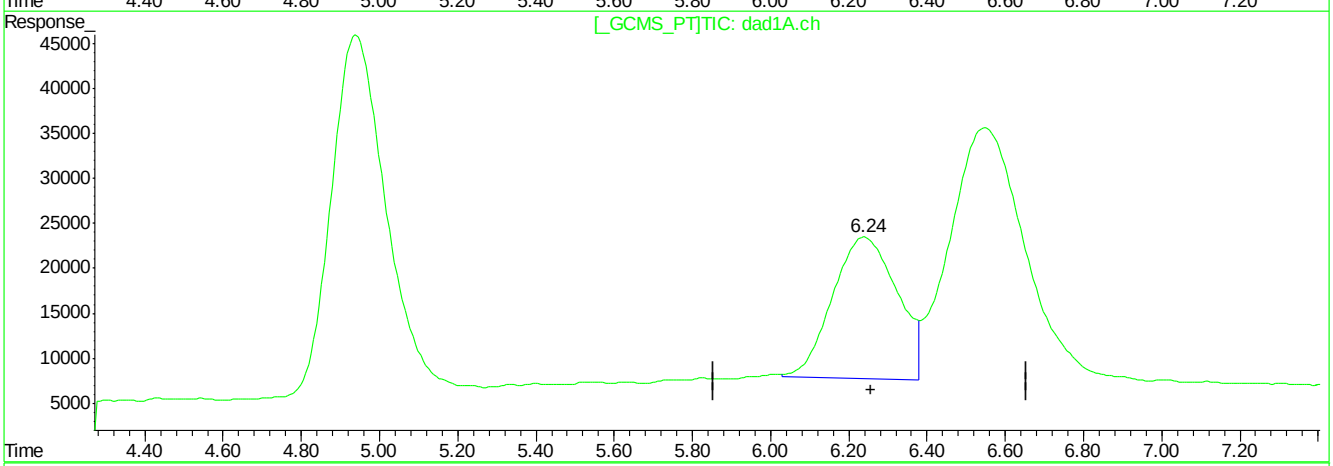
(+) = Expected Retention Time
BB060397.D 8330B_0707PLUS.M Tue Aug 07 13:40:04 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1A.ch
Acq On : 06-Aug-2018, 21:25:23 Operator: williamh
Sample : op71202-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.24min 454.737ppb m

response 2624949

(7) 1,3-Dinitrobenzene #2

6.24min 468.423ppb m

response 1832766

(+) = Expected Retention Time
BB060397.D 8330B_0707PLUS.M Tue Aug 07 13:40:22 2018

9.4.15

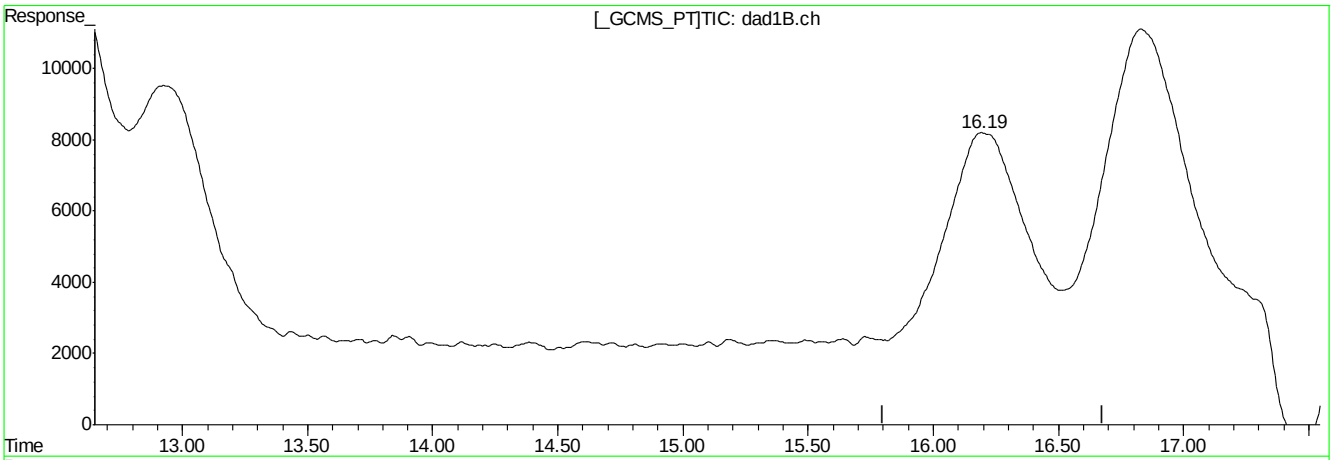
9

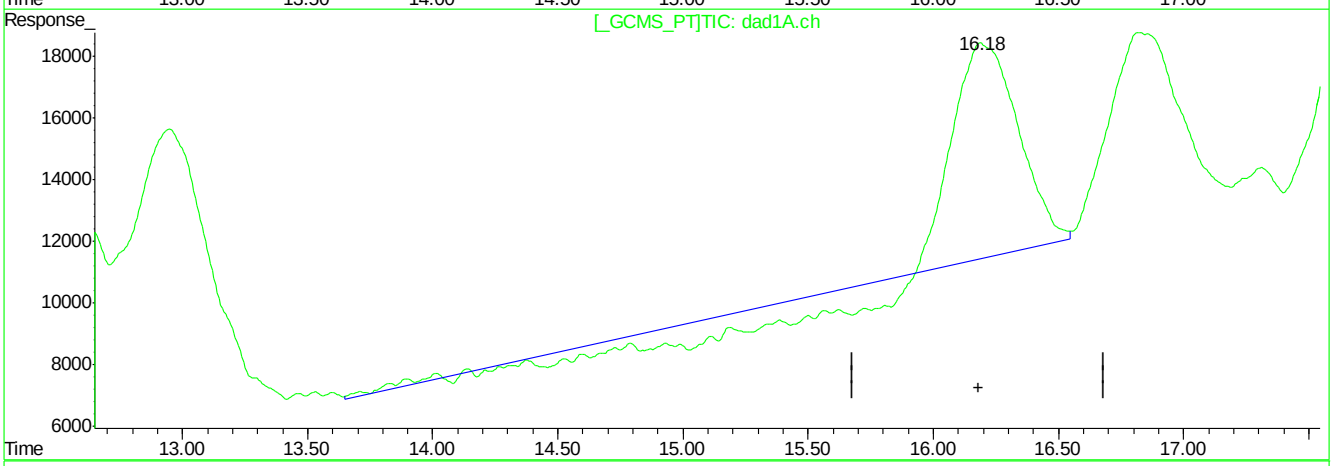
BB060397.D edits: 1,3-Dinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1A.ch
Acq On : 06-Aug-2018, 21:25:23 Operator: williamh
Sample : op71202-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

16.20min 946.215ppb

response 2249140

(18) o-Nitrotoluene #2

16.20min 238.798ppb

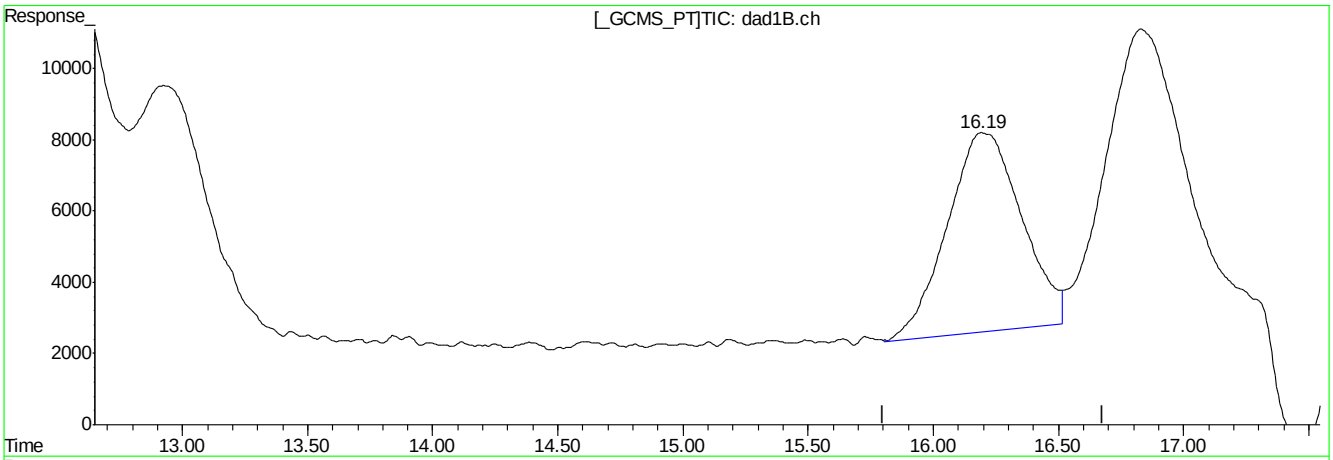
response 770027

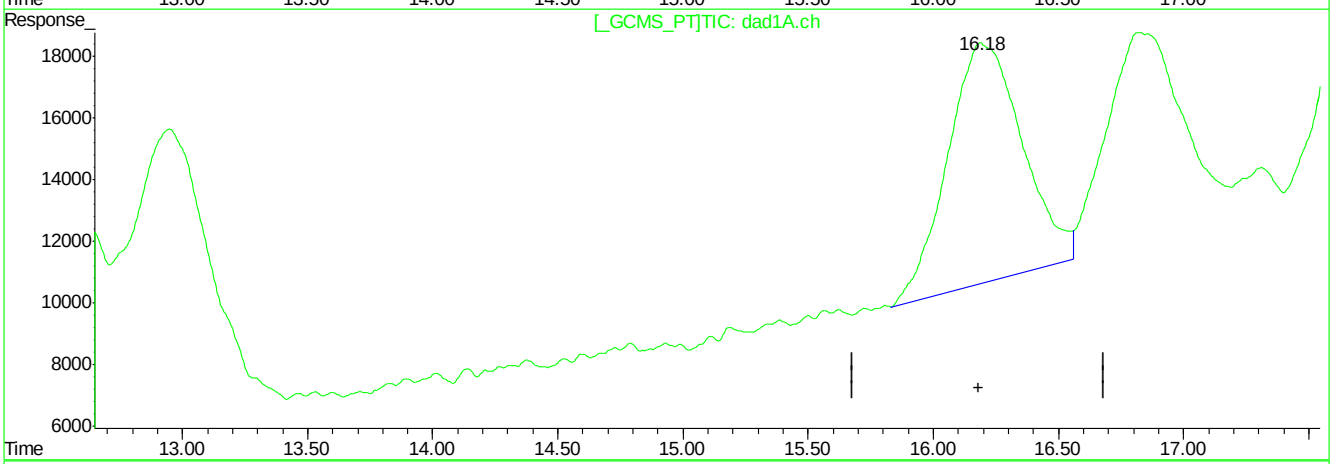
(+) = Expected Retention Time
BB060397.D 8330B_0707PLUS.M Tue Aug 07 13:40:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1A.ch
Acq On : 06-Aug-2018, 21:25:23 Operator: williamh
Sample : op71202-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

16.19min 484.939ppb m

response 1152693

(18) o-Nitrotoluene #2

16.18min 501.855ppb m

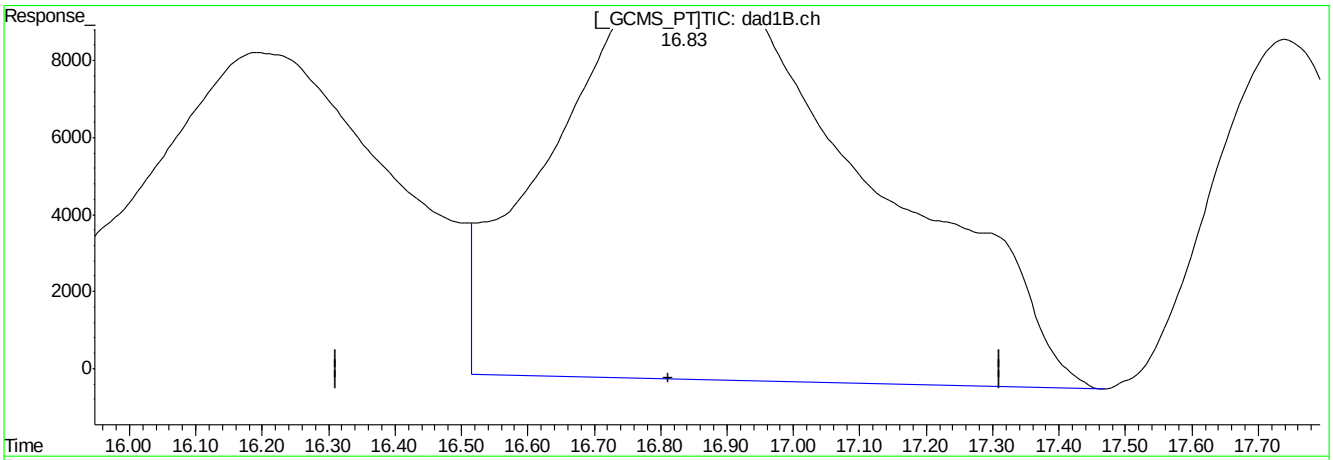
response 1618279

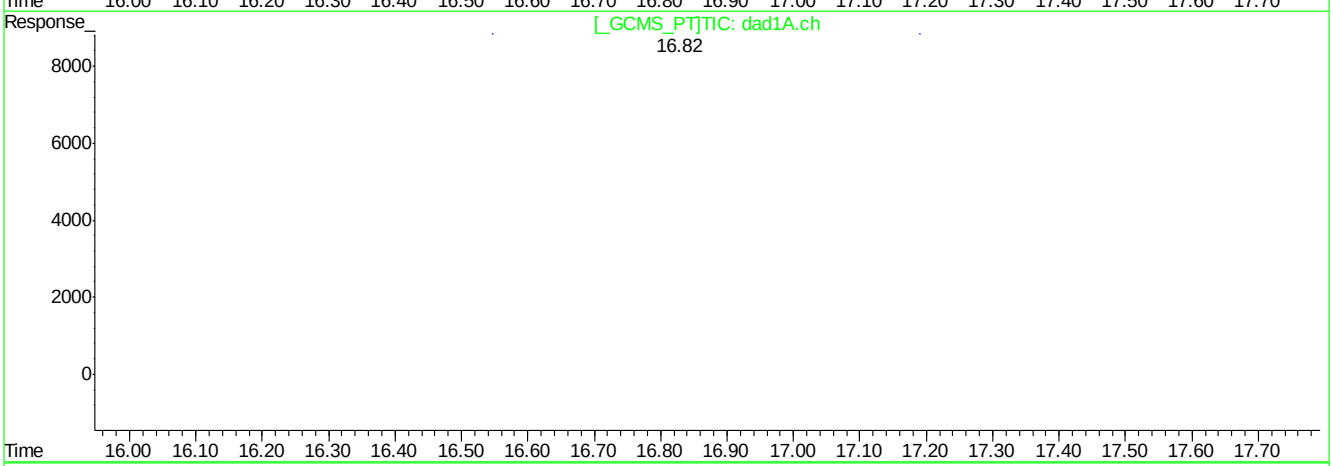
(+) = Expected Retention Time
BB060397.D 8330B_0707PLUS.M Tue Aug 07 13:40:51 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1A.ch
Acq On : 06-Aug-2018, 21:25:23 Operator: williamh
Sample : op71202-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.83min 888.762ppb

response 3491845

(19) p-Nitrotoluene #2

16.84min 350.958ppb

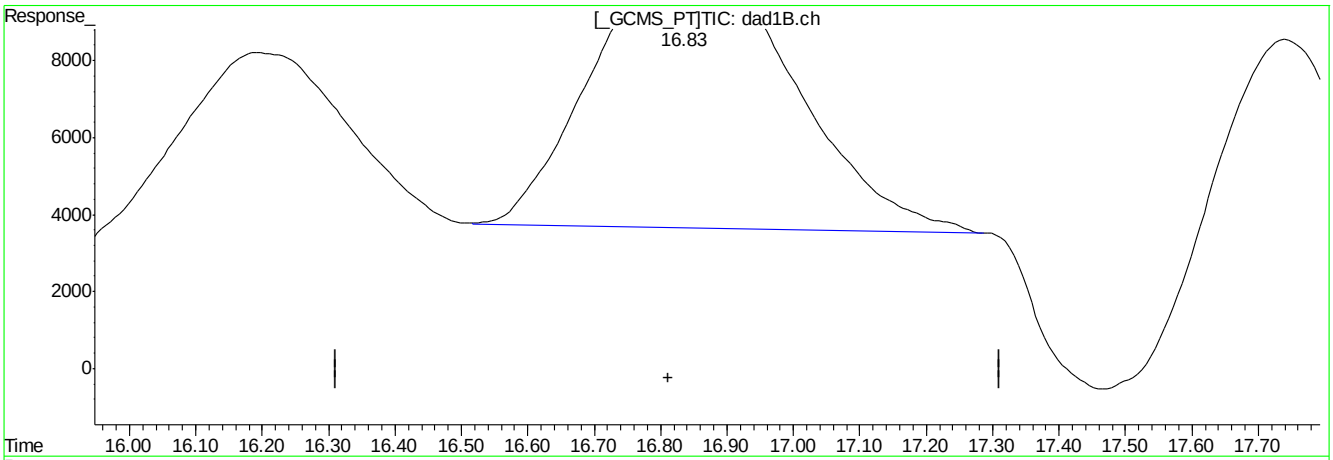
response 1228275

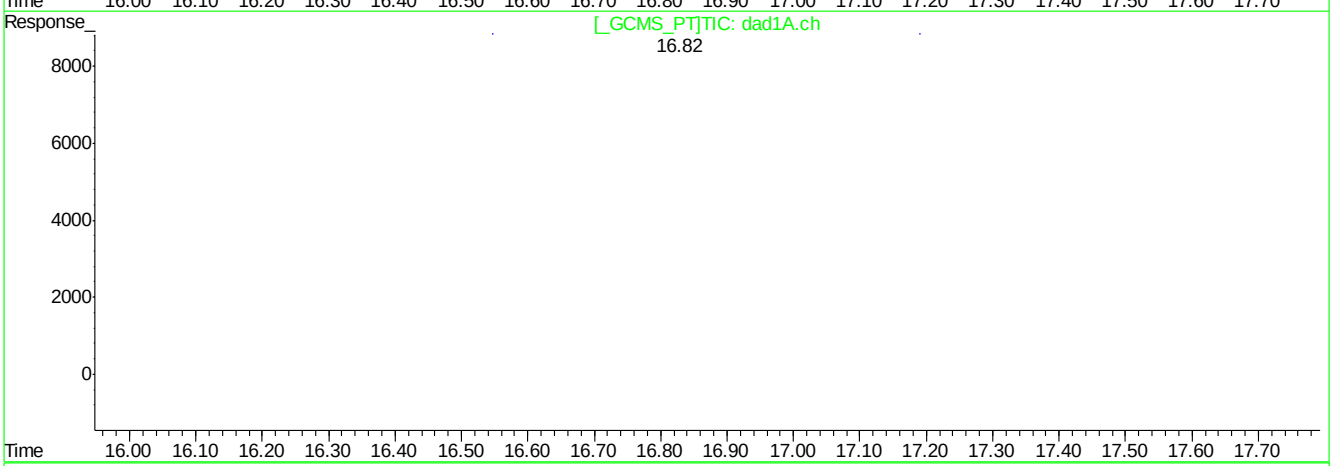
(+) = Expected Retention Time
BB060397.D 8330B_0707PLUS.M Tue Aug 07 13:41:00 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1A.ch
Acq On : 06-Aug-2018, 21:25:23 Operator: williamh
Sample : op71202-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.83min 374.819ppb m

response 1472621

(19) p-Nitrotoluene #2

16.84min 350.958ppb

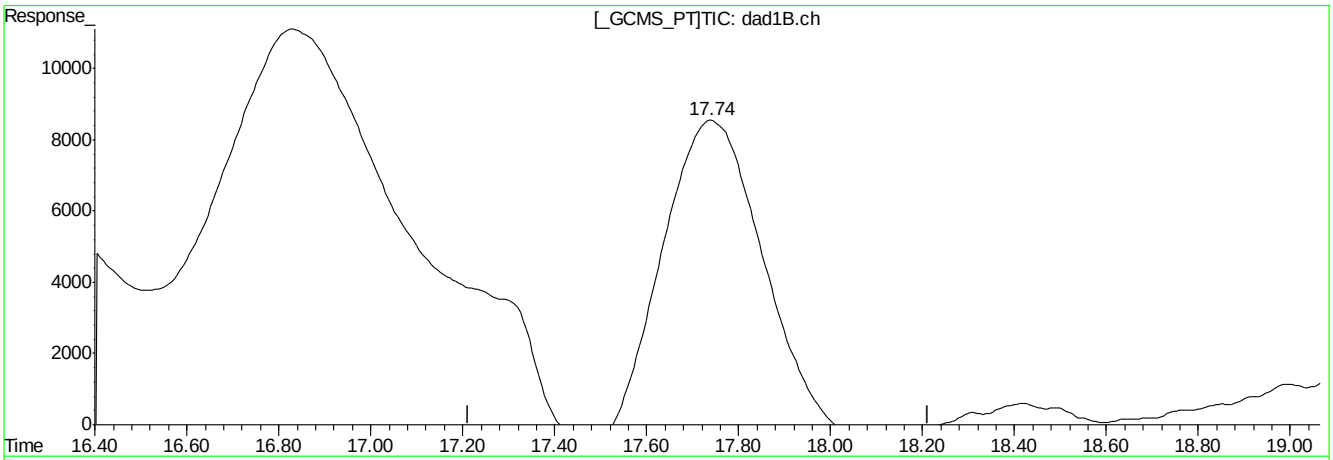
response 1228275

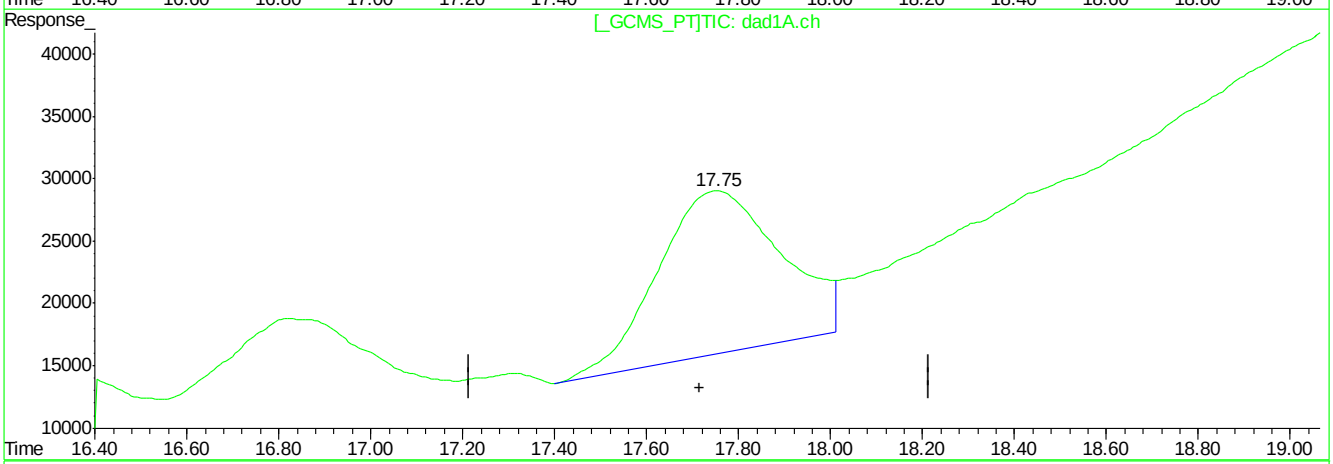
(+) = Expected Retention Time
BB060397.D 8330B_0707PLUS.M Tue Aug 07 13:41:06 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1A.ch
Acq On : 06-Aug-2018, 21:25:23 Operator: williamh
Sample : op71202-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.74min 412.293ppb

response 1456916

(20) m-Nitrotoluene #2

17.75min 667.031ppb

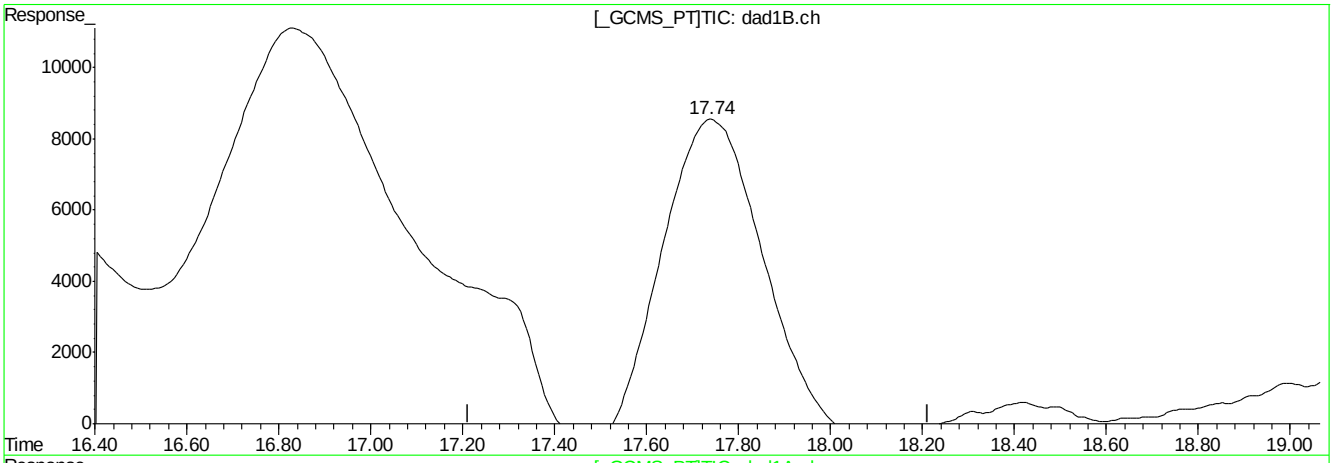
response 2409787

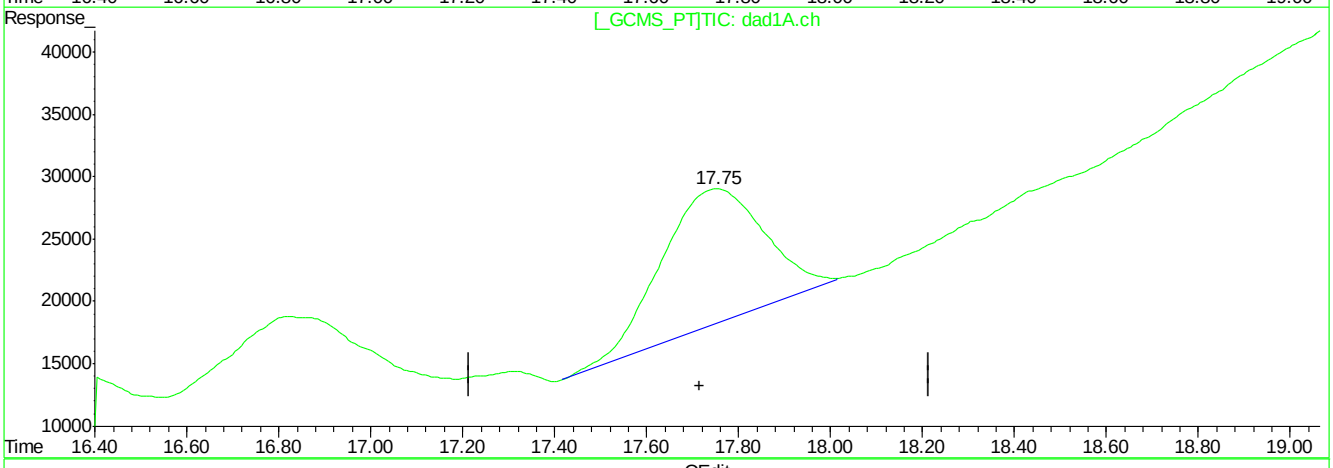
(+) = Expected Retention Time
BB060397.D 8330B_0707PLUS.M Tue Aug 07 13:41:15 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1A.ch
Acq On : 06-Aug-2018, 21:25:23 Operator: williamh
Sample : op71202-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.74min 412.293ppb

response 1456916

(20) m-Nitrotoluene #2

17.75min 469.221ppb m

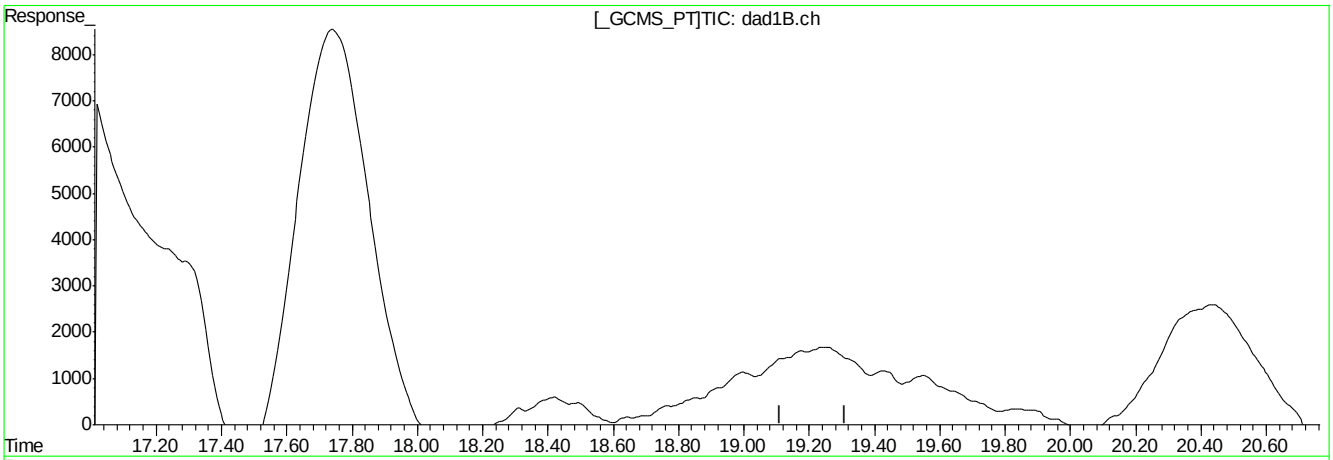
response 1695158

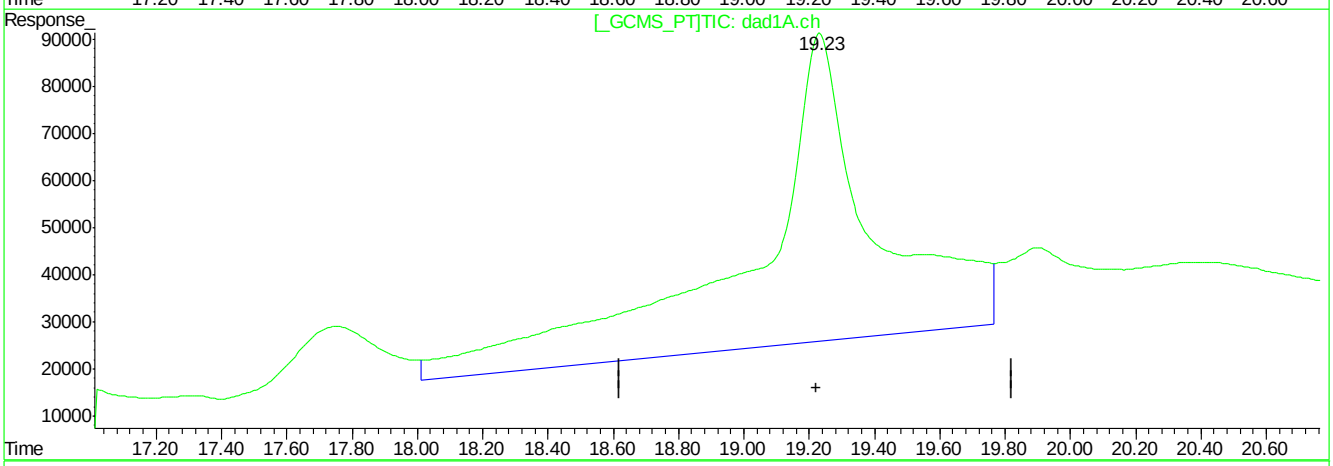
(+) = Expected Retention Time
BB060397.D 8330B_0707PLUS.M Tue Aug 07 13:41:20 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1A.ch
Acq On : 06-Aug-2018, 21:25:23 Operator: williamh
Sample : op71202-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

19.23min 11831.950ppb

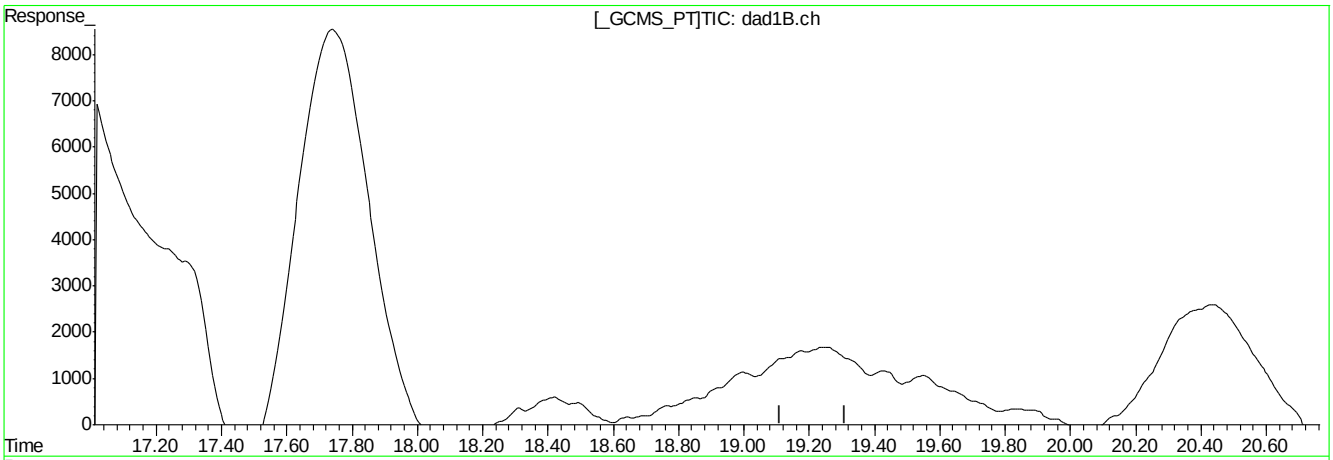
response 16982629

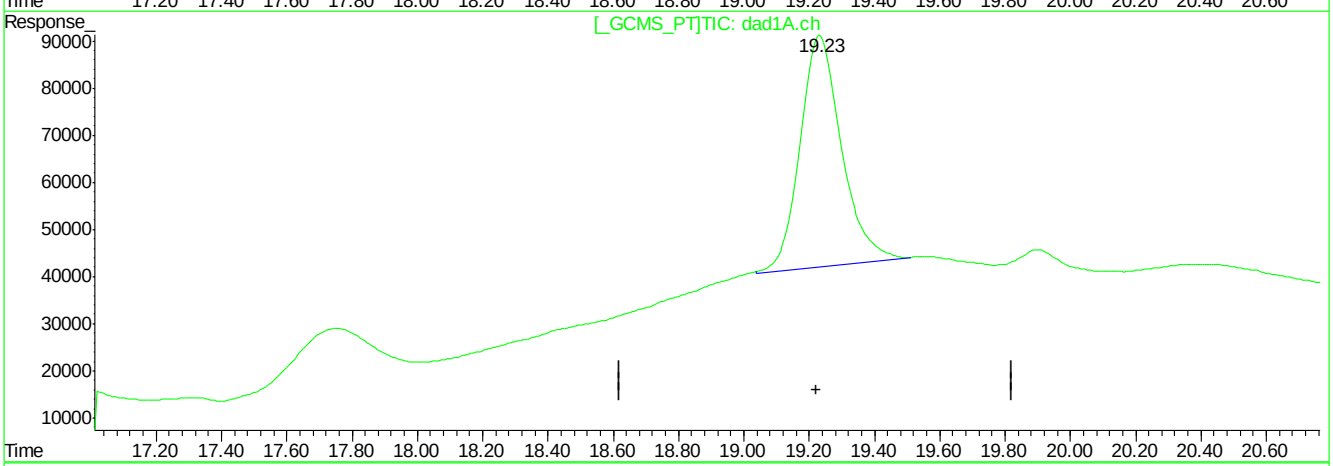
(+) = Expected Retention Time
BB060397.D 8330B_0707PLUS.M Tue Aug 07 13:41:24 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1B.ch Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060397.D\dad1A.ch
Acq On : 06-Aug-2018, 21:25:23 Operator: williamh
Sample : op71202-MS Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

19.23min 3022.895ppb m

response 4338820

(+) = Expected Retention Time
BB060397.D 8330B_0707PLUS.M Tue Aug 07 13:41:29 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/09/18 15:42

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1A.ch
Acq On : 06-Aug-2018, 21:55:20 Operator: williamh
Sample : op71202-MSD Inst : G1315B
Misc : OP71202,gbb1757,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 07 09:53:55 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.89	11.88	989198	1560784	380.321	384.845
	Spiked Amount 500.000	Range 70 - 136		Recovery =		76.06%	76.97%
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	1.56	1.56	706222	2142698	366.453m	440.591m
3)	DNX	0.00	0.00	0	0	N.D.	N.D.
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	3.10	3.10	951228	1507821	461.308	441.947
6)	1,3,5-Trinitrobe	4.94	4.94	2059464	3987844	478.567	477.993
7)	1,3-Dinitrobenze	6.24	6.24	2697575	2101075	467.318	538.005
8)	3,5-Dinitroanili	6.55	6.55	2262464	4032332	484.425	512.277
9)	Nitrobenzene	7.91	7.90	1675826	1616363	450.191	495.277
10)	Nitroglycerin	0.00	9.47	0	3658304	N.D. d	2804.397
11)	Tetryl	9.90	9.89	1160663	1909002	416.424	481.065
12)	2,4,6-Trinitroto	10.36	10.36	1803817	2104821	521.208	523.185
13)	2-Amino-4,6-Dini	10.76	10.77	1653068	2384959	425.101	469.301
14)	4-Amino-2,6-Dini	11.24	11.24	1211708	2230314	454.236	452.225
16)	2,4-Dinitrotolue	12.53	12.54	2401456	1369556	439.683	454.112
17)	2,6-Dinitrotolue	12.93	12.95	1461027	1896930	467.521	493.820
18)	o-Nitrotoluene	16.20	16.19	1130534	1540499	475.617	477.734m
19)	p-Nitrotoluene	16.83	16.84	1681811	1146217	428.063	327.511
20)	m-Nitrotoluene	17.73	17.75	1645092	1817329	465.456m	503.038m
21)	PETN	0.00	19.23	0	4218079	N.D. d	2938.774m

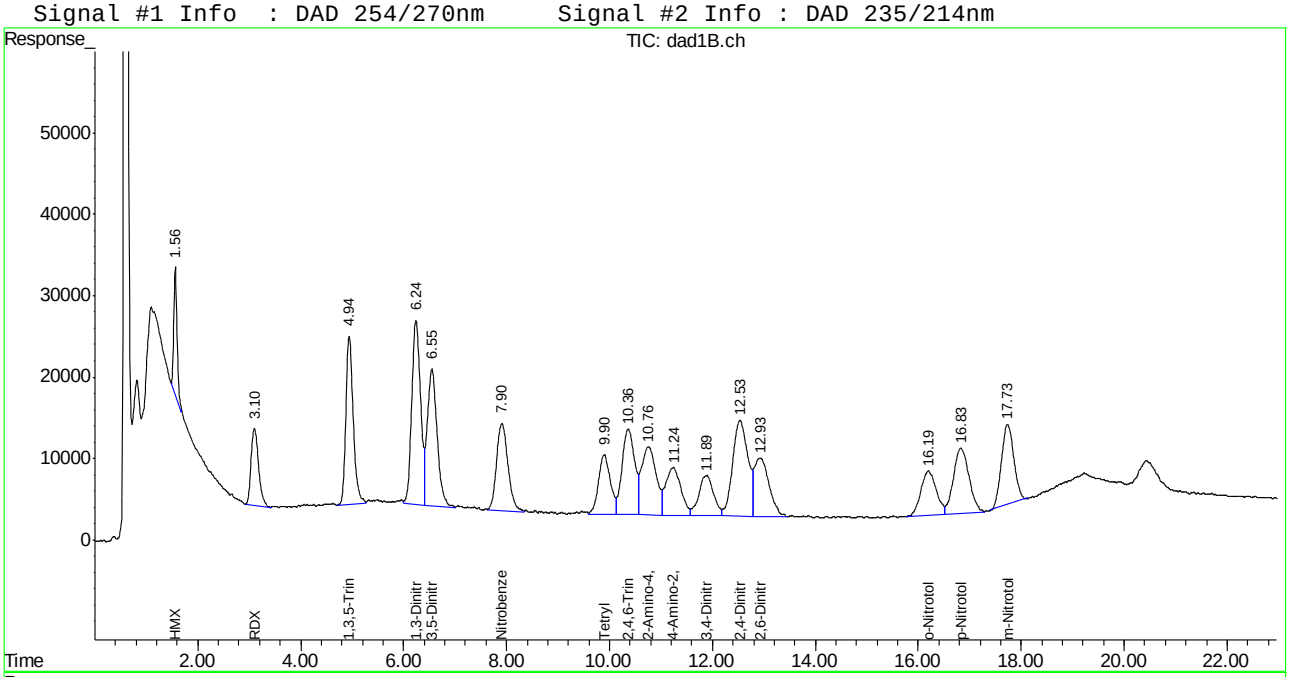
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060398.D 8330B_0707PLUS.M Tue Aug 07 15:20:12 2018 Page 1

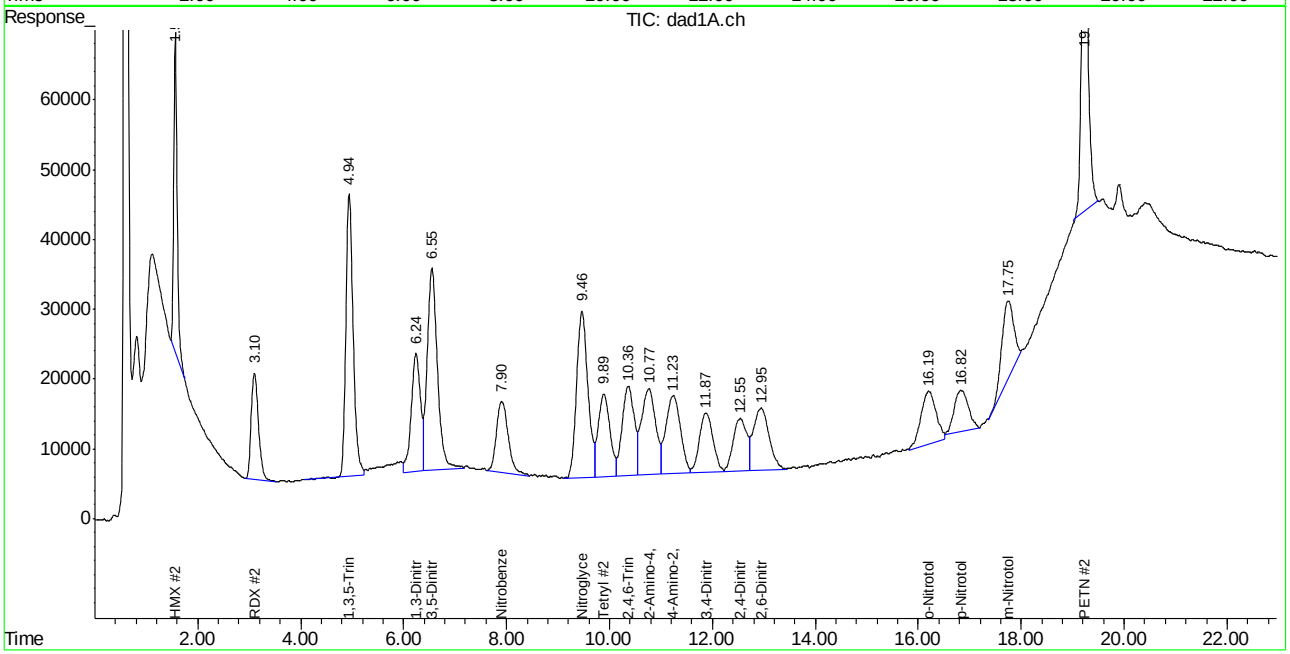
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1A.ch
Acq On : 06-Aug-2018, 21:55:20 Operator: williamh
Sample : op71202-MSD Inst : G1315B
Misc : OP71202,gbb1757,520,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 13:43 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

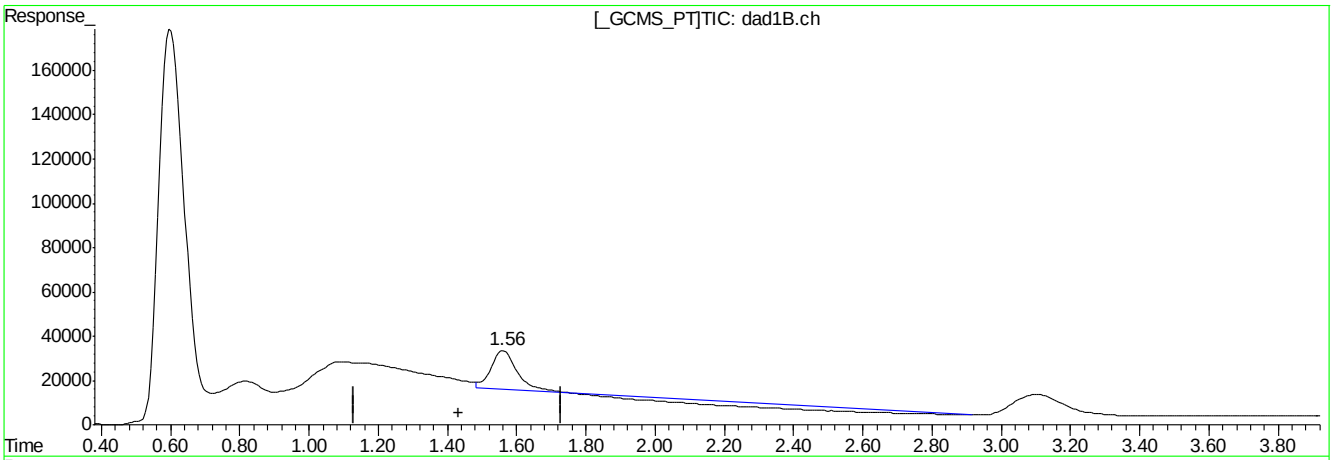
Sample Number: OP71202-MSD
Lab FileID: BB060398.D
Injection Time: 08/06/18 21:55
Method: SW846 8330A
Analyst approved: 08/07/18 15:21 William Hustedde
Supervisor approved: 08/09/18 15:42 Mike Eger

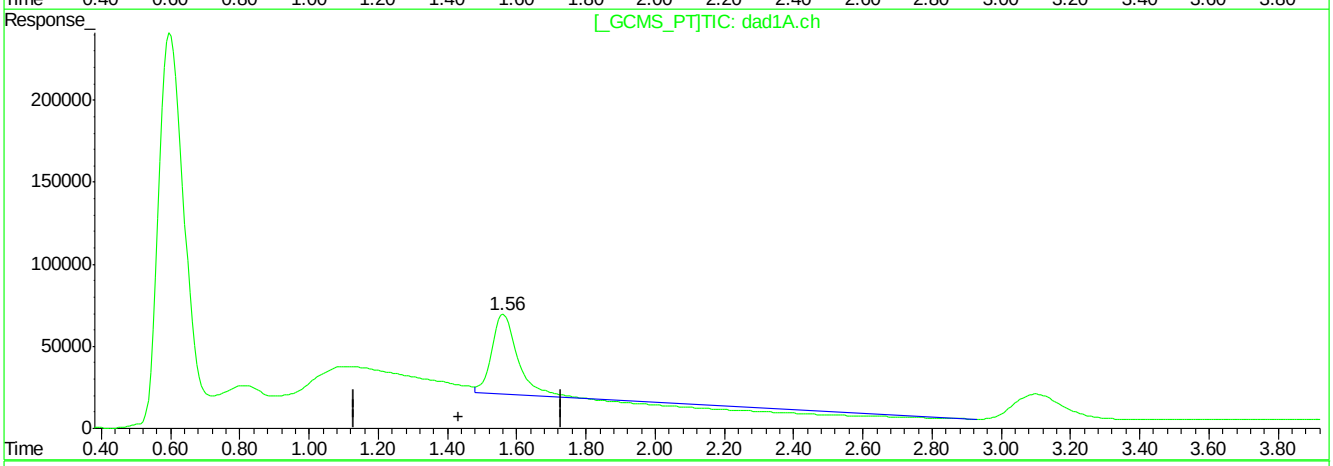
Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.56	Poor instrument integration
HMX	2691-41-0	2	1.56	Poor instrument integration
o-Nitrotoluene	88-72-2	2	16.19	Poor instrument integration
m-Nitrotoluene	99-08-1	1	17.73	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.75	Poor instrument integration
PETN	78-11-5	2	19.23	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1A.ch
Acq On : 06-Aug-2018, 21:55:20 Operator: williamh
Sample : op71202-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.56min 28.714ppb

response 145965

(1) TNX #2

1.56min 179.286ppb

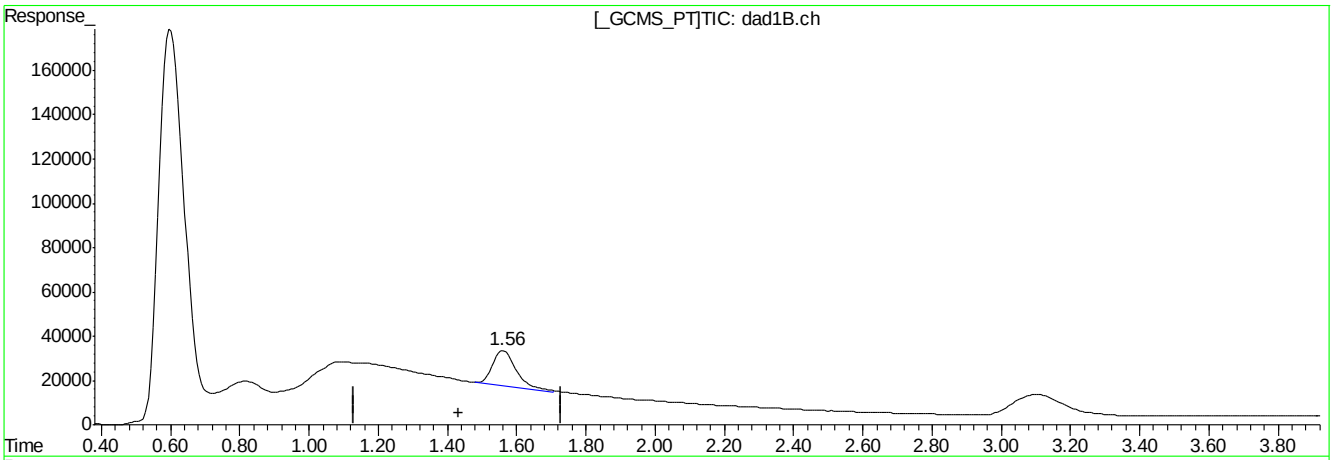
response 1413246

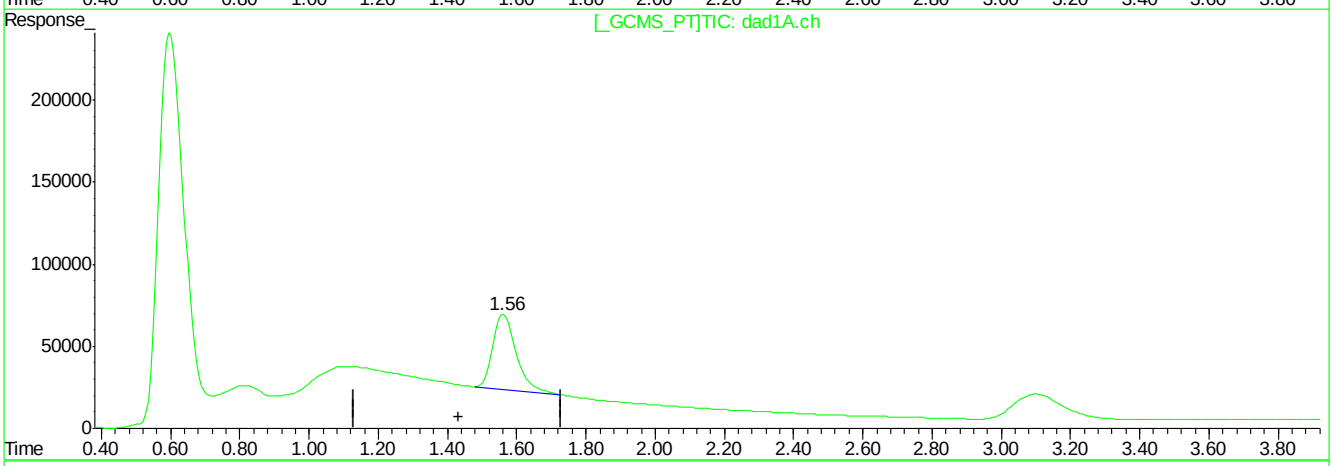
(+) = Expected Retention Time
BB060398.D 8330B_0707PLUS.M Tue Aug 07 13:41:49 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1A.ch
Acq On : 06-Aug-2018, 21:55:20 Operator: williamh
Sample : op71202-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(1) TNX

1.56min 149.388ppb m

response 759391

(1) TNX #2

1.56min 269.017ppb m

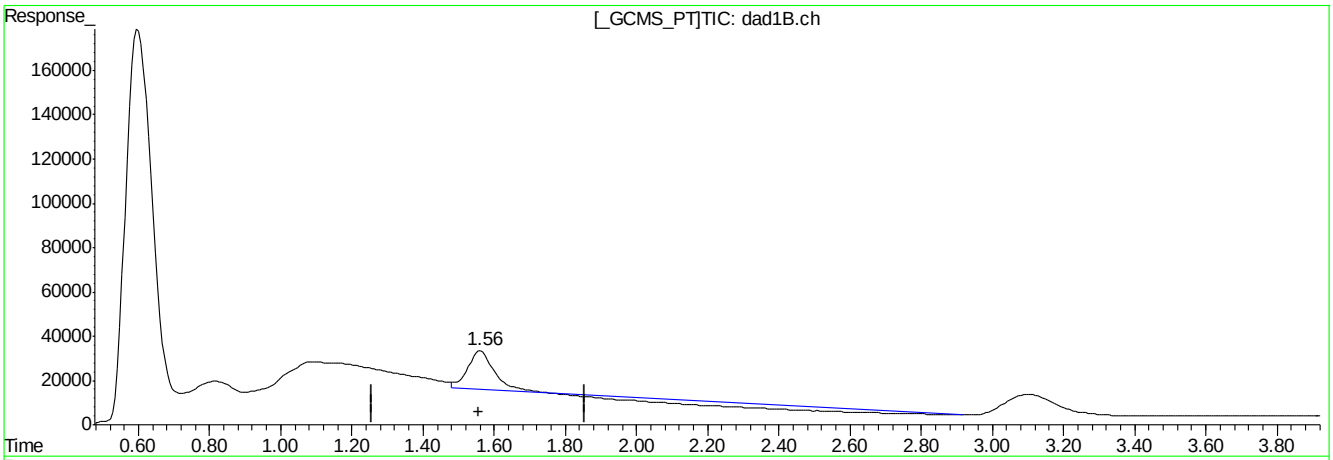
response 2120558

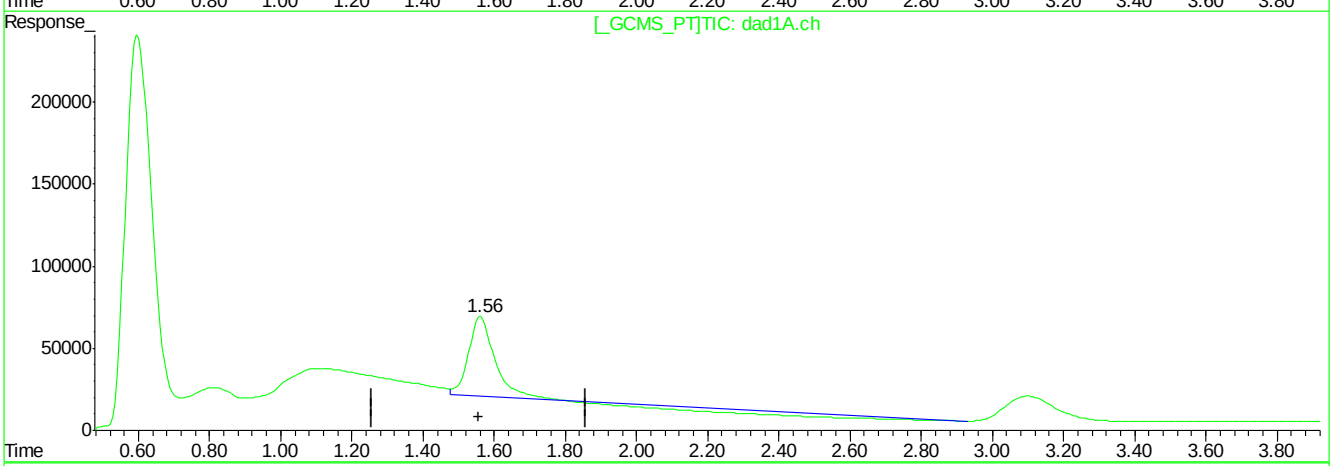
(+) = Expected Retention Time
BB060398.D 8330B_0707PLUS.M Tue Aug 07 13:42:04 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1A.ch
Acq On : 06-Aug-2018, 21:55:20 Operator: williamh
Sample : op71202-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.56min 75.740ppb

response 145965

(2) HMX #2

1.56min 290.629ppb

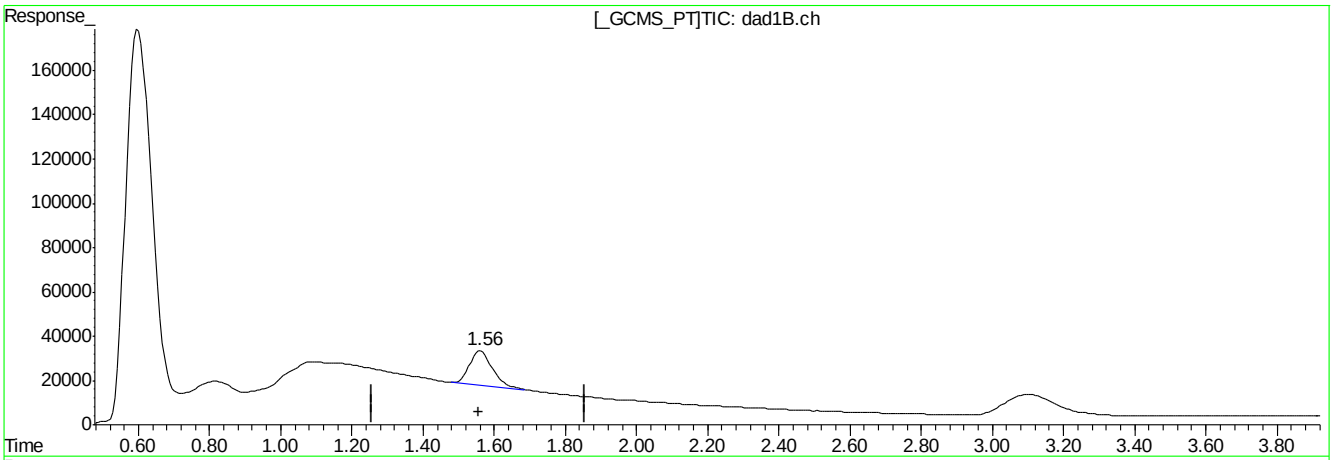
response 1413246

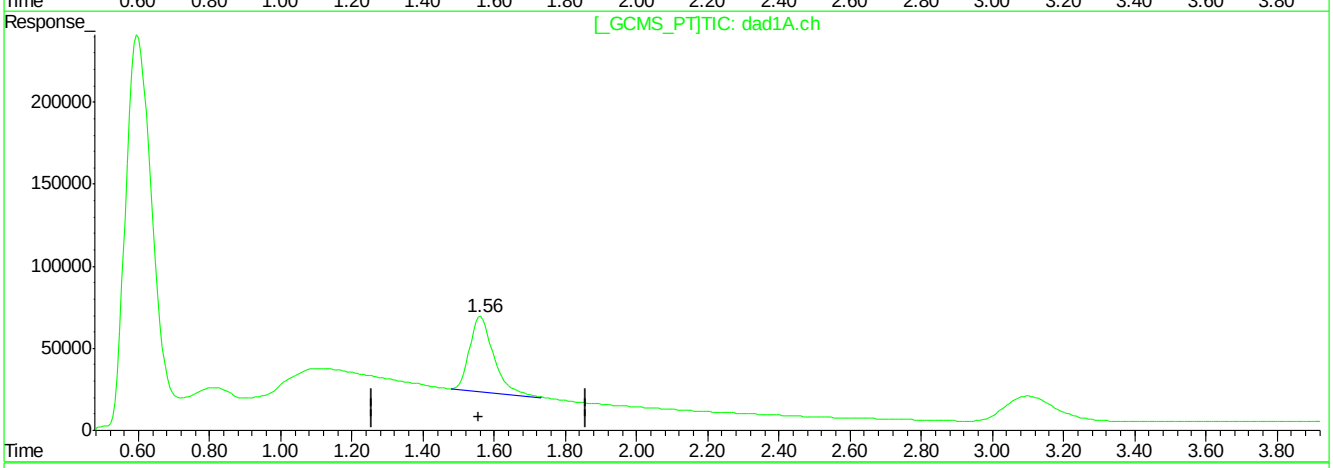
(+) = Expected Retention Time
BB060398.D 8330B_0707PLUS.M Tue Aug 07 13:42:15 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1A.ch
Acq On : 06-Aug-2018, 21:55:20 Operator: williamh
Sample : op71202-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(2) HMX

1.56min 366.453ppb m

response 706222

(2) HMX #2

1.56min 440.591ppb m

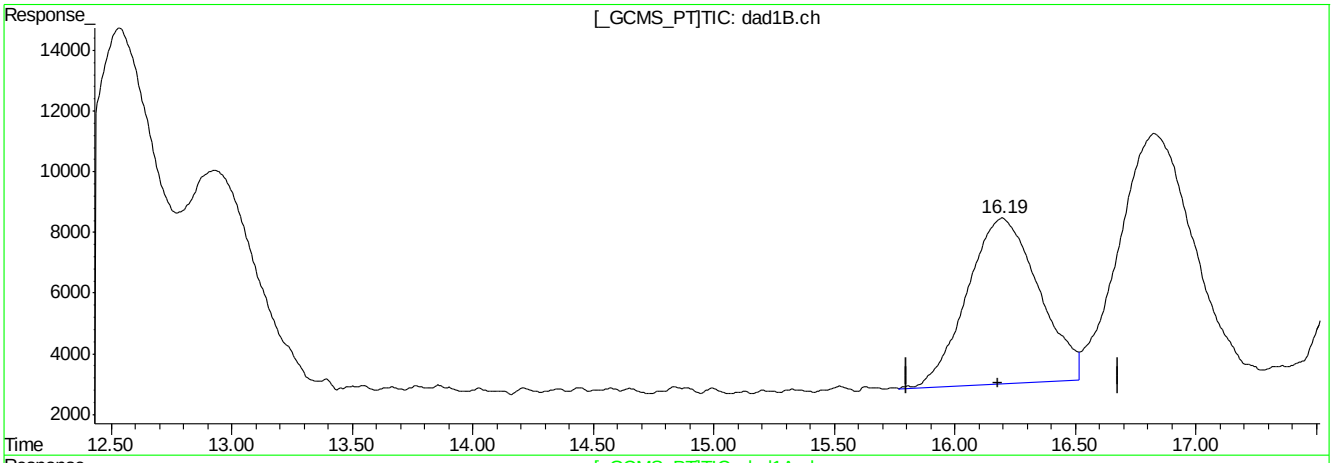
response 2142698

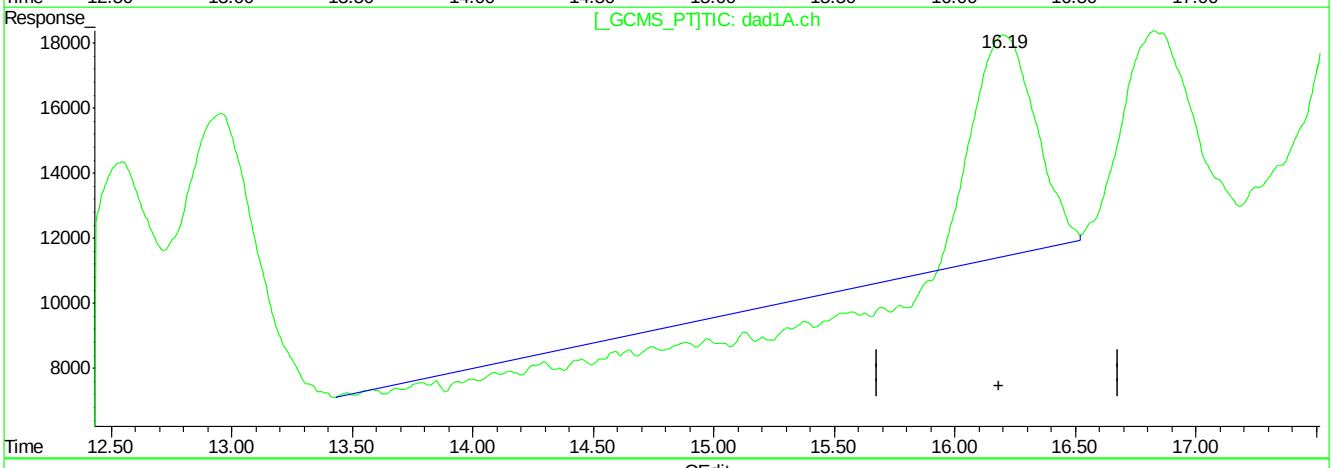
(+) = Expected Retention Time
BB060398.D 8330B_0707PLUS.M Tue Aug 07 13:42:50 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1A.ch
Acq On : 06-Aug-2018, 21:55:20 Operator: williamh
Sample : op71202-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

16.20min 475.617ppb

response 1130534

(18) o-Nitrotoluene #2

16.20min 131.905ppb

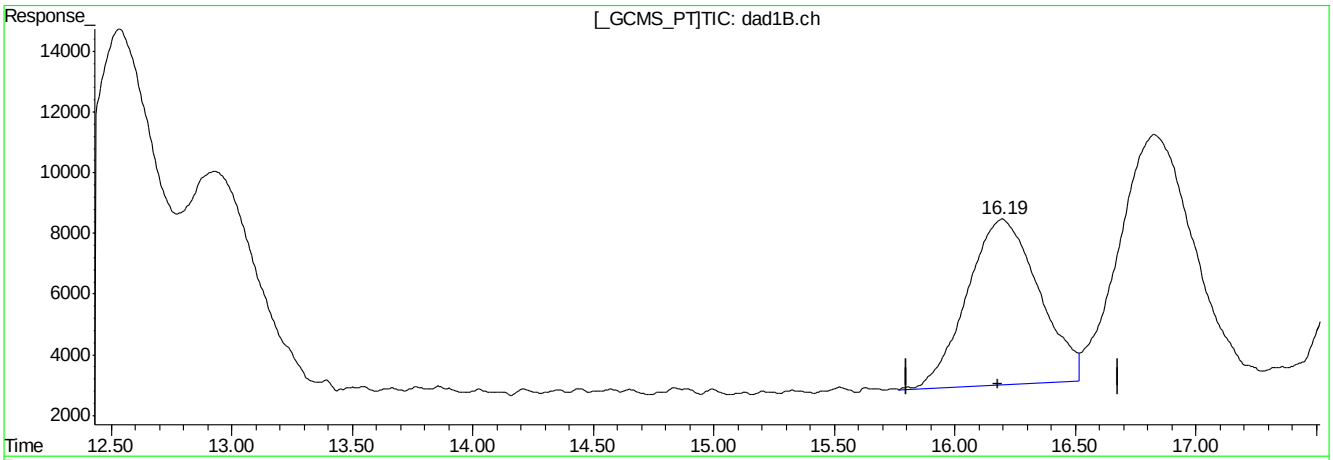
response 425339

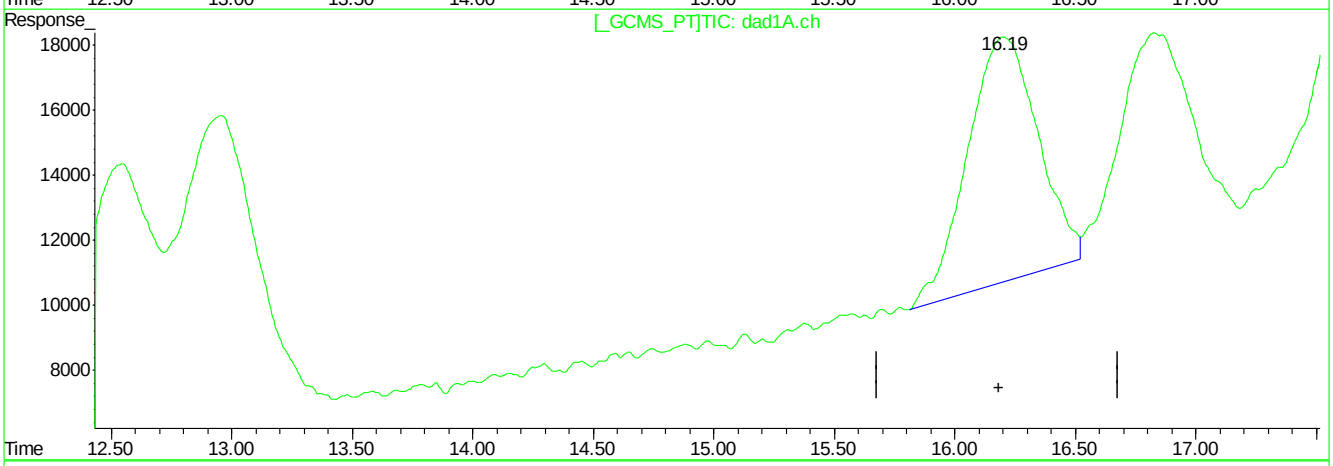
(+) = Expected Retention Time
BB060398.D 8330B_0707PLUS.M Tue Aug 07 13:43:06 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1A.ch
Acq On : 06-Aug-2018, 21:55:20 Operator: williamh
Sample : op71202-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

16.20min 475.617ppb

response 1130534

(18) o-Nitrotoluene #2

16.19min 477.734ppb m

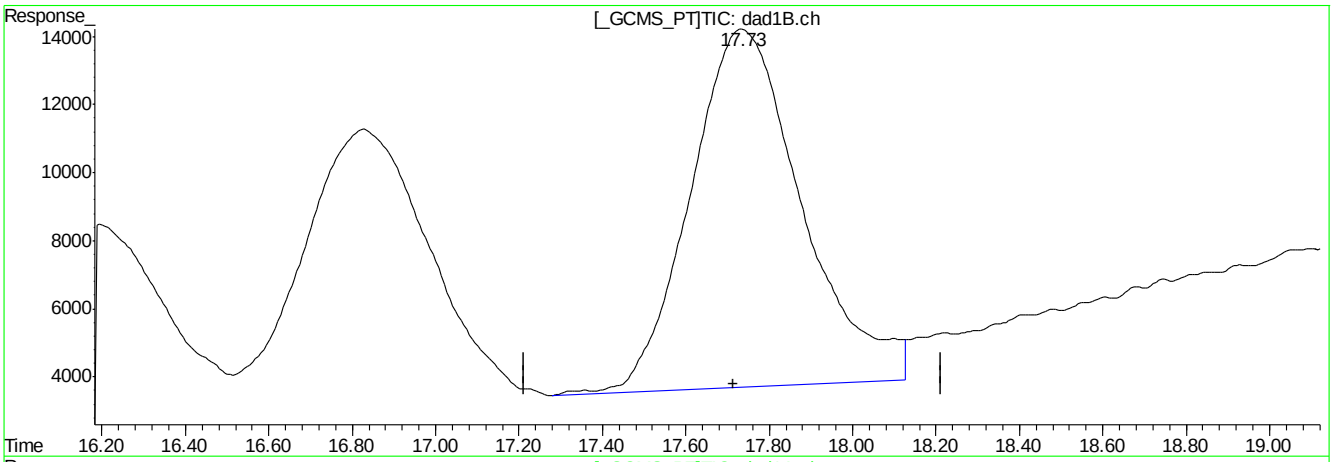
response 1540499

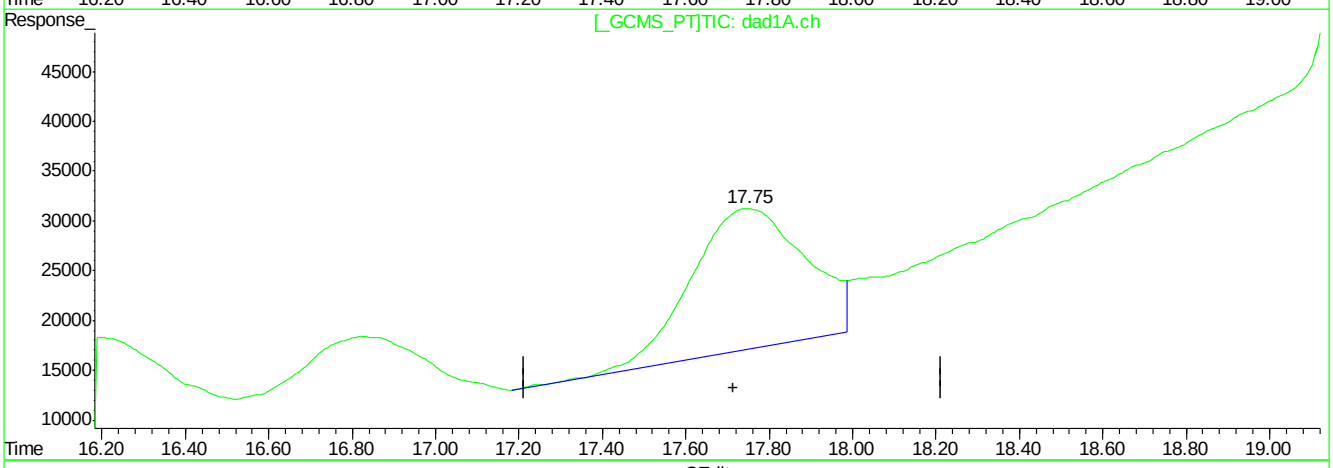
(+) = Expected Retention Time
BB060398.D 8330B_0707PLUS.M Tue Aug 07 13:43:14 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1A.ch
Acq On : 06-Aug-2018, 21:55:20 Operator: williamh
Sample : op71202-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.74min 550.455ppb

response 1946101

(20) m-Nitrotoluene #2

17.75min 740.650ppb

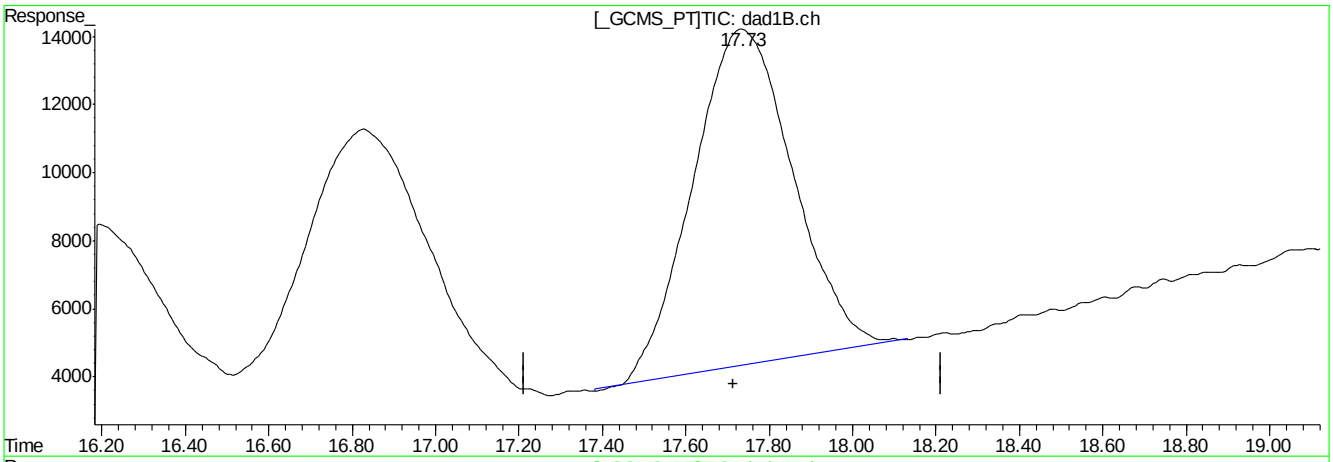
response 2675752

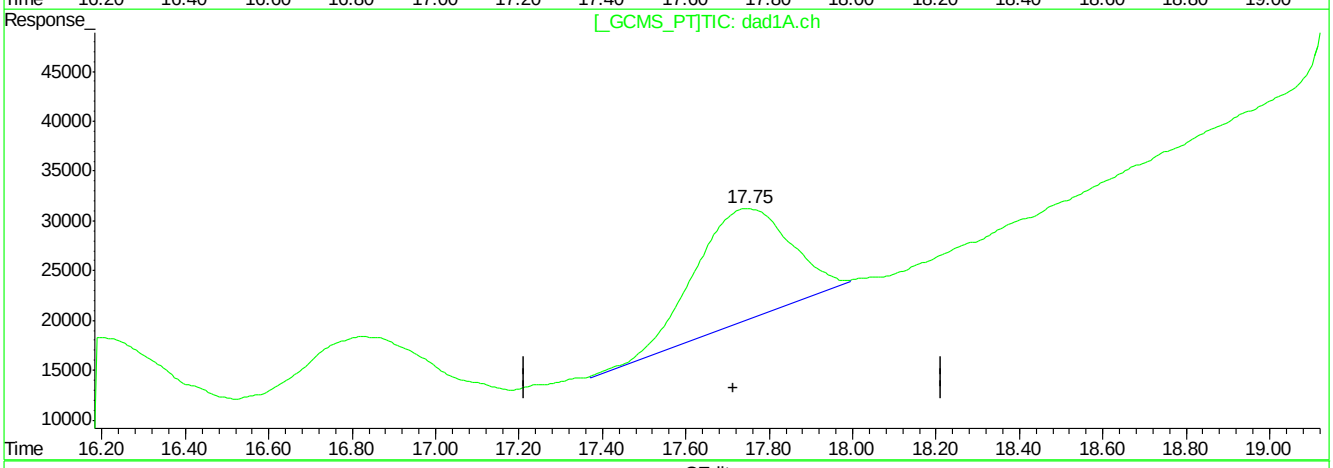
(+) = Expected Retention Time
BB060398.D 8330B_0707PLUS.M Tue Aug 07 13:43:19 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1A.ch
Acq On : 06-Aug-2018, 21:55:20 Operator: williamh
Sample : op71202-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.73min 465.456ppb m

response 1645092

(20) m-Nitrotoluene #2

17.75min 503.038ppb m

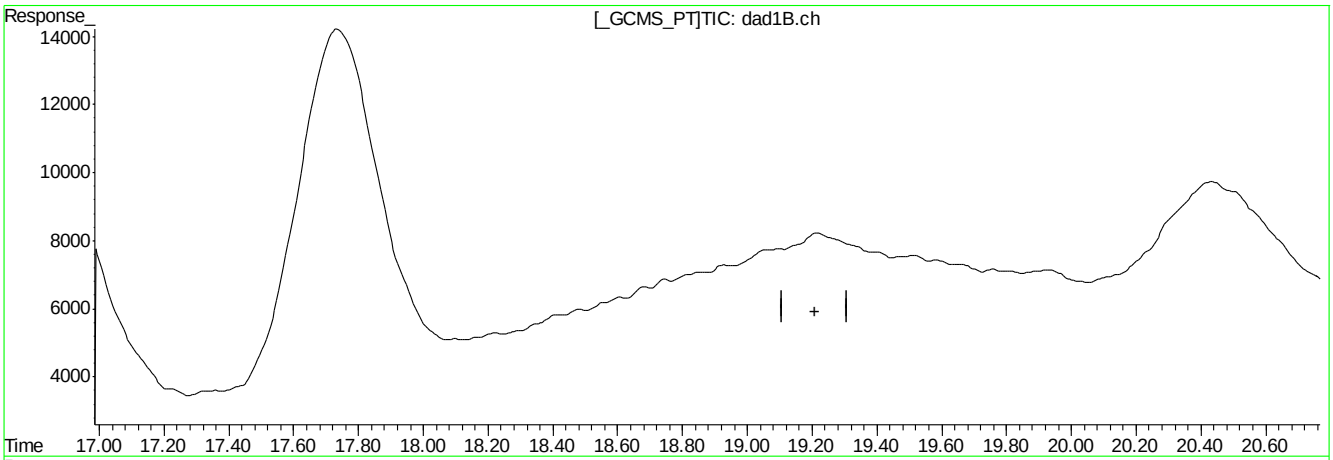
response 1817329

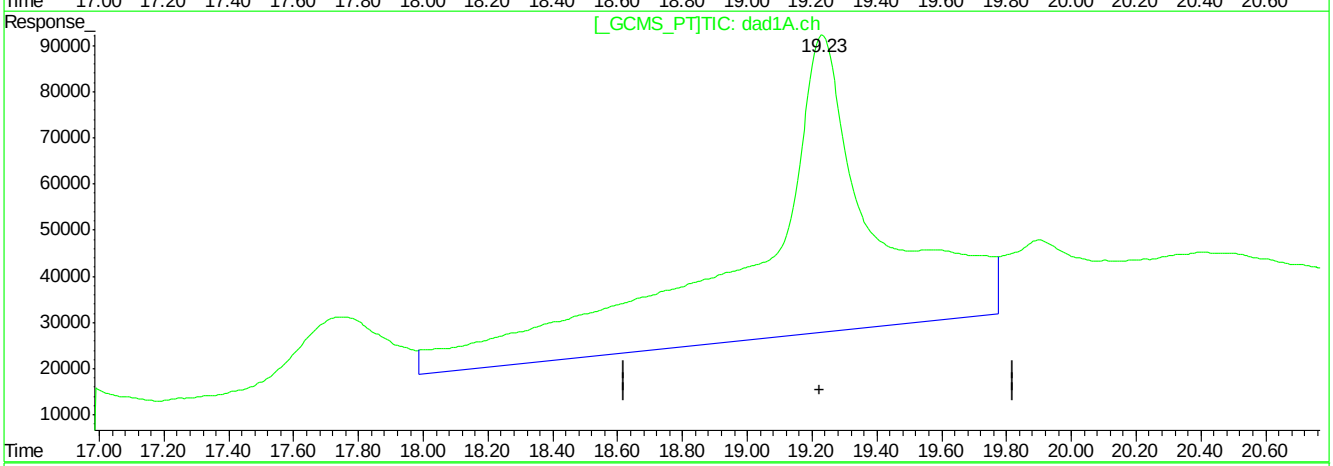
(+) = Expected Retention Time
BB060398.D 8330B_0707PLUS.M Tue Aug 07 13:43:28 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1A.ch
Acq On : 06-Aug-2018, 21:55:20 Operator: williamh
Sample : op71202-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

19.23min 11905.399ppb

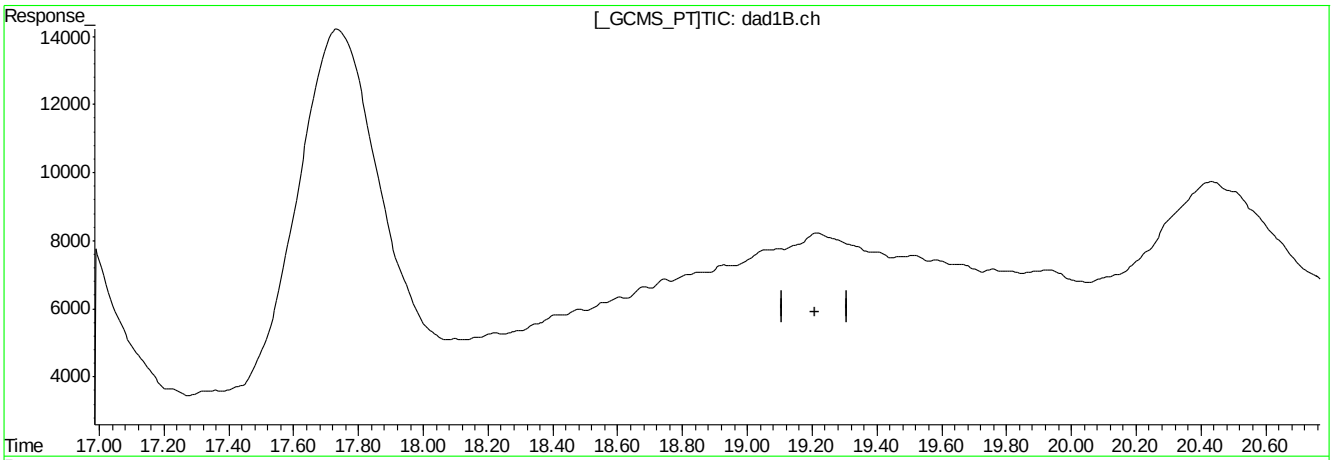
response 17088050

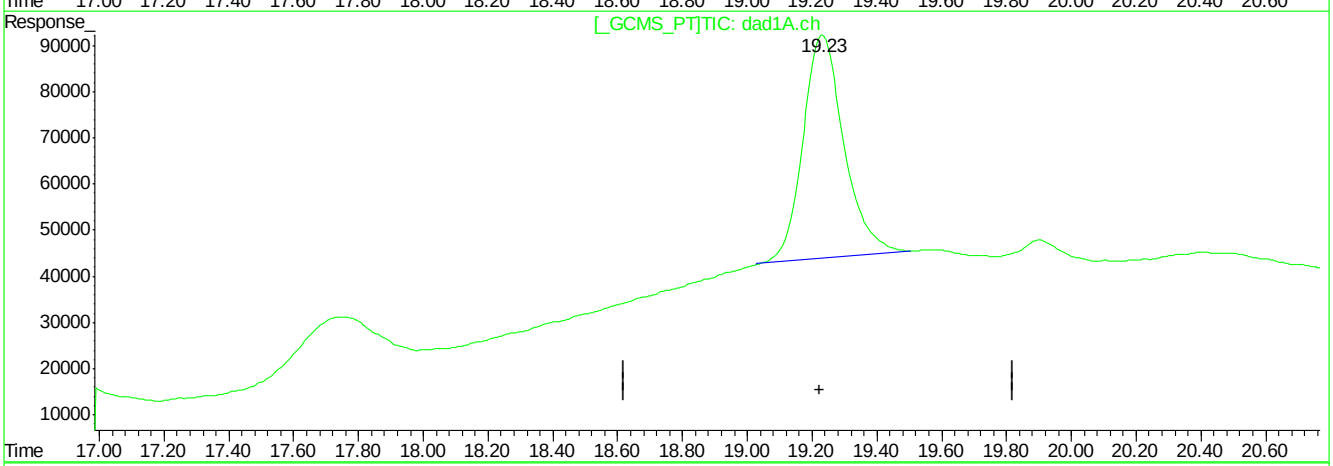
(+) = Expected Retention Time
BB060398.D 8330B_0707PLUS.M Tue Aug 07 13:43:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1B.ch Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060398.D\dad1A.ch
Acq On : 06-Aug-2018, 21:55:20 Operator: williamh
Sample : op71202-MSD Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:53 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

19.23min 2938.774ppb m

response 4218079

(+) = Expected Retention Time
BB060398.D 8330B_0707PLUS.M Tue Aug 07 13:43:38 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:27 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.44	11.44	73123	83553	29.384	19.865m
	Spiked Amount 500.000	Range 70 - 136		Recovery =		5.88%#	3.97%#
	Target Compounds						
1)	TNX	1.40	1.40	105908	163610	21.638	21.435
2)	HMX	1.55	1.55	49679	104548	27.483	21.128
3)	DNX	1.80	1.79	78544	100526	25.540	19.827m
4)	MNX	2.40	2.40	69325	105898	22.185	22.460m
5)	RDX	3.03	3.04	45945	86009	23.641m	26.376m
6)	1,3,5-Trinitrobe	4.84	4.83	120926	188051	27.751m	22.941m
7)	1,3-Dinitrobenze	6.07	6.06	135770	141420	23.292m	36.692m#
8)	3,5-Dinitroanili	6.42	6.42	135157	245029	28.906	31.343
9)	Nitrobenzene	7.73	7.69	96978	113083	25.916m	35.981m
10)	Nitroglycerin	0.00	9.04	0	139364	N.D. d	109.066m
11)	Tetryl	9.50	9.54	52961	143805	17.896m	34.742m#
12)	2,4,6-Trinitroto	10.07	10.03	101487	127709	25.910m	29.865m
13)	2-Amino-4,6-Dini	10.45	10.46	86714	118088	23.221m	21.088m
14)	4-Amino-2,6-Dini	10.99	11.01	55774	103732	21.156m	19.461m
16)	2,4-Dinitrotolue	12.09	12.09	136897	44517	26.386m	14.109m#
17)	2,6-Dinitrotolue	12.55	12.56	109062	110117	37.119m	29.843m
18)	o-Nitrotoluene	15.86	0.00	36949	0	14.299	N.D. #
19)	p-Nitrotoluene	16.44	0.00	79601	0	19.919	N.D. #
20)	m-Nitrotoluene	17.44	0.00	146388	0	42.953	N.D. #
21)	PETN	0.00	18.93	0	154833	N.D. d	117.496m

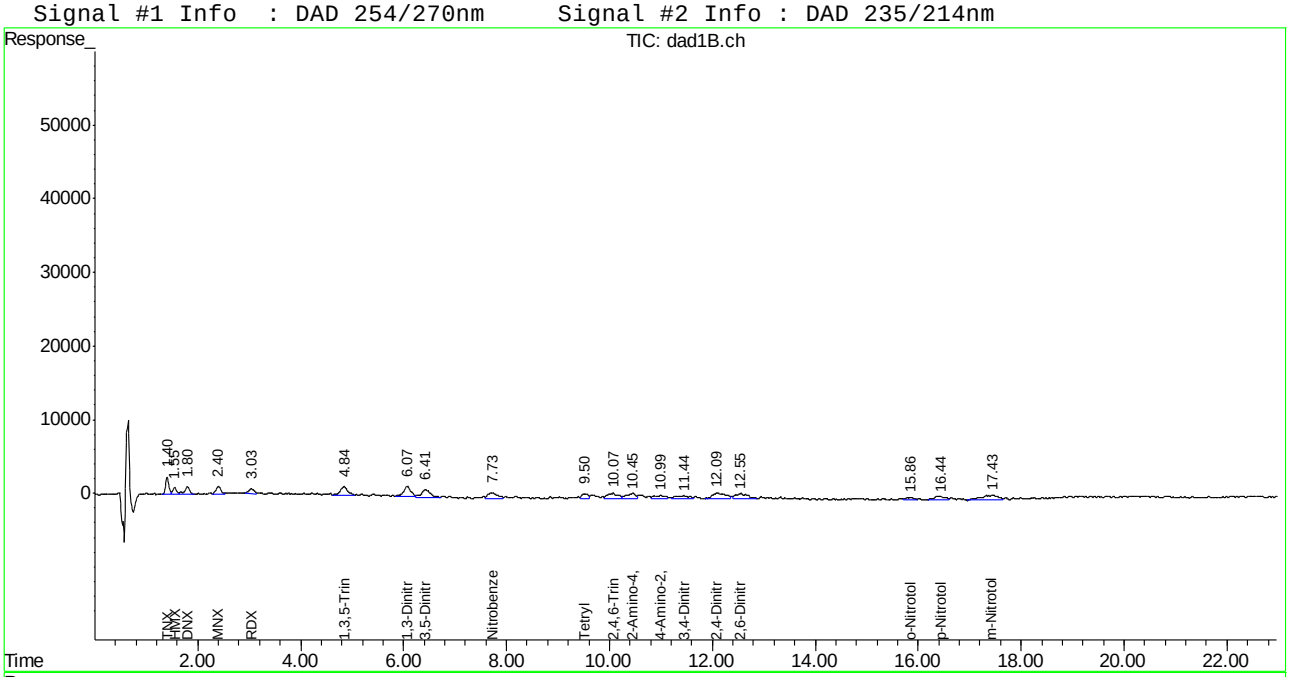
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060200.D 8330B_0707PLUS.M Mon Jul 09 10:55:16 2018 Page 1

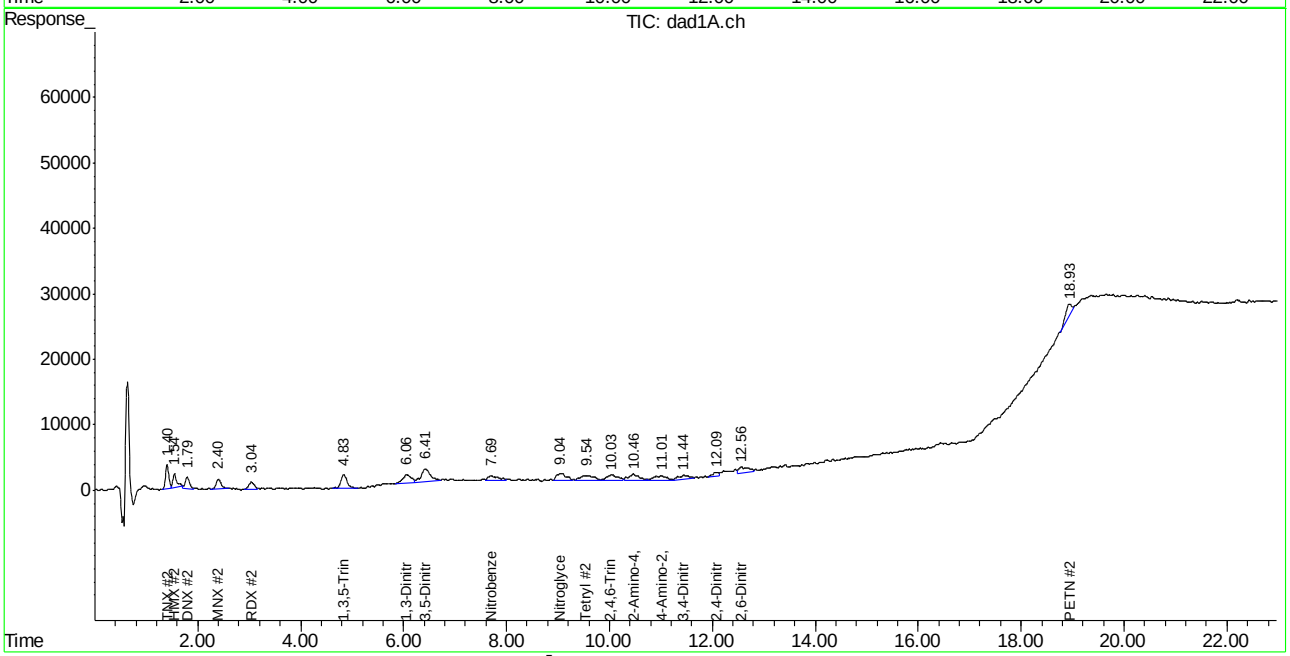
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:05 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

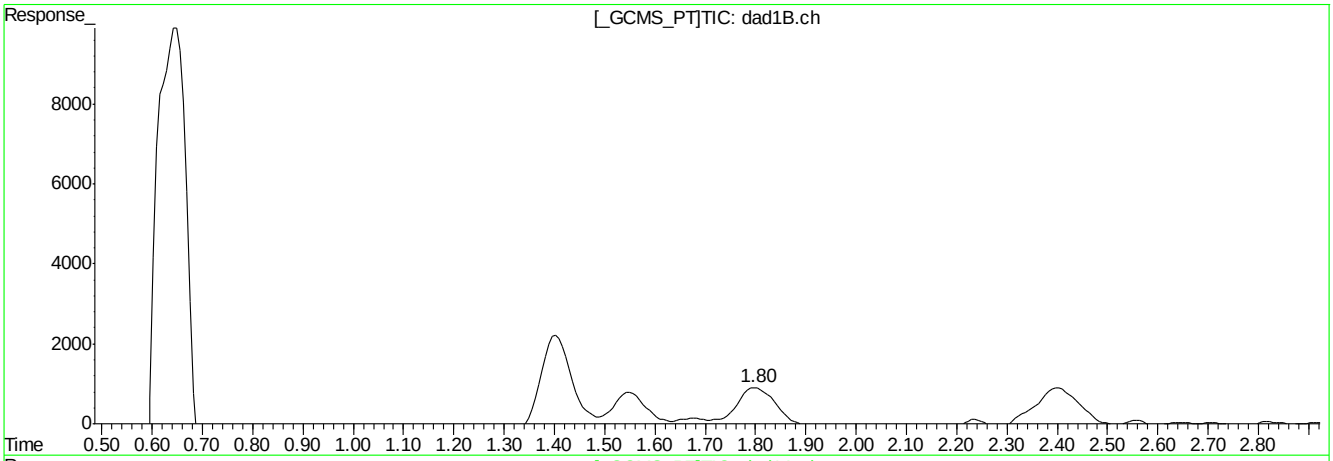
Sample Number: GBB1748-IC1748 **Method:** SW846 8330A
Lab FileID: BB060200.D **Analyst approved:** 07/09/18 11:23 William Hustedde
Injection Time: 07/06/18 15:33 **Supervisor approved:** 07/09/18 16:15 Mike Eger

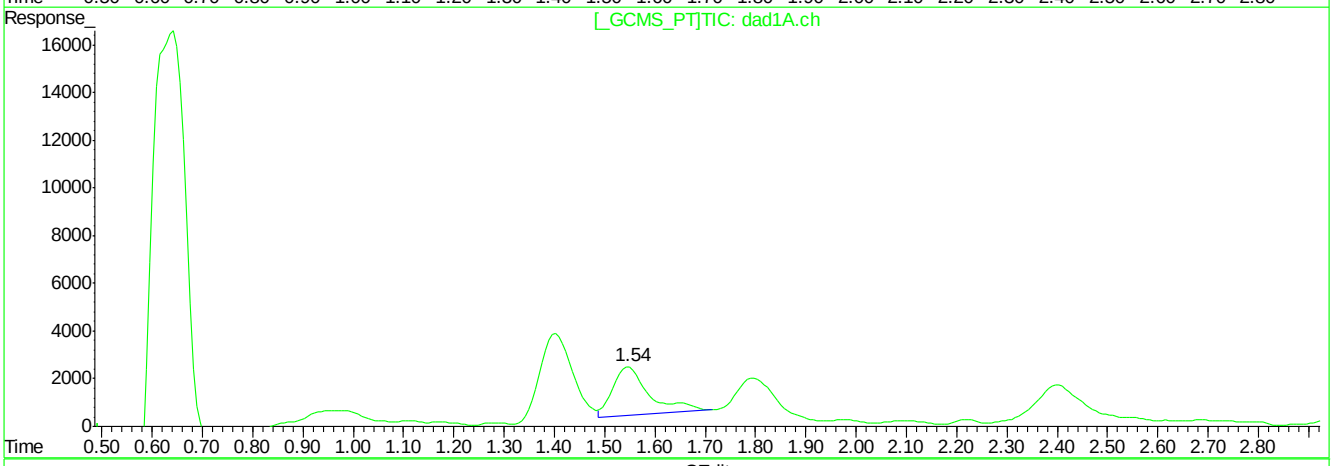
Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		2	1.79	Poor instrument integration
MNX		2	2.40	Poor instrument integration
RDX	121-82-4	1	3.03	Poor instrument integration
RDX	121-82-4	2	3.04	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.83	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.84	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.06	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	6.07	Poor instrument integration
Nitrobenzene	98-95-3	2	7.69	Poor instrument integration
Nitrobenzene	98-95-3	1	7.73	Poor instrument integration
Nitroglycerine	55-63-0	2	9.04	Poor instrument integration
Tetryl	479-45-8	1	9.50	Poor instrument integration
Tetryl	479-45-8	2	9.54	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	10.03	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	10.07	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.45	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.46	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.99	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	11.01	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	11.44	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	12.09	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	12.09	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.55	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	12.56	Poor instrument integration
PETN	78-11-5	2	18.93	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.80min 25.540ppb

response 78544

(3) DNX #2

1.55min 20.620ppb

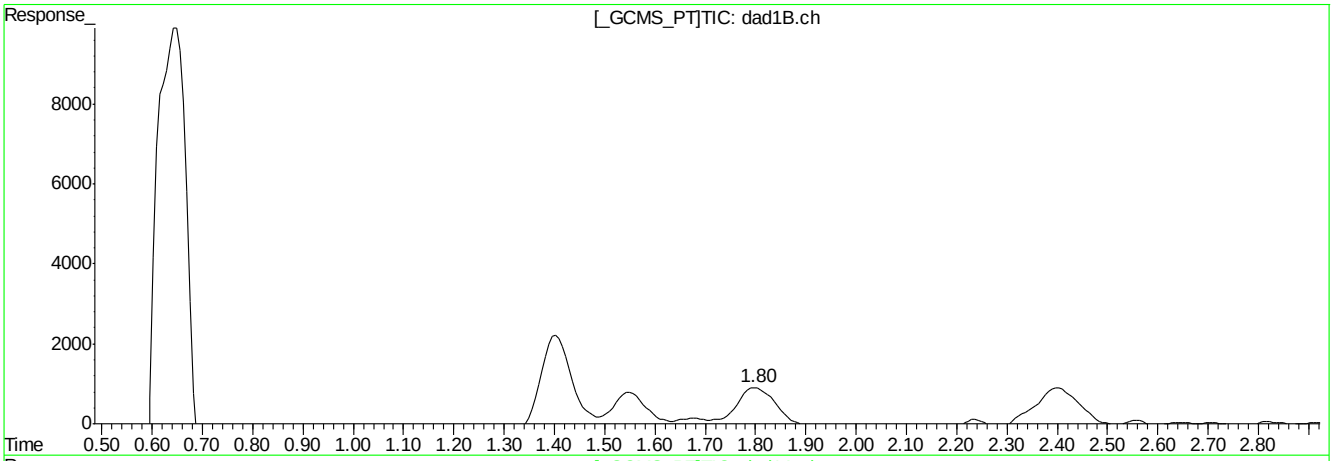
response 104548

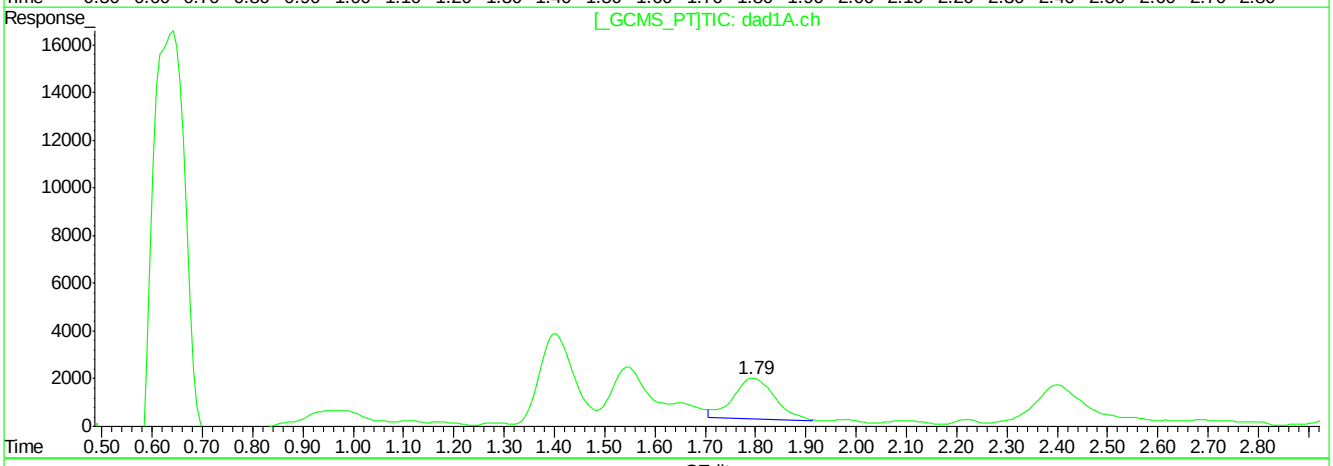
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:39:58 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(3) DNX

1.80min 25.540ppb

response 78544

(3) DNX #2

1.79min 19.827ppb m

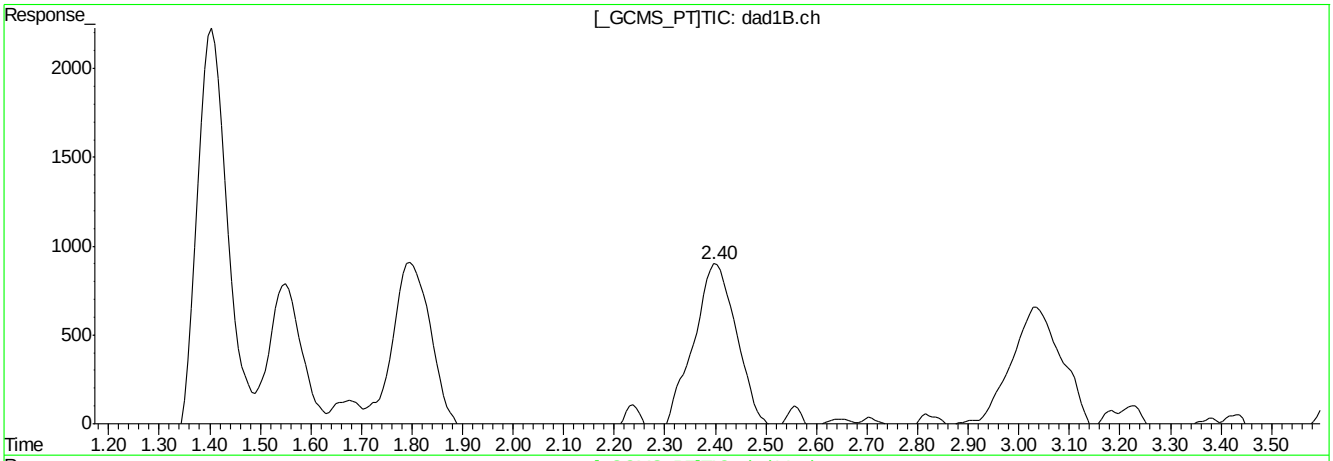
response 100526

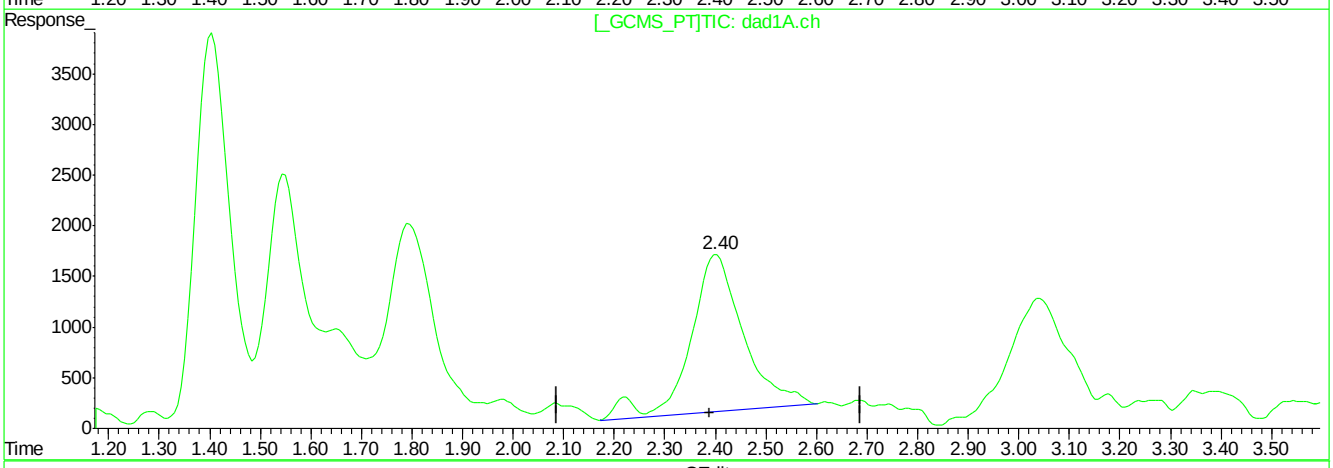
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:40:09 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.40min 22.185ppb

response 69325

(4) MNX #2

2.40min 24.066ppb

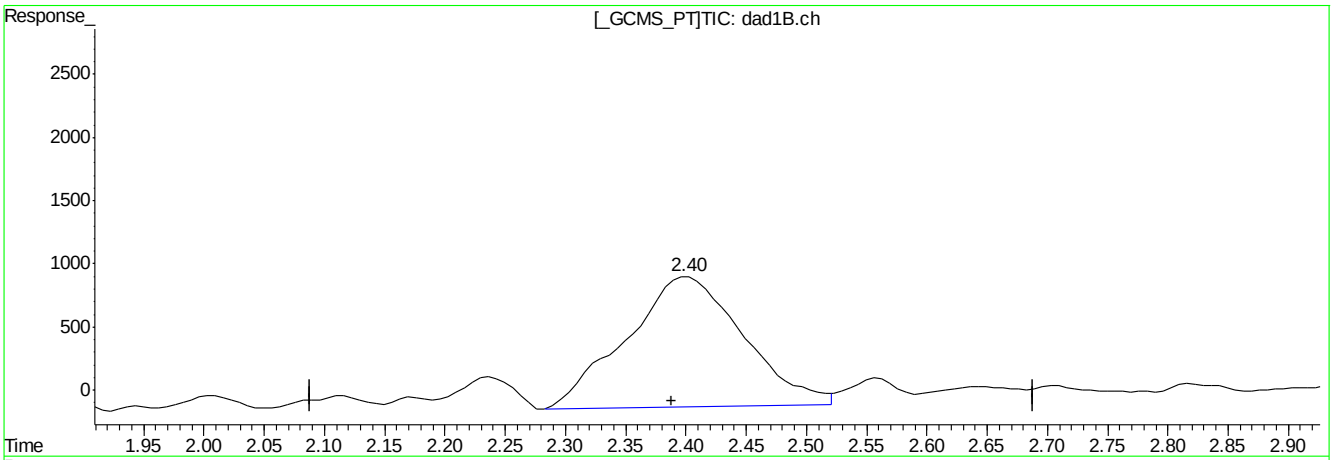
response 113473

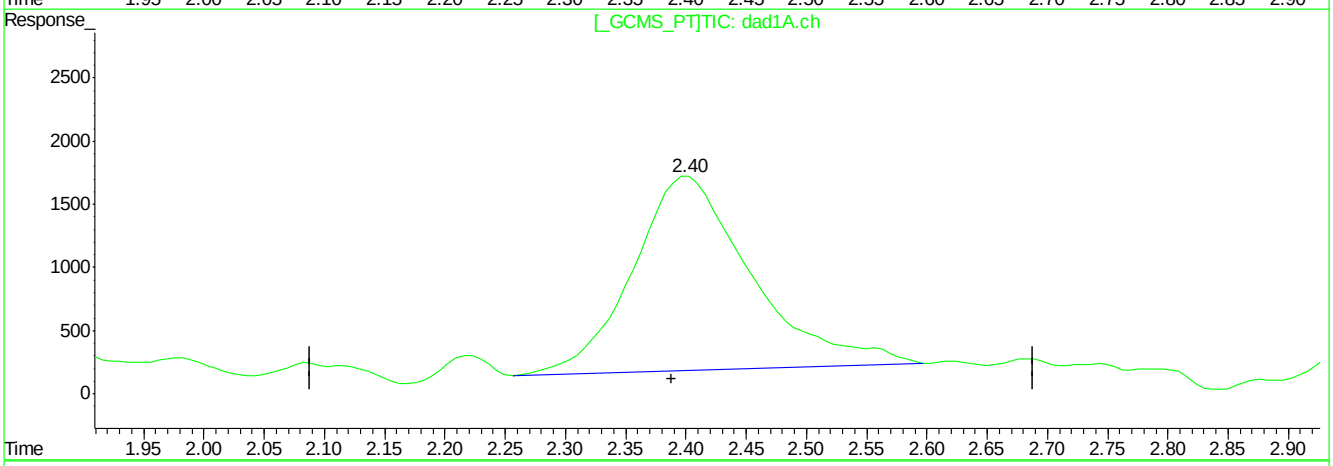
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:40:18 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.40min 22.185ppb

response 69325

(4) MNX #2

2.40min 22.460ppb m

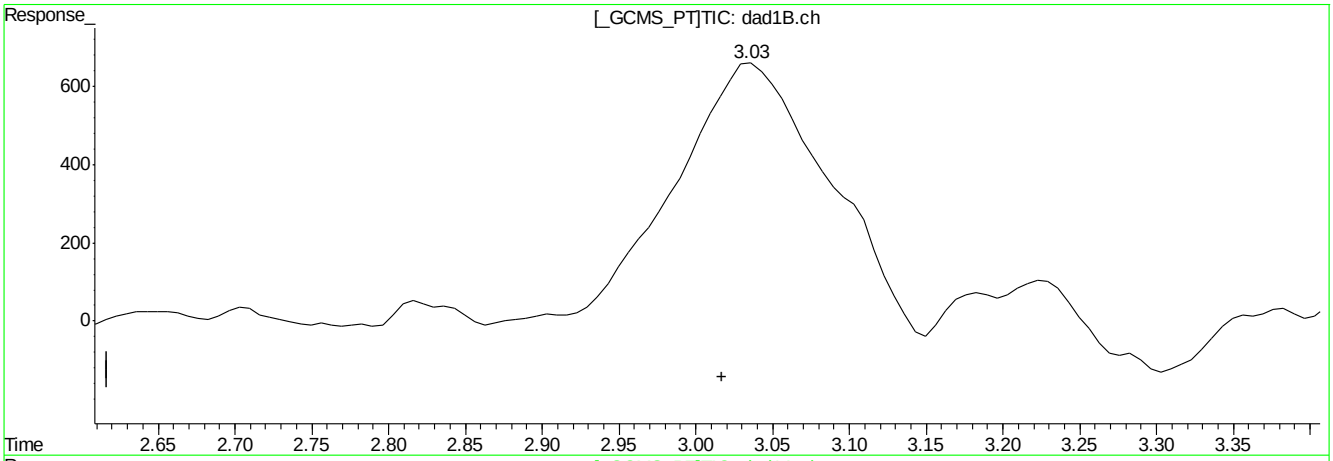
response 105898

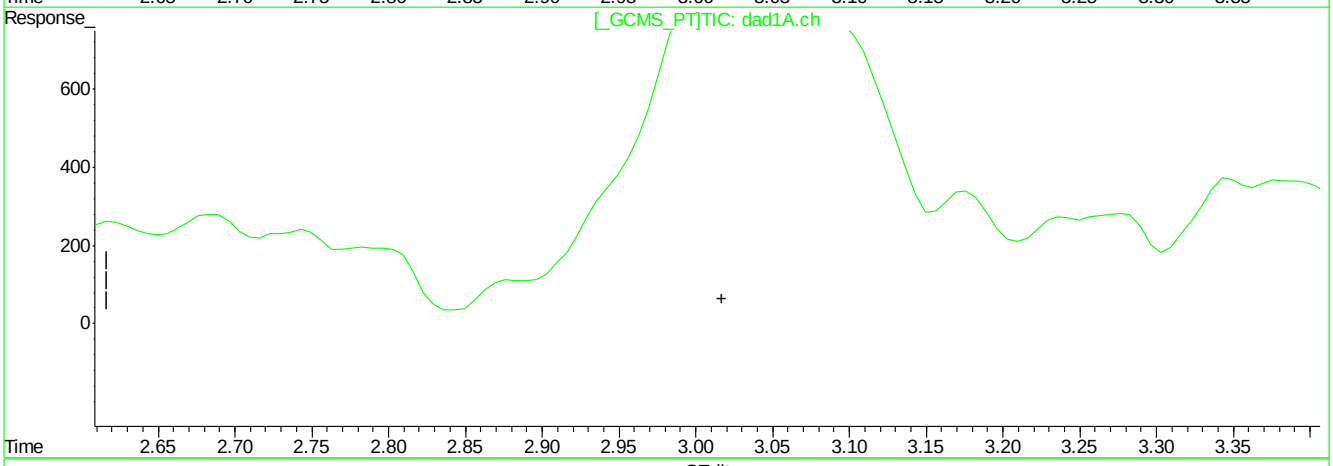
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:40:26 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.04min 35.814ppb

response 69624

(5) RDX #2

0.00min 0.000ppb

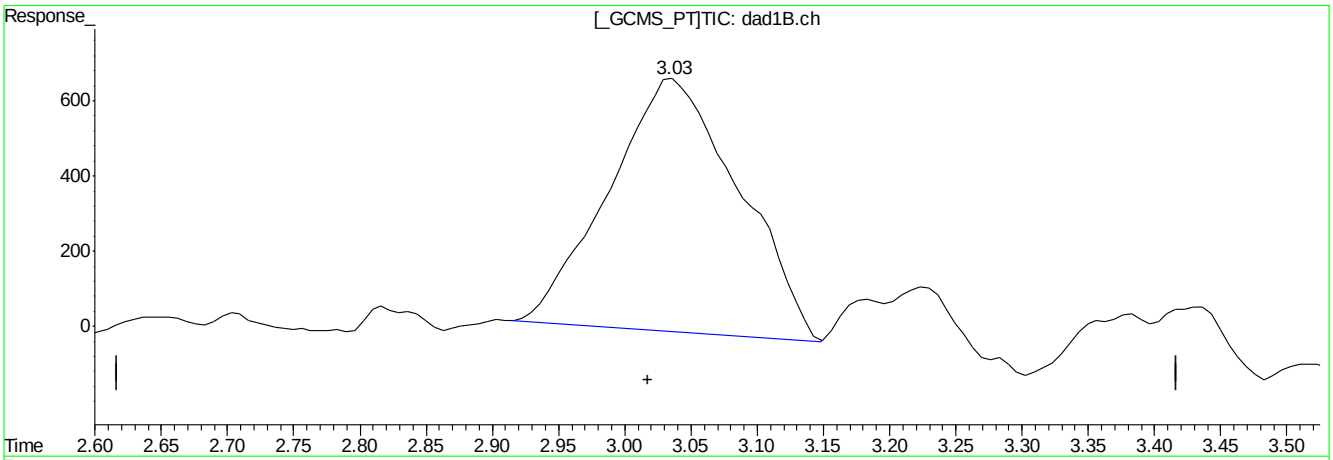
response 0

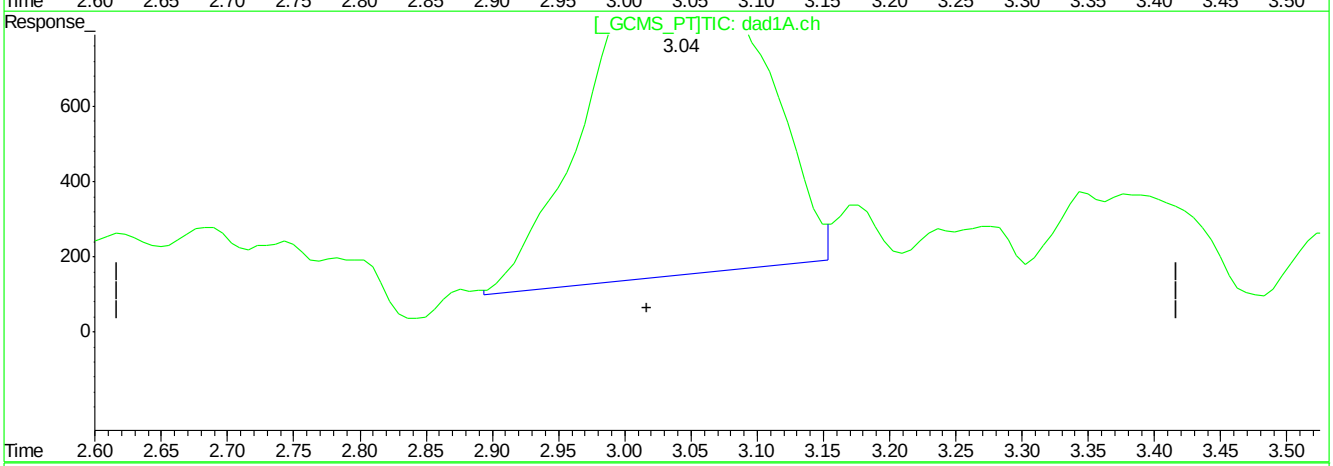
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:40:33 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.03min 23.641ppb m

response 45945

(5) RDX #2

3.04min 26.376ppb m

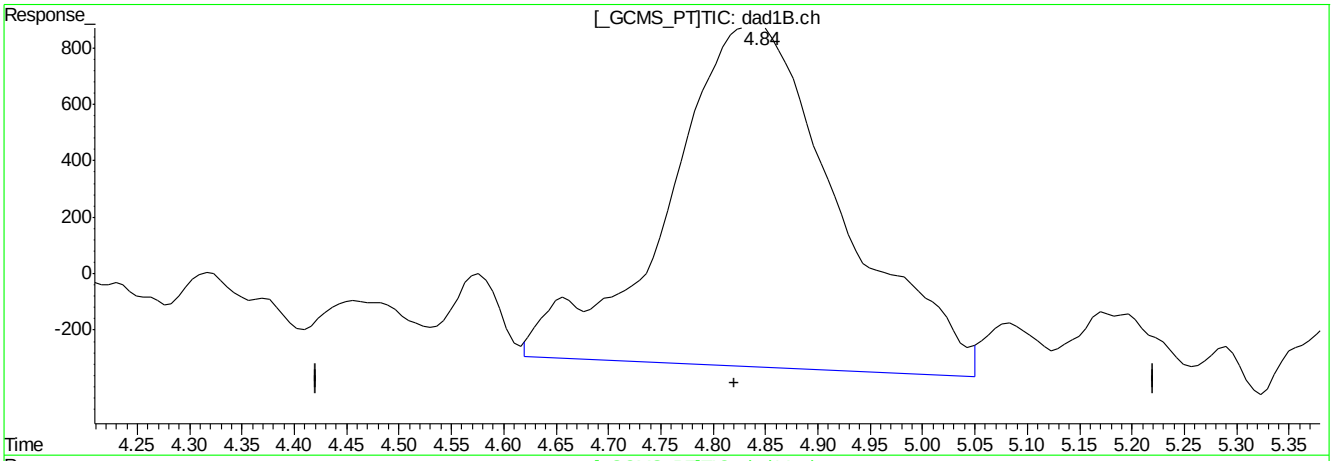
response 86009

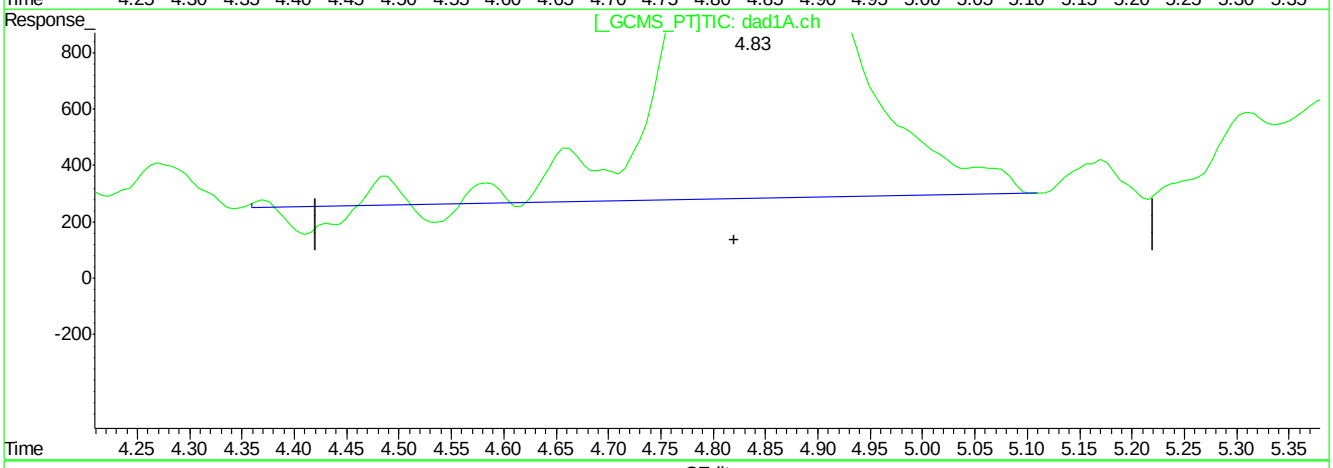
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:40:53 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.84min 31.656ppb

response 137939

(6) 1,3,5-Trinitrobenzene #2

4.84min 22.571ppb

response 185021

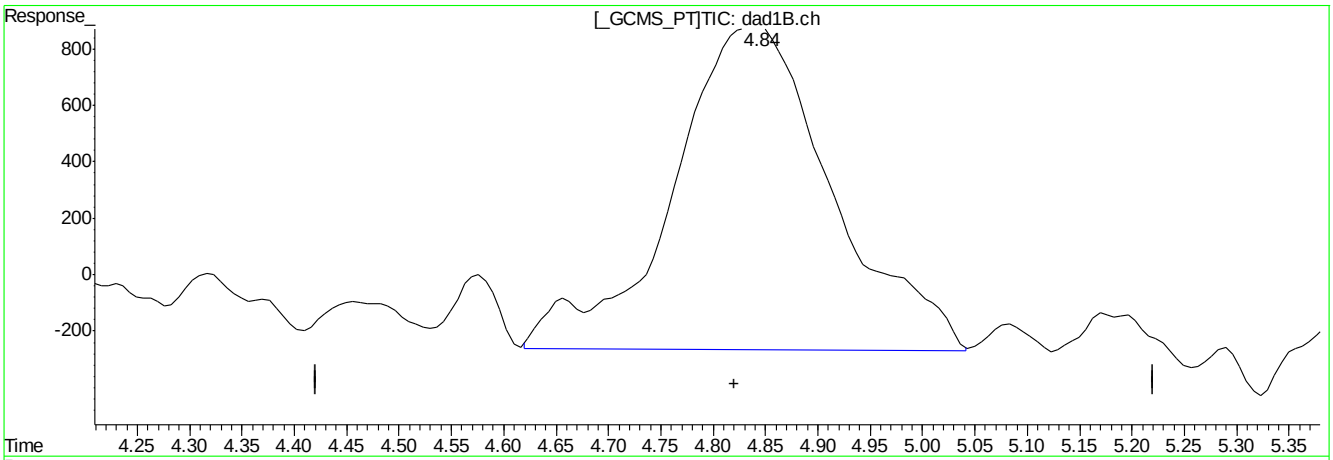
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:40:59 2018

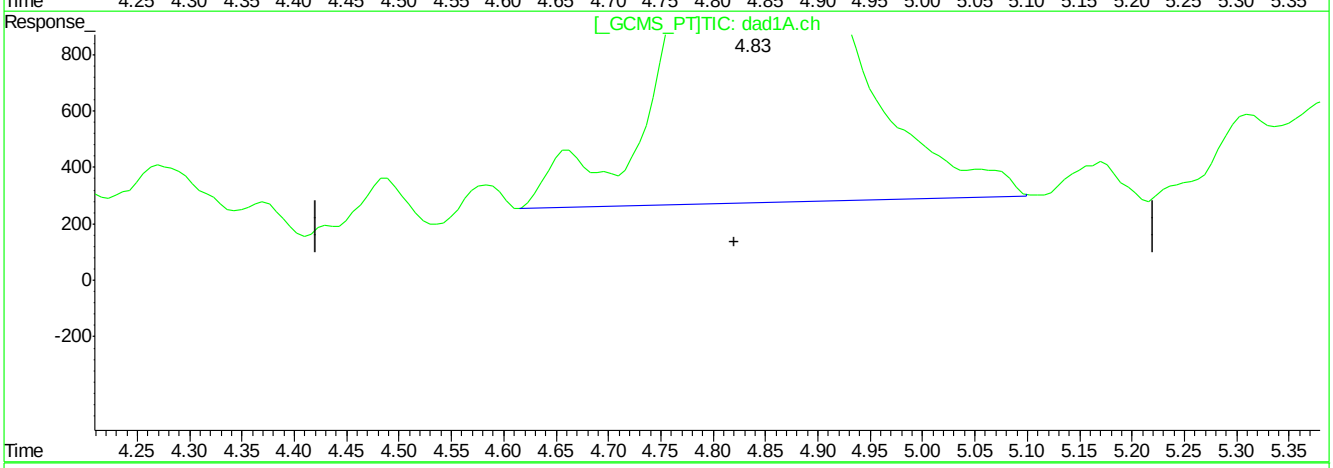
BB060200.D edits: 1,3,5-Trinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.84min 27.751ppb m

response 120926

(6) 1,3,5-Trinitrobenzene #2

4.83min 22.941ppb m

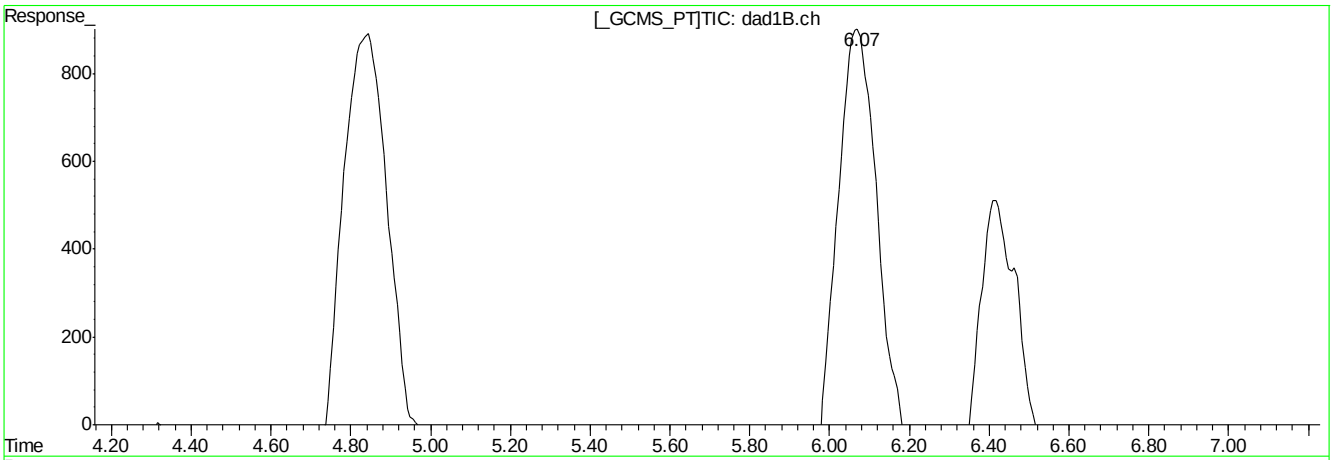
response 188051

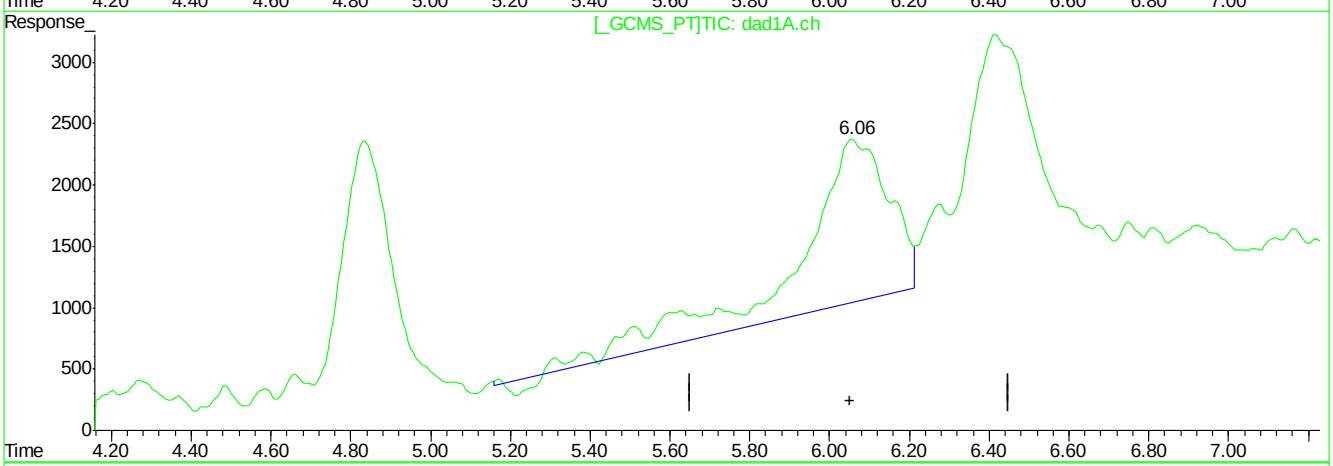
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:41:09 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.07min 26.459ppb

response 154231

(7) 1,3-Dinitrobenzene #2

6.06min 53.131ppb

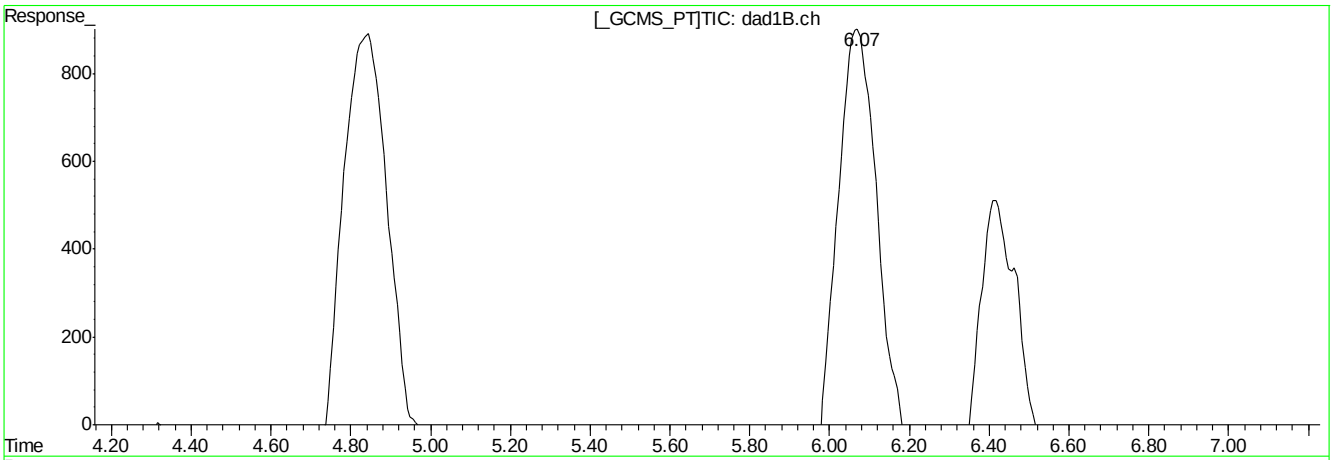
response 204736

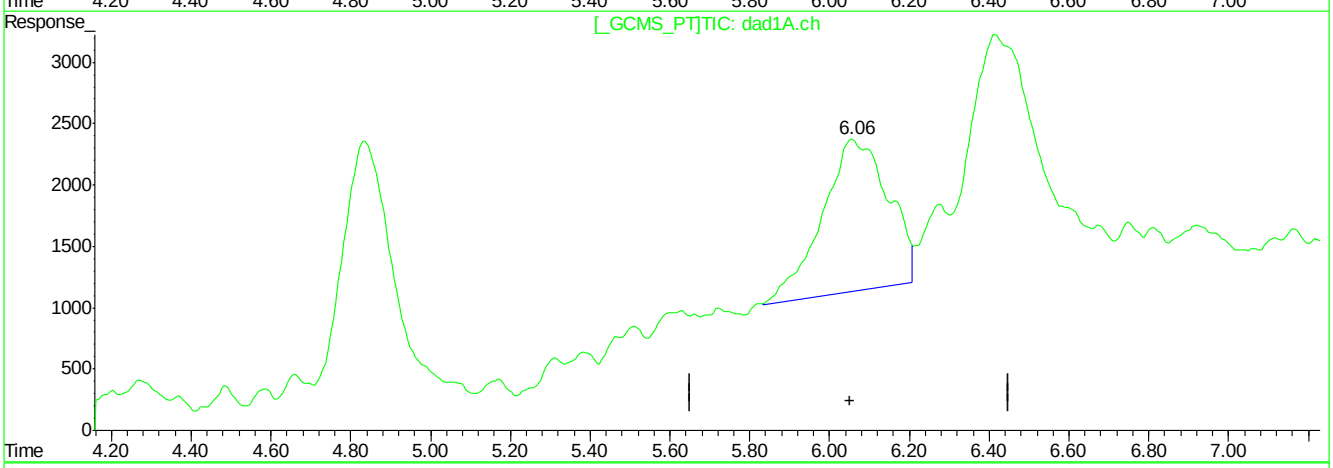
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:41:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.07min 26.459ppb

response 154231

(7) 1,3-Dinitrobenzene #2

6.06min 36.692ppb m

response 141420

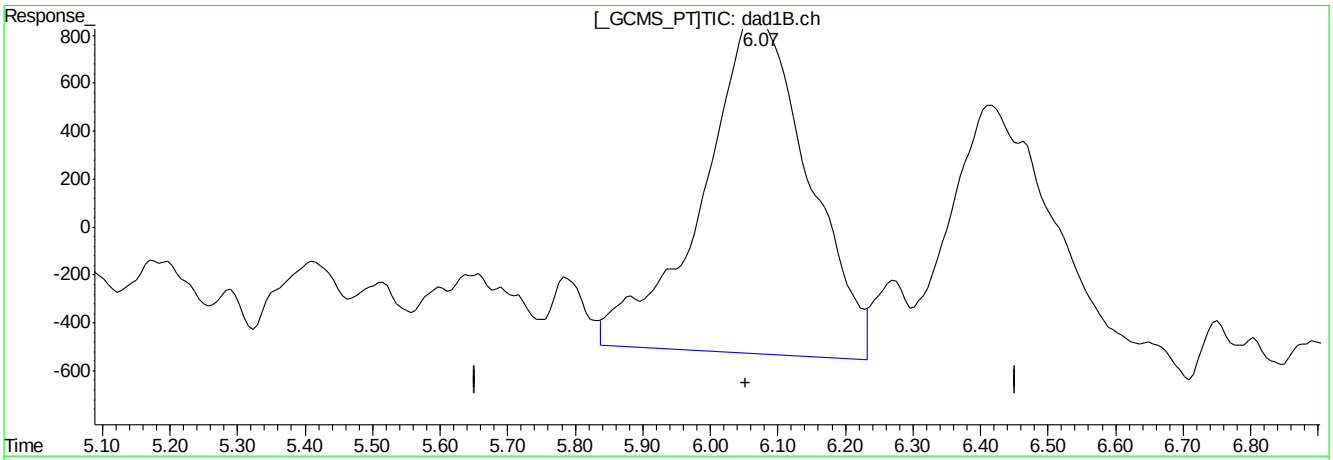
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:41:43 2018

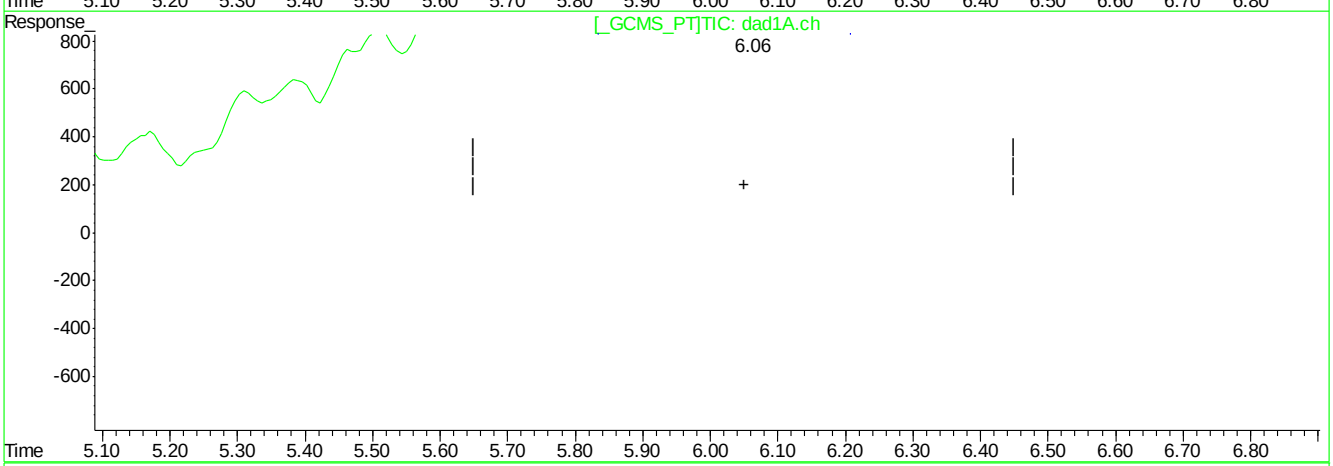
BB060200.D edits: 1,3-Dinitrobenzene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.07min 26.459ppb

response 154231

(7) 1,3-Dinitrobenzene #2

6.06min 36.692ppb m

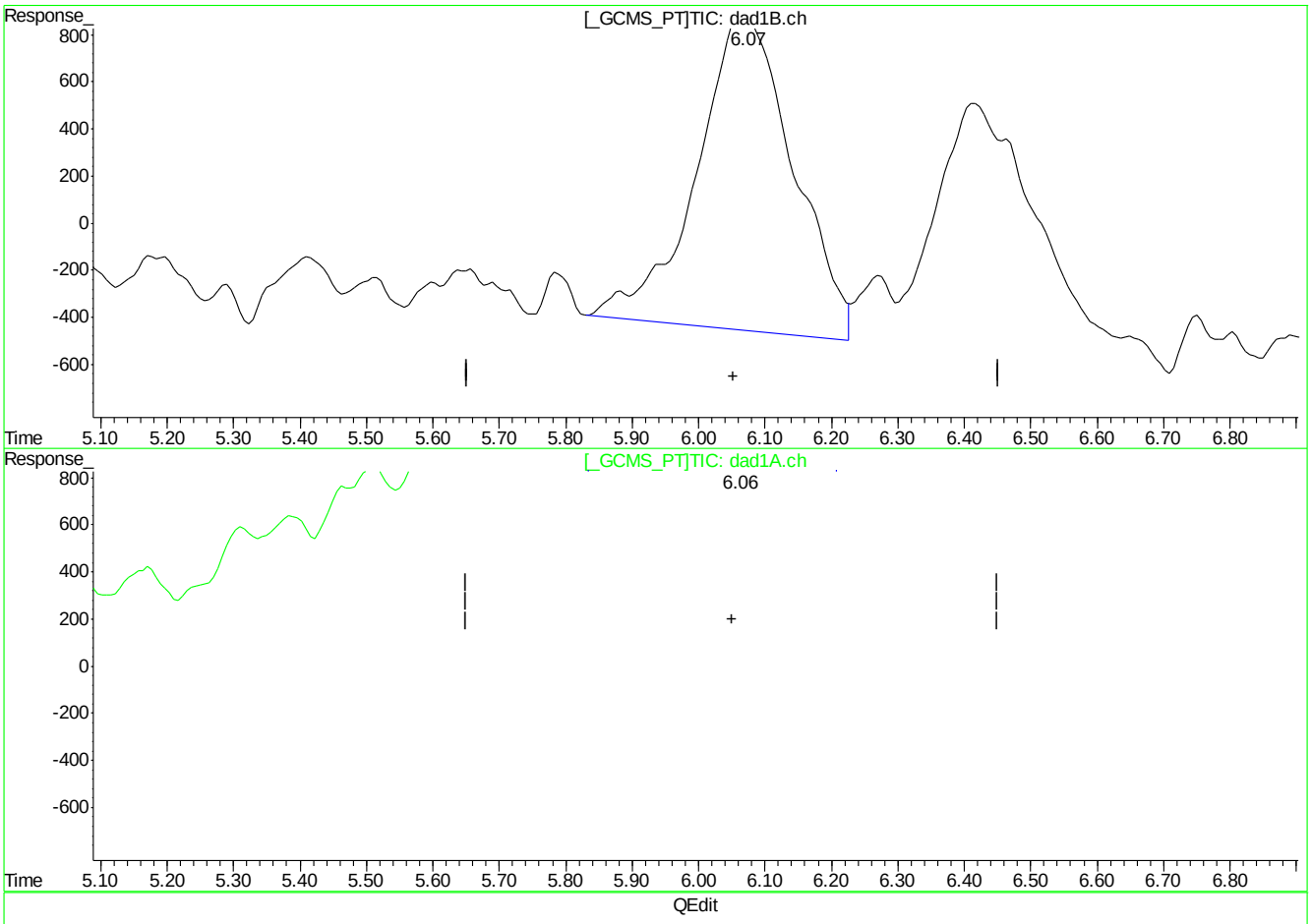
response 141420

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:41:46 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

6.07min 23.292ppb m

response 135770

(7) 1,3-Dinitrobenzene #2

6.06min 36.692ppb m

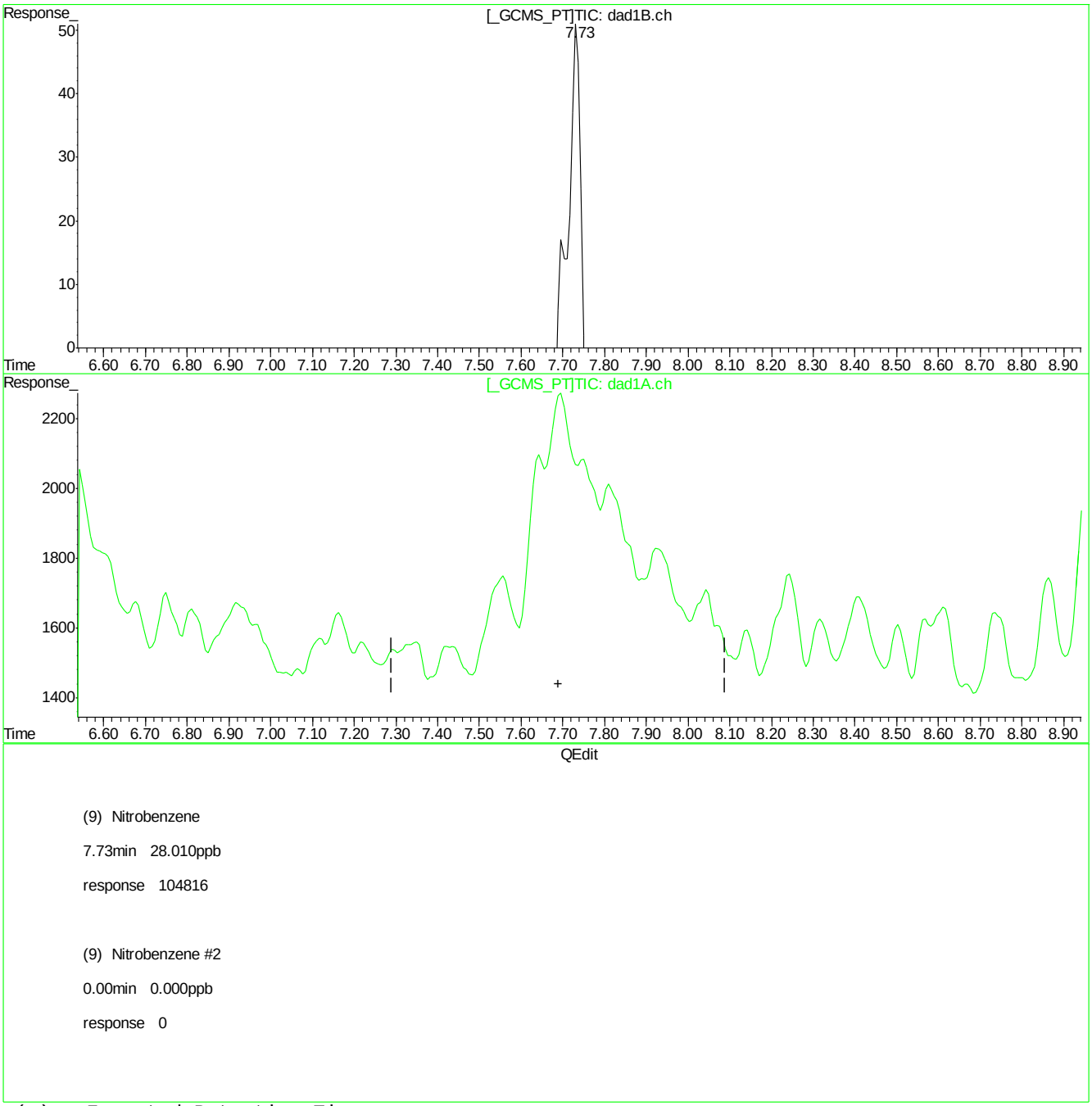
response 141420

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:41:54 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(9) Nitrobenzene

7.73min 28.010ppb

response 104816

(9) Nitrobenzene #2

0.00min 0.000ppb

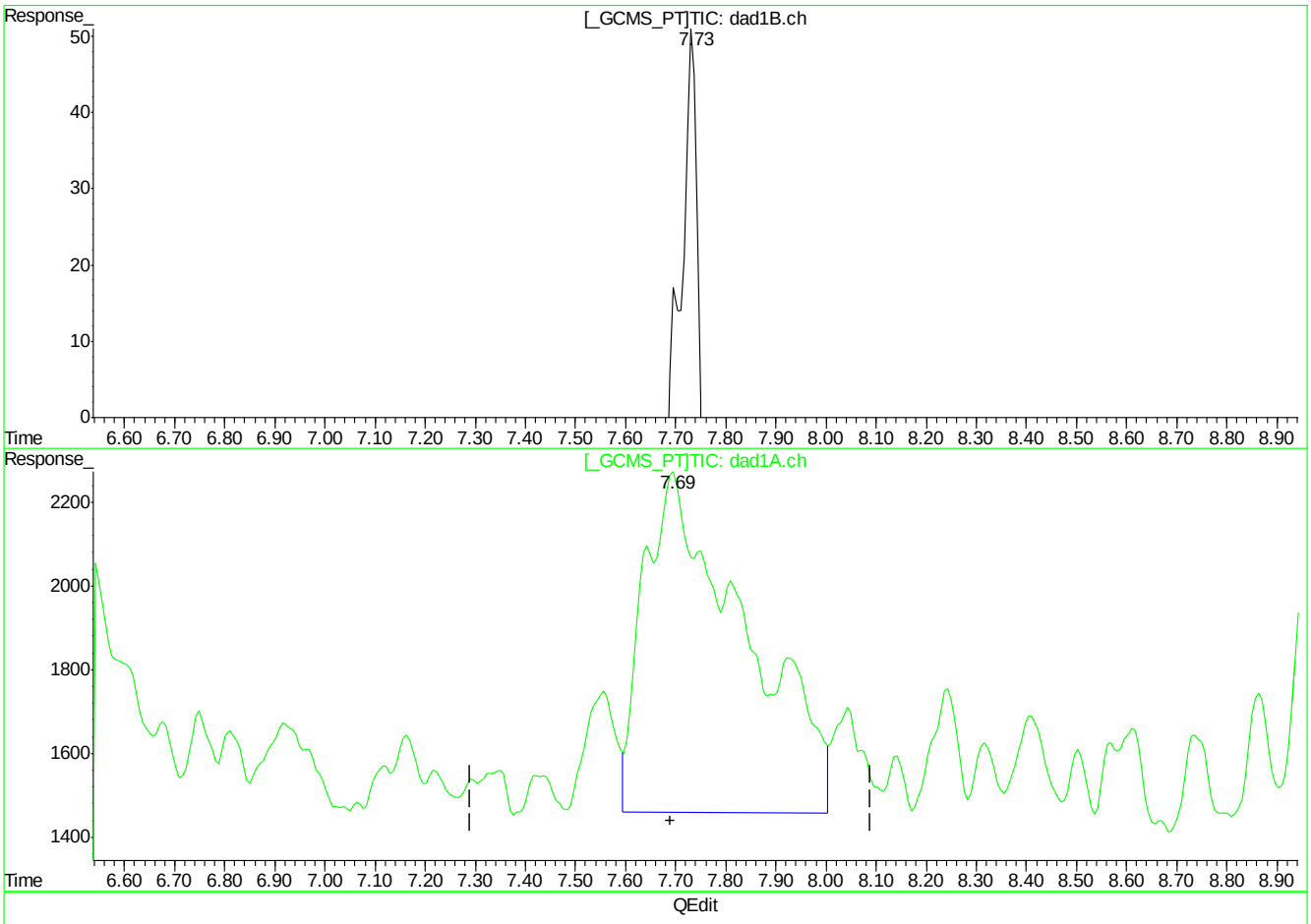
response 0

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:05 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(9) Nitrobenzene

7.73min 28.010ppb

response 104816

(9) Nitrobenzene #2

7.69min 35.981ppb m

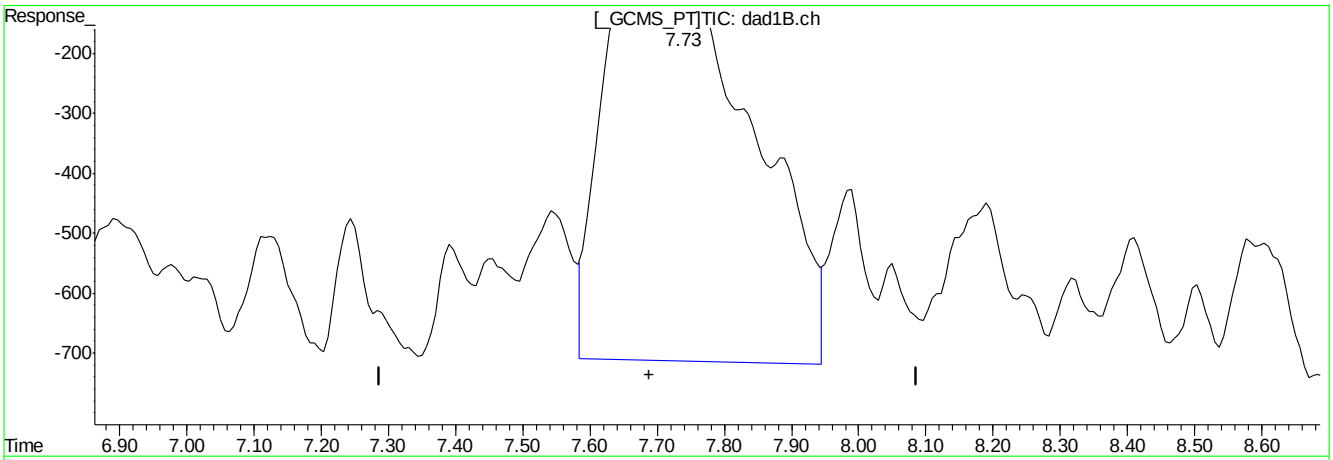
response 113083

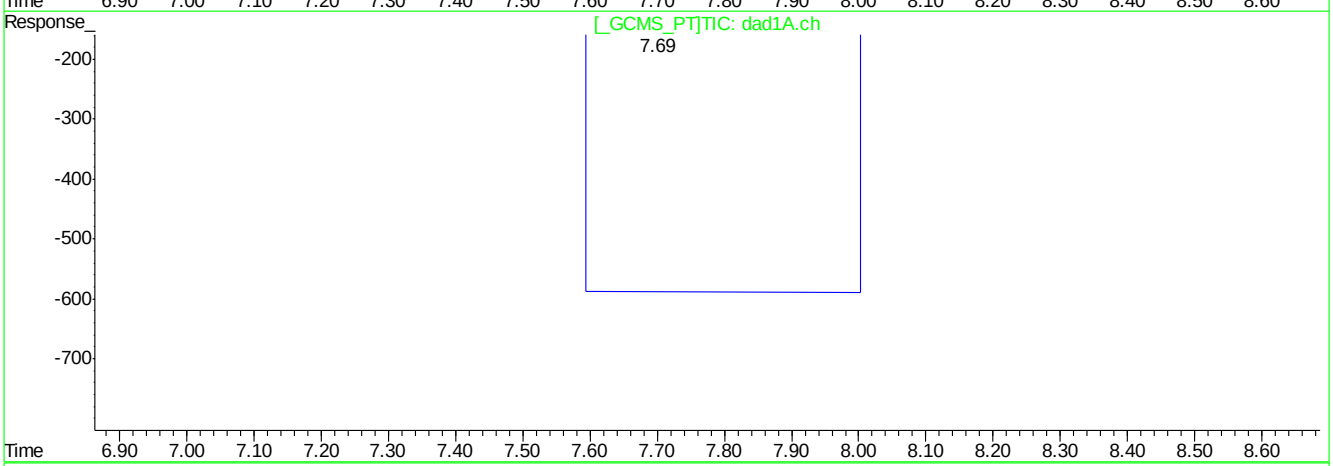
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:13 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.73min 28.010ppb

response 104816

(9) Nitrobenzene #2

7.69min 35.981ppb m

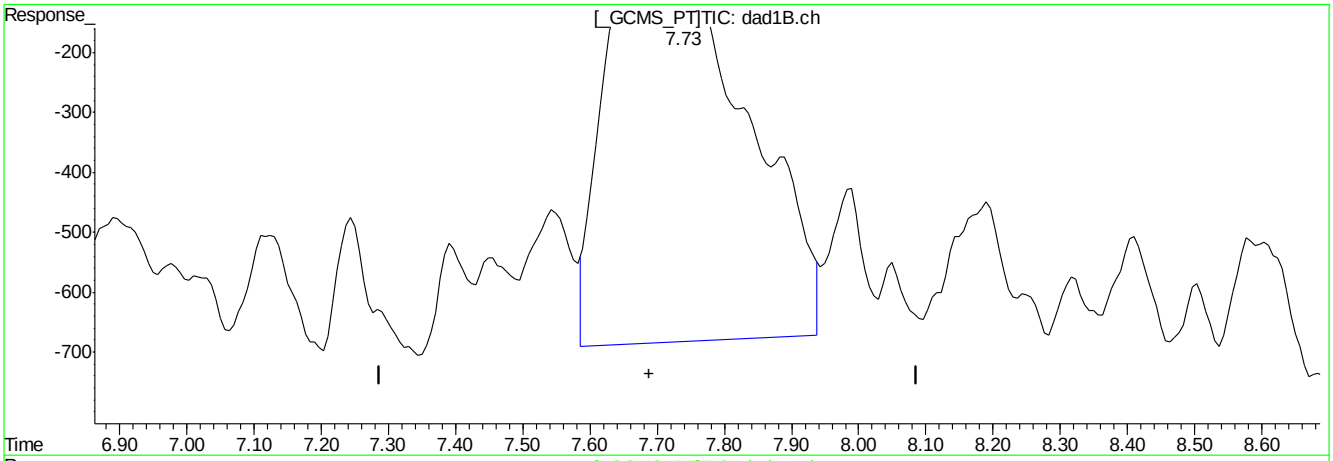
response 113083

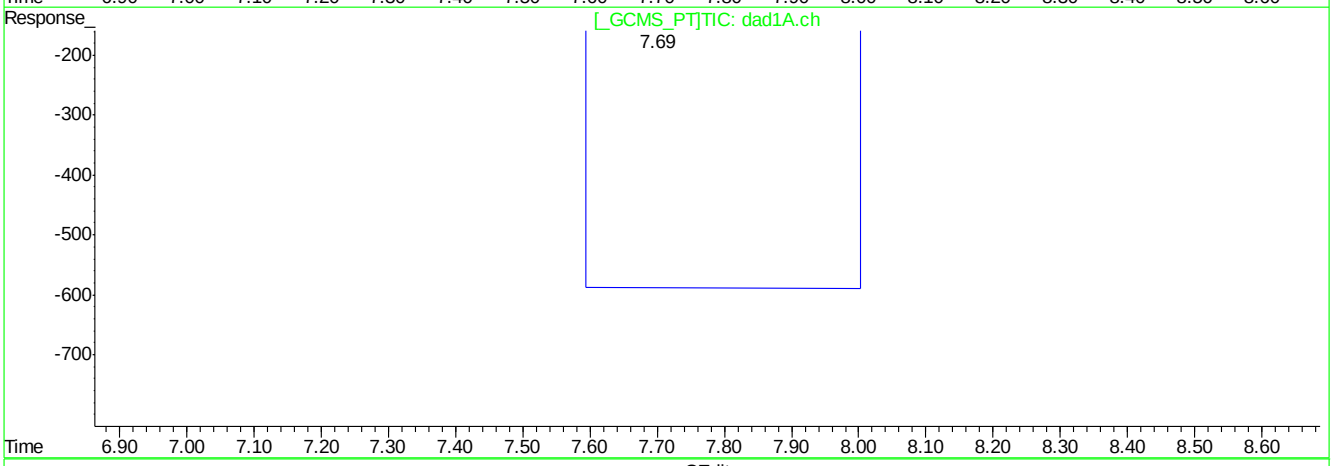
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:19 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.73min 25.916ppb m

response 96978

(9) Nitrobenzene #2

7.69min 35.981ppb m

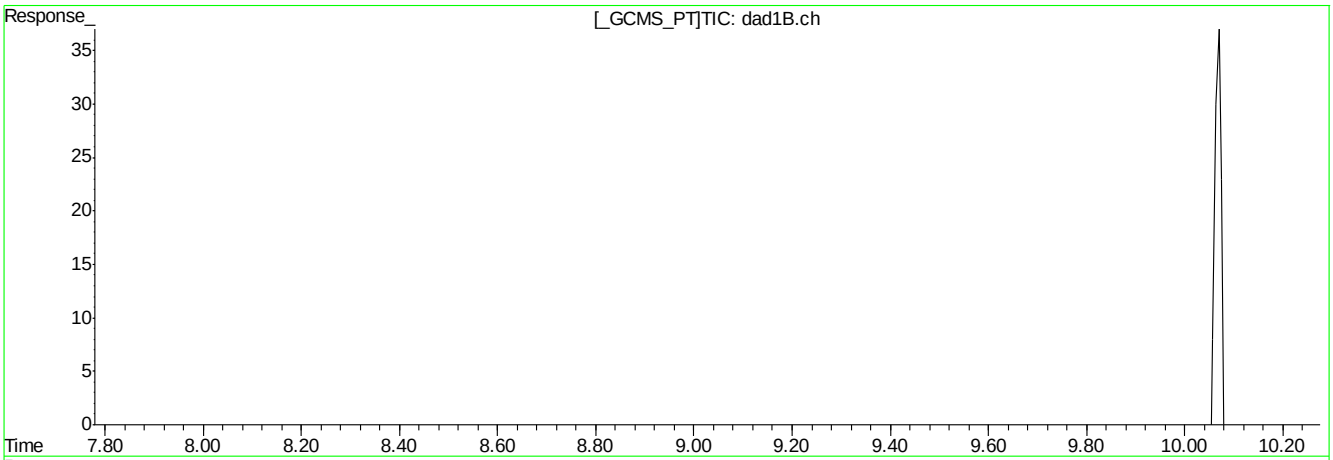
response 113083

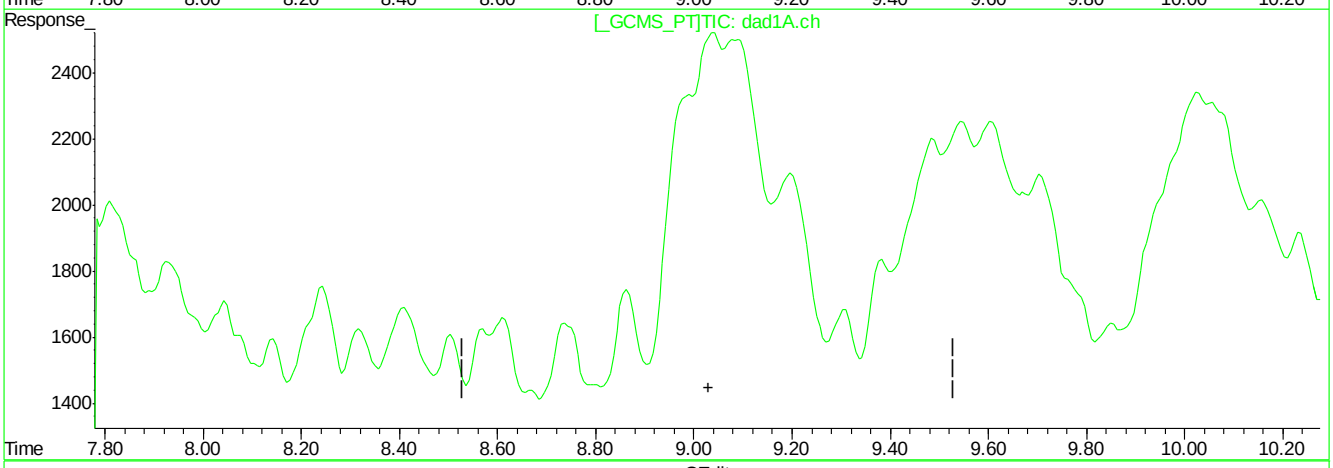
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:24 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

9.02min 0.000ppb

response 21201

(10) Nitroglycerin #2

0.00min 0.000ppb

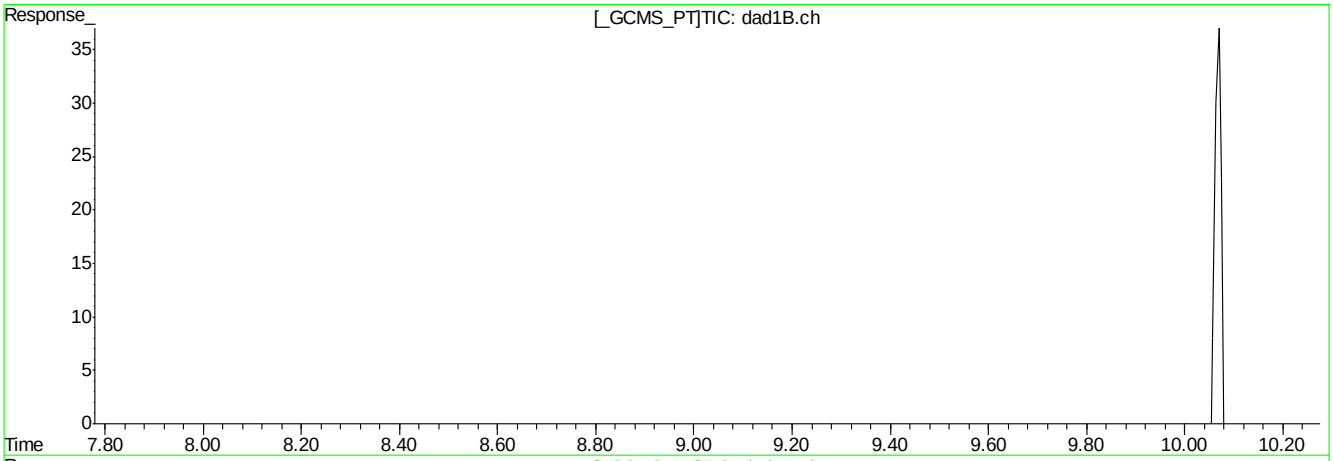
response 0

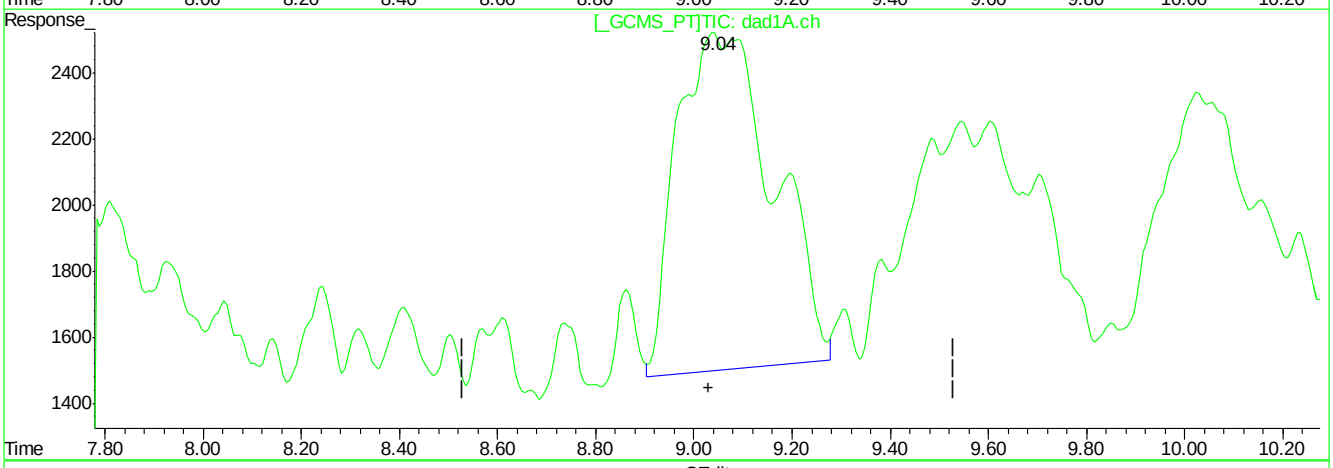
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:29 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

9.02min 0.000ppb

response 21201

(10) Nitroglycerin #2

9.04min 109.066ppb m

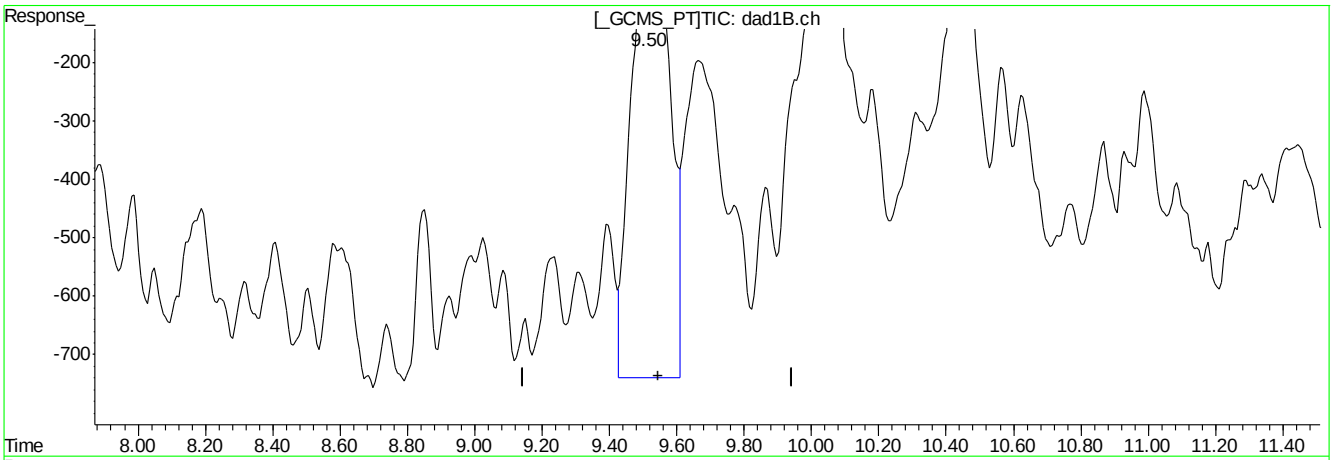
response 139364

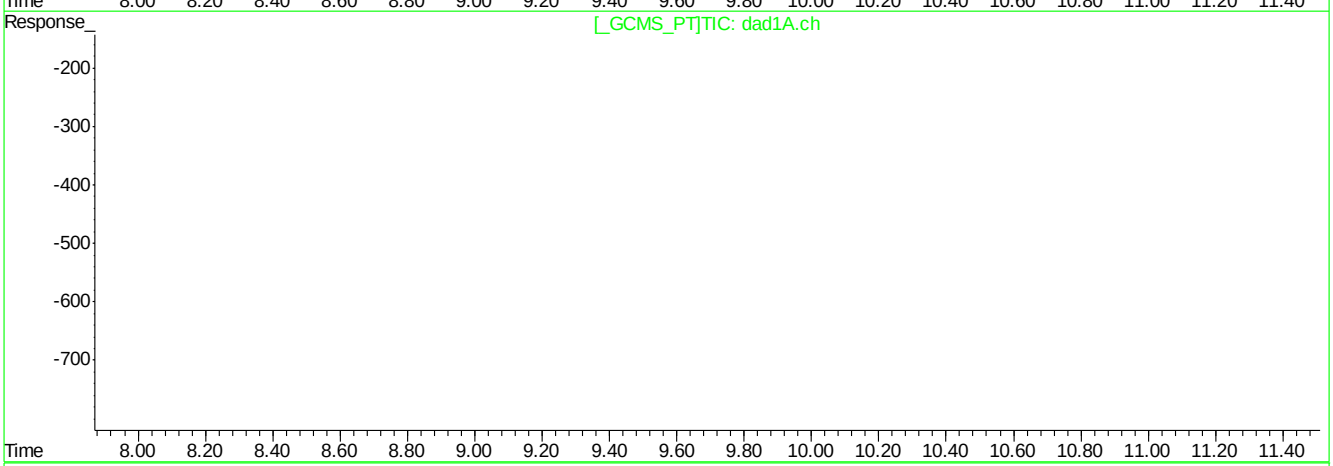
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:34 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.51min 18.826ppb

response 55716

(11) Tetryl #2

0.00min 0.000ppb

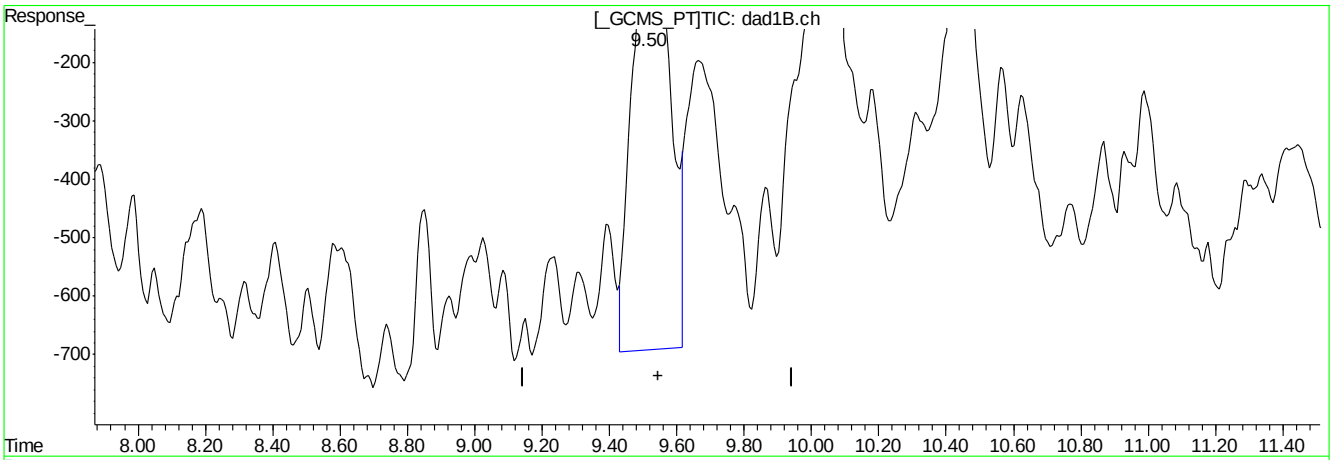
response 0

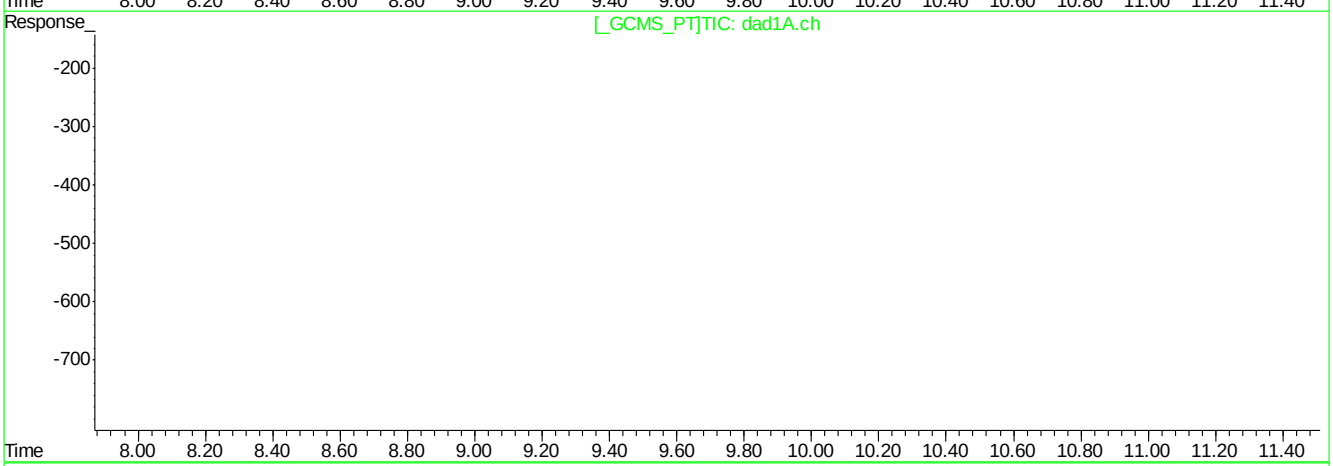
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:42:53 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.50min 17.896ppb m

response 52961

(11) Tetryl #2

0.00min 0.000ppb

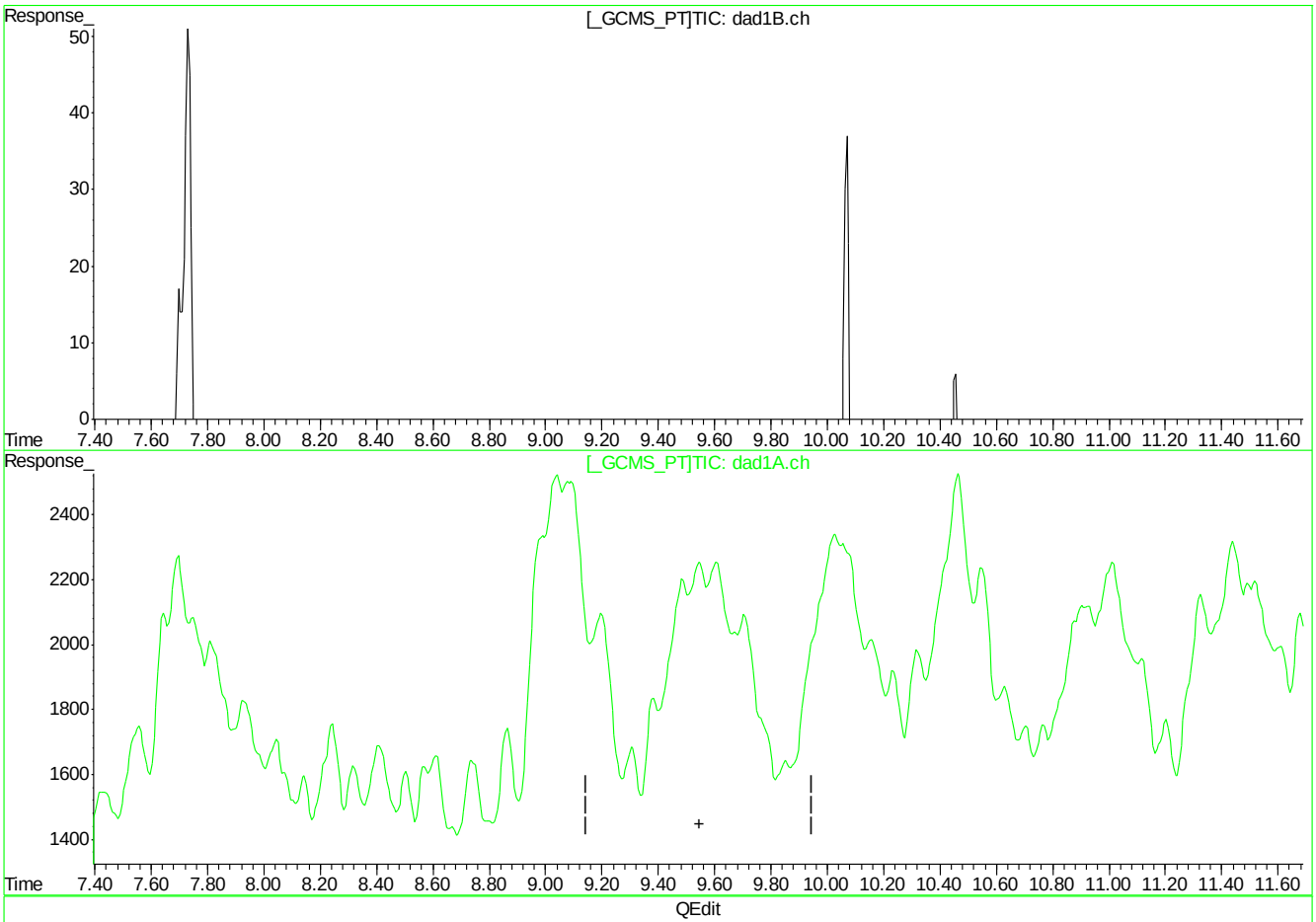
response 0

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:43:11 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(11) Tetryl

9.50min 17.896ppb m

response 52961

(11) Tetryl #2

0.00min 0.000ppb

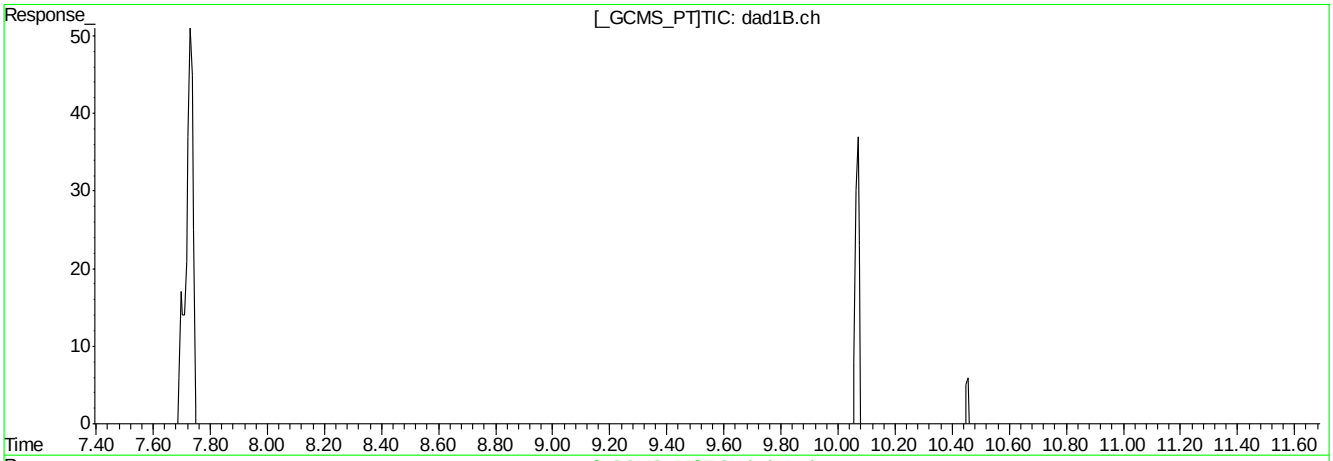
response 0

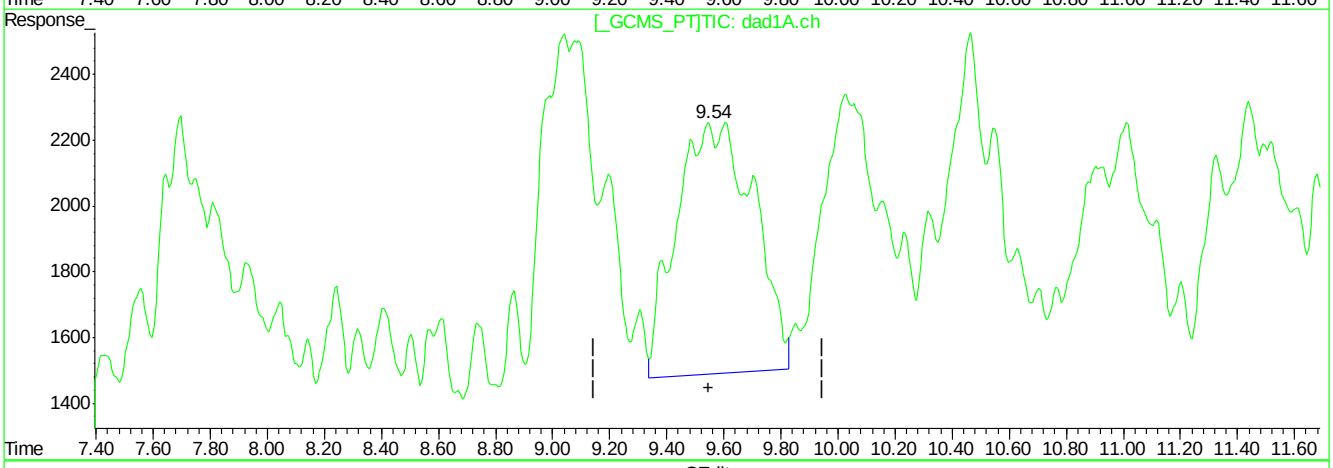
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:43:17 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.50min 17.896ppb m

response 52961

(11) Tetryl #2

9.54min 34.742ppb m

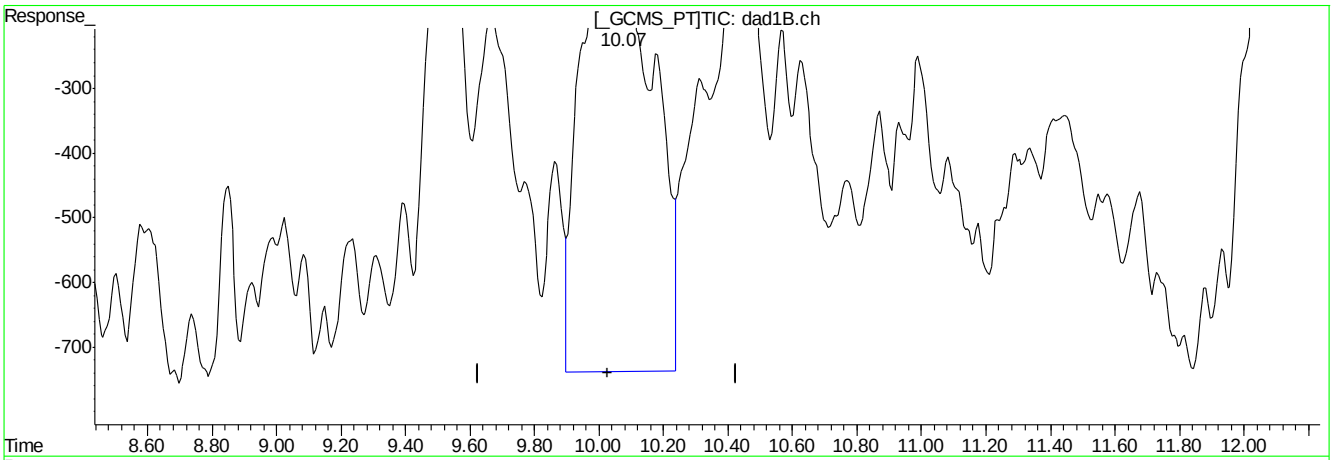
response 143805

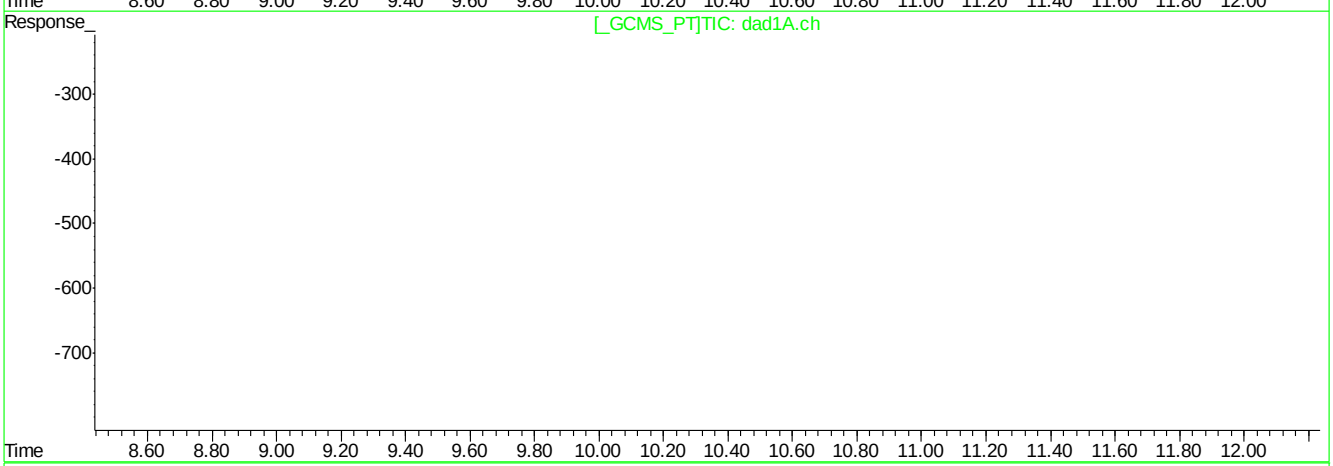
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:43:35 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.07min 26.985ppb

response 105697

(12) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb

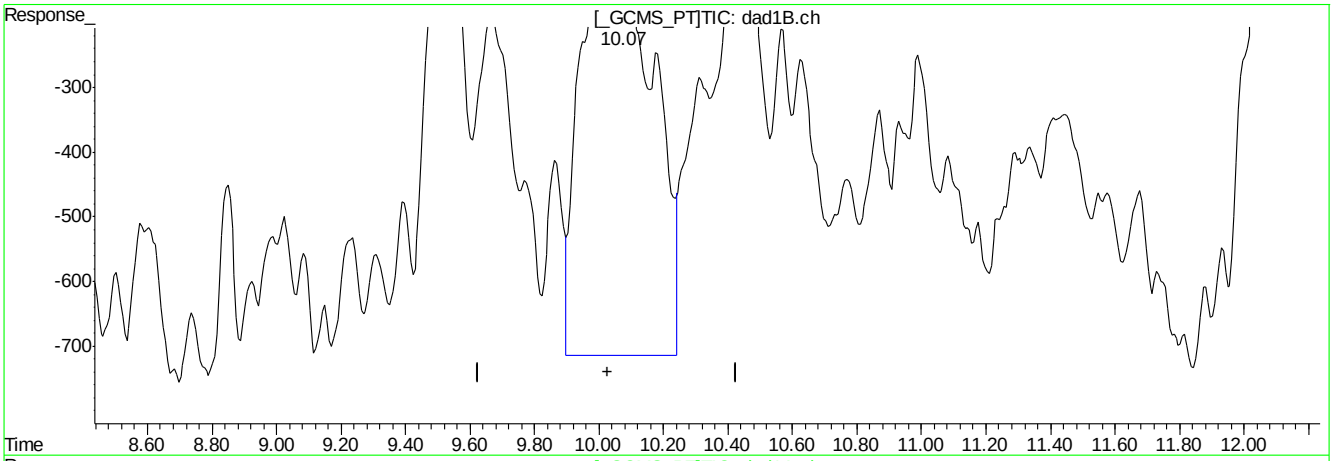
response 0

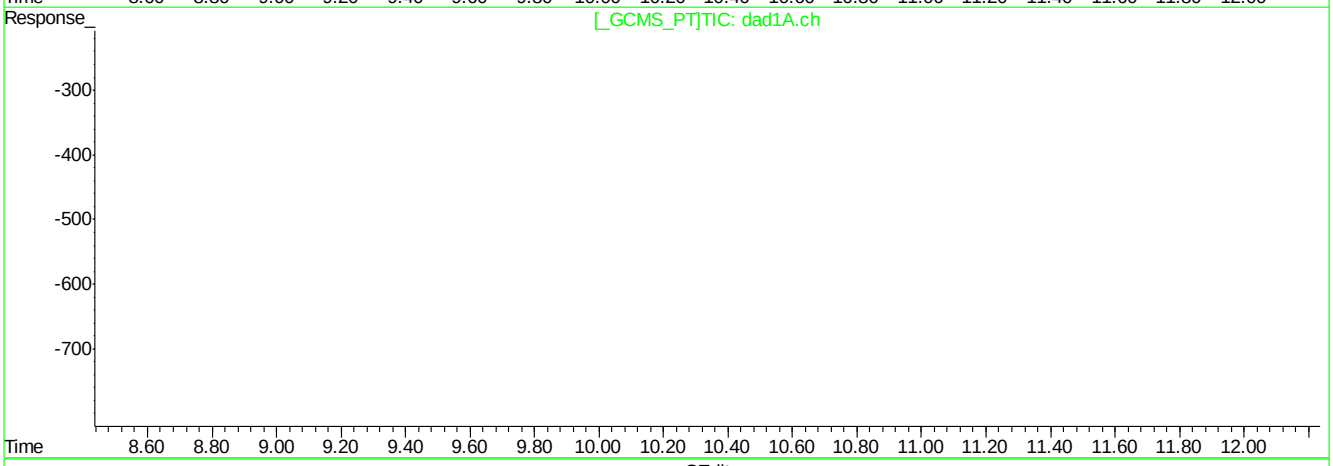
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:44:16 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.07min 25.910ppb m

response 101487

(12) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb

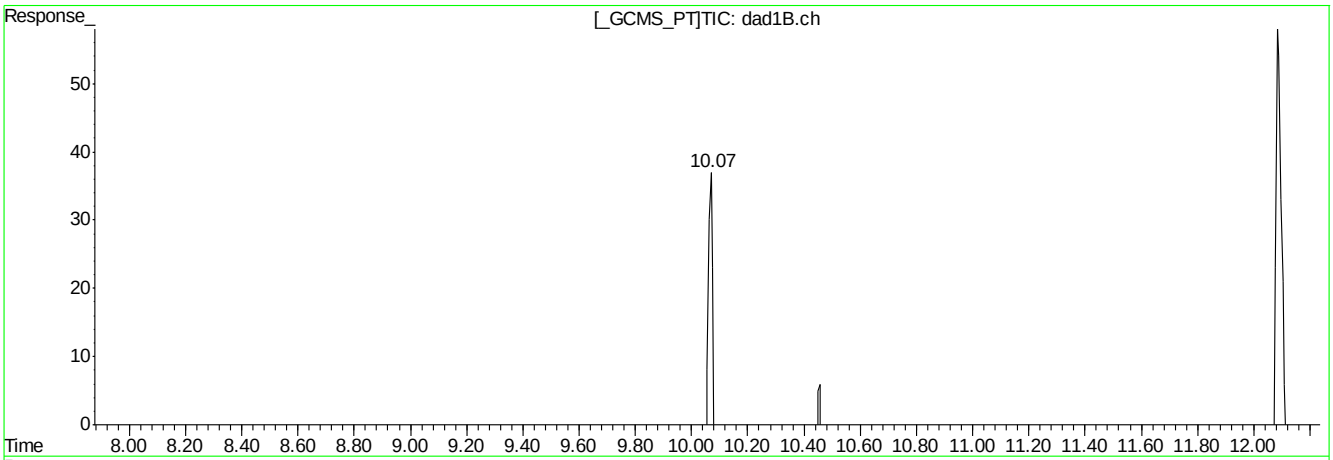
response 0

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:44:28 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

10.07min 25.910ppb m

response 101487

(12) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb

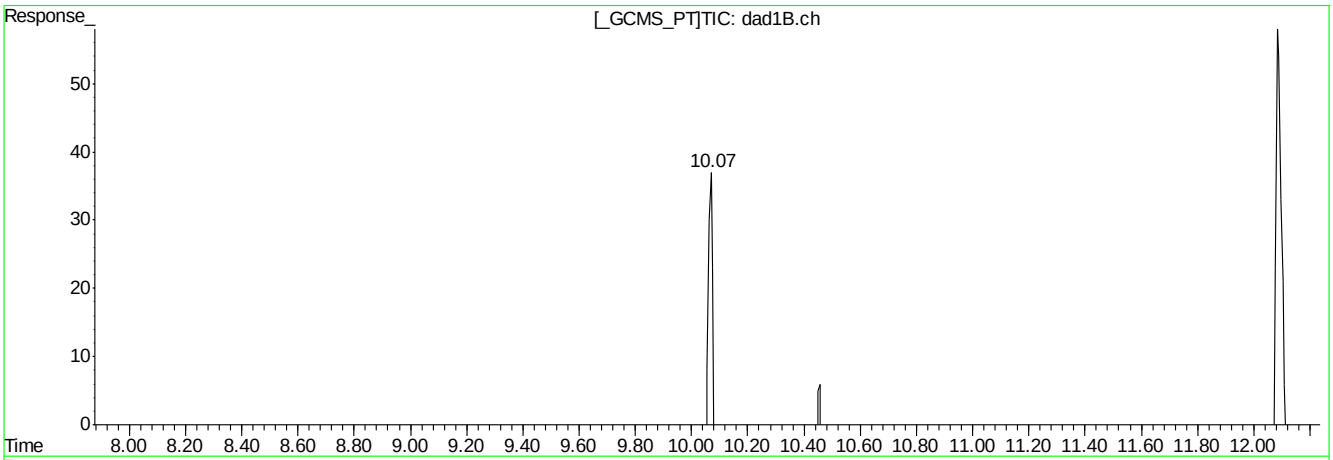
response 0

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:44:39 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

10.07min 25.910ppb m

response 101487

(12) 2,4,6-Trinitrotoluene #2

10.03min 29.865ppb m

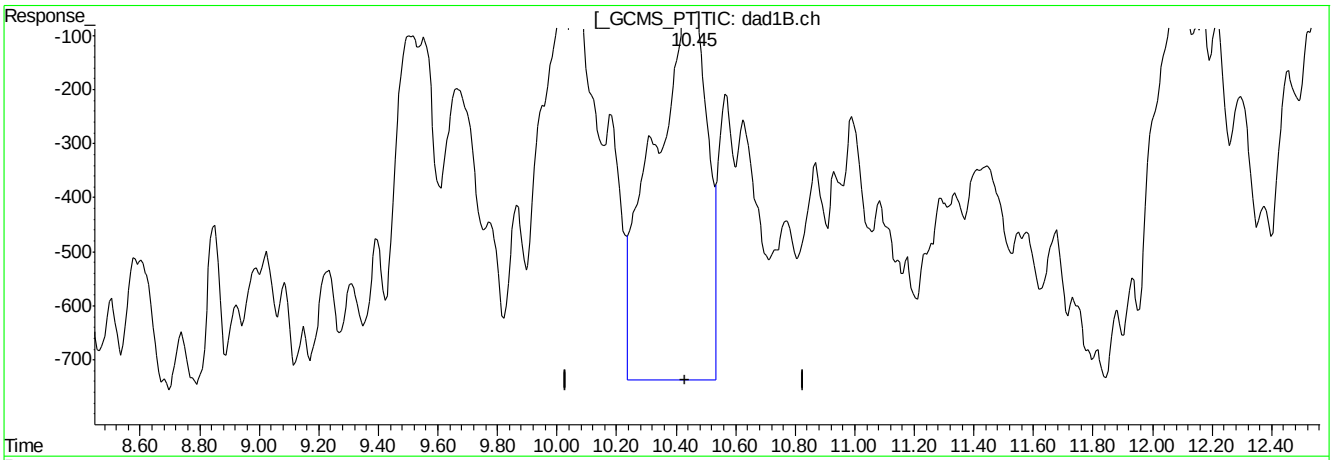
response 127709

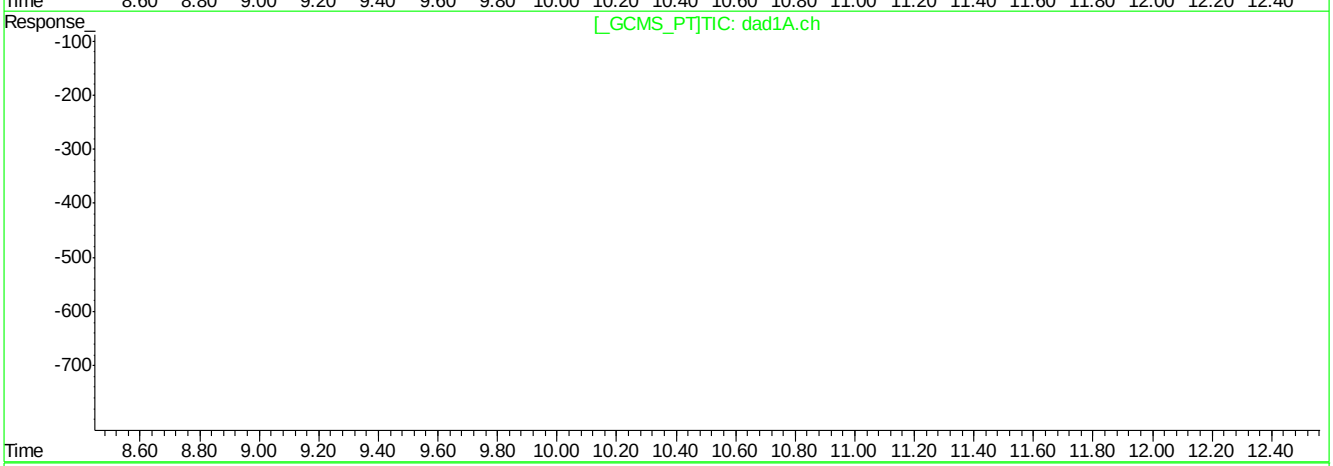
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:45:05 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.45min 23.334ppb

response 87134

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

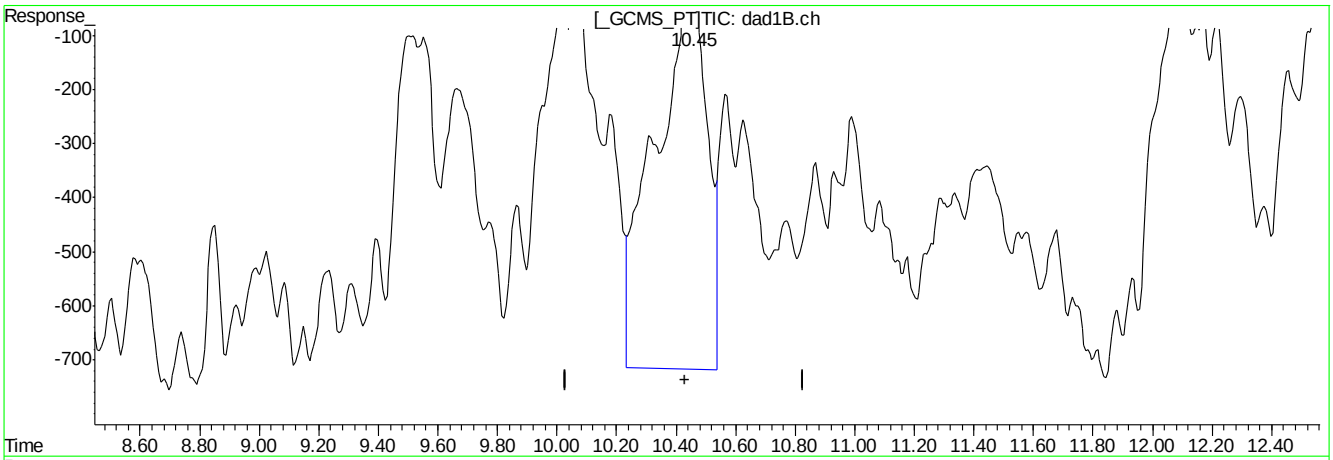
response 0

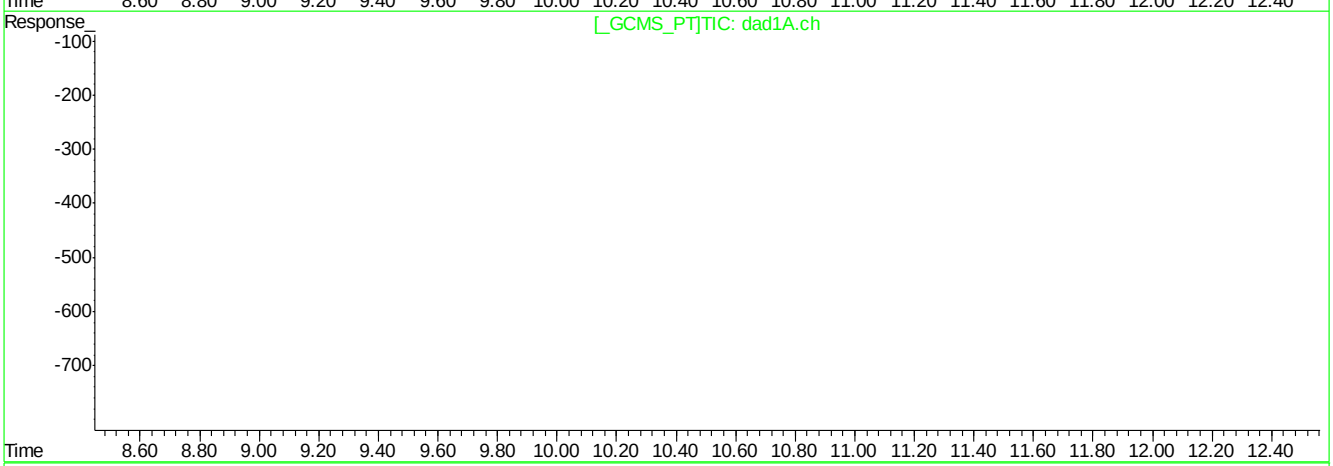
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:45:24 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.45min 23.221ppb m

response 86714

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

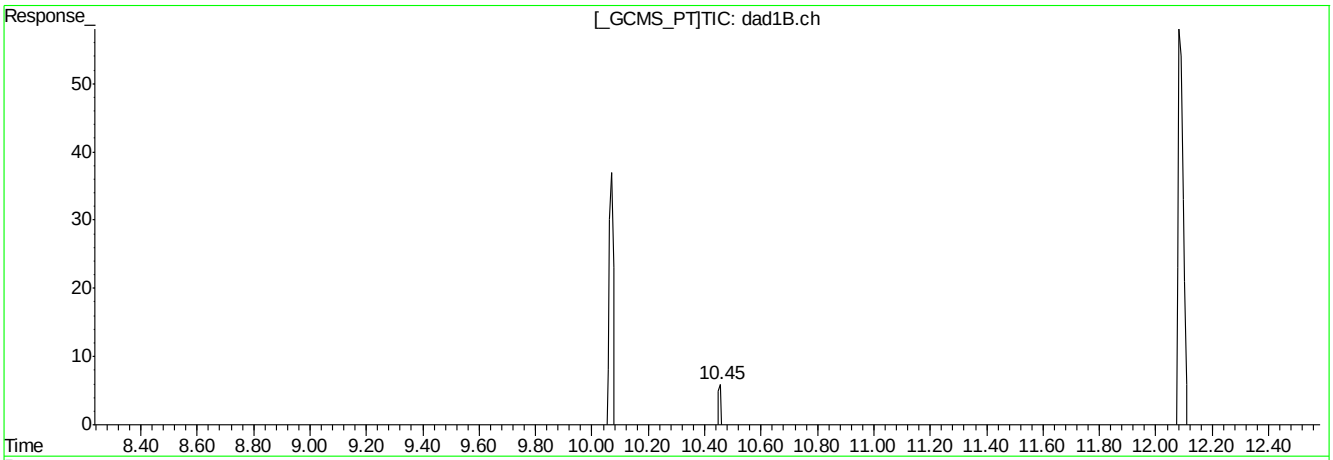
response 0

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:45:42 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.45min 23.221ppb m

response 86714

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

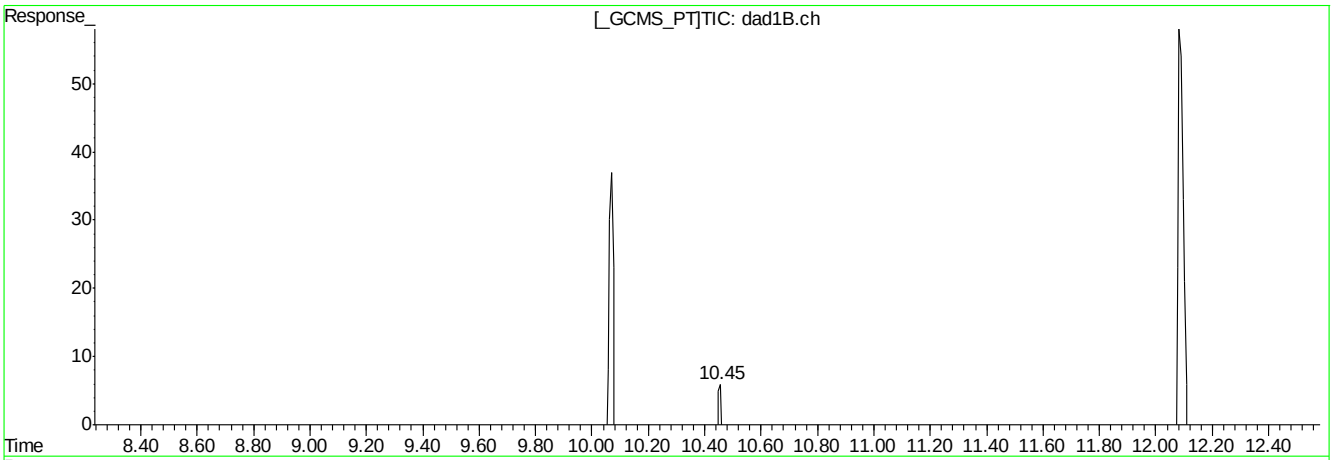
response 0

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:45:50 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.45min 23.221ppb m

response 86714

(13) 2-Amino-4,6-Dinitrotoluene #2

10.46min 21.088ppb m

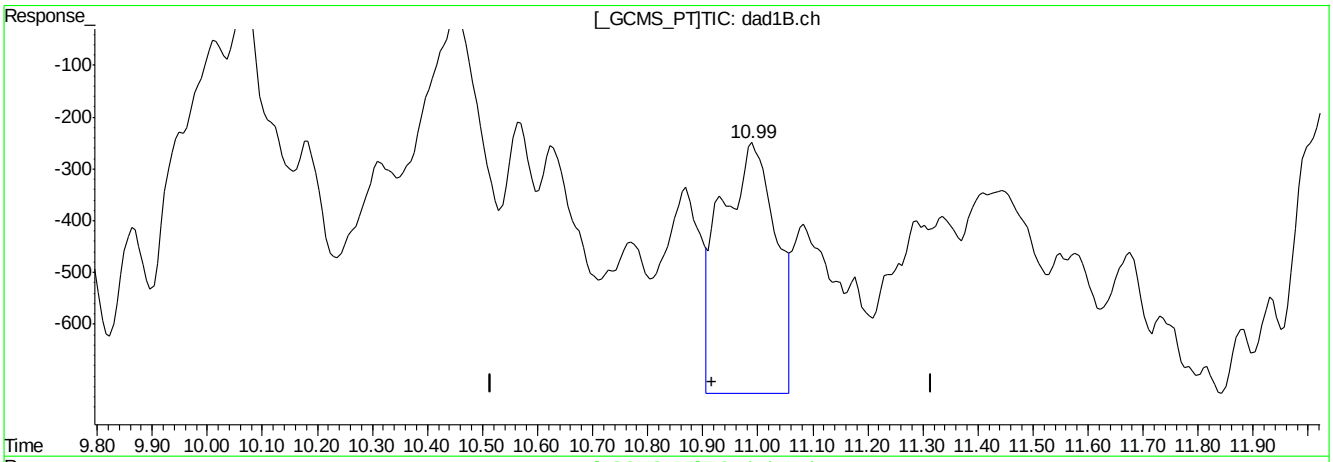
response 118088

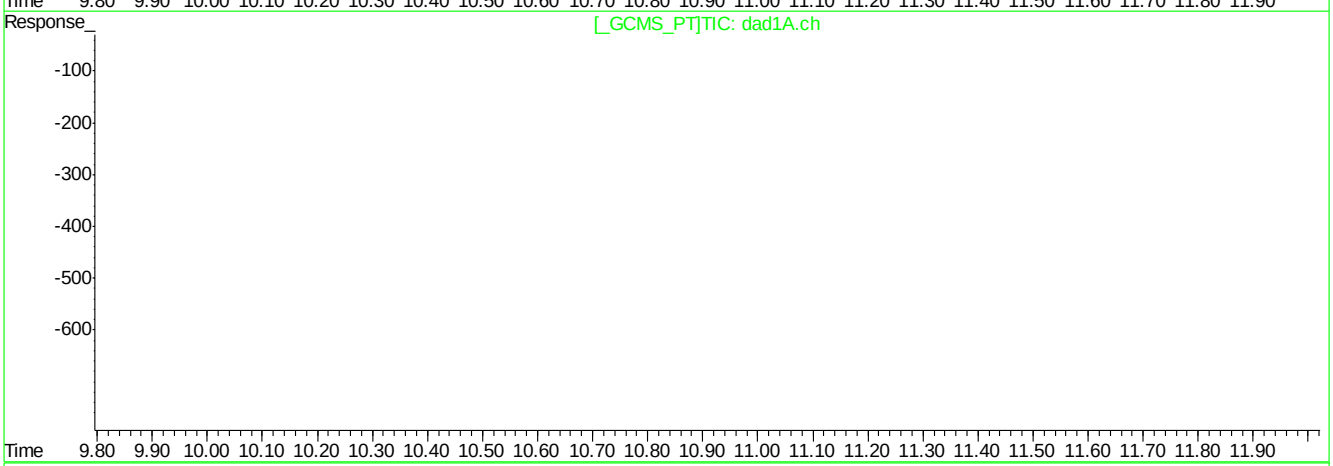
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:45:58 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.99min 12.661ppb

response 33371

(14) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb

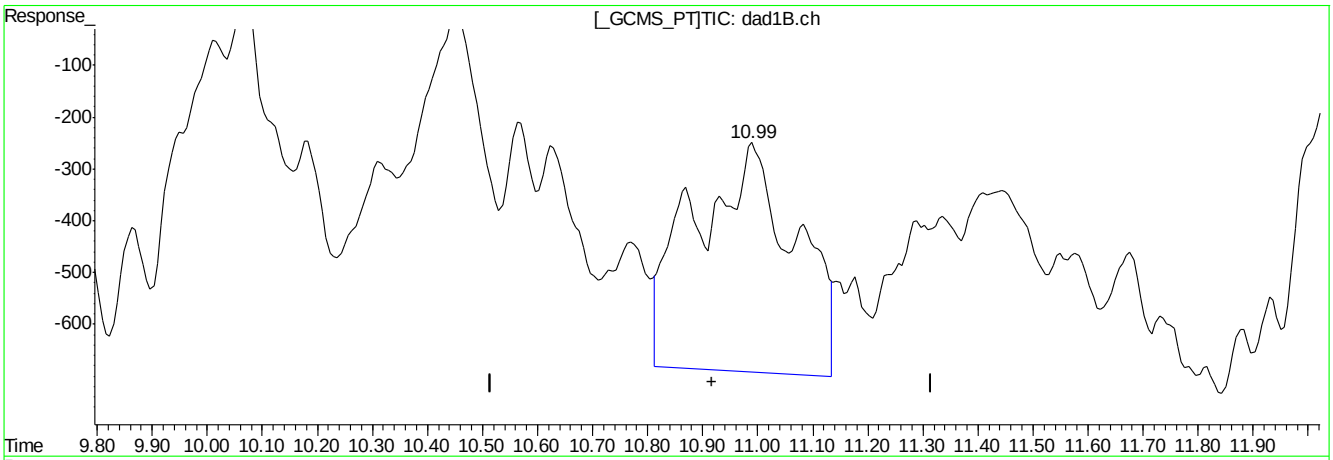
response 0

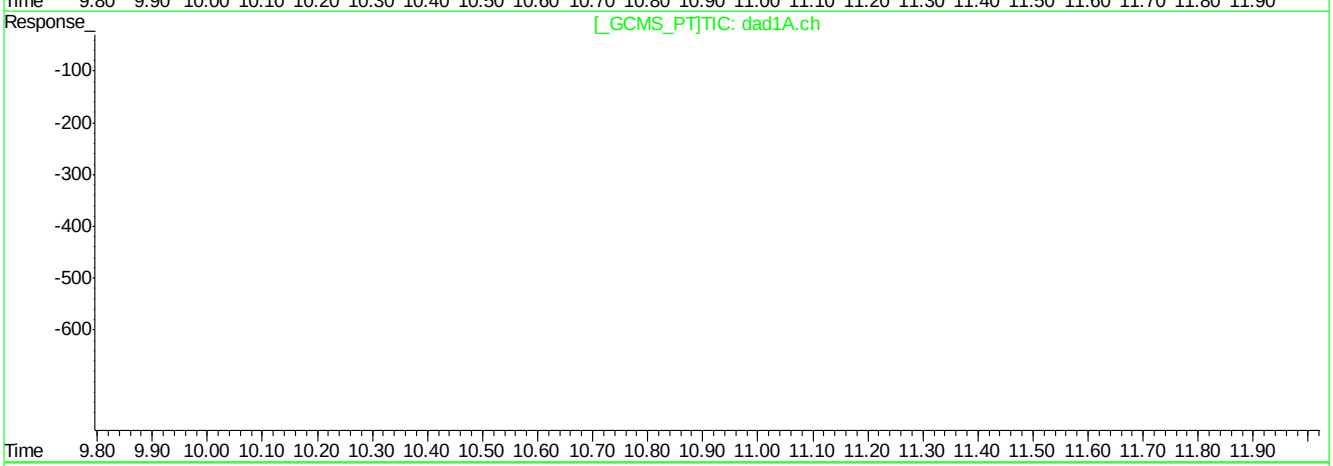
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:46:14 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.99min 21.156ppb m

response 55774

(14) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb

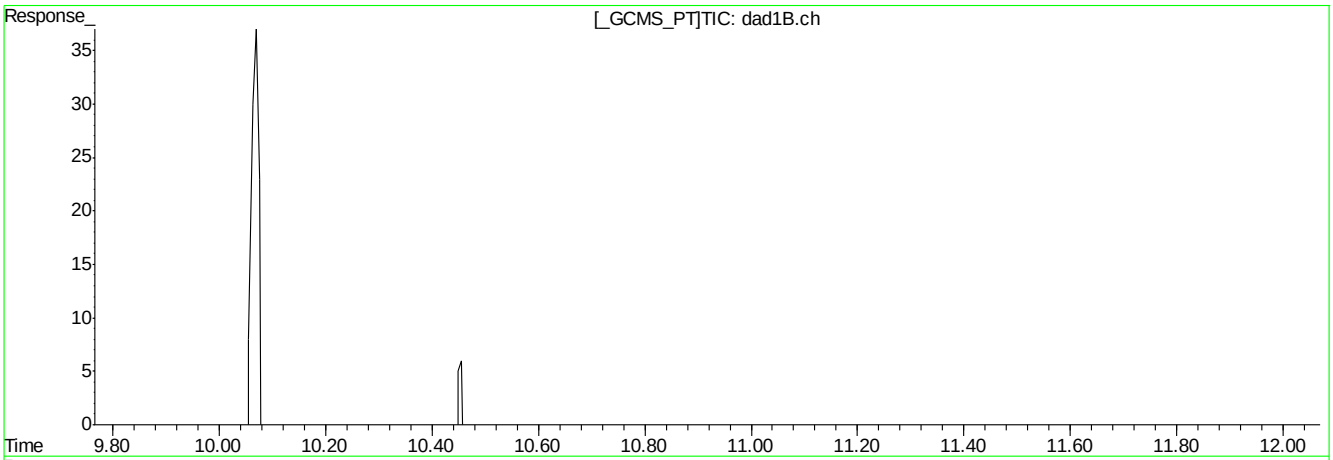
response 0

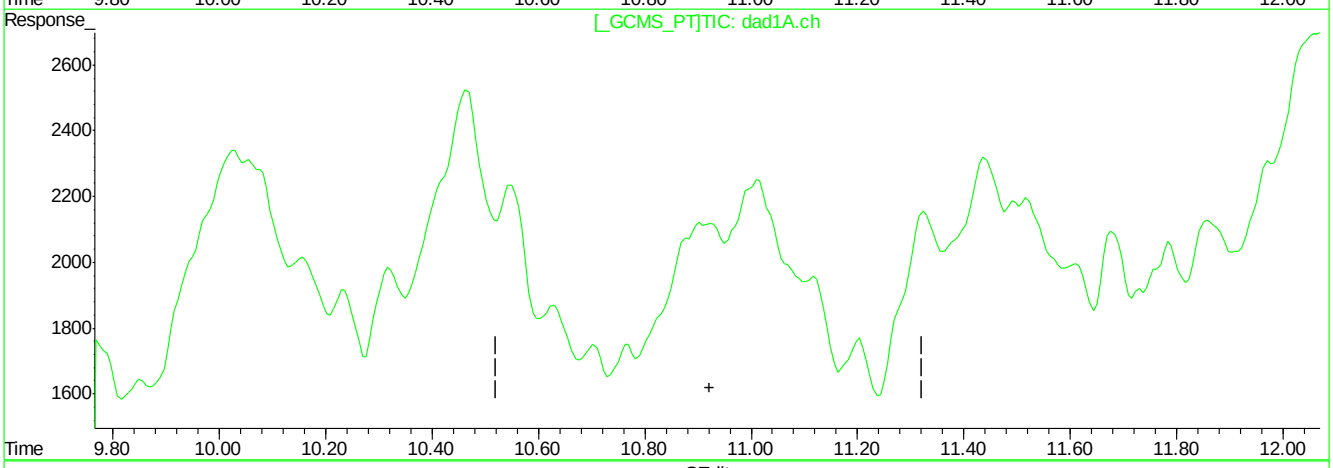
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:46:28 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.99min 21.156ppb m

response 55774

(14) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb

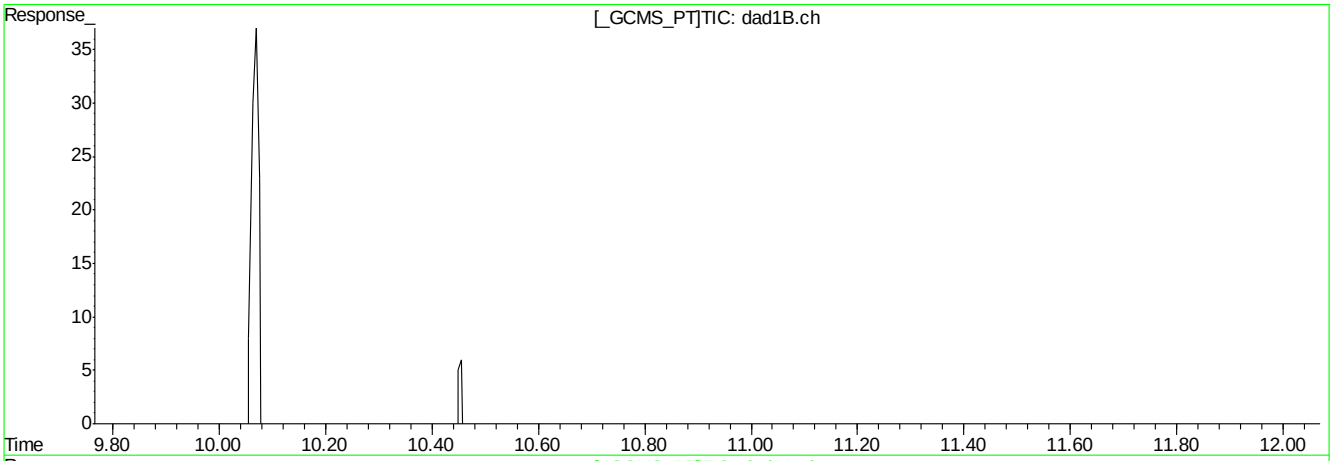
response 0

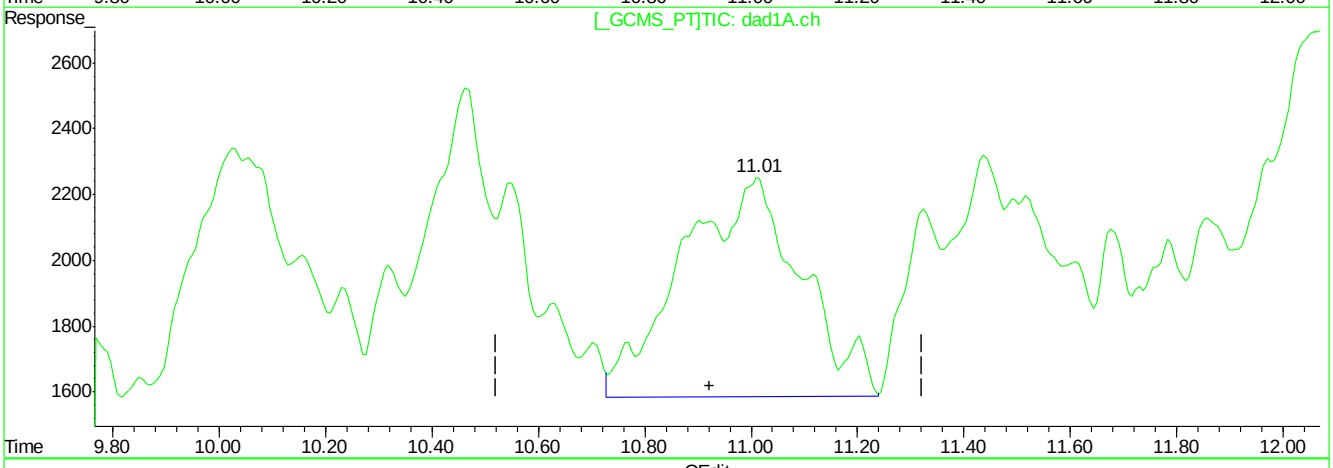
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:46:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.99min 21.156ppb m

response 55774

(14) 4-Amino-2,6-Dinitrotoluene #2

11.01min 19.461ppb m

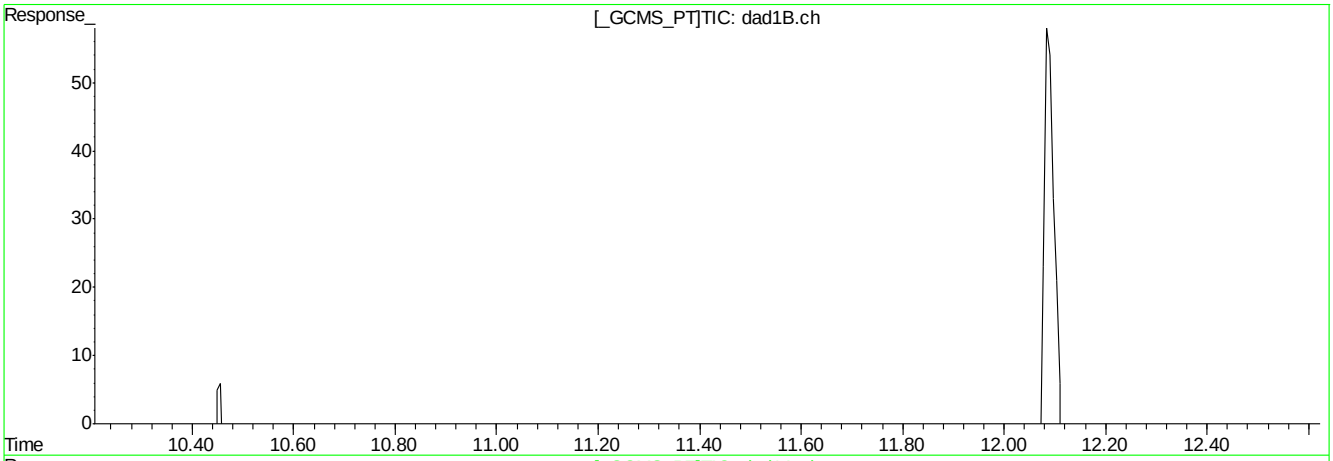
response 103732

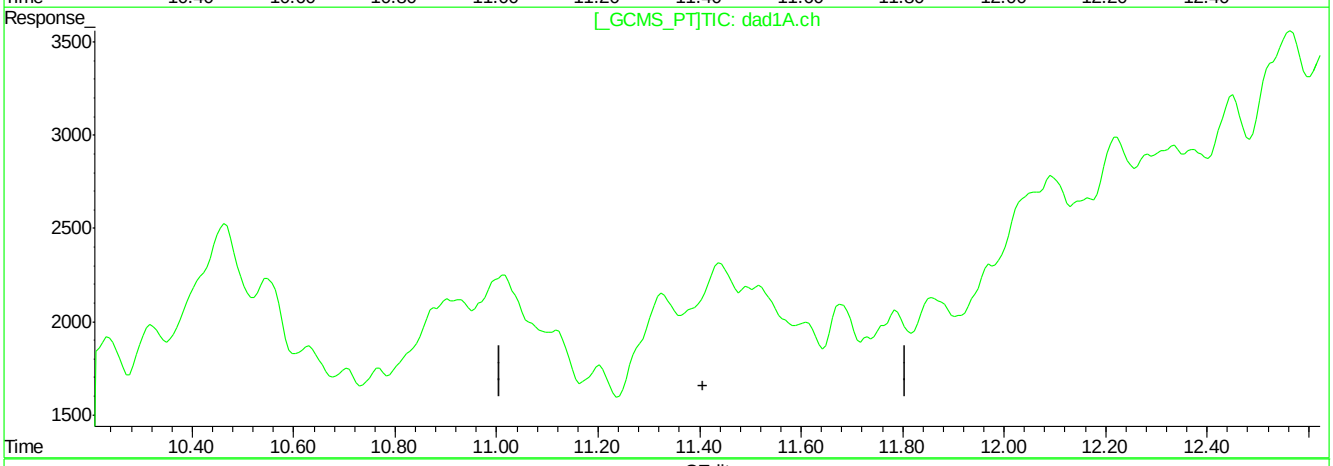
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:46:40 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.44min 29.384ppb

response 73123

(15) 3,4-Dinitrotoluene #2 (S)

0.00min 0.000ppb

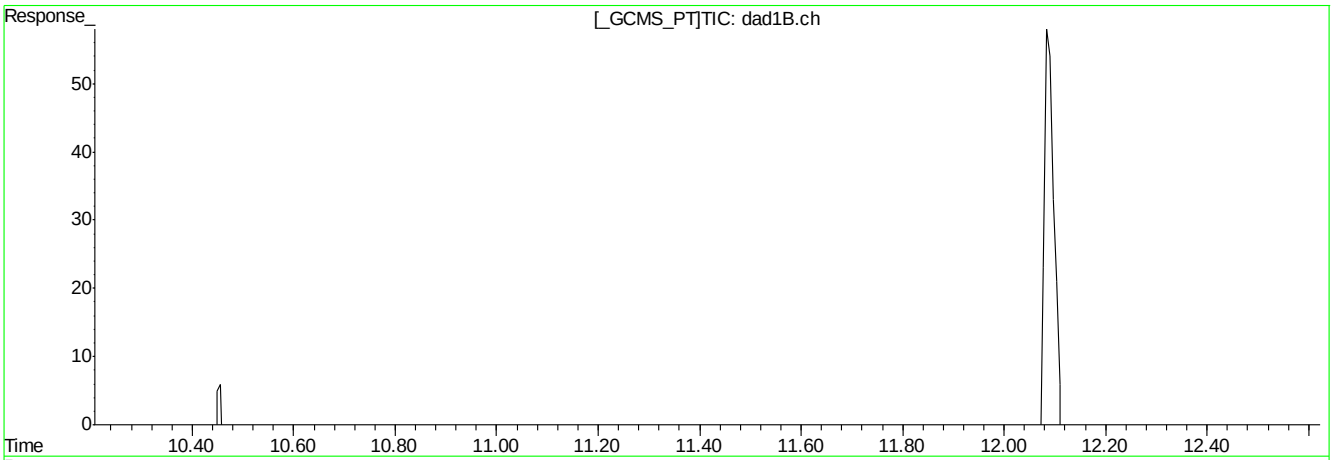
response 0

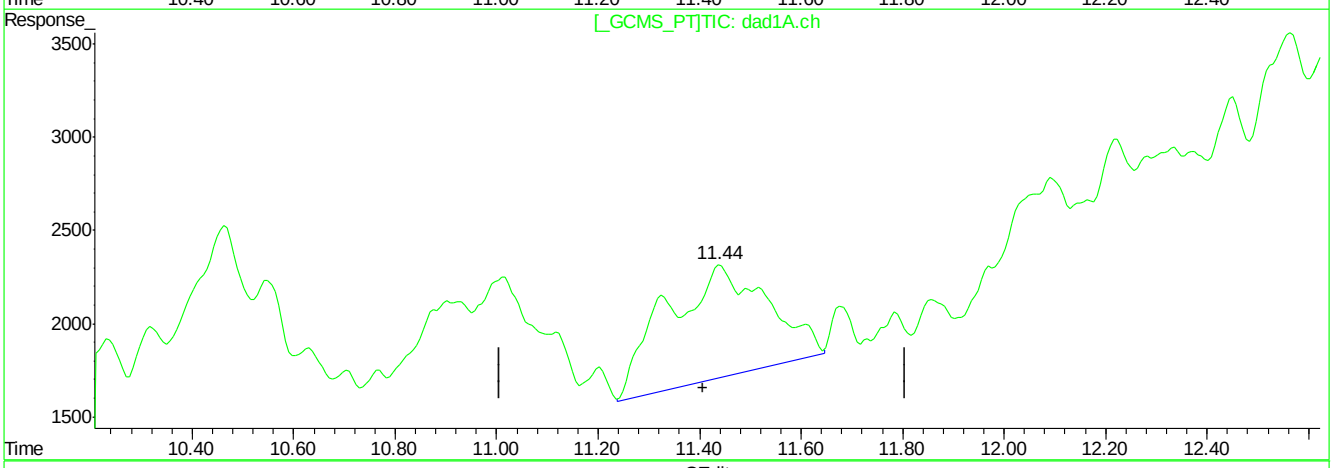
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:46:54 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.44min 29.384ppb

response 73123

(15) 3,4-Dinitrotoluene #2 (S)

11.44min 19.865ppb m

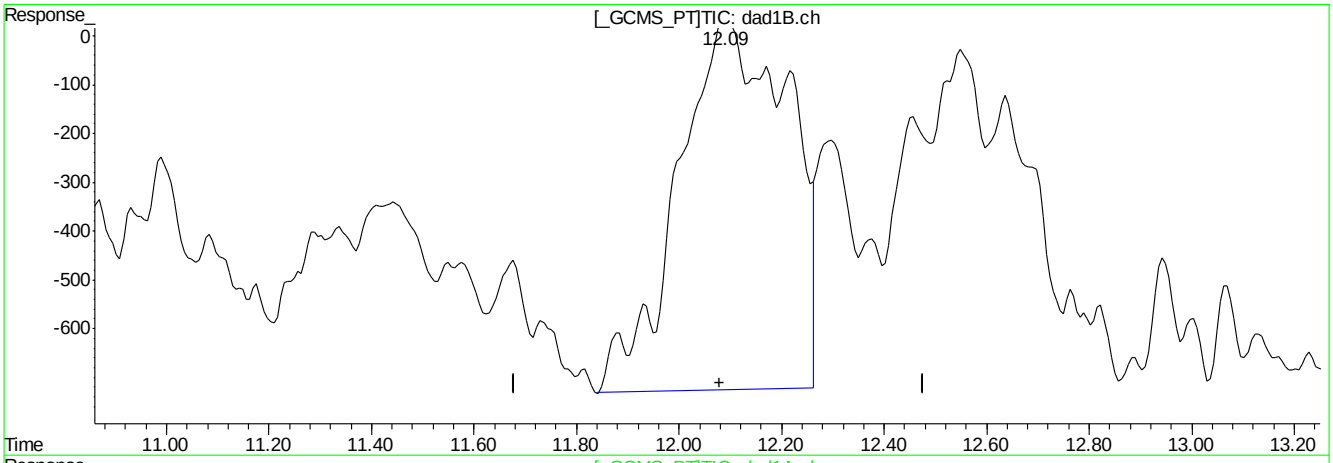
response 83553

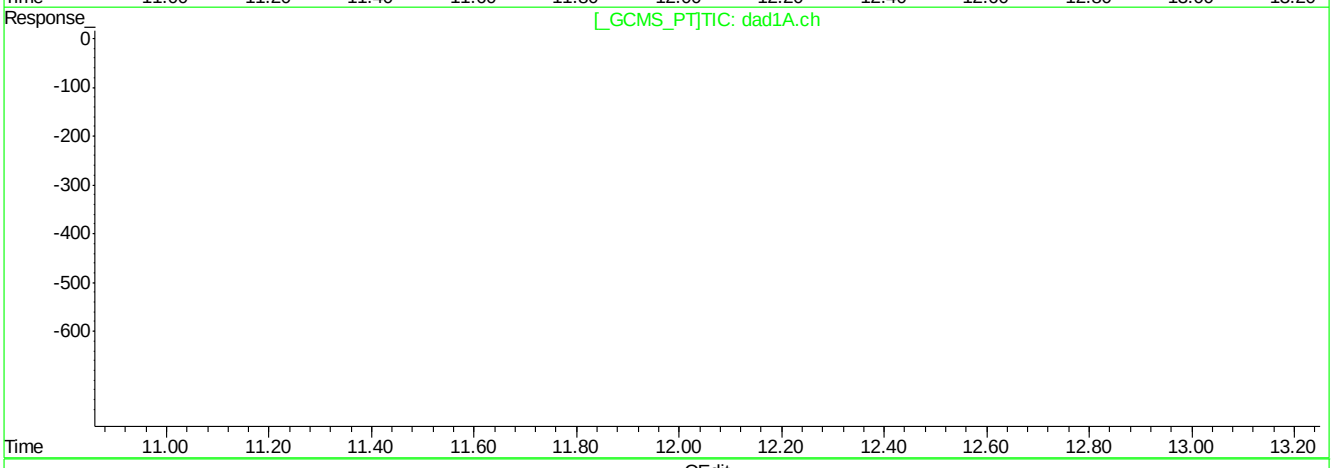
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:46:59 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.09min 21.712ppb

response 112648

(16) 2,4-Dinitrotoluene #2

0.00min 0.000ppb

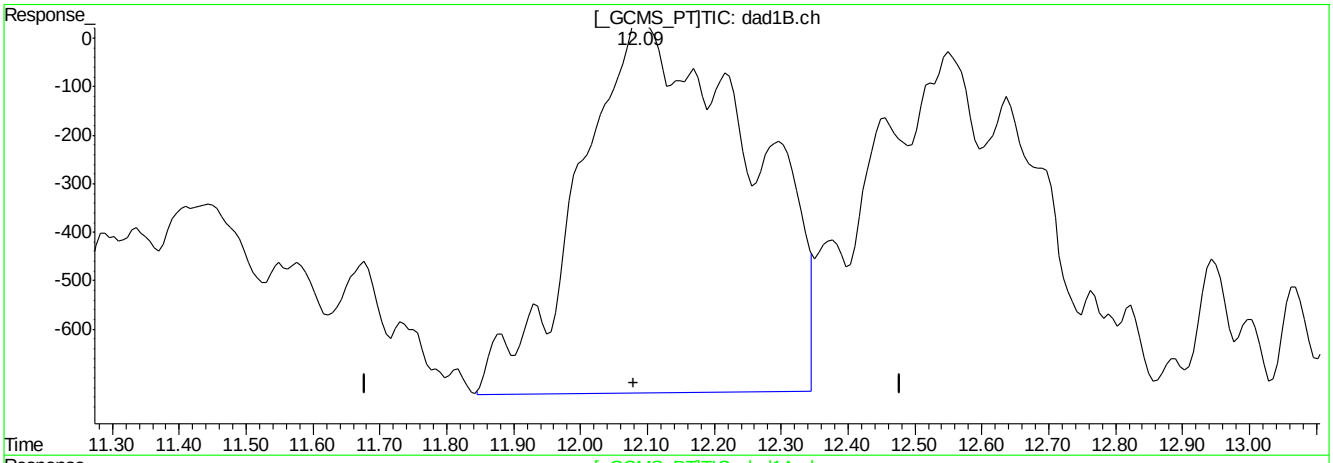
response 0

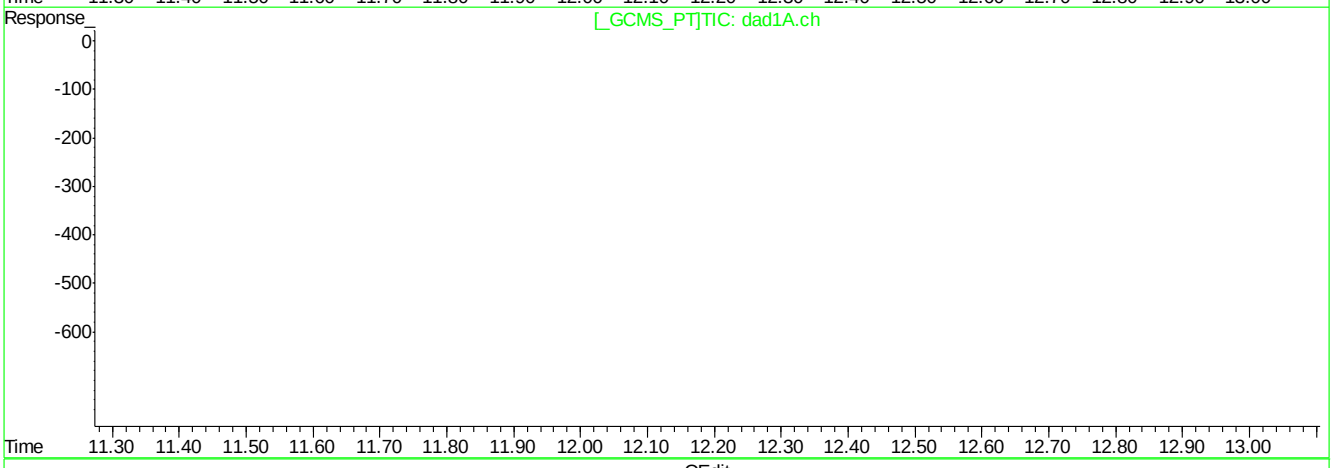
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:47:07 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.09min 26.386ppb m

response 136897

(16) 2,4-Dinitrotoluene #2

0.00min 0.000ppb

response 0

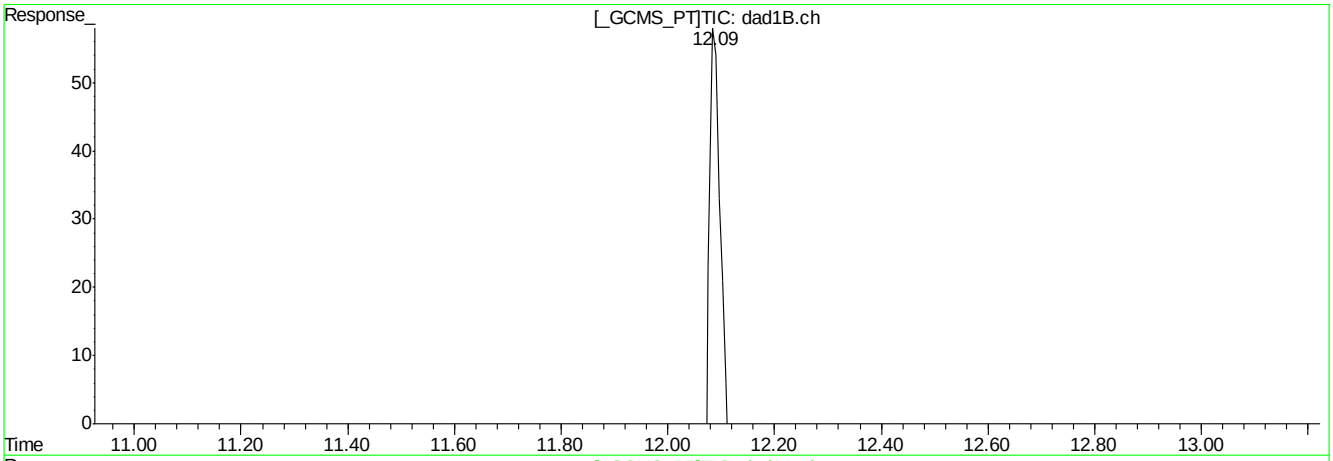
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:47:24 2018

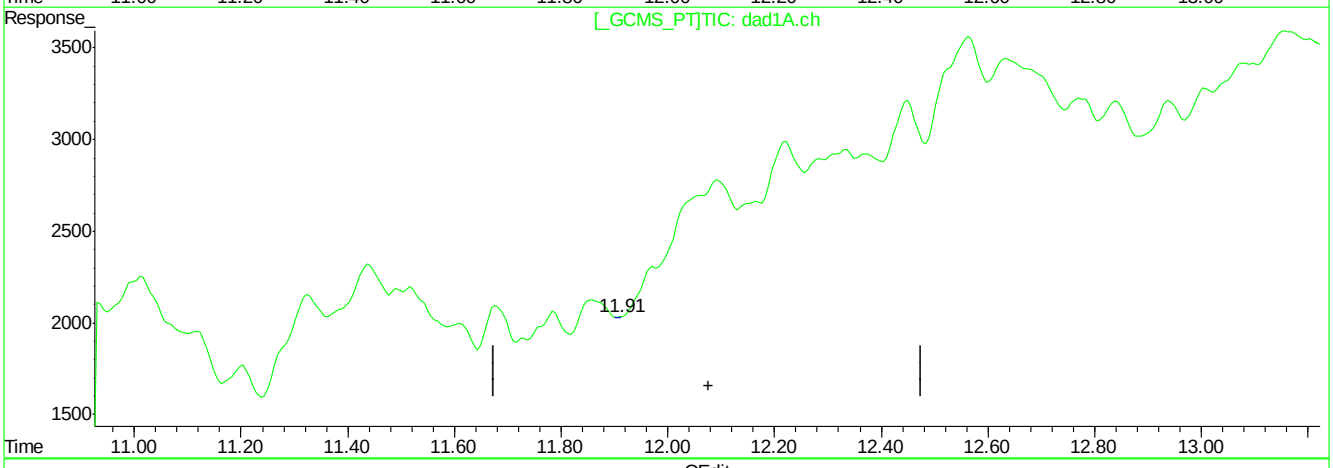
BB060200.D edits: 2,4-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.09min 26.386ppb m

response 136897

(16) 2,4-Dinitrotoluene #2

11.91min 0.010ppb m

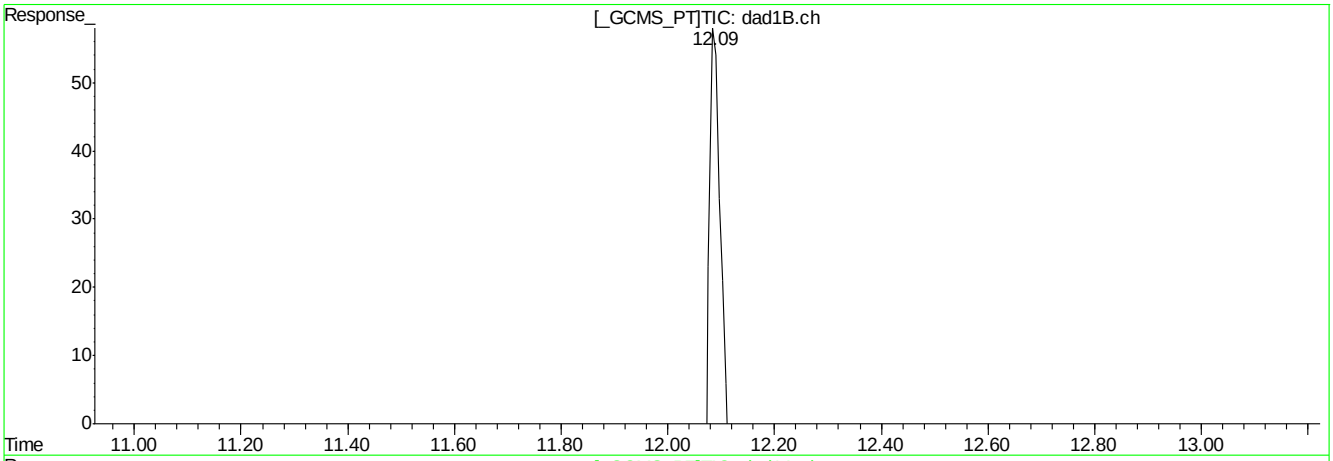
response 31

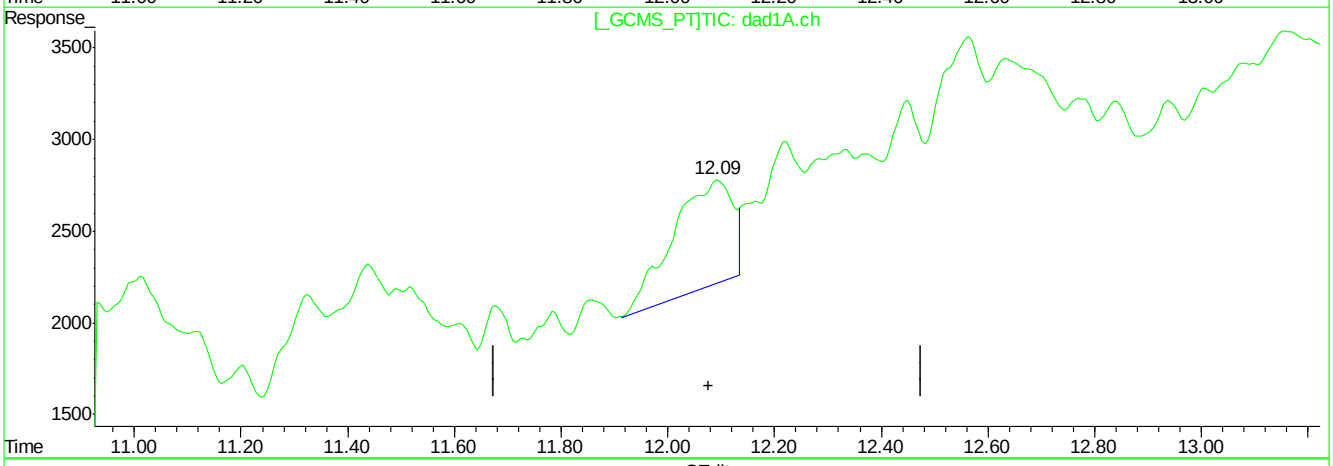
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:47:40 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.09min 26.386ppb m

response 136897

(16) 2,4-Dinitrotoluene #2

12.09min 14.109ppb m

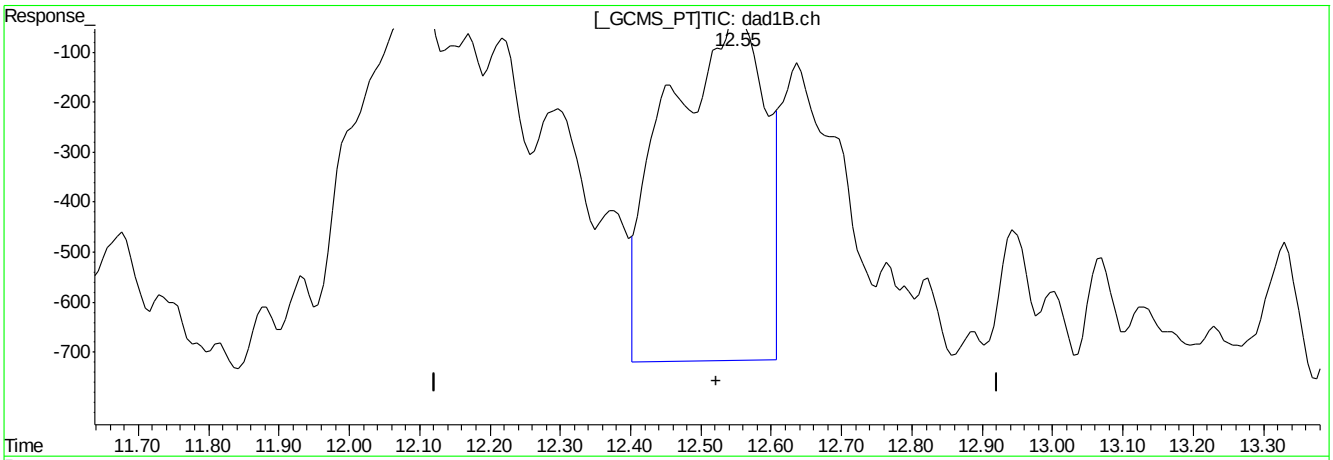
response 44517

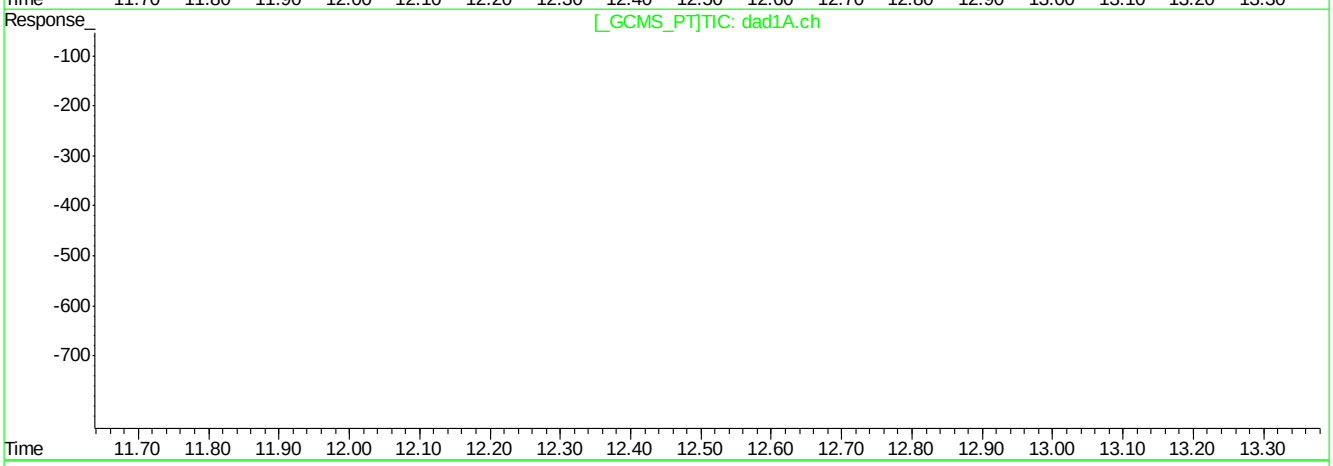
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:47:51 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 22.343ppb

response 65628

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

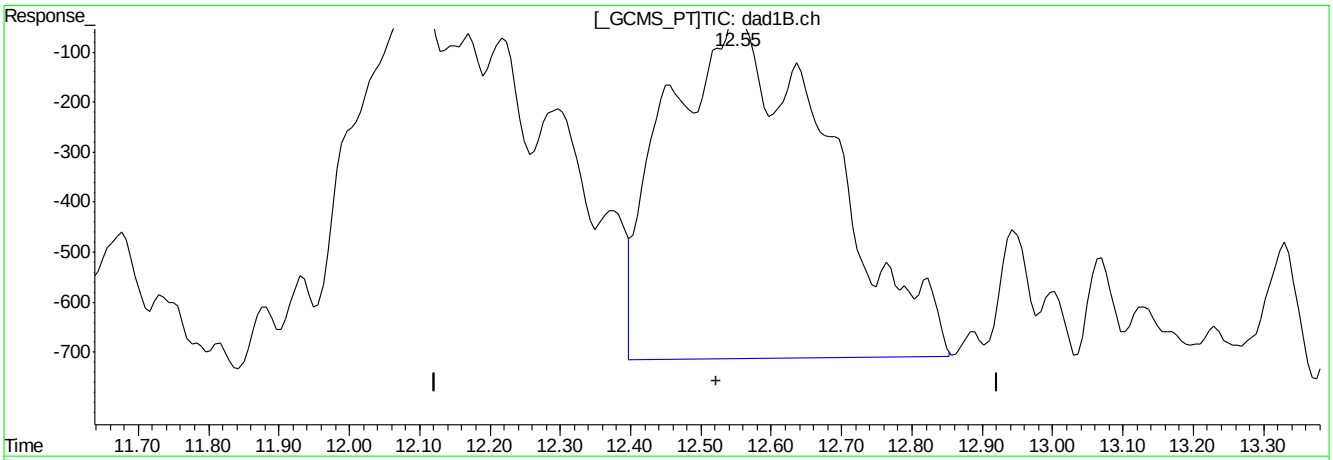
response 0

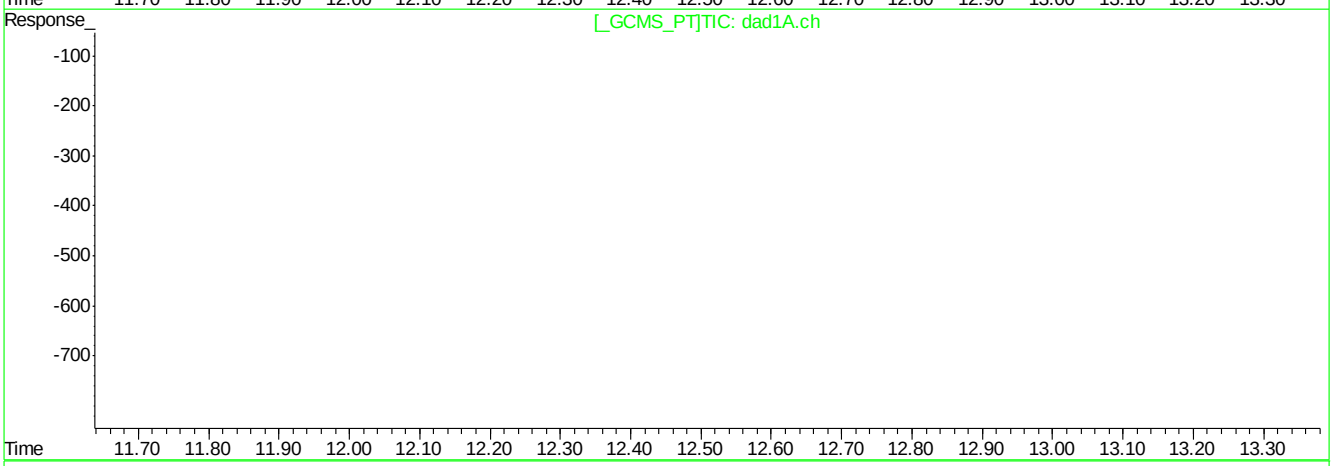
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:47:59 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 37.119ppb m

response 109062

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

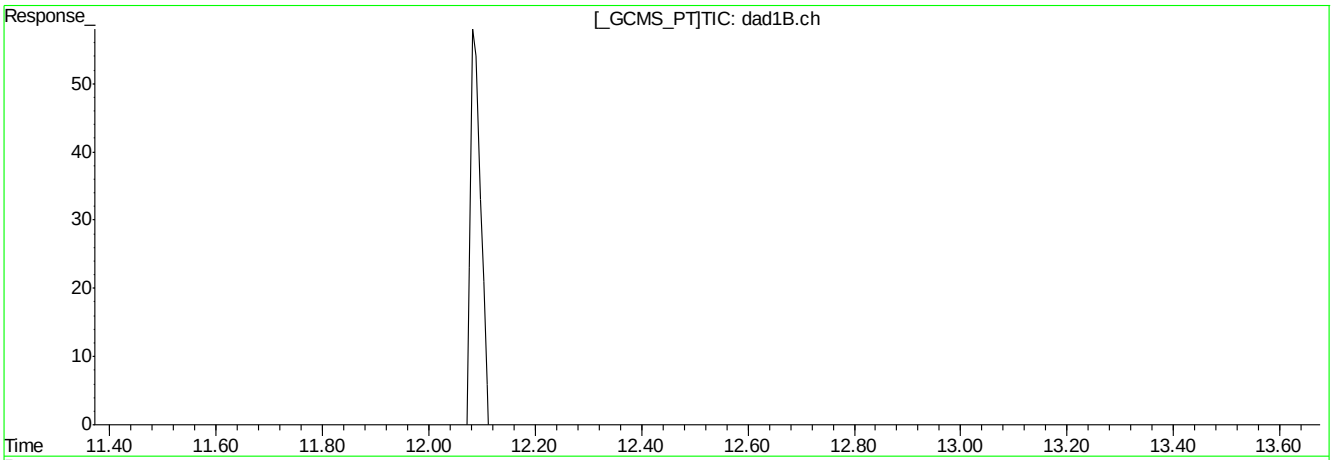
response 0

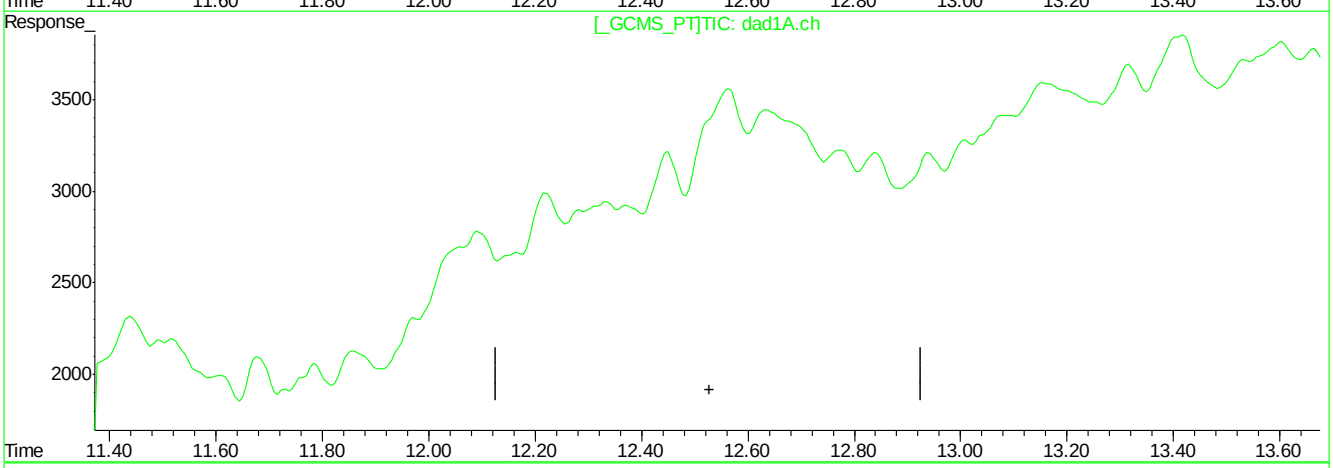
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:48:06 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 37.119ppb m

response 109062

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

response 0

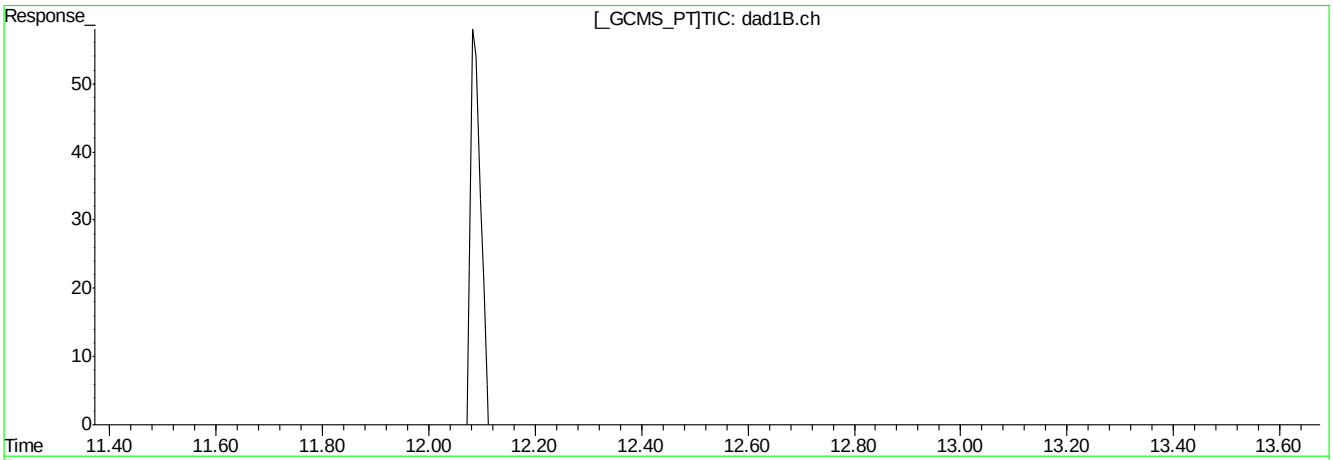
(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:48:10 2018

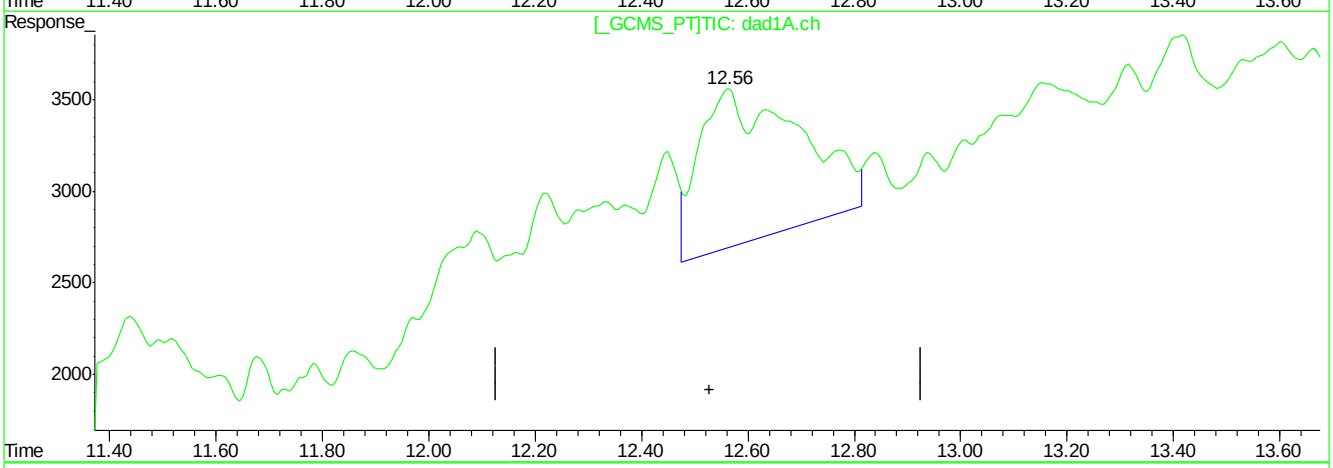
BB060200.D edits: 2,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 37.119ppb m

response 109062

(17) 2,6-Dinitrotoluene #2

12.56min 29.843ppb m

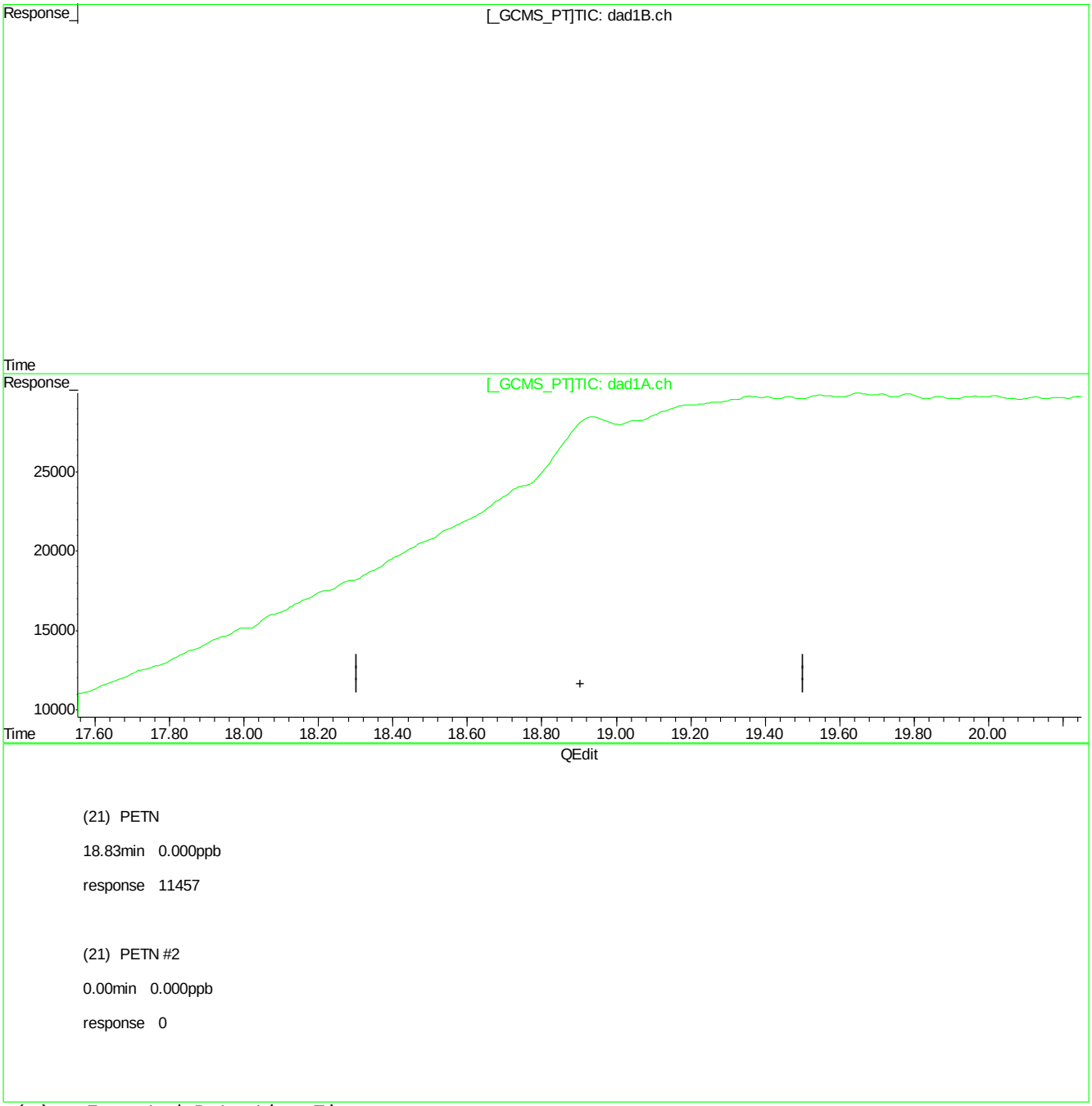
response 110117

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:48:19 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration

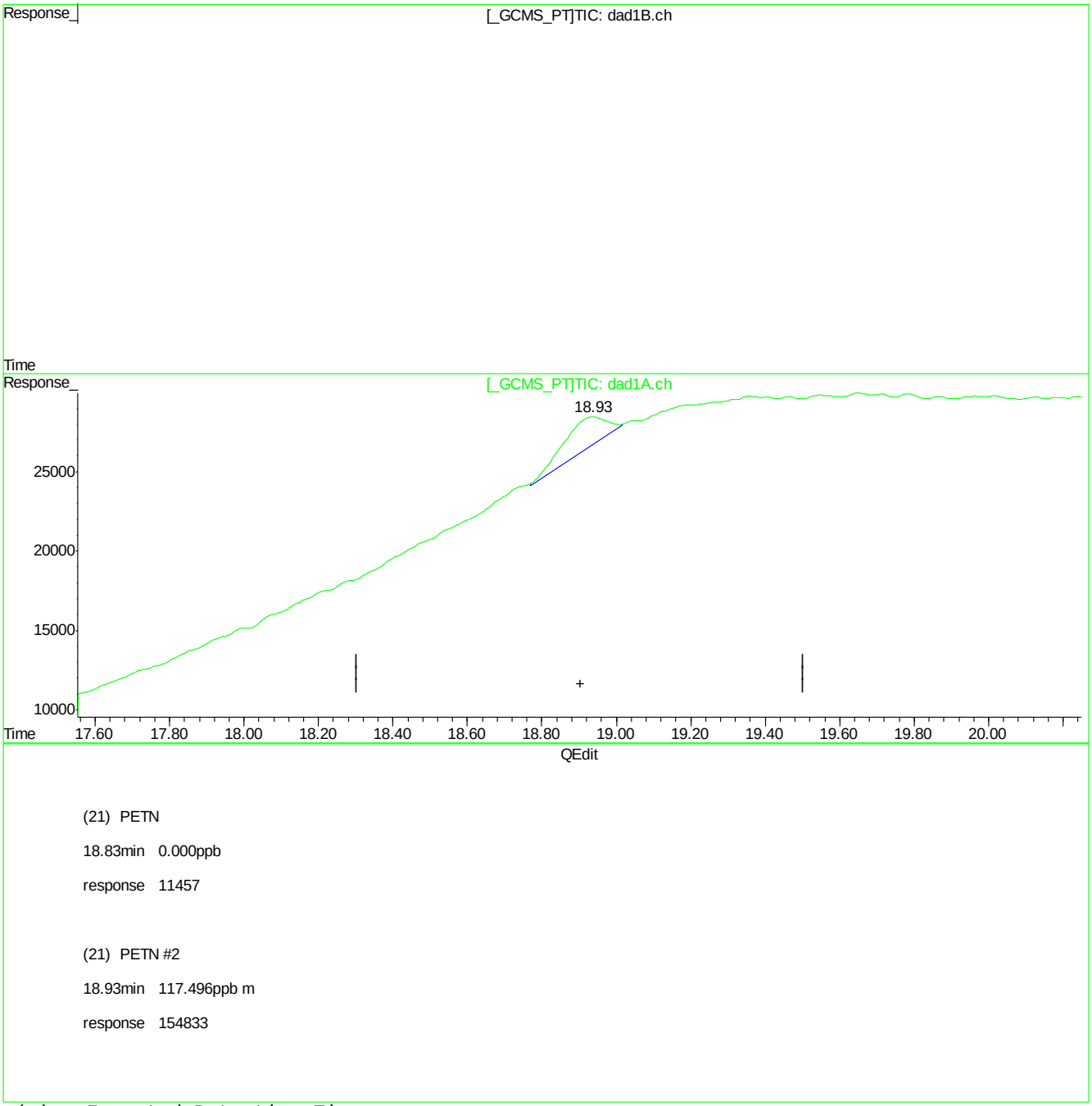


(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:48:36 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060200.D\dad1A.ch
Acq On : 06-Jul-2018, 15:33:10 Operator: kismetl
Sample : ic1748-20 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(21) PETN

18.83min 0.000ppb

response 11457

(21) PETN #2

18.93min 117.496ppb m

response 154833

(+) = Expected Retention Time
BB060200.D 8330B_0707PLUS.M Mon Jul 09 09:48:41 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:28 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.40	11.46	174462	177673	70.107m	42.241m
Spiked Amount	500.000	Range 70 - 136		Recovery =		14.02%#	8.45%#
	Target Compounds						
1)	TNX	1.40	1.40	252540	396416	51.598	51.934
2)	HMX	1.55	1.55	102831	355134	56.888	71.768
3)	DNX	1.80	1.80	181106	255850	58.889	50.462
4)	MNX	2.40	2.40	135560	202448	43.381m	42.937m
5)	RDX	3.03	3.03	116121	172551	59.698m	52.915
6)	1,3,5-Trinitrobe	4.82	4.83	223552	418867	51.303m	51.098m
7)	1,3-Dinitrobenze	6.08	6.08	298753	231193	51.253	60.002m
8)	3,5-Dinitroanili	6.42	6.42	238749	410785	51.061	52.545
9)	Nitrobenzene	7.71	7.74	195457	194582	52.232m	61.874m
10)	Nitroglycerin	0.00	9.07	0	333501	N.D. d	260.996
11)	Tetryl	9.53	9.56	167113	173340	56.468m	41.877m
12)	2,4,6-Trinitroto	10.06	10.07	190062	190046	48.523m	44.442m
13)	2-Amino-4,6-Dini	10.44	10.46	217365	214056	58.208m	38.227m
14)	4-Amino-2,6-Dini	10.93	10.92	151170	172539	57.302m	32.370m#
16)	2,4-Dinitrotolue	12.09	12.13	296379	145969	57.126m	46.262m
17)	2,6-Dinitrotolue	12.55	12.55	162232	204595	55.194m	55.448m
18)	o-Nitrotoluene	15.79	15.79	131134	131880	50.748m	39.593m
19)	p-Nitrotoluene	16.45	16.45	225031	196142	56.312	61.939m
20)	m-Nitrotoluene	17.39	17.61	262604	183968	76.996	52.216m
21)	PETN	0.00	18.91	0	348156	N.D. d	264.200m

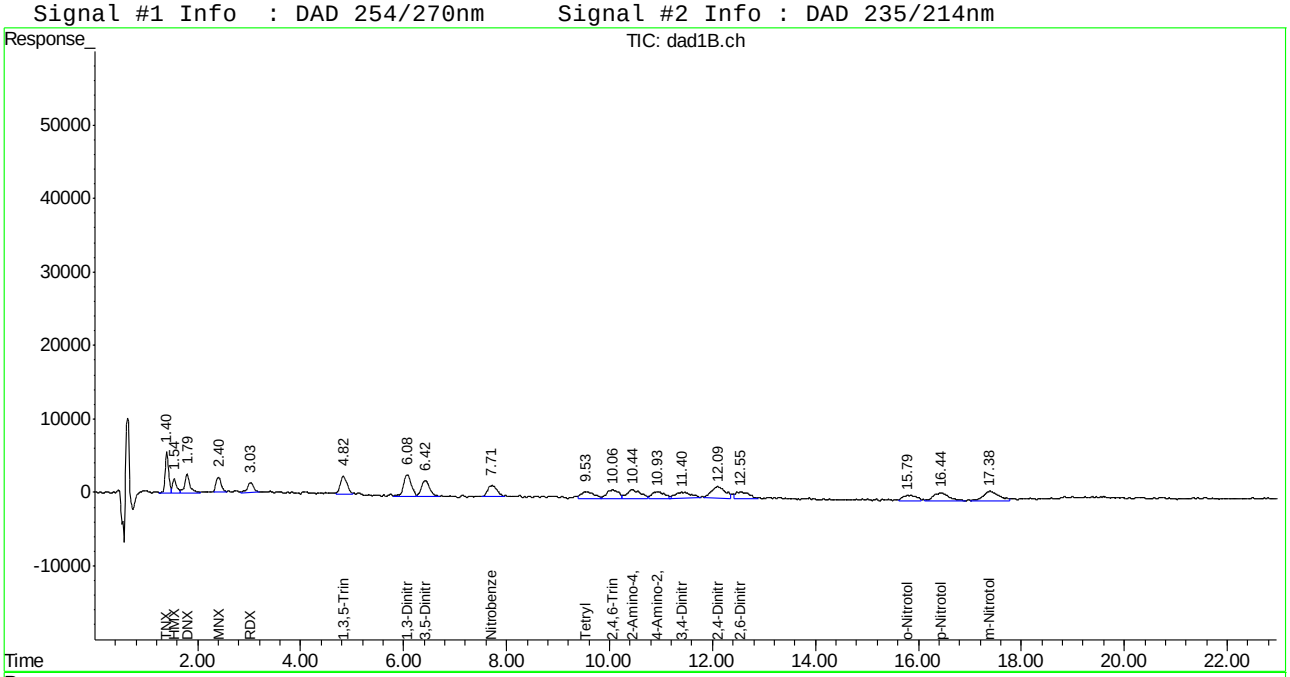
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060201.D 8330B_0707PLUS.M Mon Jul 09 11:20:49 2018 Page 1

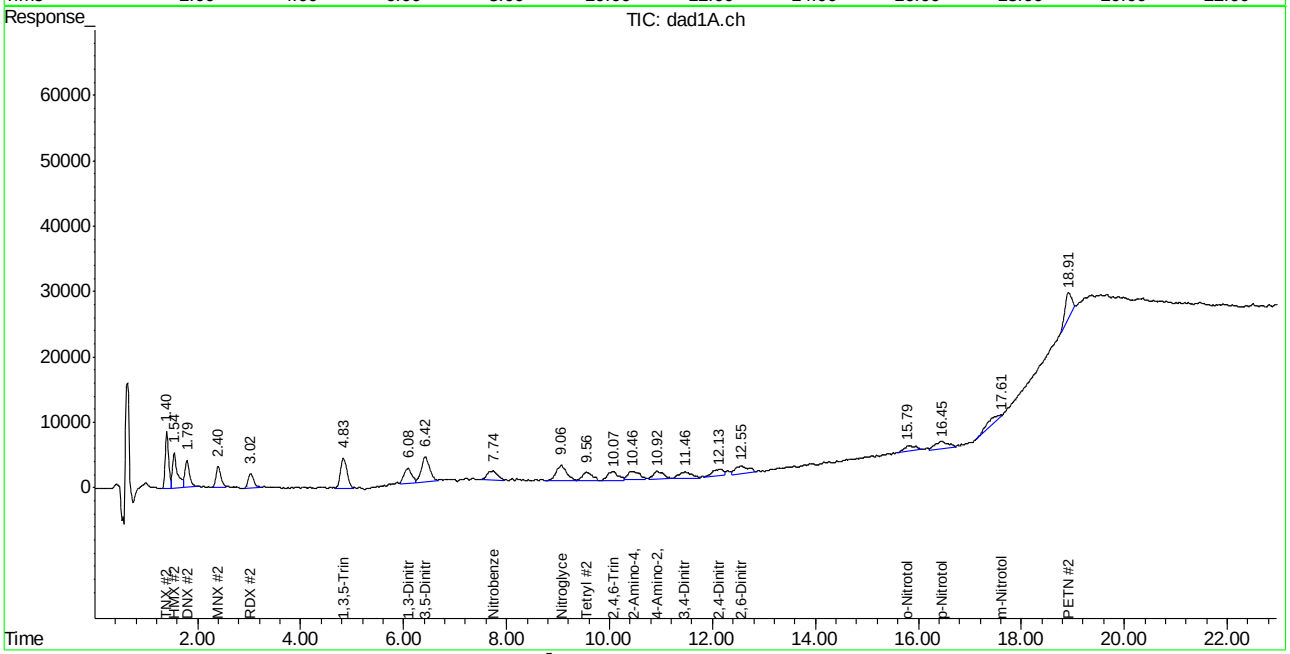
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:06 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

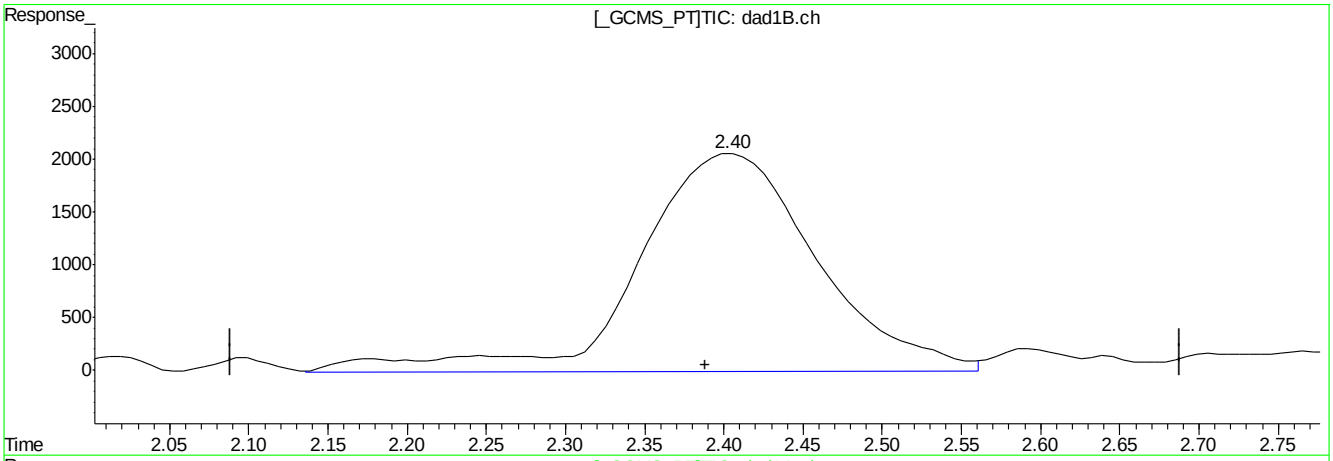
Sample Number: GBB1748-IC1748 **Method:** SW846 8330A
Lab FileID: BB060201.D **Analyst approved:** 07/09/18 11:23 William Hustedde
Injection Time: 07/06/18 16:03 **Supervisor approved:** 07/09/18 16:15 Mike Eger

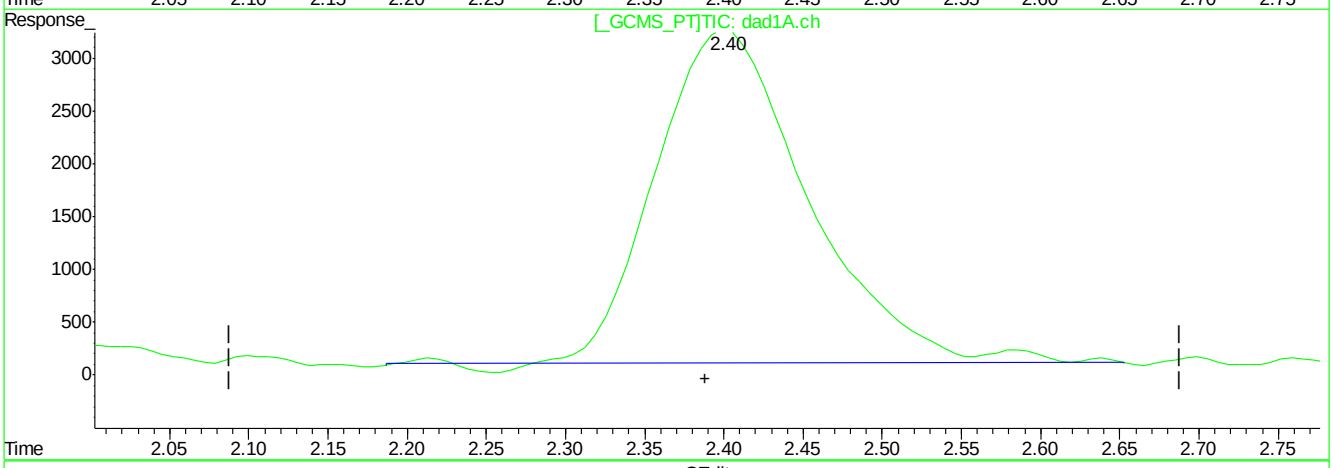
Parameter	CAS	Sig#	R.T. (min.)	Reason
MNX		1	2.40	Poor instrument integration
MNX		2	2.40	Poor instrument integration
RDX	121-82-4	1	3.03	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.82	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.83	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.08	Poor instrument integration
Nitrobenzene	98-95-3	1	7.71	Poor instrument integration
Nitrobenzene	98-95-3	2	7.74	Poor instrument integration
Tetryl	479-45-8	1	9.53	Poor instrument integration
Tetryl	479-45-8	2	9.56	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	10.06	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	10.07	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.44	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.46	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	10.92	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.93	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.40	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	2	11.46	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	12.09	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	12.13	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.55	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	2	12.55	Poor instrument integration
o-Nitrotoluene	88-72-2	1	15.79	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.79	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.45	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.61	Poor instrument integration
PETN	78-11-5	2	18.91	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.41min 52.344ppb

response 163569

(4) MNX #2

2.40min 44.216ppb

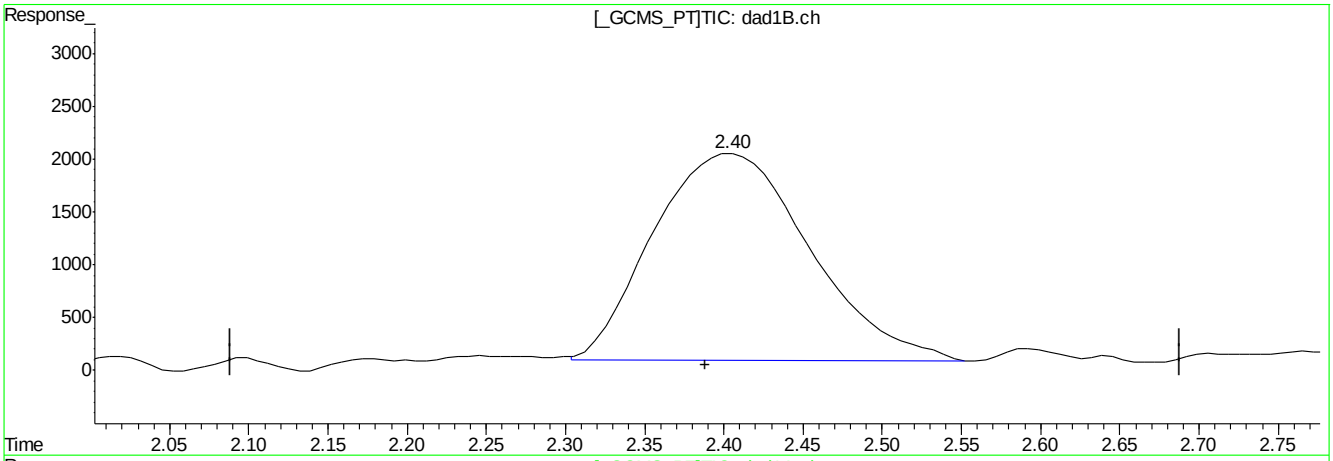
response 208479

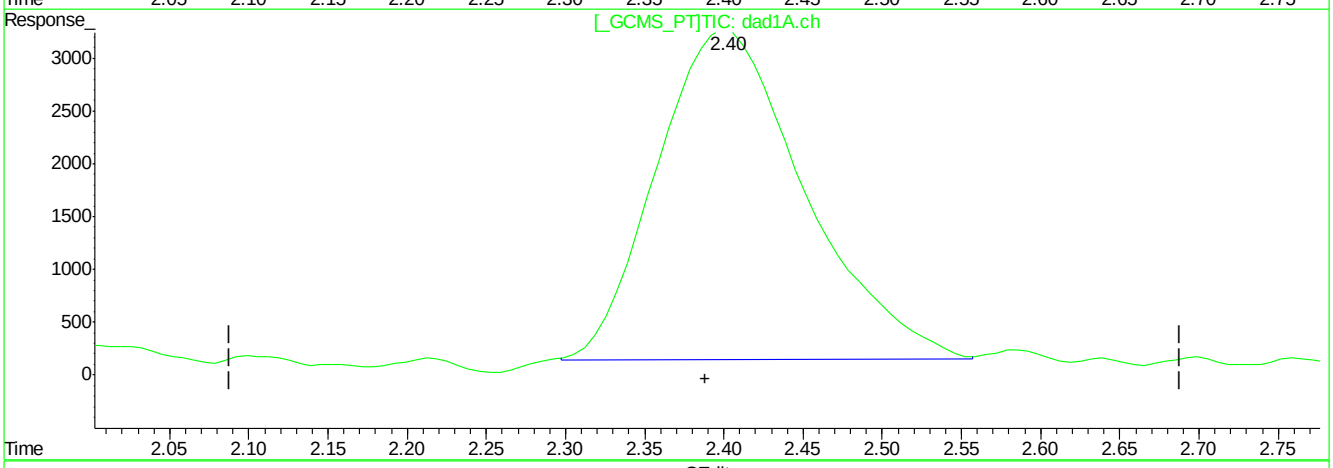
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:24:44 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.40min 43.381ppb m

response 135560

(4) MNX #2

2.40min 42.937ppb m

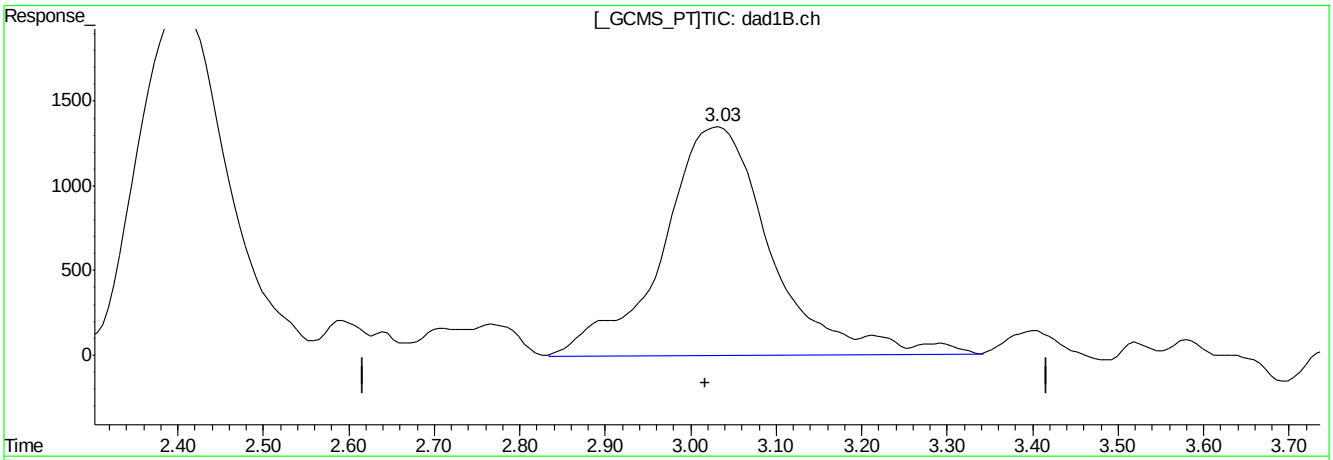
response 202448

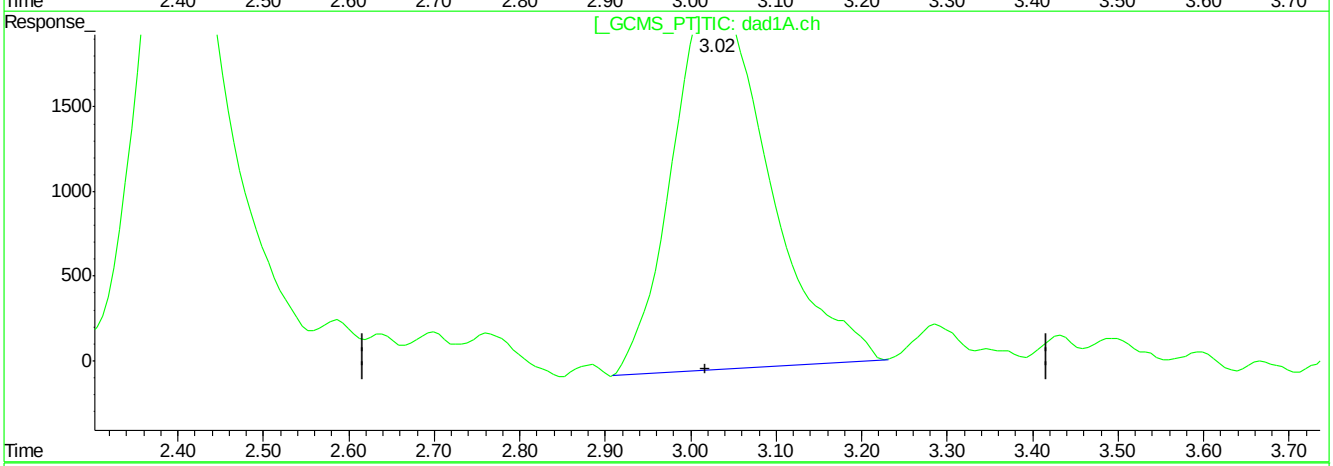
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:24:51 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.03min 61.540ppb

response 119710

(5) RDX #2

3.03min 52.915ppb

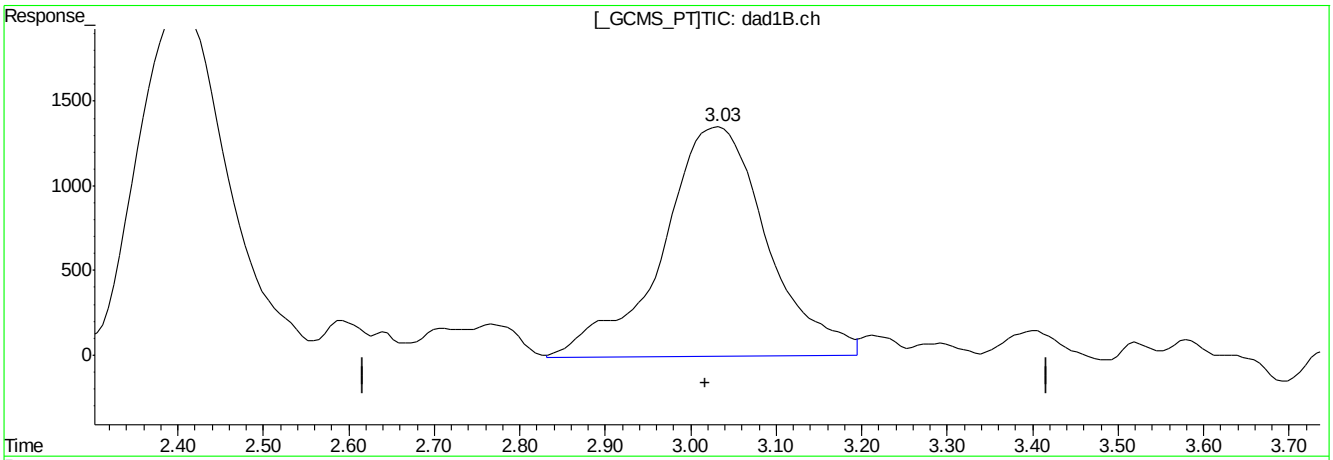
response 172551

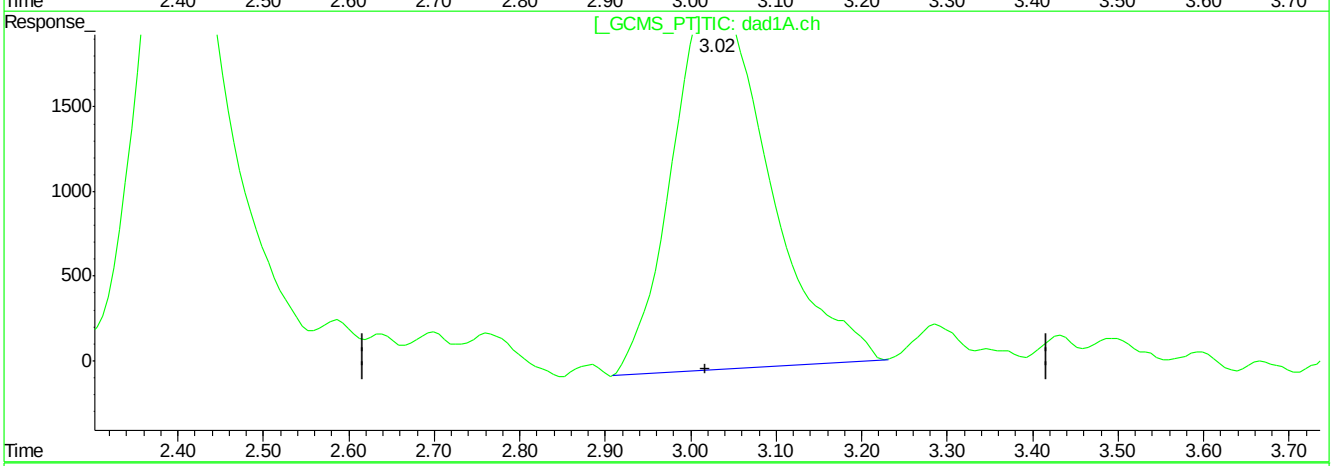
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:24:58 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.03min 59.698ppb m

response 116121

(5) RDX #2

3.03min 52.915ppb

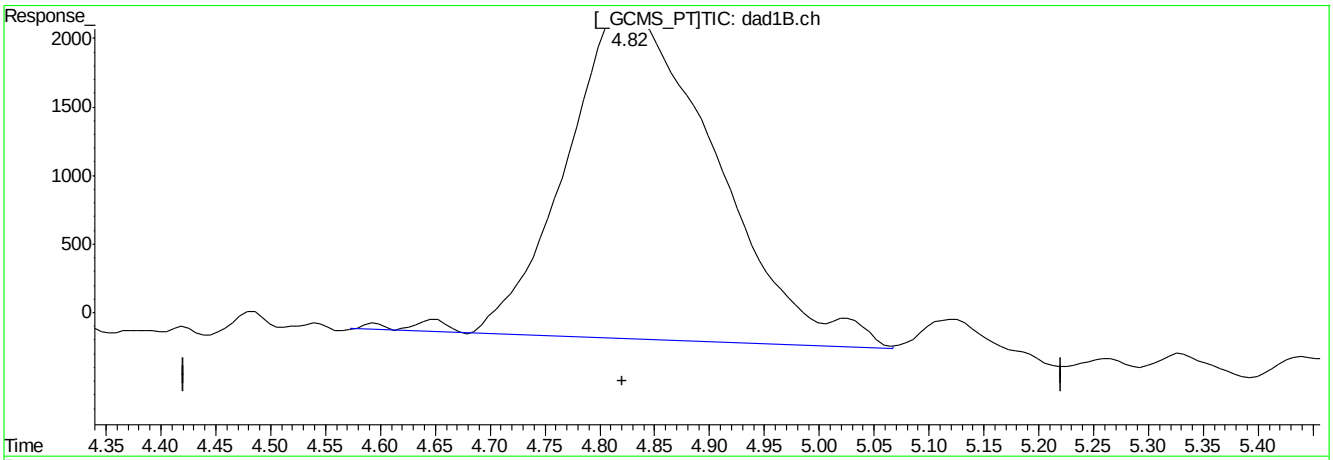
response 172551

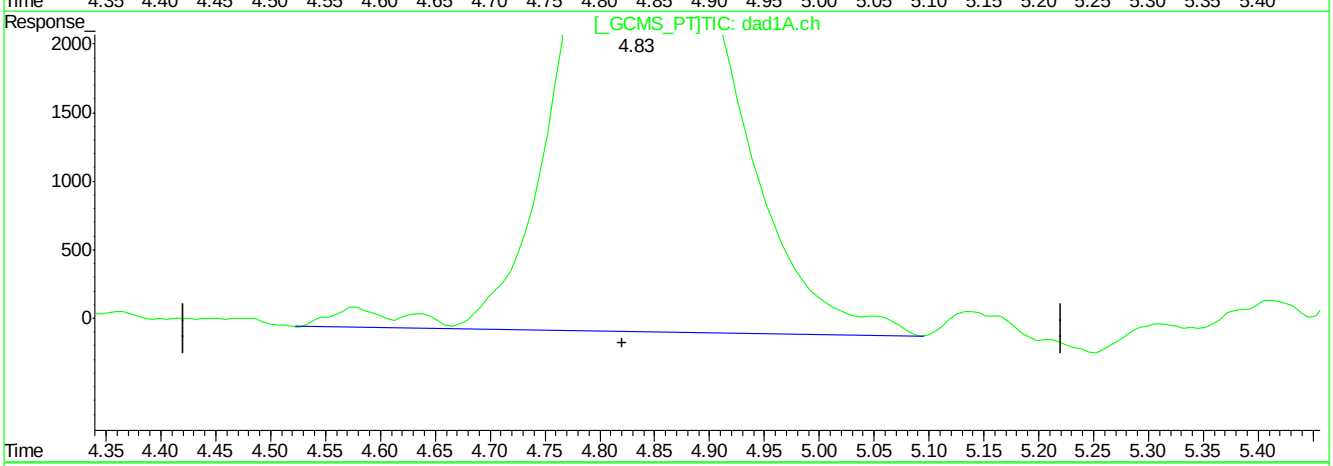
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:05 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.83min 52.479ppb

response 228678

(6) 1,3,5-Trinitrobenzene #2

4.83min 52.151ppb

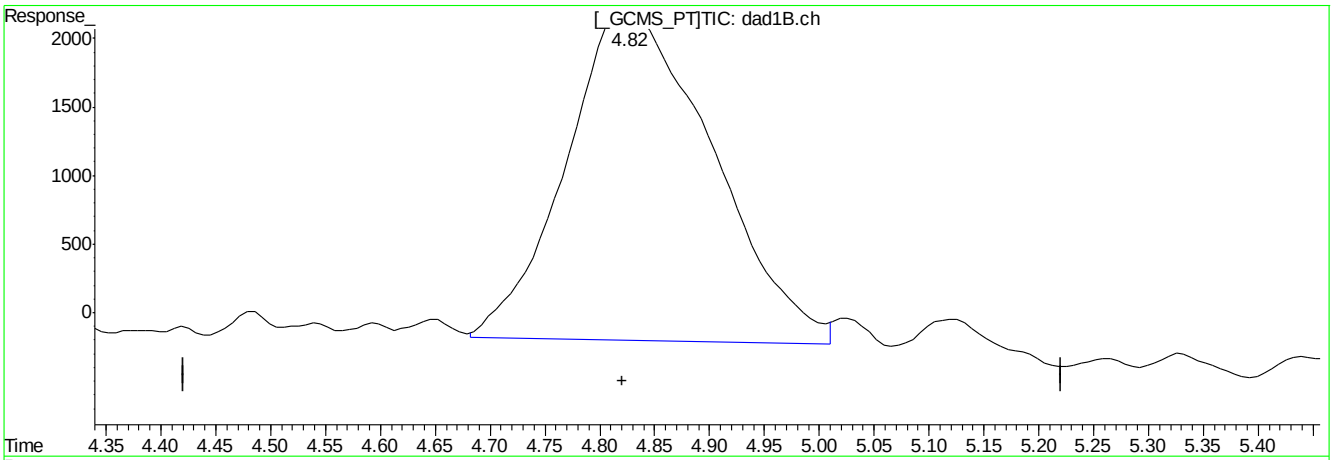
response 427502

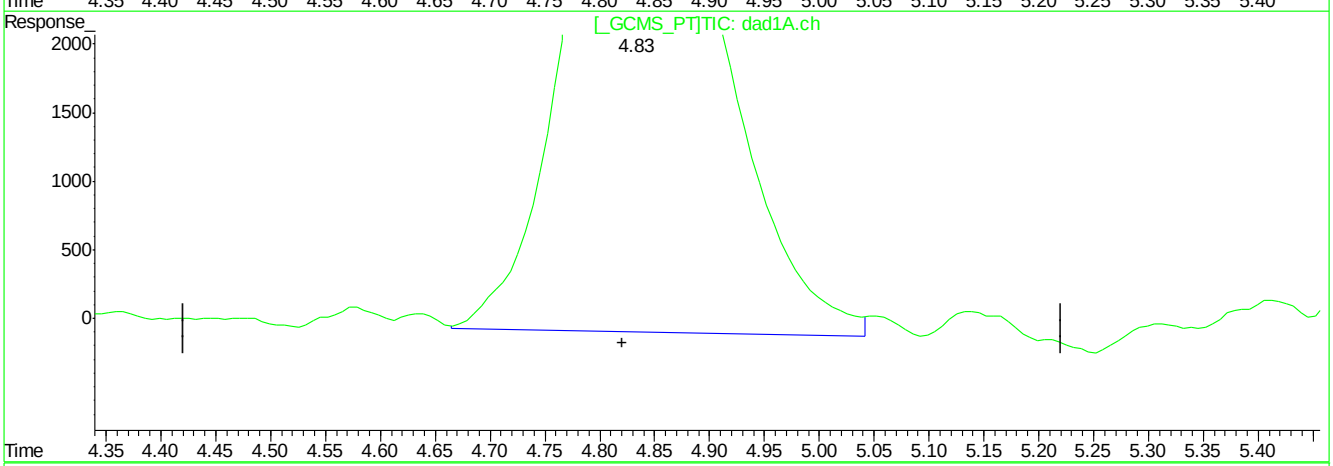
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:10 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.82min 51.303ppb m

response 223552

(6) 1,3,5-Trinitrobenzene #2

4.83min 51.098ppb m

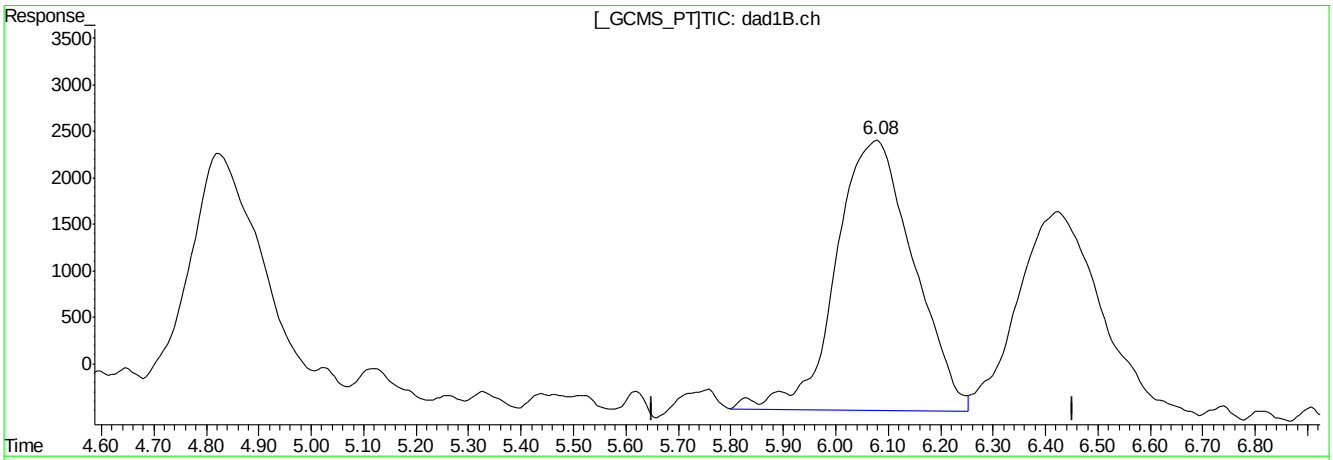
response 418867

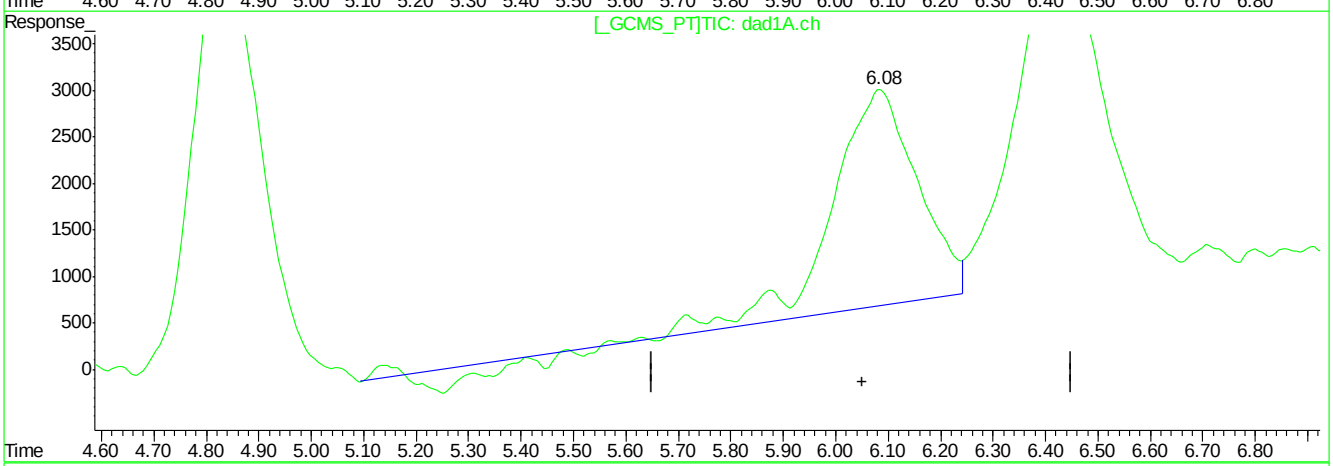
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:17 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.08min 51.253ppb

response 298753

(7) 1,3-Dinitrobenzene #2

6.09min 64.575ppb

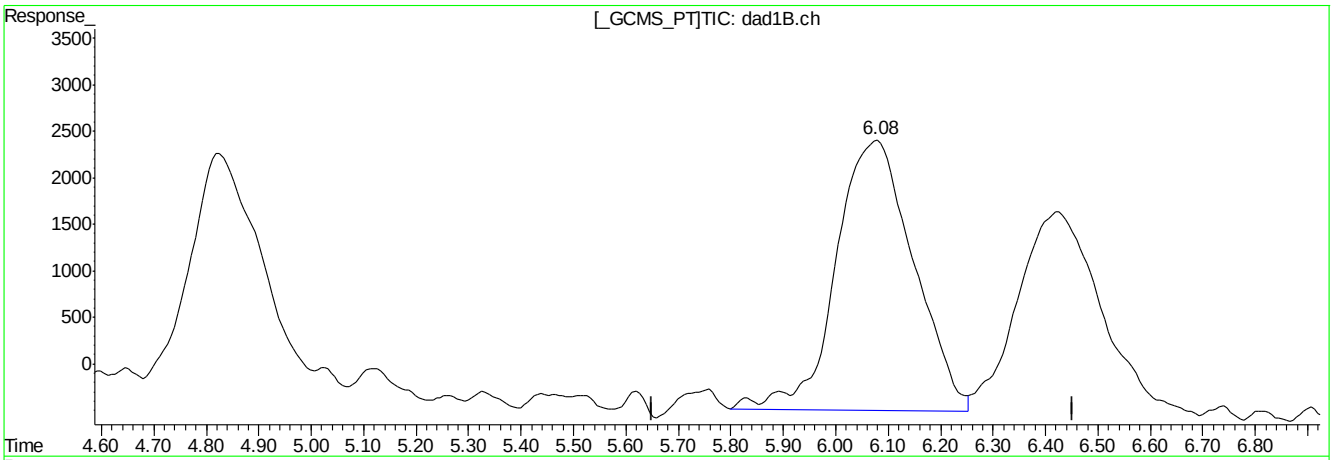
response 248799

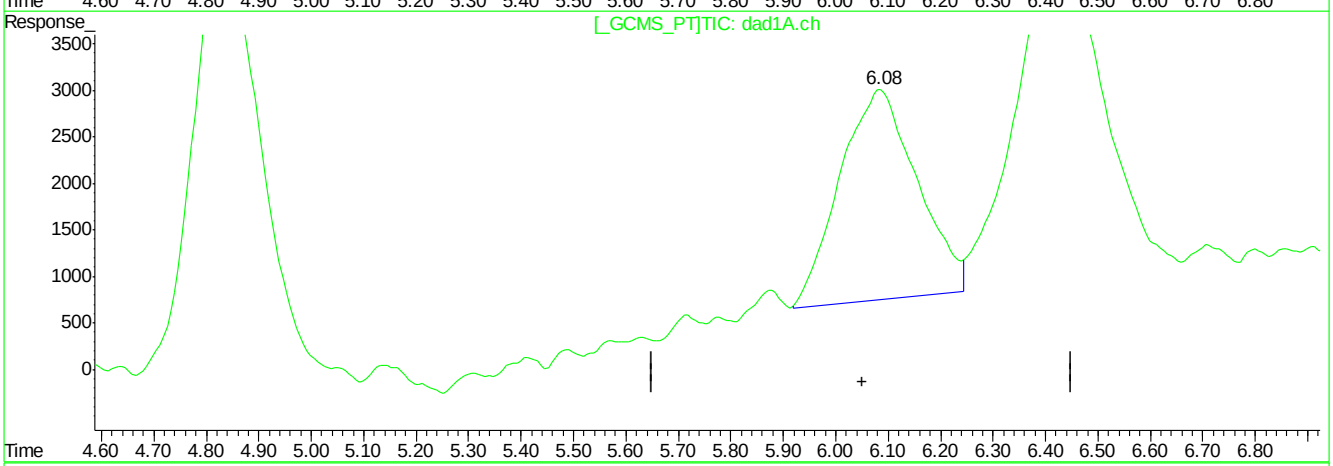
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.08min 51.253ppb

response 298753

(7) 1,3-Dinitrobenzene #2

6.08min 60.002ppb m

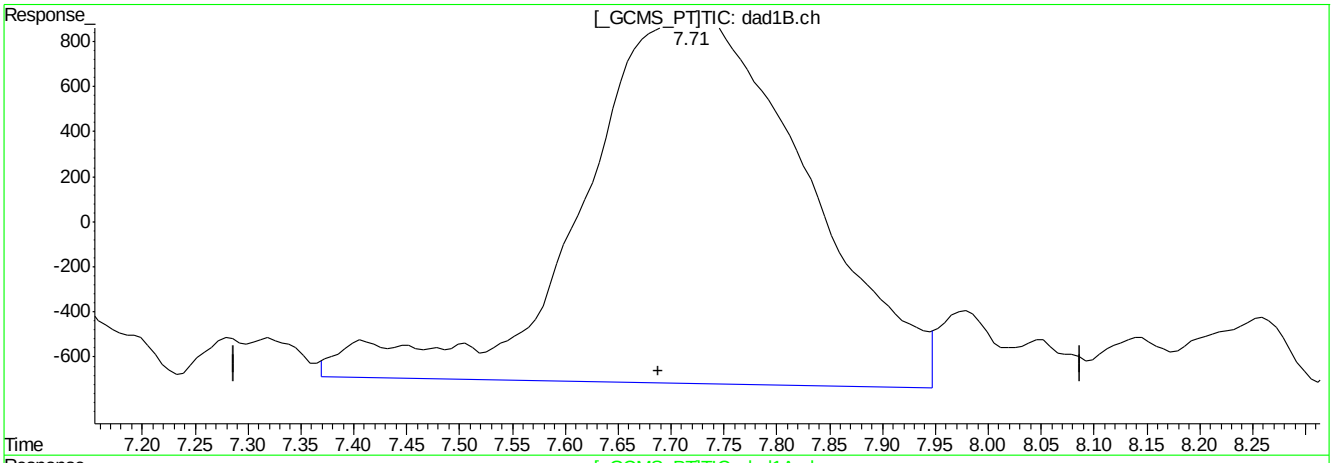
response 231193

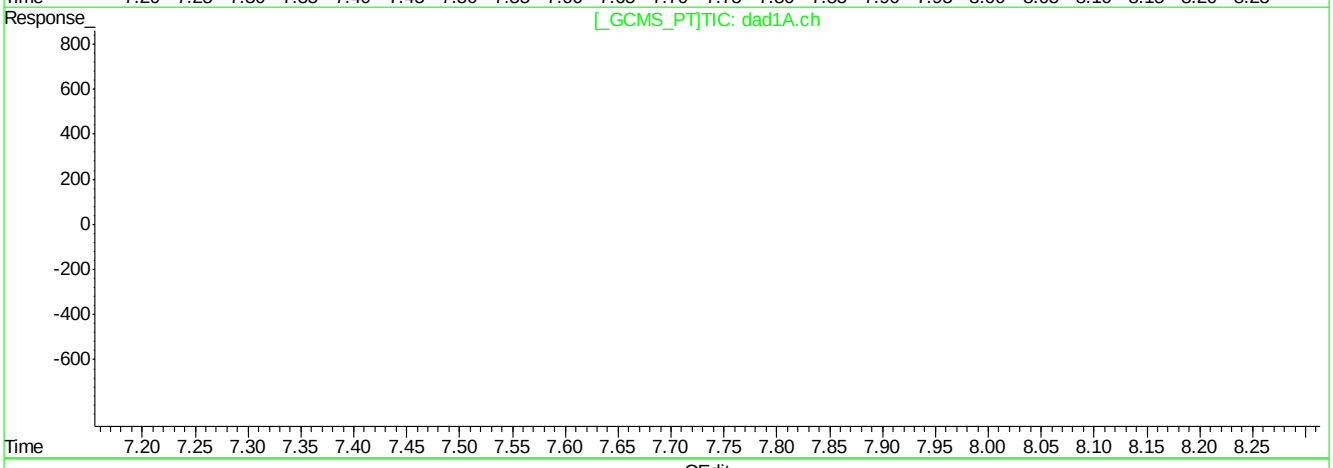
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:38 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.72min 64.155ppb

response 240073

(9) Nitrobenzene #2

0.00min 0.000ppb

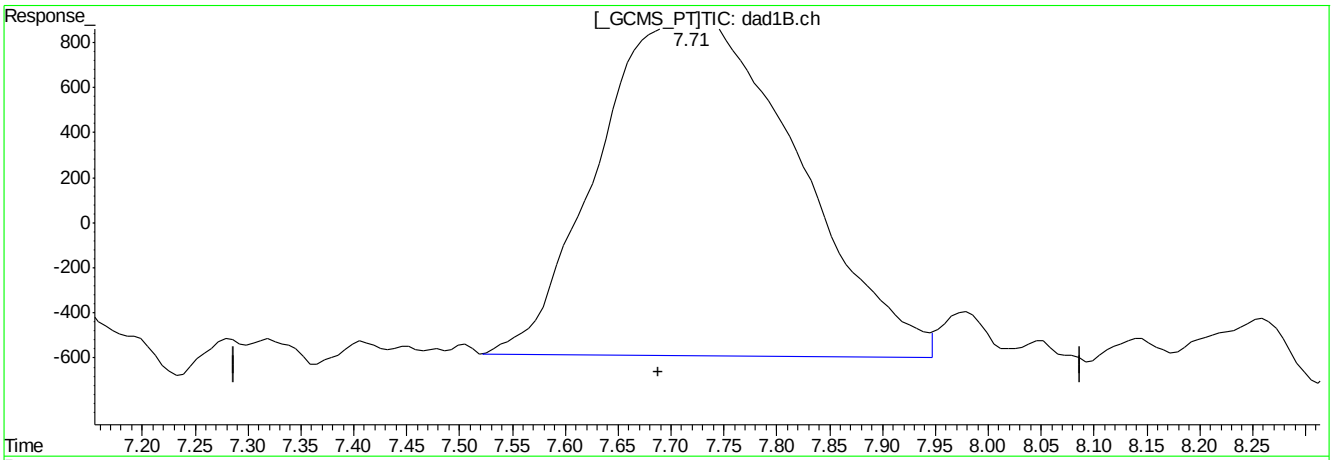
response 0

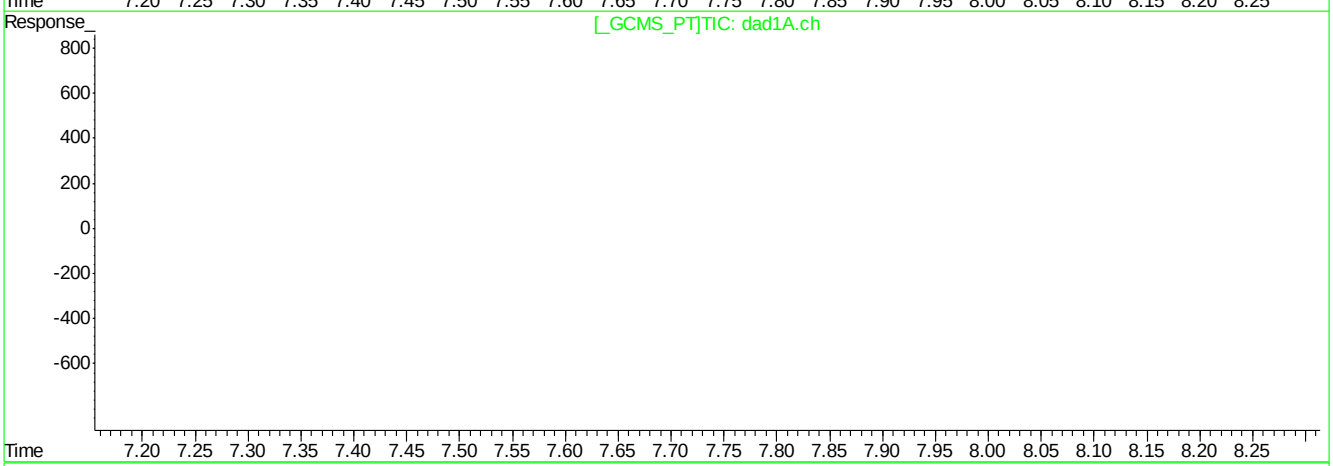
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:47 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.71min 52.232ppb m

response 195457

(9) Nitrobenzene #2

0.00min 0.000ppb

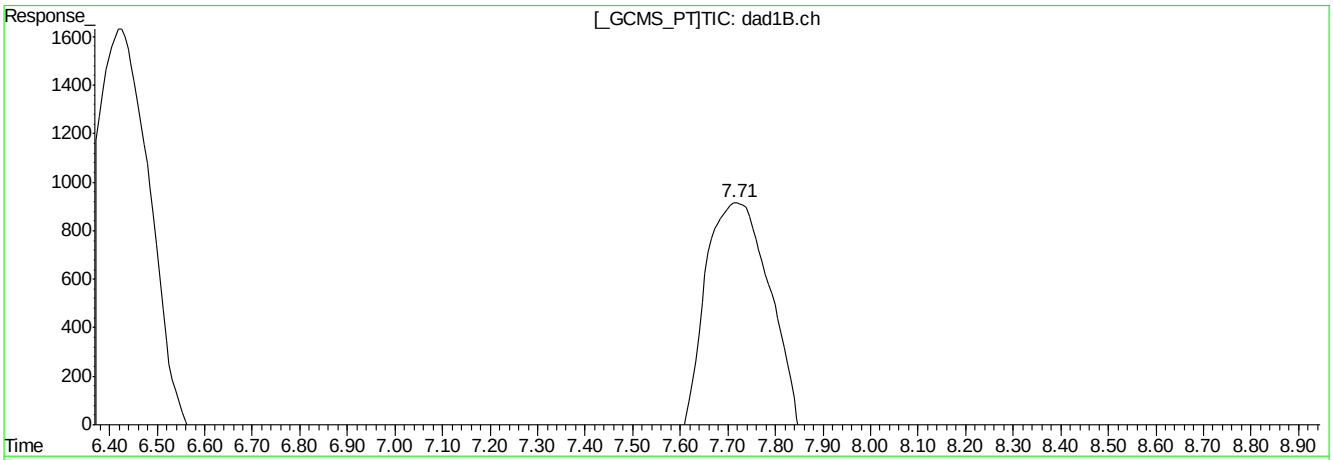
response 0

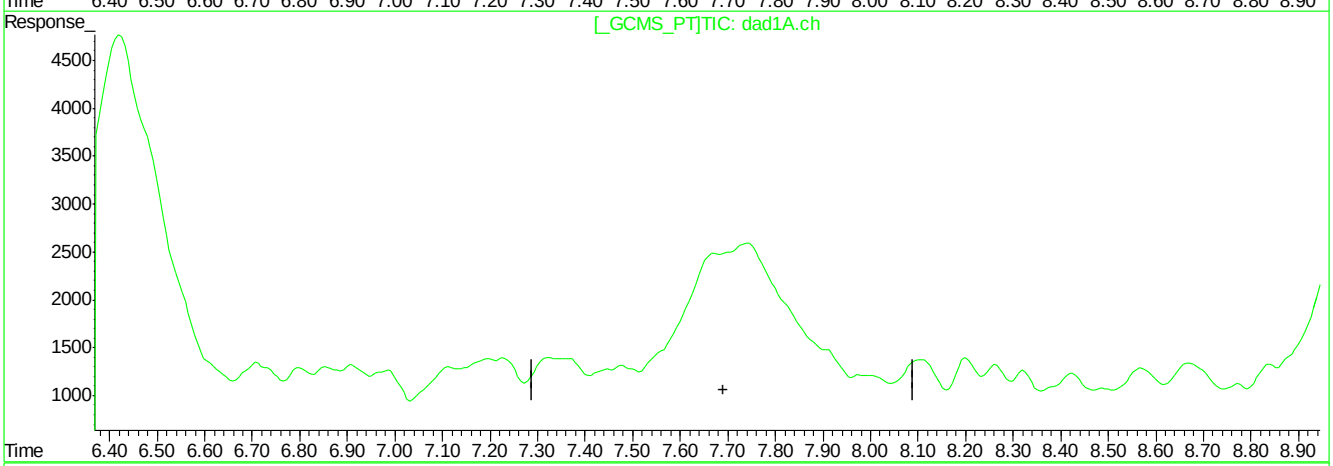
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:25:55 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.71min 52.232ppb m

response 195457

(9) Nitrobenzene #2

0.00min 0.000ppb

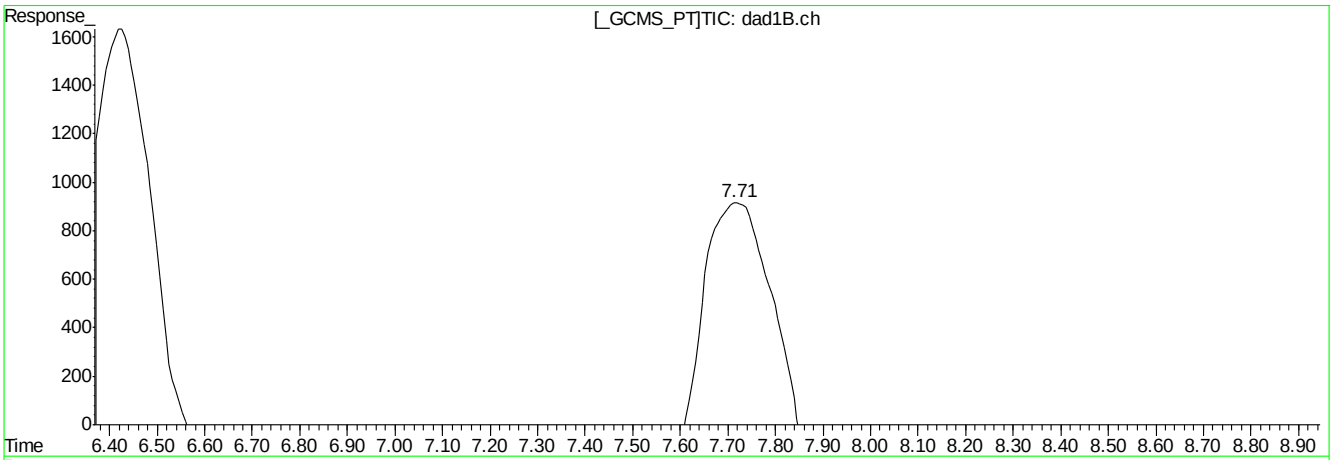
response 0

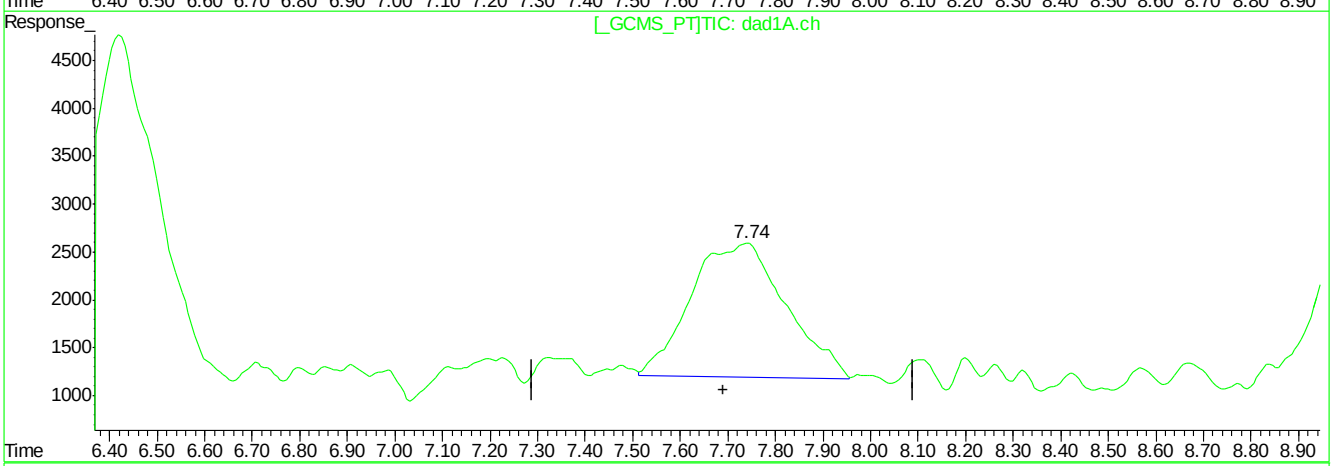
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:26:00 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.71min 52.232ppb m

response 195457

(9) Nitrobenzene #2

7.74min 61.874ppb m

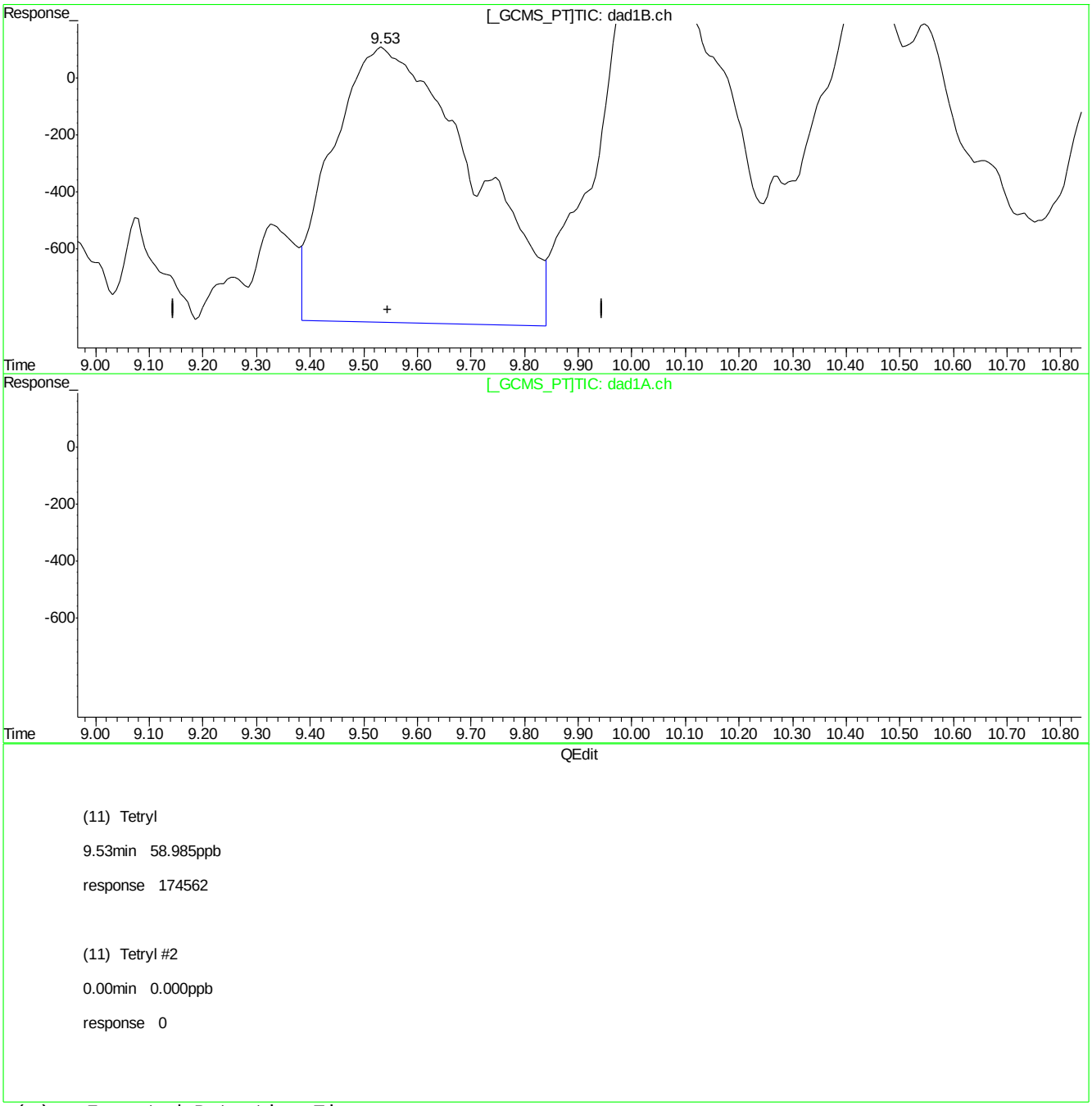
response 194582

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:26:05 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(11) Tetryl

9.53min 58.985ppb

response 174562

(11) Tetryl #2

0.00min 0.000ppb

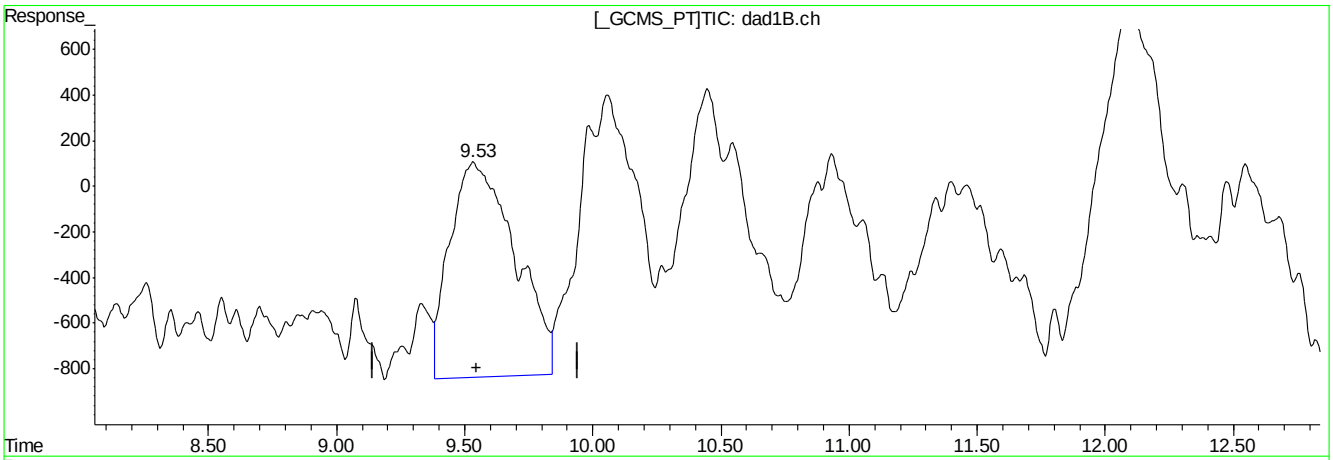
response 0

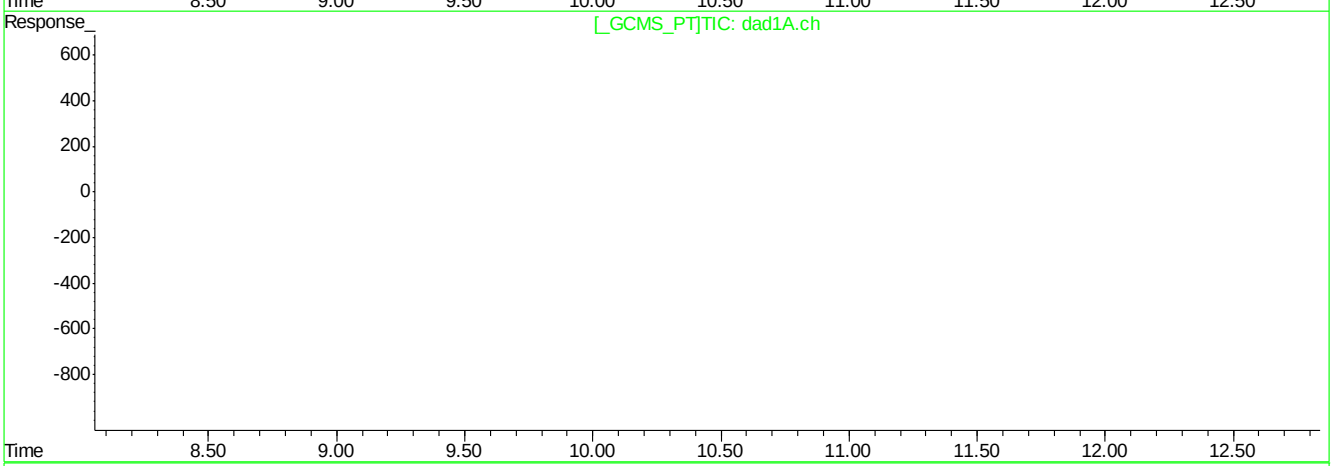
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:26:21 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.53min 56.468ppb m

response 167113

(11) Tetryl #2

0.00min 0.000ppb

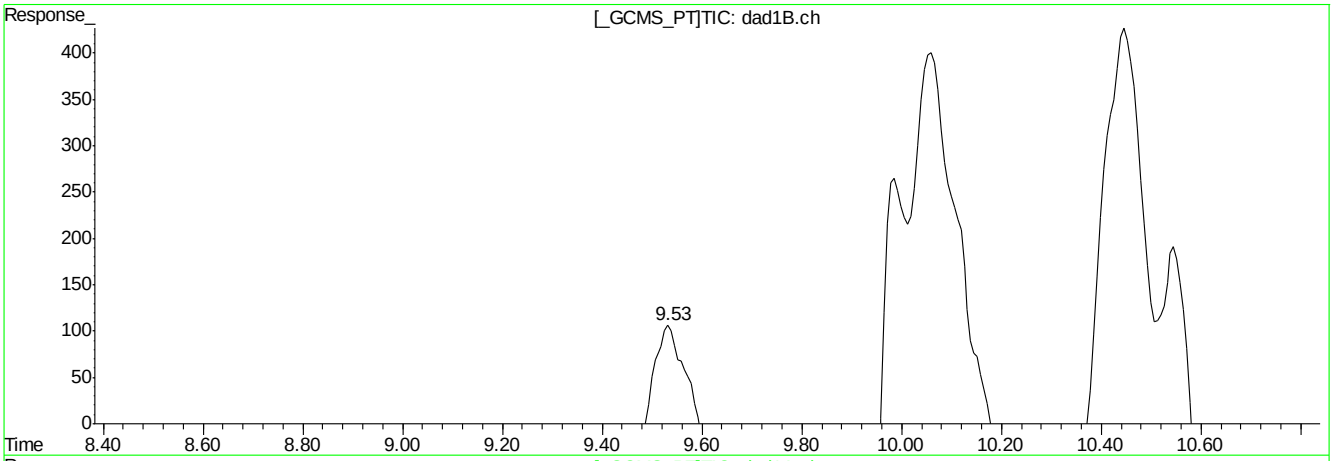
response 0

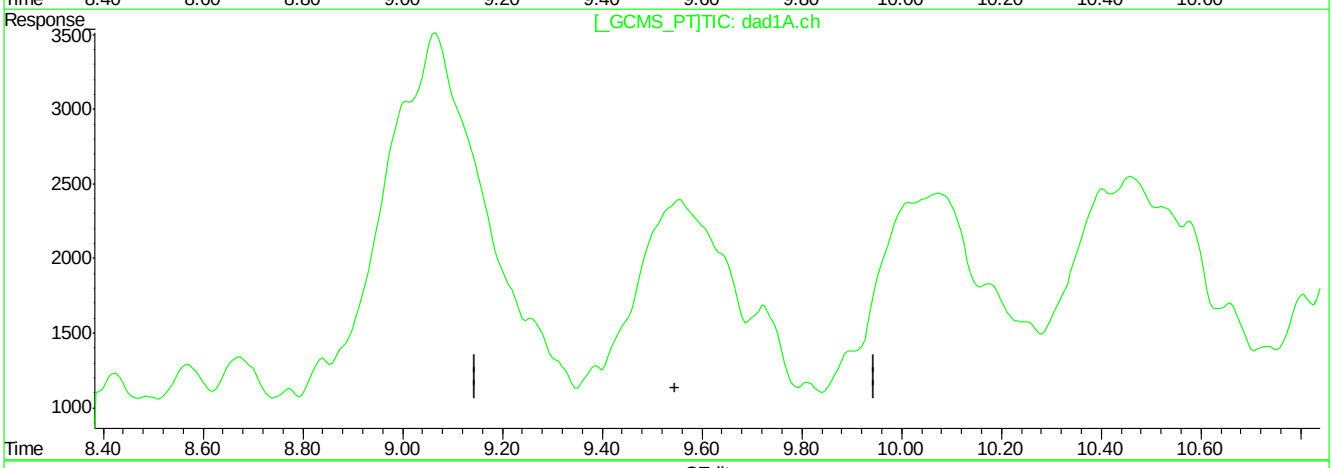
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:26:39 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.53min 56.468ppb m

response 167113

(11) Tetryl #2

0.00min 0.000ppb

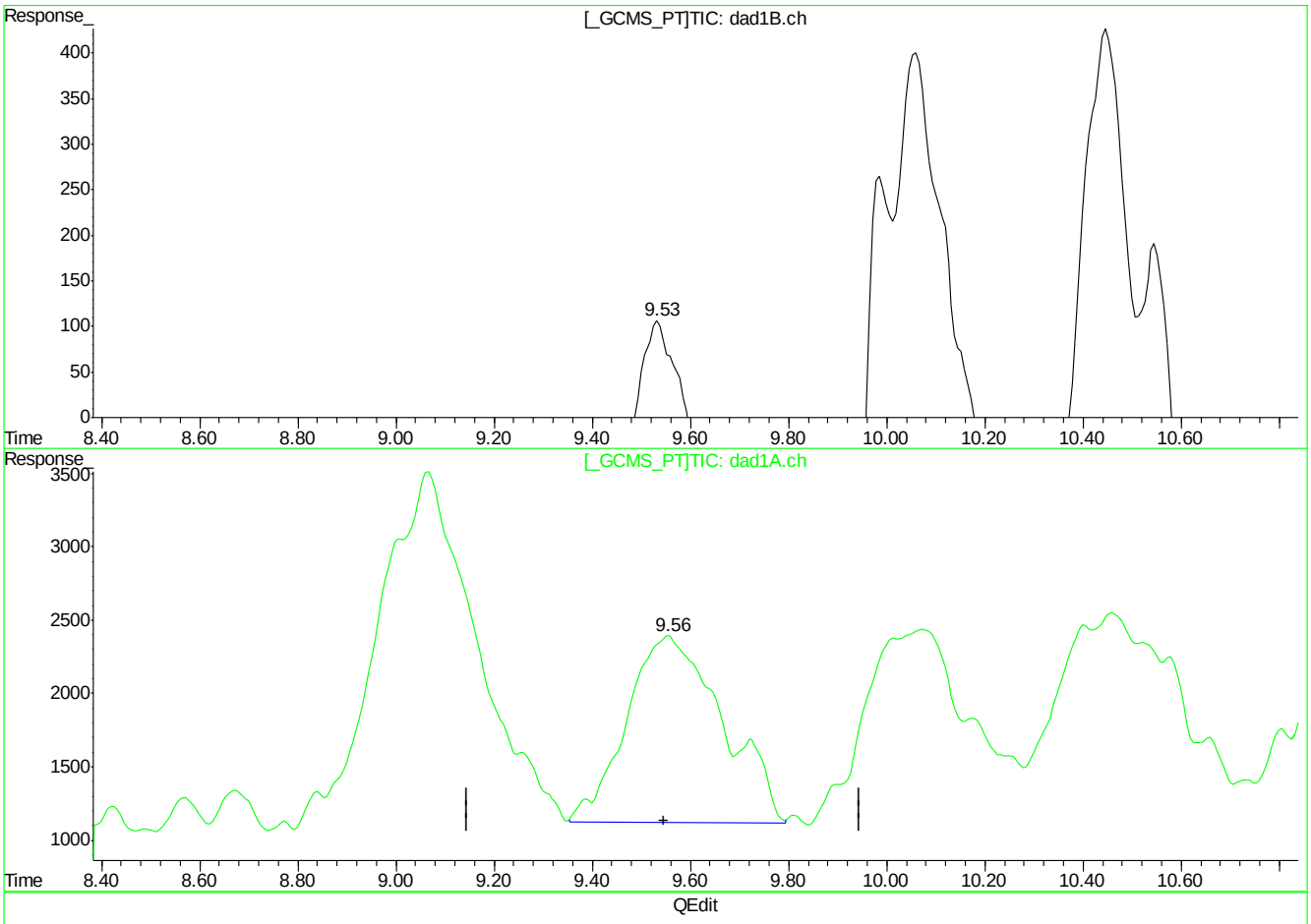
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:26:44 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(11) Tetryl

9.53min 56.468ppb m

response 167113

(11) Tetryl #2

9.56min 41.877ppb m

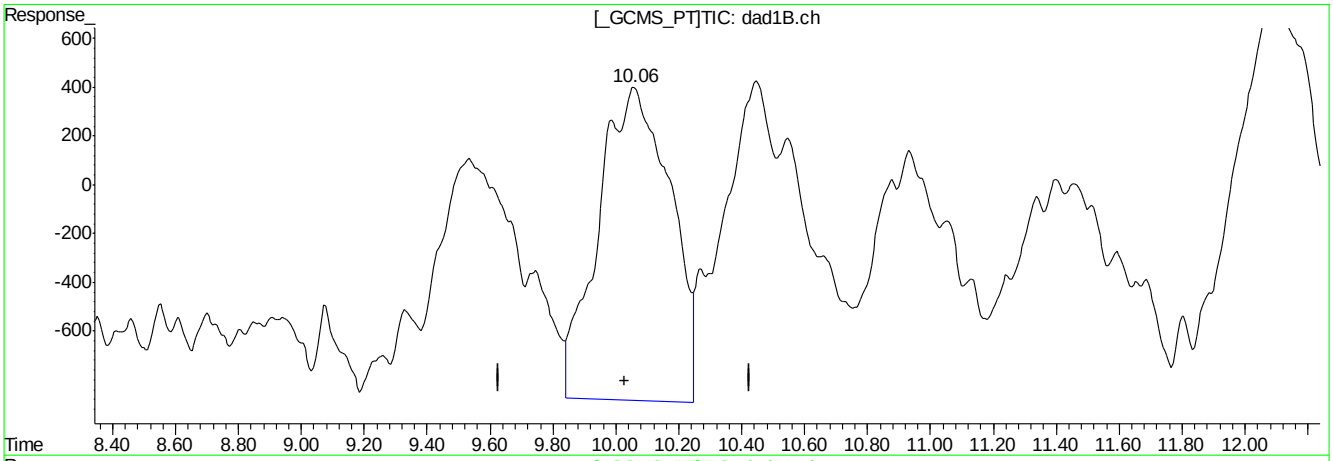
response 173340

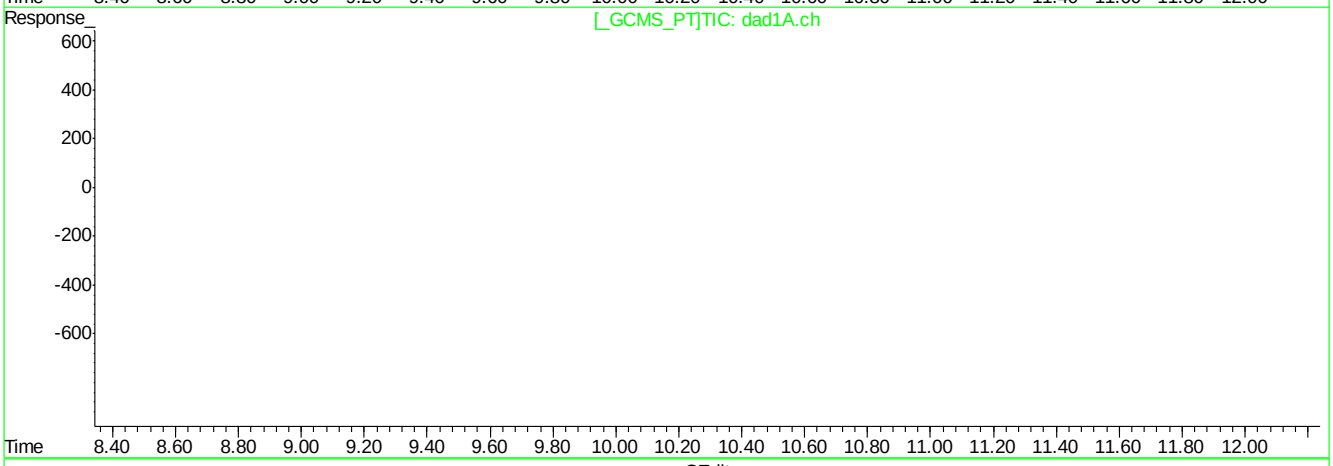
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:26:48 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.06min 51.873ppb

response 203183

(12) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb

response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:27:04 2018

9.5.2.18

9

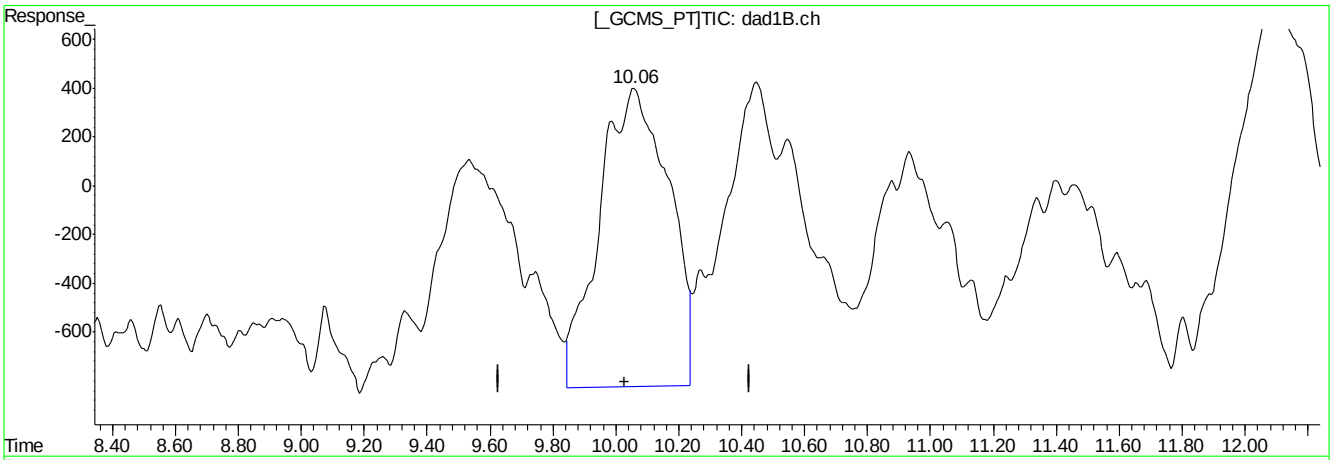
FA56228

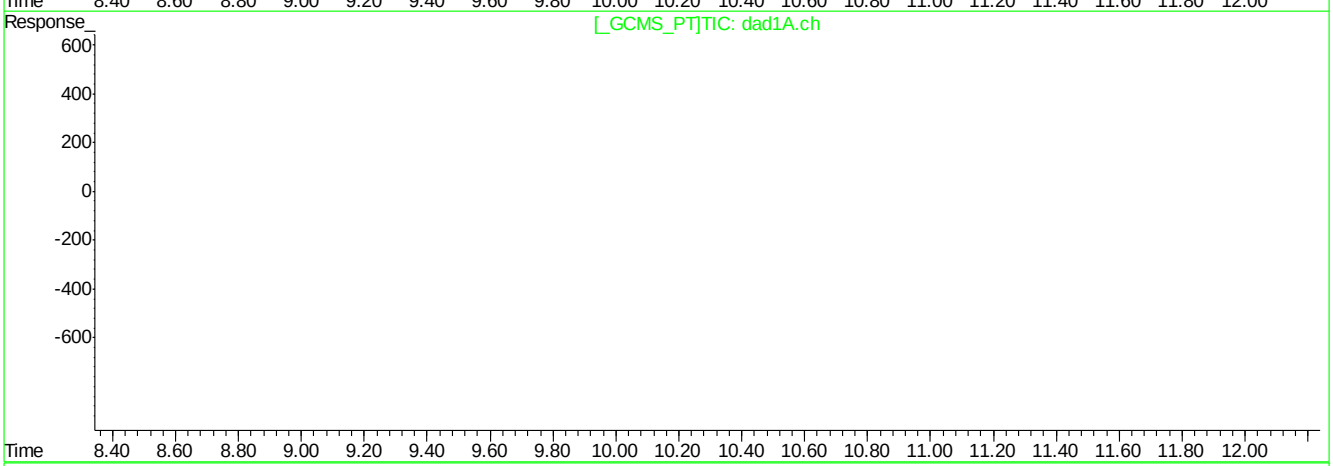
BB060201.D edits: 2,4,6-Trinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.06min 47.790ppb m

response 187189

(12) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb

response 0

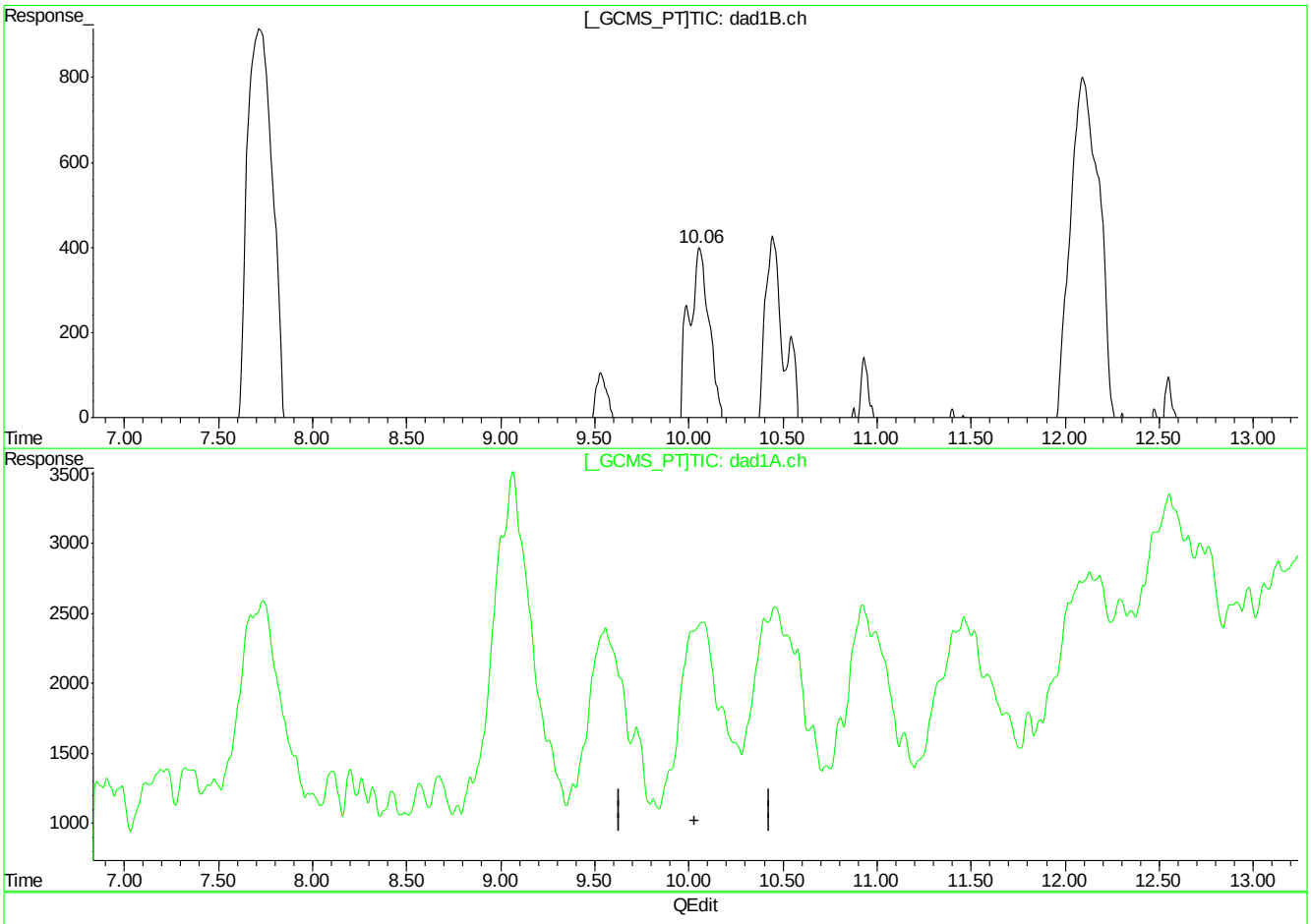
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:27:12 2018

BB060201.D edits: 2,4,6-Trinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

10.06min 48.523ppb m

response 190062

(12) 2,4,6-Trinitrotoluene #2

0.00min 0.000ppb

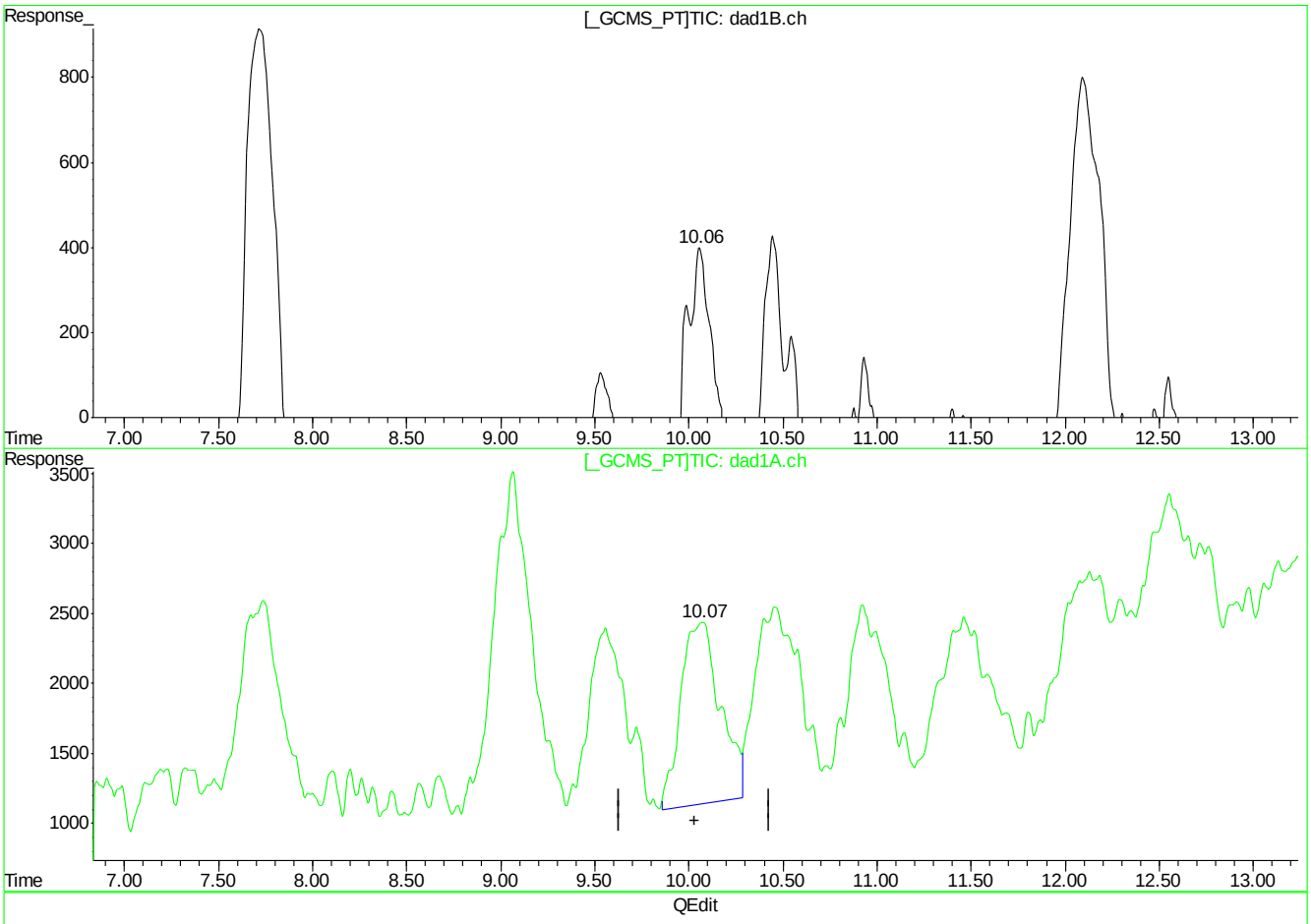
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:27:57 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

10.06min 48.523ppb m

response 190062

(12) 2,4,6-Trinitrotoluene #2

10.07min 44.442ppb m

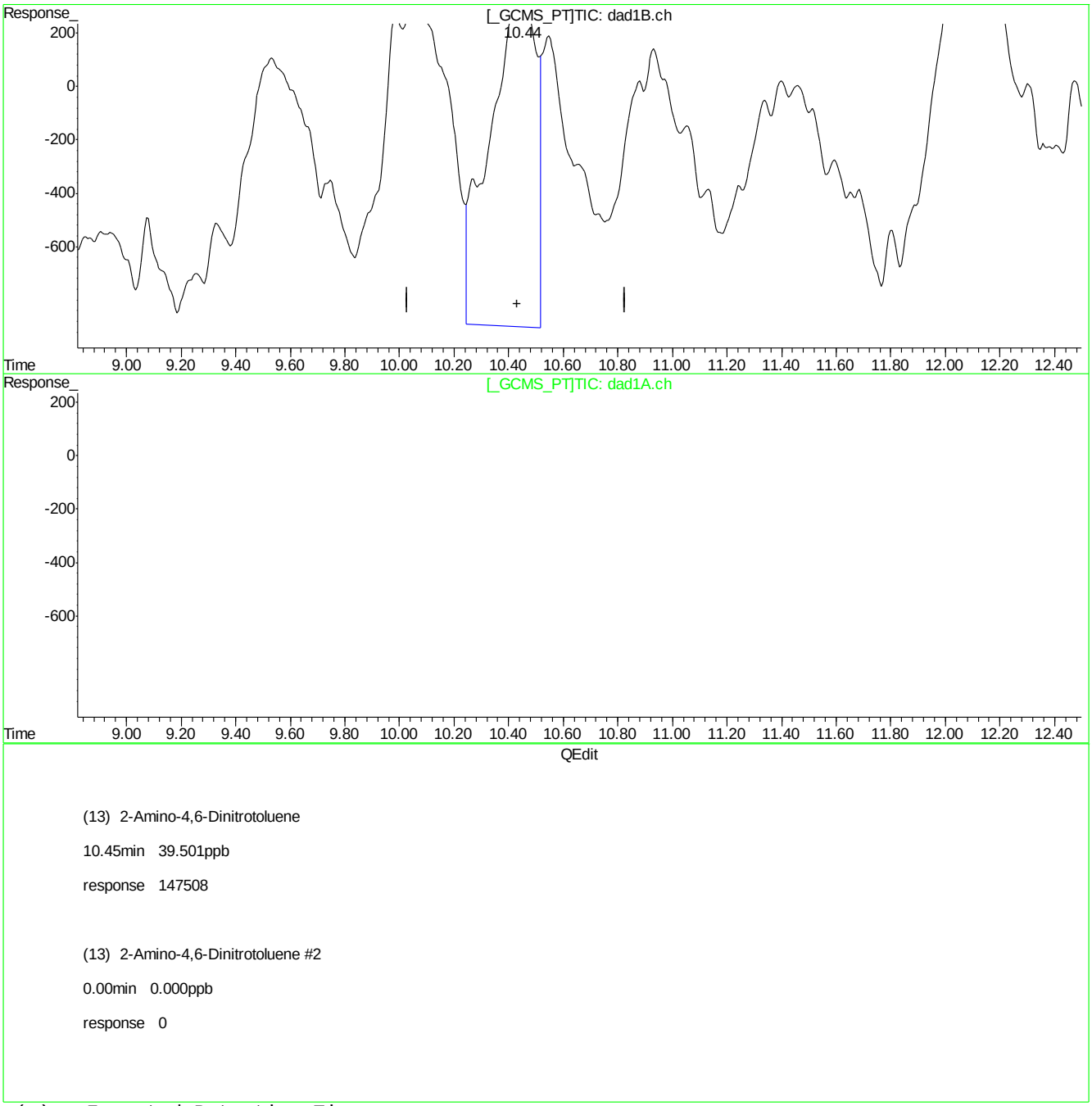
response 190046

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:28:05 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.45min 39.501ppb

response 147508

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

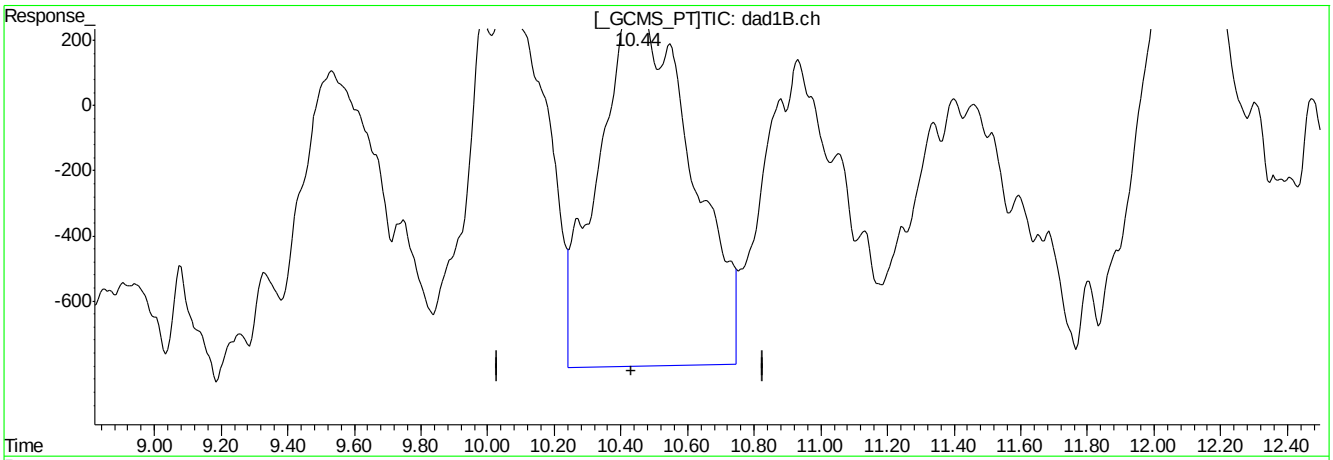
response 0

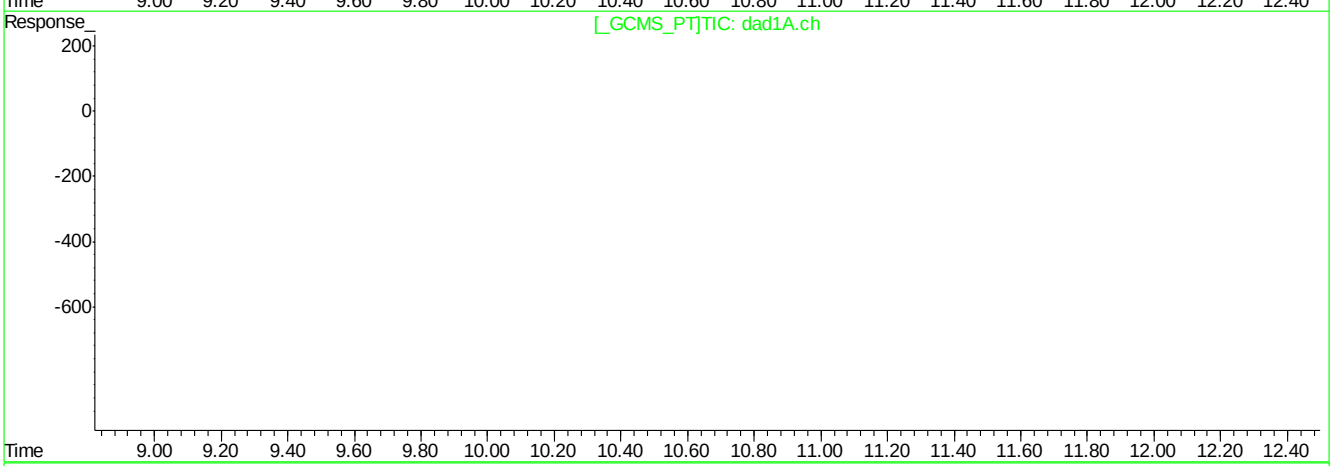
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:28:14 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.44min 58.208ppb m

response 217365

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:28:22 2018

9.5.2.23

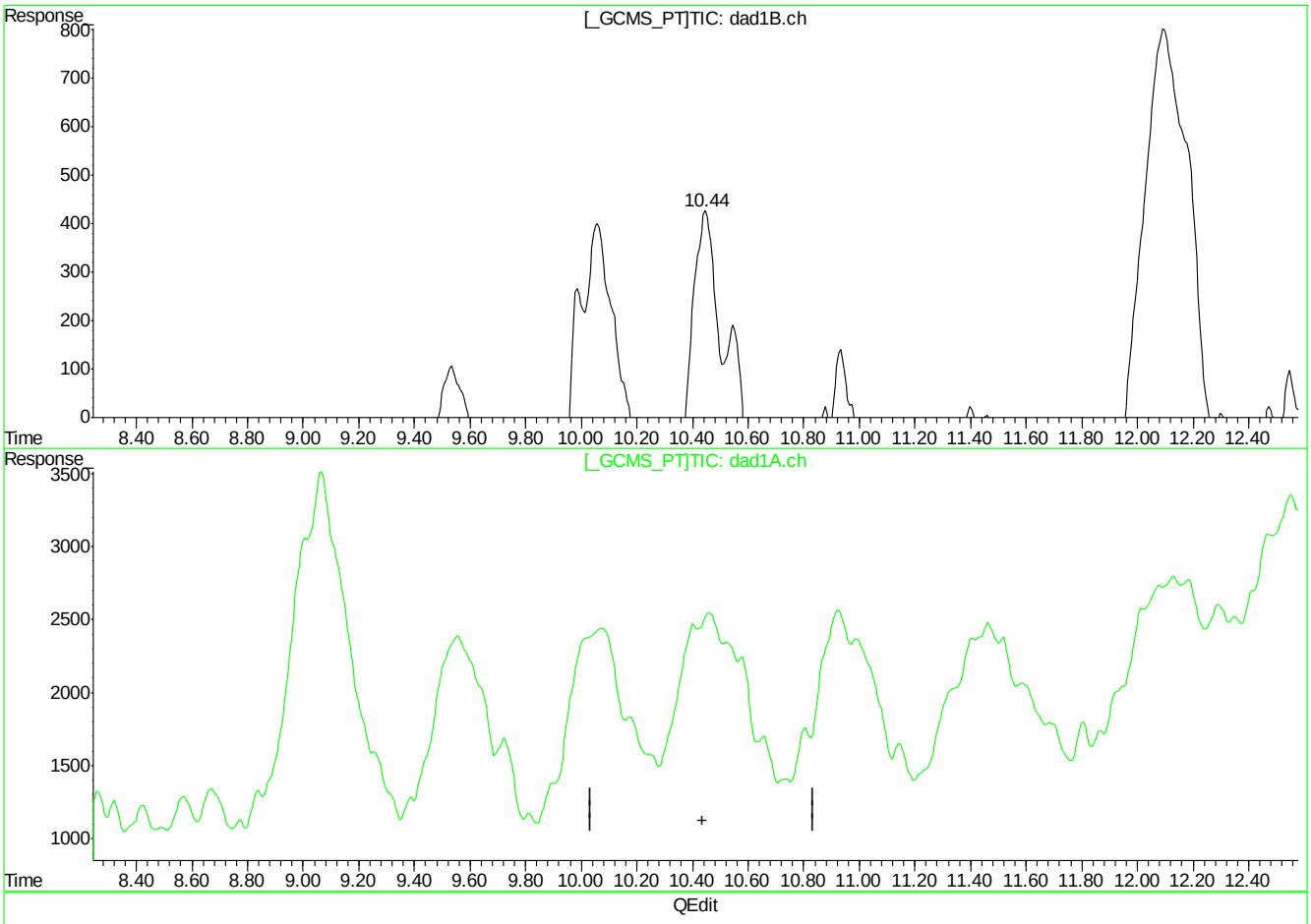
9

BB060201.D edits: 2-Amino-4,6-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.44min 58.208ppb m

response 217365

(13) 2-Amino-4,6-Dinitrotoluene #2

0.00min 0.000ppb

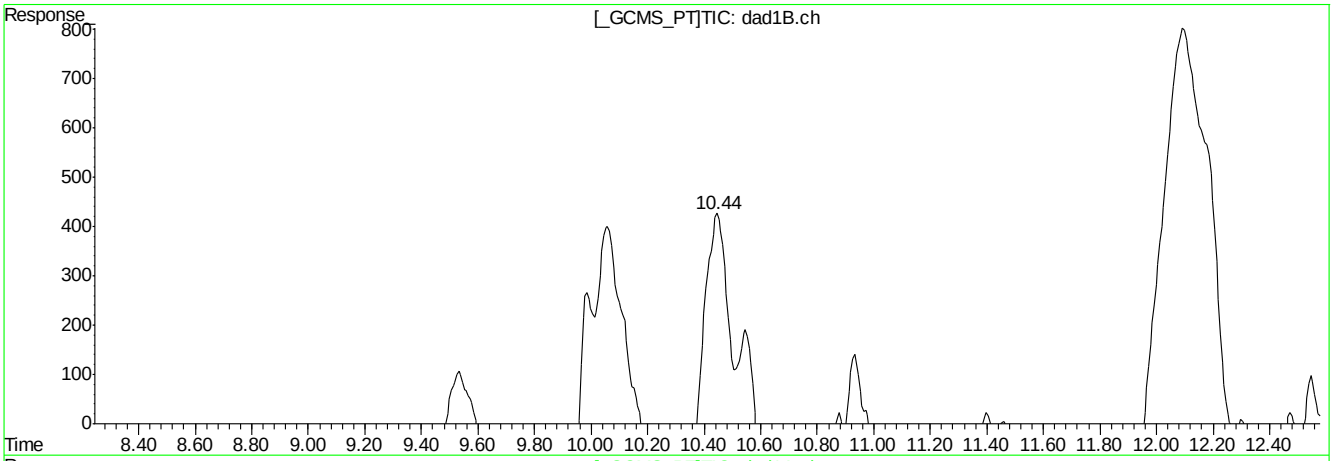
response 0

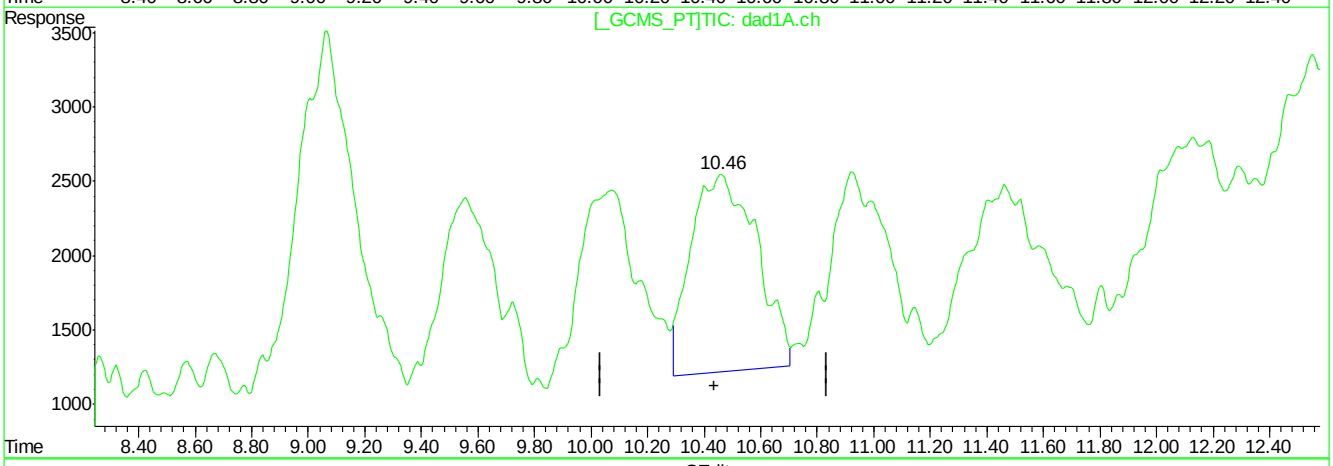
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:28:25 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.44min 58.208ppb m

response 217365

(13) 2-Amino-4,6-Dinitrotoluene #2

10.46min 38.227ppb m

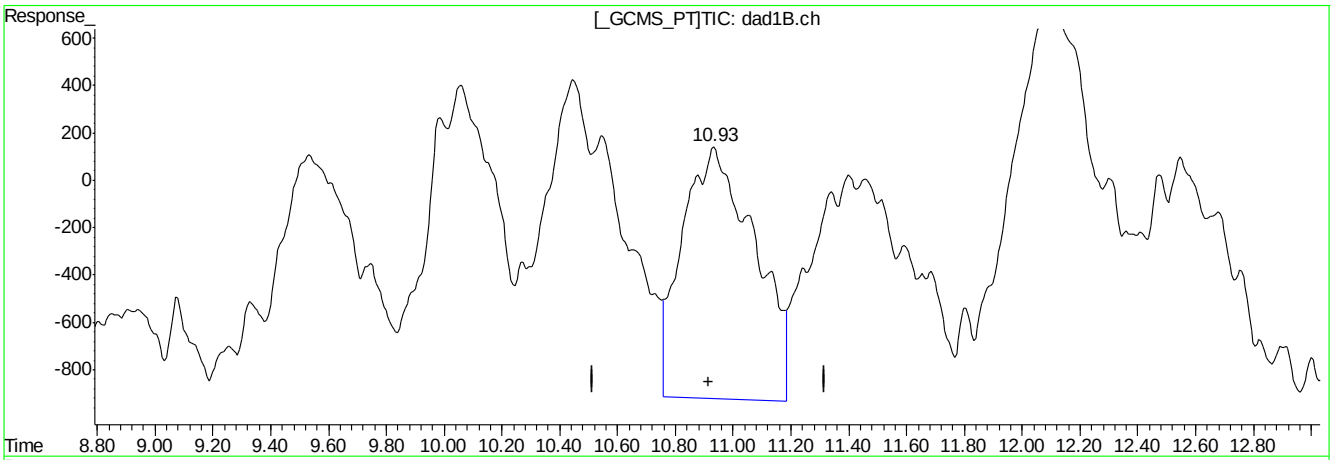
response 214056

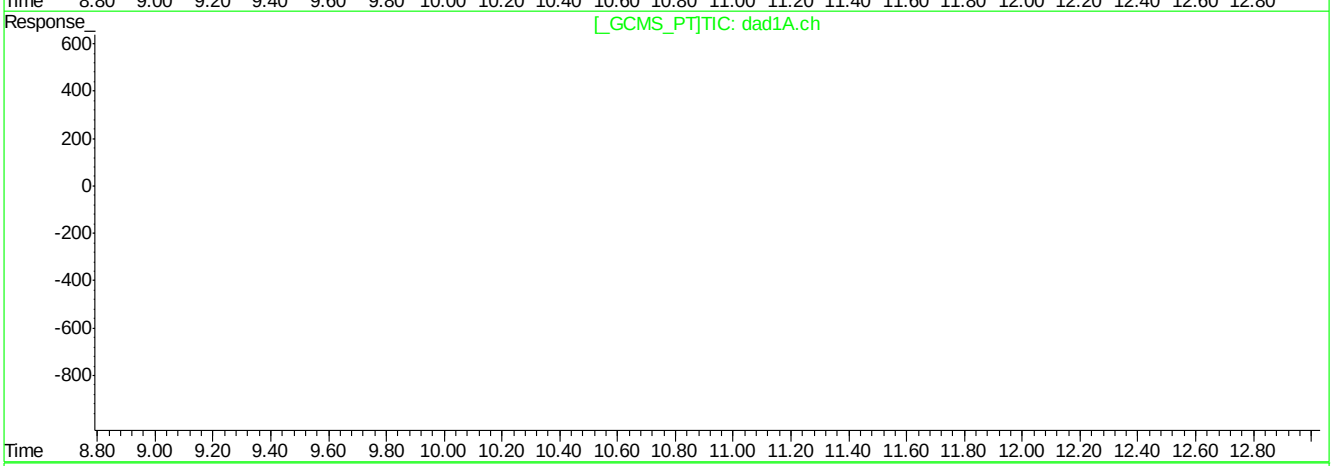
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:28:37 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.93min 70.216ppb

response 185286

(14) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb

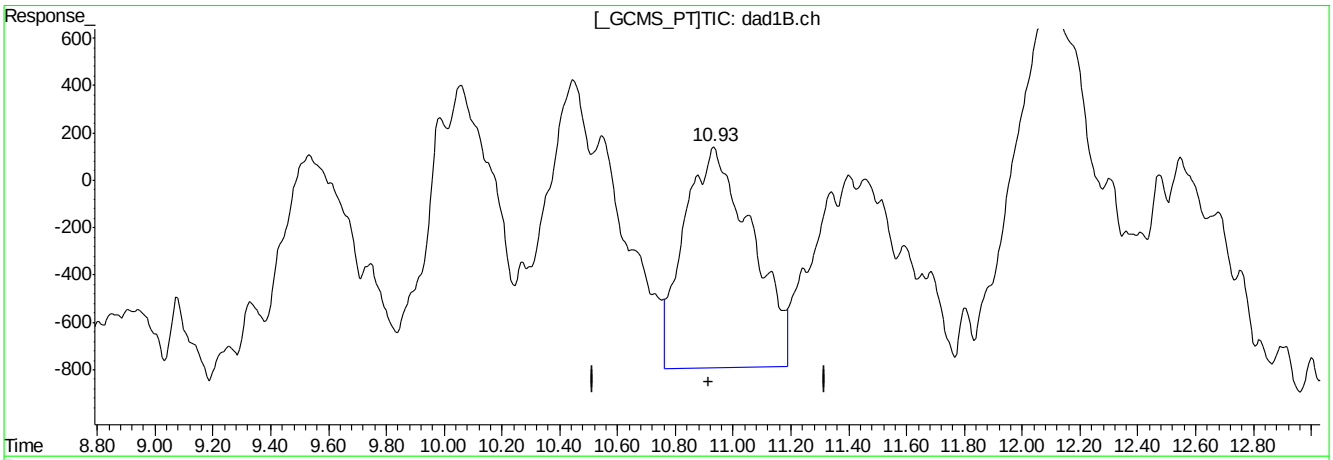
response 0

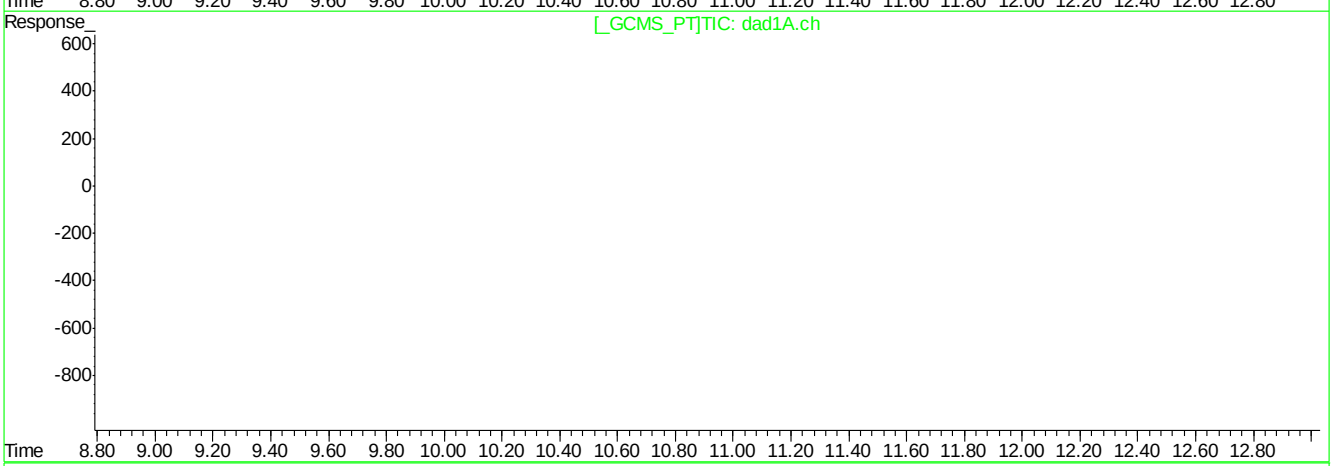
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:29:26 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.93min 57.302ppb m

response 151170

(14) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb

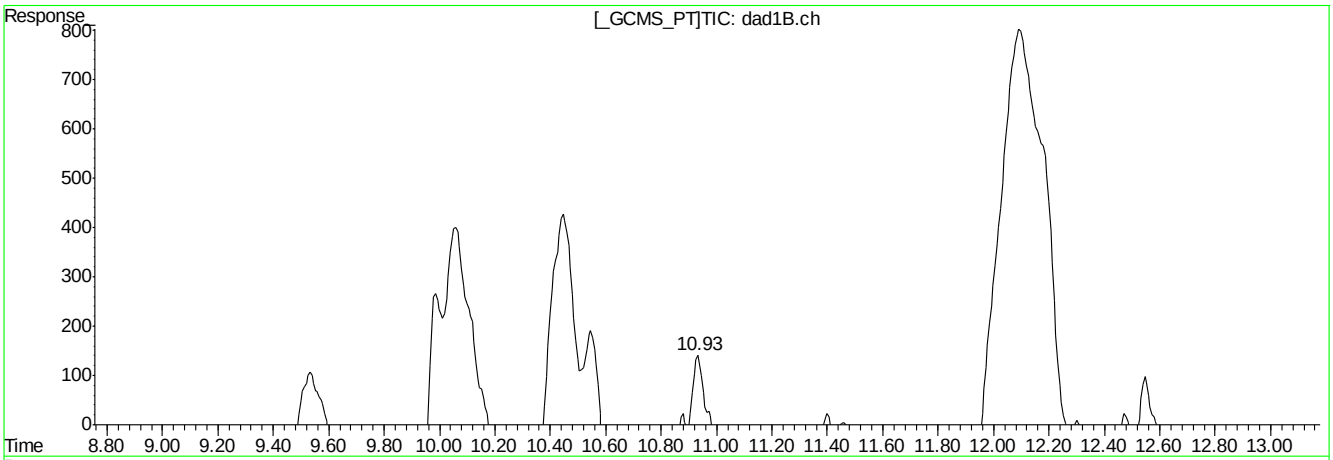
response 0

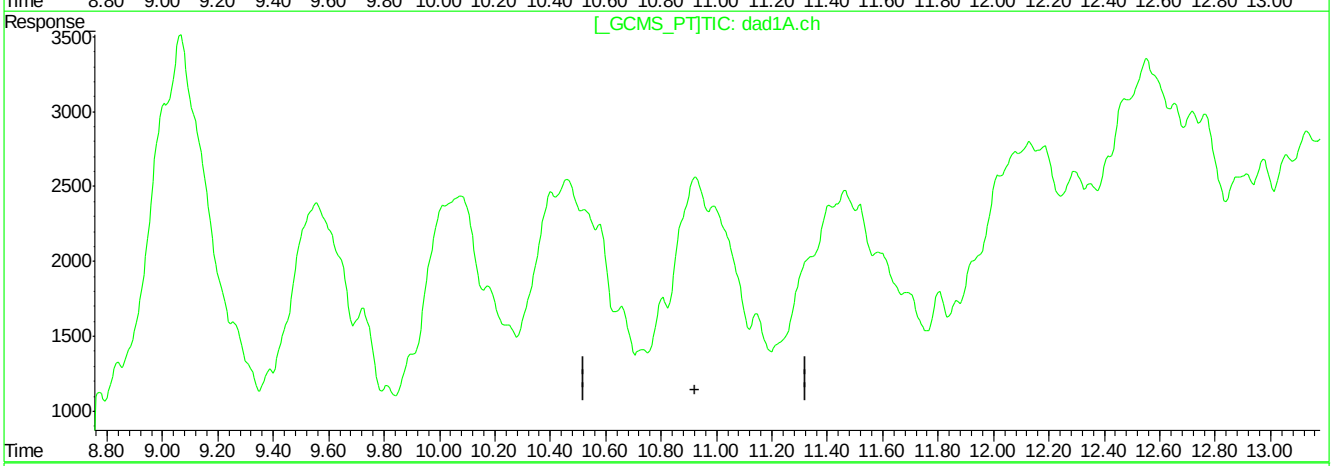
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:29:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.93min 57.302ppb m

response 151170

(14) 4-Amino-2,6-Dinitrotoluene #2

0.00min 0.000ppb

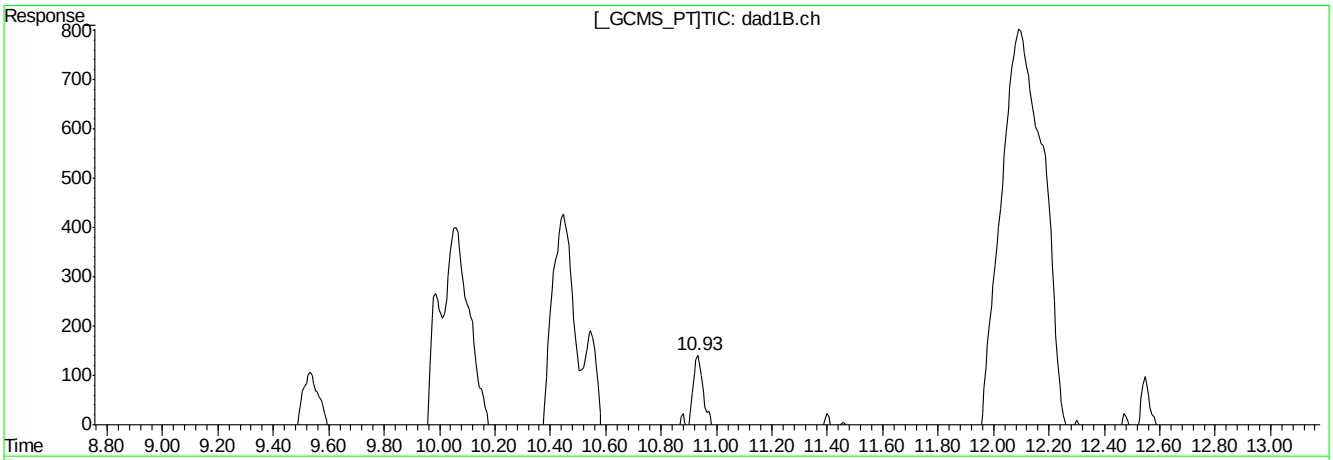
response 0

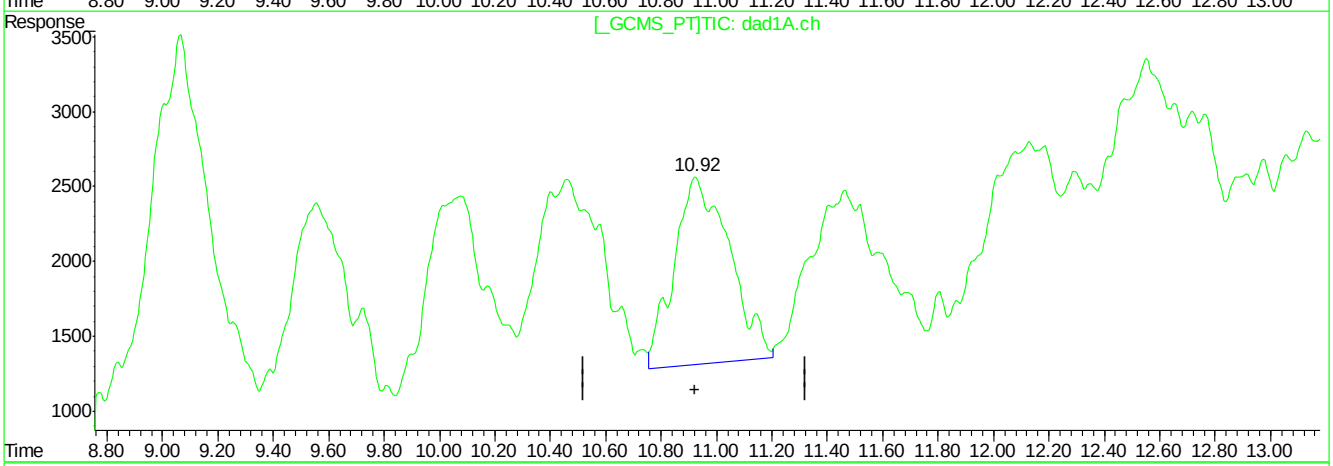
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:29:41 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.93min 57.302ppb m

response 151170

(14) 4-Amino-2,6-Dinitrotoluene #2

10.92min 32.370ppb m

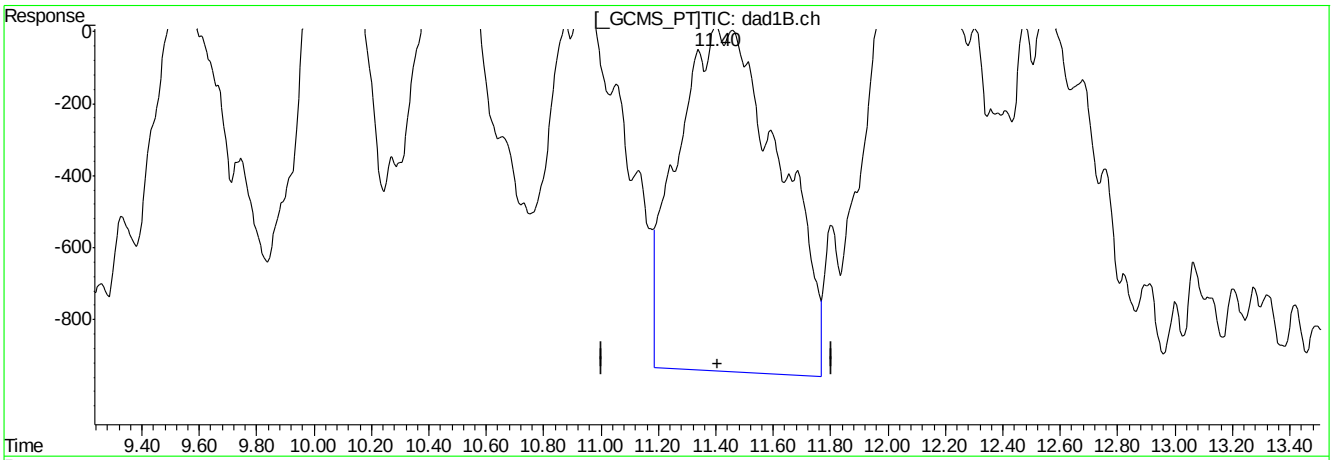
response 172539

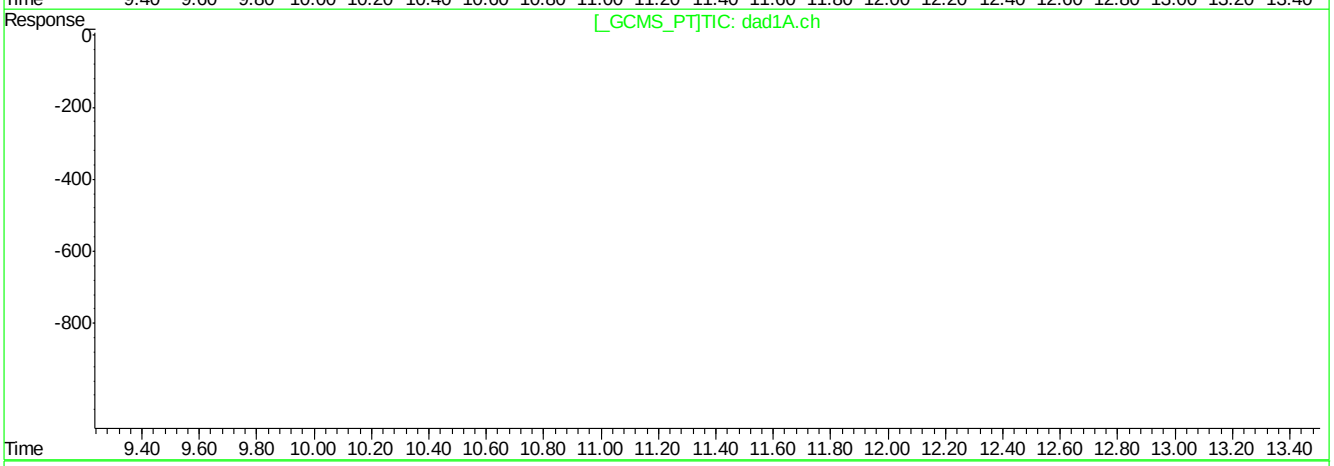
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:29:50 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.40min 94.542ppb

response 235270

(15) 3,4-Dinitrotoluene #2 (S)

0.00min 0.000ppb

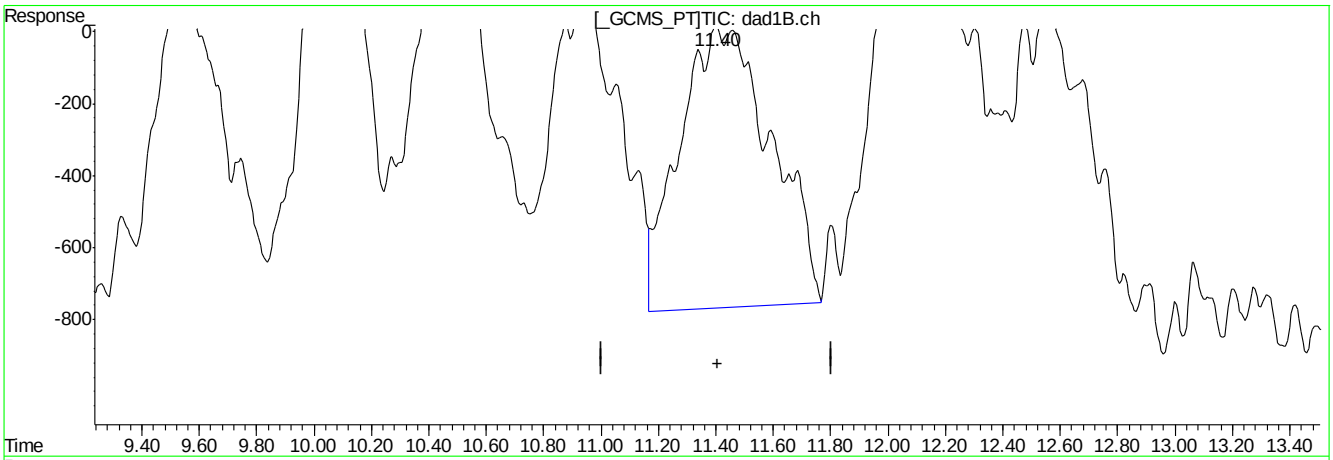
response 0

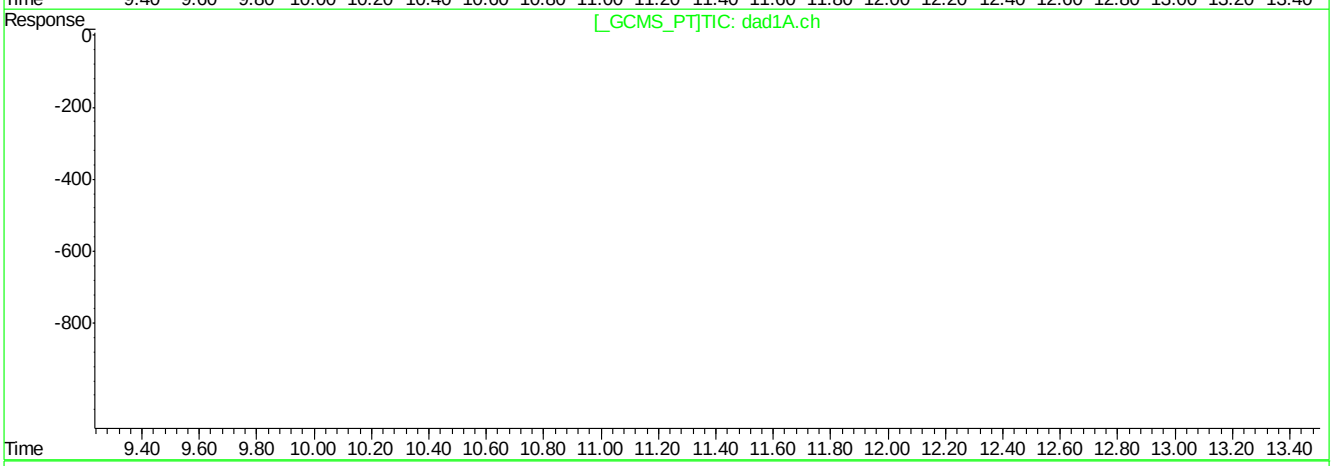
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:30:25 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.40min 70.107ppb m

response 174462

(15) 3,4-Dinitrotoluene #2 (S)

0.00min 0.000ppb

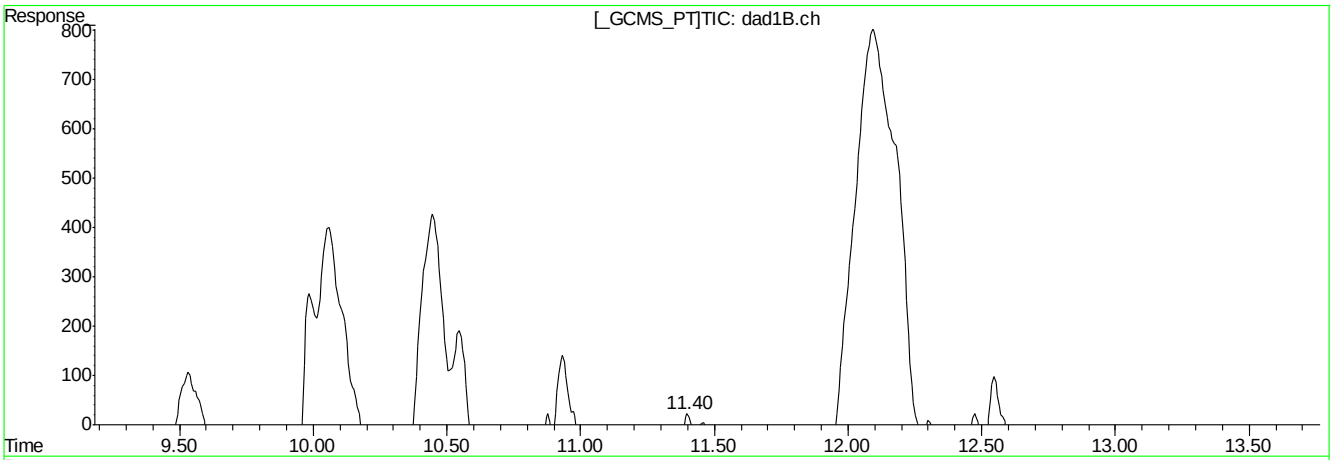
response 0

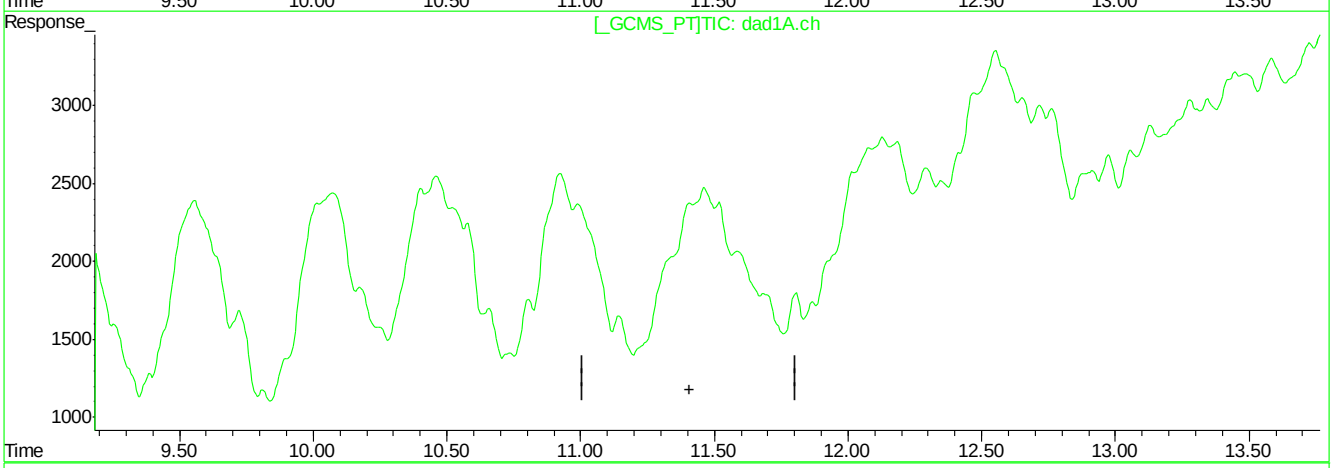
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:30:37 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.40min 70.107ppb m

response 174462

(15) 3,4-Dinitrotoluene #2 (S)

0.00min 0.000ppb

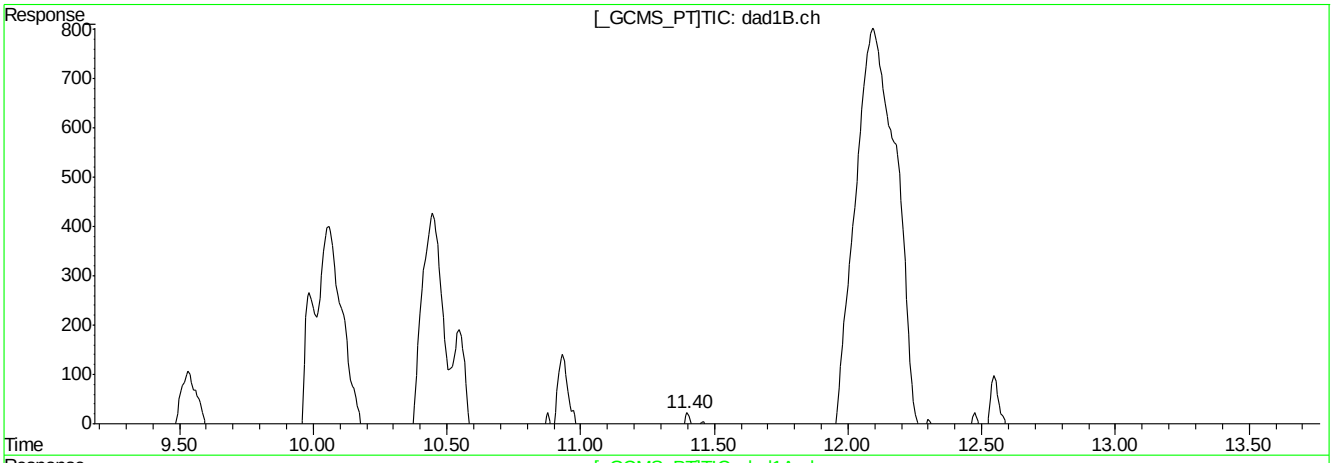
response 0

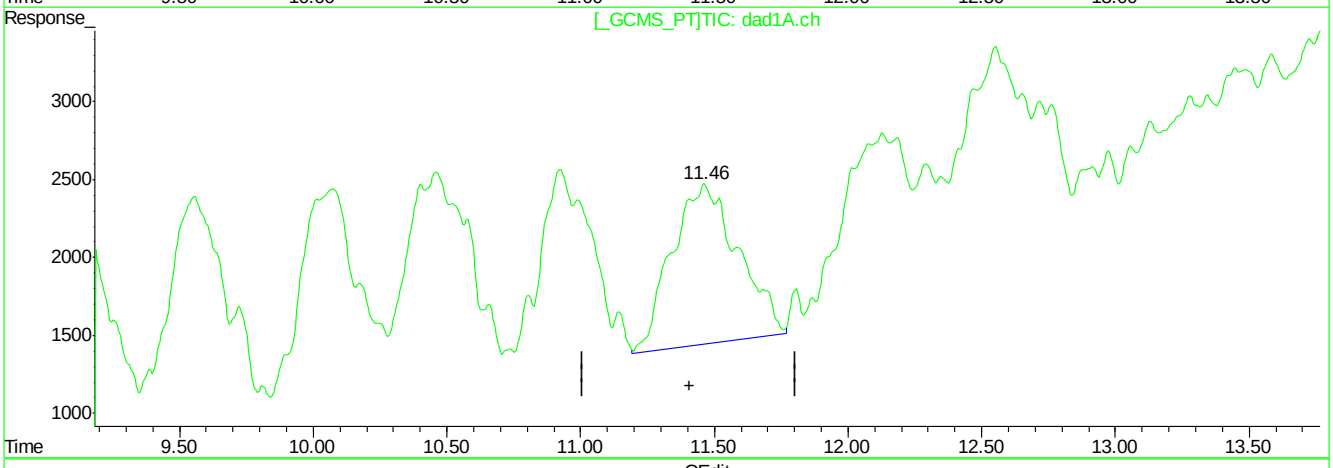
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:30:44 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.40min 70.107ppb m

response 174462

(15) 3,4-Dinitrotoluene #2 (S)

11.46min 42.241ppb m

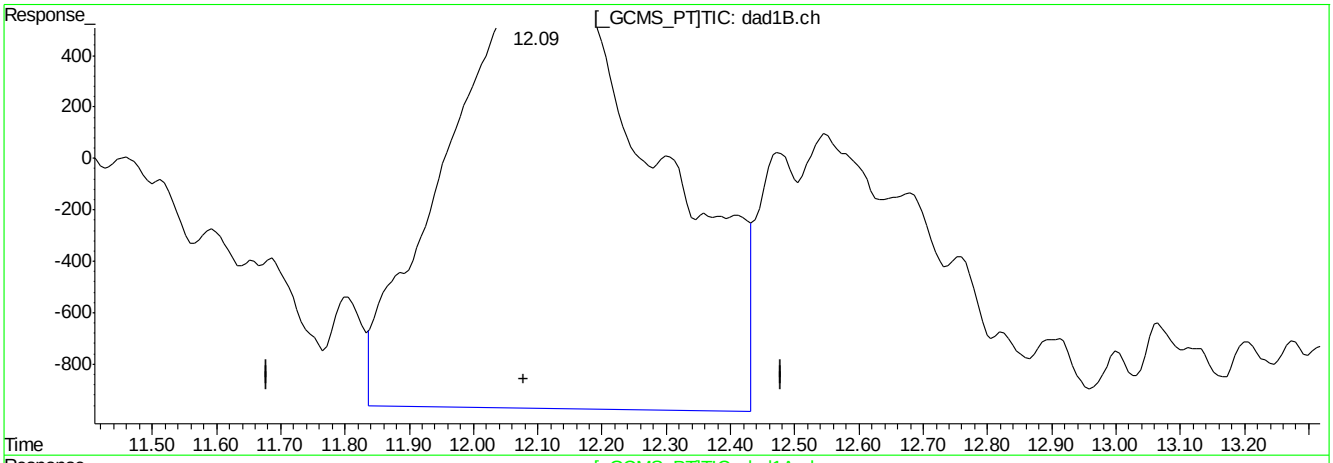
response 177673

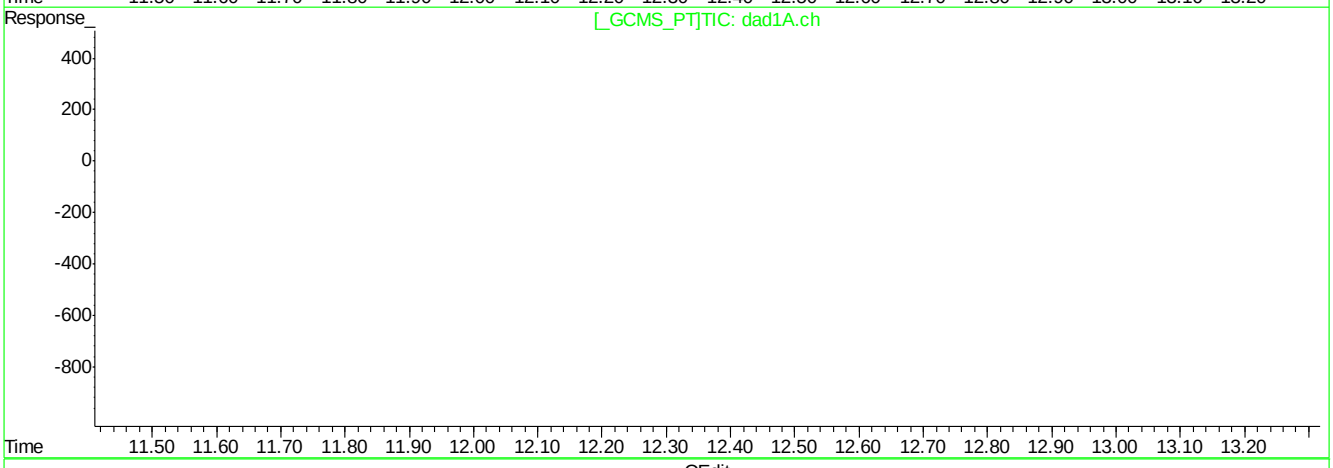
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:30:52 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.10min 74.949ppb

response 388847

(16) 2,4-Dinitrotoluene #2

0.00min 0.000ppb

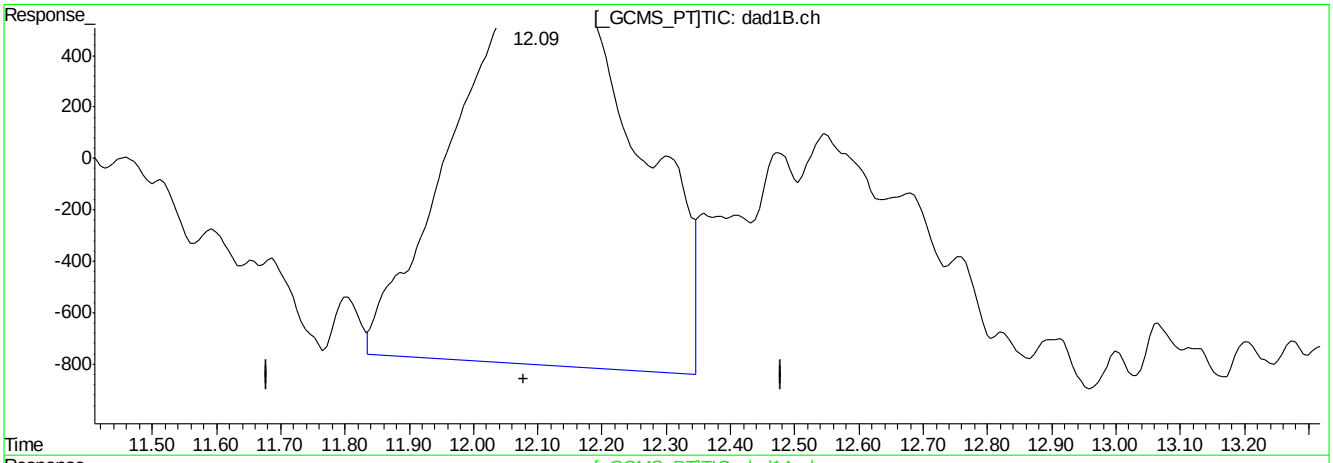
response 0

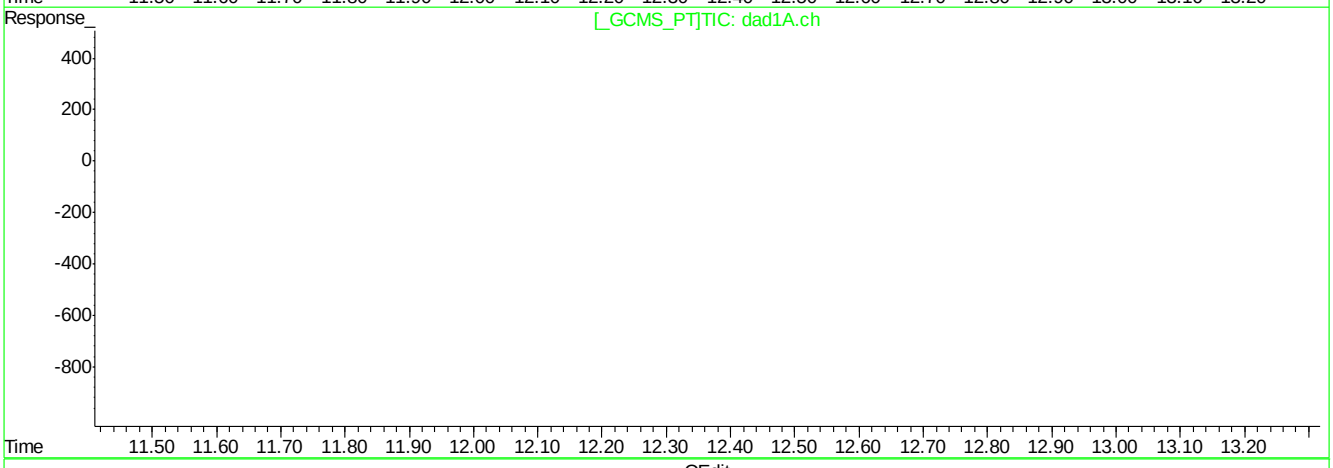
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:02 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.09min 57.126ppb m

response 296379

(16) 2,4-Dinitrotoluene #2

0.00min 0.000ppb

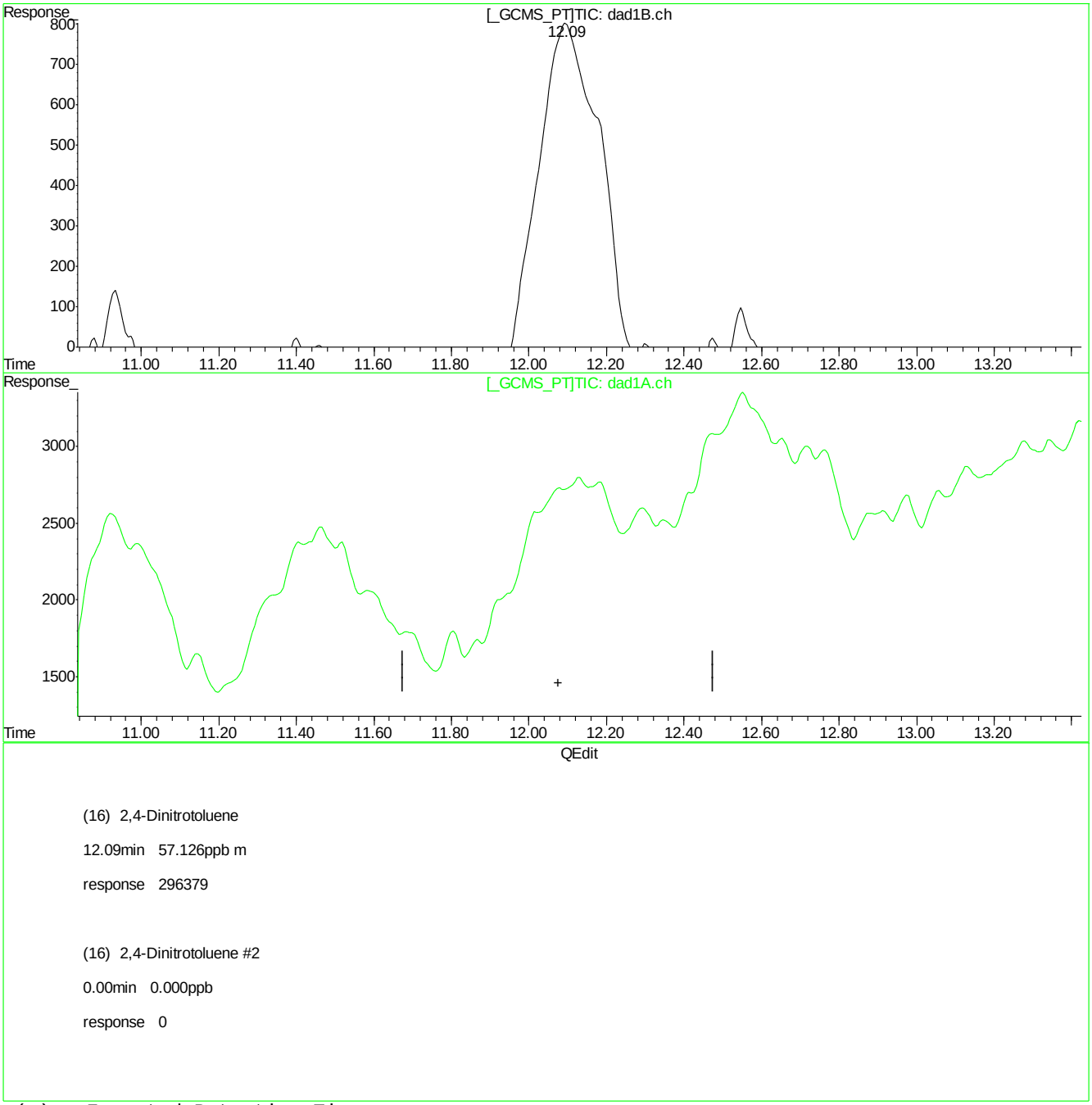
response 0

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:11 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration

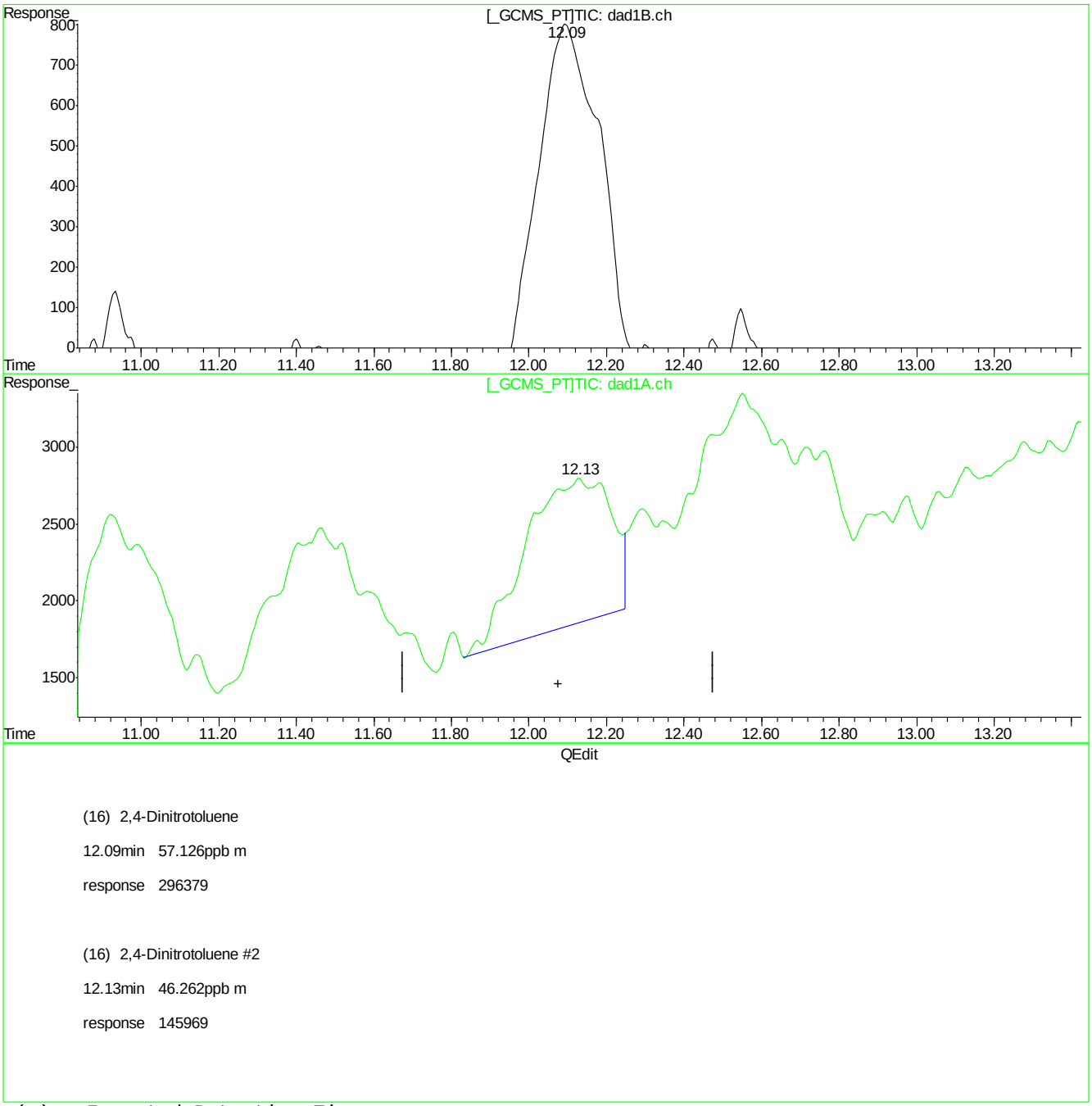


(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:15 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(16) 2,4-Dinitrotoluene

12.09min 57.126ppb m

response 296379

(16) 2,4-Dinitrotoluene #2

12.13min 46.262ppb m

response 145969

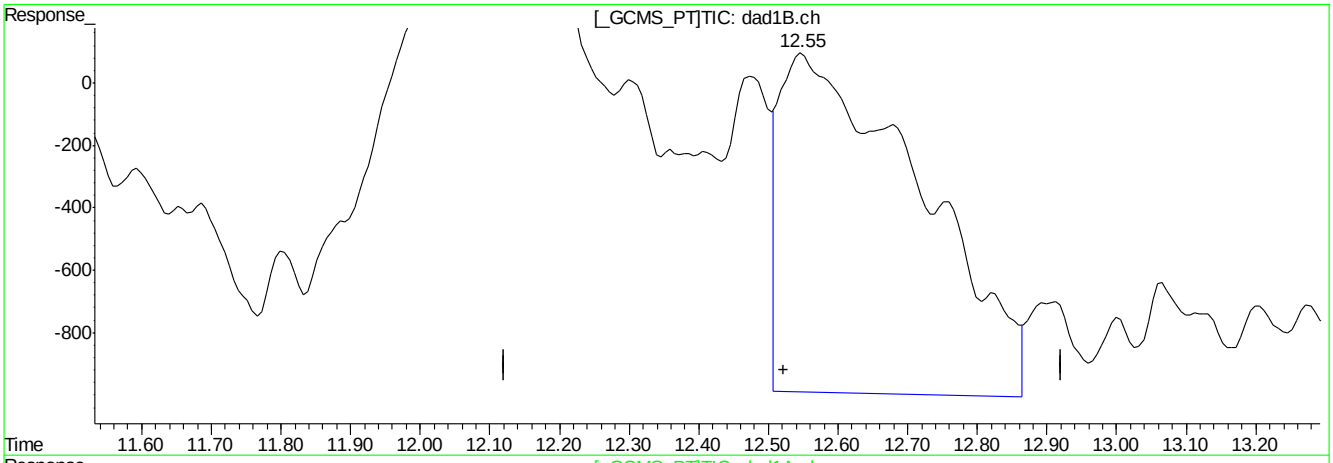
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:26 2018

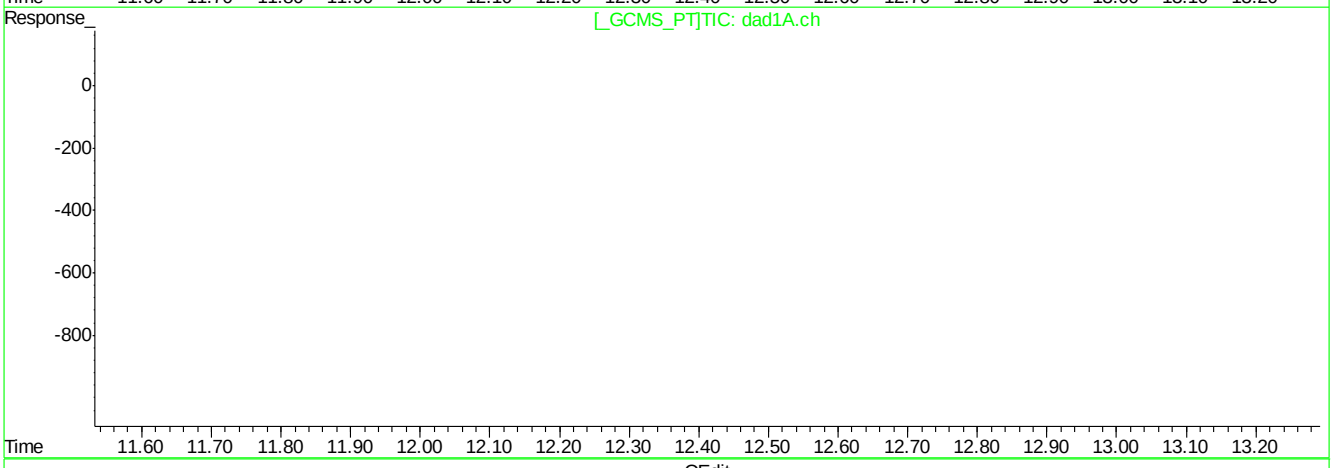
BB060201.D edits: 2,4-Dinitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 52.561ppb

response 154484

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

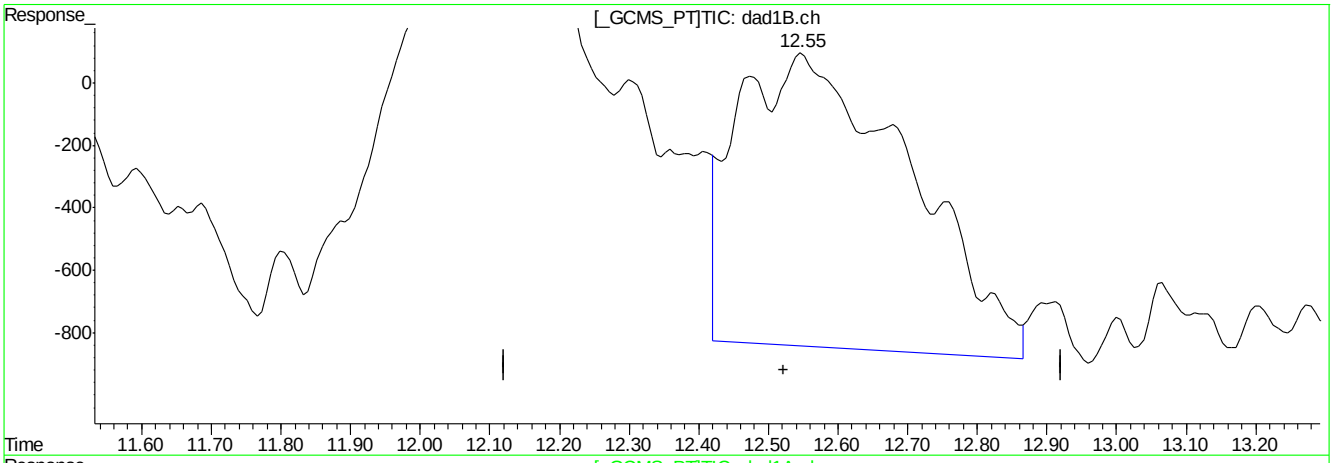
response 0

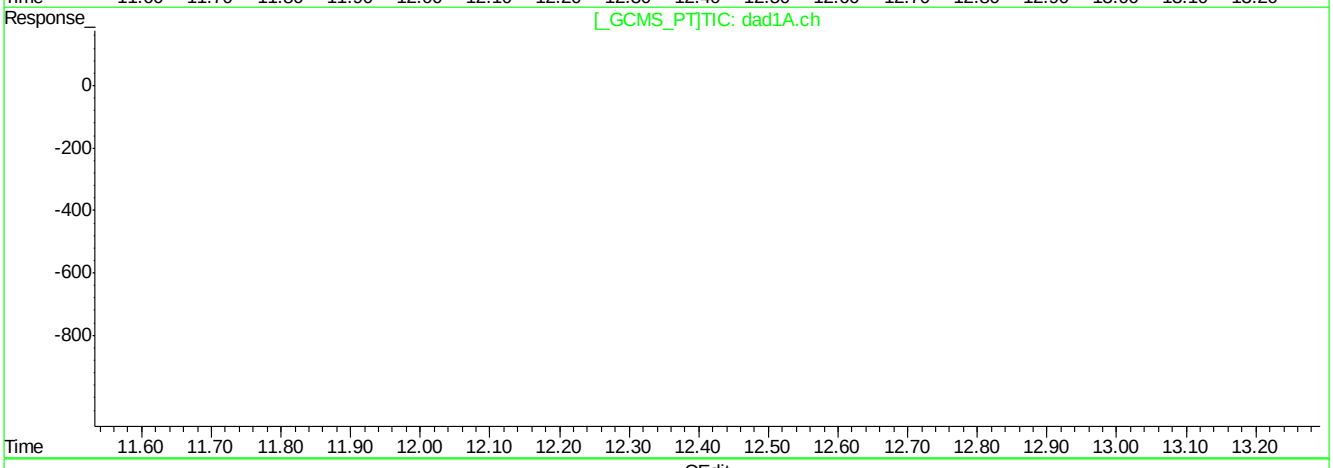
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:34 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 55.194ppb m

response 162232

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

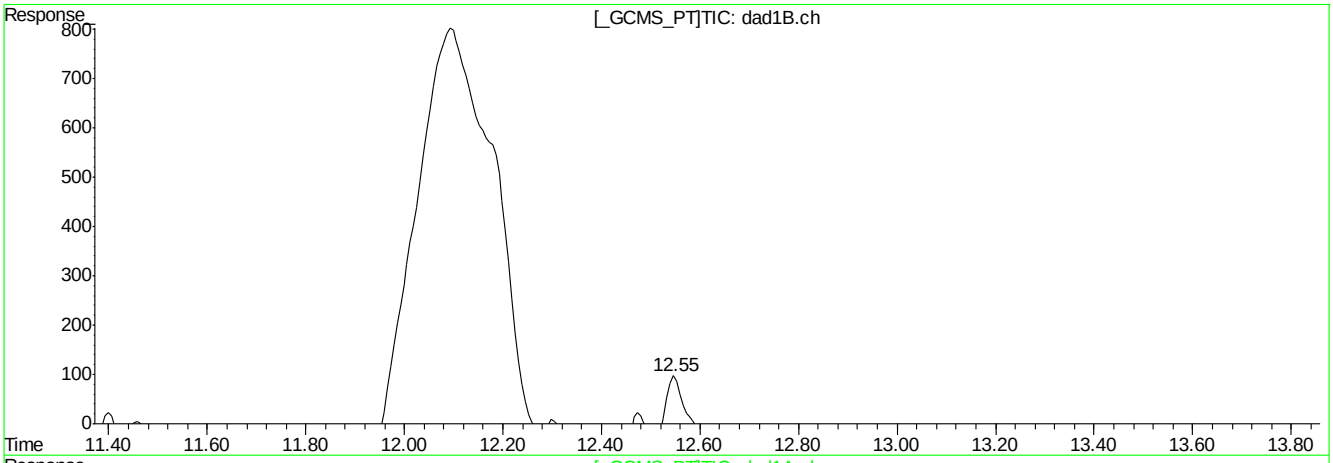
response 0

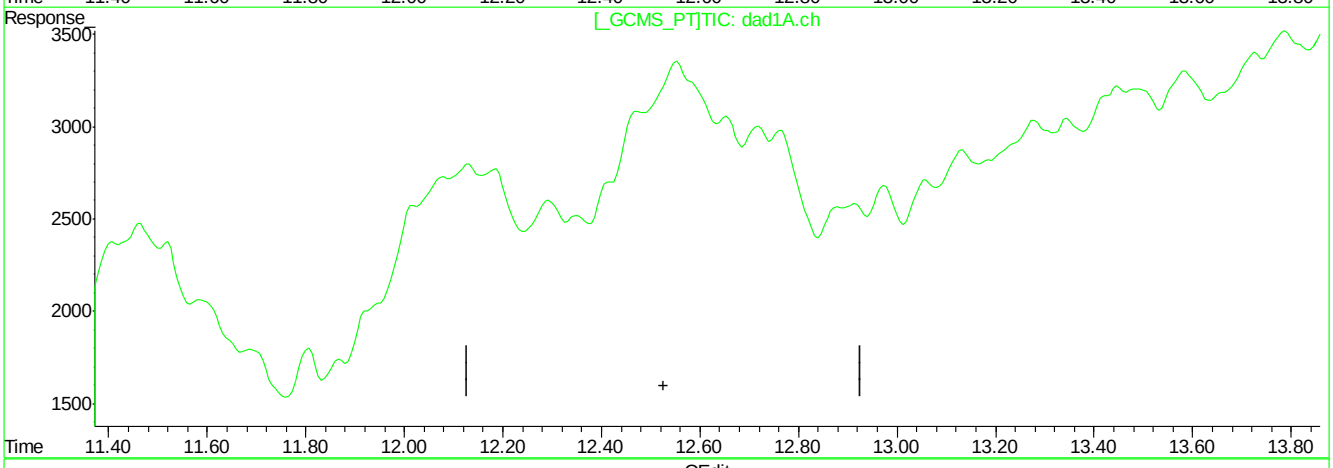
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:40 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 55.194ppb m

response 162232

(17) 2,6-Dinitrotoluene #2

0.00min 0.000ppb

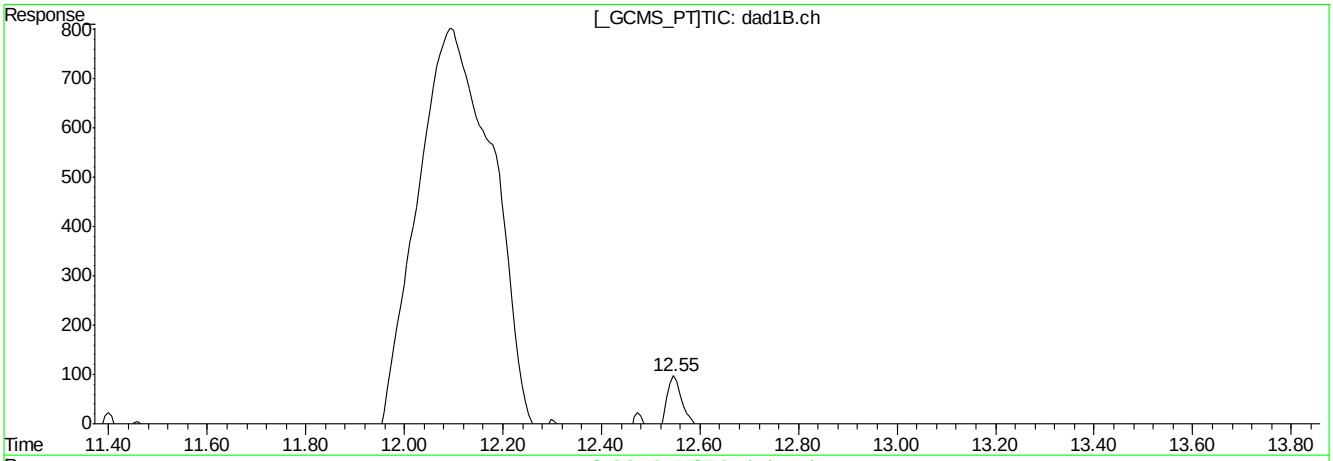
response 0

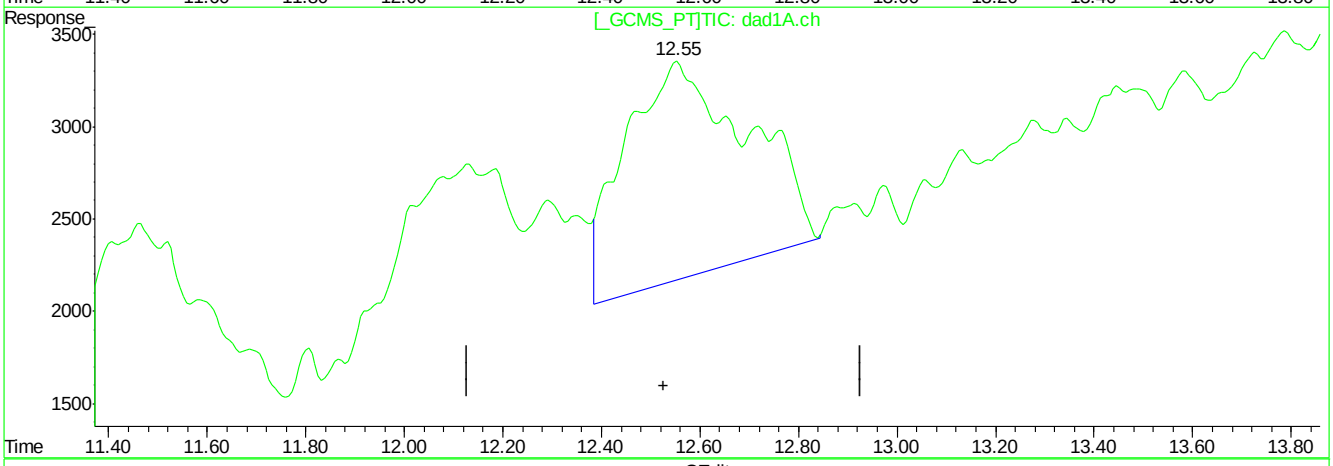
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:45 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 55.194ppb m

response 162232

(17) 2,6-Dinitrotoluene #2

12.55min 55.448ppb m

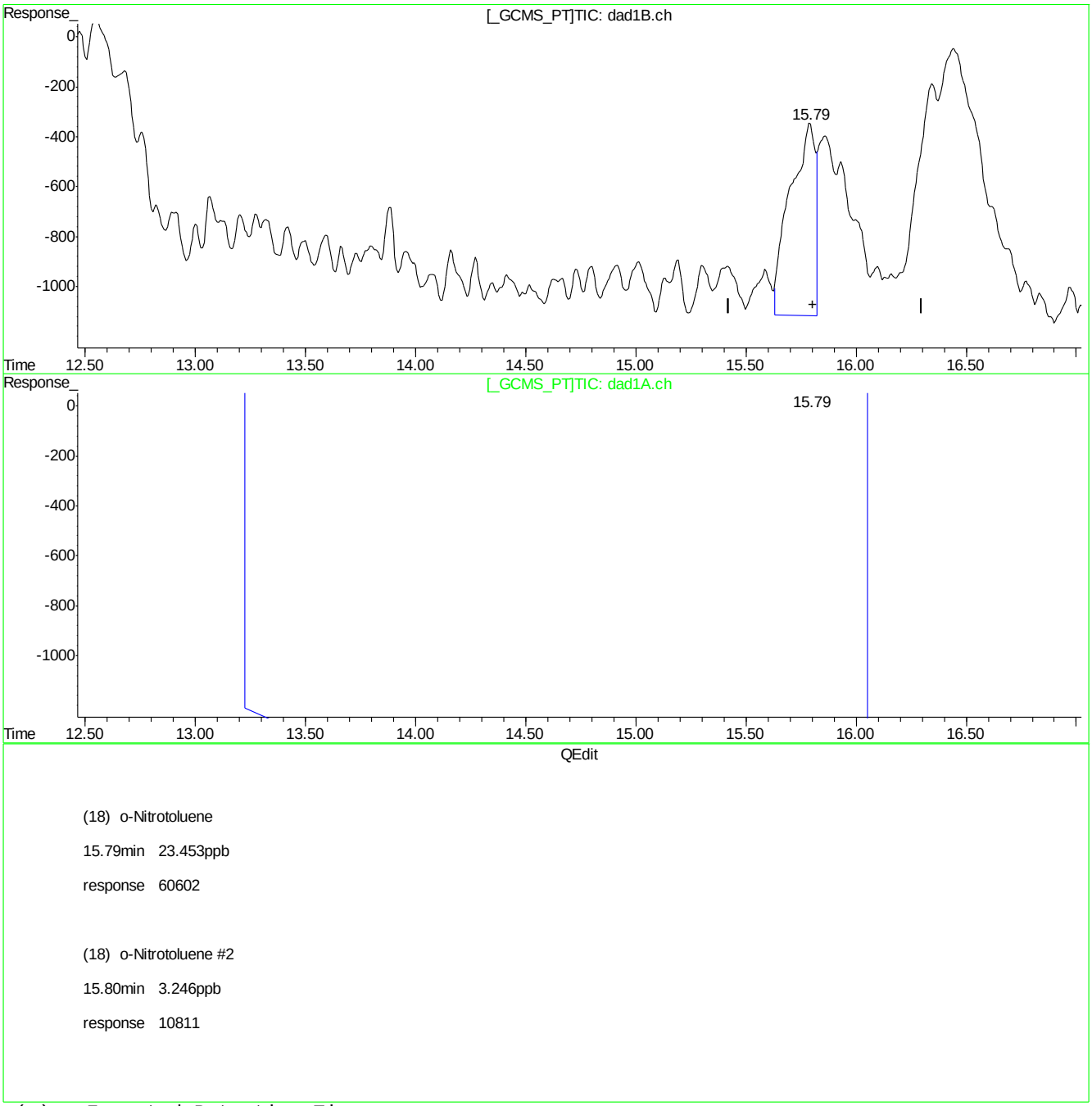
response 204595

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:31:52 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.79min 23.453ppb

response 60602

(18) o-Nitrotoluene #2

15.80min 3.246ppb

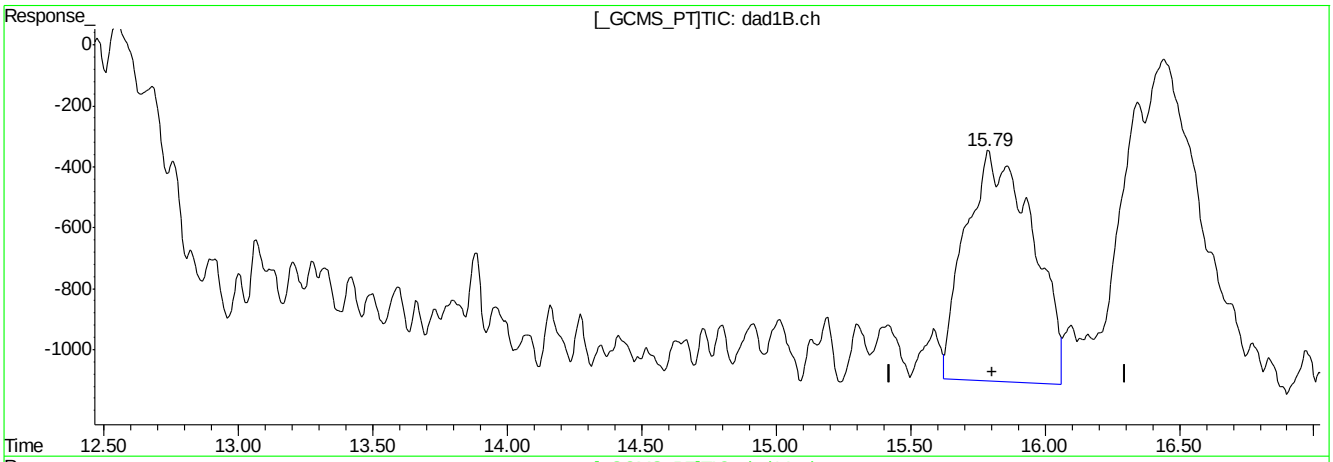
response 10811

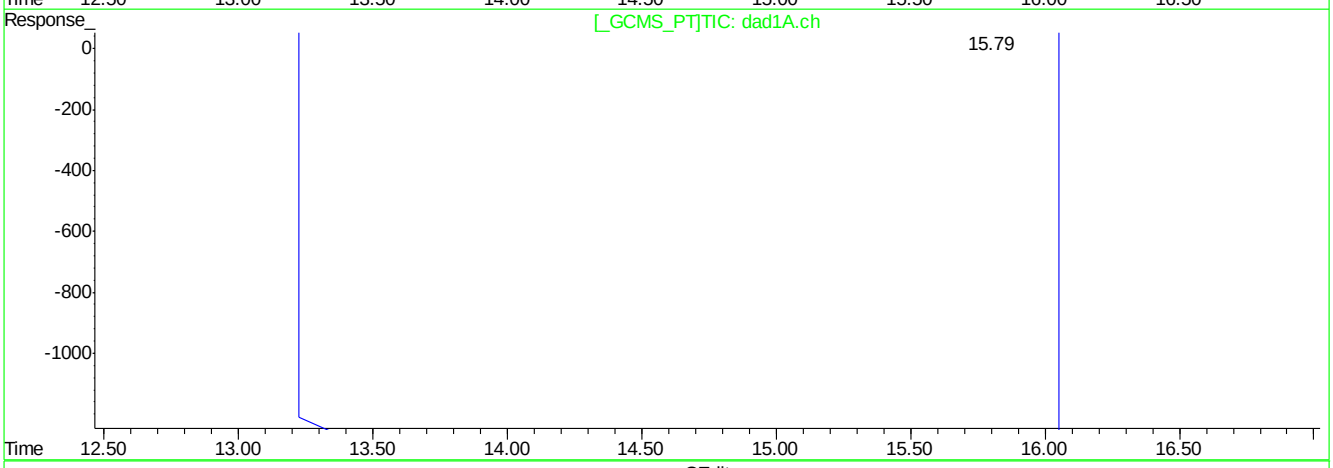
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:32:03 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.79min 50.748ppb m

response 131134

(18) o-Nitrotoluene #2

15.80min 3.246ppb

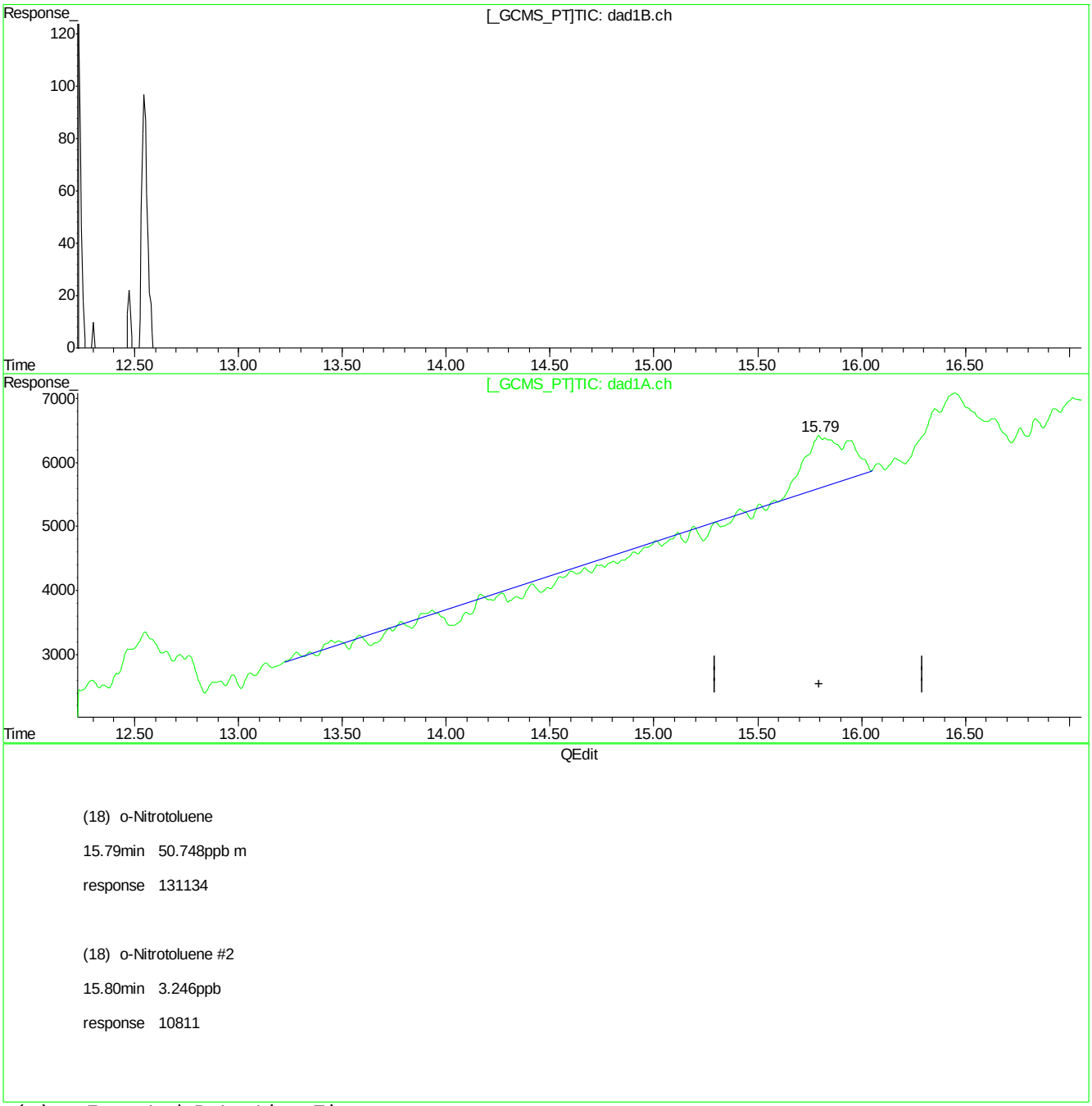
response 10811

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:32:12 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.79min 50.748ppb m

response 131134

(18) o-Nitrotoluene #2

15.80min 3.246ppb

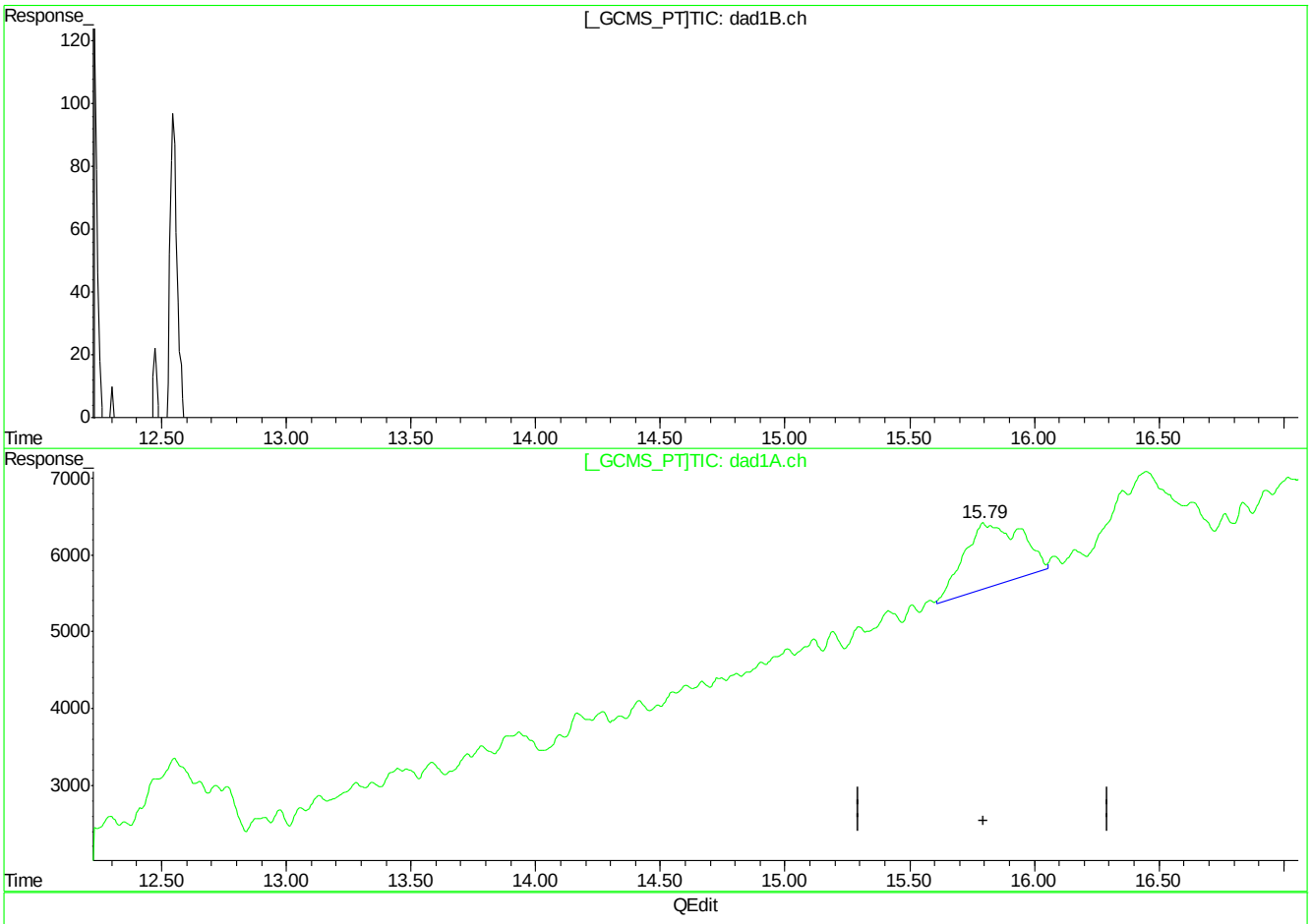
response 10811

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:32:16 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.79min 50.748ppb m

response 131134

(18) o-Nitrotoluene #2

15.79min 39.593ppb m

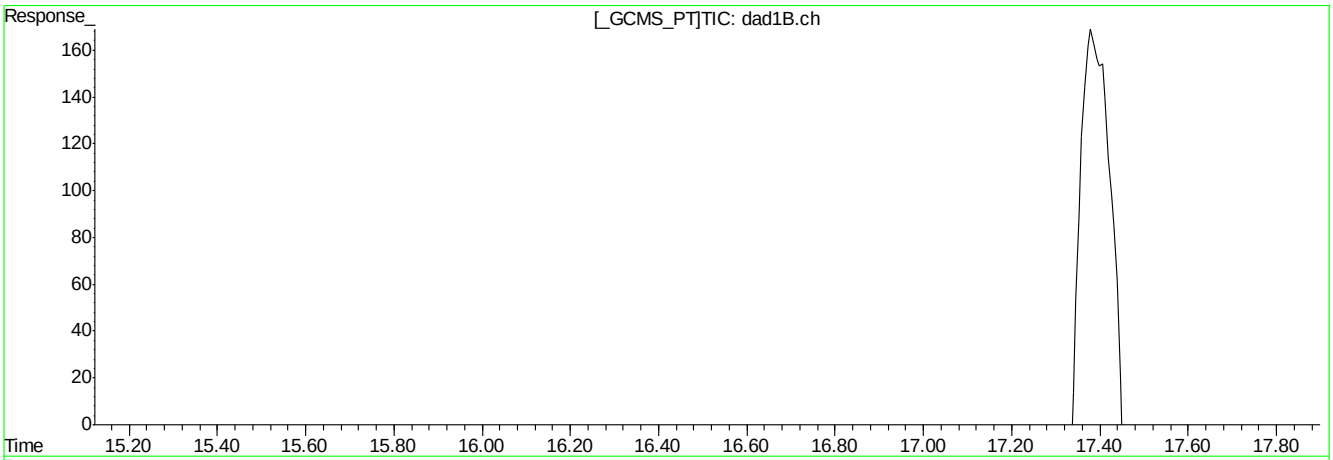
response 131880

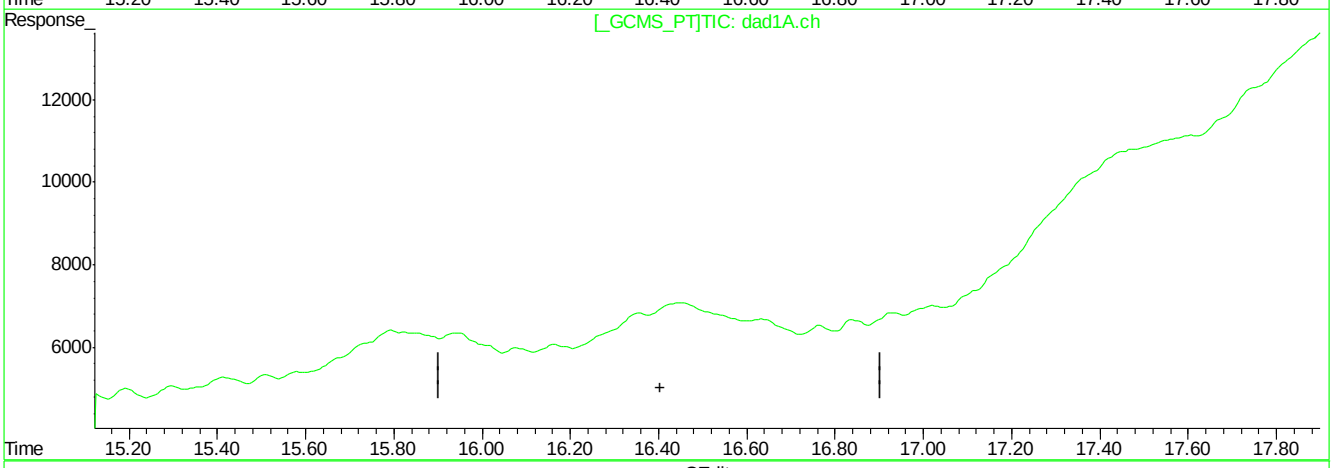
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:32:21 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.45min 56.312ppb

response 225031

(19) p-Nitrotoluene #2

0.00min 0.000ppb

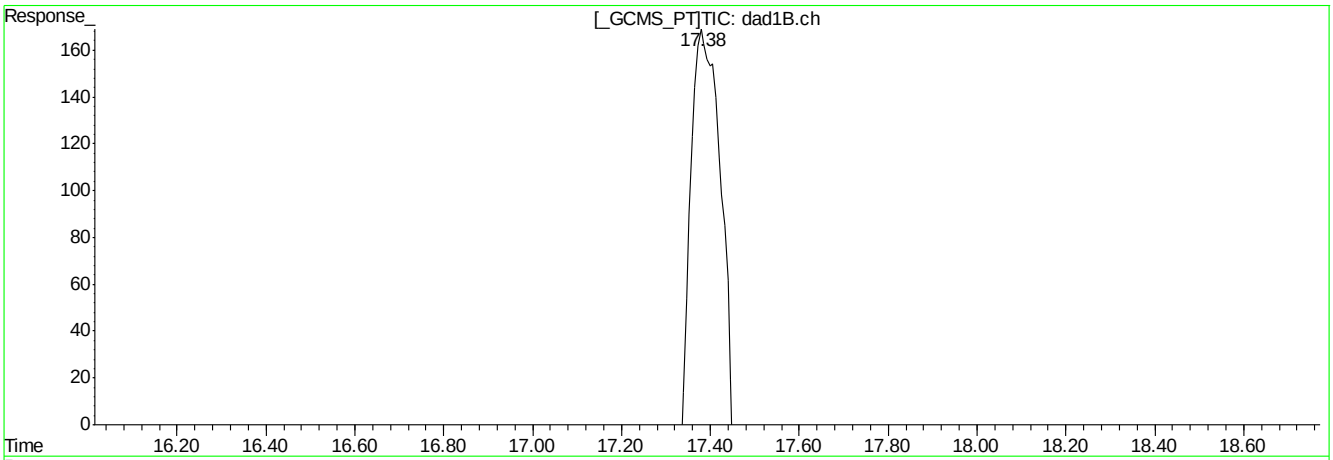
response 0

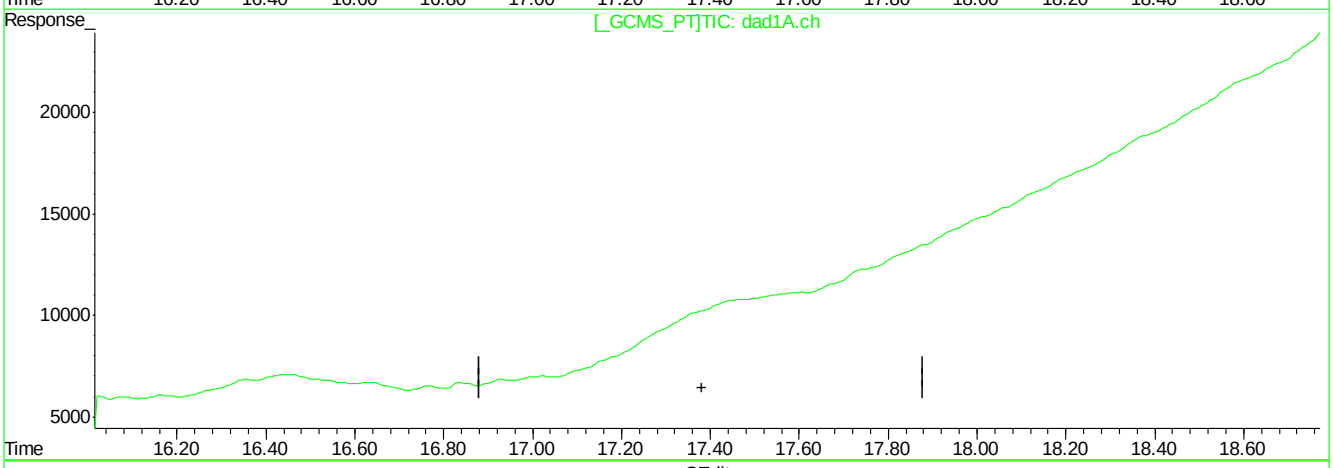
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:32:46 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.39min 76.996ppb

response 262604

(20) m-Nitrotoluene #2

0.00min 0.000ppb

response 0

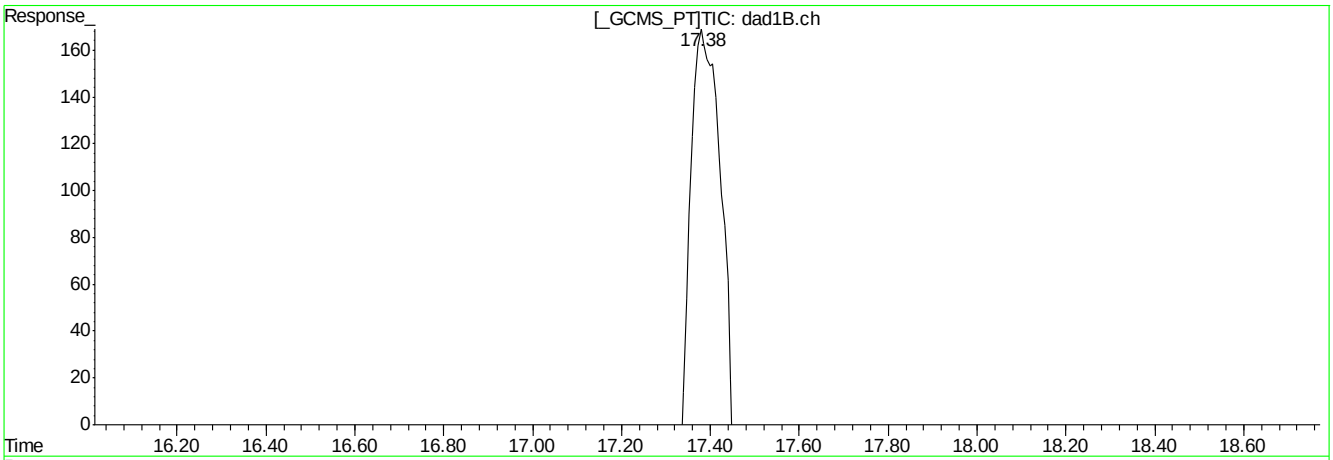
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:33:01 2018

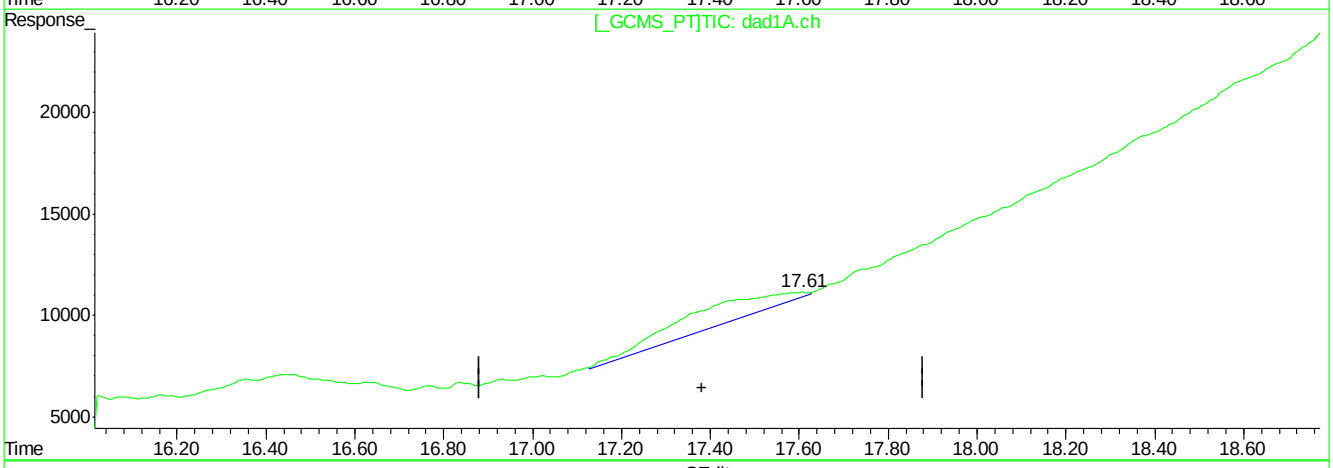
BB060201.D edits: m-Nitrotoluene

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.39min 76.996ppb

response 262604

(20) m-Nitrotoluene #2

17.61min 52.216ppb m

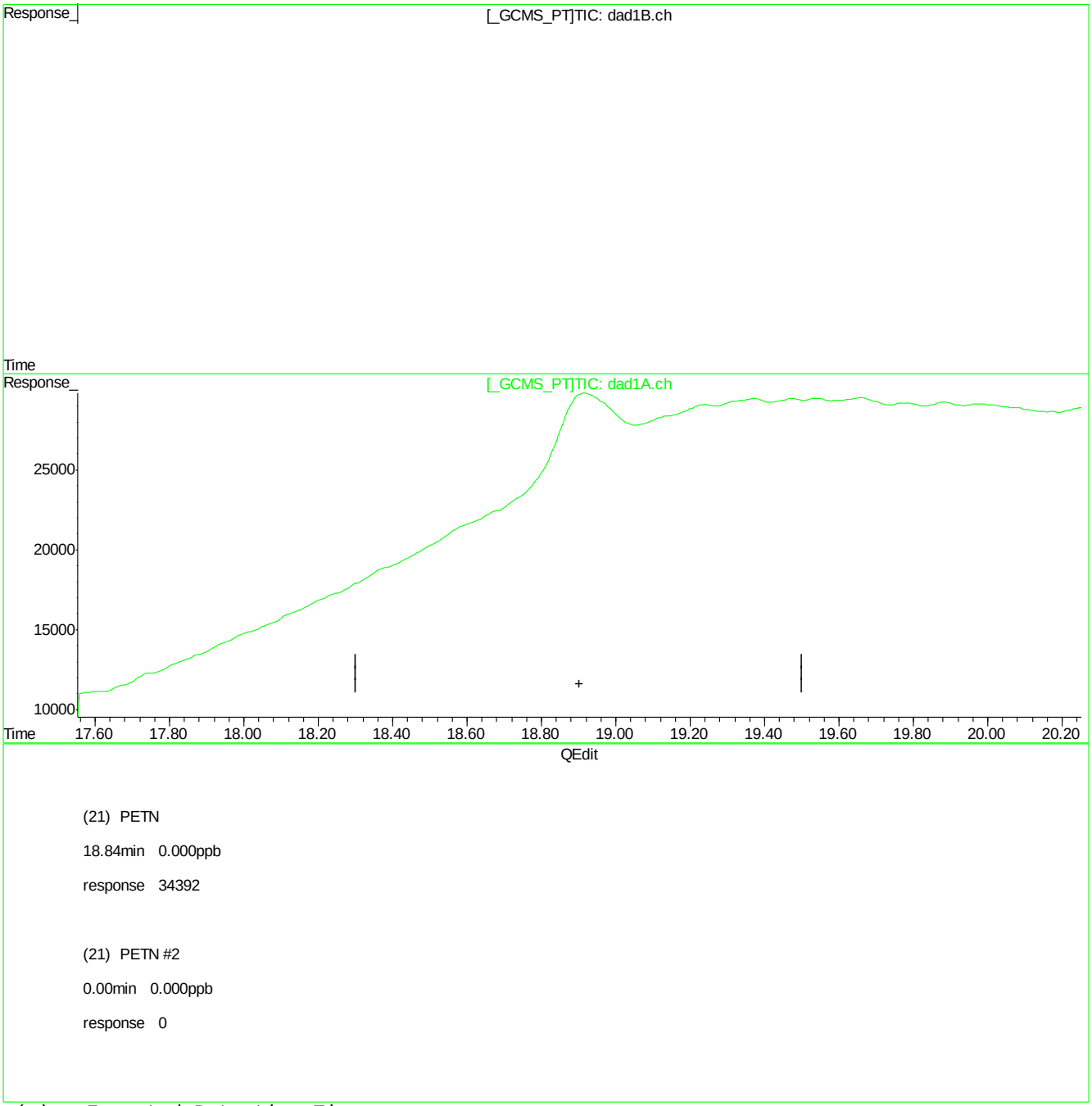
response 183968

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:33:09 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration

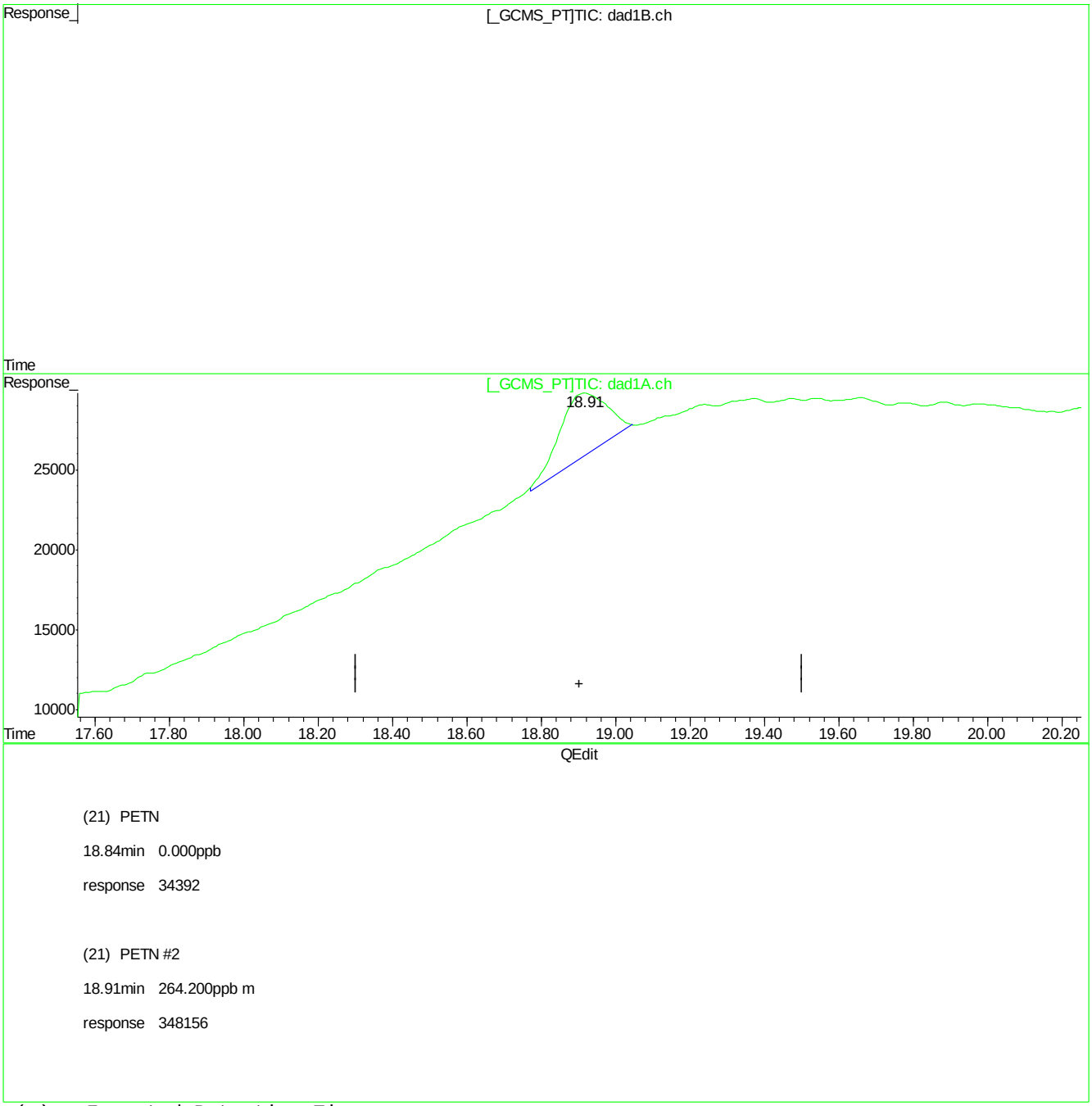


(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:33:14 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(21) PETN

18.84min 0.000ppb

response 34392

(21) PETN #2

18.91min 264.200ppb m

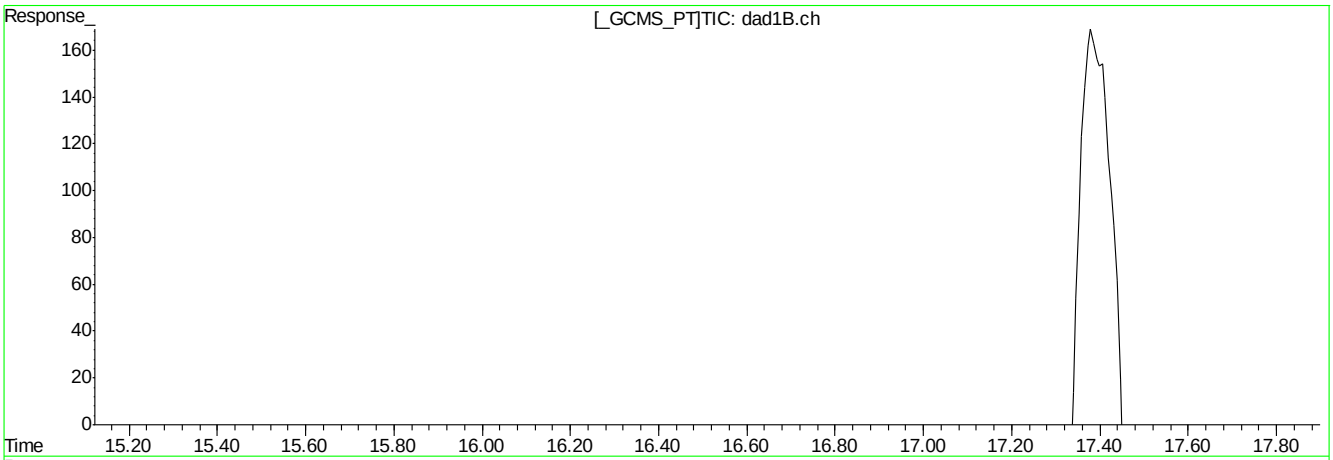
response 348156

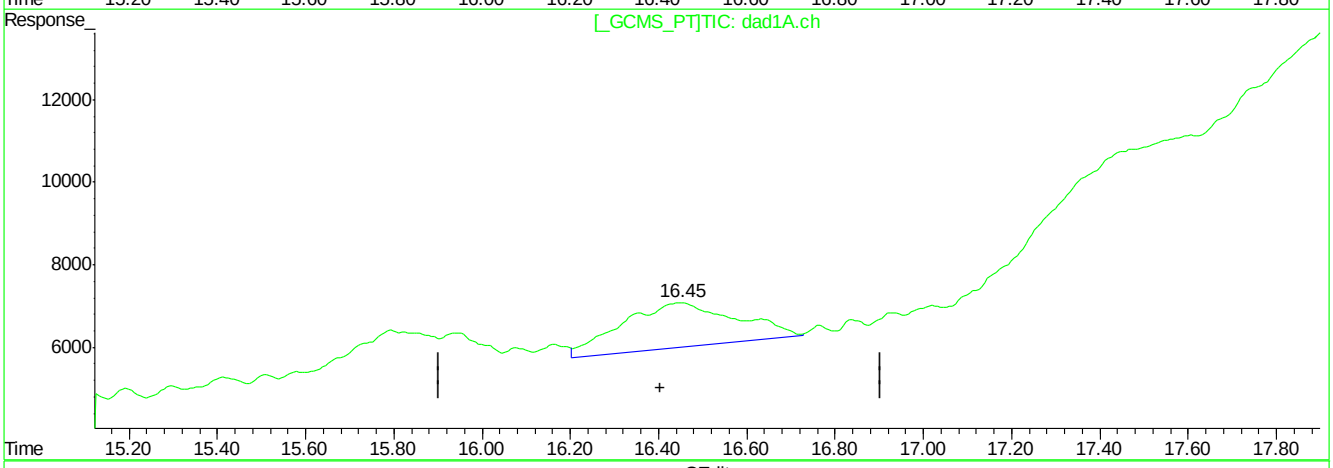
(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 09:33:19 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1B.ch Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060201.D\dad1A.ch
Acq On : 06-Jul-2018, 16:03:10 Operator: kismetl
Sample : ic1748-50 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:06 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.45min 56.312ppb

response 225031

(19) p-Nitrotoluene #2

16.45min 61.939ppb m

response 196142

(+) = Expected Retention Time
BB060201.D 8330B_0707PLUS.M Mon Jul 09 14:56:14 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:29 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.45	11.42	243543	337052	97.867m	80.133
Spiked Amount	500.000	Range	70 - 136	Recovery	=	19.57%#	16.03%#
	Target Compounds						
1)	TNX	1.40	1.40	496861	772053	101.516	101.146
2)	HMX	1.55	1.55	188991	501943	104.553	101.435
3)	DNX	1.80	1.80	293719	432193	95.507	85.242
4)	MNX	2.40	2.40	312824	417376	100.107	88.521
5)	RDX	3.03	3.02	186515	328854	95.805m	100.847m
6)	1,3,5-Trinitrobe	4.83	4.83	391758	800907	89.904m	97.704m
7)	1,3-Dinitrobenze	6.07	6.07	549072	405606	94.196m	105.328m
8)	3,5-Dinitroanili	6.42	6.41	493777	843524	105.604	107.898
9)	Nitrobenzene	7.70	7.71	335829	329599	89.744	104.697m
10)	Nitroglycerin	0.00	9.05	0	628213	N.D. d	491.636m
11)	Tetryl	9.58	9.55	298926	395754	101.008m	95.610m
12)	2,4,6-Trinitroto	10.04	10.06	355562	363139	90.775m	84.920m
13)	2-Amino-4,6-Dini	10.42	10.47	369021	460555	98.820m	82.247m
14)	4-Amino-2,6-Dini	10.97	10.96	244977	395056	92.796m	74.116m
16)	2,4-Dinitrotolue	12.08	12.13	499014	315018	96.183m	99.839m
17)	2,6-Dinitrotolue	12.54	12.54	301682	412058	102.534m	111.674
18)	o-Nitrotoluene	15.85	15.83	273711	363866	105.925	109.241m
19)	p-Nitrotoluene	16.42	16.43	394551	394268	98.732	124.506m
20)	m-Nitrotoluene	17.42	17.43	419276	294844	122.811	83.460m
21)	PETN	0.00	18.91	0	704993	N.D. d	534.988m

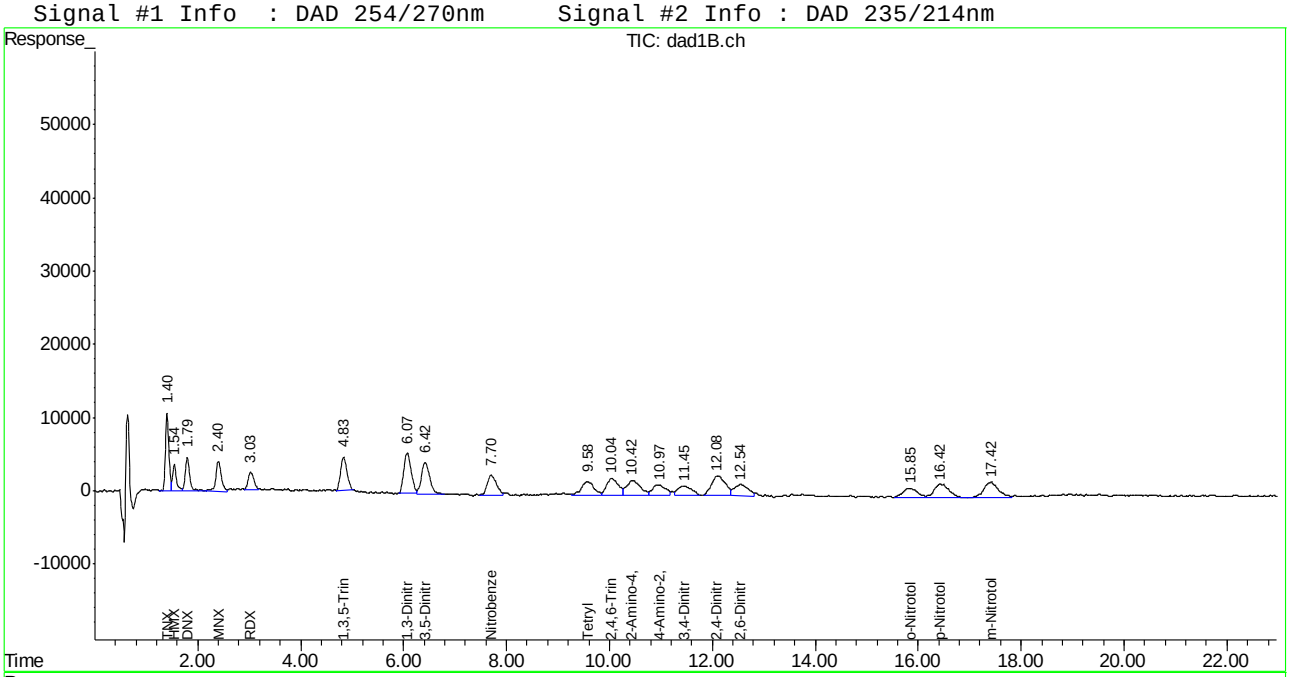
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060202.D 8330B_0707PLUS.M Mon Jul 09 11:20:50 2018 Page 1

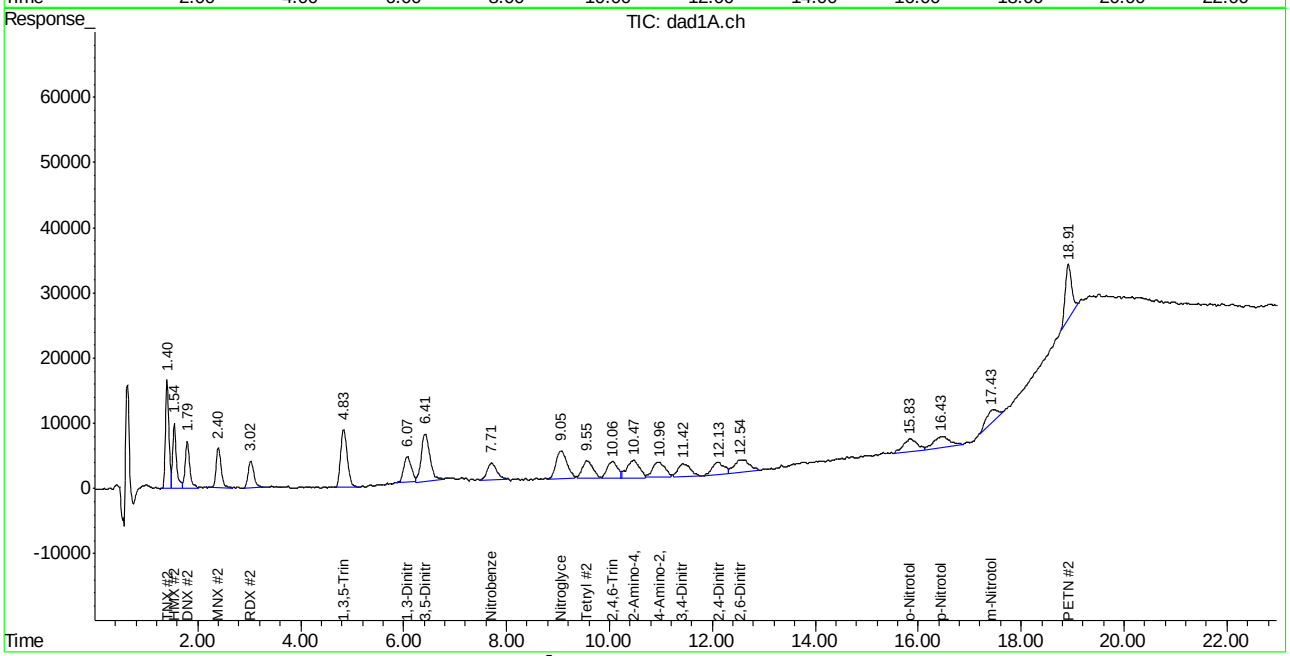
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:06 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

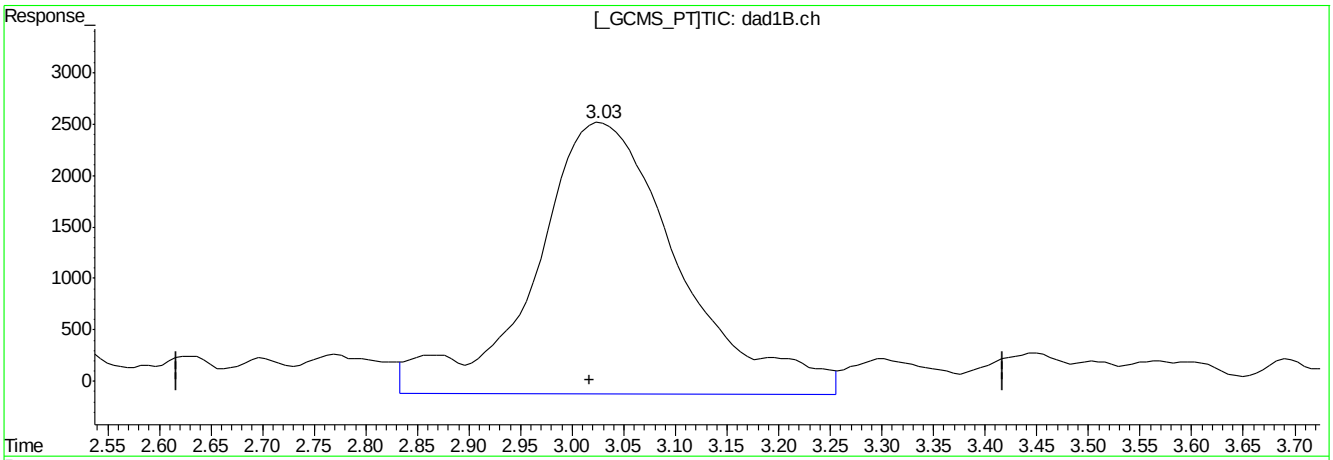
Sample Number: GBB1748-IC1748 **Method:** SW846 8330A
Lab FileID: BB060202.D **Analyst approved:** 07/09/18 11:23 William Hustedde
Injection Time: 07/06/18 16:33 **Supervisor approved:** 07/09/18 16:15 Mike Eger

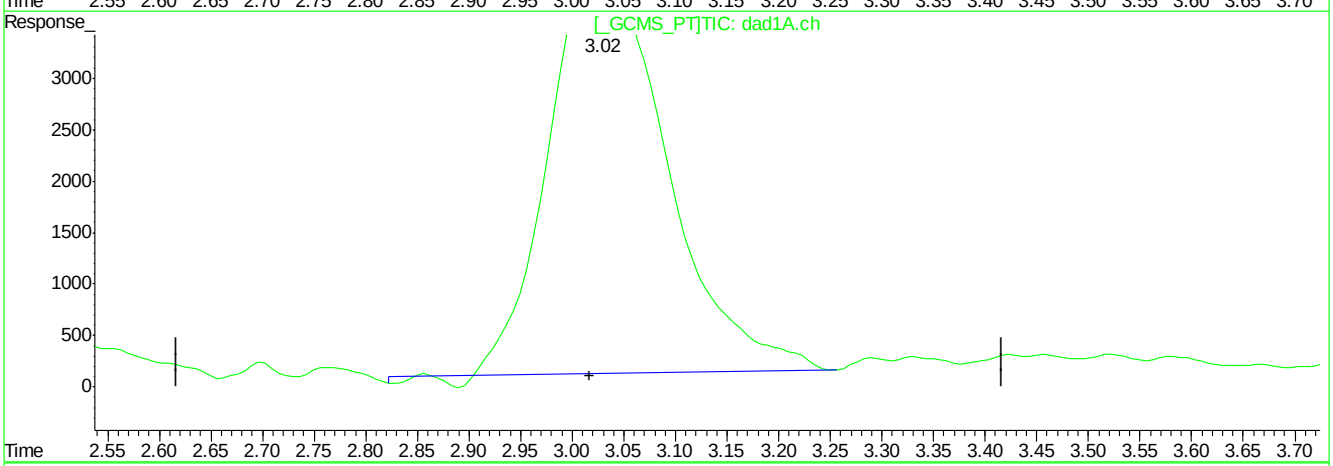
Parameter	CAS	Sig#	R.T. (min.)	Reason
RDX	121-82-4	2	3.02	Poor instrument integration
RDX	121-82-4	1	3.03	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	1	4.83	Poor instrument integration
1,3,5-Trinitrobenzene	99-35-4	2	4.83	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	6.07	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.07	Poor instrument integration
Nitrobenzene	98-95-3	2	7.71	Poor instrument integration
Nitroglycerine	55-63-0	2	9.05	Poor instrument integration
Tetryl	479-45-8	2	9.55	Poor instrument integration
Tetryl	479-45-8	1	9.58	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	1	10.04	Poor instrument integration
2,4,6-Trinitrotoluene	118-96-7	2	10.06	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.42	Poor instrument integration
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.47	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	2	10.96	Poor instrument integration
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.97	Poor instrument integration
3,4-Dinitrotoluene	610-39-9	1	11.45	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	1	12.08	Poor instrument integration
2,4-Dinitrotoluene	121-14-2	2	12.13	Poor instrument integration
2,6-Dinitrotoluene	606-20-2	1	12.54	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.83	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.43	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.43	Poor instrument integration
PETN	78-11-5	2	18.91	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.03min 132.058ppb

response 257315

(5) RDX #2

3.03min 96.549ppb

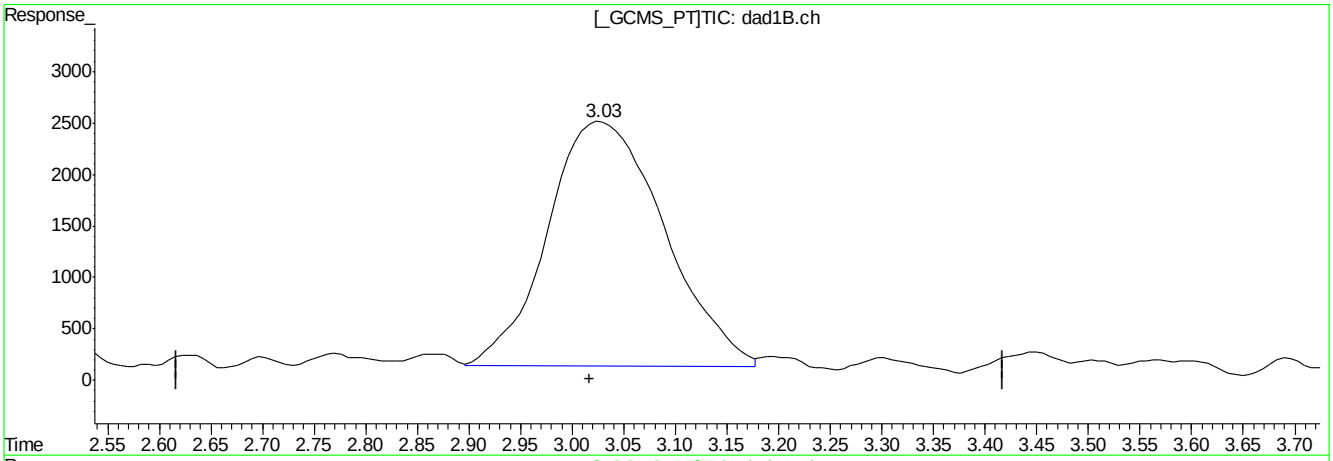
response 314838

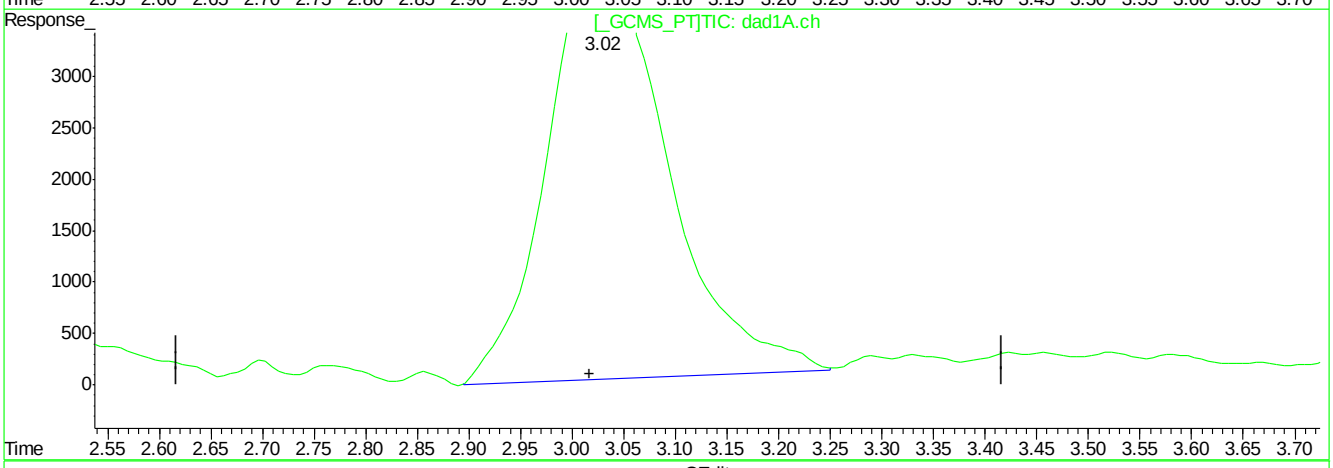
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:49:33 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.03min 95.805ppb m

response 186515

(5) RDX #2

3.02min 100.847ppb m

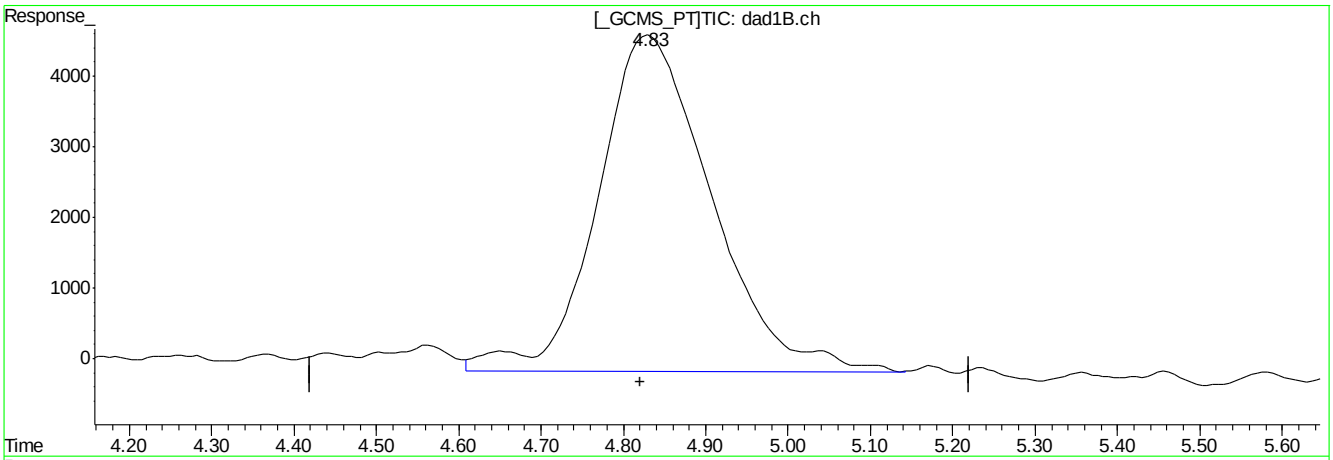
response 328854

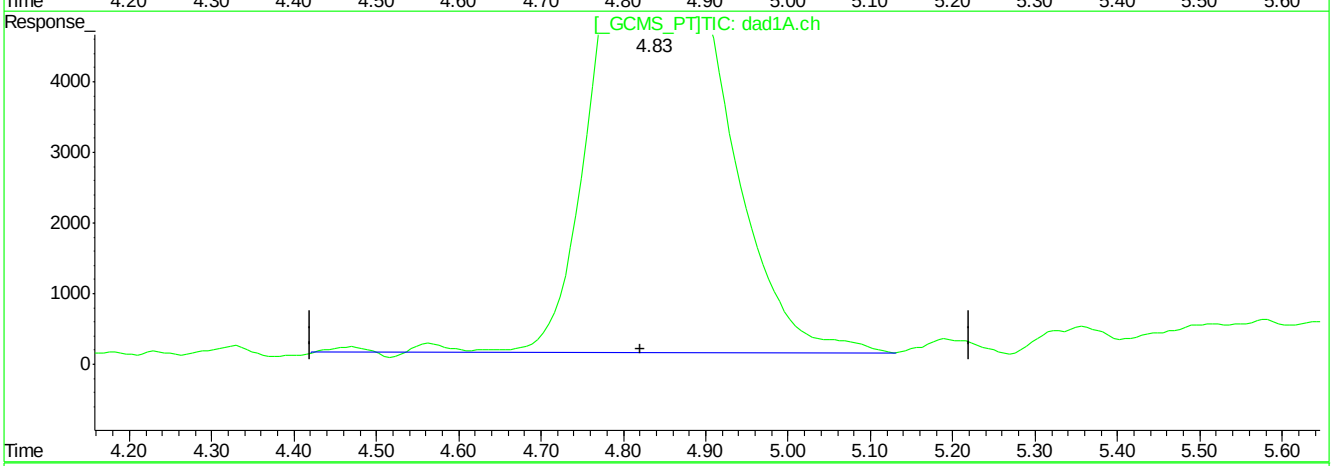
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:49:45 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(6) 1,3,5-Trinitrobenzene

4.83min 104.545ppb

response 455554

(6) 1,3,5-Trinitrobenzene #2

4.83min 98.937ppb

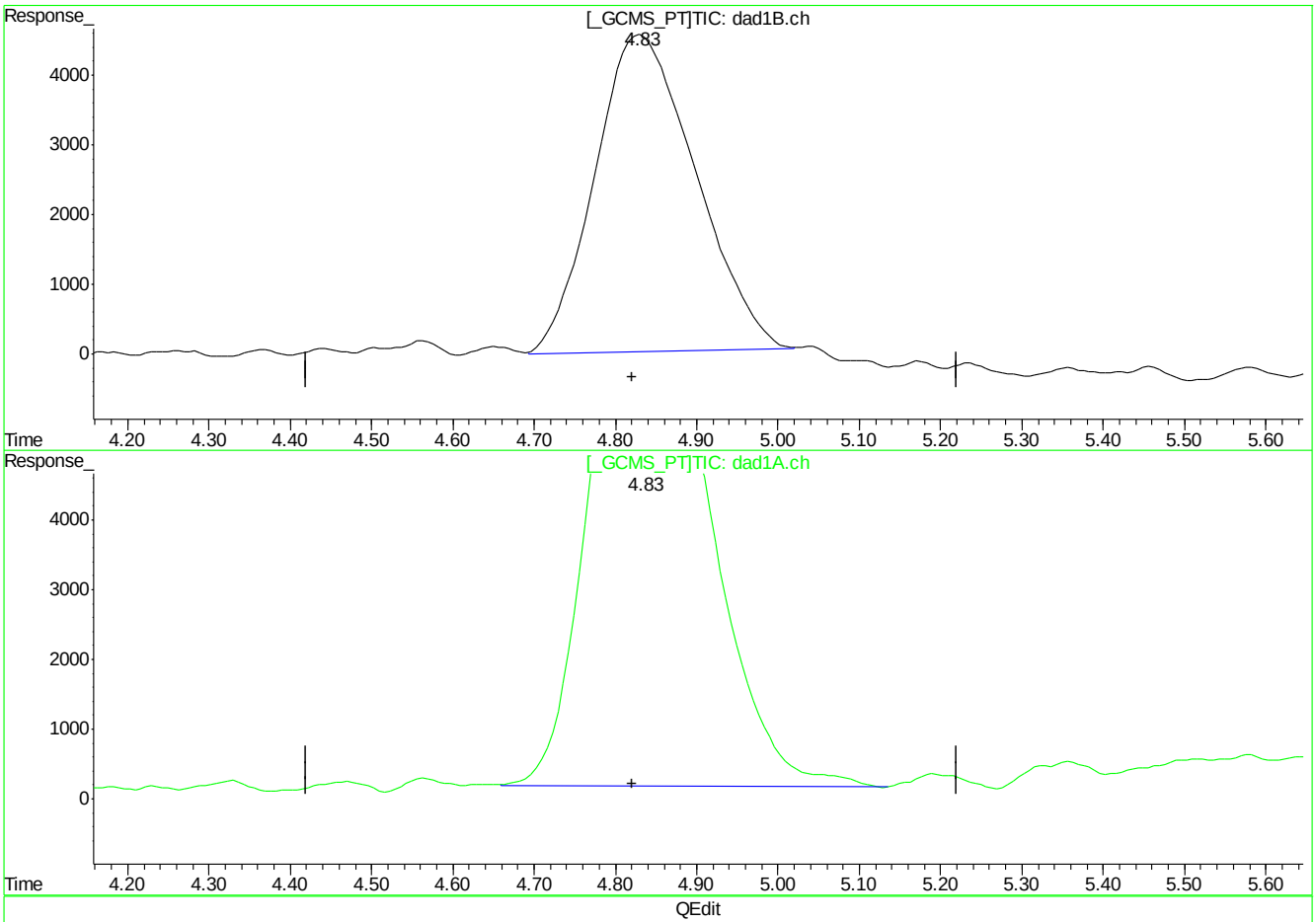
response 811020

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:49:52 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(6) 1,3,5-Trinitrobenzene

4.83min 89.904ppb m

response 391758

(6) 1,3,5-Trinitrobenzene #2

4.83min 97.704ppb m

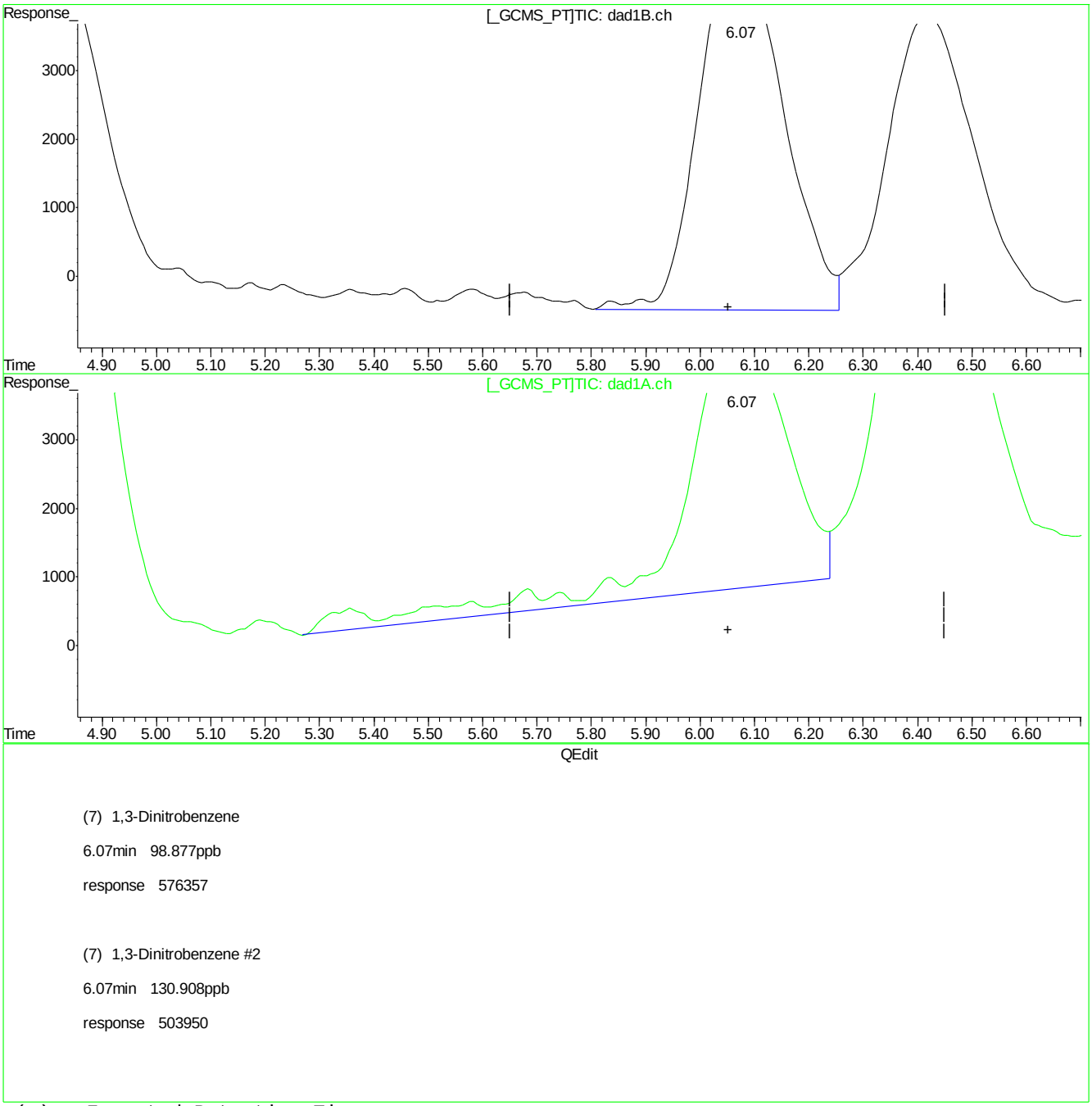
response 800907

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:49:59 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

6.07min 98.877ppb

response 576357

(7) 1,3-Dinitrobenzene #2

6.07min 130.908ppb

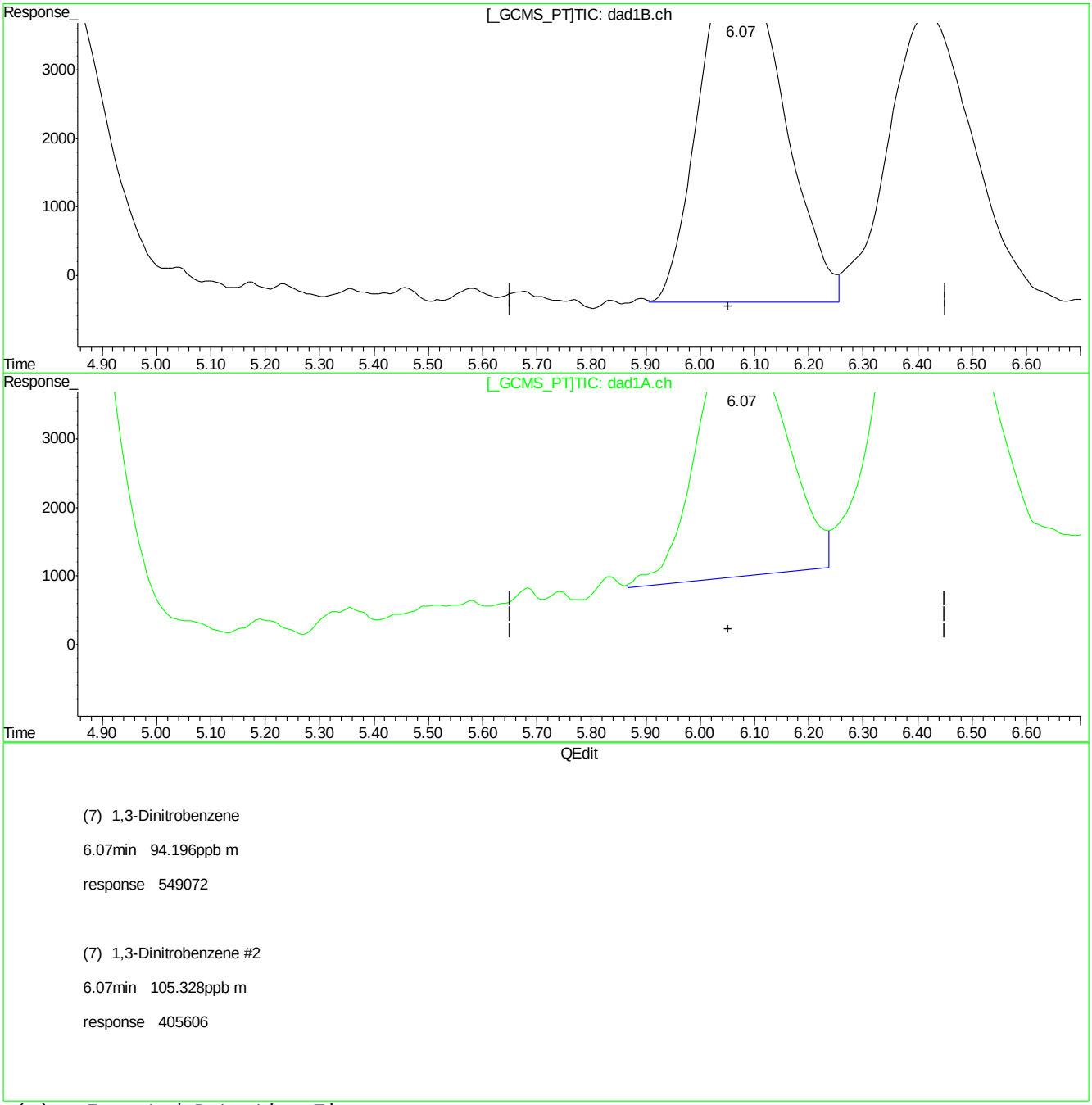
response 503950

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:50:06 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(7) 1,3-Dinitrobenzene

6.07min 94.196ppb m

response 549072

(7) 1,3-Dinitrobenzene #2

6.07min 105.328ppb m

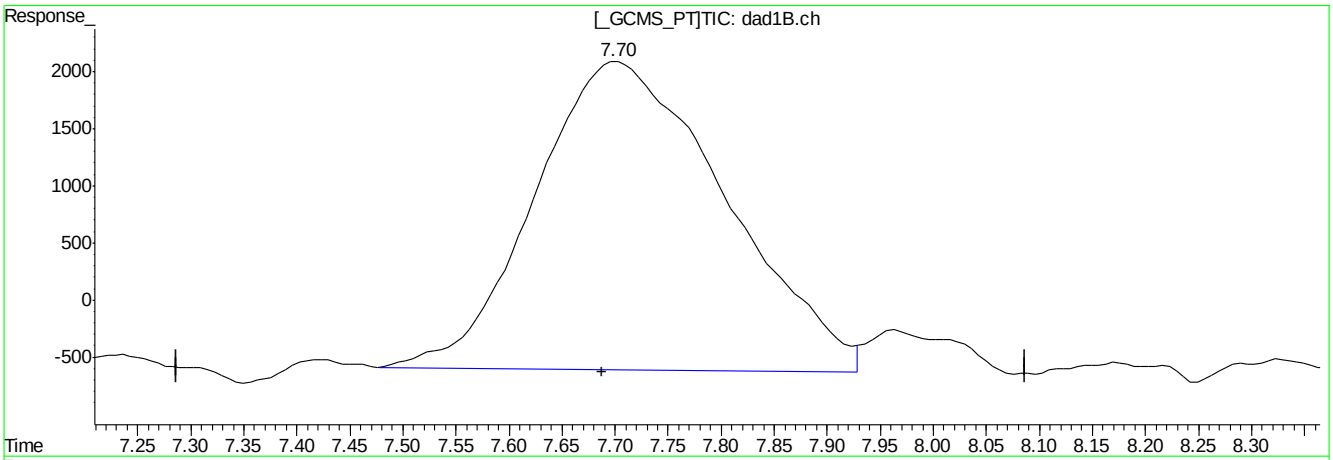
response 405606

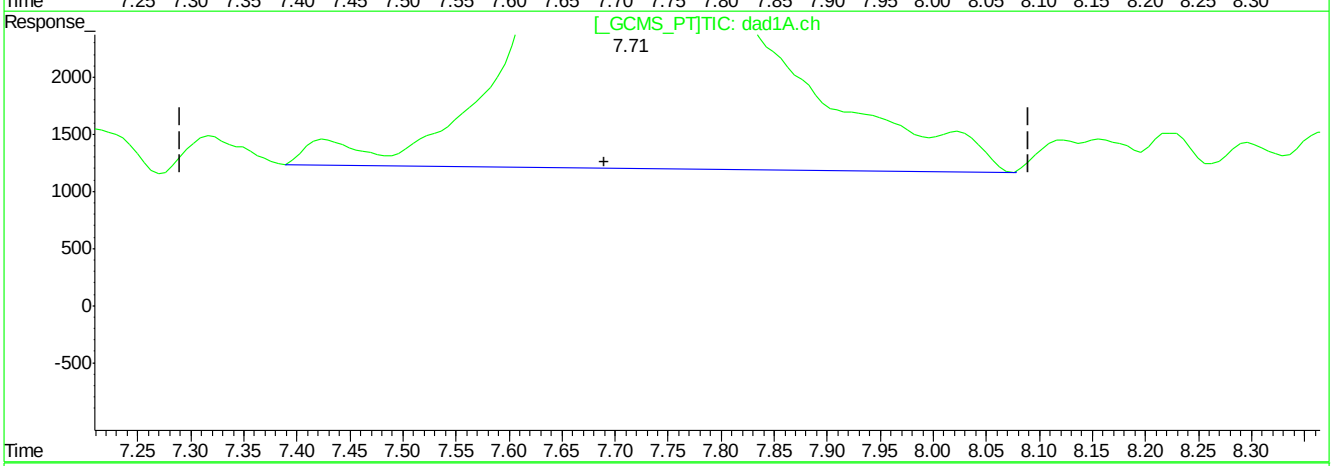
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:50:17 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(9) Nitrobenzene

7.70min 89.744ppb

response 335829

(9) Nitrobenzene #2

7.71min 125.578ppb

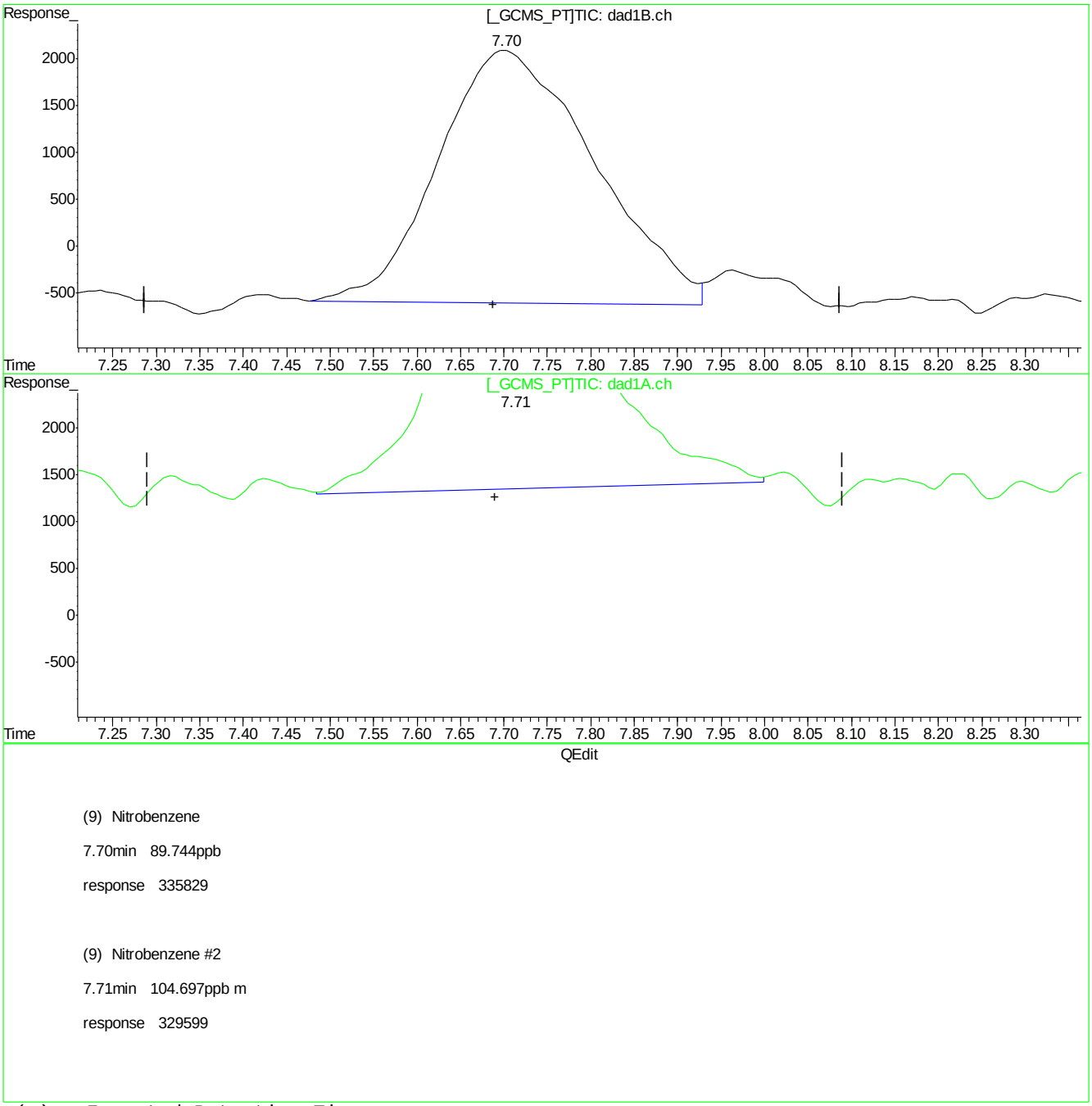
response 395536

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:50:36 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(9) Nitrobenzene

7.70min 89.744ppb

response 335829

(9) Nitrobenzene #2

7.71min 104.697ppb m

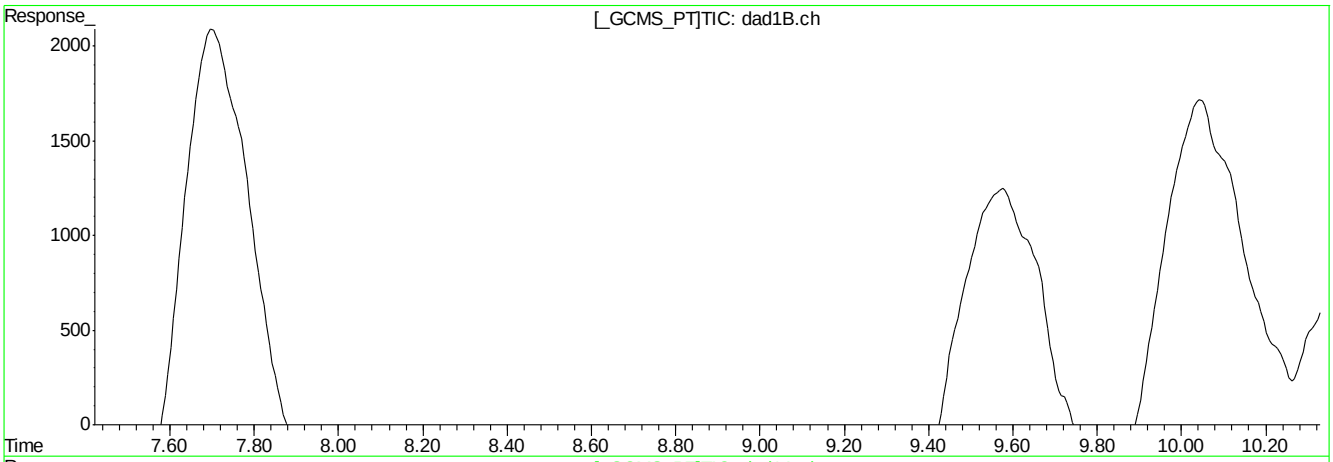
response 329599

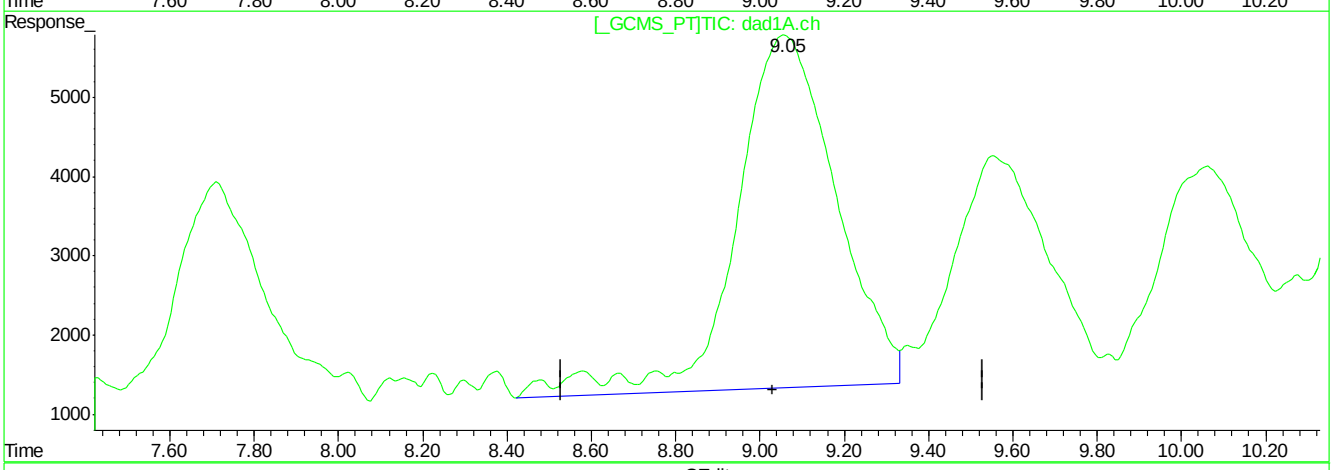
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:50:41 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

8.96min 0.000ppb

response 20984

(10) Nitroglycerin #2

9.06min 574.852ppb

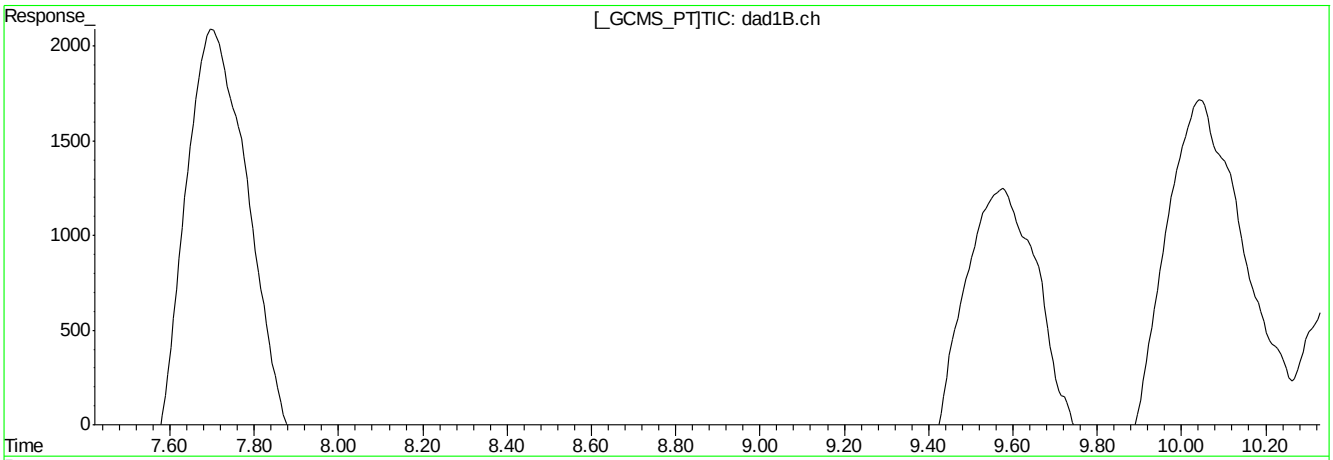
response 734547

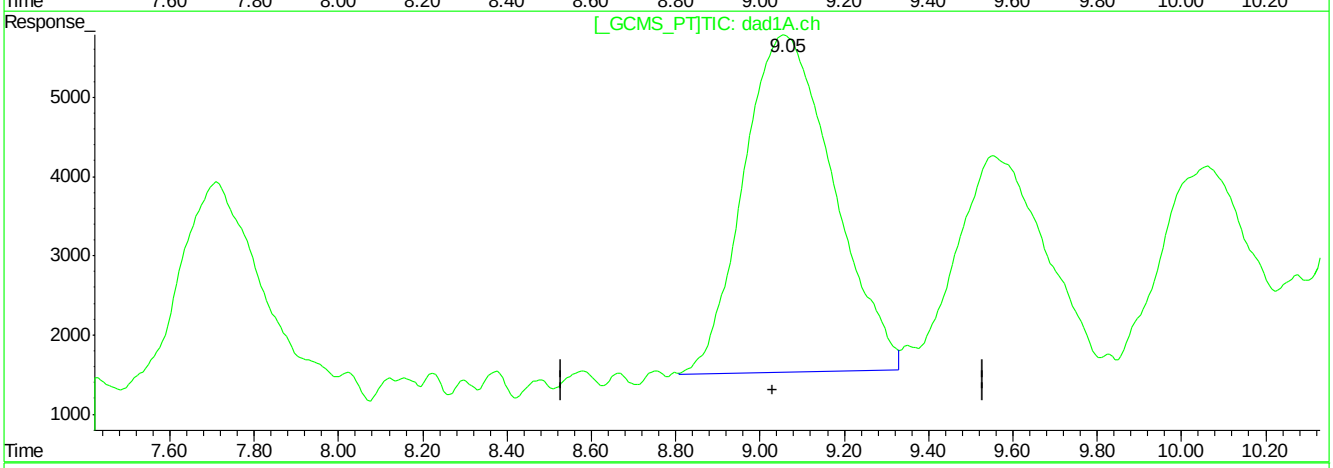
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:50:45 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

8.96min 0.000ppb

response 20984

(10) Nitroglycerin #2

9.05min 491.636ppb m

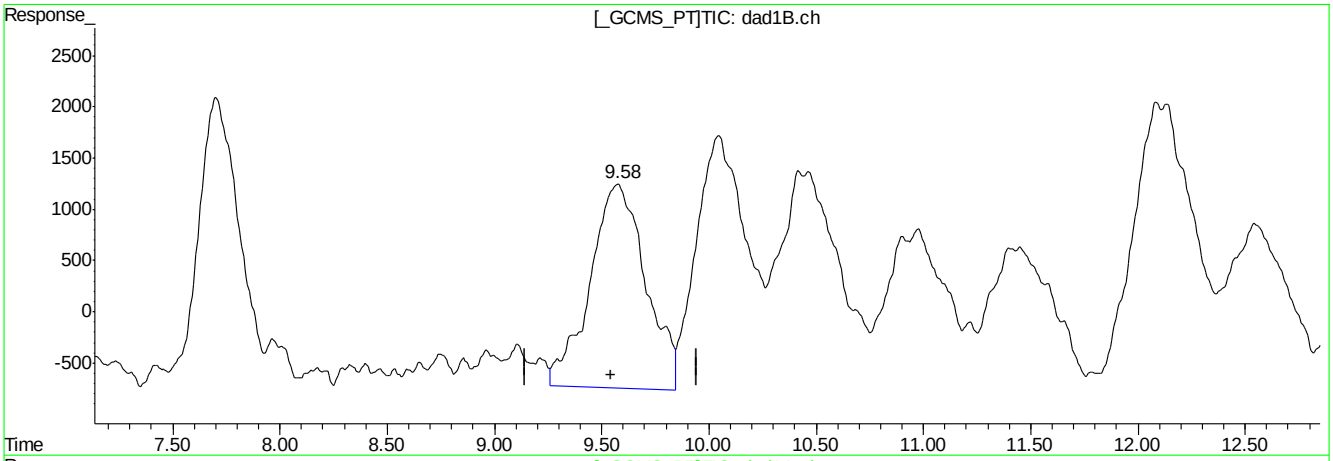
response 628213

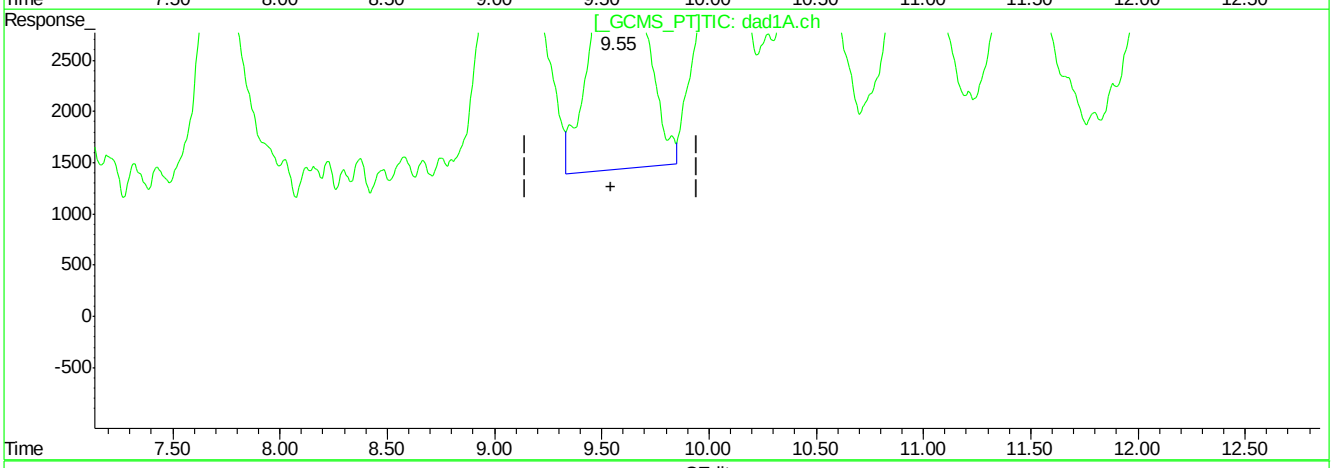
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:50:53 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(11) Tetryl

9.57min 121.417ppb

response 359326

(11) Tetryl #2

9.56min 105.620ppb

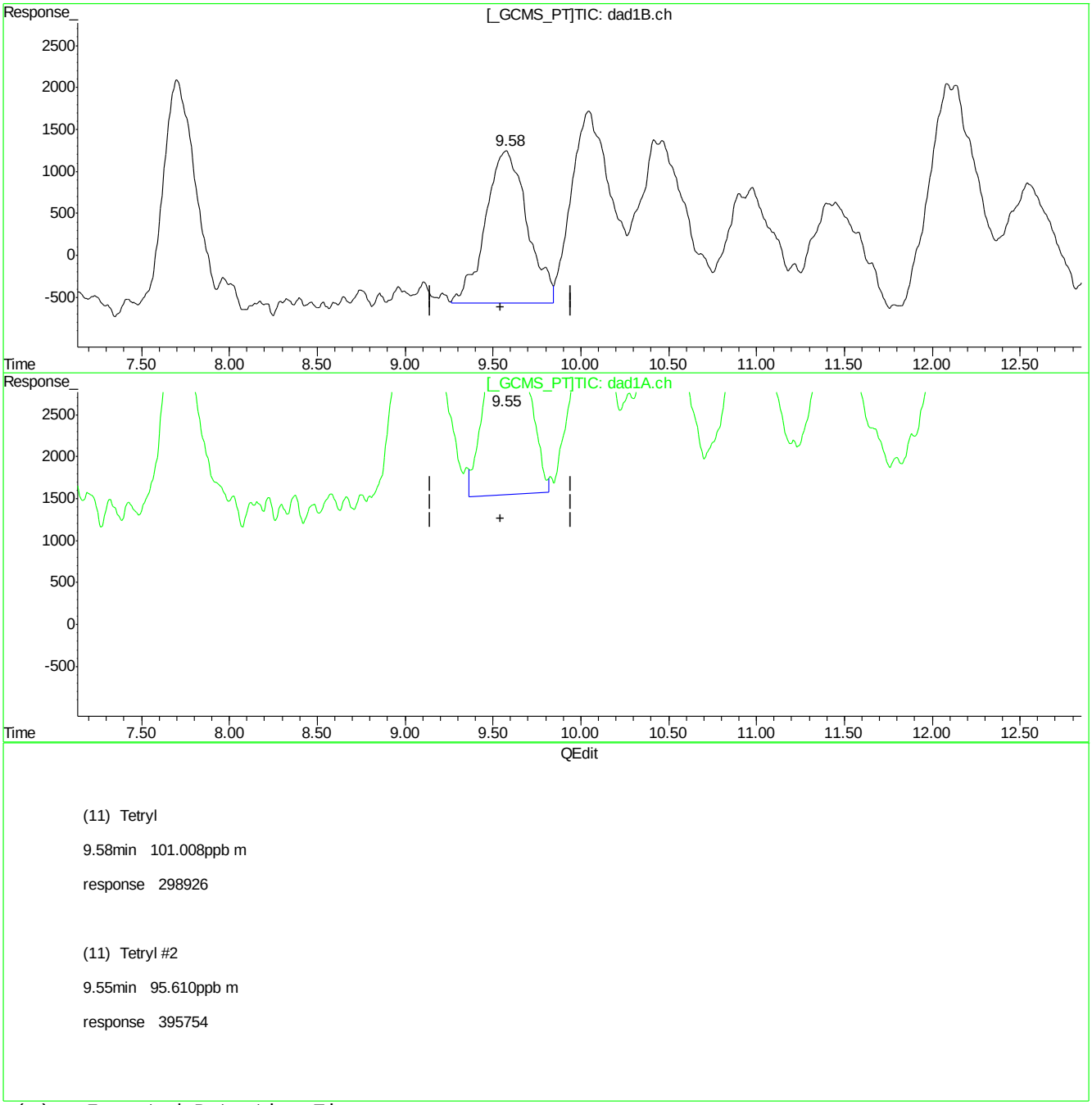
response 437188

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:51:09 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(11) Tetryl

9.58min 101.008ppb m

response 298926

(11) Tetryl #2

9.55min 95.610ppb m

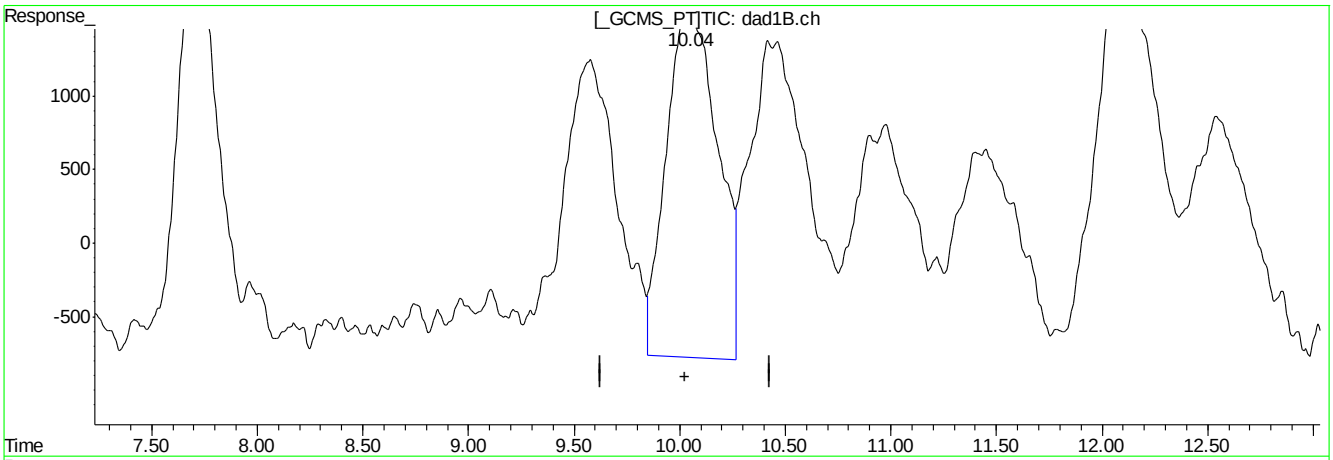
response 395754

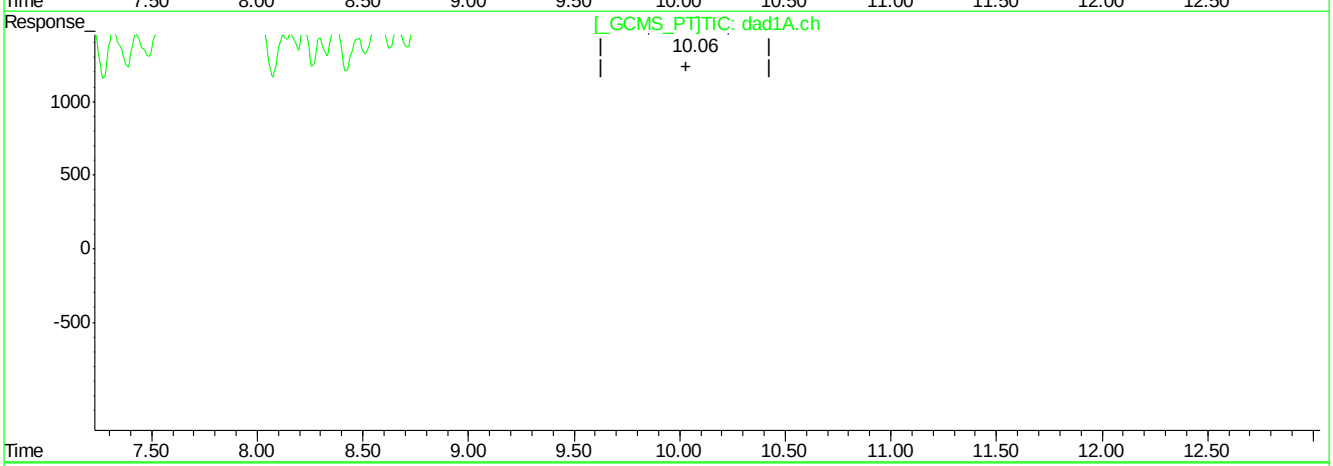
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:51:33 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.05min 103.218ppb

response 404299

(12) 2,4,6-Trinitrotoluene #2

10.06min 87.655ppb

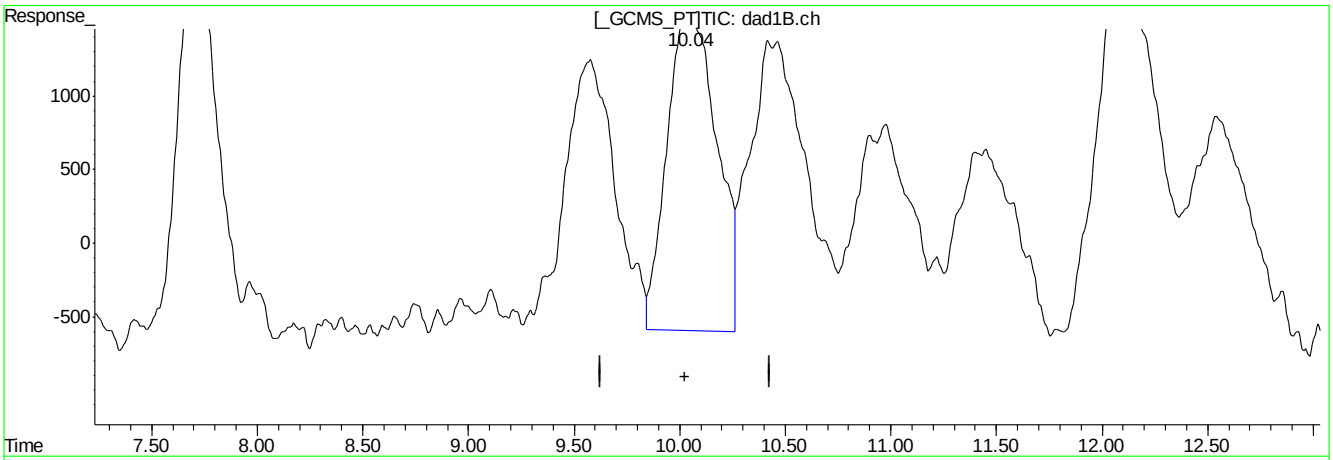
response 374837

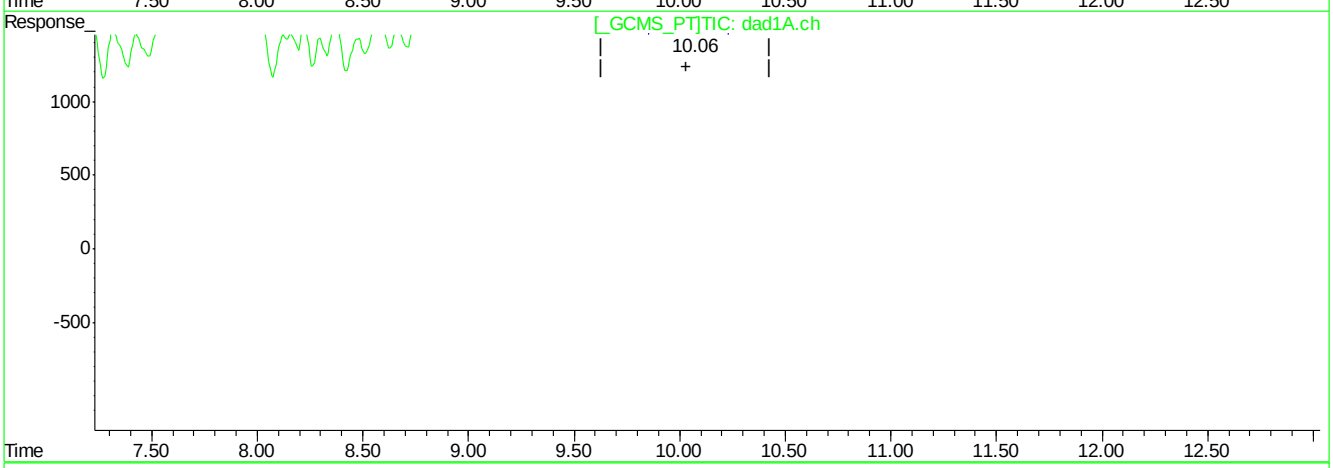
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:52:09 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.04min 90.775ppb m

response 355562

(12) 2,4,6-Trinitrotoluene #2

10.06min 87.655ppb

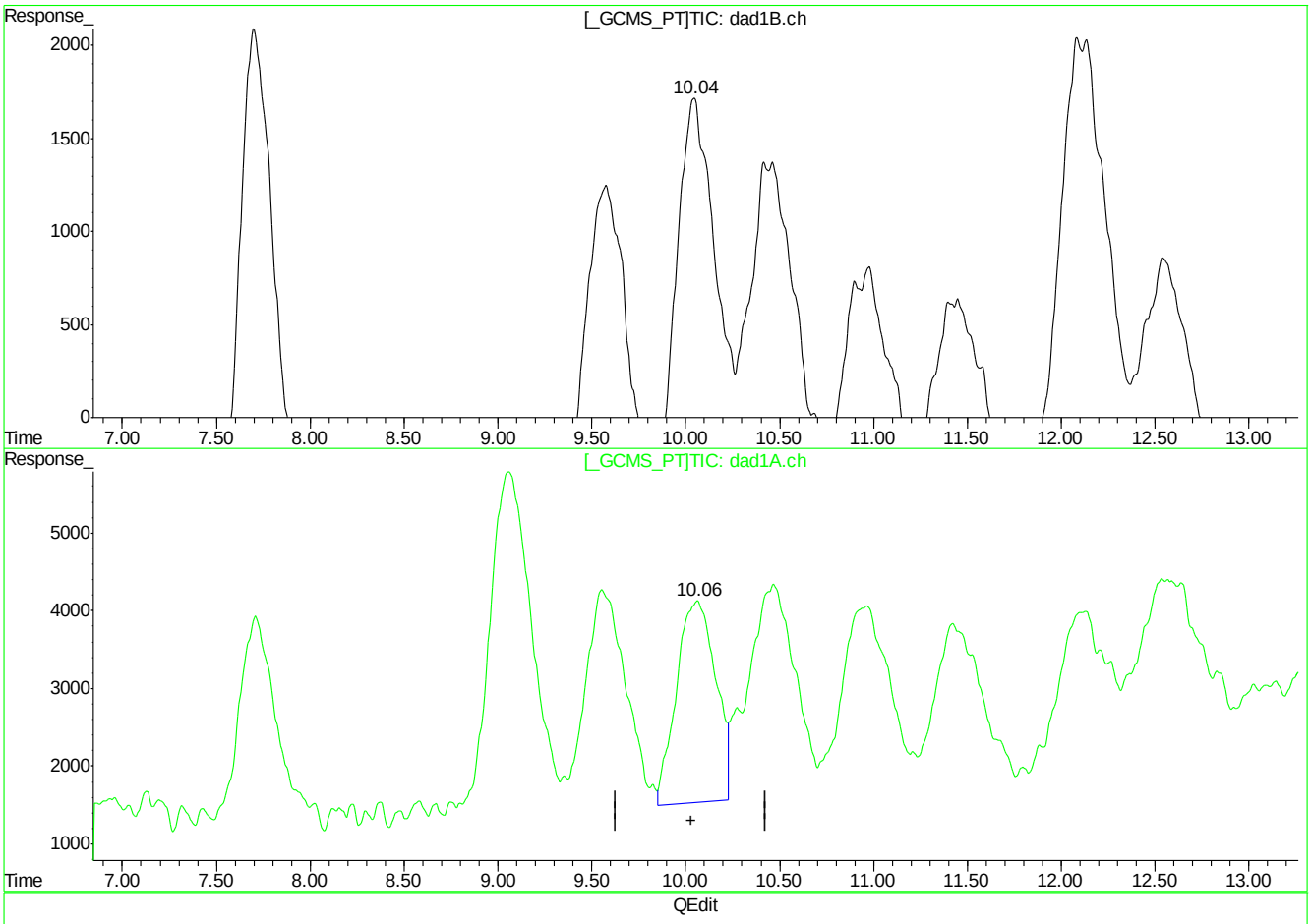
response 374837

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:52:22 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(12) 2,4,6-Trinitrotoluene

10.04min 90.775ppb m

response 355562

(12) 2,4,6-Trinitrotoluene #2

10.06min 87.655ppb

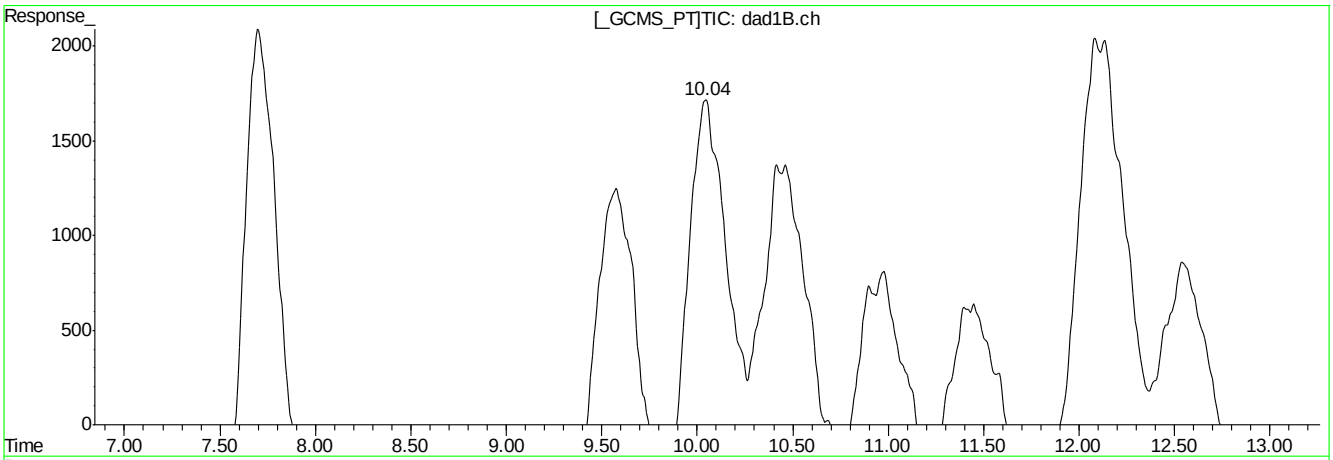
response 374837

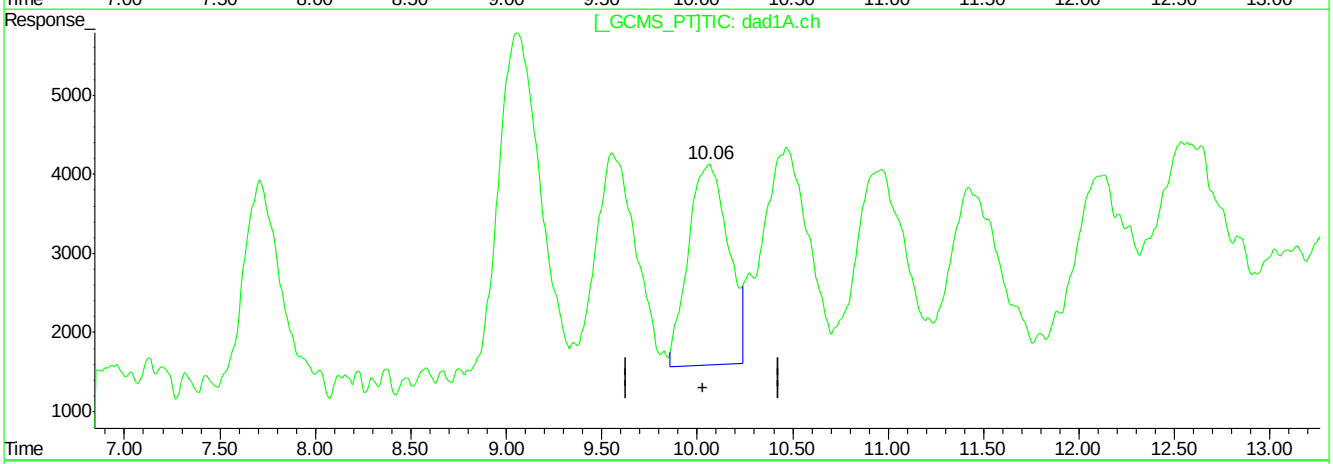
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:52:28 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(12) 2,4,6-Trinitrotoluene

10.04min 90.775ppb m

response 355562

(12) 2,4,6-Trinitrotoluene #2

10.06min 84.920ppb m

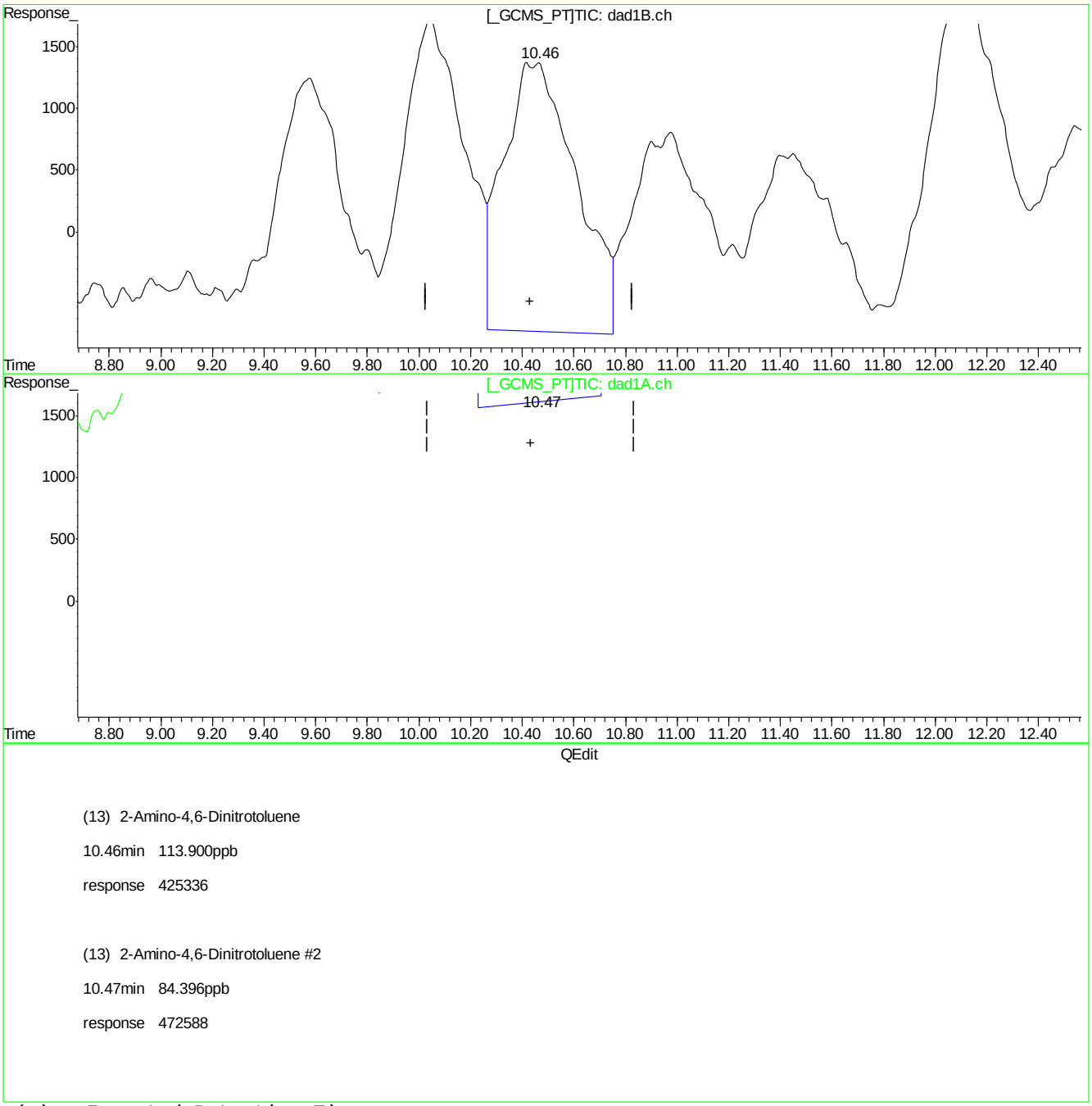
response 363139

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:52:38 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.46min 113.900ppb

response 425336

(13) 2-Amino-4,6-Dinitrotoluene #2

10.47min 84.396ppb

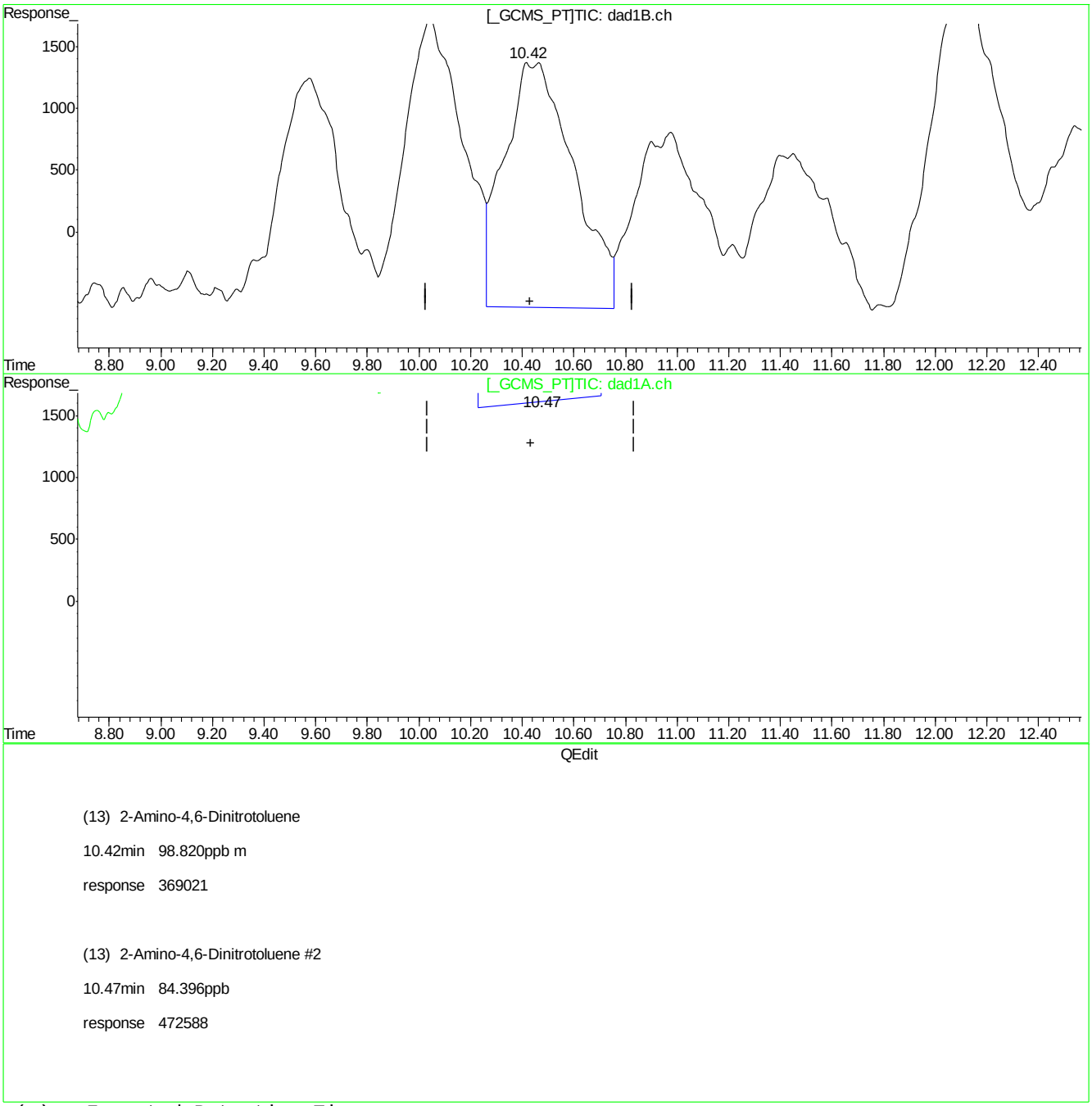
response 472588

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:52:56 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.42min 98.820ppb m

response 369021

(13) 2-Amino-4,6-Dinitrotoluene #2

10.47min 84.396ppb

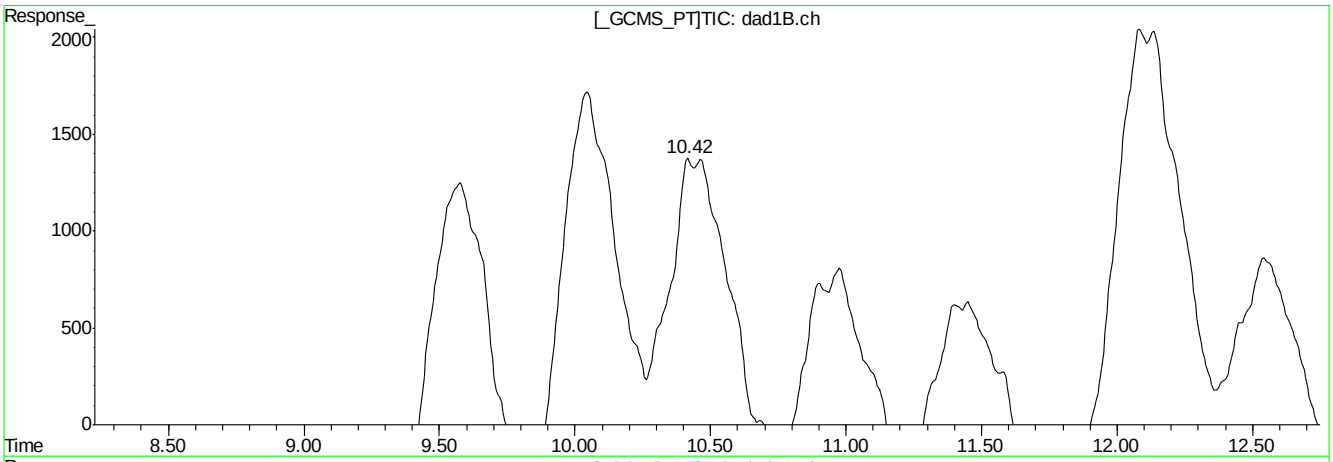
response 472588

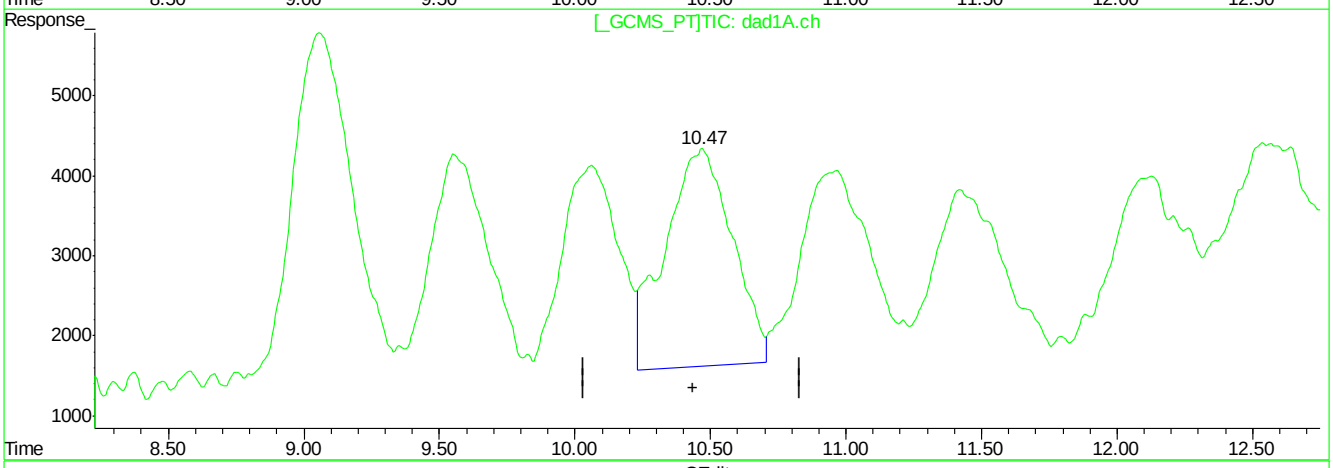
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:09 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(13) 2-Amino-4,6-Dinitrotoluene

10.42min 98.820ppb m

response 369021

(13) 2-Amino-4,6-Dinitrotoluene #2

10.47min 84.396ppb

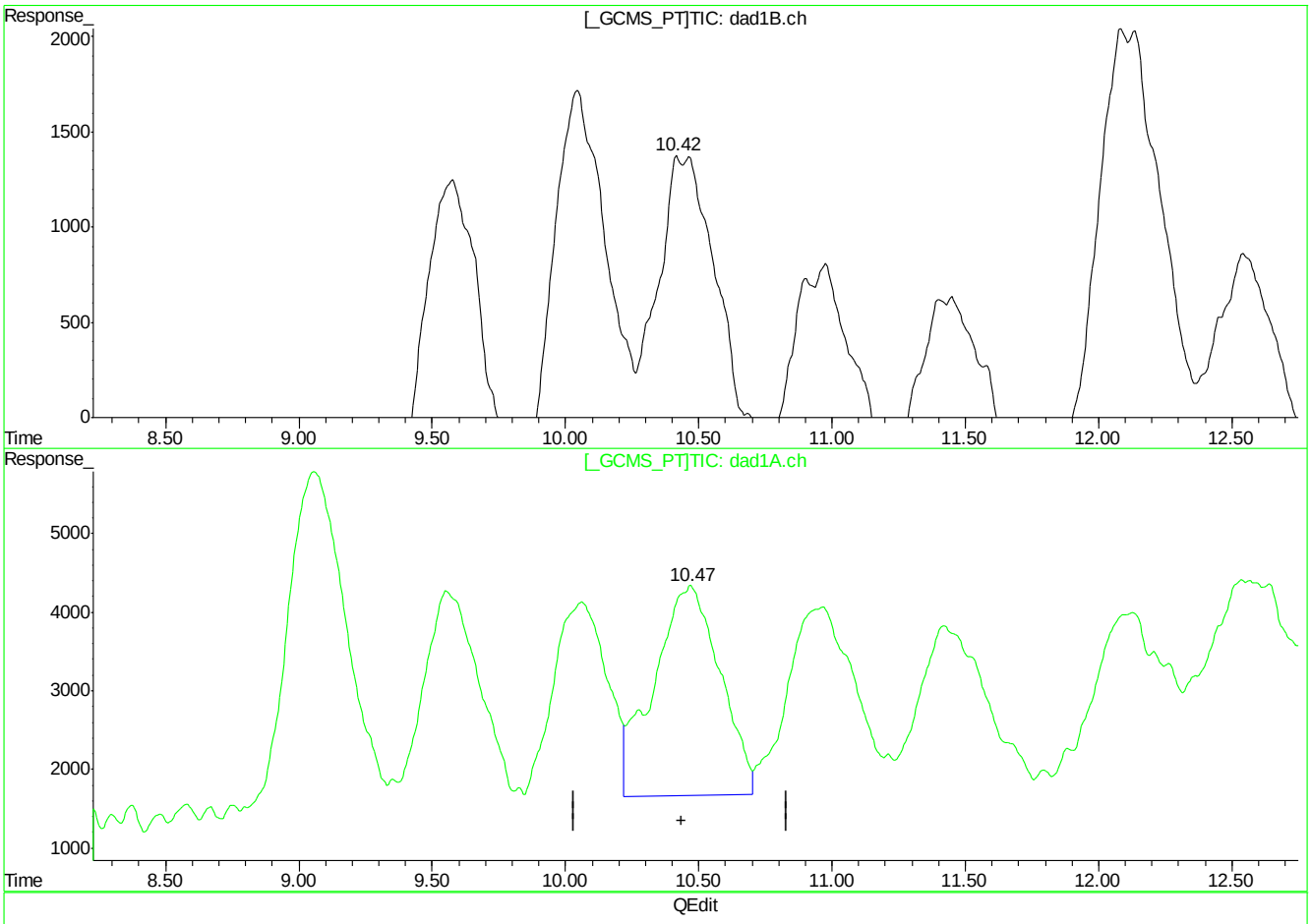
response 472588

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:13 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(13) 2-Amino-4,6-Dinitrotoluene

10.42min 98.820ppb m

response 369021

(13) 2-Amino-4,6-Dinitrotoluene #2

10.47min 82.247ppb m

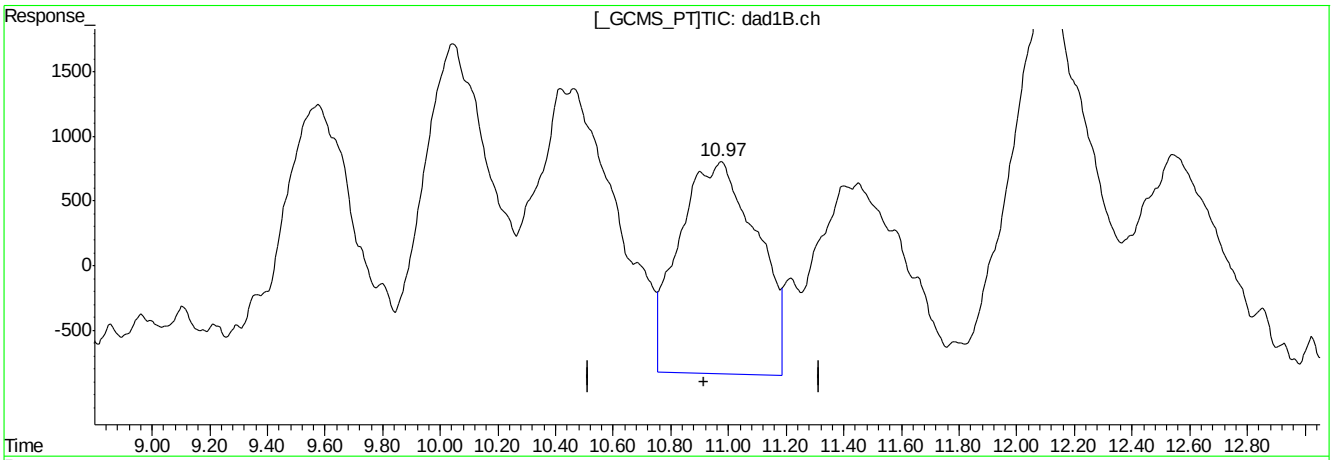
response 460555

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:23 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(14) 4-Amino-2,6-Dinitrotoluene

10.98min 116.814ppb

response 308528

(14) 4-Amino-2,6-Dinitrotoluene #2

10.96min 77.377ppb

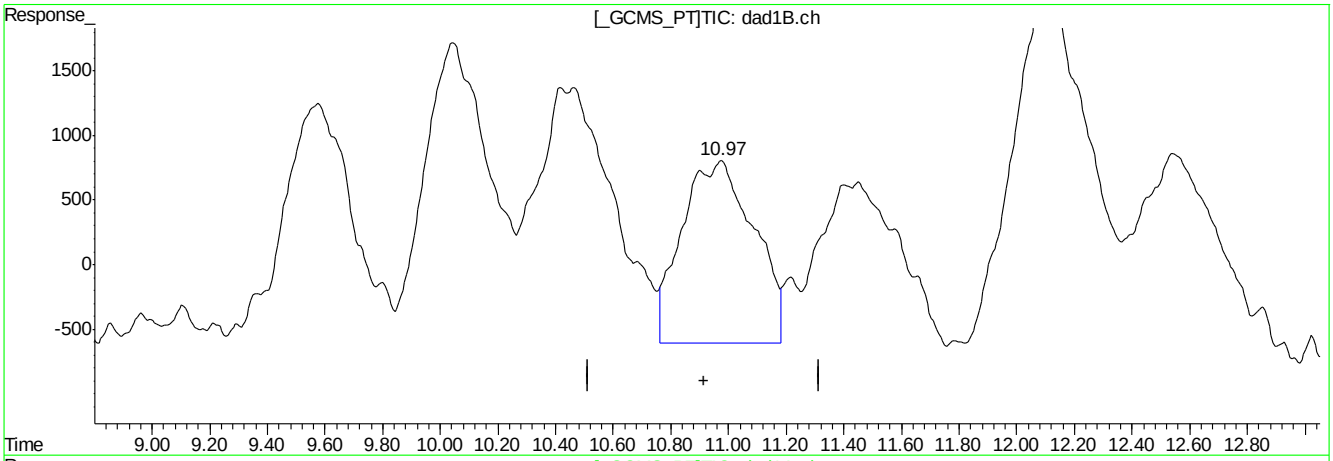
response 412438

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:37 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(14) 4-Amino-2,6-Dinitrotoluene

10.97min 92.796ppb m

response 244977

(14) 4-Amino-2,6-Dinitrotoluene #2

10.96min 77.377ppb

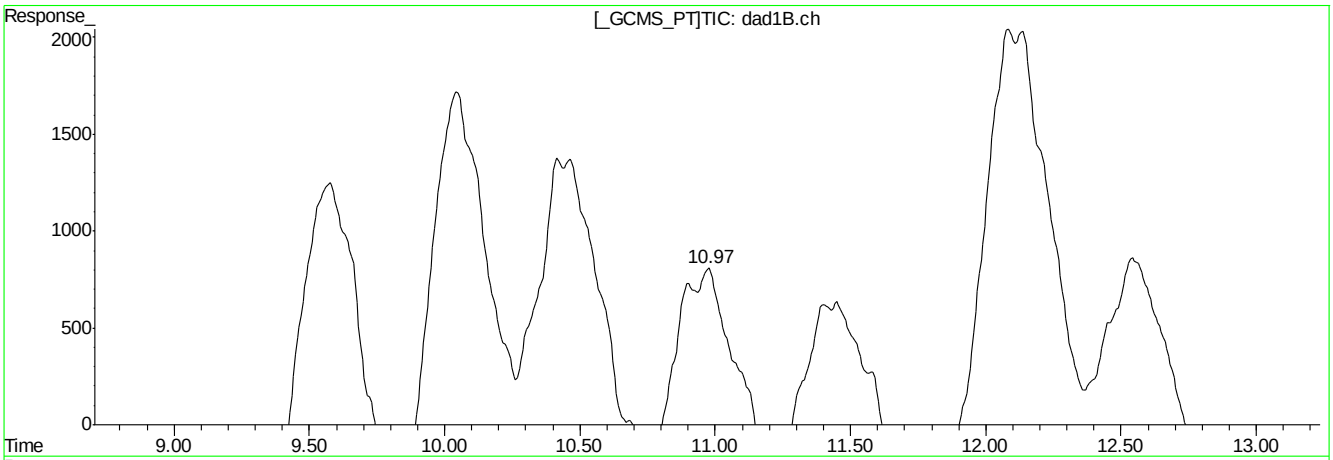
response 412438

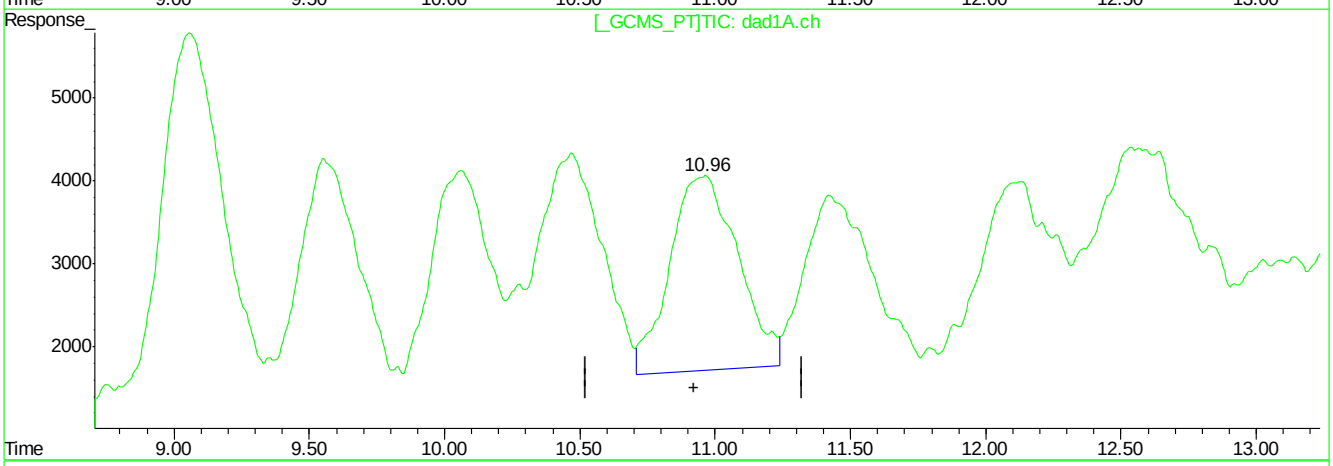
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:46 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(14) 4-Amino-2,6-Dinitrotoluene

10.97min 92.796ppb m

response 244977

(14) 4-Amino-2,6-Dinitrotoluene #2

10.96min 77.377ppb

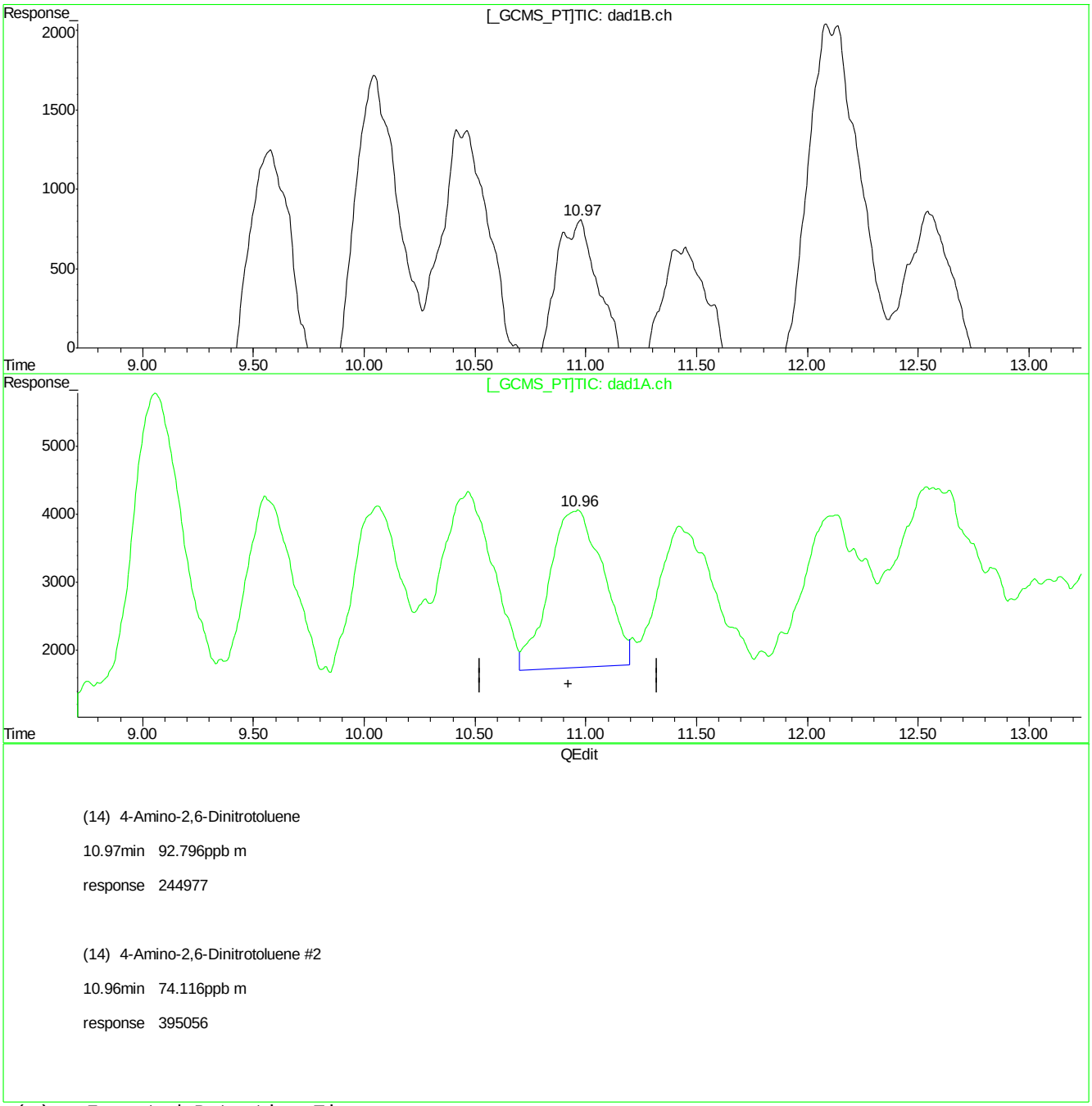
response 412438

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:49 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(14) 4-Amino-2,6-Dinitrotoluene

10.97min 92.796ppb m

response 244977

(14) 4-Amino-2,6-Dinitrotoluene #2

10.96min 74.116ppb m

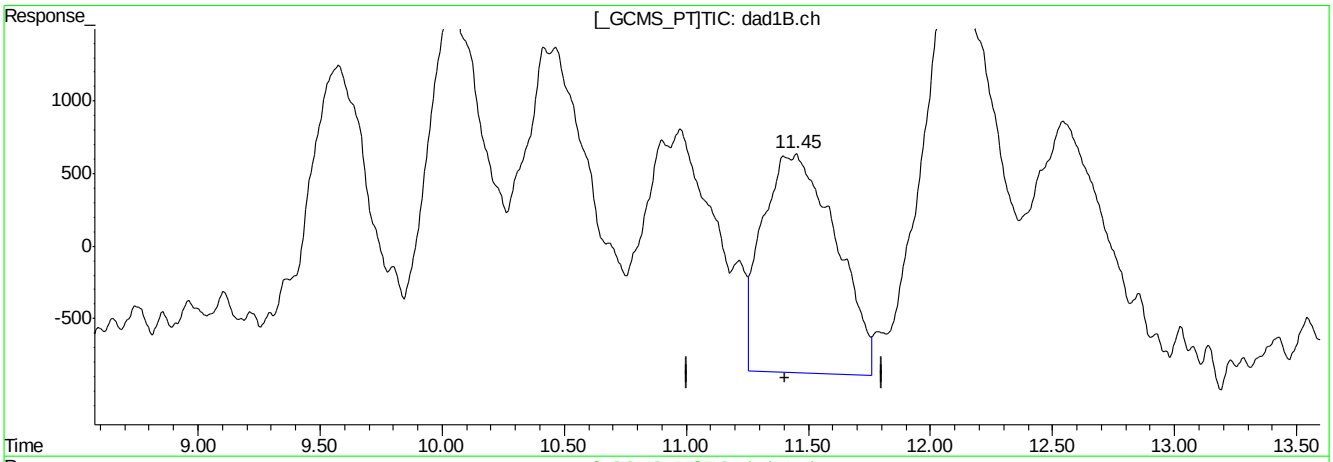
response 395056

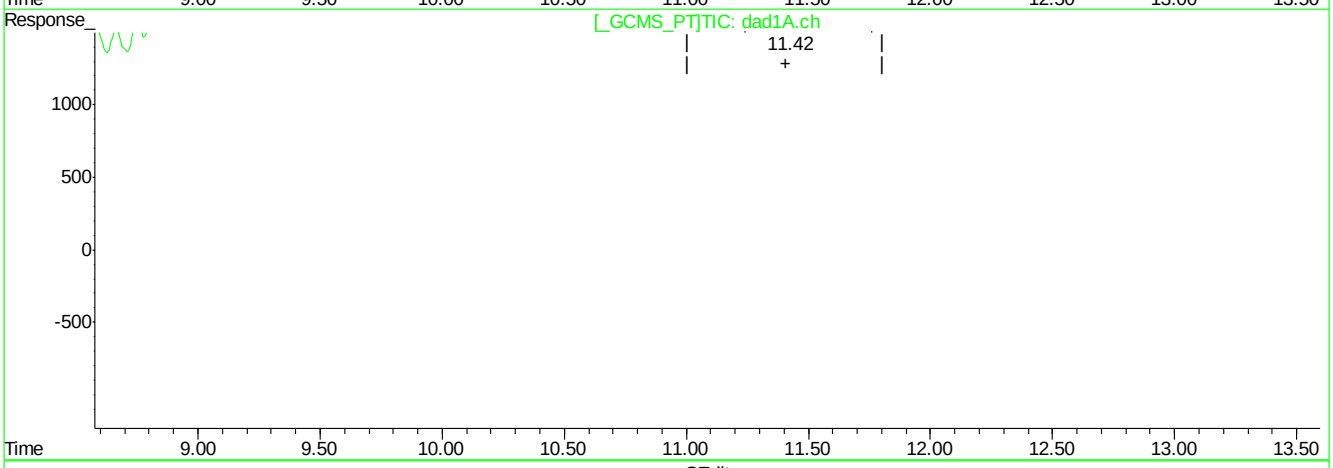
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:53:58 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.45min 126.683ppb

response 315252

(15) 3,4-Dinitrotoluene #2 (S)

11.42min 80.133ppb

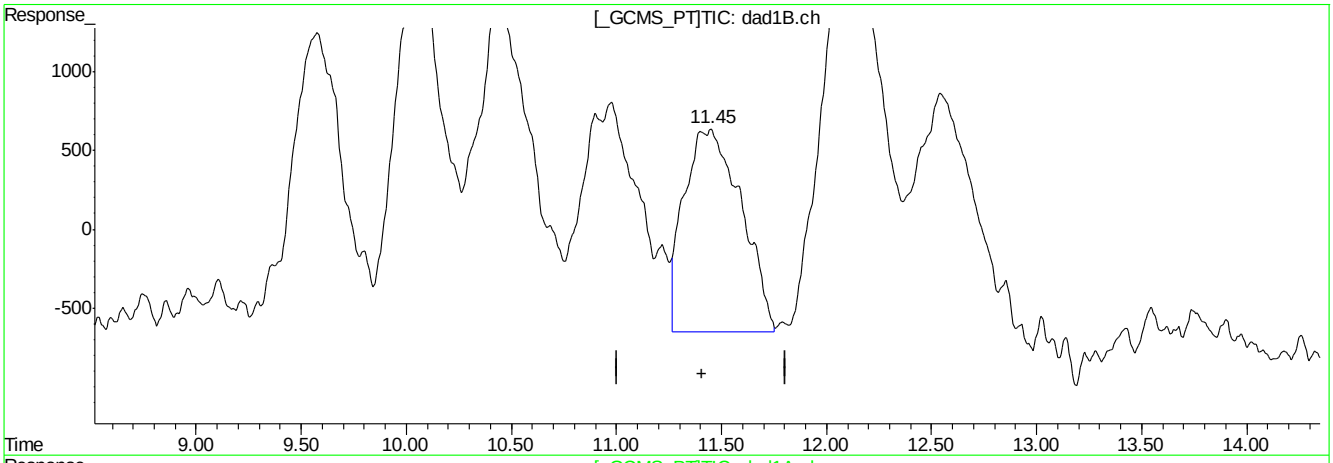
response 337052

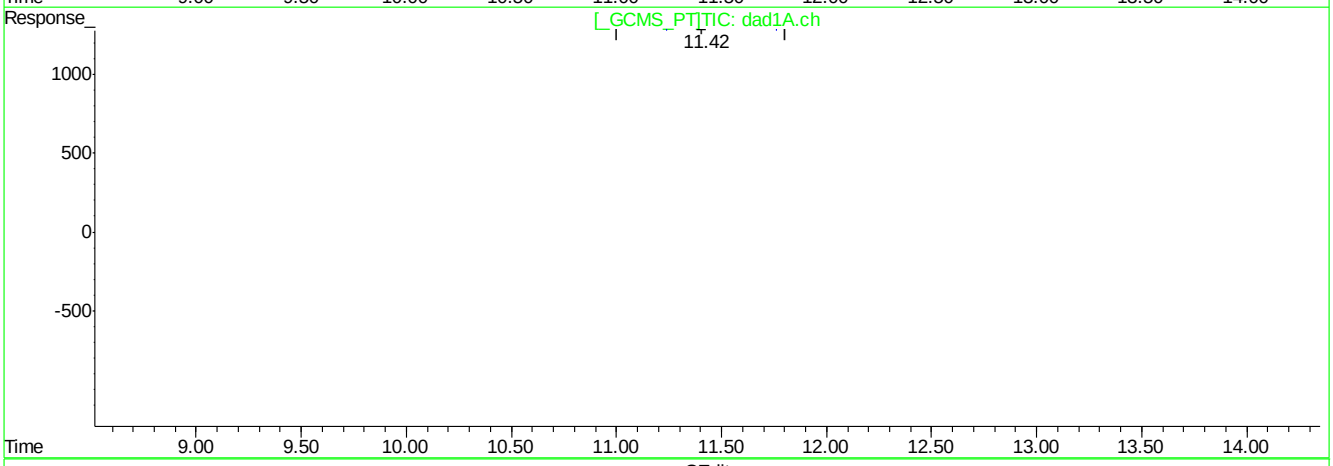
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:54:21 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(15) 3,4-Dinitrotoluene (S)

11.45min 97.867ppb m

response 243543

(15) 3,4-Dinitrotoluene #2 (S)

11.42min 80.133ppb

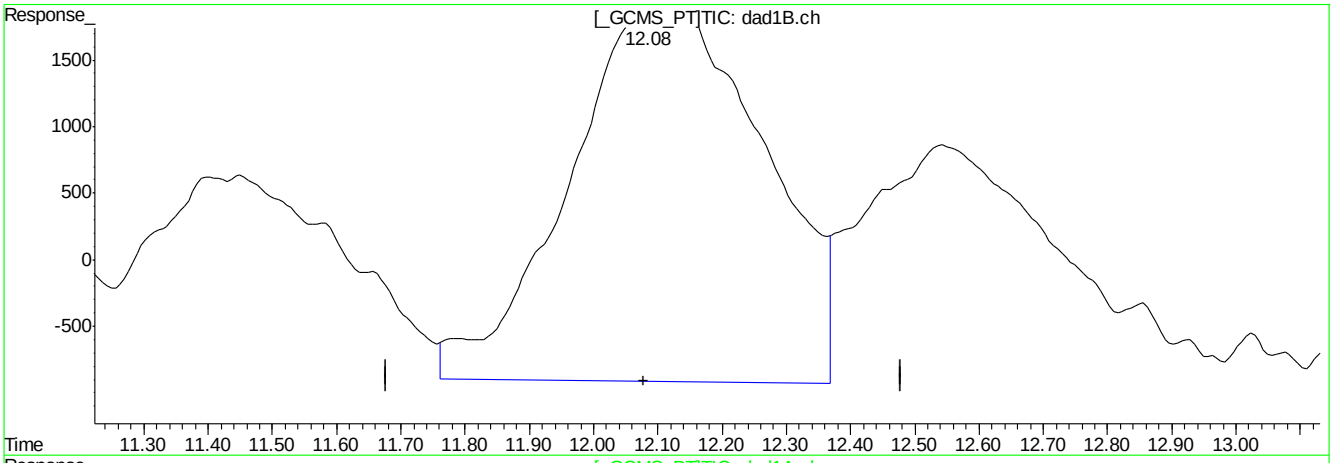
response 337052

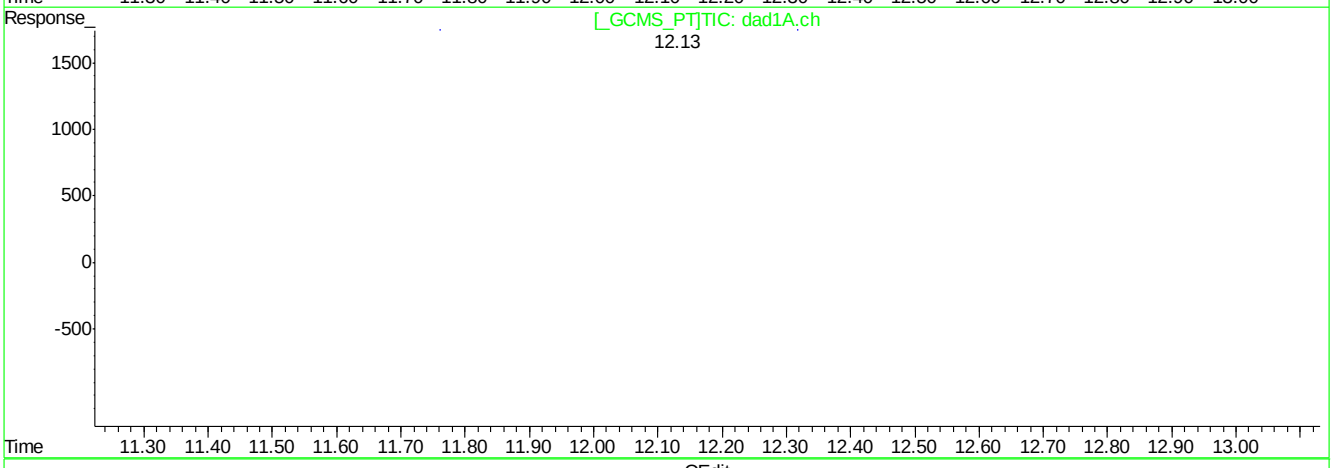
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:54:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.09min 116.004ppb

response 601850

(16) 2,4-Dinitrotoluene #2

12.13min 99.321ppb

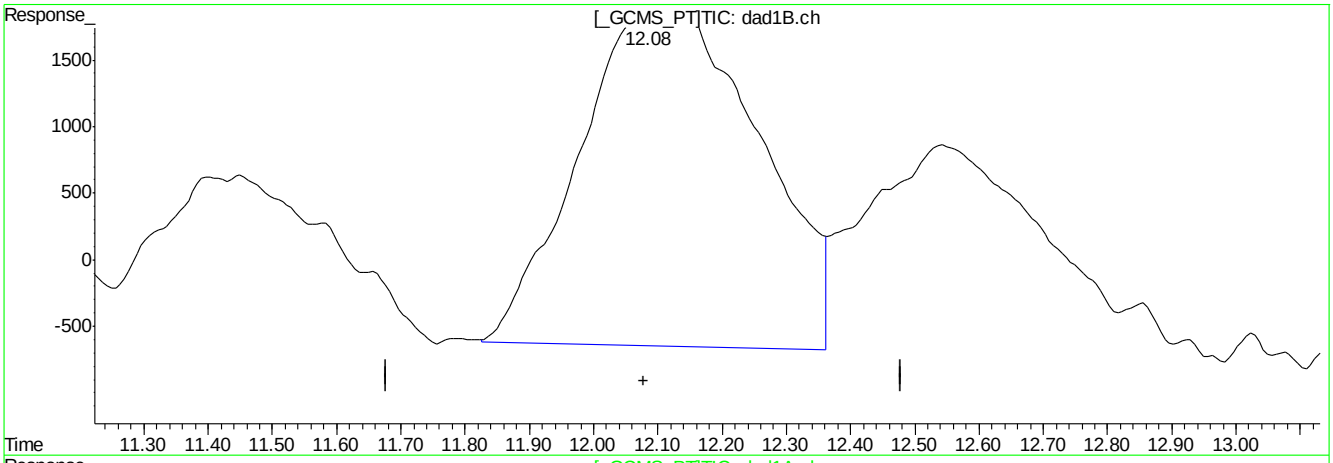
response 313385

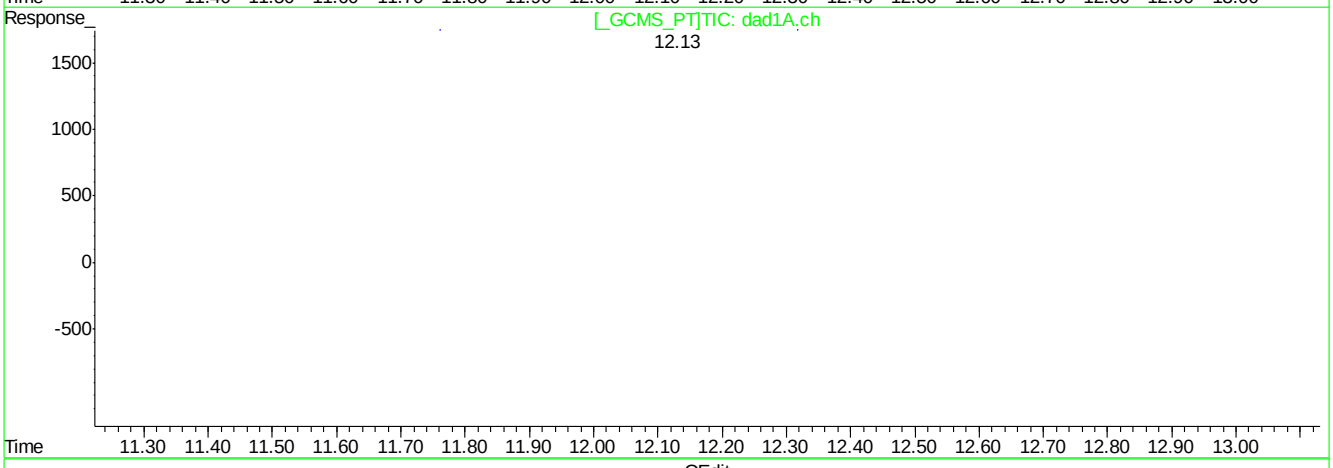
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:54:40 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.08min 96.183ppb m

response 499014

(16) 2,4-Dinitrotoluene #2

12.13min 99.321ppb

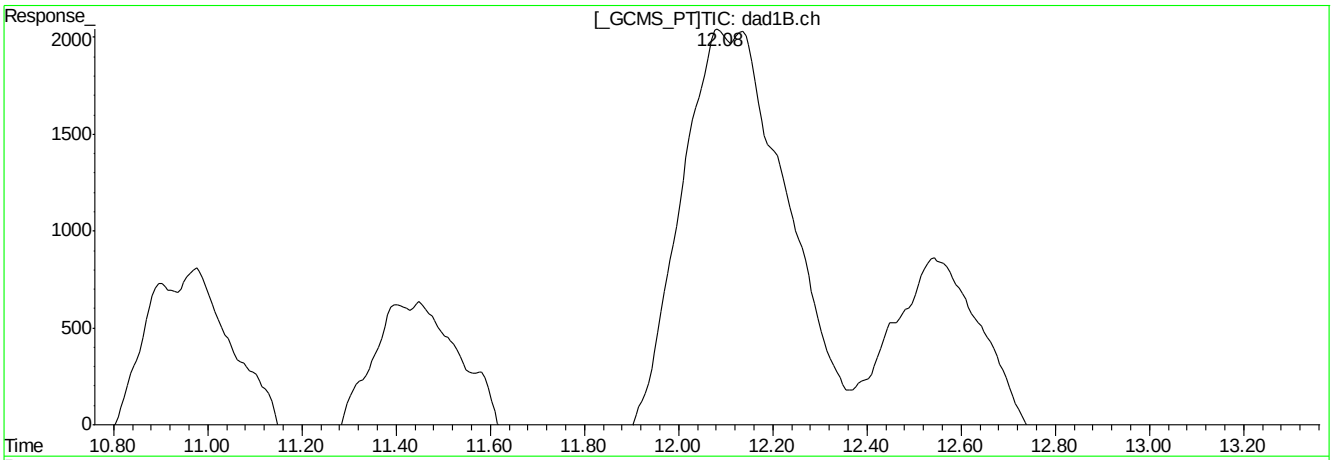
response 313385

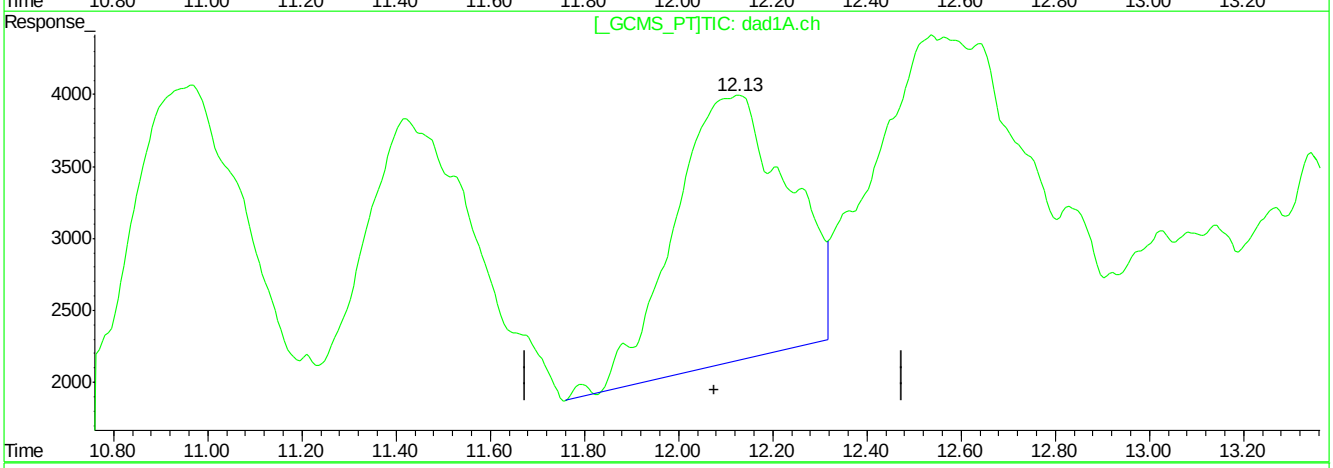
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:54:48 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.08min 96.183ppb m

response 499014

(16) 2,4-Dinitrotoluene #2

12.13min 99.321ppb

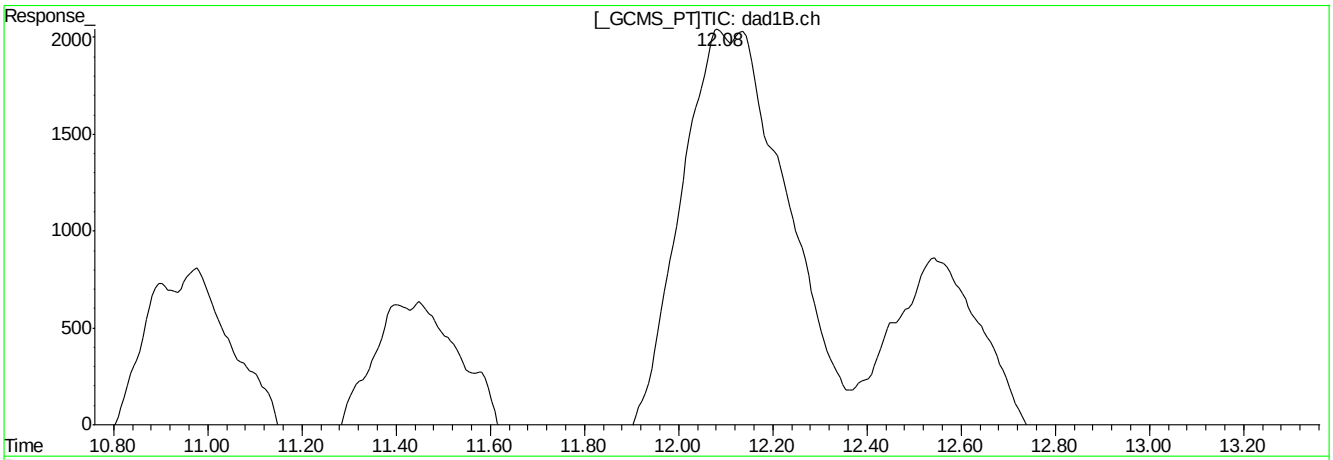
response 313385

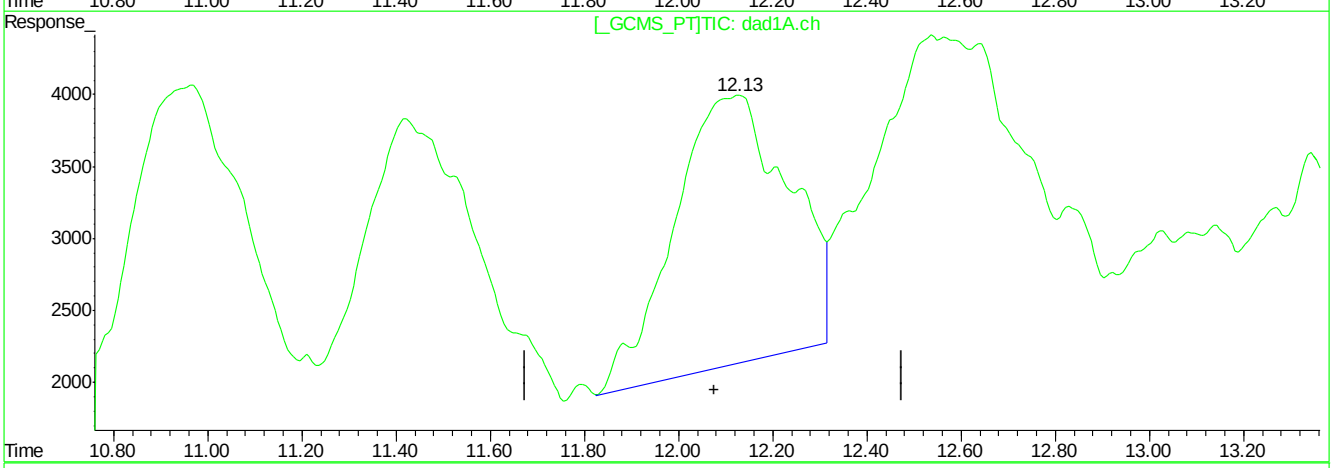
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:54:53 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(16) 2,4-Dinitrotoluene

12.08min 96.183ppb m

response 499014

(16) 2,4-Dinitrotoluene #2

12.13min 99.839ppb m

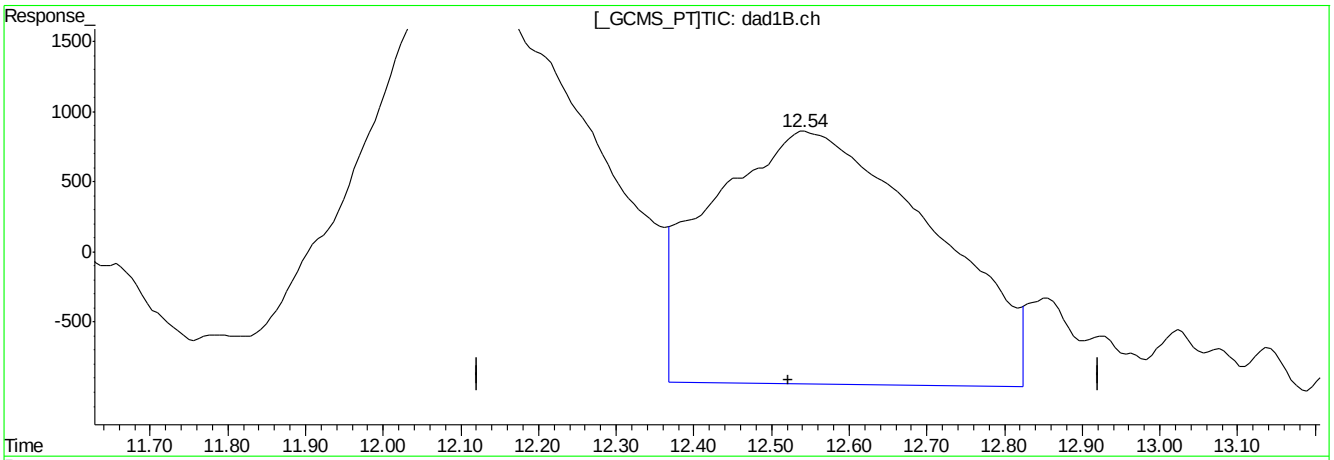
response 315018

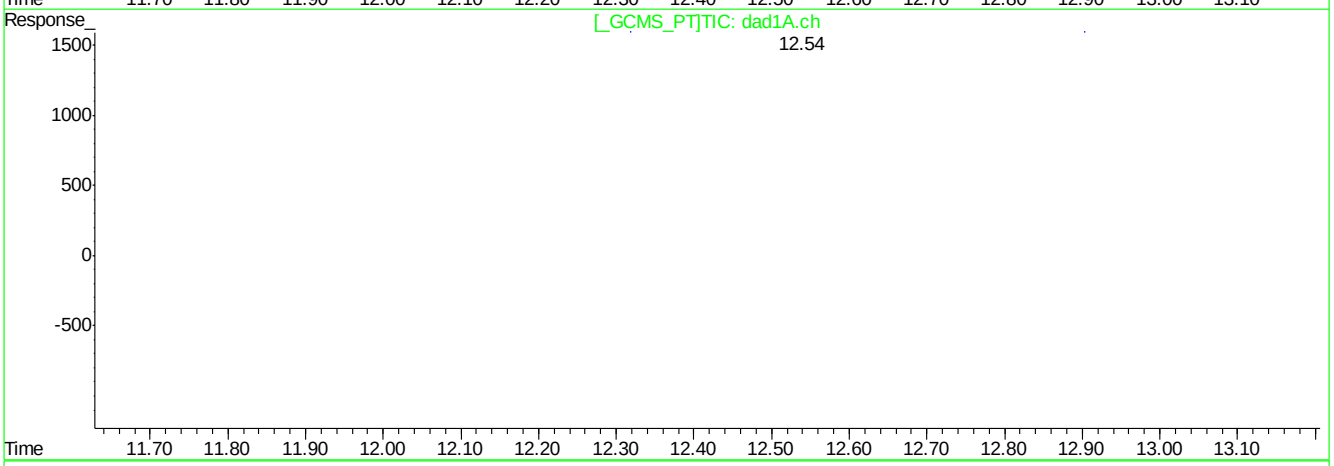
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:04 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.55min 122.083ppb

response 359348

(17) 2,6-Dinitrotoluene #2

12.54min 111.674ppb

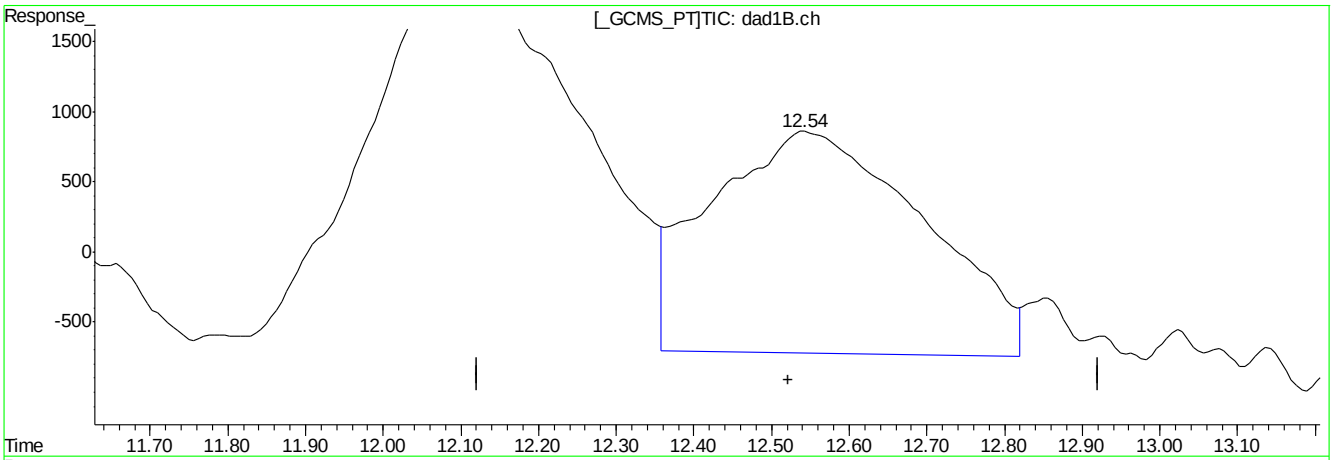
response 412058

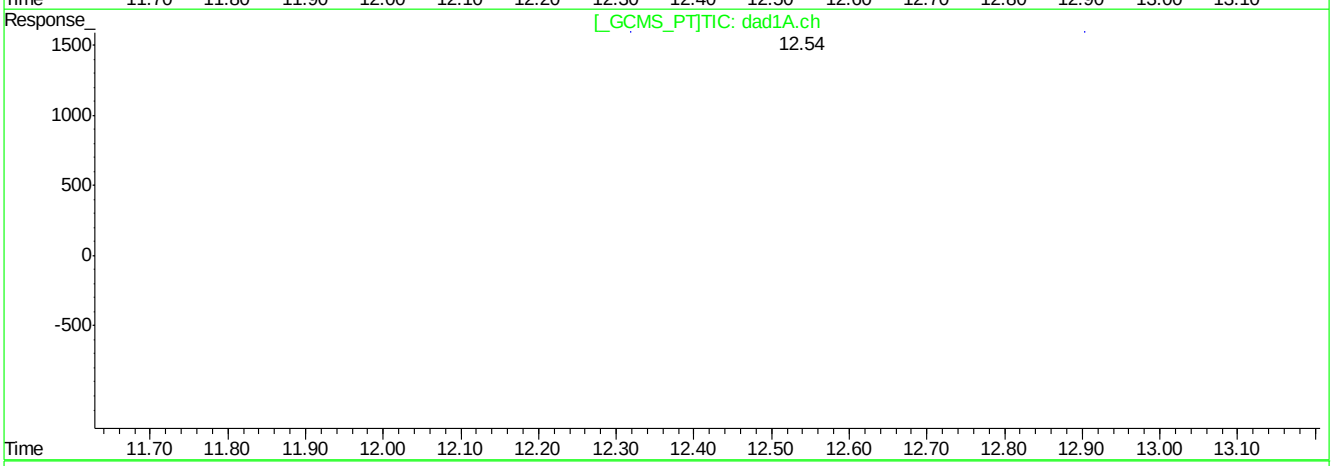
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:13 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(17) 2,6-Dinitrotoluene

12.54min 102.534ppb m

response 301682

(17) 2,6-Dinitrotoluene #2

12.54min 111.674ppb

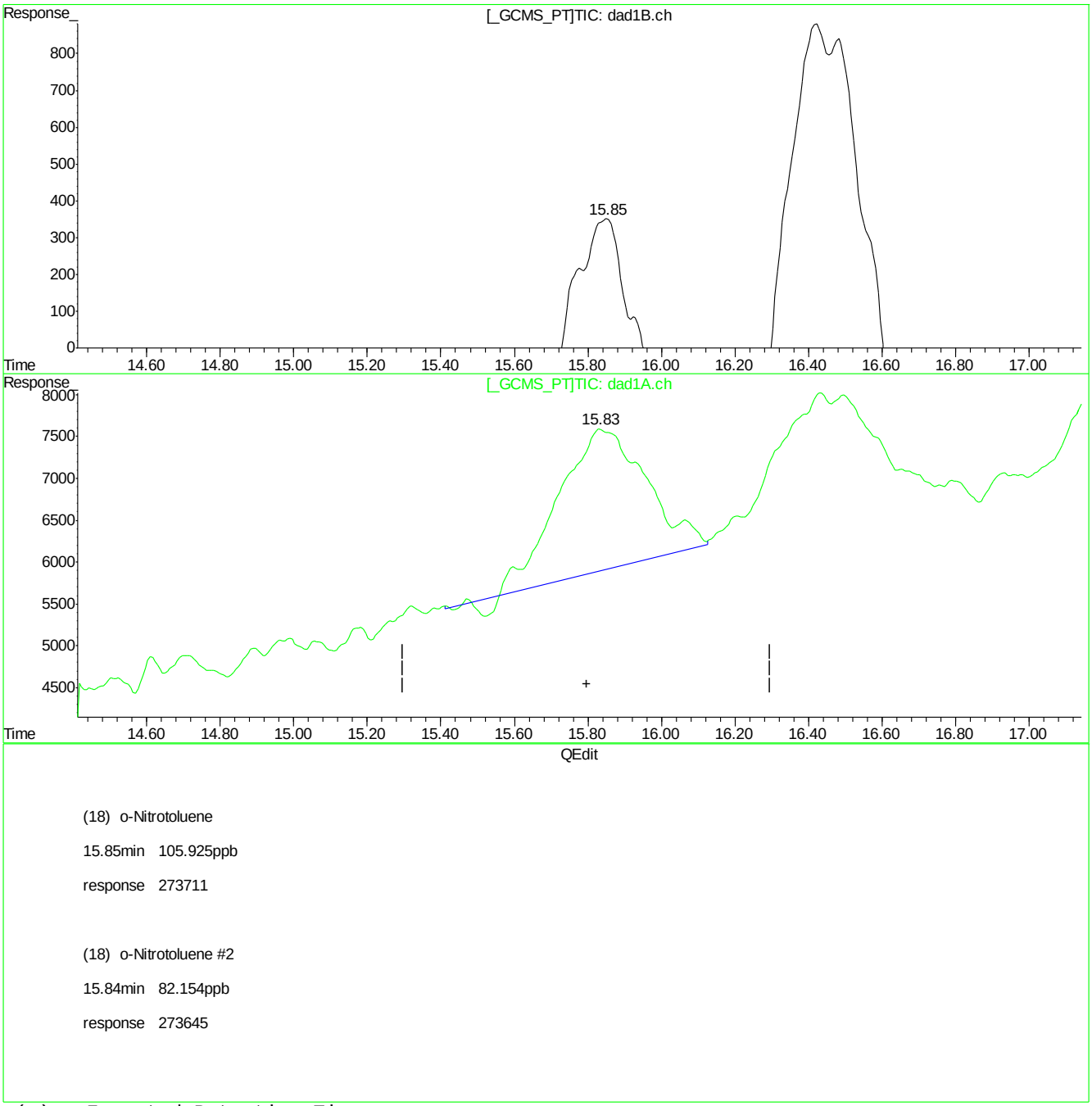
response 412058

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:20 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.85min 105.925ppb

response 273711

(18) o-Nitrotoluene #2

15.84min 82.154ppb

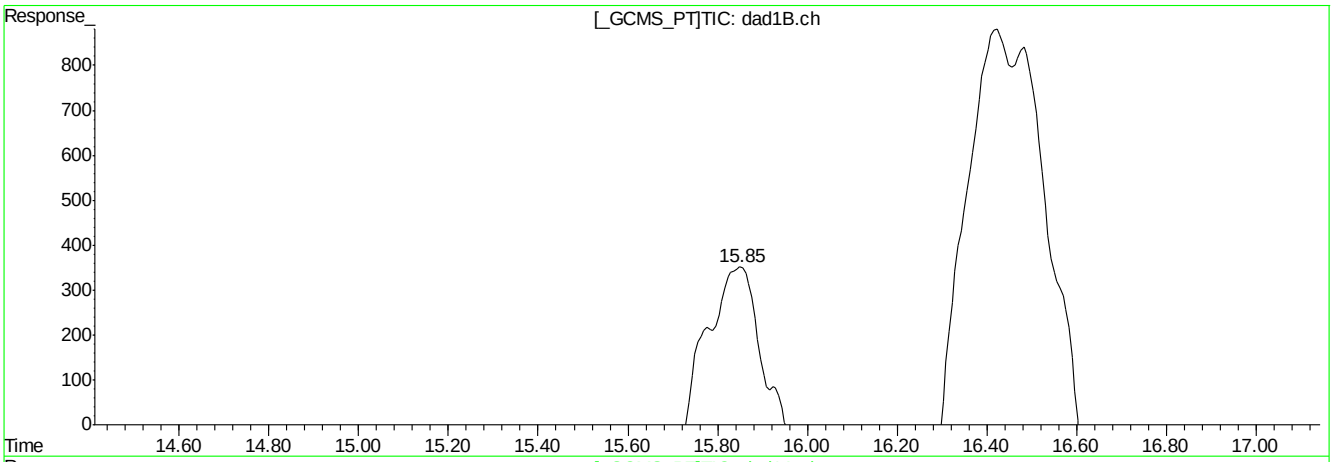
response 273645

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:31 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.85min 105.925ppb

response 273711

(18) o-Nitrotoluene #2

15.83min 109.241ppb m

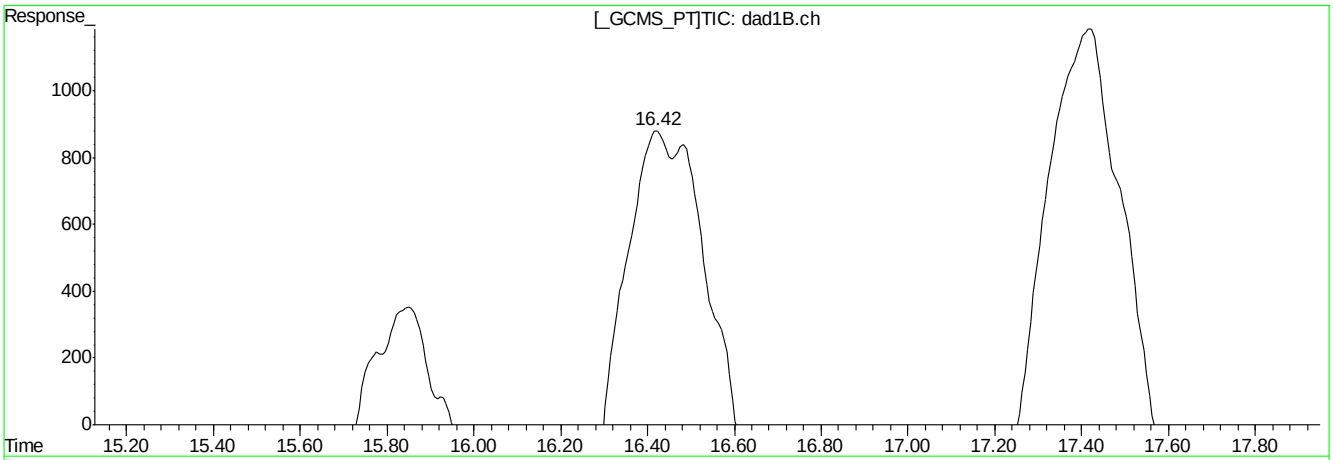
response 363866

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:39 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.42min 98.732ppb

response 394551

(19) p-Nitrotoluene #2

16.44min 47.202ppb

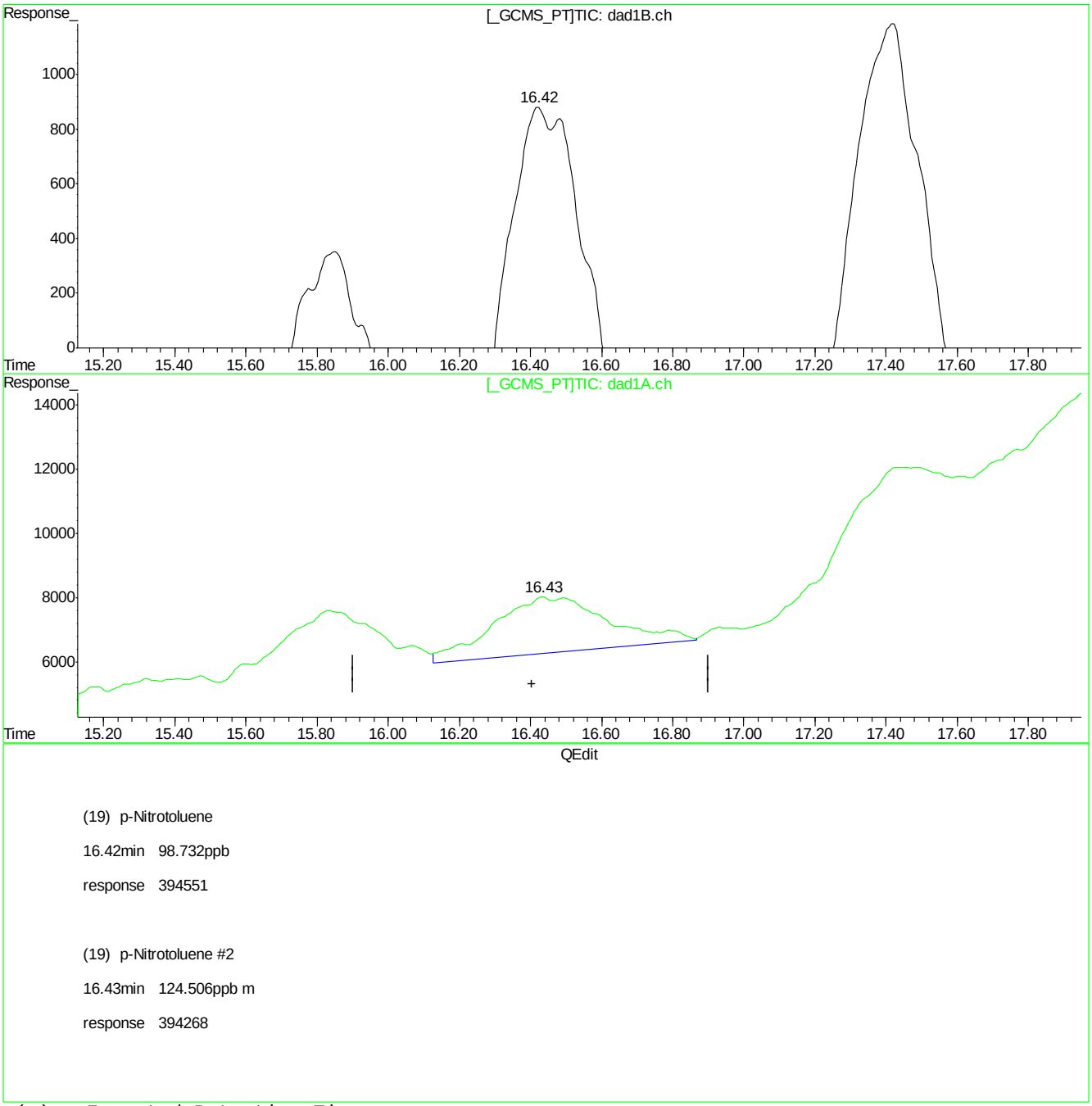
response 149474

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:46 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(19) p-Nitrotoluene

16.42min 98.732ppb

response 394551

(19) p-Nitrotoluene #2

16.43min 124.506ppb m

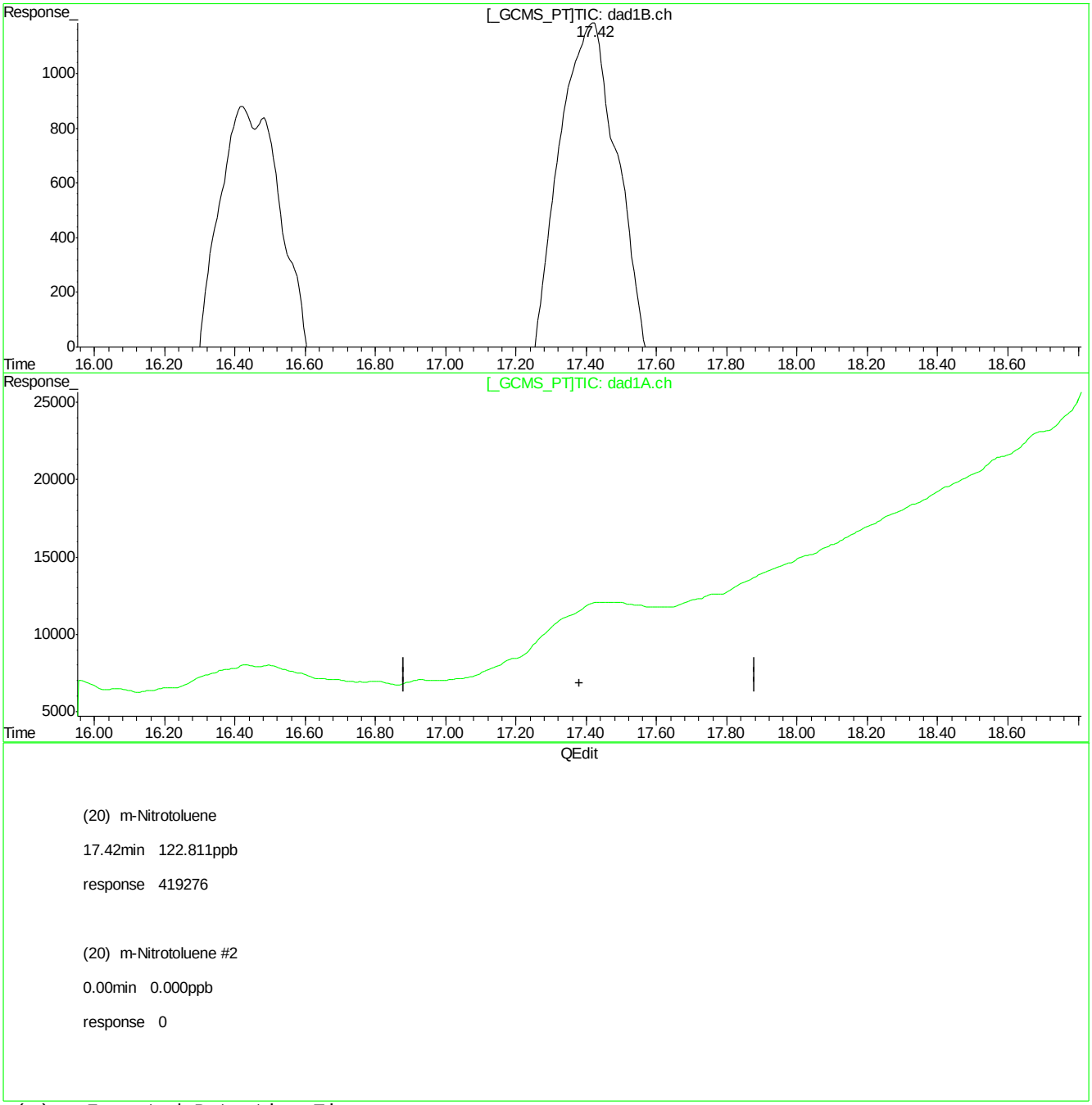
response 394268

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:55:54 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

17.42min 122.811ppb

response 419276

(20) m-Nitrotoluene #2

0.00min 0.000ppb

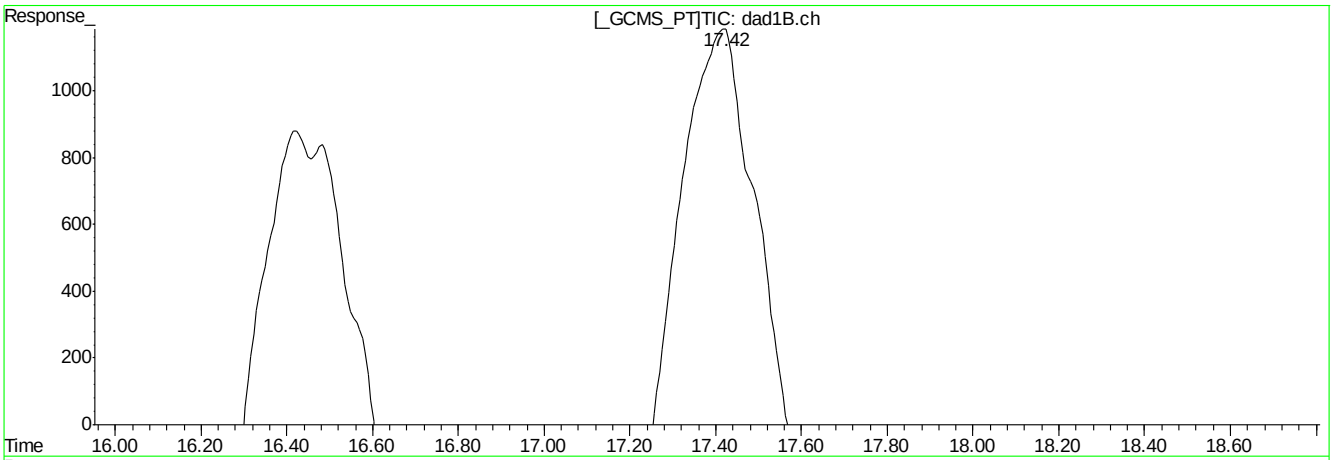
response 0

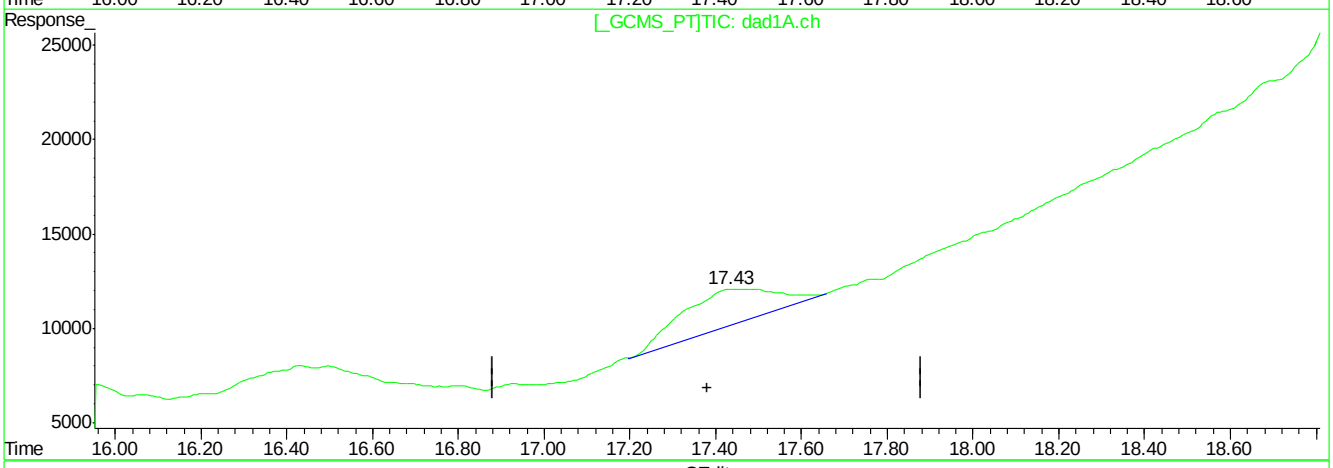
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:56:03 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.42min 122.811ppb

response 419276

(20) m-Nitrotoluene #2

17.43min 83.460ppb m

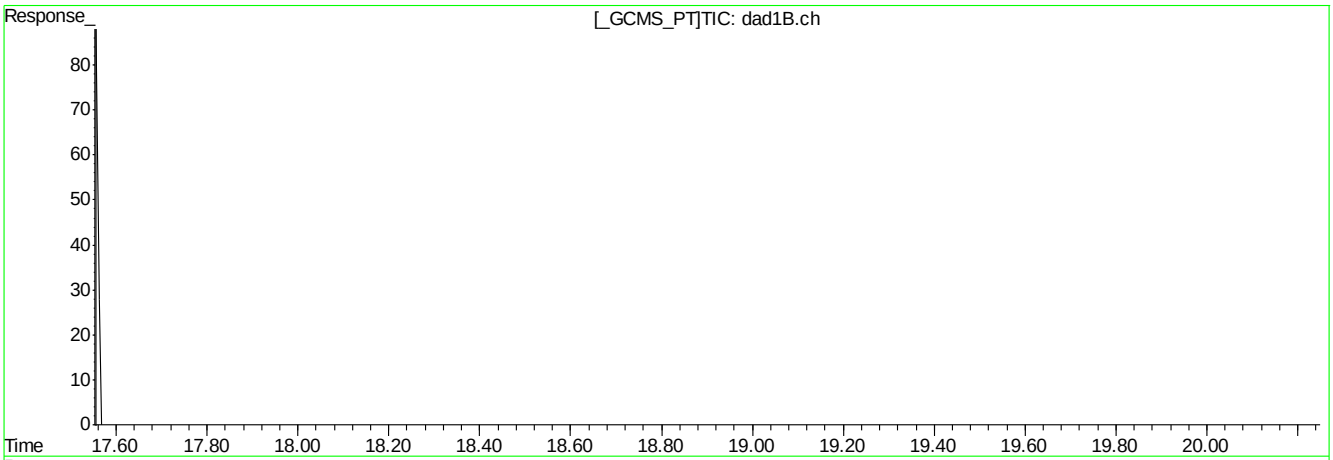
response 294844

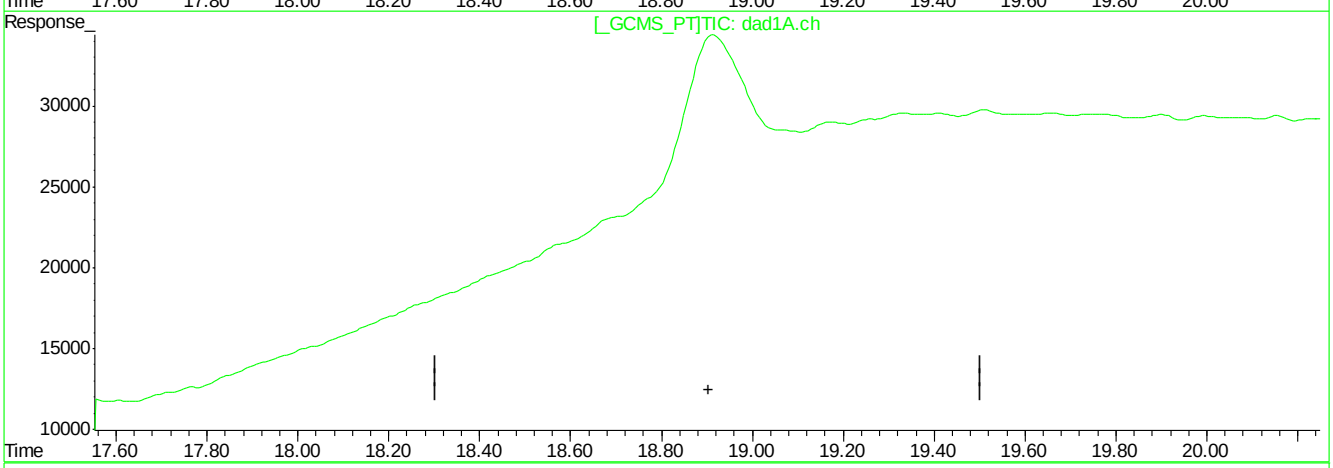
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:56:08 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.96min 0.000ppb

response 22949

(21) PETN #2

0.00min 0.000ppb

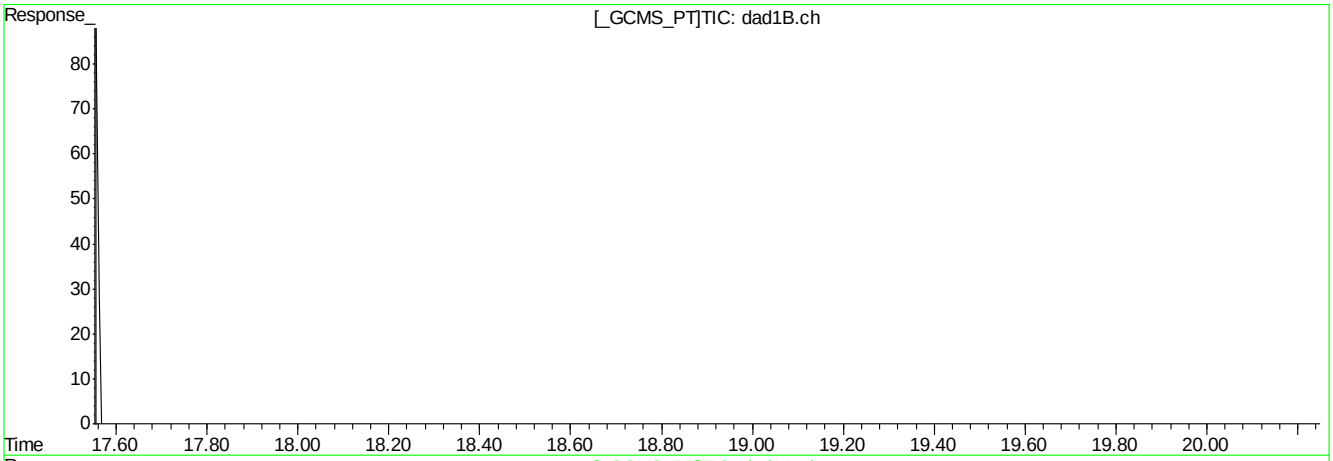
response 0

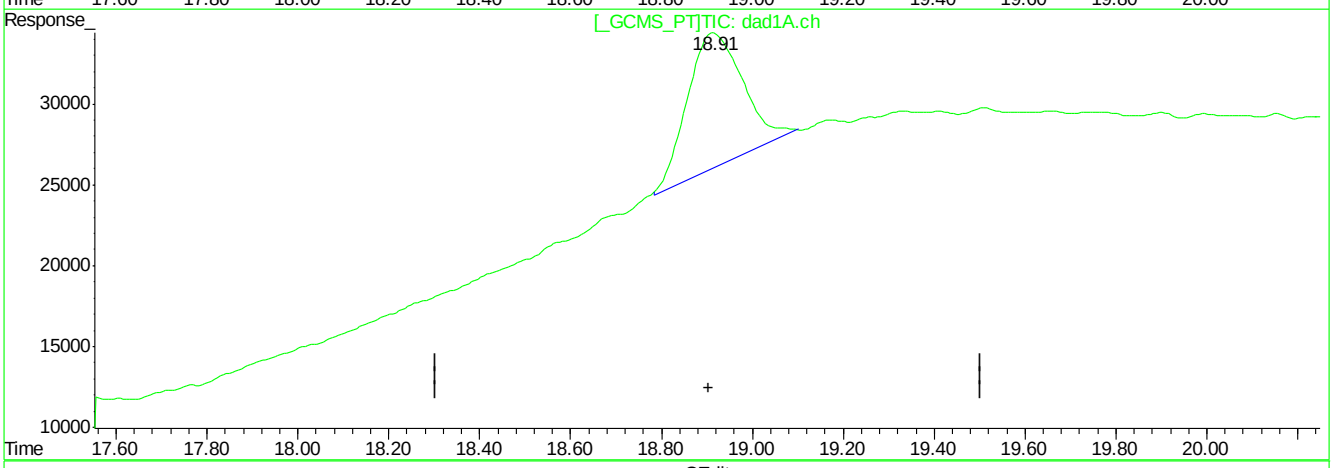
(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:56:12 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1B.ch Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060202.D\dad1A.ch
Acq On : 06-Jul-2018, 16:33:08 Operator: kismetl
Sample : ic1748-100 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.96min 0.000ppb

response 22949

(21) PETN #2

18.91min 534.988ppb m

response 704993

(+) = Expected Retention Time
BB060202.D 8330B_0707PLUS.M Mon Jul 09 09:56:18 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:30 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.44	11.45	519740	738848	208.855	175.659
	Spiked Amount 500.000	Range 70 - 136		Recovery =		41.77%#	35.13%#
	Target Compounds						
1)	TNX	1.40	1.40	1013813	1588935	207.137	208.166
2)	HMX	1.54	1.54	367501	1086351	203.308	219.536
3)	DNX	1.79	1.79	555004	940350	180.467	185.467
4)	MNX	2.40	2.40	560123	824492	179.245	174.866m
5)	RDX	3.02	3.02	394305	674661	202.026m	206.893m
6)	1,3,5-Trinitrobe	4.83	4.83	860101	1607722	197.385	196.128
7)	1,3-Dinitrobenze	6.06	6.06	1104856	740582	189.544m	192.527m
8)	3,5-Dinitroanili	6.42	6.42	965484	1662853	206.488	212.702
9)	Nitrobenzene	7.71	7.71	730467	677197	195.204	214.537
10)	Nitroglycerin	0.00	9.05	0	1269517	N.D. d	993.517
11)	Tetryl	9.58	9.56	548276	759245	185.264	183.425
12)	2,4,6-Trinitroto	10.05	10.04	700562	781607	178.854	182.778
13)	2-Amino-4,6-Dini	10.44	10.45	763996	941355	204.589	168.109
14)	4-Amino-2,6-Dini	10.94	10.96	522801	901049	197.632	169.045
16)	2,4-Dinitrotolue	12.10	12.11	1029064	561998	198.348	178.115
17)	2,6-Dinitrotolue	12.56	12.58	597888	715257	202.775	193.845
18)	o-Nitrotoluene	15.82	15.82	465201	616132	180.031	184.977m
19)	p-Nitrotoluene	16.42	16.42	747964	659517	187.170	208.269
20)	m-Nitrotoluene	17.38	17.42	749218	651487	219.001	182.835m
21)	PETN	0.00	18.91	0	1424589	N.D. d	1081.058m

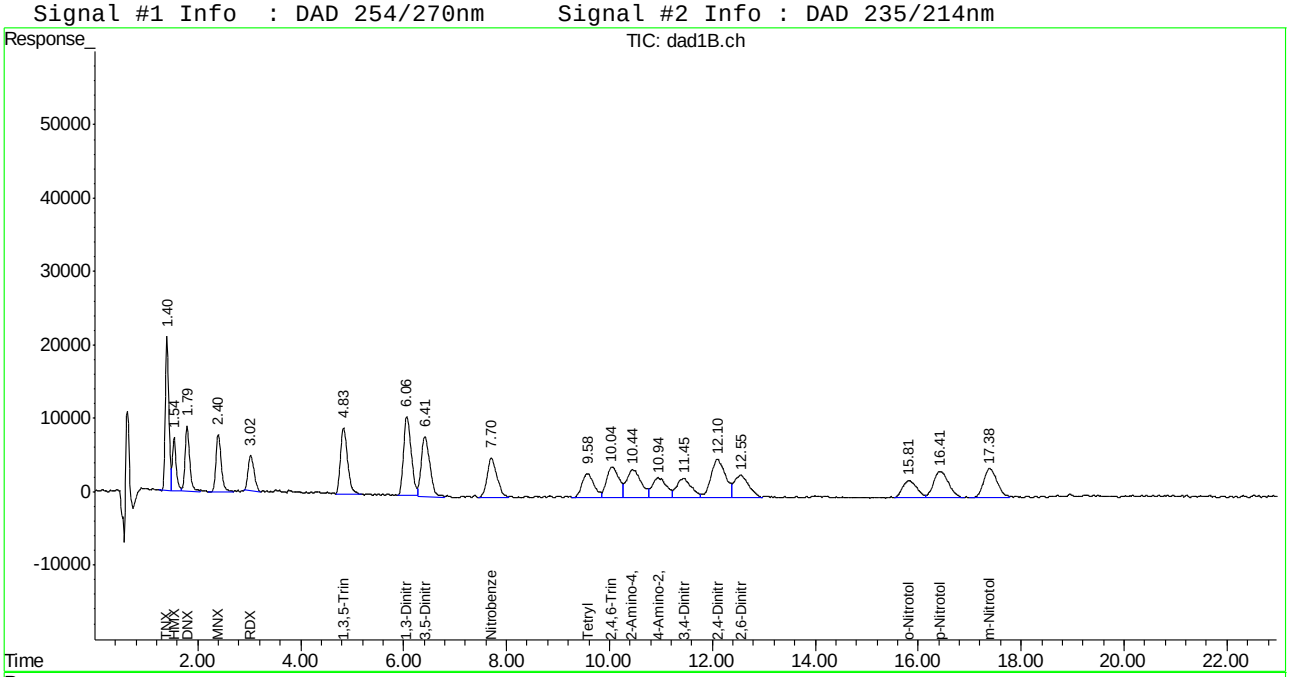
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060203.D 8330B_0707PLUS.M Mon Jul 09 11:20:51 2018 Page 1

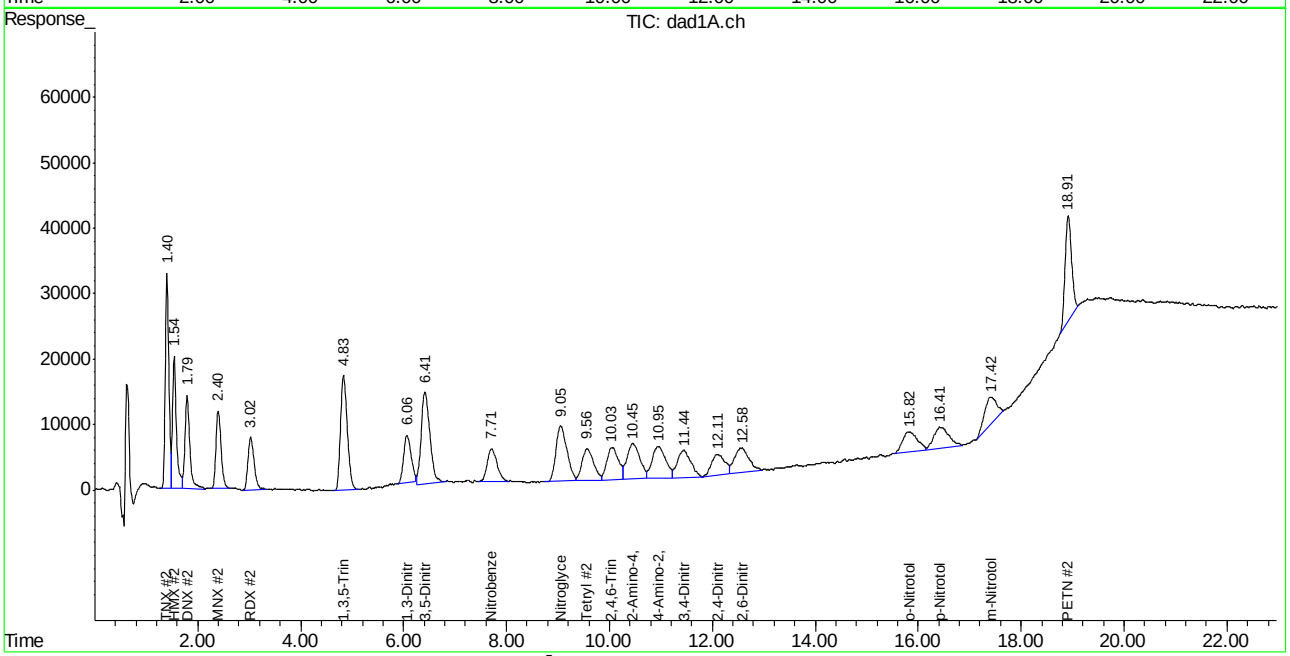
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:06 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

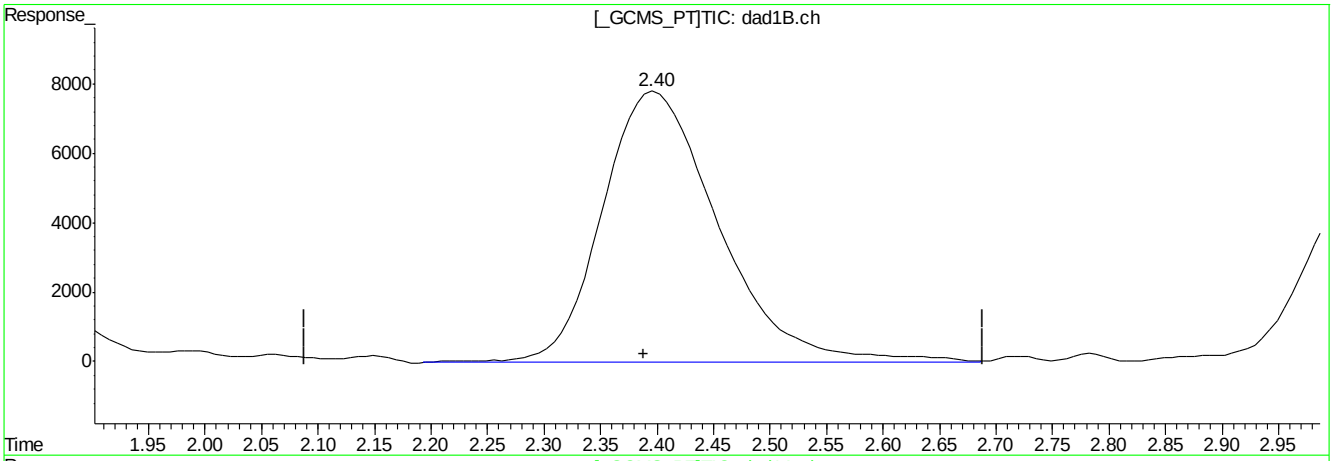
Sample Number: GBB1748-IC1748 **Method:** SW846 8330A
Lab FileID: BB060203.D **Analyst approved:** 07/09/18 11:23 William Hustedde
Injection Time: 07/06/18 17:03 **Supervisor approved:** 07/09/18 16:15 Mike Eger

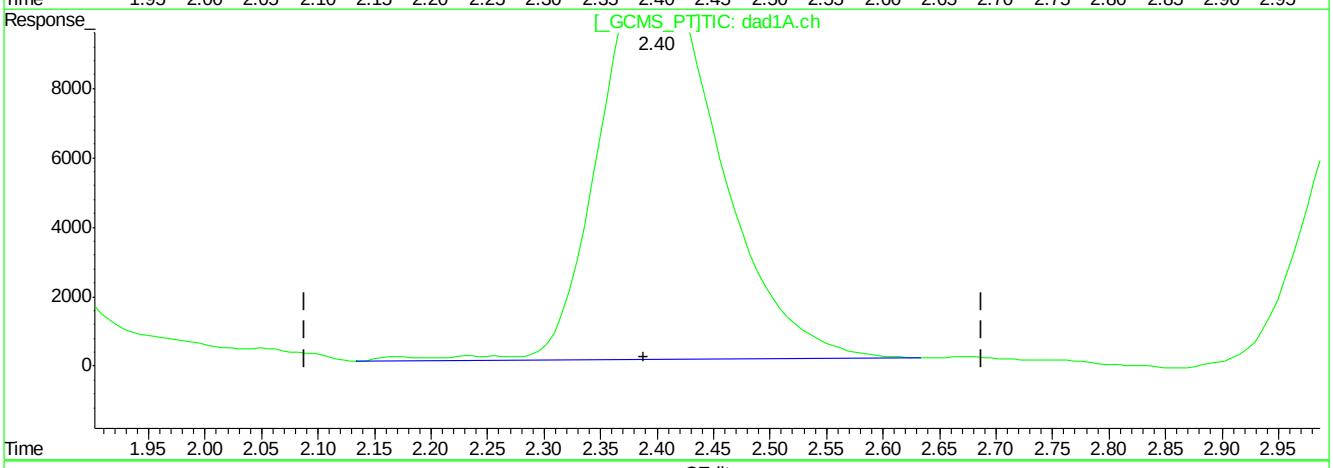
Parameter	CAS	Sig#	R.T. (min.)	Reason
MNX		2	2.40	Poor instrument integration
RDX	121-82-4	1	3.02	Poor instrument integration
RDX	121-82-4	2	3.02	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	1	6.06	Poor instrument integration
1,3-Dinitrobenzene	99-65-0	2	6.06	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.82	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.42	Poor instrument integration
PETN	78-11-5	2	18.91	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.40min 179.245ppb

response 560123

(4) MNX #2

2.40min 177.792ppb

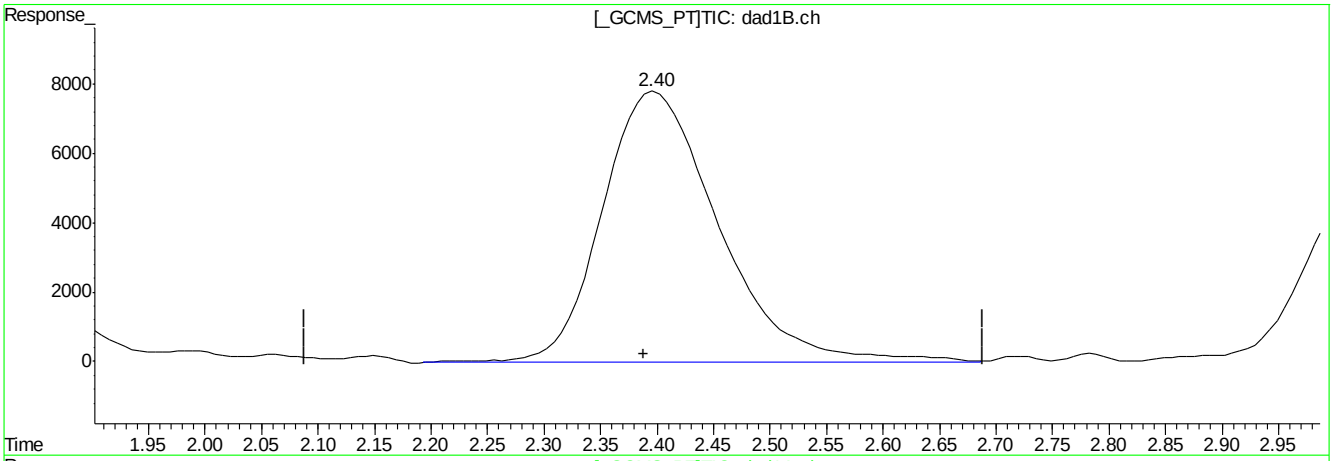
response 838288

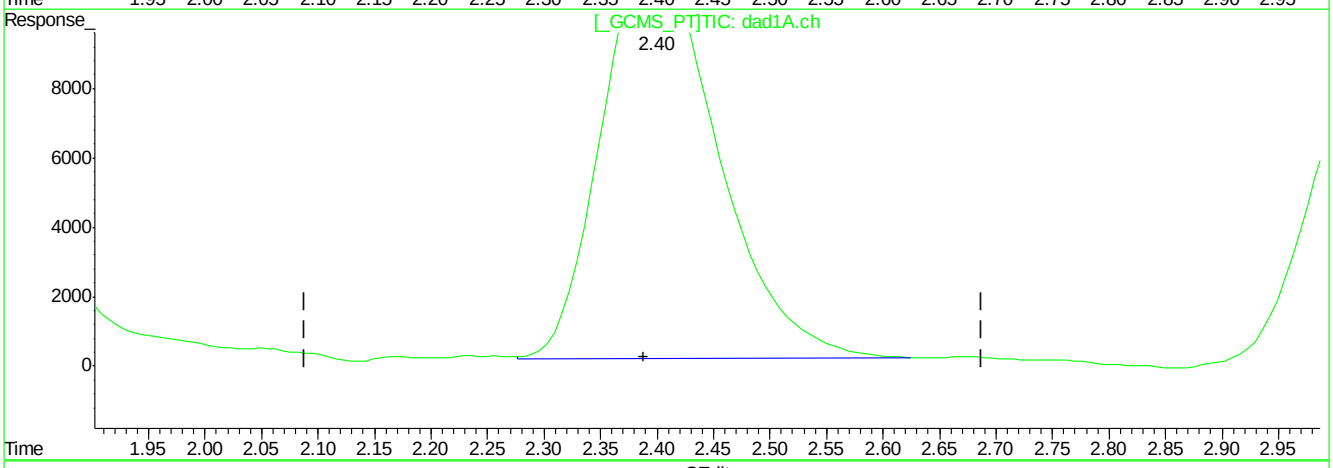
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:56:43 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(4) MNX

2.40min 179.245ppb

response 560123

(4) MNX #2

2.40min 174.866ppb m

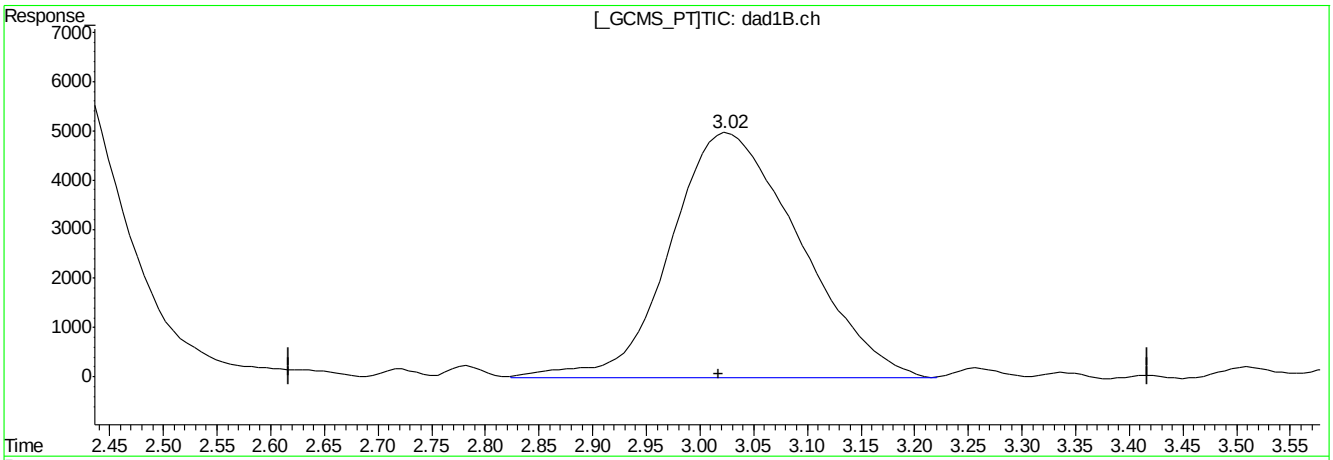
response 824492

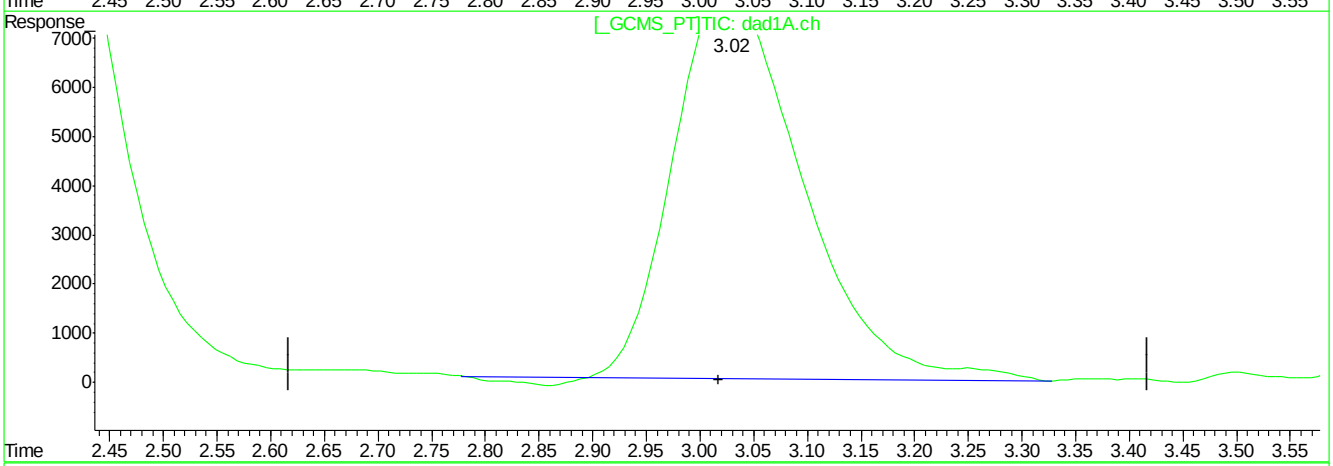
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:56:50 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(5) RDX

3.03min 212.700ppb

response 415243

(5) RDX #2

3.03min 199.903ppb

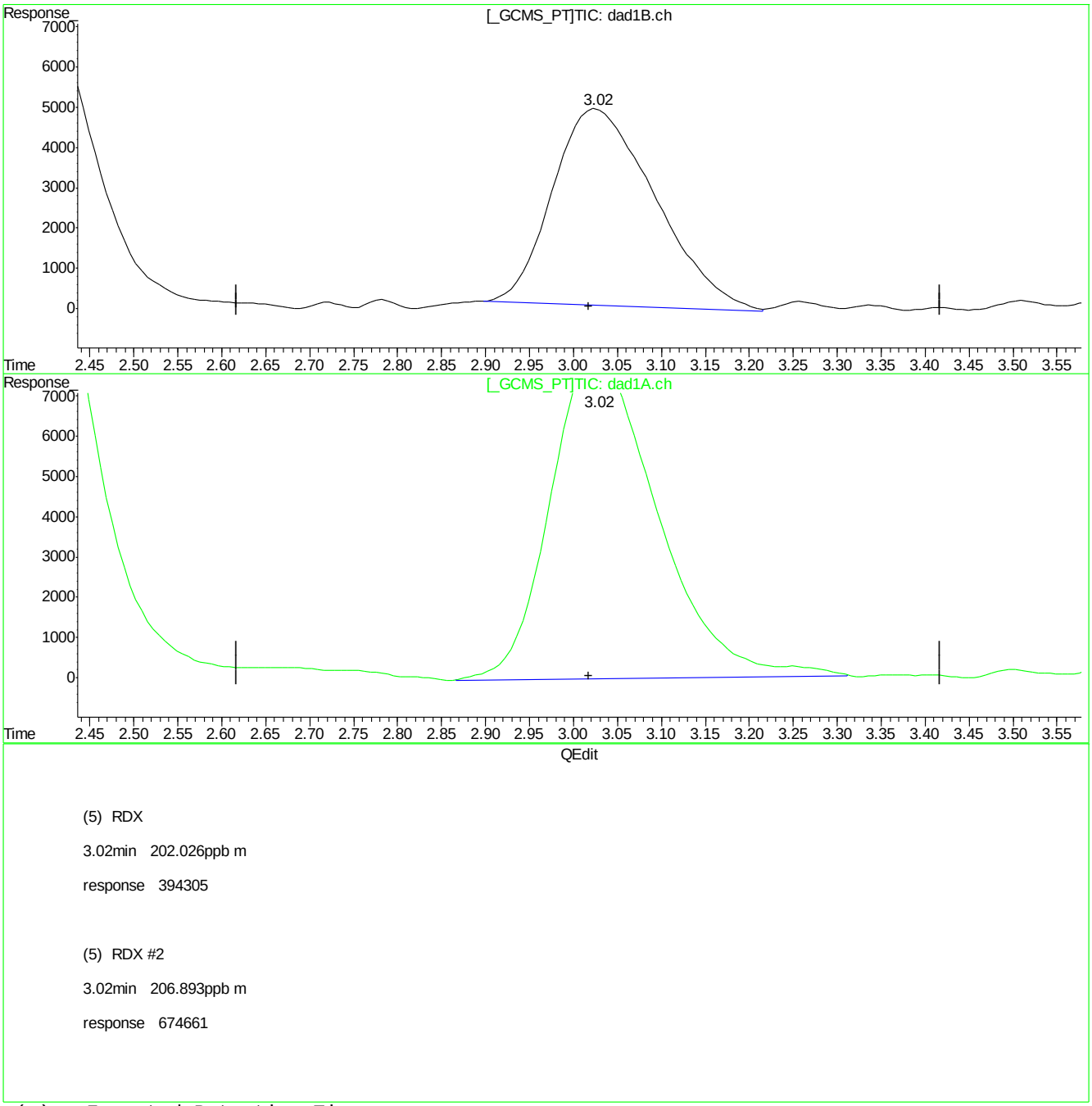
response 651869

(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:56:56 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(5) RDX

3.02min 202.026ppb m

response 394305

(5) RDX #2

3.02min 206.893ppb m

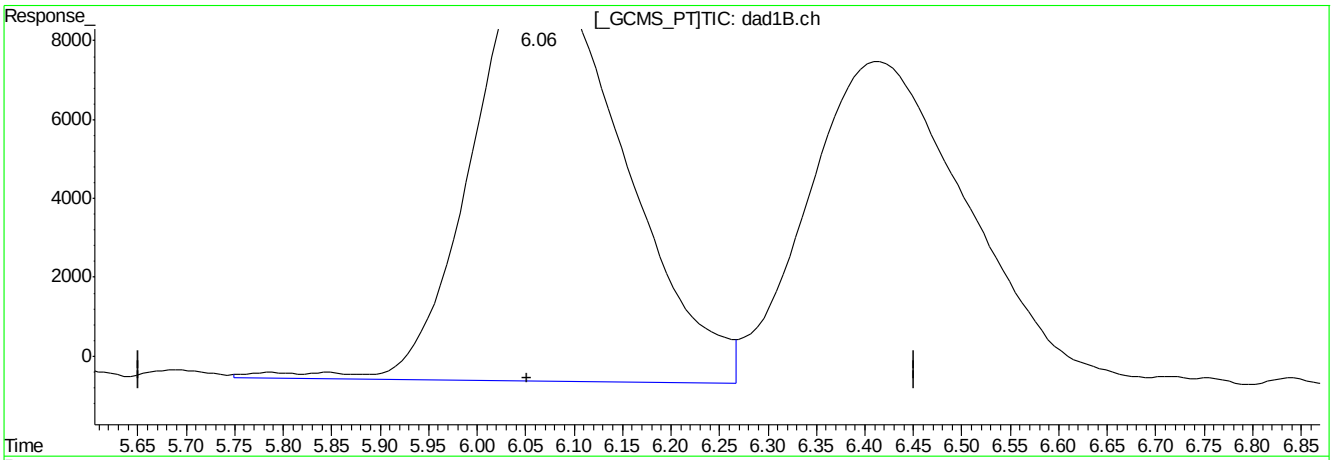
response 674661

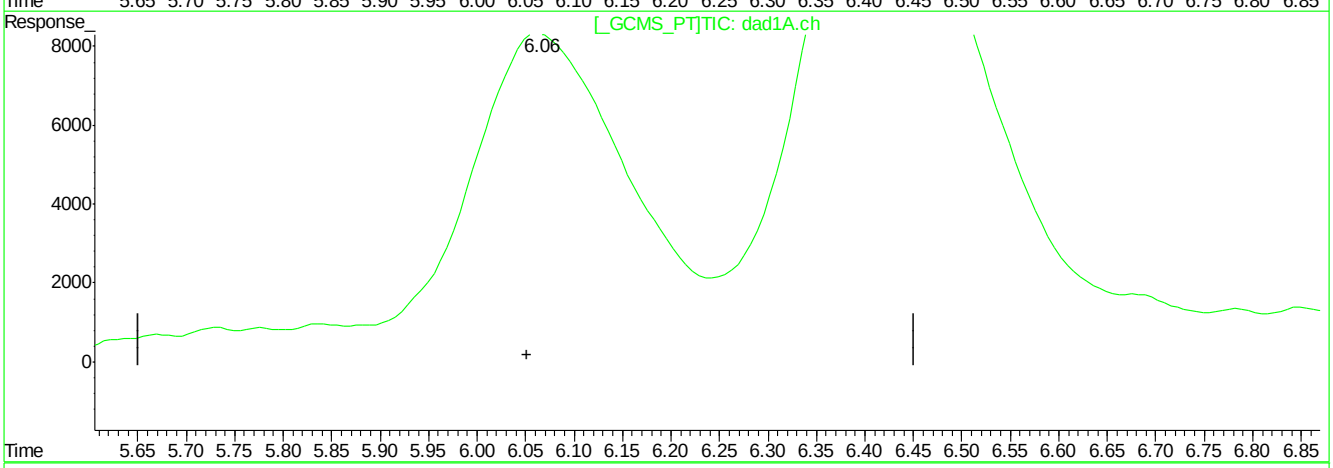
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:57:04 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.06min 195.357ppb

response 1138744

(7) 1,3-Dinitrobenzene #2

6.07min 237.834ppb

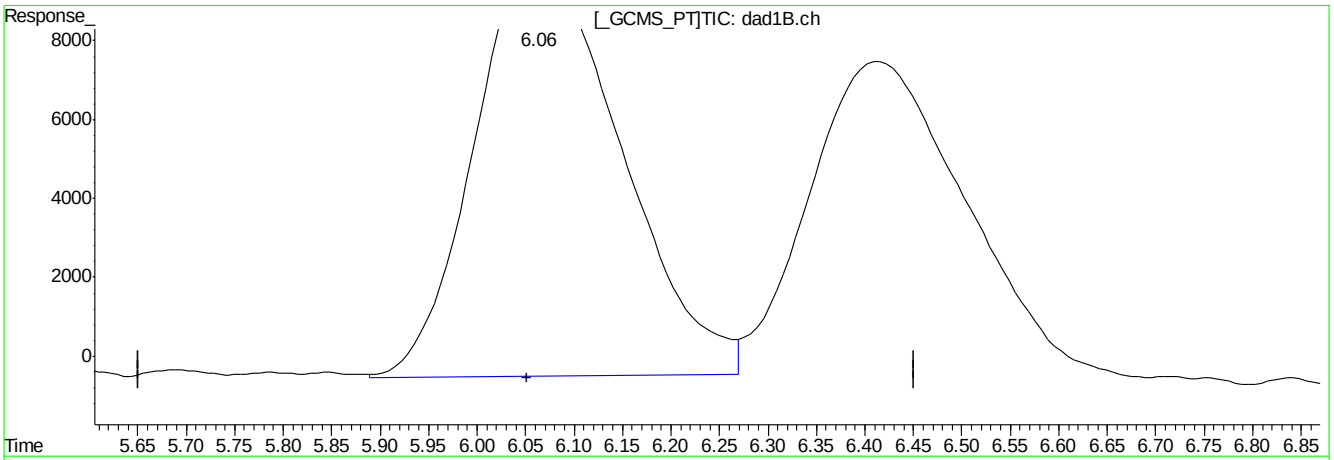
response 914341

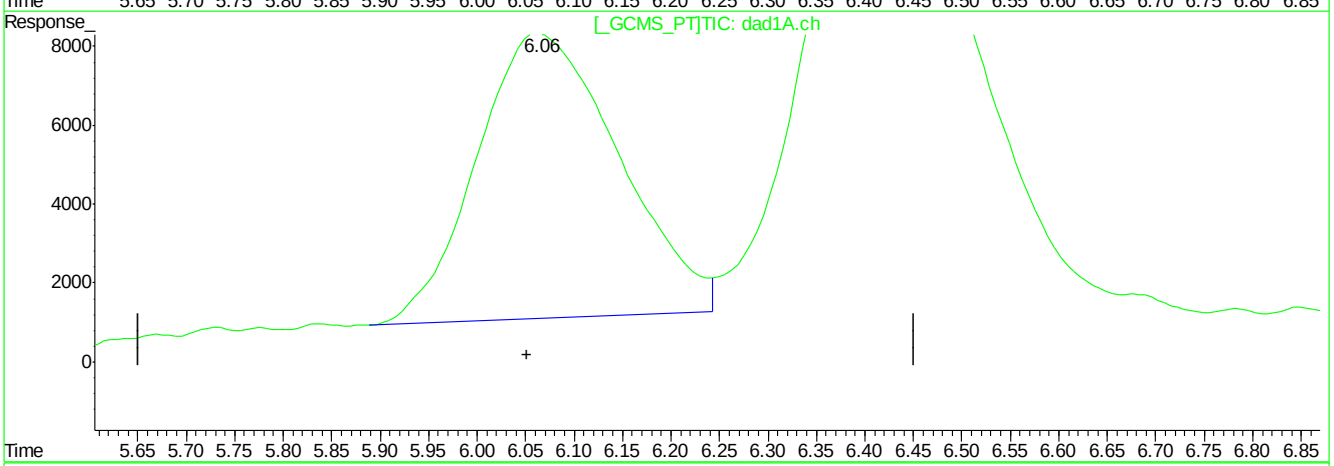
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:57:16 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(7) 1,3-Dinitrobenzene

6.06min 189.544ppb m

response 1104856

(7) 1,3-Dinitrobenzene #2

6.06min 192.527ppb m

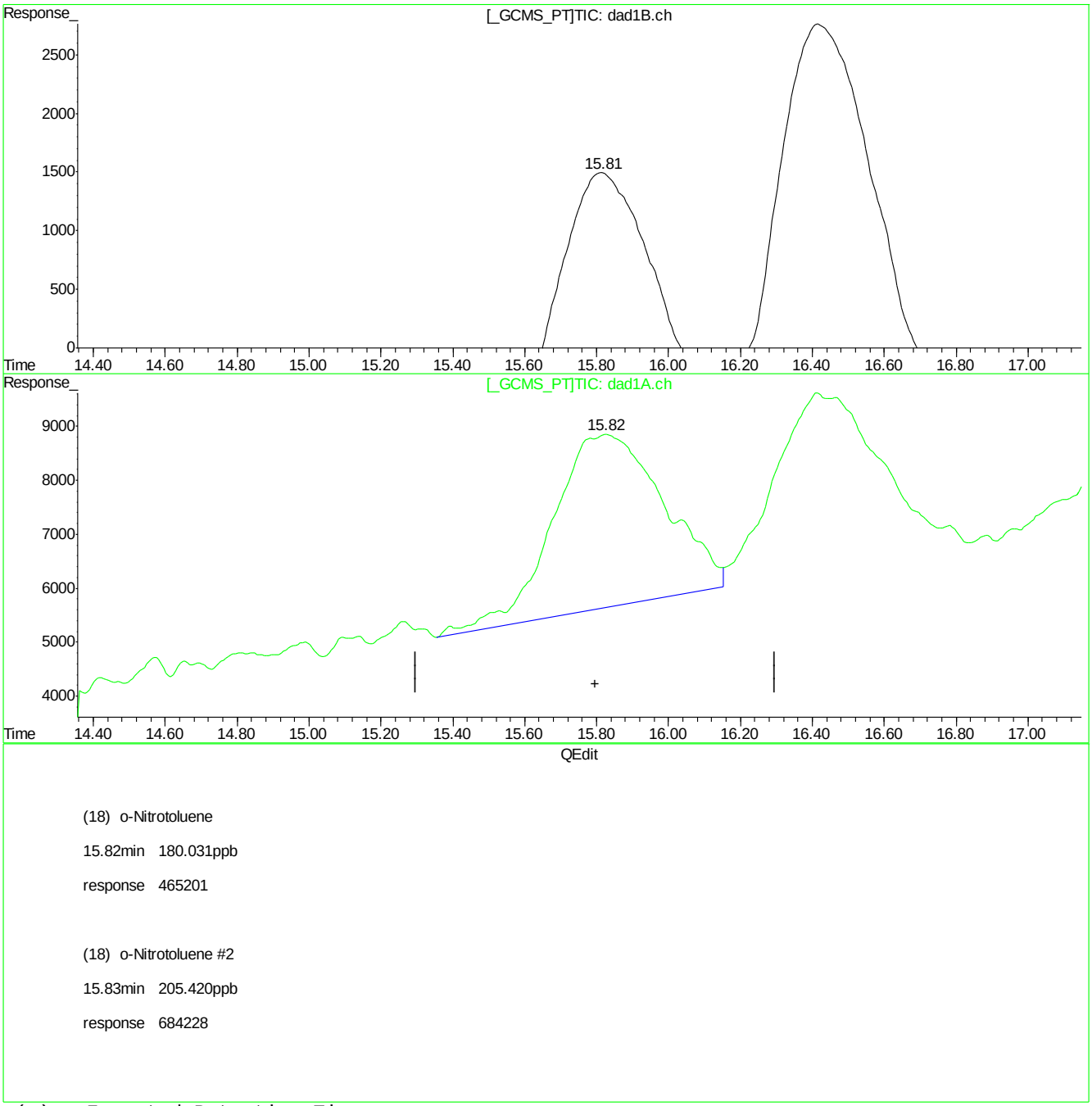
response 740582

(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:57:30 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.82min 180.031ppb

response 465201

(18) o-Nitrotoluene #2

15.83min 205.420ppb

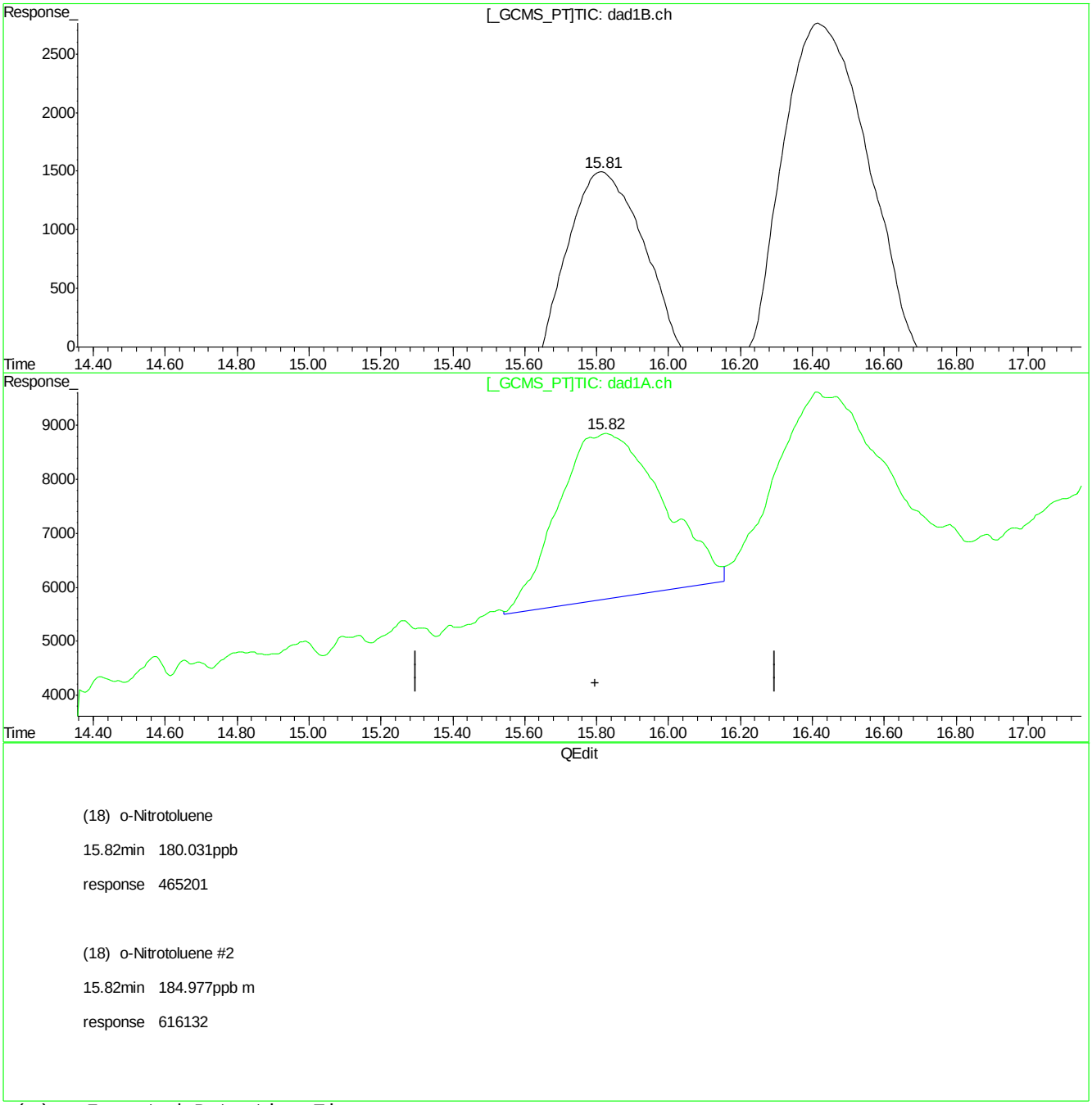
response 684228

(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:58:40 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.82min 180.031ppb

response 465201

(18) o-Nitrotoluene #2

15.82min 184.977ppb m

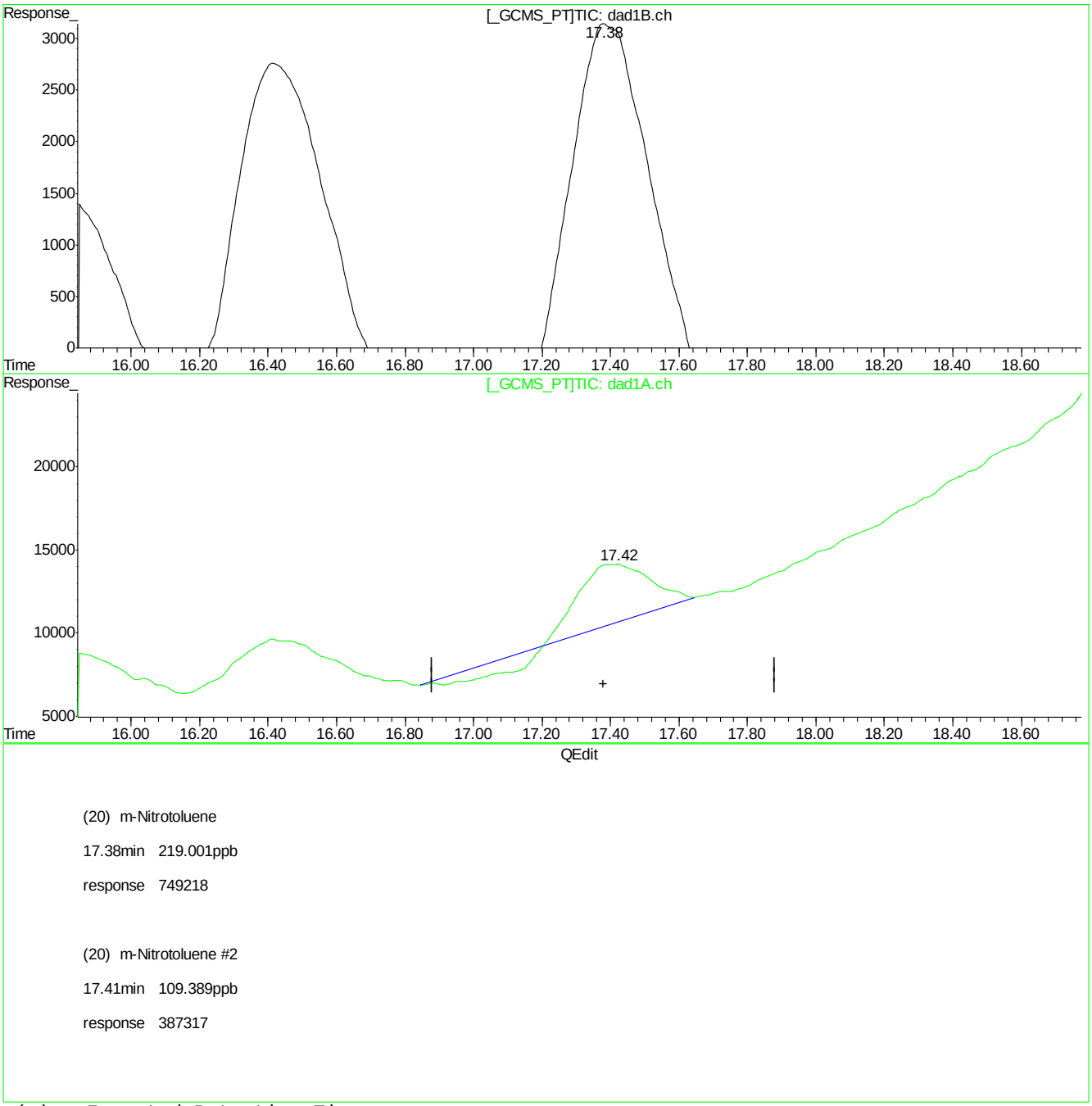
response 616132

(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:58:45 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

17.38min 219.001ppb

response 749218

(20) m-Nitrotoluene #2

17.41min 109.389ppb

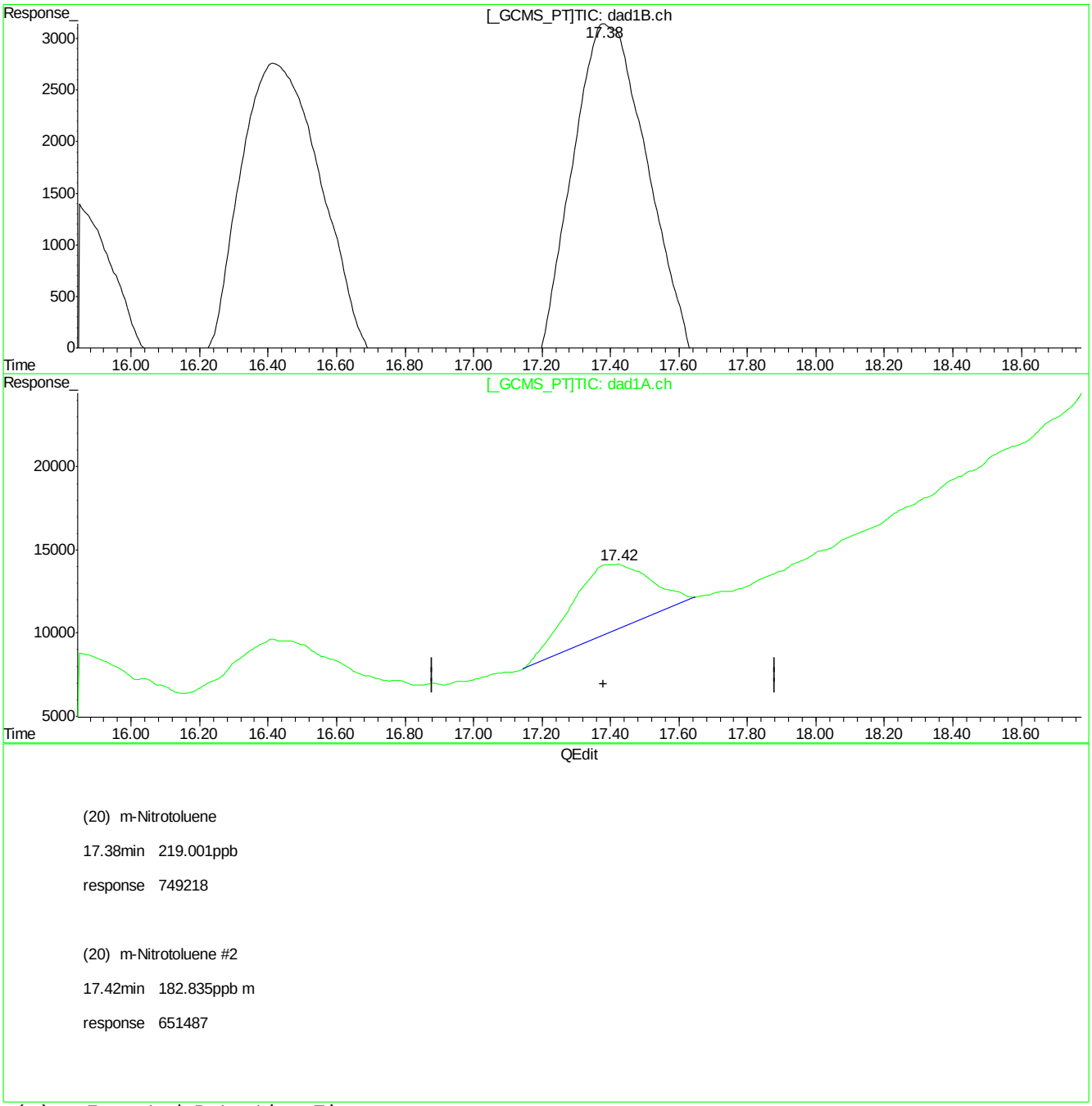
response 387317

(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:58:55 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(20) m-Nitrotoluene

17.38min 219.001ppb

response 749218

(20) m-Nitrotoluene #2

17.42min 182.835ppb m

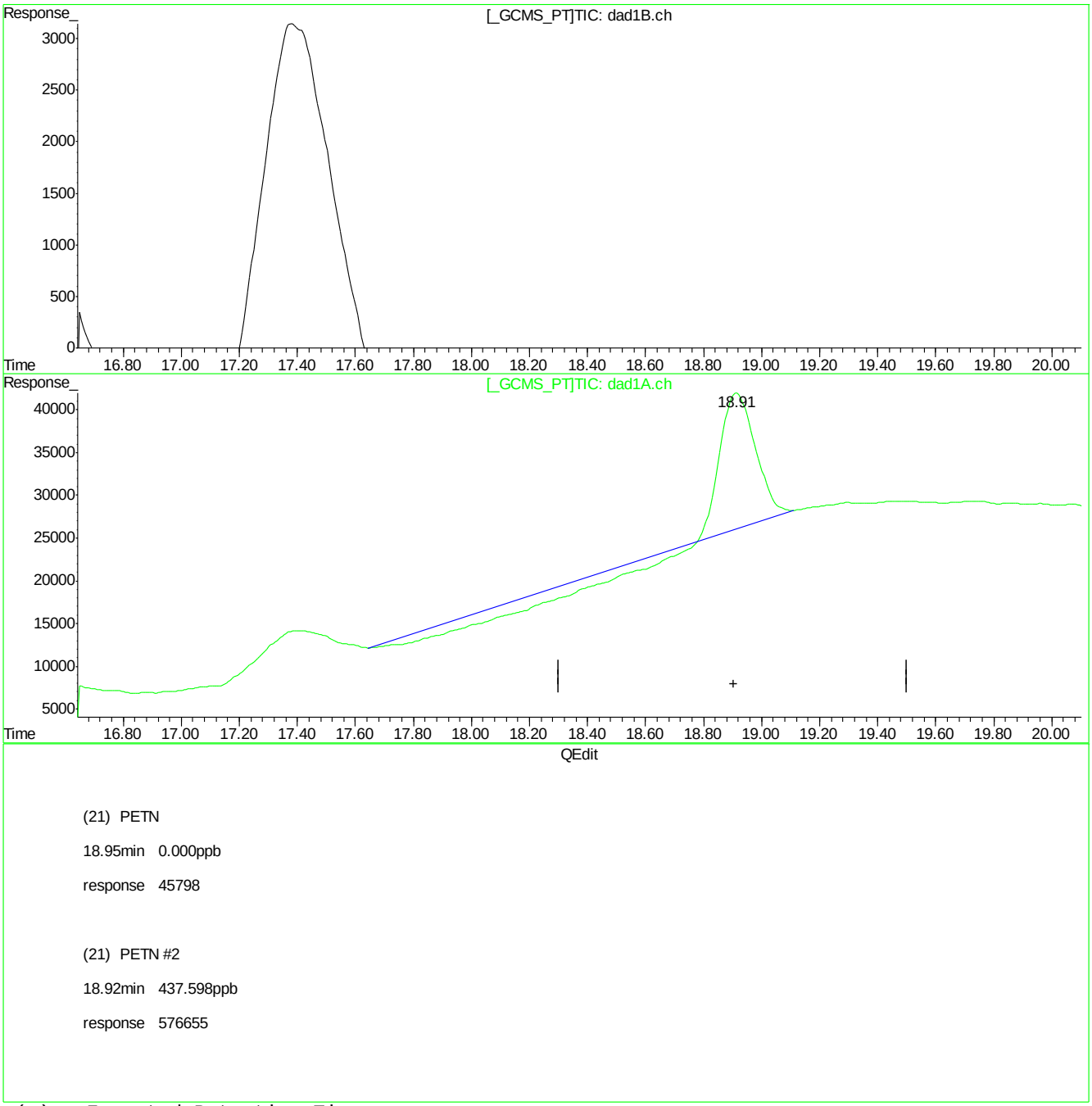
response 651487

(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:58:59 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration



(21) PETN

18.95min 0.000ppb

response 45798

(21) PETN #2

18.92min 437.598ppb

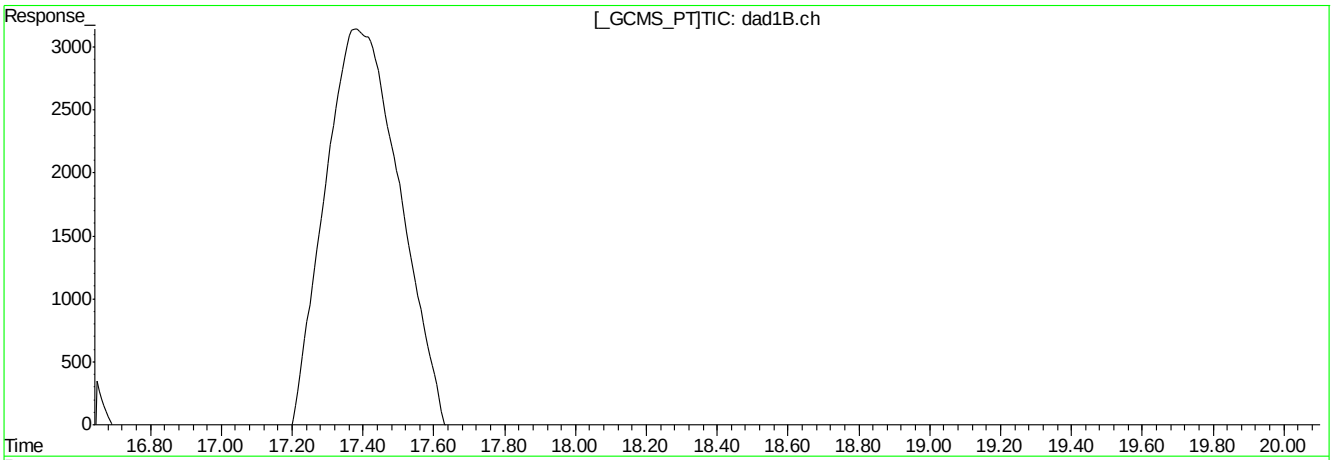
response 576655

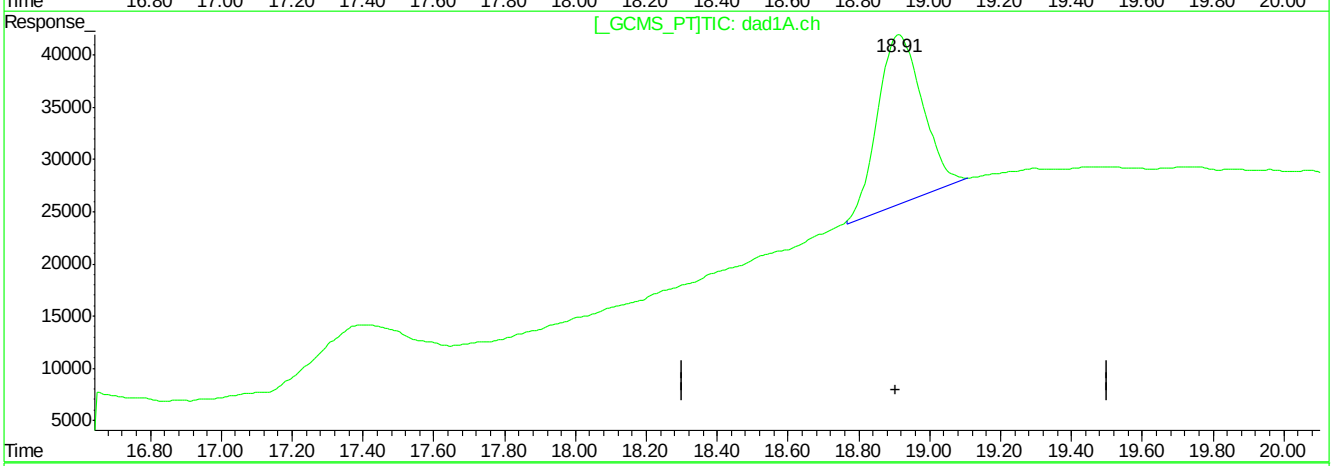
(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:59:02 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1B.ch Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060203.D\dad1A.ch
Acq On : 06-Jul-2018, 17:03:09 Operator: kismetl
Sample : ic1748-200 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.95min 0.000ppb

response 45798

(21) PETN #2

18.91min 1081.058ppb m

response 1424589

(+) = Expected Retention Time
BB060203.D 8330B_0707PLUS.M Mon Jul 09 09:59:06 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:31 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.43	11.43	1326259	2009879	532.951	477.841
	Spiked Amount 500.000	Range 70 - 136		Recovery =		106.59%	95.57%
	Target Compounds						
1)	TNX	1.40	1.40	2540056	3934187	518.971	515.416
2)	HMX	1.54	1.54	866622	2432057	479.430	491.484
3)	DNX	1.79	1.79	1288131	2082049	418.854	410.646
4)	MNX	2.40	2.40	1356477	2085790	434.086	442.374
5)	RDX	3.03	3.03	1026432	1589435	521.932	487.420
6)	1,3,5-Trinitrobe	4.83	4.83	2151407	4091369	493.726	499.111
7)	1,3-Dinitrobenze	6.06	6.06	2787254	1966959	478.167	513.424
8)	3,5-Dinitroanili	6.41	6.41	2362475	3996217	505.263	511.171
9)	Nitrobenzene	7.70	7.70	1752261	1685137	468.259	529.797
10)	Nitroglycerin	0.00	9.05	0	3257598	N.D. d	2549.377
11)	Tetryl	9.57	9.57	1335519	2004141	451.275	484.179
12)	2,4,6-Trinitroto	10.05	10.04	1763560	1994076	450.239	466.312
13)	2-Amino-4,6-Dini	10.45	10.45	1860707	2633204	498.276	470.243
14)	4-Amino-2,6-Dini	10.94	10.94	1350375	2528291	507.423	474.329
16)	2,4-Dinitrotolue	12.09	12.09	2624271	1517167	505.818	480.837
17)	2,6-Dinitrotolue	12.55	12.55	1570807	1909487	529.079	517.499
18)	o-Nitrotoluene	15.82	15.81	1200374	1703628	464.540	511.467m
19)	p-Nitrotoluene	16.42	16.43	1875115	1707142	469.227	539.097
20)	m-Nitrotoluene	17.40	17.39	1816420	1971467	527.450	536.915m
21)	PETN	0.00	18.91	0	3568025	N.D. d	2707.617m

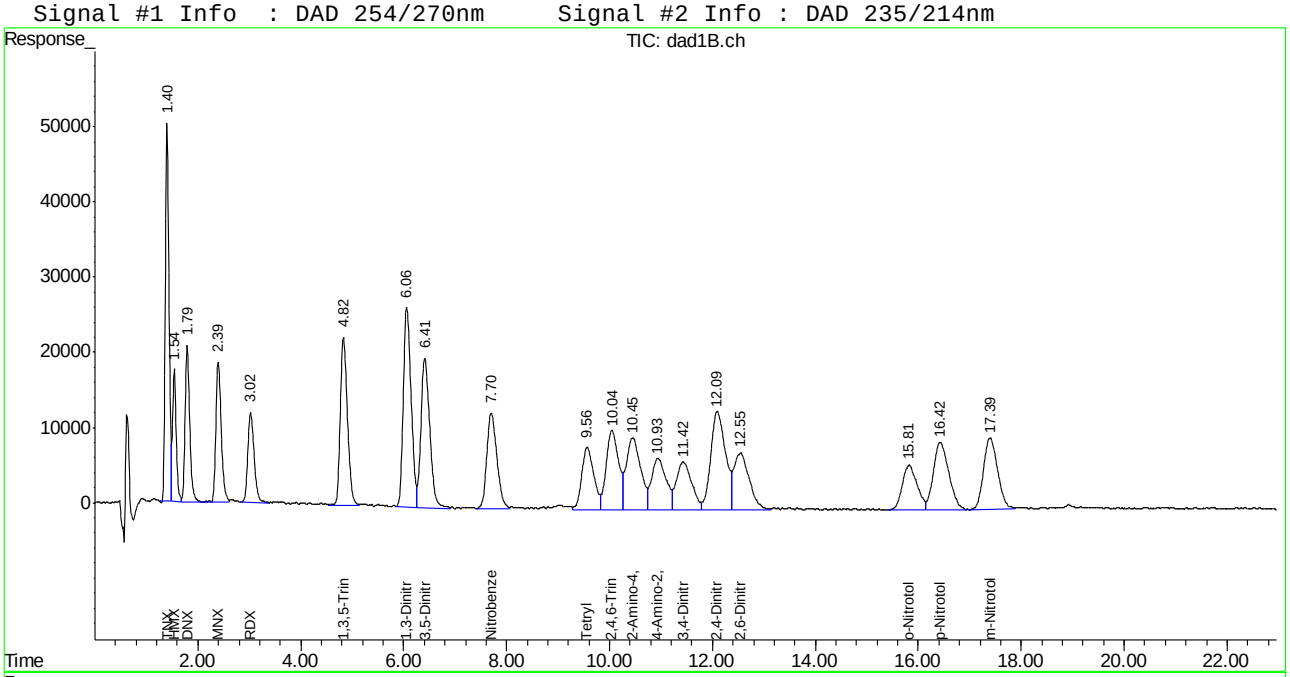
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060204.D 8330B_0707PLUS.M Mon Jul 09 11:20:52 2018 Page 1

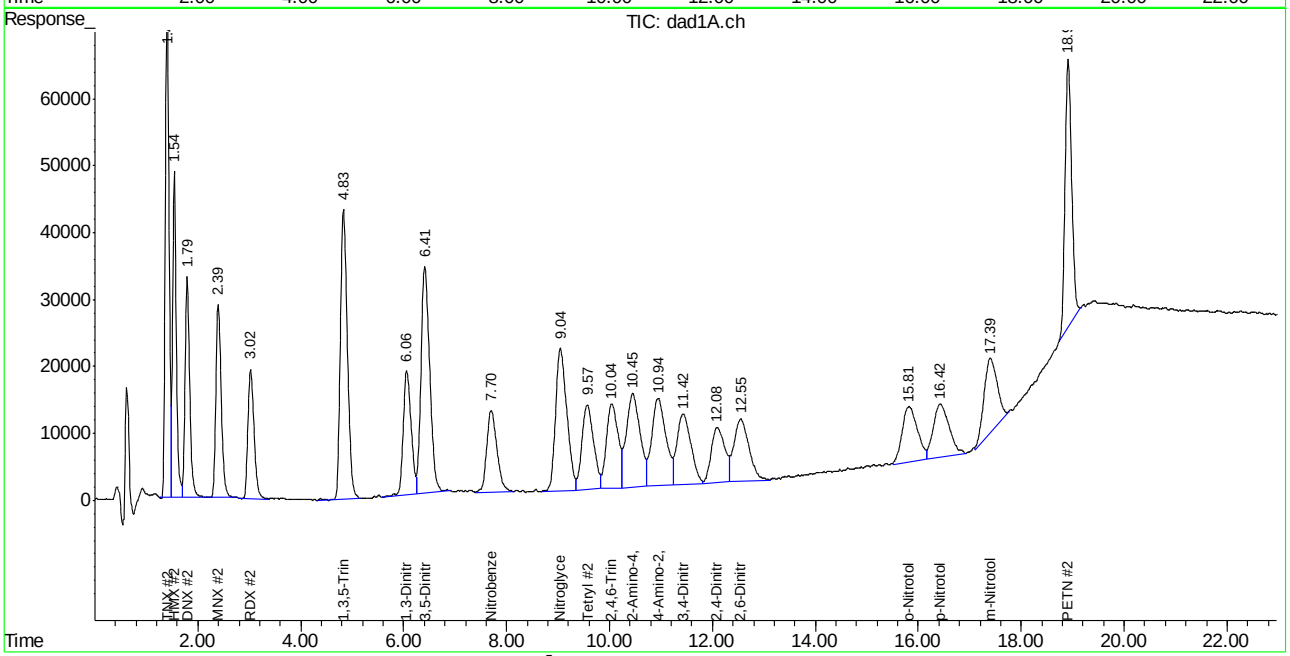
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:06 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

Sample Number: GBB1748-IC1748
Lab FileID: BB060204.D
Injection Time: 07/06/18 17:33

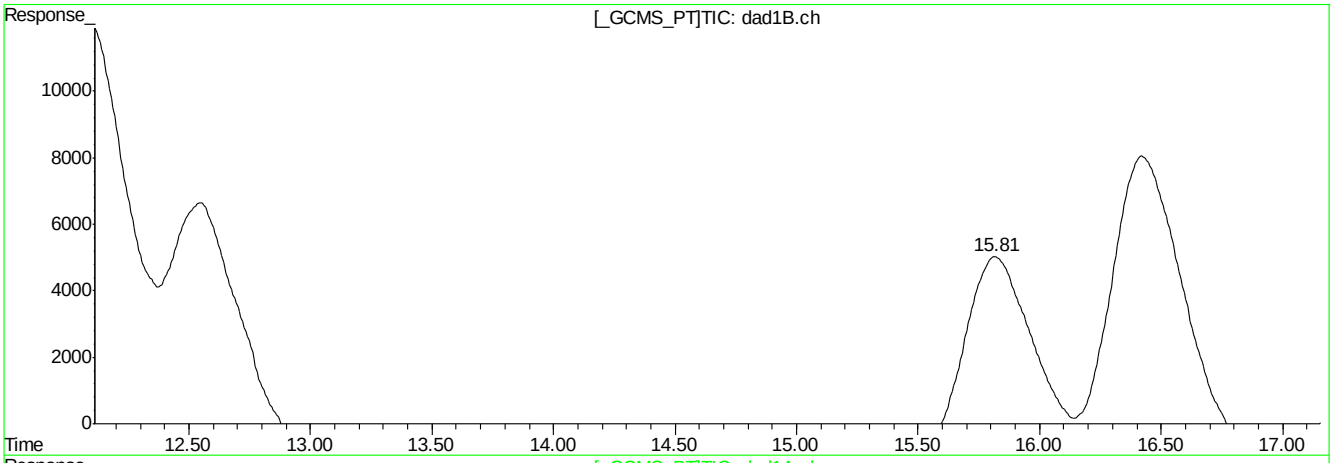
Method: SW846 8330A
Analyst approved: 07/09/18 11:23 William Hustedde
Supervisor approved: 07/09/18 16:15 Mike Eger

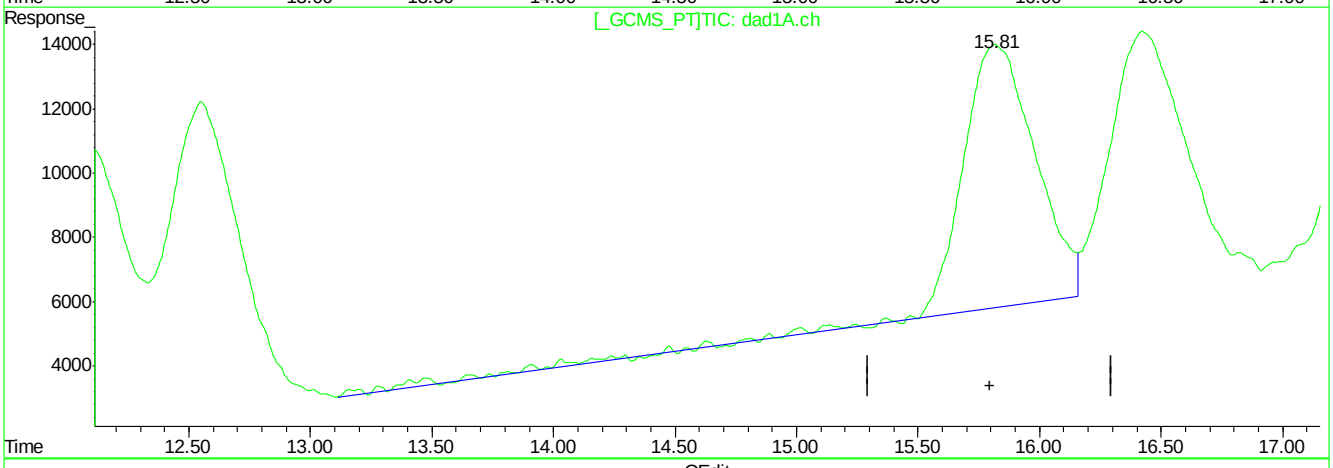
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.81	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.39	Poor instrument integration
PETN	78-11-5	2	18.91	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.82min 464.540ppb

response 1200374

(18) o-Nitrotoluene #2

15.82min 513.742ppb

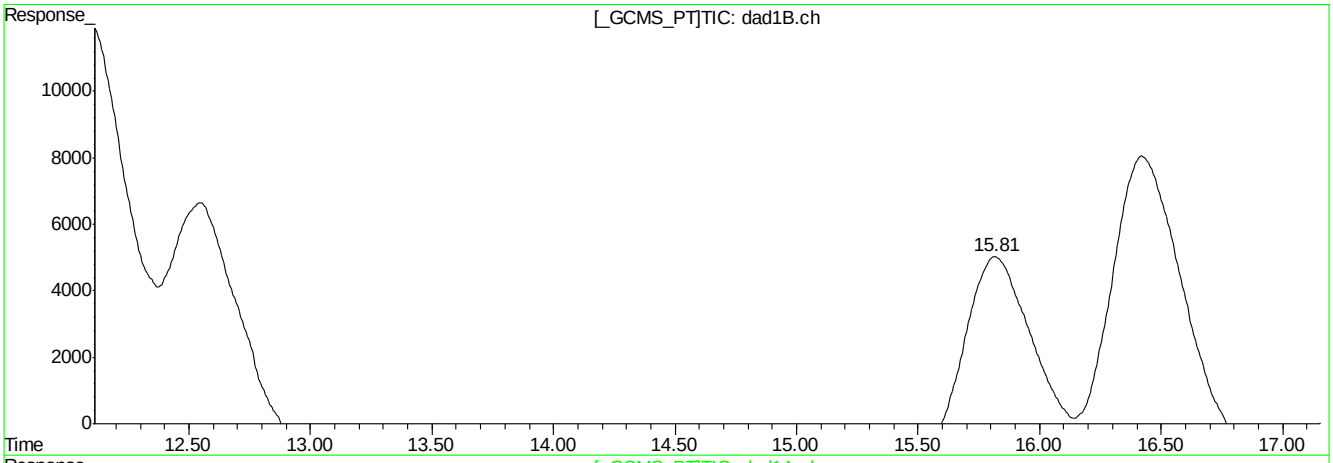
response 1711208

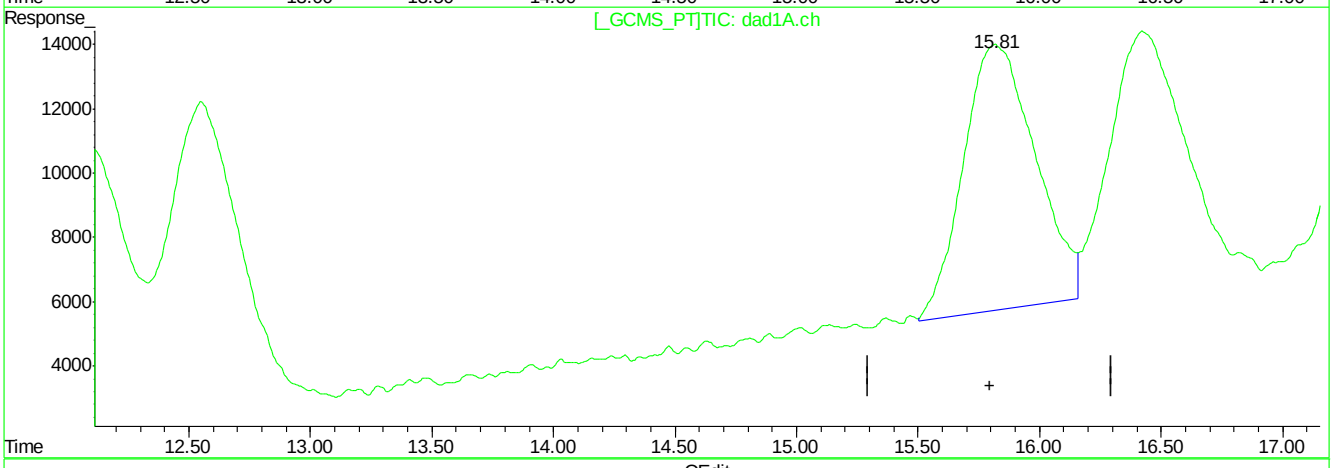
(+) = Expected Retention Time
BB060204.D 8330B_0707PLUS.M Mon Jul 09 10:00:00 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.82min 464.540ppb

response 1200374

(18) o-Nitrotoluene #2

15.81min 511.467ppb m

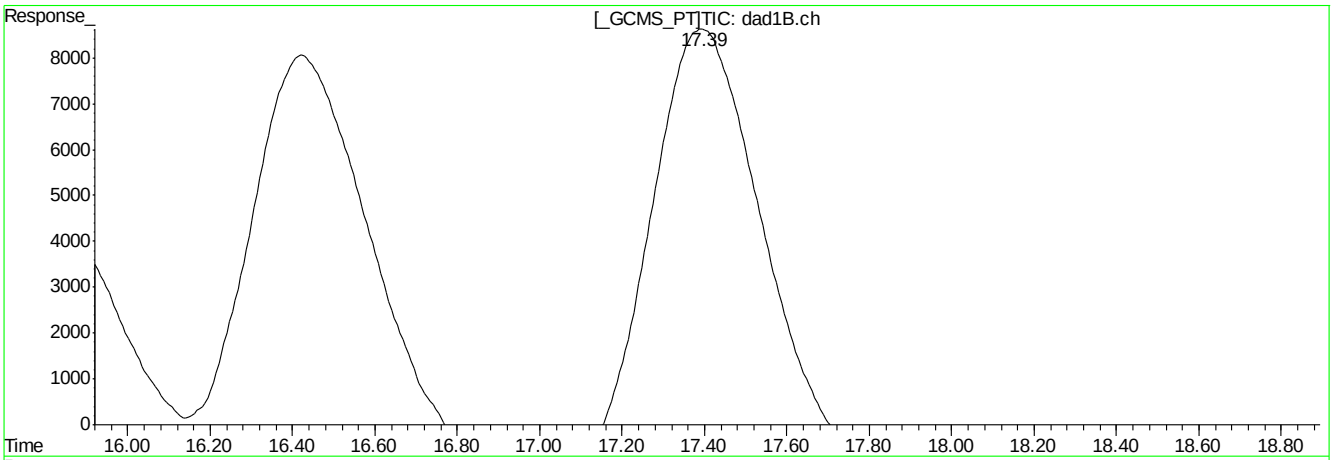
response 1703628

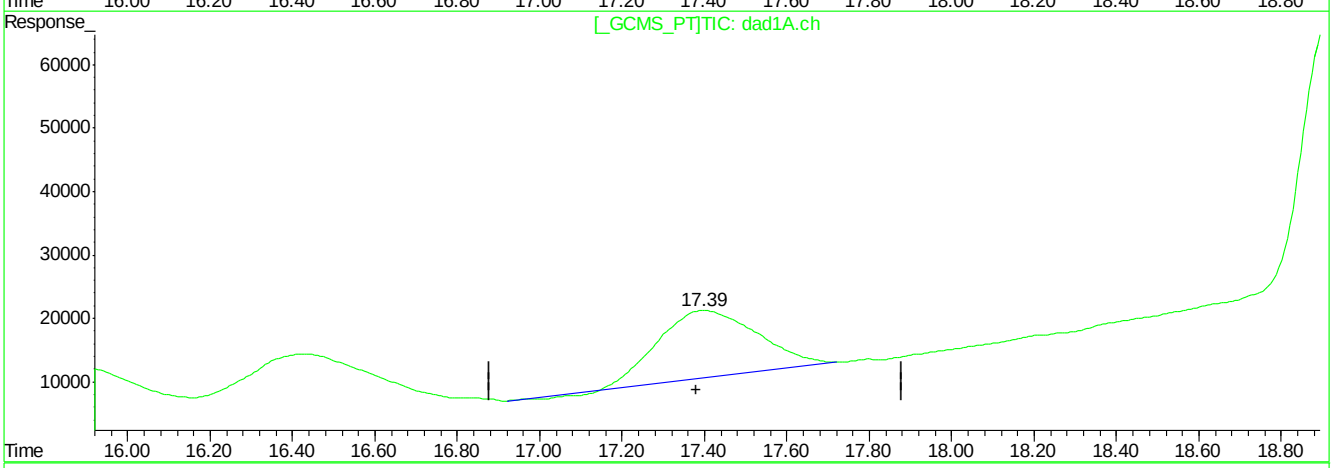
(+) = Expected Retention Time
BB060204.D 8330B_0707PLUS.M Mon Jul 09 10:00:08 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.40min 527.450ppb

response 1816420

(20) m-Nitrotoluene #2

17.40min 477.321ppb

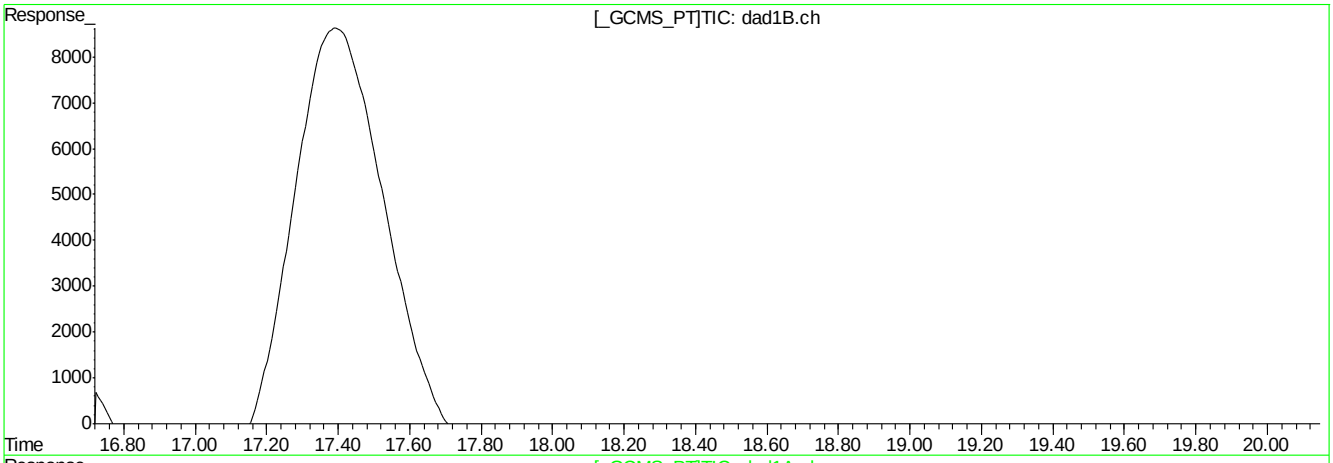
response 1743927

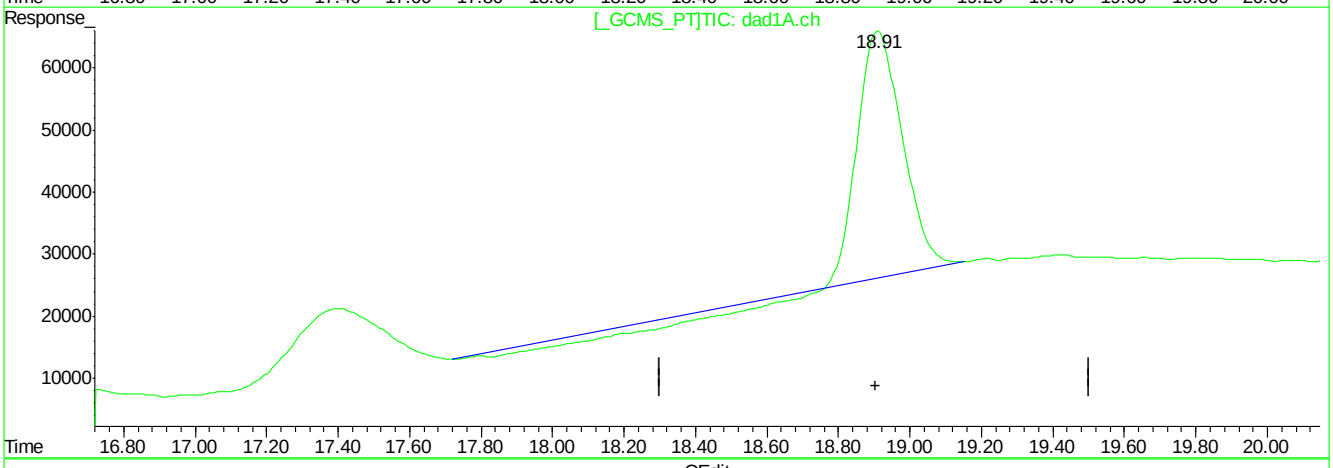
(+) = Expected Retention Time
BB060204.D 8330B_0707PLUS.M Mon Jul 09 10:00:17 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.93min 0.000ppb

response 59501

(21) PETN #2

18.91min 2176.580ppb

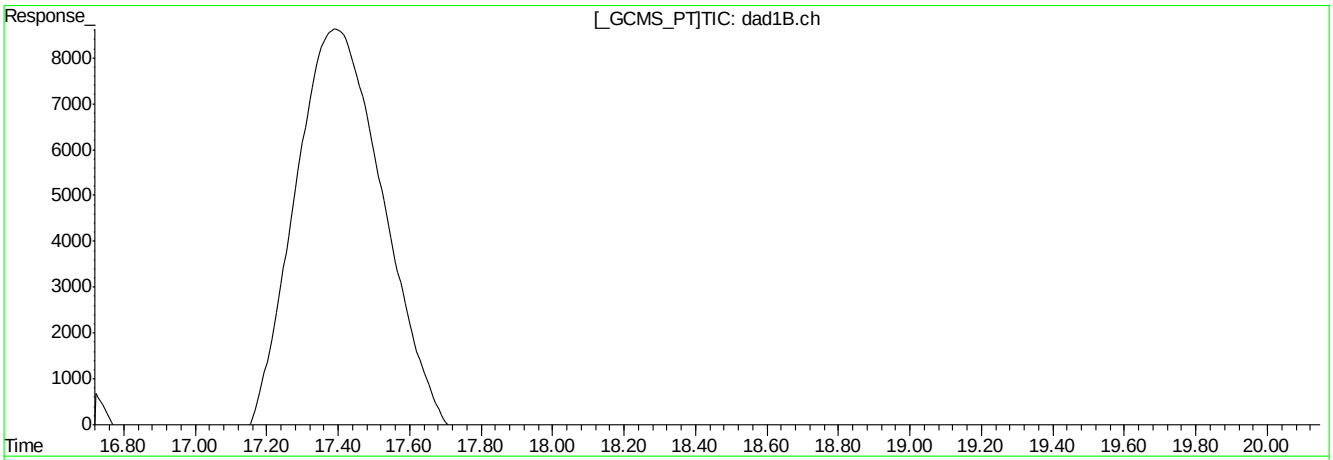
response 2868239

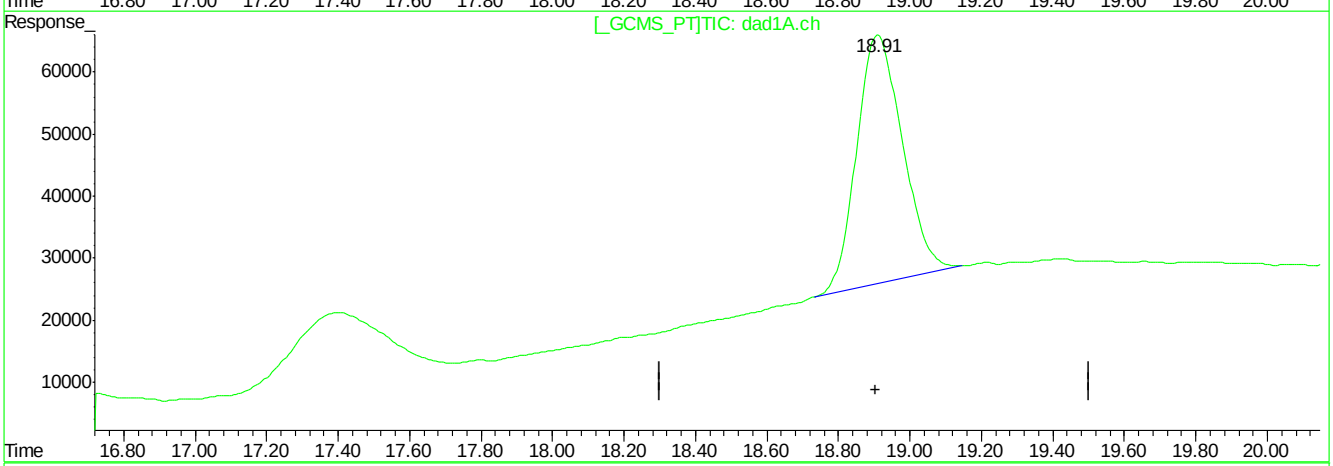
(+) = Expected Retention Time
BB060204.D 8330B_0707PLUS.M Mon Jul 09 10:00:24 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.93min 0.000ppb

response 59501

(21) PETN #2

18.91min 2707.617ppb m

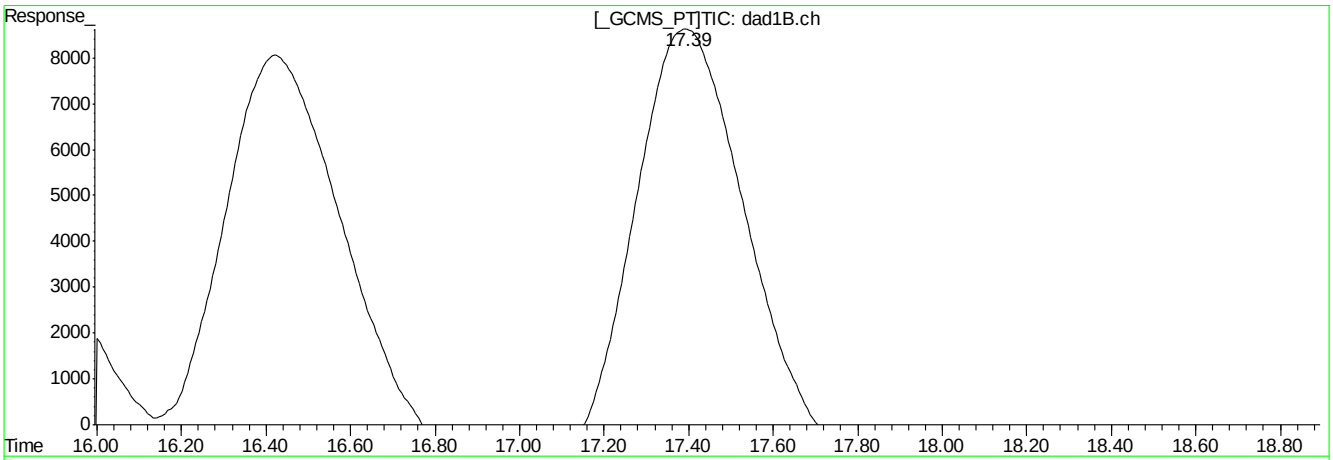
response 3568025

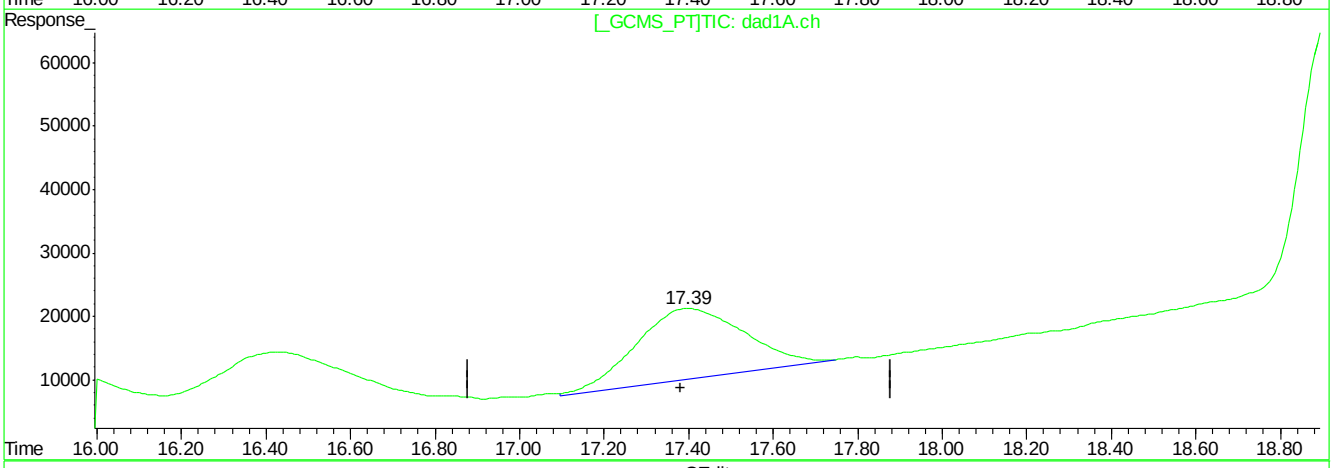
(+) = Expected Retention Time
BB060204.D 8330B_0707PLUS.M Mon Jul 09 10:00:32 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1B.ch Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060204.D\dad1A.ch
Acq On : 06-Jul-2018, 17:33:06 Operator: kismetl
Sample : ic1748-500 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:06 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.40min 527.450ppb

response 1816420

(20) m-Nitrotoluene #2

17.39min 536.915ppb m

response 1971467

(+) = Expected Retention Time
BB060204.D 8330B_0707PLUS.M Mon Jul 09 14:57:24 2018

BB060204.D edits: m-Nitrotoluene

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:32 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.41	11.41	2561824	4298869	1029.457	1022.041
	Spiked Amount 500.000	Range 70 - 136		Recovery =		205.89%#	204.41%#
	Target Compounds						
1)	TNX	1.40	1.40	5066573	7811576	1035.177	1023.390
2)	HMX	1.54	1.54	1747477	4809701	966.733	971.972
3)	DNX	1.79	1.79	2600076	4210229	845.451	830.391
4)	MNX	2.39	2.39	2680610	4205036	857.821	891.844
5)	RDX	3.02	3.02	1965147	3162496	988.379	969.818
6)	1,3,5-Trinitrobe	4.82	4.82	4293926	8184186	985.413	998.399
7)	1,3-Dinitrobenze	6.05	6.05	5535275	3856903	949.604	1013.160
8)	3,5-Dinitroanili	6.40	6.40	4629054	7790581	990.018	996.523
9)	Nitrobenzene	7.69	7.69	3384877	3205789	904.546	996.664
10)	Nitroglycerin	0.00	9.03	0	6440885	N.D. d	5040.599m
11)	Tetryl	9.55	9.55	2569677	4000666	868.300	966.518
12)	2,4,6-Trinitroto	10.03	10.03	3401002	4070531	868.280	951.888
13)	2-Amino-4,6-Dini	10.43	10.44	3651023	5325321	977.702	951.006
14)	4-Amino-2,6-Dini	10.92	10.93	2555519	5058545	952.103	949.027
16)	2,4-Dinitrotolue	12.08	12.08	5046352	3053181	972.665	967.647
17)	2,6-Dinitrotolue	12.52	12.53	3108741	3922811	1036.013	1063.140
18)	o-Nitrotoluene	15.80	15.80	2353681	3312890	910.866	994.603m
19)	p-Nitrotoluene	16.41	16.41	3780874	3193214	946.122	1008.383
20)	m-Nitrotoluene	17.38	17.38	3464883	3888967	996.149m	1018.202m
21)	PETN	0.00	18.90	0	7077497	N.D. d	5370.800m

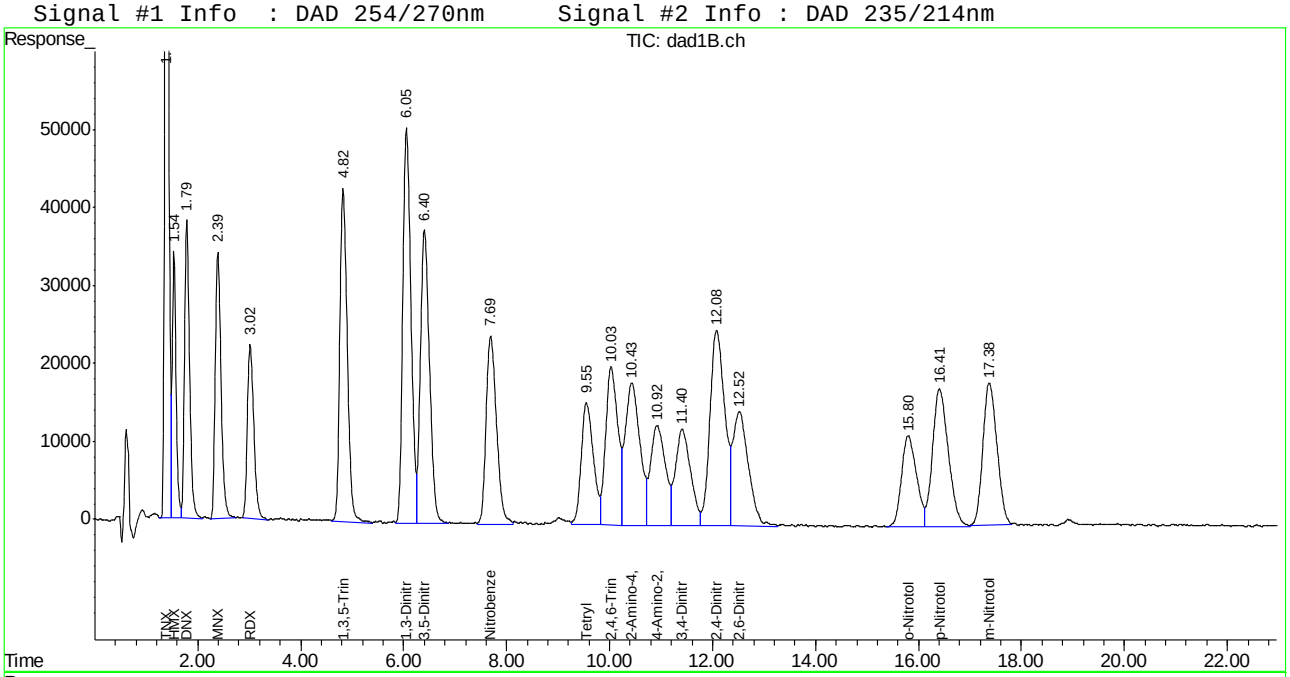
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060205.D 8330B_0707PLUS.M Mon Jul 09 11:20:53 2018 Page 1

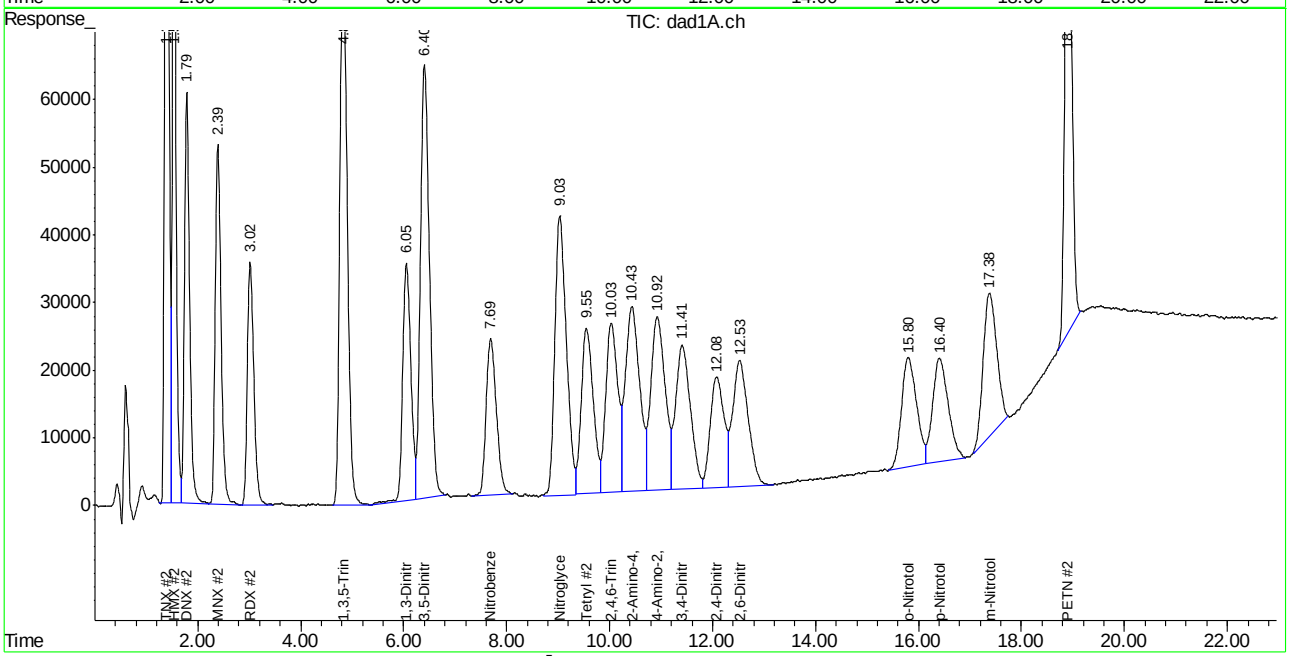
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:05 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

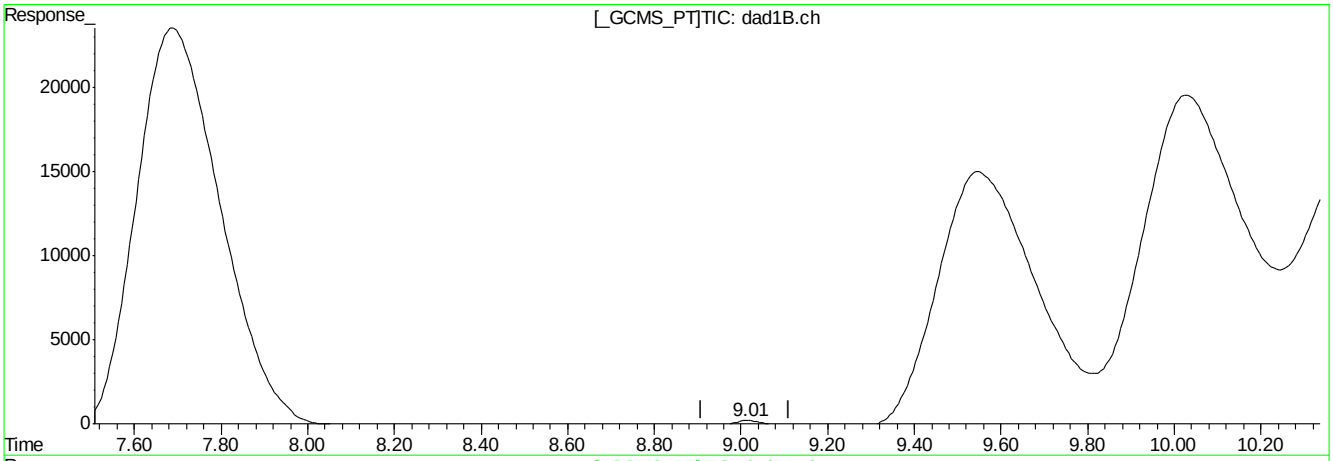
Sample Number: GBB1748-ICC1748 **Method:** SW846 8330A
Lab FileID: BB060205.D **Analyst approved:** 07/09/18 11:23 William Hustedde
Injection Time: 07/06/18 18:03 **Supervisor approved:** 07/09/18 16:15 Mike Eger

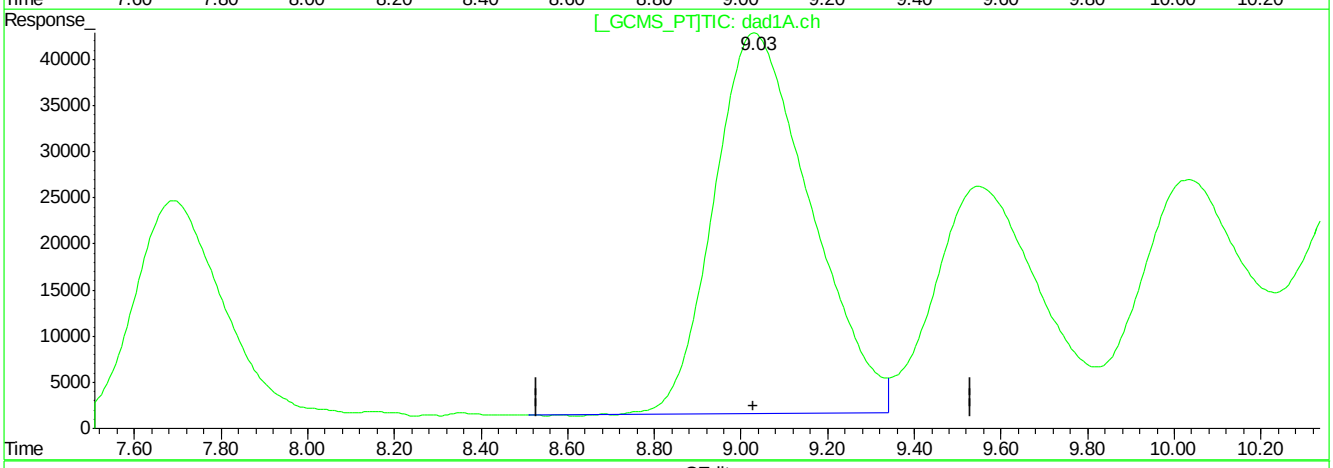
Parameter	CAS	Sig#	R.T. (min.)	Reason
Nitroglycerine	55-63-0	2	9.03	Poor instrument integration
o-Nitrotoluene	88-72-2	2	15.80	Poor instrument integration
m-Nitrotoluene	99-08-1	1	17.38	Poor instrument integration
m-Nitrotoluene	99-08-1	2	17.38	Poor instrument integration
PETN	78-11-5	2	18.90	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

9.02min 0.000ppb

response 131673

(10) Nitroglycerin #2

9.03min 4994.562ppb

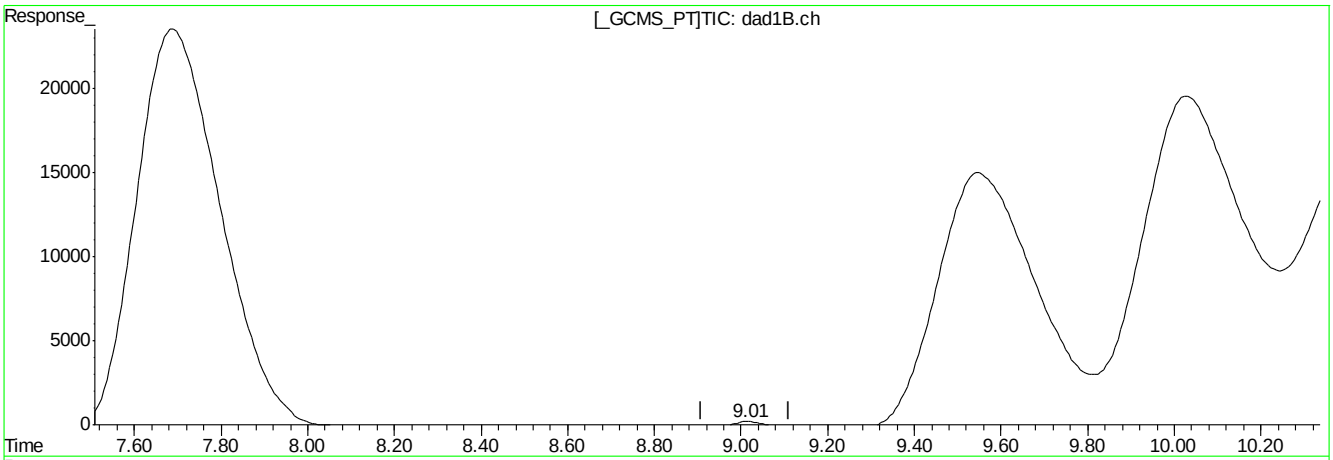
response 6382059

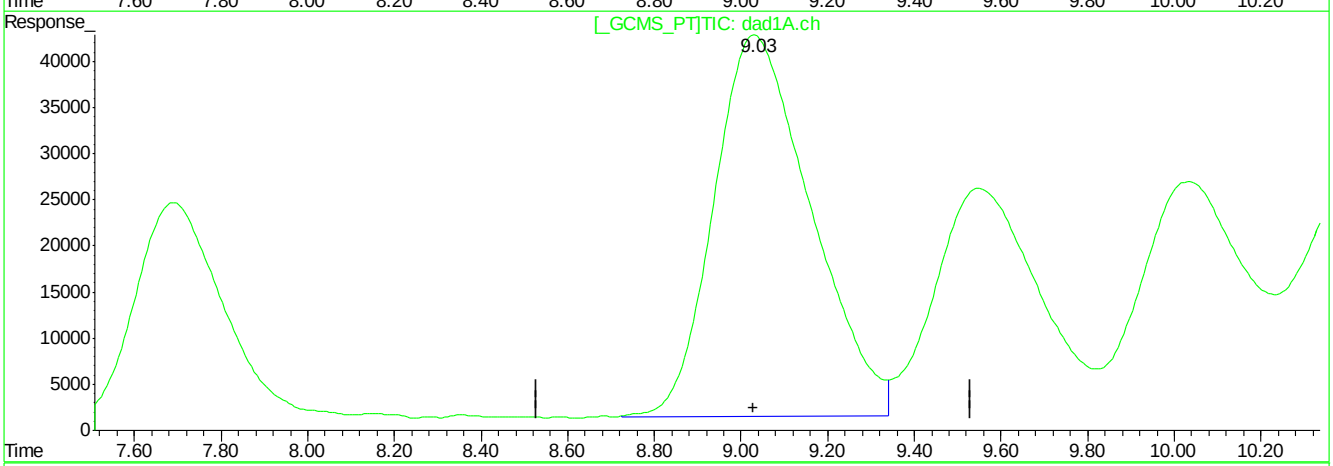
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:00:58 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(10) Nitroglycerin

9.02min 0.000ppb

response 131673

(10) Nitroglycerin #2

9.03min 5040.599ppb m

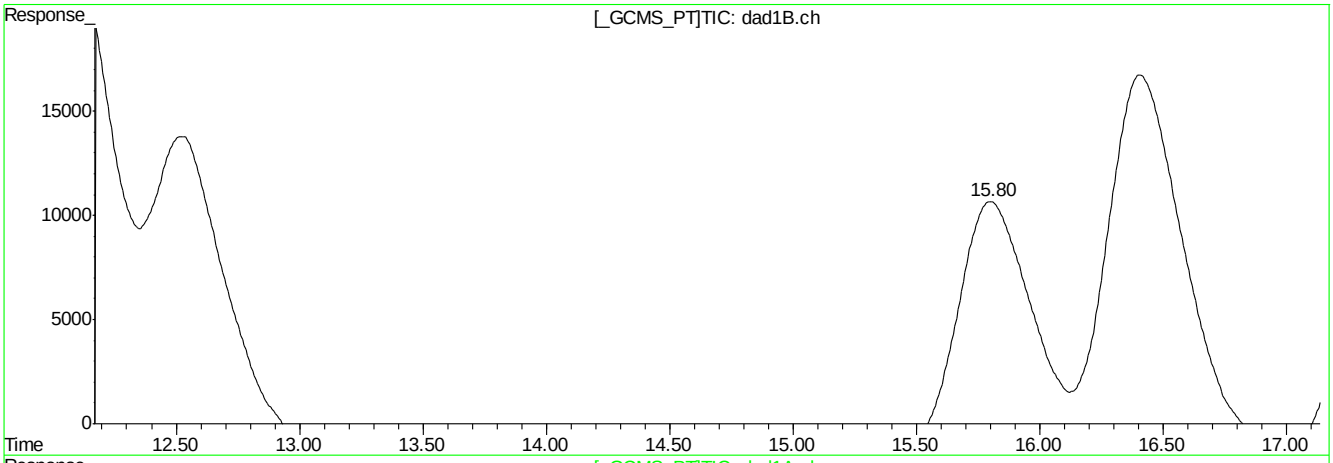
response 6440885

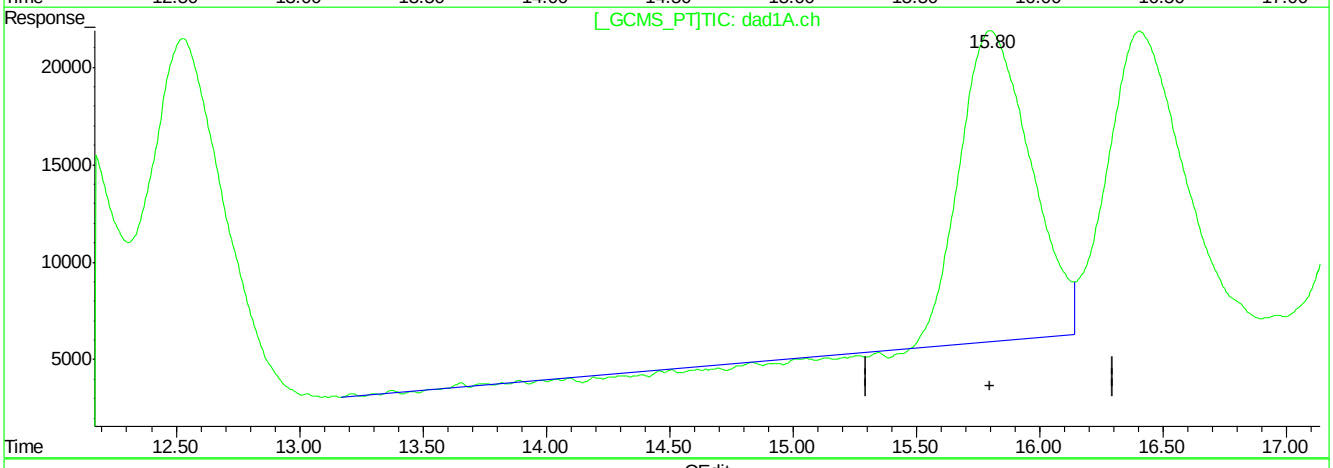
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:01:21 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.80min 910.866ppb

response 2353681

(18) o-Nitrotoluene #2

15.80min 917.908ppb

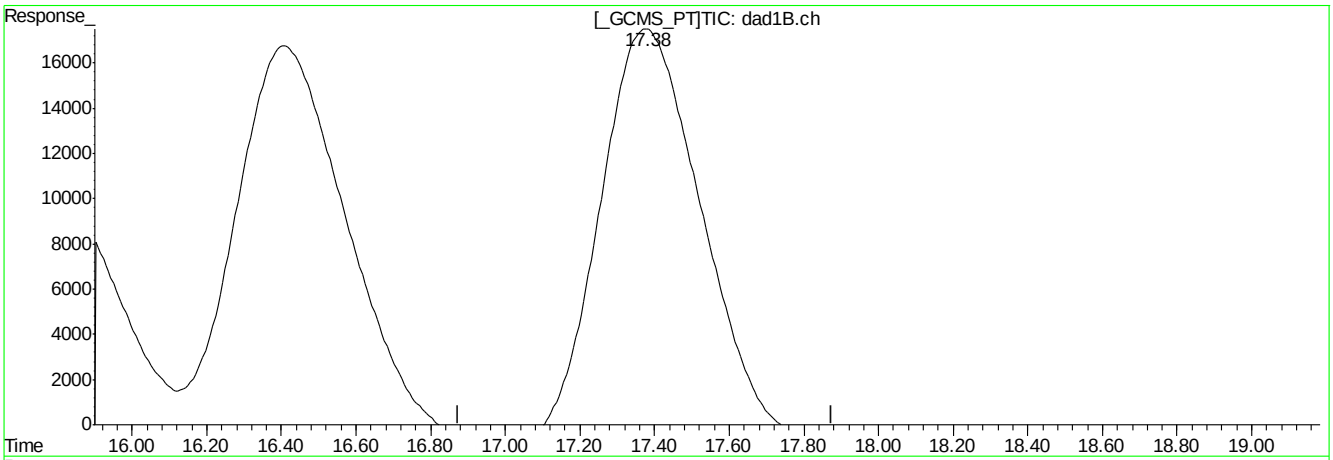
response 3057429

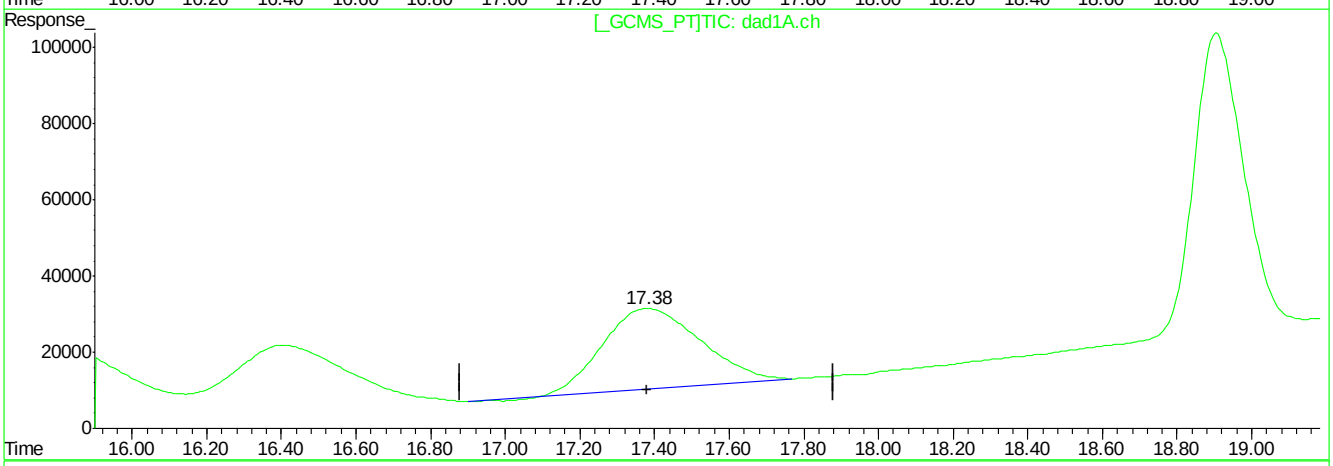
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:01:45 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.38min 996.149ppb m

response 3464883

(20) m-Nitrotoluene #2

17.38min 991.679ppb

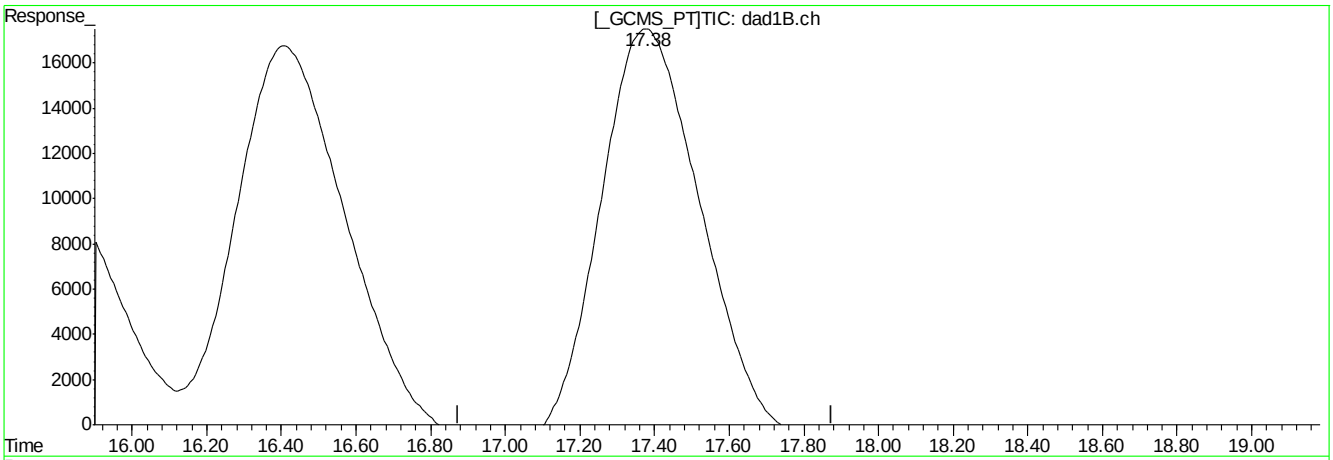
response 3779597

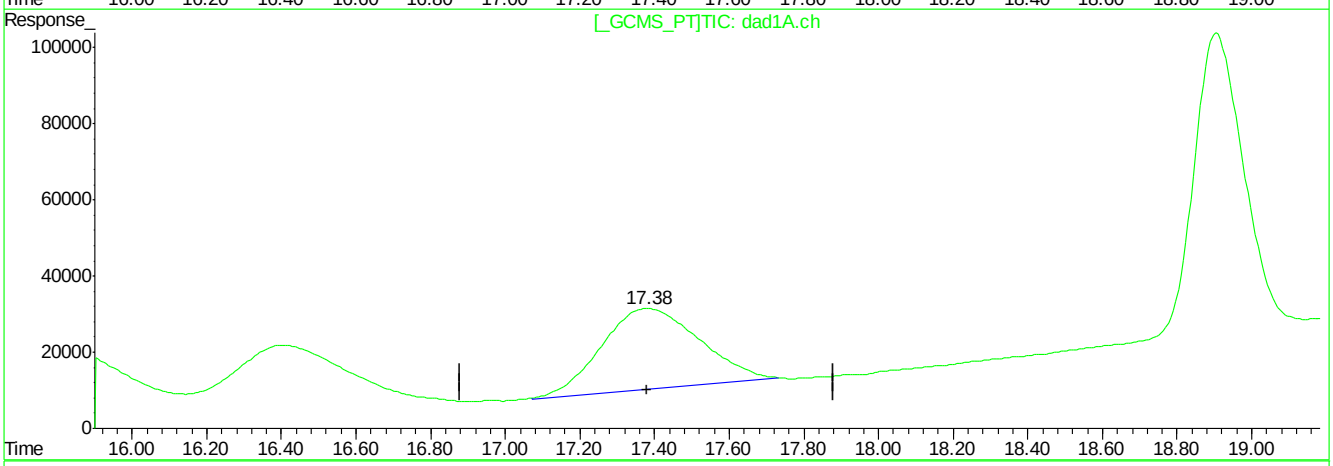
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:03:12 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(20) m-Nitrotoluene

17.38min 996.149ppb m

response 3464883

(20) m-Nitrotoluene #2

17.38min 1018.202ppb m

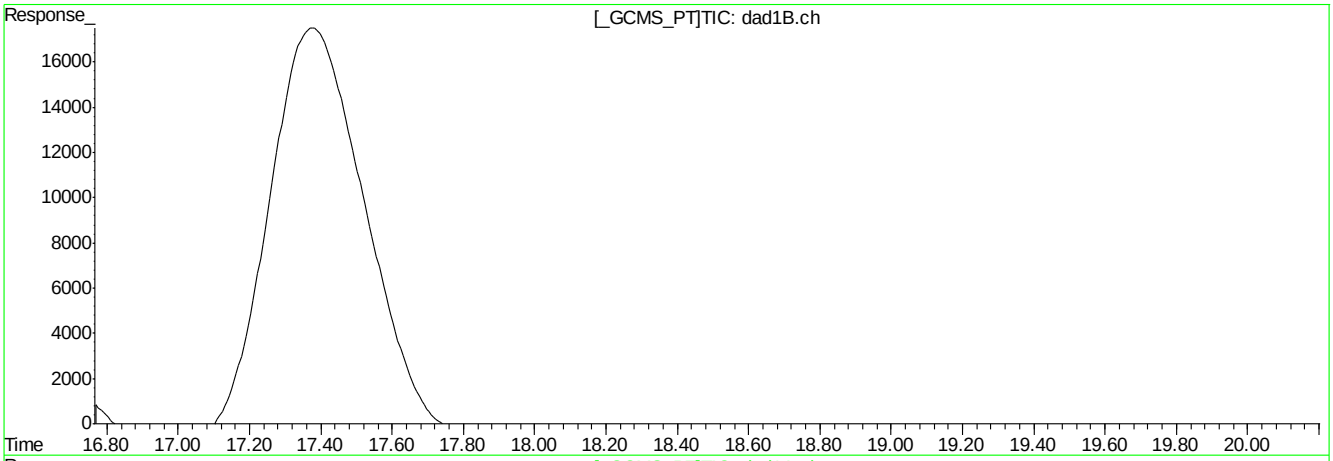
response 3888967

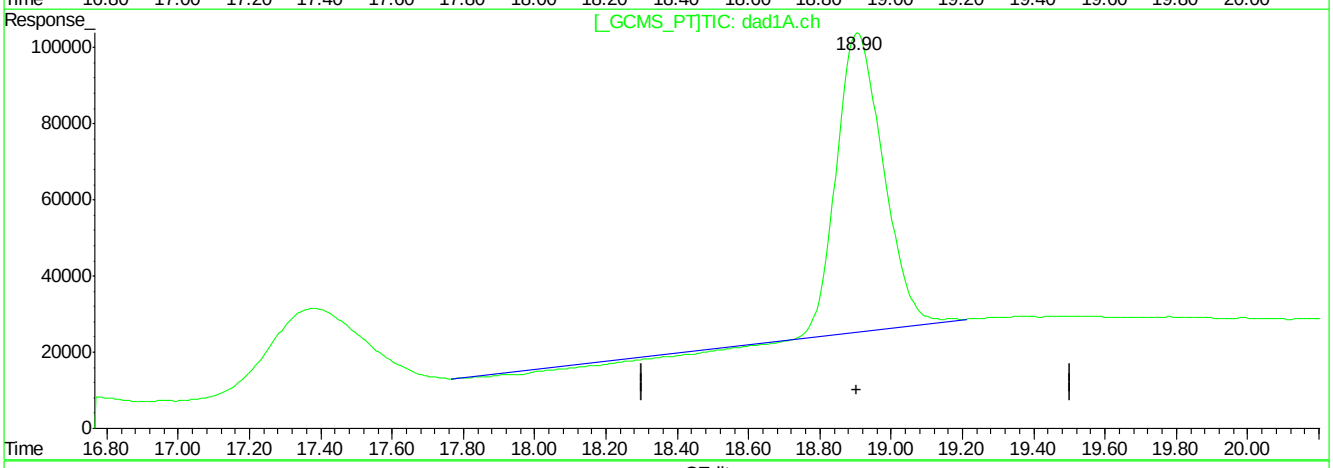
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:03:26 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.91min 0.000ppb

response 134464

(21) PETN #2

18.91min 5130.566ppb

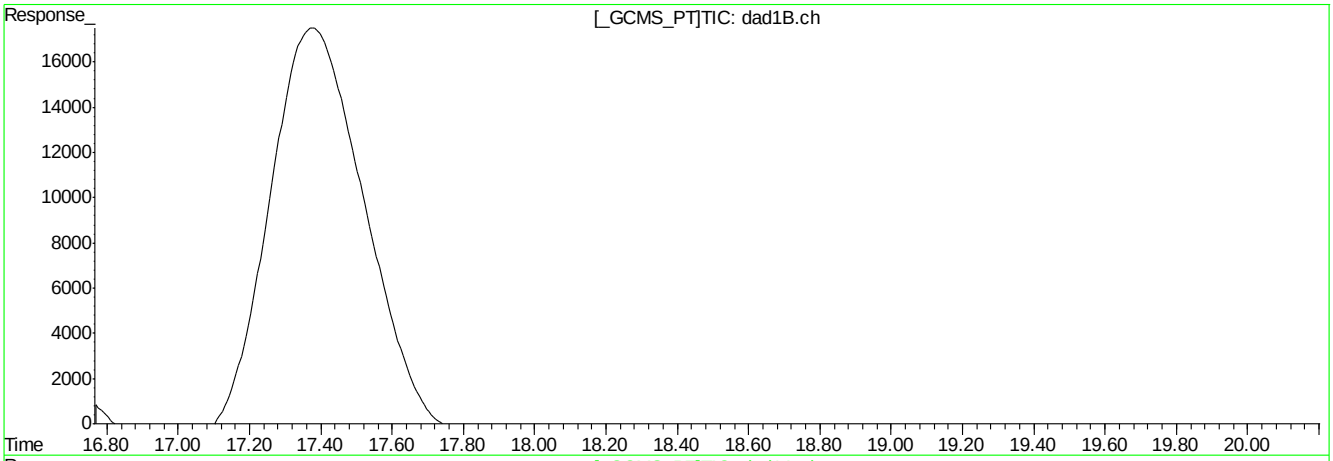
response 6760923

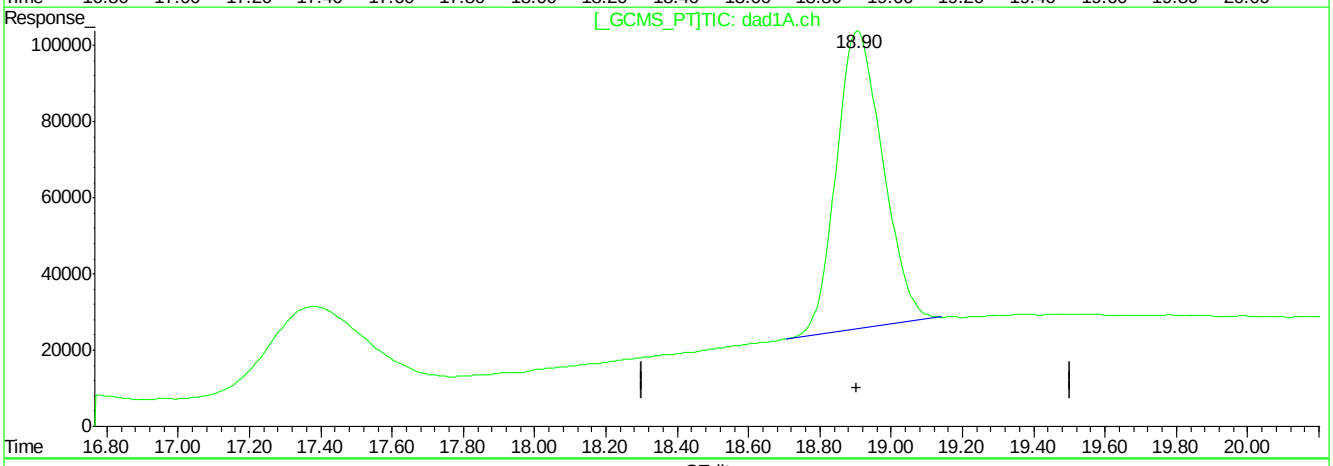
(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:03:30 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.91min 0.000ppb

response 134464

(21) PETN #2

18.90min 5370.800ppb m

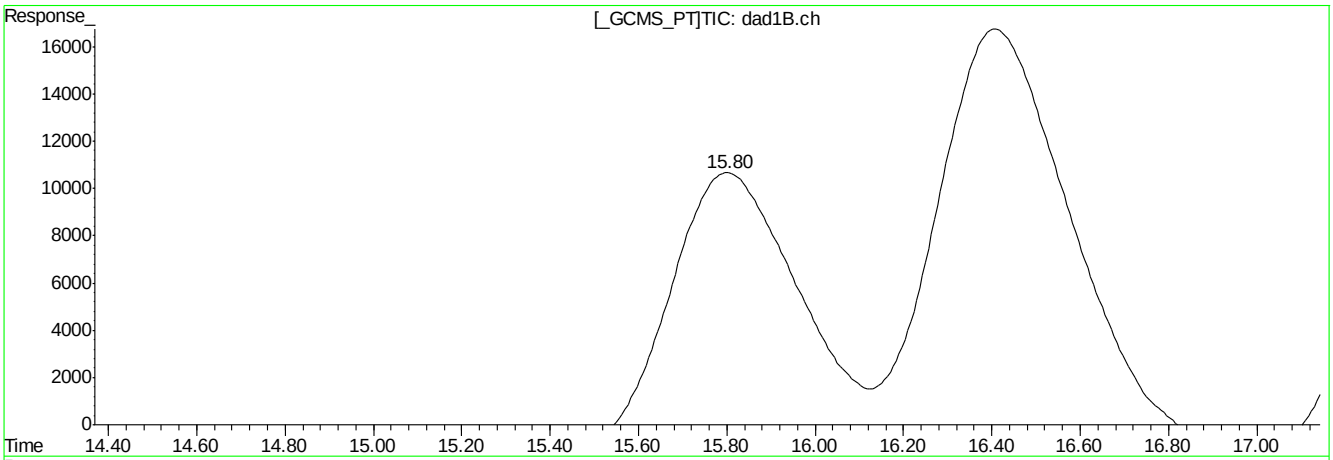
response 7077497

(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 10:03:41 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1B.ch Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060205.D\dad1A.ch
Acq On : 06-Jul-2018, 18:03:02 Operator: kismetl
Sample : icc1748-1000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:05 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.80min 910.866ppb

response 2353681

(18) o-Nitrotoluene #2

15.80min 994.603ppb m

response 3312890

(+) = Expected Retention Time
BB060205.D 8330B_0707PLUS.M Mon Jul 09 14:58:22 2018

BB060206.D

Manual Integrations APPROVED (compounds with "m" flag)

Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1A.ch
Acq On : 06-Jul-2018, 18:32:59 Operator: kismetl
Sample : ic1748-2000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 09:11:33 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.39	11.39	5115538	9053265	2055.656	2152.381
	Spiked Amount 500.000	Range 70 - 136		Recovery =		411.13%#	430.48%#
	Target Compounds						
1)	TNX	1.39	1.39	10105818	15448809	2064.770	2023.940
2)	HMX	1.53	1.54	3483085	9749731	1926.900	1970.281
3)	DNX	1.78	1.78	5255169	8449746	1708.792	1666.558
4)	MNX	2.38	2.38	5357968	8298916	1714.601	1760.113
5)	RDX	3.01	3.01	3919638	6255301	1929.035	1918.264
6)	1,3,5-Trinitrobe	4.81	4.81	8513836	16411515	1953.840	2002.061
7)	1,3-Dinitrobenze	6.04	6.04	11037661	7502576	1893.565	1995.846
8)	3,5-Dinitroanili	6.39	6.39	9333920	15843000	1996.249	2026.539
9)	Nitrobenzene	7.67	7.67	6798534	6515780	1816.782	1979.353
10)	Nitroglycerin	0.00	9.02	0	12866154	N.D. d	10068.976
11)	Tetryl	9.54	9.54	5097597	8150390	1722.490	1969.047
12)	2,4,6-Trinitroto	10.02	10.02	6742837	8172998	1721.455	1911.244
13)	2-Amino-4,6-Dini	10.40	10.40	7309803	10968055	1957.481	1958.696
14)	4-Amino-2,6-Dini	10.90	10.90	5081720	10532204	1860.921	1975.933
16)	2,4-Dinitrotolue	12.06	12.06	10059472	6208052	1938.924	1967.523
17)	2,6-Dinitrotolue	12.49	12.50	6133132	8070107	2003.485	2187.118
18)	o-Nitrotoluene	15.78	15.78	4702437	6540969	1819.826	1963.744m
19)	p-Nitrotoluene	16.39	16.39	7610234	6456208	1904.376	2038.802
20)	m-Nitrotoluene	17.36	17.36	7122912	7918223	2005.015	1931.495
21)	PETN	0.00	18.90	0	14289945	N.D. d	10844.008m

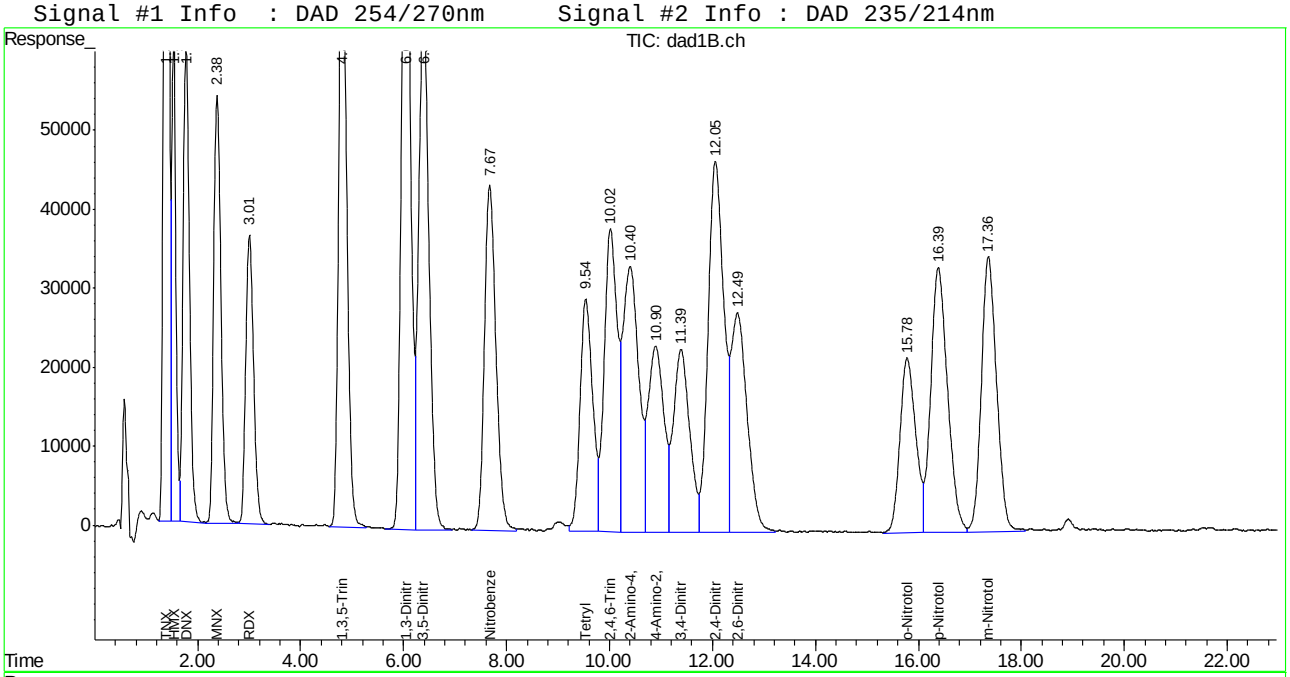
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060206.D 8330B_0707PLUS.M Mon Jul 09 11:20:54 2018 Page 1

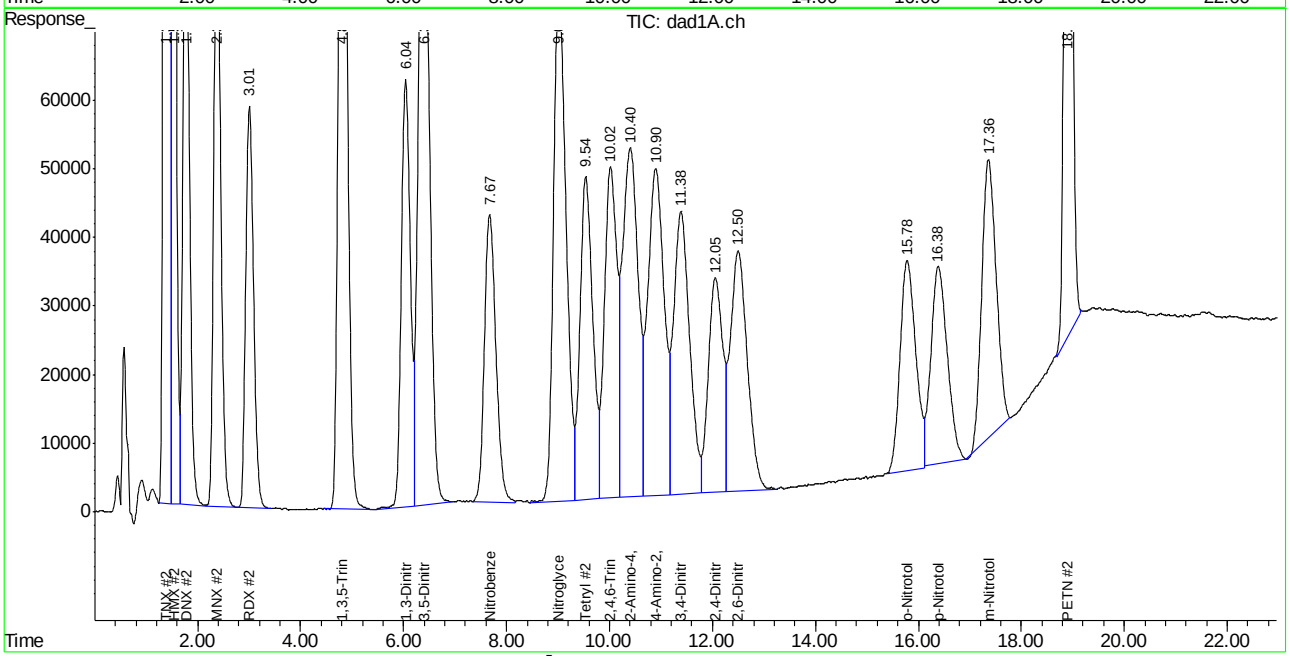
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1A.ch
Acq On : 06-Jul-2018, 18:32:59 Operator: kismetl
Sample : ic1748-2000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:04 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

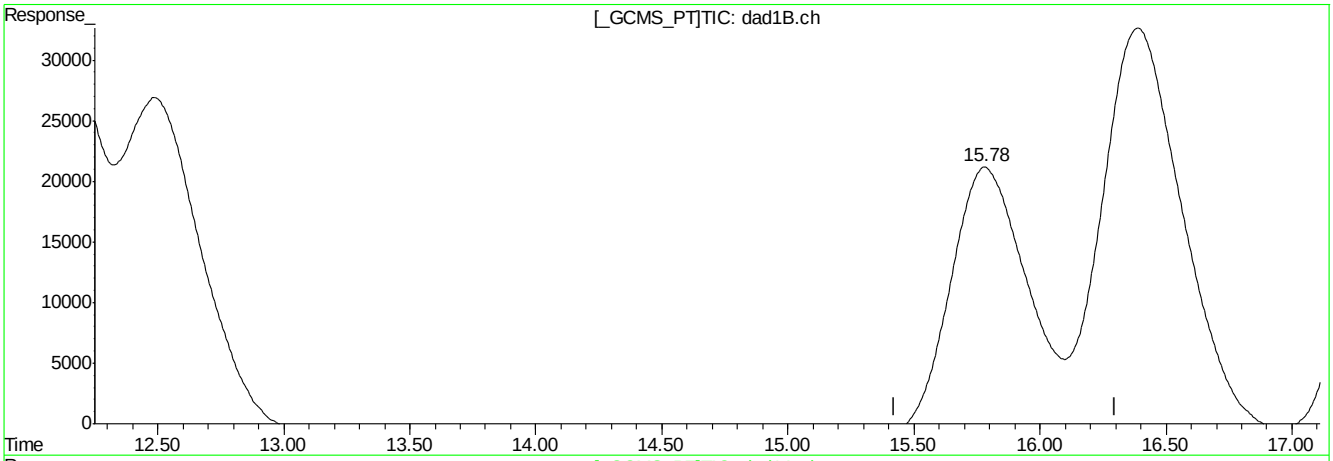
Sample Number: GBB1748-IC1748
Lab FileID: BB060206.D
Injection Time: 07/06/18 18:32
Method: SW846 8330A
Analyst approved: 07/09/18 11:23 William Hustedde
Supervisor approved: 07/09/18 16:15 Mike Eger

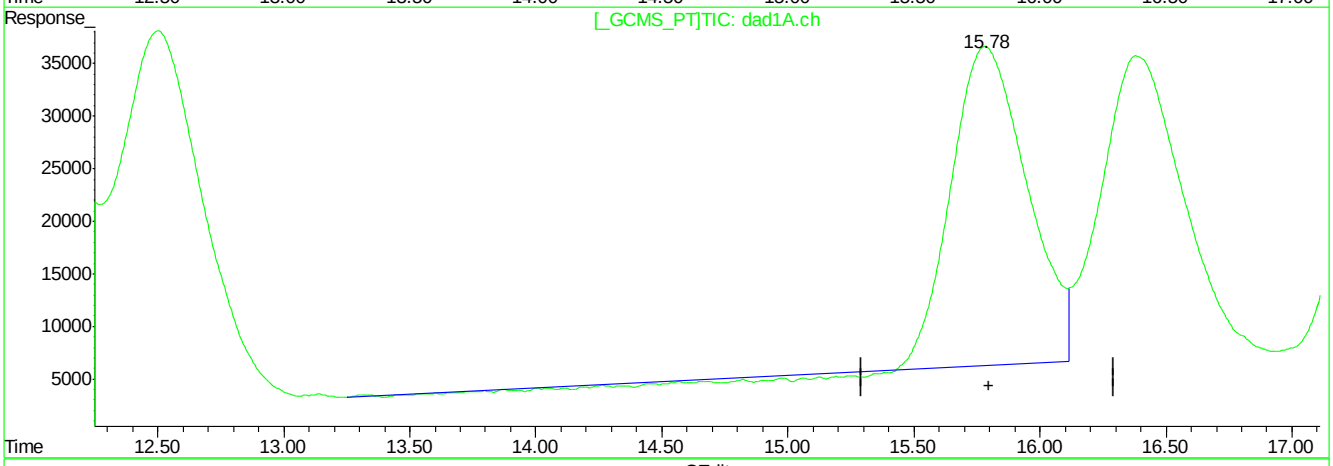
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.78	Poor instrument integration
PETN	78-11-5	2	18.90	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1A.ch
Acq On : 06-Jul-2018, 18:32:59 Operator: kismetl
Sample : ic1748-2000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.78min 1819.826ppb

response 4702437

(18) o-Nitrotoluene #2

15.78min 1839.383ppb

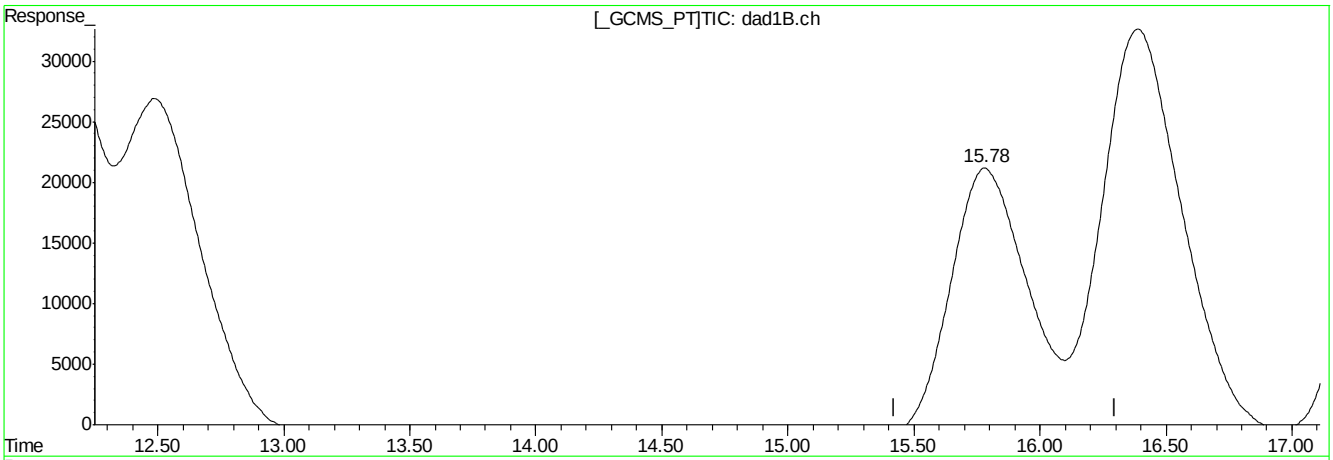
response 6126739

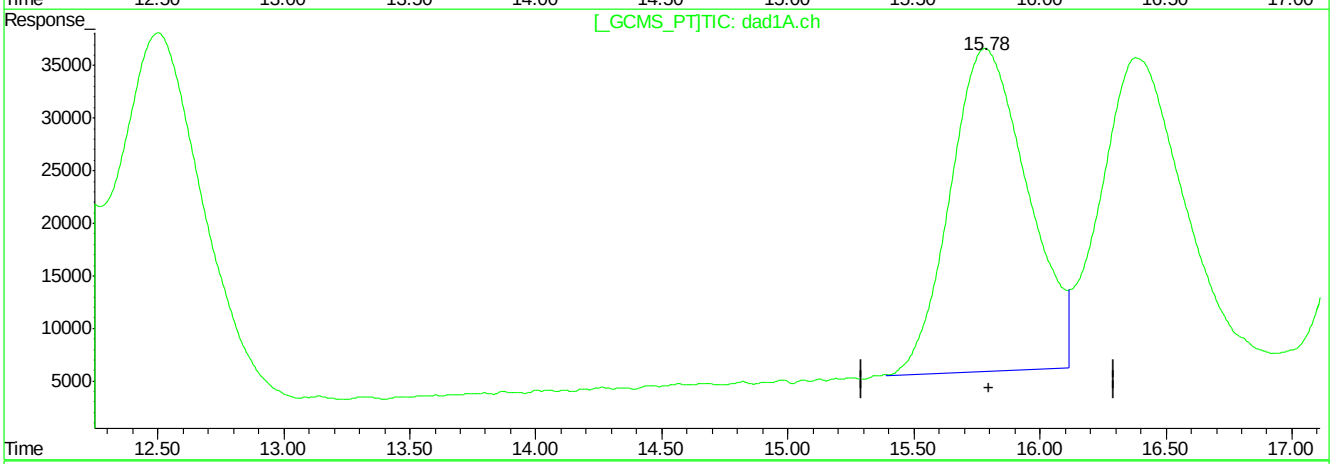
(+) = Expected Retention Time
BB060206.D 8330B_0707PLUS.M Mon Jul 09 10:04:22 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1A.ch
Acq On : 06-Jul-2018, 18:32:59 Operator: kismetl
Sample : ic1748-2000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.78min 1819.826ppb

response 4702437

(18) o-Nitrotoluene #2

15.78min 1963.744ppb m

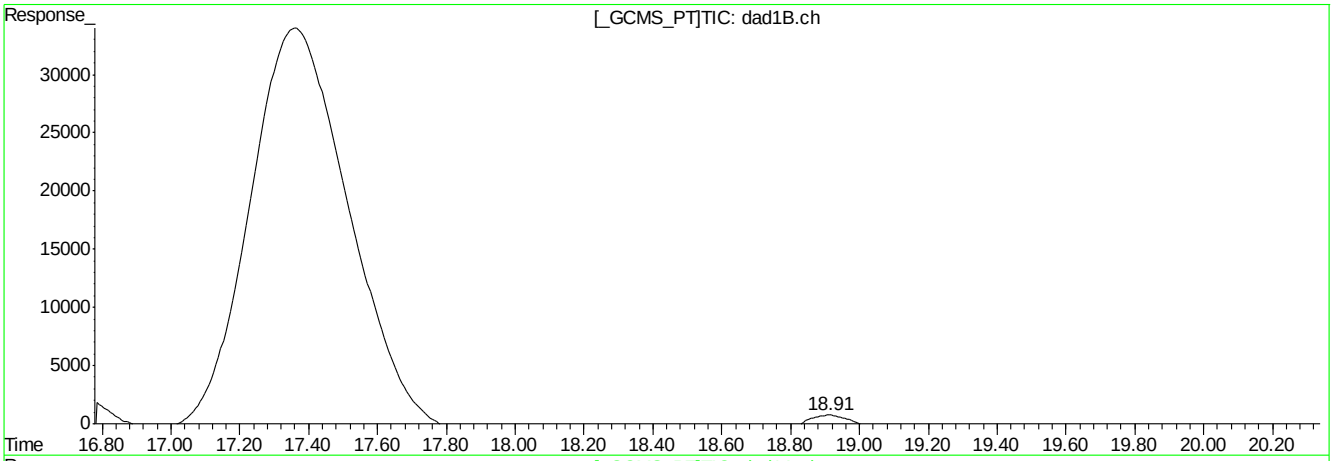
response 6540969

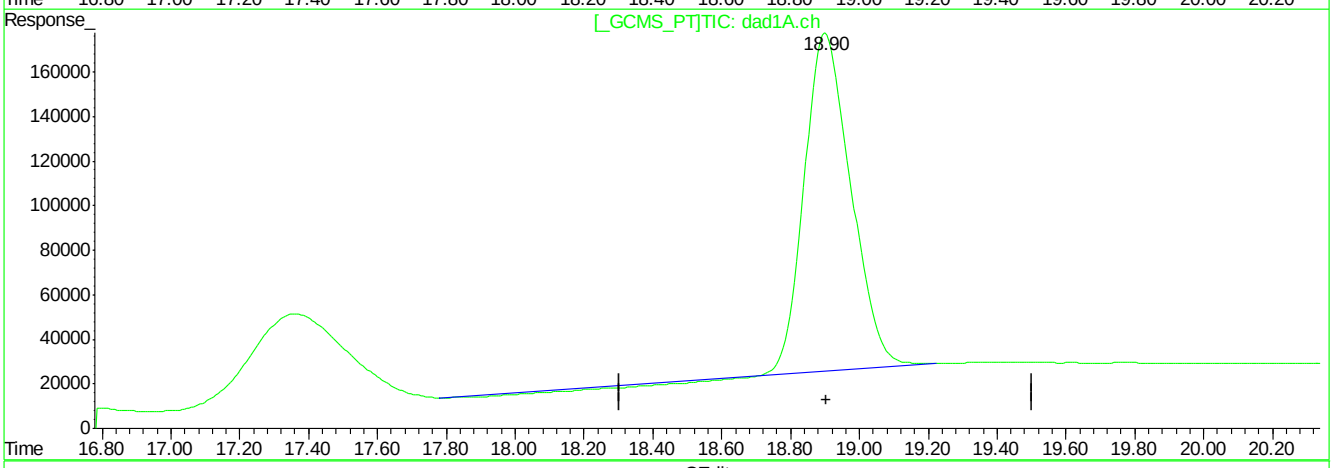
(+) = Expected Retention Time
BB060206.D 8330B_0707PLUS.M Mon Jul 09 10:04:29 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1A.ch
Acq On : 06-Jul-2018, 18:32:59 Operator: kismetl
Sample : ic1748-2000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.91min 0.000ppb

response 168009

(21) PETN #2

18.90min 10471.514ppb

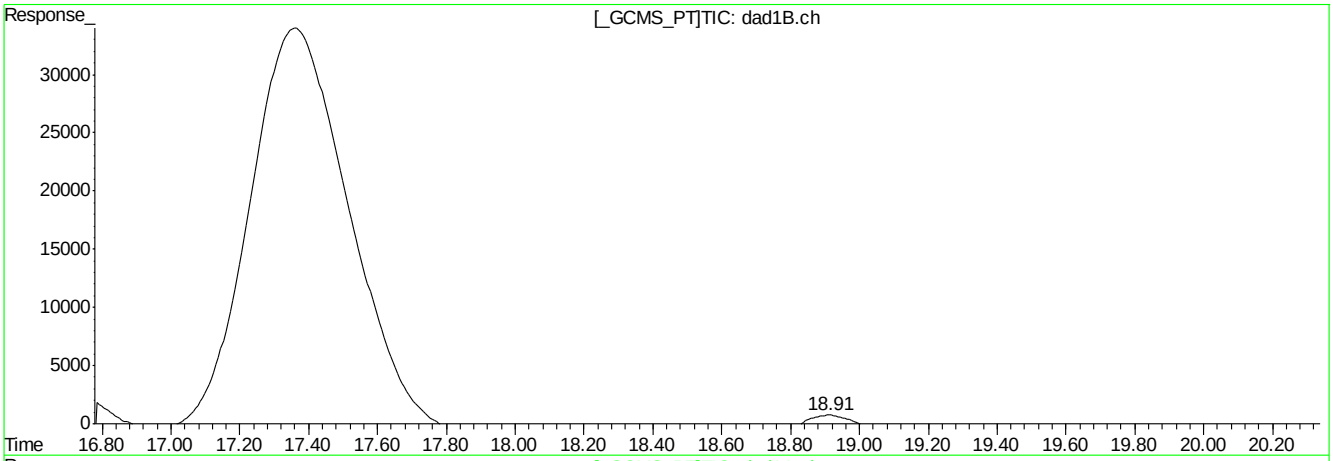
response 13799082

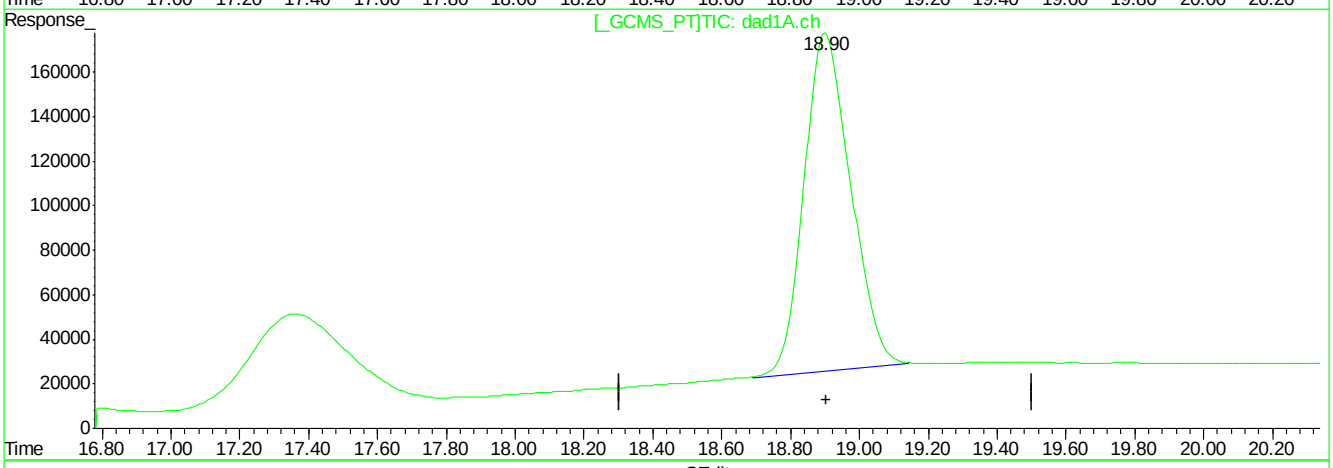
(+) = Expected Retention Time
BB060206.D 8330B_0707PLUS.M Mon Jul 09 10:04:41 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1B.ch Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060206.D\dad1A.ch
Acq On : 06-Jul-2018, 18:32:59 Operator: kismetl
Sample : ic1748-2000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 9:11 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 09:11:00 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.91min 0.000ppb

response 168009

(21) PETN #2

18.90min 10844.008ppb m

response 14289945

(+) = Expected Retention Time
BB060206.D 8330B_0707PLUS.M Mon Jul 09 10:04:55 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
07/09/18 16:15

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 11:03:35 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
Spiked Amount	500.000	Range	70 - 136	Recovery	=	0.00%#	0.00%#
	Target Compounds						
1)	TNX	1.39	1.39	4515438	6945759	888.280	881.147
2)	HMX	1.54	1.54	2011935	5533116	1043.978	1137.187
3)	DNX	1.78	1.78	2521630	4036157	965.091	889.408
4)	MNX	2.39	2.39	2620001	4050127	908.873	939.824
5)	RDX	3.01	3.01	2243559	3605185	1088.039	1056.691
6)	1,3,5-Trinitrobe	4.82	4.82	4810677	9191960	1122.936	1101.772
7)	1,3-Dinitrobenze	6.05	6.05	6161966	4294442	1067.478	1117.069
8)	3,5-Dinitroanili	6.40	6.40	4358334	7455000	933.611	945.674
9)	Nitrobenzene	7.68	7.68	3736320	3624907	1003.720	1112.210
10)	Nitroglycerin	0.00	9.02	0	6279551	N.D. d	4813.802
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	12.06	12.06	5571508	3462562	1020.089	1133.416
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	15.79	15.78	2663398	3599618	1120.494	1116.301m
19)	p-Nitrotoluene	16.39	16.39	4189871	3567103	1066.427	1019.236
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	18.90	0	7180831	N.D. d	5002.949m

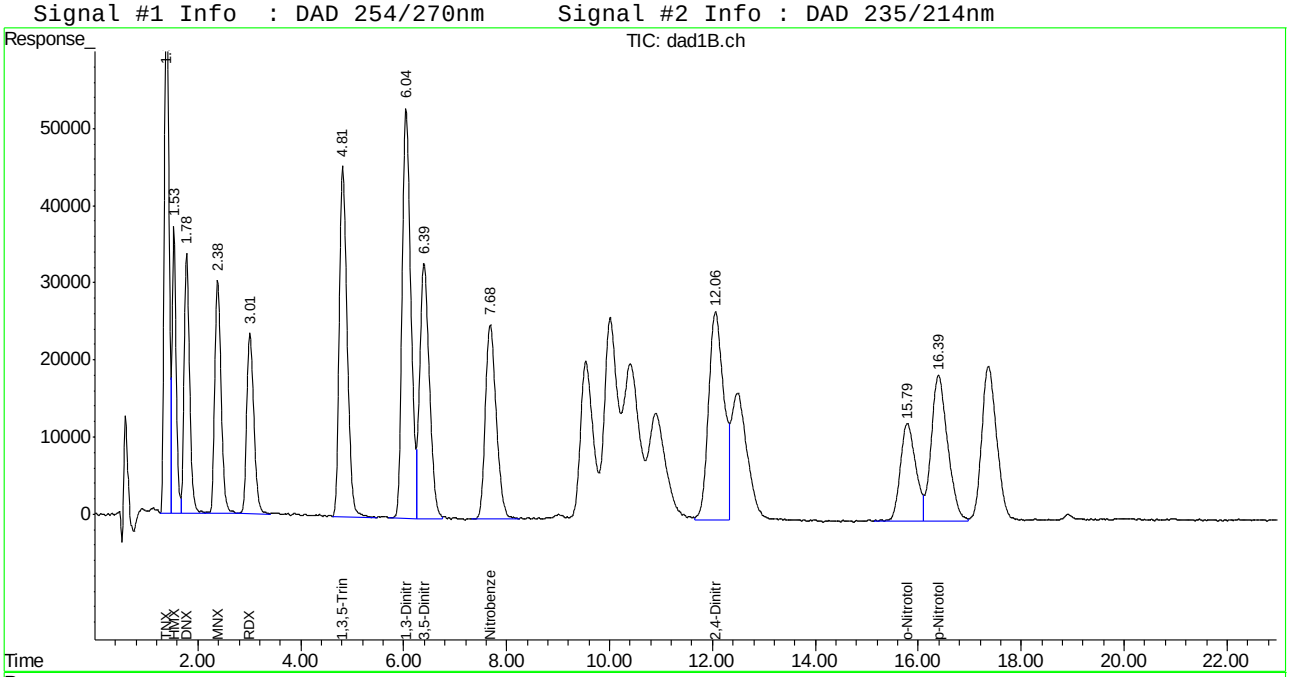
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060207.D 8330B_0707PLUS.M Mon Jul 09 11:20:55 2018 Page 1

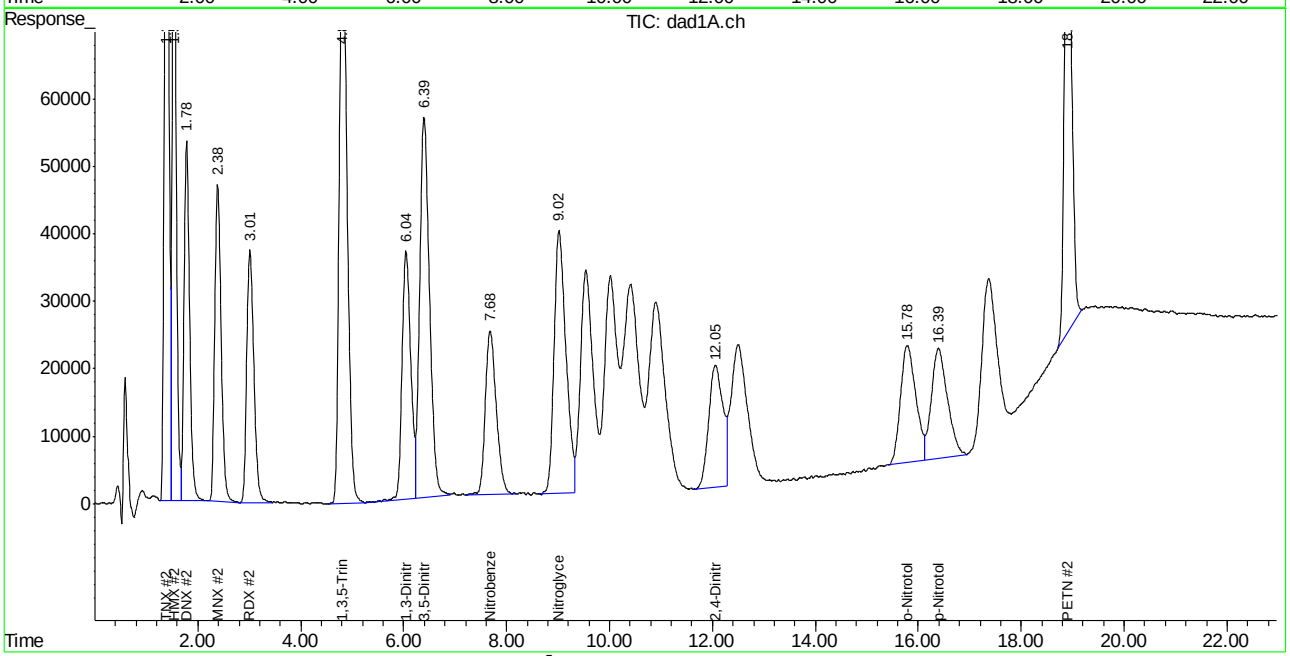
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 11:17 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

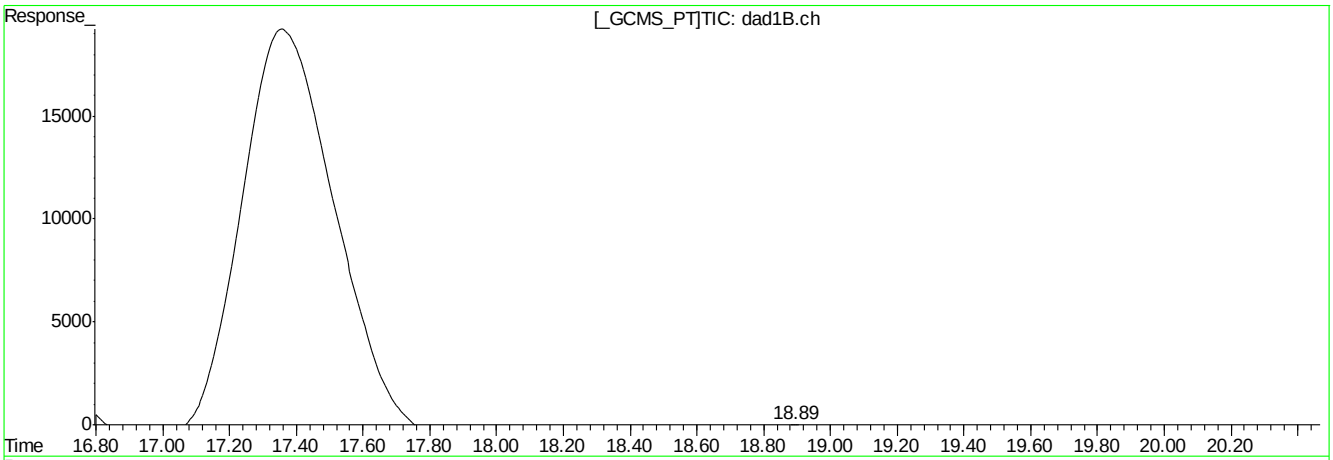
Sample Number: GBB1748-ICV1748 **Method:** SW846 8330A
Lab FileID: BB060207.D **Analyst approved:** 07/09/18 11:23 William Hustedde
Injection Time: 07/06/18 19:02 **Supervisor approved:** 07/09/18 16:15 Mike Eger

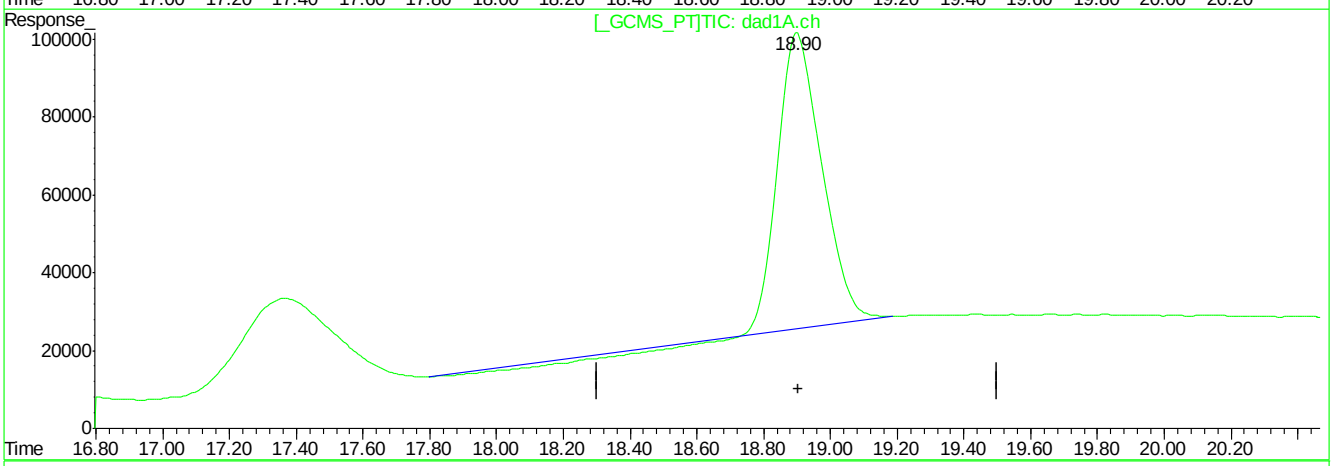
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	15.78	Poor instrument integration
PETN	78-11-5	2	18.90	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 11:03 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.90min 0.000ppb

response 121084

(21) PETN #2

18.90min 4641.987ppb

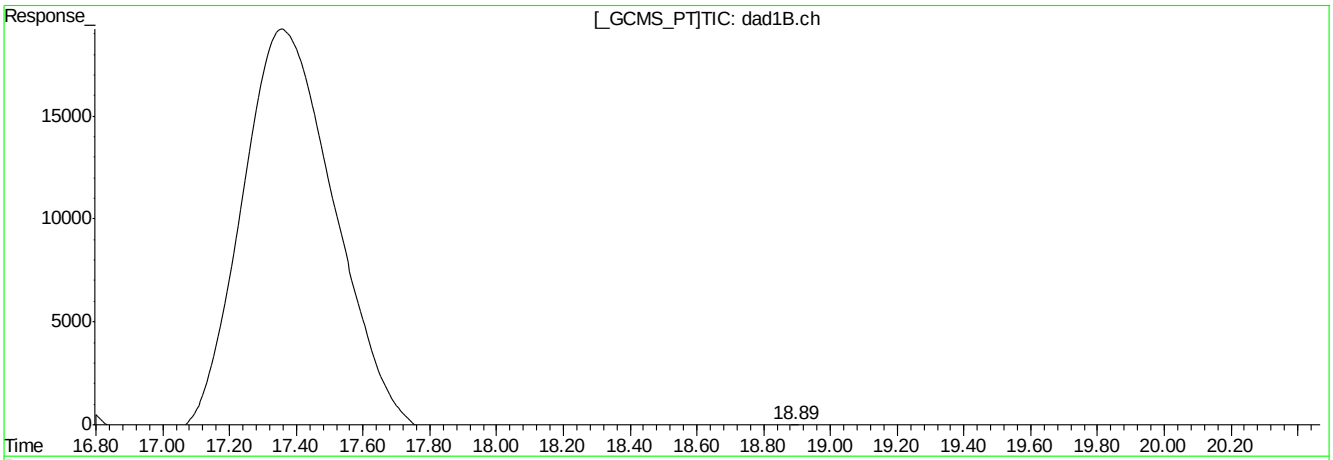
response 6662734

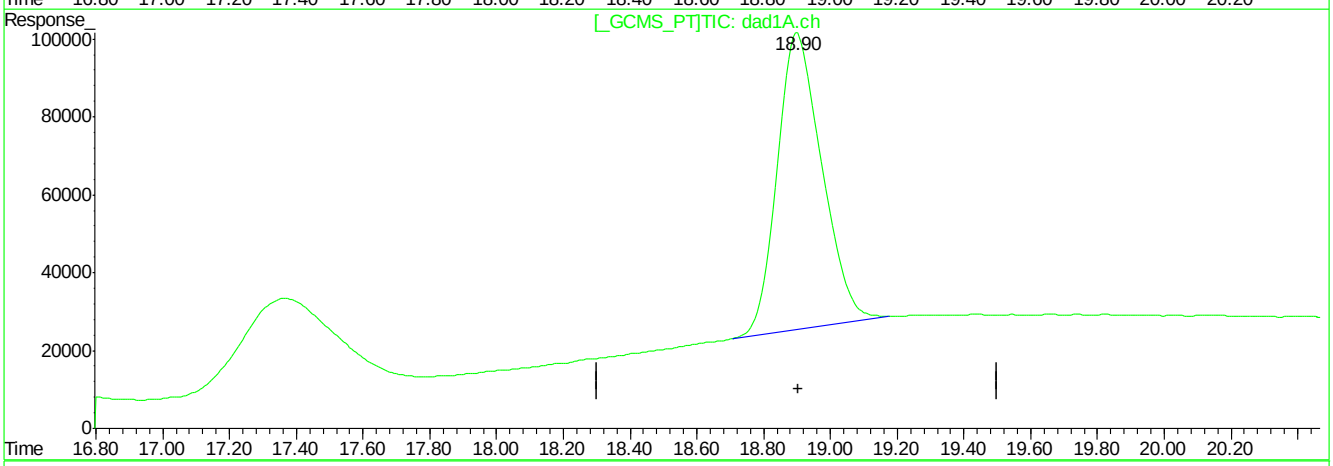
(+) = Expected Retention Time
BB060207.D 8330B_0707PLUS.M Mon Jul 09 11:04:29 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 11:03 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

18.90min 0.000ppb

response 121084

(21) PETN #2

18.90min 5002.949ppb m

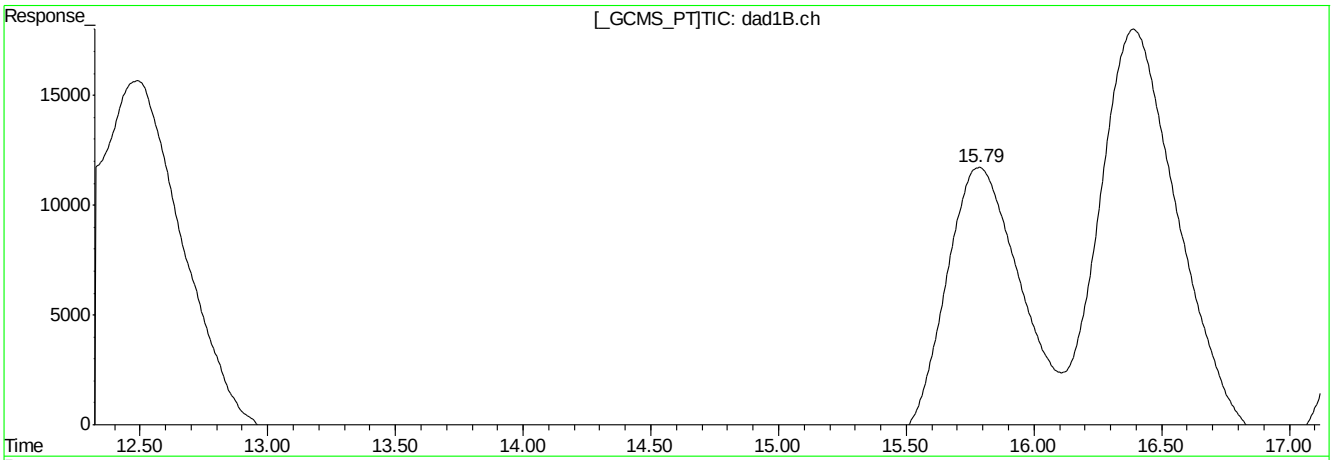
response 7180831

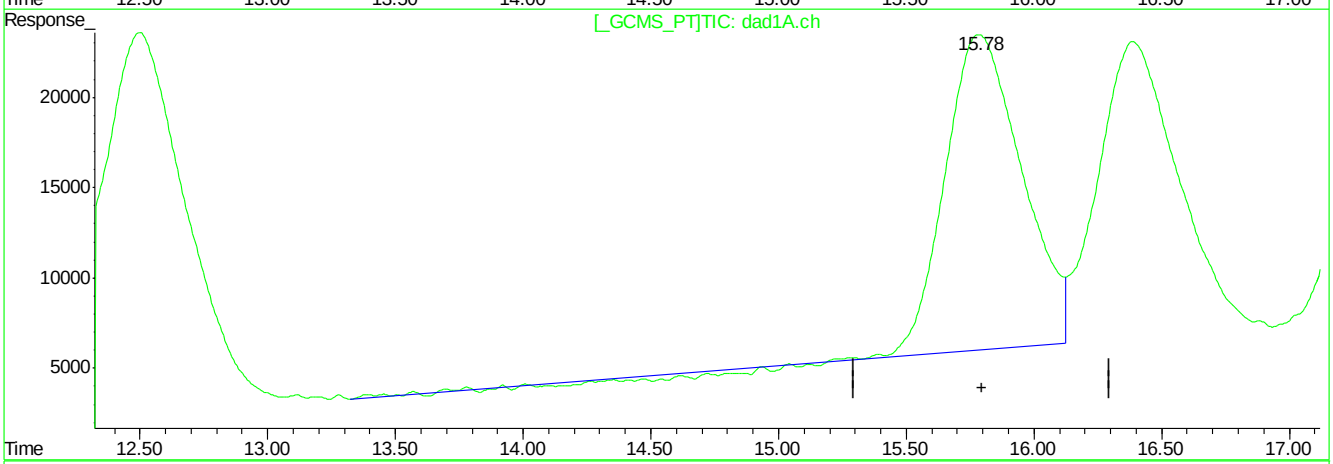
(+) = Expected Retention Time
BB060207.D 8330B_0707PLUS.M Mon Jul 09 11:04:38 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 11:03 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.79min 1120.494ppb

response 2663398

(18) o-Nitrotoluene #2

15.79min 1097.541ppb

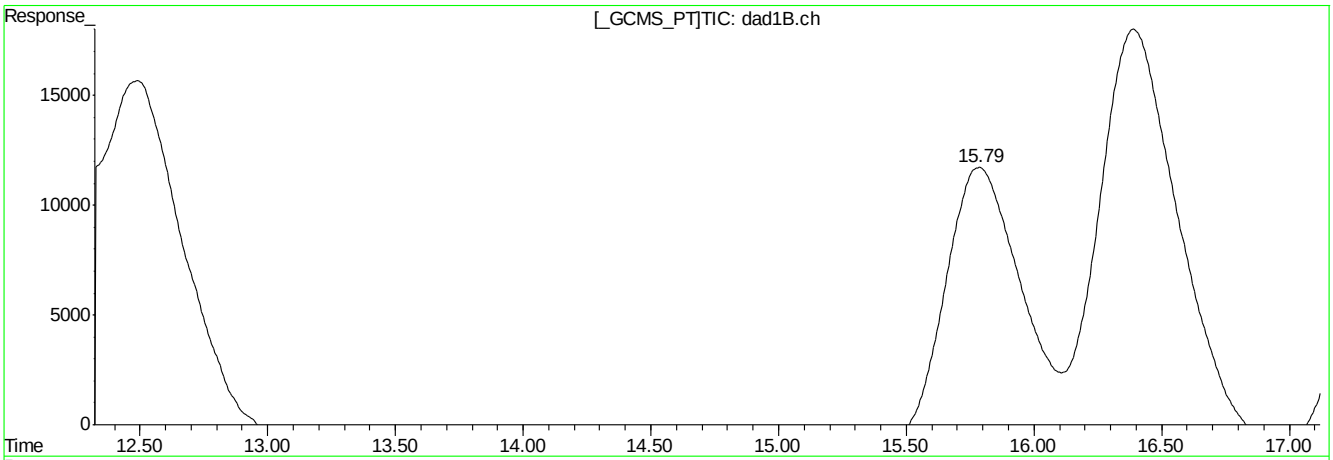
response 3539122

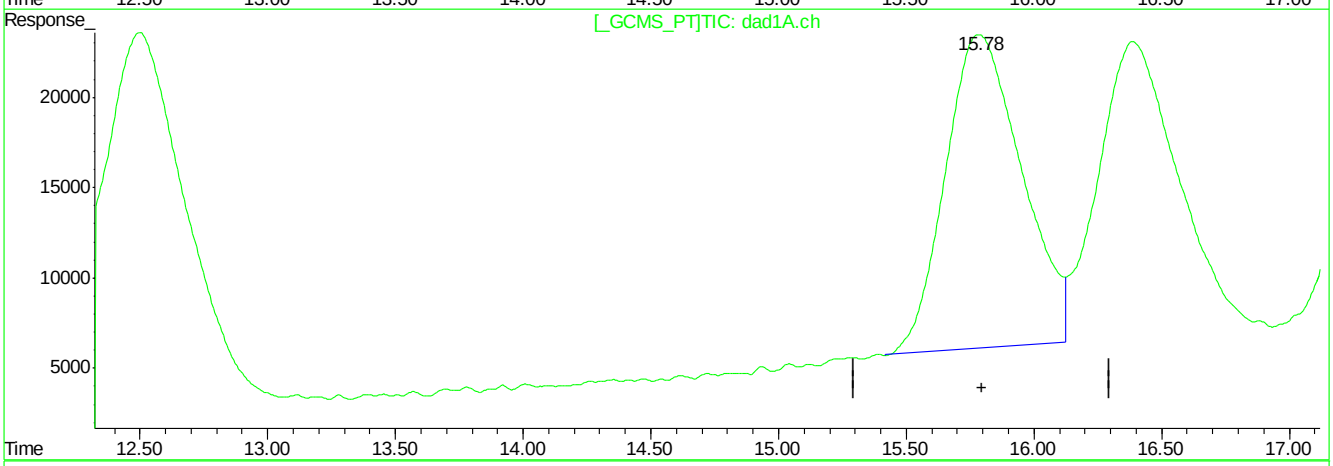
(+) = Expected Retention Time
BB060207.D 8330B_0707PLUS.M Mon Jul 09 11:04:43 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1B.ch Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060207.D\dad1A.ch
Acq On : 06-Jul-2018, 19:02:56 Operator: kismetl
Sample : icv1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 11:03 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.79min 1120.494ppb

response 2663398

(18) o-Nitrotoluene #2

15.78min 1116.301ppb m

response 3599618

(+) = Expected Retention Time
BB060207.D 8330B_0707PLUS.M Mon Jul 09 11:04:52 2018

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1A.ch
Acq On : 06-Jul-2018, 19:32:55 Operator: kismetl
Sample : icv1748-1000 spk Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 09 11:03:36 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	0.00	0.00	0	0	N.D.	N.D.
	Spiked Amount 500.000	Range 70 - 136		Recovery =		0.00%#	0.00%#
	Target Compounds						
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D.	N.D.
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D.	N.D.
11)	Tetryl	9.55	9.55	2737696	4395456	982.234	1095.709
12)	2,4,6-Trinitroto	10.02	10.02	3431479	4263770	1000.138	1053.616
13)	2-Amino-4,6-Dini	10.42	10.43	3553663	5249645	913.856	1033.000
14)	4-Amino-2,6-Dini	10.92	10.92	2653232	5361584	994.624	1058.821
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	12.51	12.52	2978778	4005471	958.888	1024.395
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	17.37	17.37	3386708	3621920	956.540	1002.550
21)	PETN	0.00	0.00	0	0	N.D.	N.D.

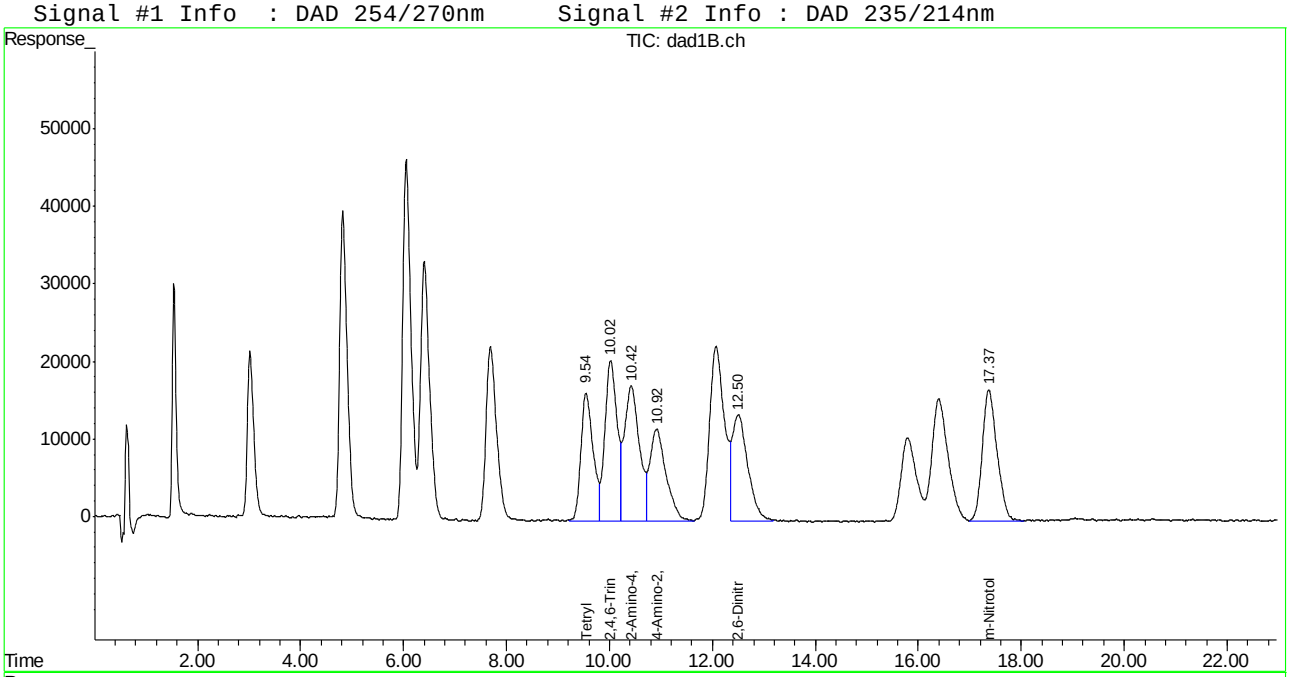
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060208.D 8330B_0707PLUS.M Mon Jul 09 11:20:56 2018 Page 1

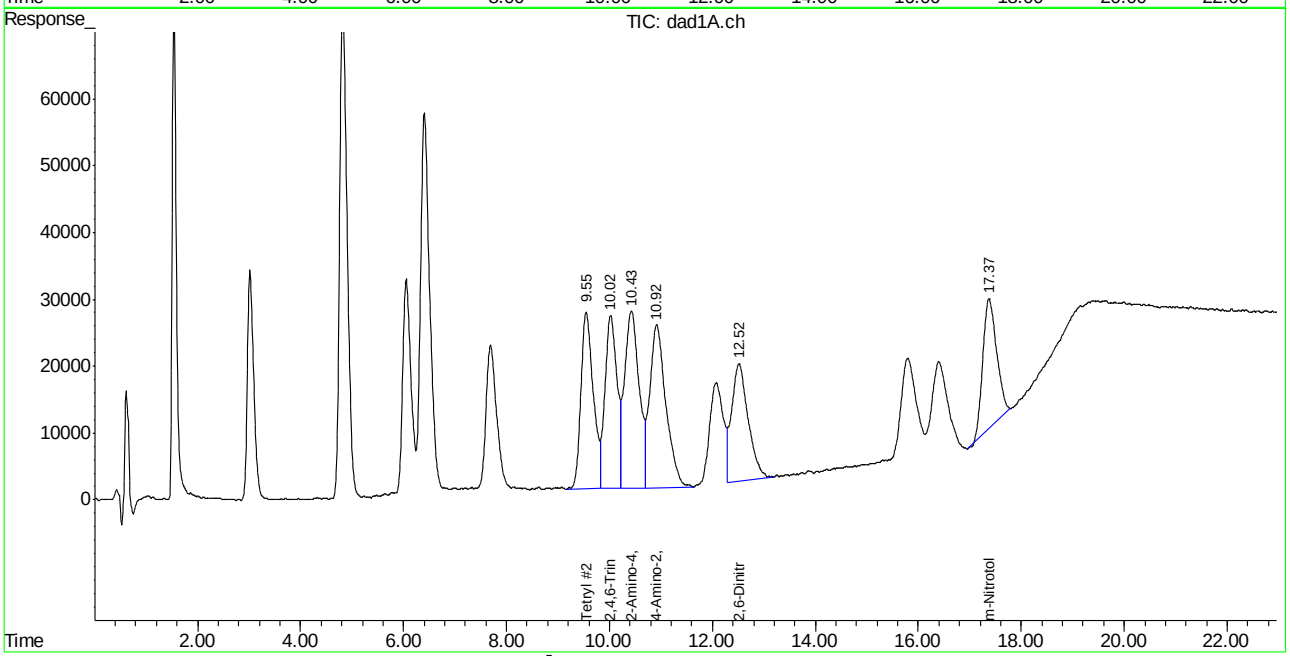
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1A.ch
Acq On : 06-Jul-2018, 19:32:55 Operator: kismetl
Sample : icv1748-1000 spk Inst : G1315B
Misc : OP70628,gbb1748,100,,,10,,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 11:05 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:58:14 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

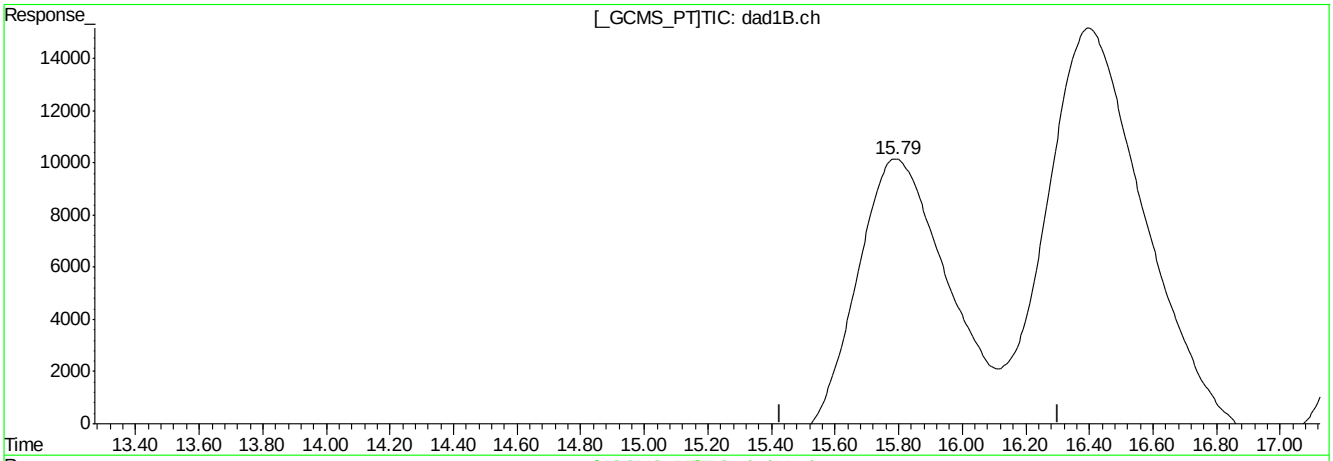


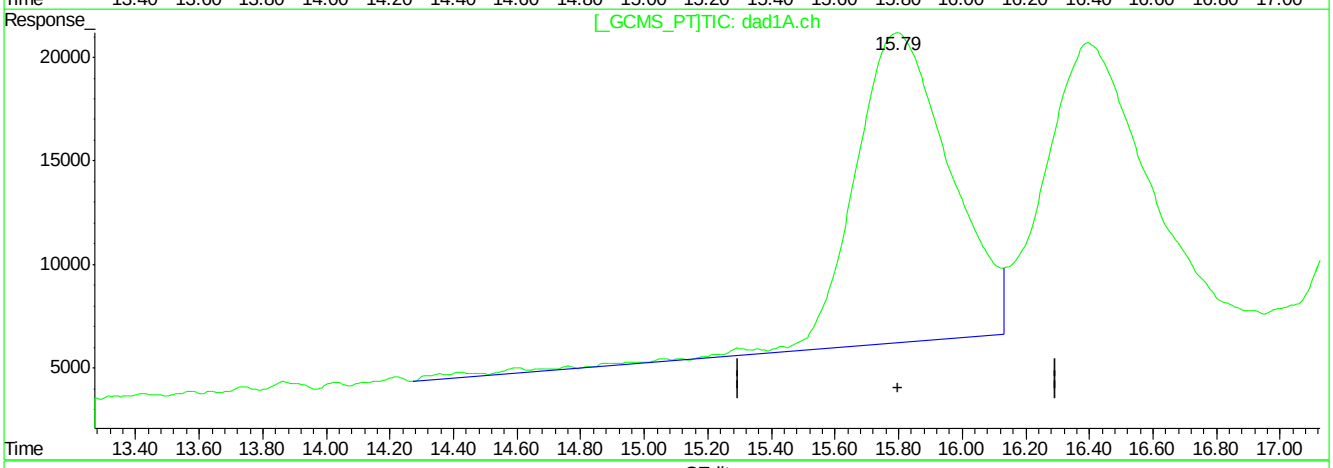


Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1A.ch
Acq On : 06-Jul-2018, 19:32:55 Operator: kismetl
Sample : icv1748-1000 spk Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:27 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:27:29 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

15.79min 919.460ppb

response 2185543

(18) o-Nitrotoluene #2

15.80min 981.327ppb

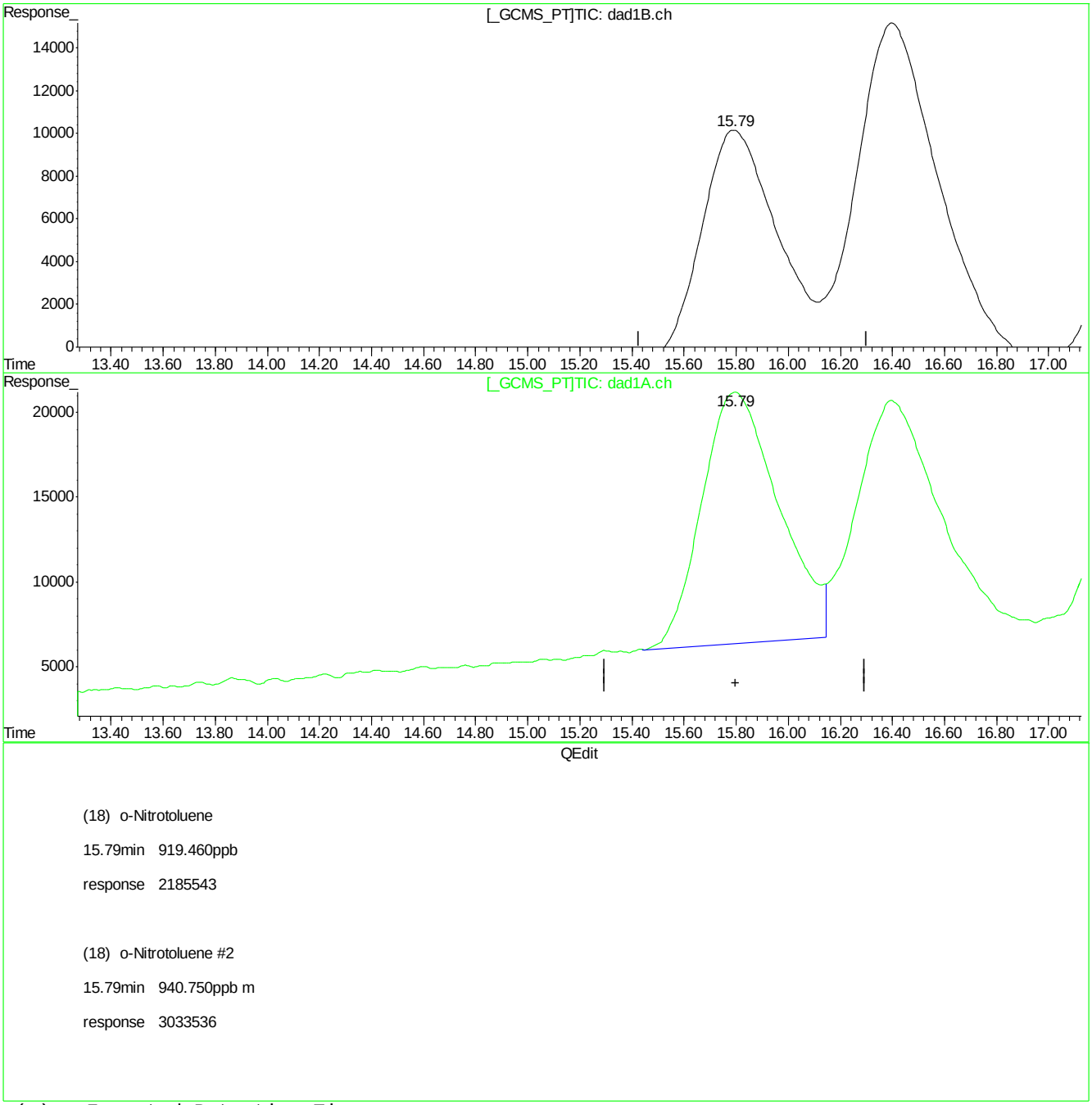
response 3164380

(+) = Expected Retention Time
BB060208.D 8330B_0707PLUS.M Mon Jul 09 10:30:33 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1B.ch Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\GBB1748\BB060208.D\dad1A.ch
Acq On : 06-Jul-2018, 19:32:55 Operator: kismetl
Sample : icv1748-1000 spk Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jul 9 10:27 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Jul 09 10:27:29 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

15.79min 919.460ppb

response 2185543

(18) o-Nitrotoluene #2

15.79min 940.750ppb m

response 3033536

(+) = Expected Retention Time
BB060208.D 8330B_0707PLUS.M Mon Jul 09 10:30:44 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/09/18 15:42

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060383.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060383.D\dad1A.ch
Acq On : 06-Aug-2018, 14:27:47 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71049,gbb1757,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 06 15:04:48 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.88	11.88	2341243	4032694	905.232	954.711
	Spiked Amount 500.000	Range 70 - 136		Recovery =		181.05%#	190.94%#
	Target Compounds						
1)	TNX	1.43	1.43	4895793	7537698	963.104	956.241
2)	HMX	1.56	1.56	1807462	4968186	937.878	1021.163
3)	DNX	1.85	1.85	2446638	3915750	936.516	862.875
4)	MNX	2.47	2.47	2628054	4076088	911.666	945.849
5)	RDX	3.12	3.12	1966438	3136960	953.646	919.453
6)	1,3,5-Trinitrobe	4.96	4.96	4175253	8050412	973.591	964.943
7)	1,3-Dinitrobenze	6.26	6.26	5331650	3689573	923.637	955.505
8)	3,5-Dinitroanili	6.56	6.56	4628179	7752920	991.474	983.337
9)	Nitrobenzene	7.92	7.92	3335080	3222325	895.931	988.422
10)	Nitroglycerin	0.00	9.47	0	6252772	N.D. d	4793.274
11)	Tetryl	9.89	9.89	2179853	3584771	782.090	896.748
12)	2,4,6-Trinitroto	10.36	10.36	3324388	4037100	968.367	998.215
13)	2-Amino-4,6-Dini	10.76	10.76	3472358	5131270	892.948	1009.707
14)	4-Amino-2,6-Dini	11.23	11.23	2718391	5311351	1019.050	1049.328
16)	2,4-Dinitrotolue	12.54	12.54	4998383	3056750	915.155	1003.042
17)	2,6-Dinitrotolue	12.94	12.94	2854497	3831363	918.430	981.269
18)	o-Nitrotoluene	16.18	16.18	2352711	3064021	989.788	950.204m
19)	p-Nitrotoluene	16.81	16.81	3784431	2916178	963.232	833.245m
20)	m-Nitrotoluene	17.71	17.72	3595333	4079620	1015.251	1129.242
21)	PETN	0.00	19.22	0	7242348	N.D. d	5045.809m

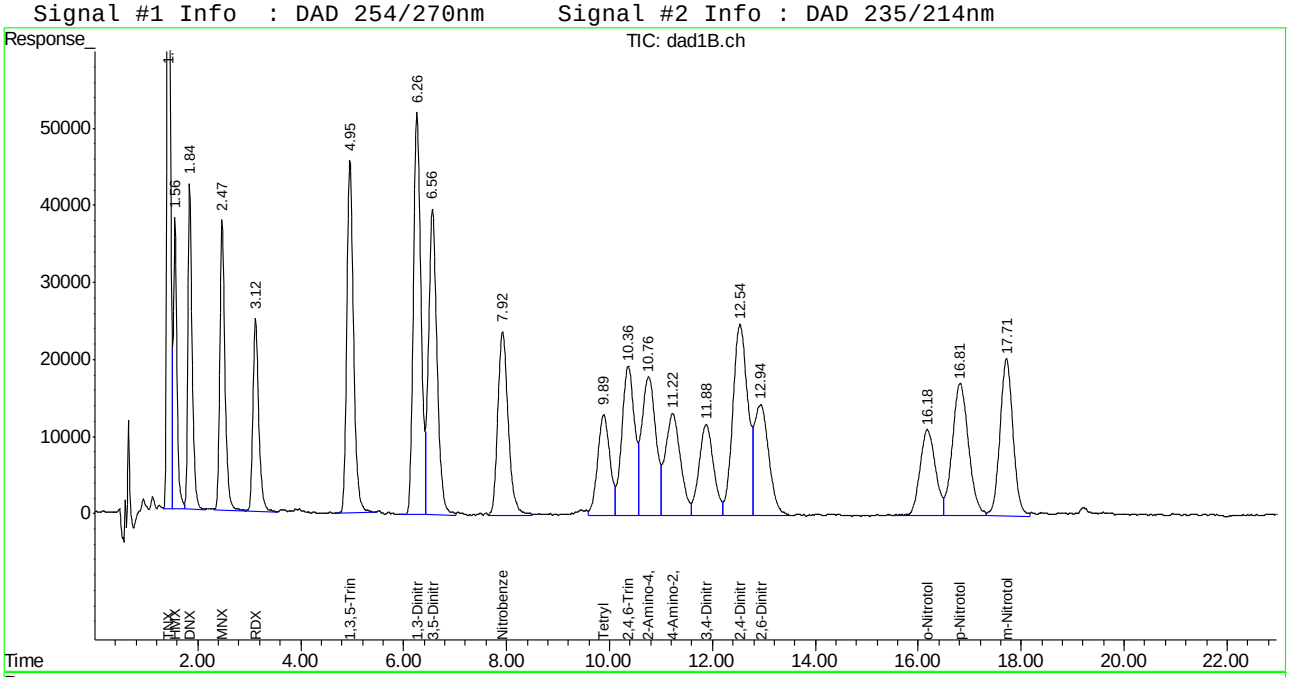
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060383.D 8330B_0707PLUS.M Tue Aug 07 14:47:14 2018 Page 1

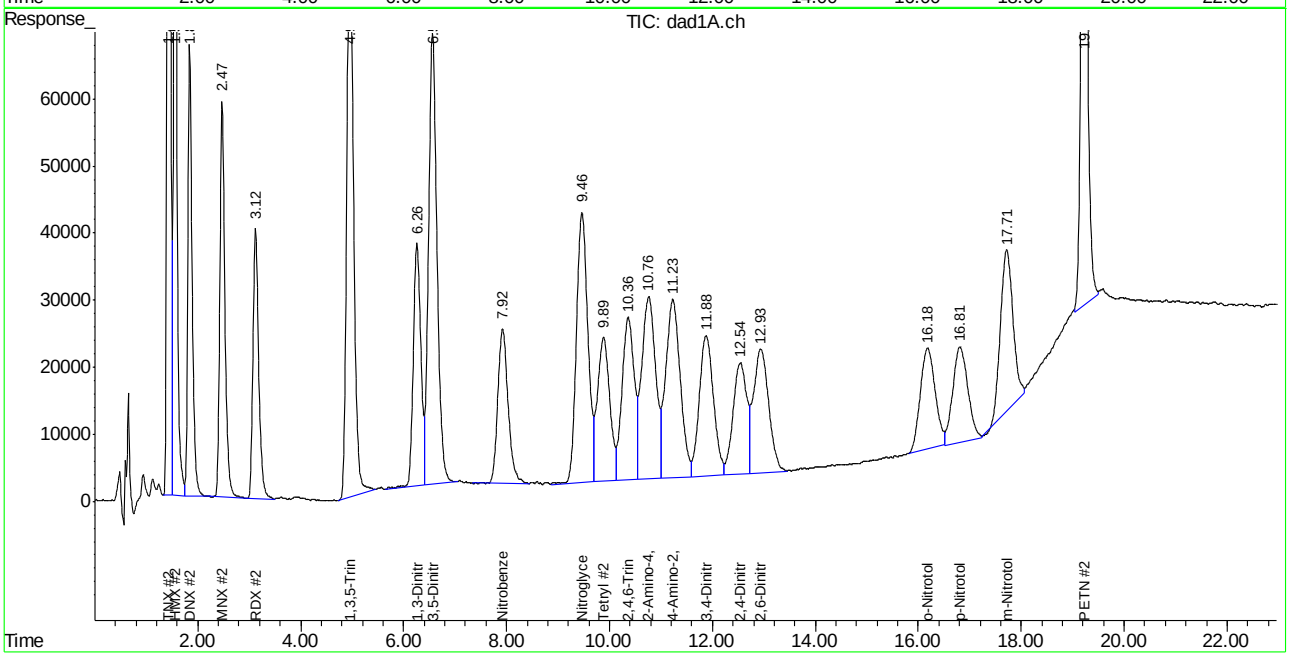
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060383.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060383.D\dad1A.ch
Acq On : 06-Aug-2018, 14:27:47 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71049,gbb1757,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 6 15:05 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

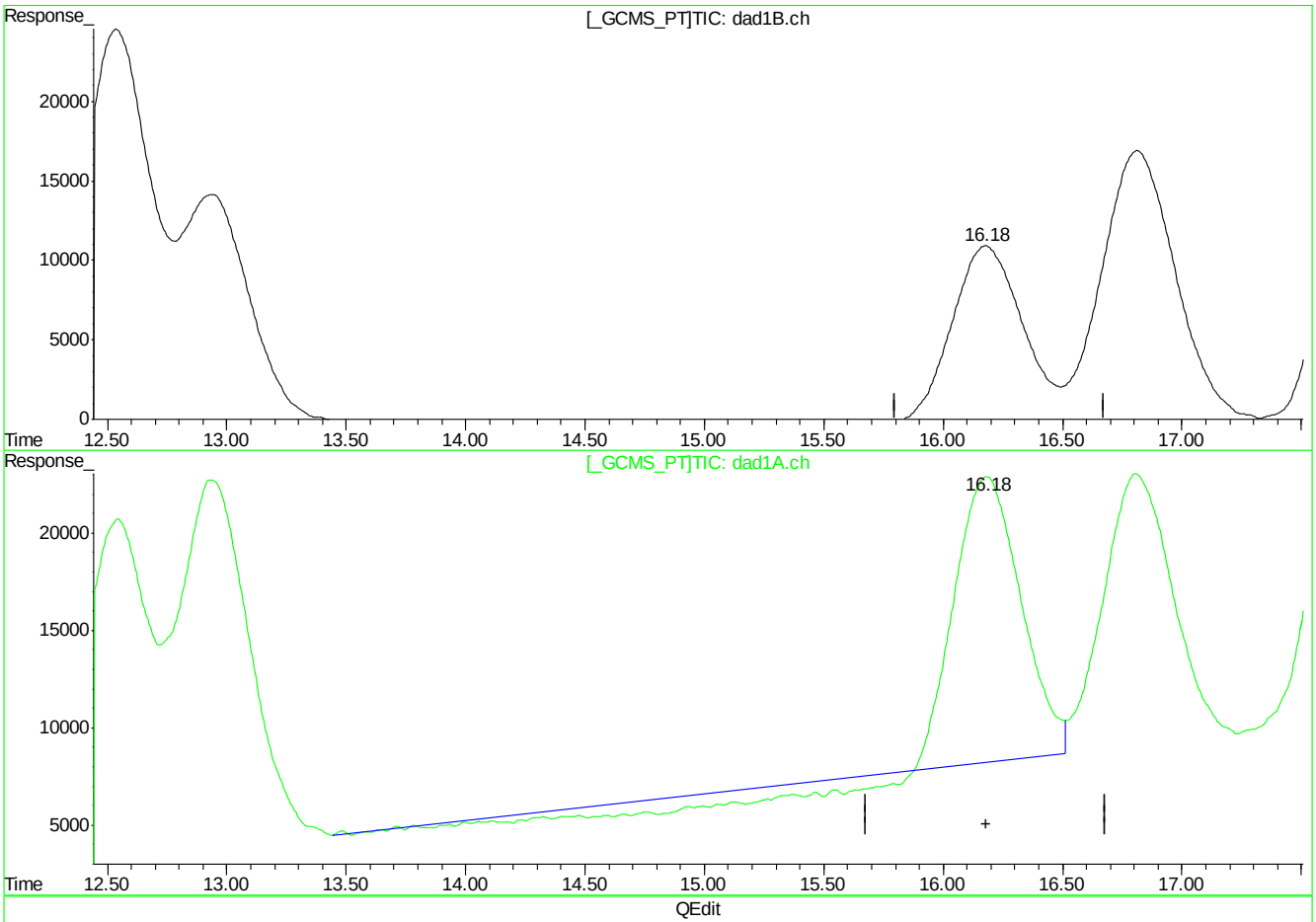
Sample Number: GBB1757-CC1748
Lab FileID: BB060383.D
Injection Time: 08/06/18 14:27
Method: SW846 8330A
Analyst approved: 08/07/18 14:53 William Hustedde
Supervisor approved: 08/09/18 15:42 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	16.18	Poor instrument integration
p-Nitrotoluene	99-99-0	2	16.81	Poor instrument integration
PETN	78-11-5	2	19.22	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060383.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060383.D\dad1A.ch
Acq On : 06-Aug-2018, 14:27:47 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 6 15:04 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

16.18min 989.788ppb

response 2352711

(18) o-Nitrotoluene #2

16.18min 682.918ppb

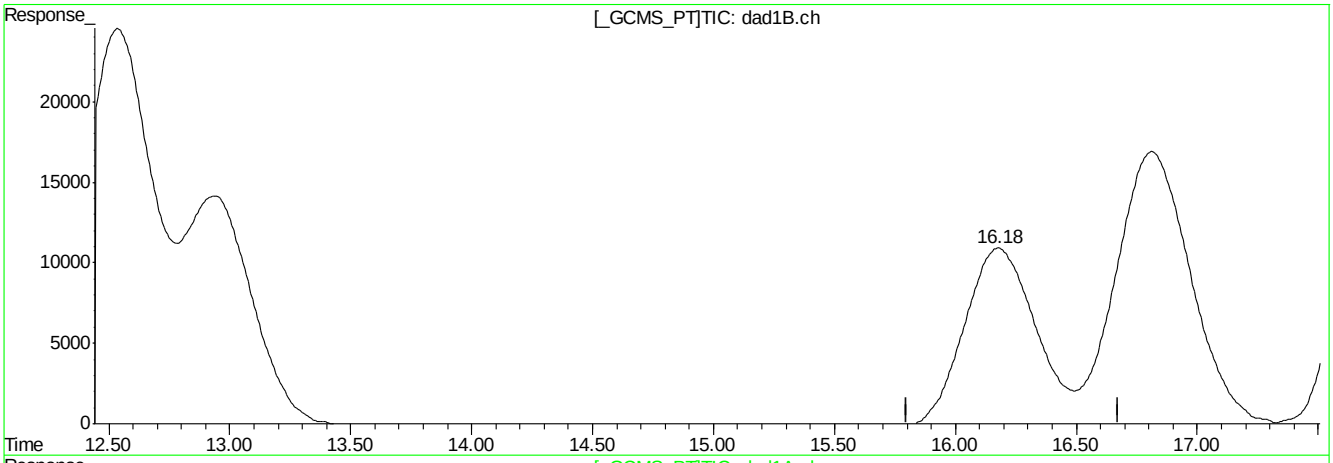
response 2202133

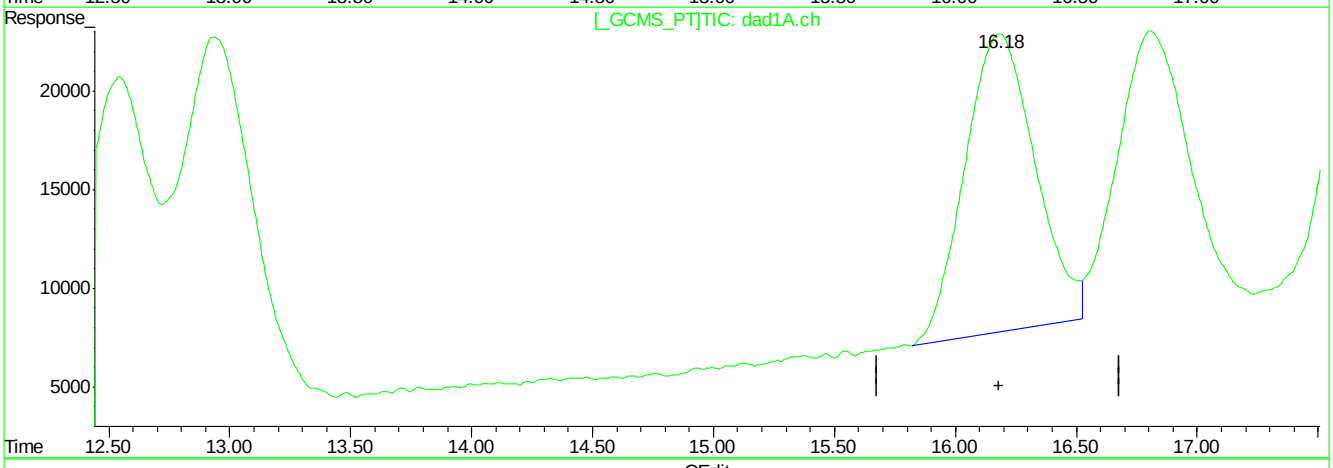
(+) = Expected Retention Time
BB060383.D 8330B_0707PLUS.M Mon Aug 06 15:05:15 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060383.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060383.D\dad1A.ch
Acq On : 06-Aug-2018, 14:27:47 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 6 15:04 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

16.18min 989.788ppb

response 2352711

(18) o-Nitrotoluene #2

16.18min 950.204ppb m

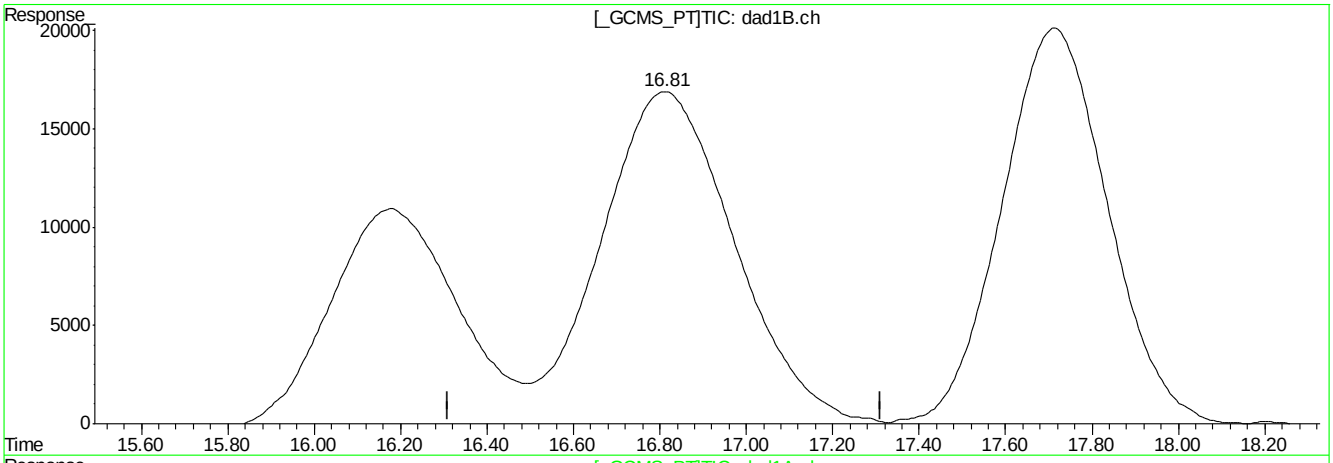
response 3064021

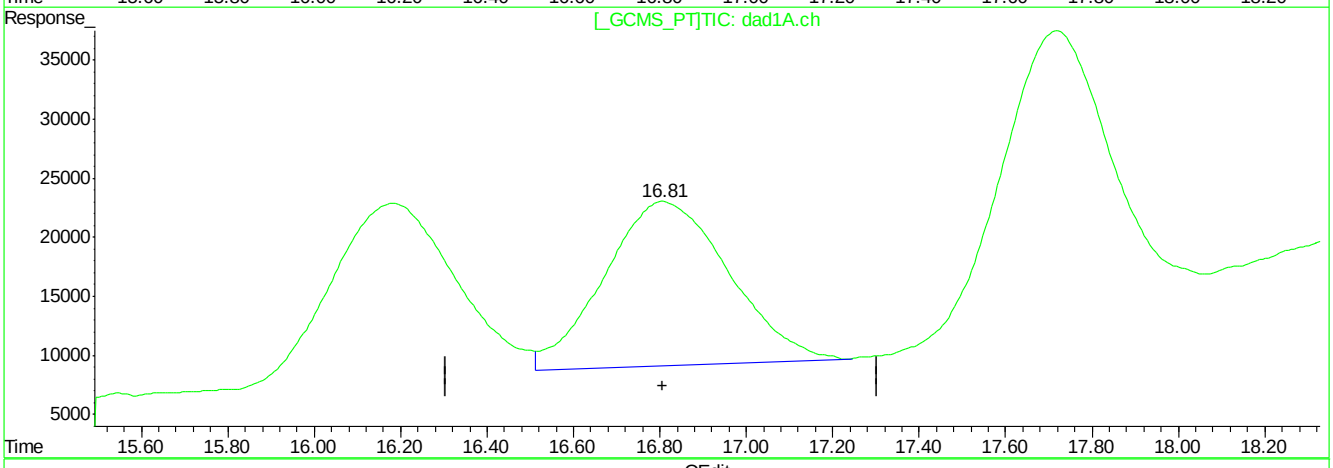
(+) = Expected Retention Time
BB060383.D 8330B_0707PLUS.M Mon Aug 06 15:05:24 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060383.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060383.D\dad1A.ch
Acq On : 06-Aug-2018, 14:27:47 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 6 15:04 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.81min 963.232ppb

response 3784431

(19) p-Nitrotoluene #2

16.81min 800.063ppb

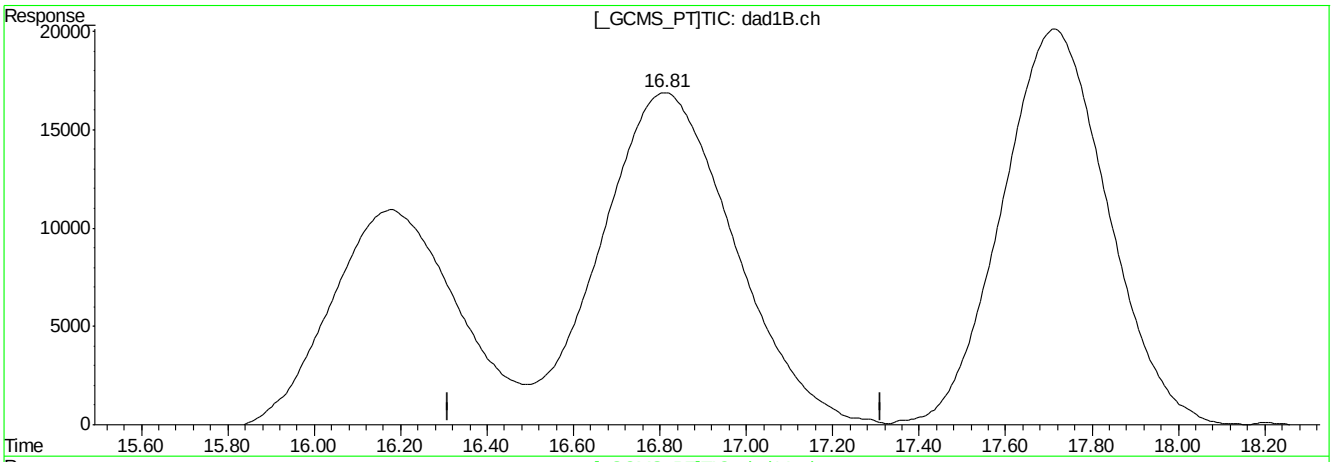
response 2800047

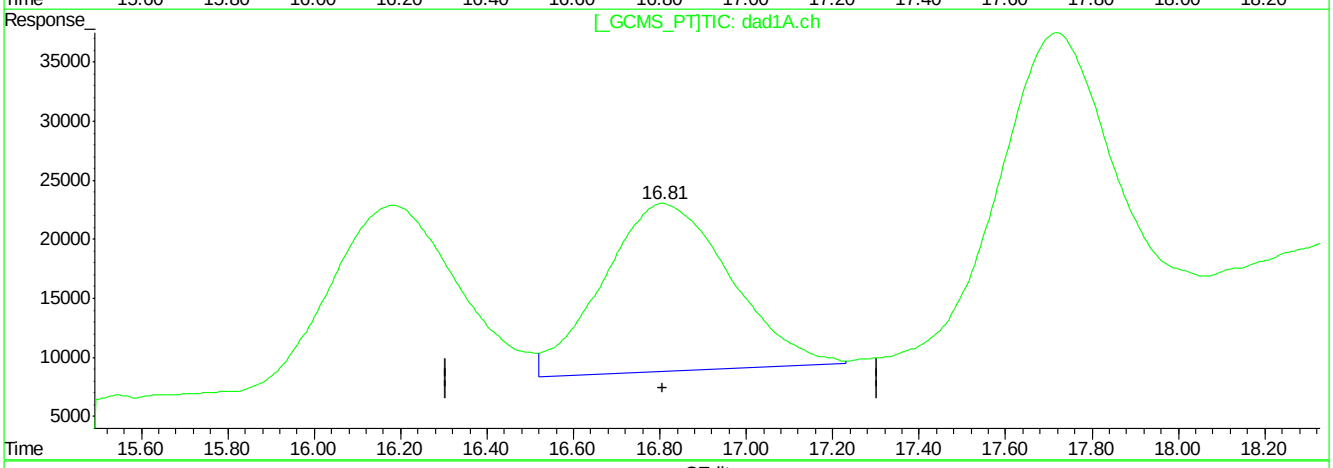
(+) = Expected Retention Time
BB060383.D 8330B_0707PLUS.M Mon Aug 06 15:05:39 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060383.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060383.D\dad1A.ch
Acq On : 06-Aug-2018, 14:27:47 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 6 15:04 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(19) p-Nitrotoluene

16.81min 963.232ppb

response 3784431

(19) p-Nitrotoluene #2

16.81min 833.245ppb m

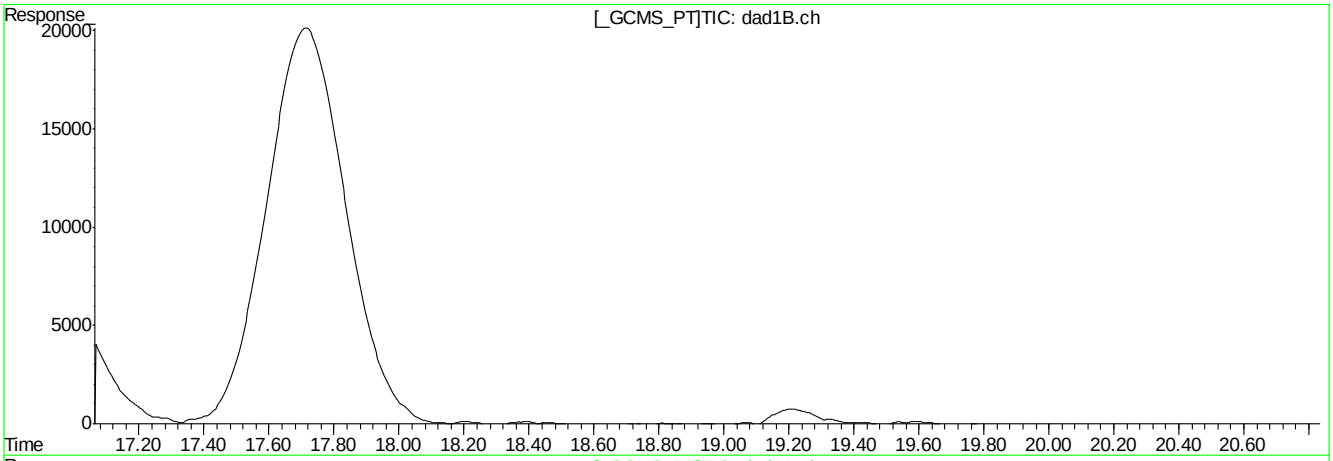
response 2916178

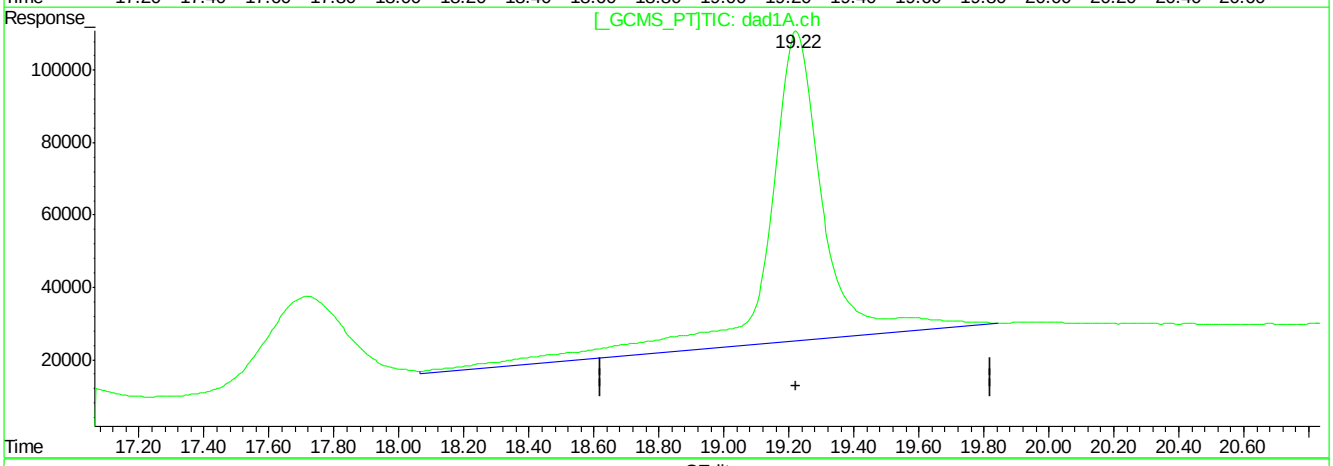
(+) = Expected Retention Time
BB060383.D 8330B_0707PLUS.M Mon Aug 06 15:05:48 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060383.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060383.D\dad1A.ch
Acq On : 06-Aug-2018, 14:27:47 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 6 15:04 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

19.22min 7100.254ppb

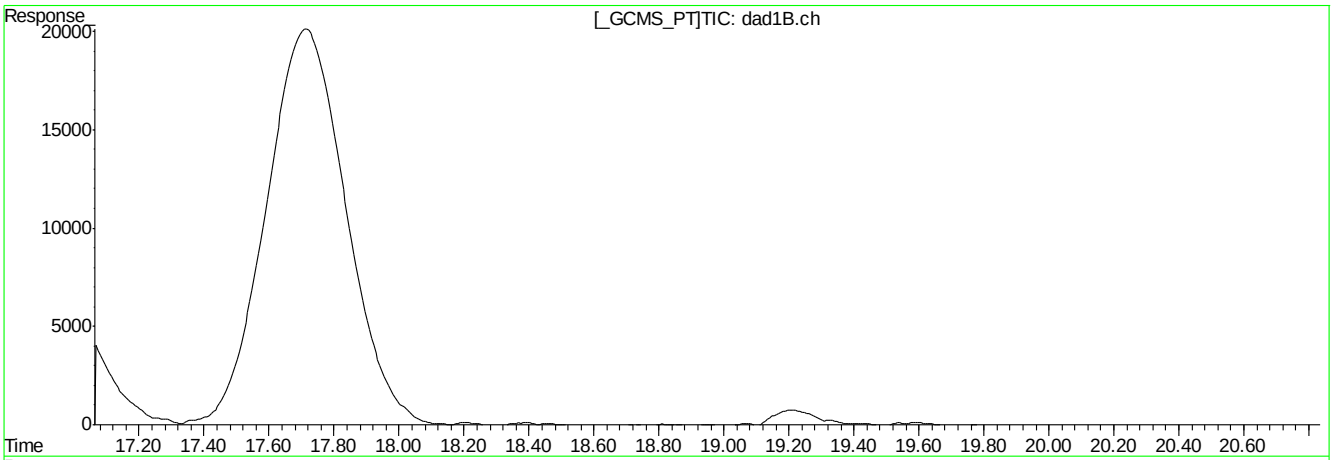
response 10191133

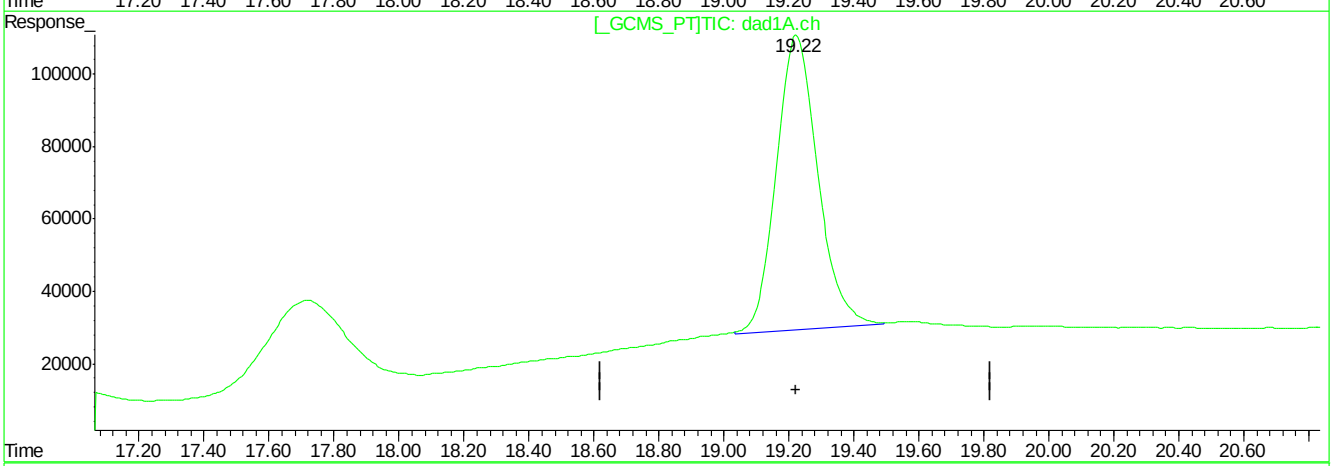
(+) = Expected Retention Time
BB060383.D 8330B_0707PLUS.M Mon Aug 06 15:05:57 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060383.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060383.D\dad1A.ch
Acq On : 06-Aug-2018, 14:27:47 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 6 15:04 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

19.22min 5045.809ppb m

response 7242348

(+) = Expected Retention Time
BB060383.D 8330B_0707PLUS.M Mon Aug 06 15:06:02 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/09/18 15:42

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060394.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060394.D\dad1A.ch
Acq On : 06-Aug-2018, 19:55:31 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71202,gbb1757,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 07 09:53:51 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.91	11.91	2396187	4084740	926.690	966.253
	Spiked Amount 500.000	Range 70 - 136		Recovery =		185.34%#	193.25%#
	Target Compounds						
1)	TNX	1.44	1.44	4886563	7525406	961.288	954.682
2)	HMX	1.56	1.57	1824926	4955826	946.940	1018.625
3)	DNX	1.85	1.85	2489424	3959898	952.820	872.603
4)	MNX	2.48	2.48	2648205	4118841	918.657	955.769
5)	RDX	3.13	3.13	2003057	3132623	971.404	918.182
6)	1,3,5-Trinitrobe	4.97	4.97	4121707	8043319	961.020	964.093
7)	1,3-Dinitrobenze	6.27	6.27	5305840	3709413	919.165	960.781
8)	3,5-Dinitroanili	6.58	6.58	4585734	7709132	982.372	977.802
9)	Nitrobenzene	7.94	7.94	3372462	3180509	905.973	975.569
10)	Nitroglycerin	0.00	9.48	0	6090503	N.D. d	4668.881
11)	Tetryl	9.92	9.92	2203815	3564343	790.688	891.717
12)	2,4,6-Trinitroto	10.39	10.39	3368506	4031383	981.451	996.817
13)	2-Amino-4,6-Dini	10.80	10.81	3544450	5096711	911.487	1002.906
14)	4-Amino-2,6-Dini	11.27	11.28	2774738	5325056	1040.173	1051.919
16)	2,4-Dinitrotolue	12.57	12.57	4955718	3011552	907.344	988.482
17)	2,6-Dinitrotolue	12.96	12.98	3158003	3994044	1017.305	1021.568
18)	o-Nitrotoluene	16.23	16.22	2414938	3129869	1015.967	970.624m
19)	p-Nitrotoluene	16.86	16.87	3901401	2700354	993.004	771.577
20)	m-Nitrotoluene	17.75	17.76	3744717	4194054	1057.275	1160.917
21)	PETN	0.00	19.23	0	7053227	N.D. d	4914.047m

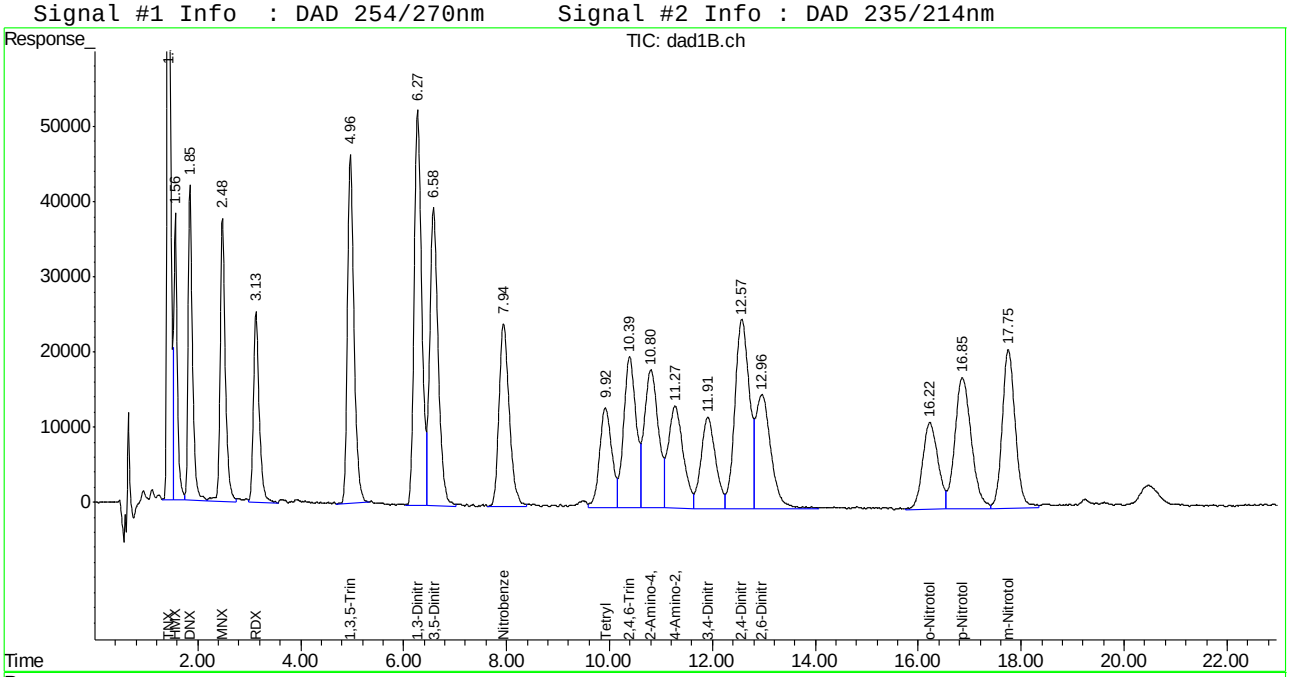
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060394.D 8330B_0707PLUS.M Tue Aug 07 14:53:59 2018 Page 1

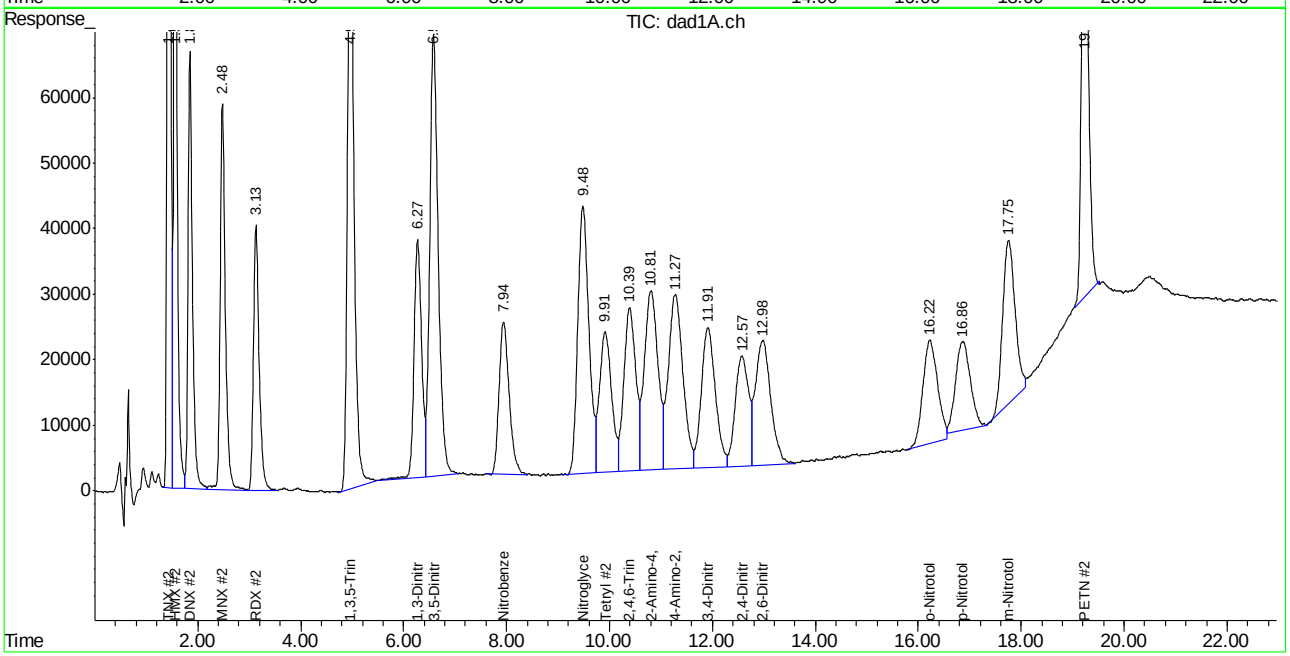
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060394.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060394.D\dad1A.ch
Acq On : 06-Aug-2018, 19:55:31 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71202,gbb1757,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 14:52 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

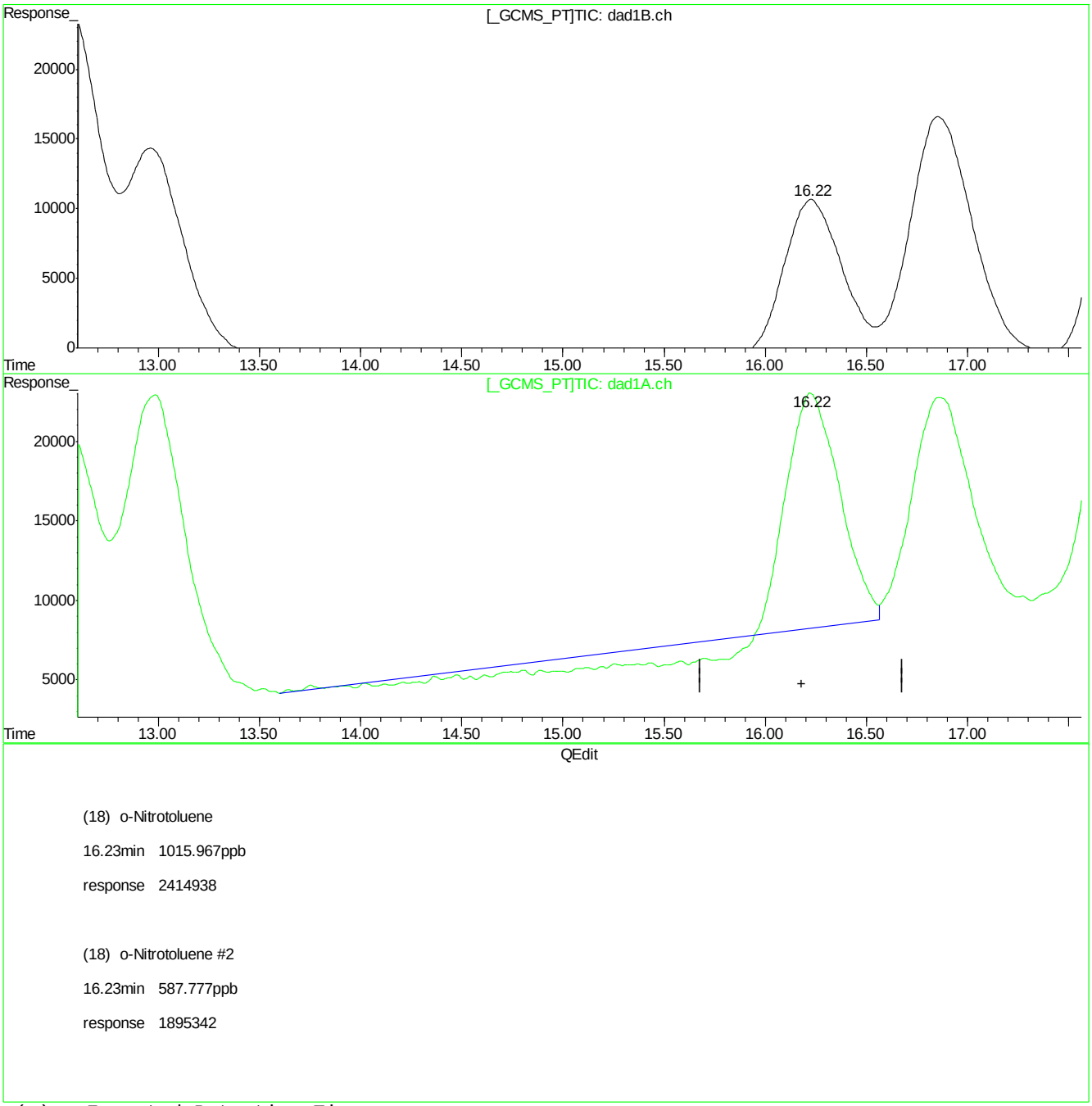
Sample Number:	GBB1757-CC1748	**Method:**	SW846 8330A
Lab FileID:	BB060394.D	**Analyst approved:**	08/07/18 14:57 William Hustedde
Injection Time:	08/06/18 19:55	**Supervisor approved:**	08/09/18 15:42 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	16.22	Poor instrument integration
PETN	78-11-5	2	19.23	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060394.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060394.D\dad1A.ch
Acq On : 06-Aug-2018, 19:55:31 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71202,gbb1757,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:55 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

16.23min 1015.967ppb

response 2414938

(18) o-Nitrotoluene #2

16.23min 587.777ppb

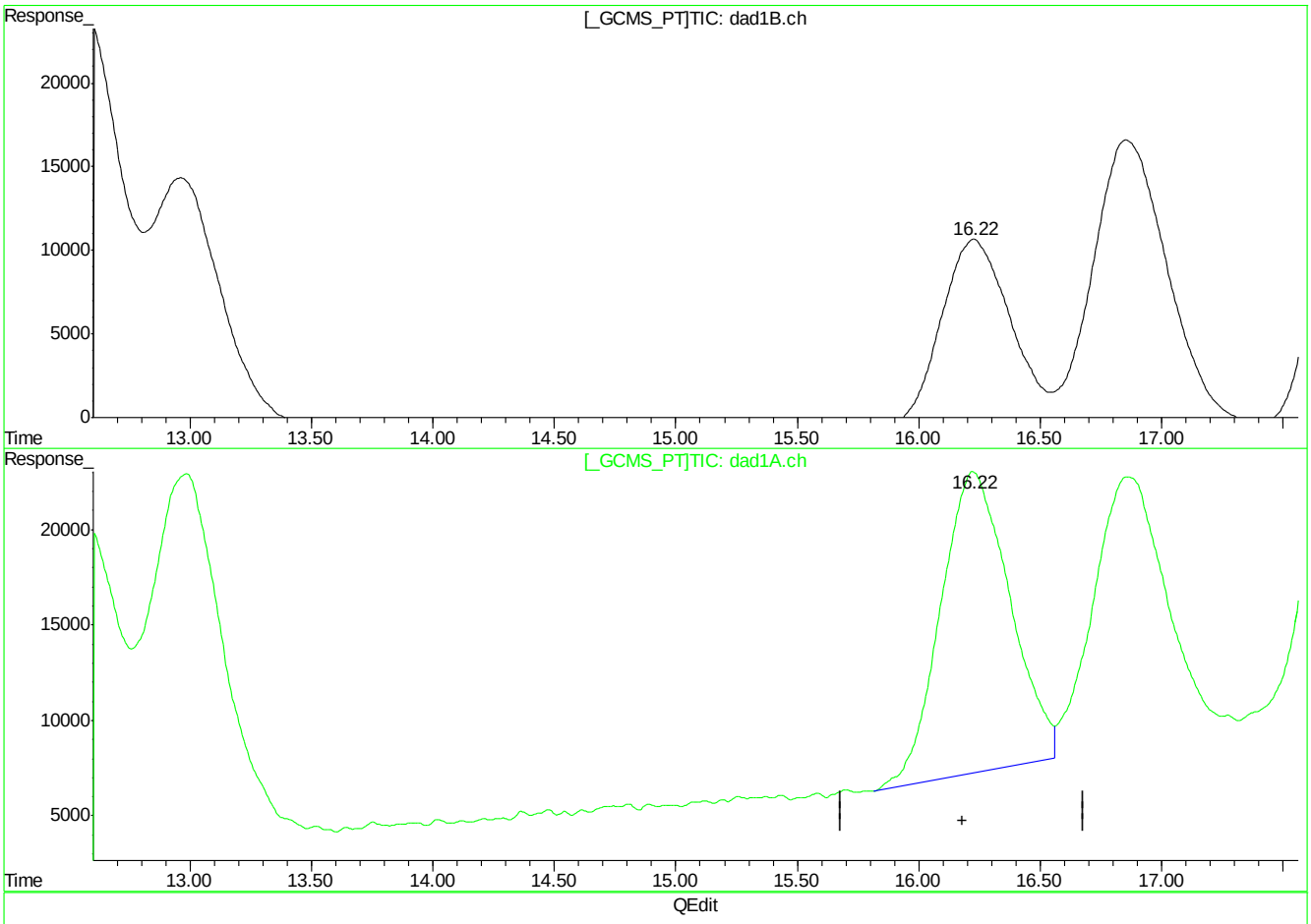
response 1895342

(+) = Expected Retention Time
BB060394.D 8330B_0707PLUS.M Tue Aug 07 14:52:05 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060394.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060394.D\dad1A.ch
Acq On : 06-Aug-2018, 19:55:31 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71202,gbb1757,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:55 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration



(18) o-Nitrotoluene

16.23min 1015.967ppb

response 2414938

(18) o-Nitrotoluene #2

16.22min 970.624ppb m

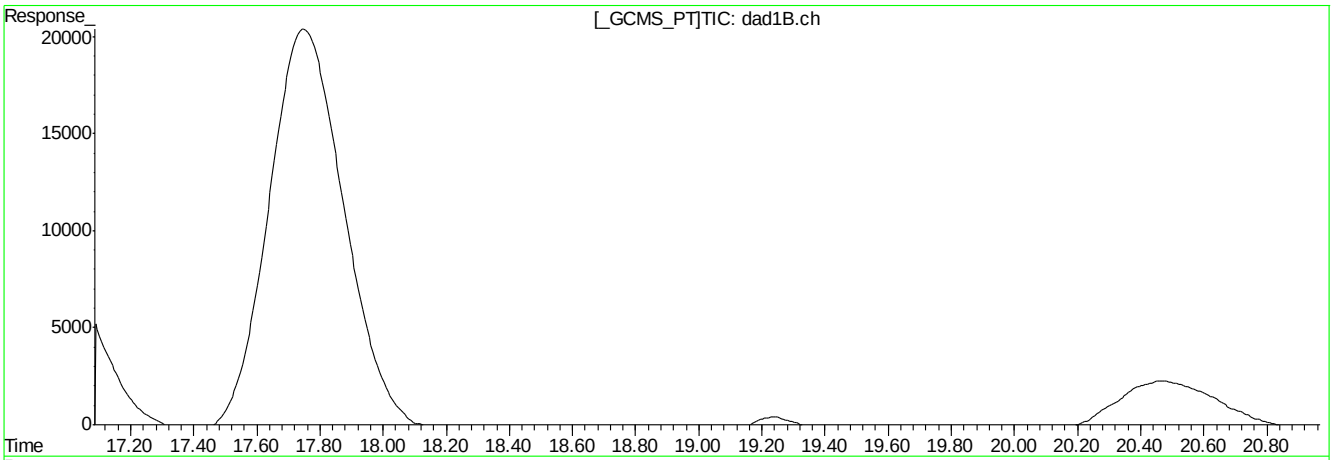
response 3129869

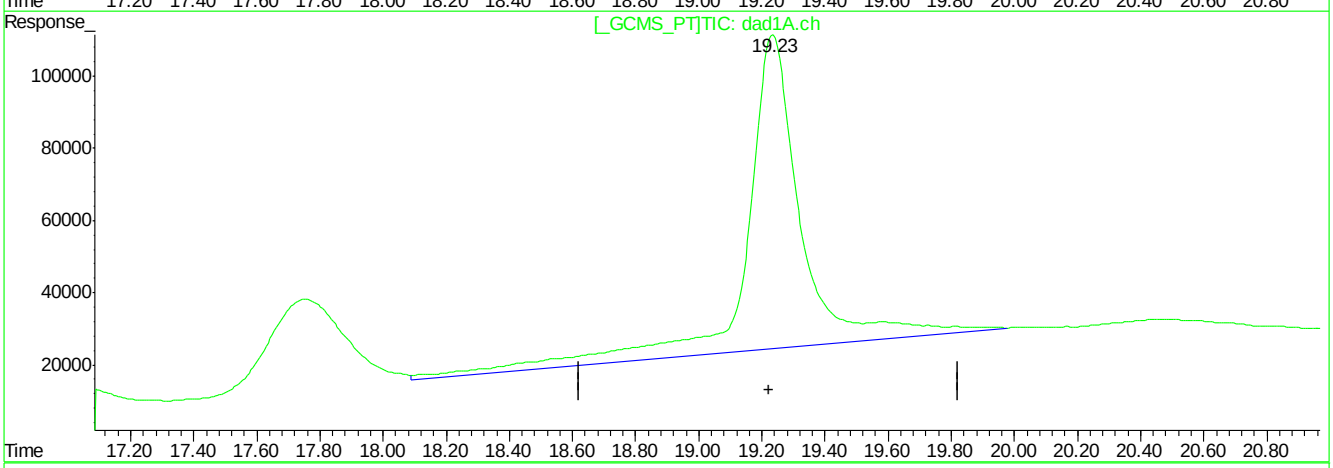
(+) = Expected Retention Time
BB060394.D 8330B_0707PLUS.M Tue Aug 07 14:52:13 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060394.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060394.D\dad1A.ch
Acq On : 06-Aug-2018, 19:55:31 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71202,gbb1757,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:55 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

19.24min 7399.489ppb

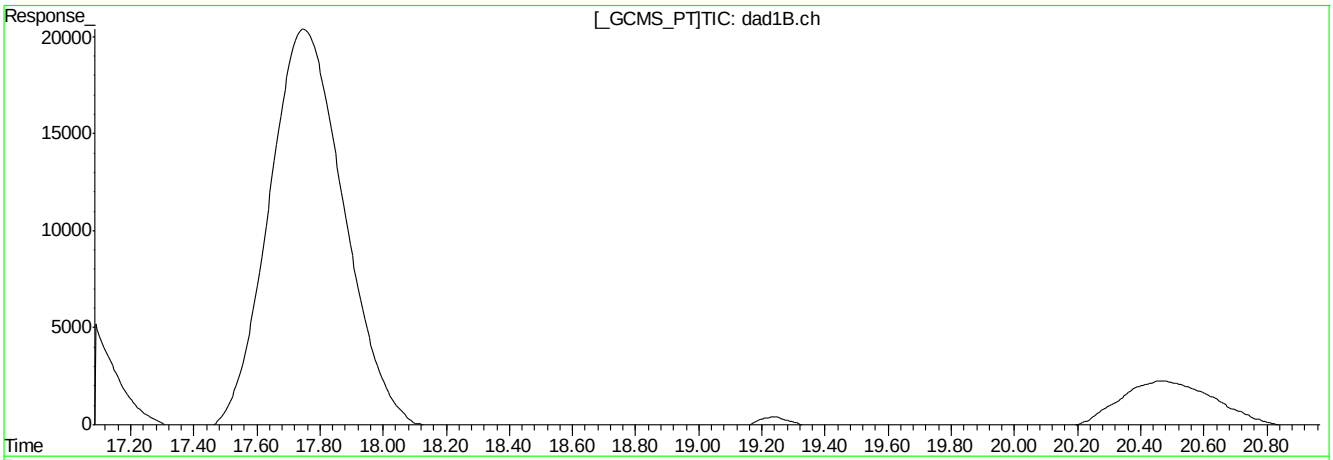
response 10620630

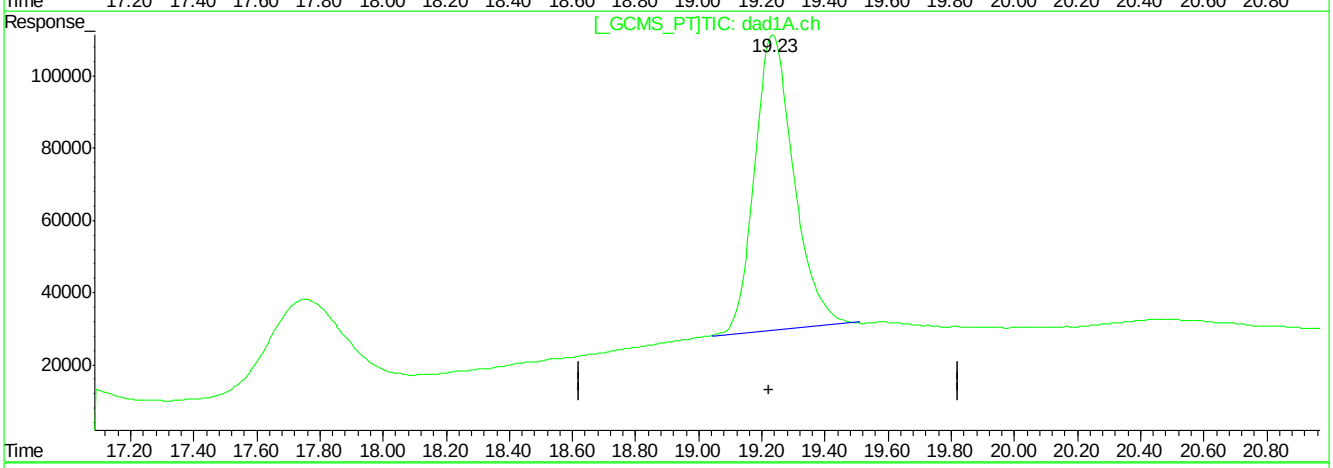
(+) = Expected Retention Time
BB060394.D 8330B_0707PLUS.M Tue Aug 07 14:52:17 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060394.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060394.D\dad1A.ch
Acq On : 06-Aug-2018, 19:55:31 Operator: williamh
Sample : cc1748-1000 Inst : G1315B
Misc : OP71202,gbb1757,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:55 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

19.23min 4914.047ppb m

response 7053227

(+) = Expected Retention Time
BB060394.D 8330B_0707PLUS.M Tue Aug 07 14:52:24 2018

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
08/09/18 15:42

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060400.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060400.D\dad1A.ch
Acq On : 06-Aug-2018, 22:55:16 Operator: williamh
Sample : ecc1748-1000 Inst : G1315B
Misc : OP71202,gbb1757,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 07 09:55:58 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Initial Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
15) S	3,4-Dinitrotolue	11.89	11.89	2320794	3979712	897.249	942.944
	Spiked Amount 500.000	Range 70 - 136		Recovery =		179.45%#	188.59%#
	Target Compounds						
1)	TNX	1.44	1.44	4869907	7485121	958.012	949.571
2)	HMX	1.56	1.56	1809851	4944225	939.118	1016.242
3)	DNX	1.85	1.85	2488380	3945682	952.422	869.471
4)	MNX	2.48	2.48	2591629	4057805	899.031	941.606
5)	RDX	3.13	3.13	1924558	3126050	933.336	916.255
6)	1,3,5-Trinitrobe	4.96	4.96	4069109	8026768	948.674	962.109
7)	1,3-Dinitrobenze	6.26	6.26	5287205	3830508	915.937	993.019
8)	3,5-Dinitroanili	6.58	6.58	4600931	7695646	985.631	976.097
9)	Nitrobenzene	7.93	7.93	3391912	3248073	911.198	996.337
10)	Nitroglycerin	0.00	9.47	0	6045102	N.D. d	4634.077
11)	Tetryl	9.91	9.90	2165044	3509130	776.777	878.114
12)	2,4,6-Trinitroto	10.37	10.38	3284687	3973507	956.598	982.660
13)	2-Amino-4,6-Dini	10.79	10.79	3484558	5048107	896.085	993.342
14)	4-Amino-2,6-Dini	11.26	11.26	2710410	5244534	1016.058	1036.690
16)	2,4-Dinitrotolue	12.55	12.55	4844943	2972278	887.062	975.825
17)	2,6-Dinitrotolue	12.94	12.96	2982228	3871517	960.012	991.226
18)	o-Nitrotoluene	16.21	16.20	2345997	3074397	986.963	953.422m
19)	p-Nitrotoluene	16.84	16.85	3734658	2742230	950.564	783.543
20)	m-Nitrotoluene	17.74	17.75	3572950	4083547	1008.953	1130.329
21)	PETN	0.00	19.22	0	7201091	N.D. d	5017.065m

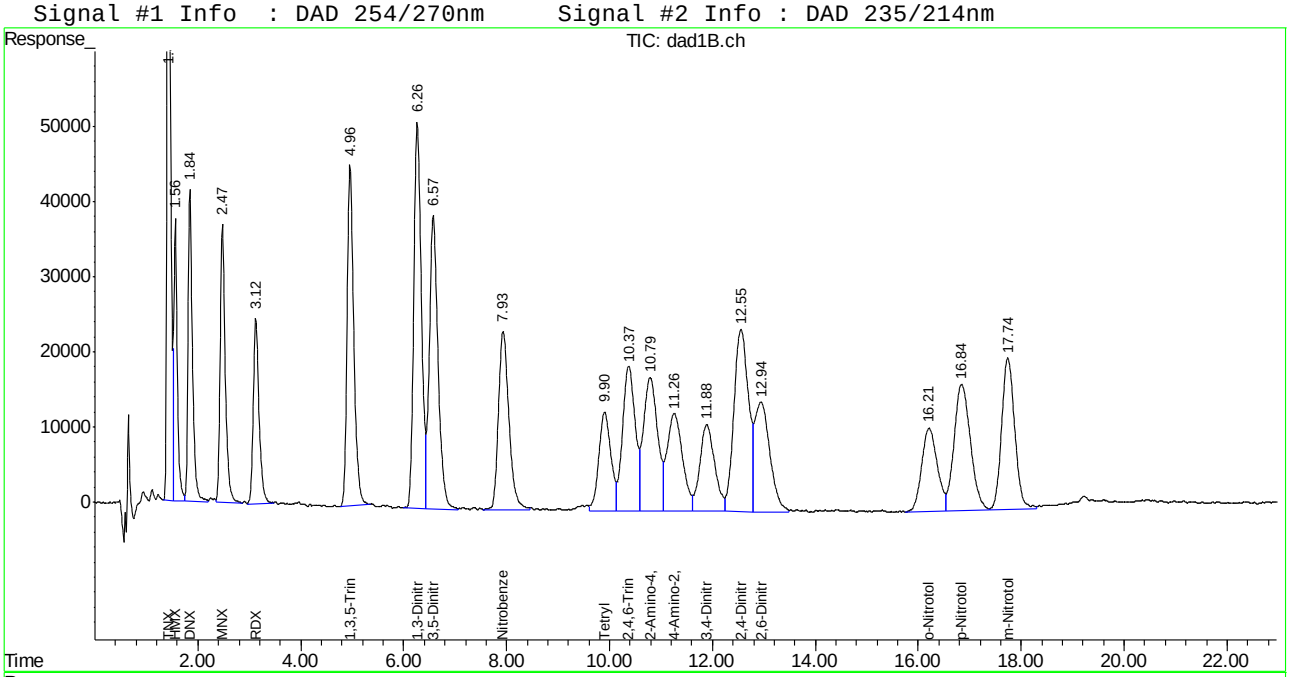
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
BB060400.D 8330B_0707PLUS.M Tue Aug 07 14:43:01 2018 Page 1

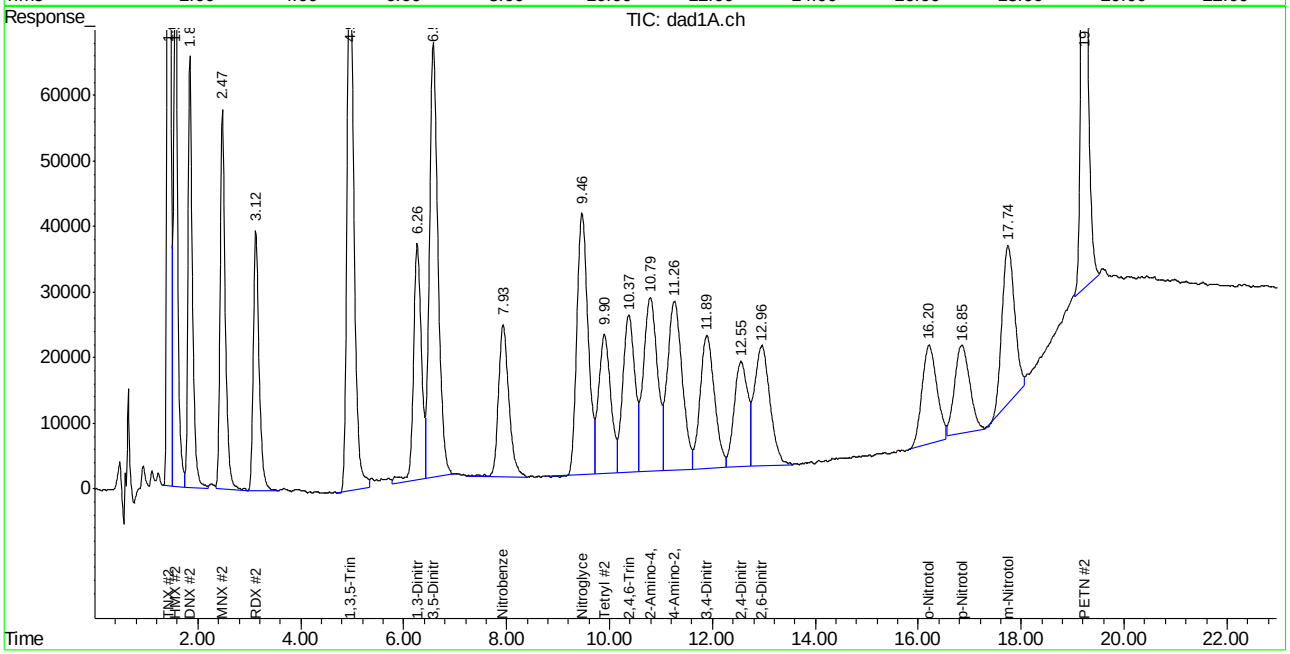
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060400.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060400.D\dad1A.ch
Acq On : 06-Aug-2018, 22:55:16 Operator: williamh
Sample : ecc1748-1000 Inst : G1315B
Misc : OP71202,gbb1757,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 13:44 2018 Quant Results File: 8330B_0707PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration
DataAcq Meth : 8330B.M

Volume Inj. : 100ul
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





Manual Integration Approval Summary

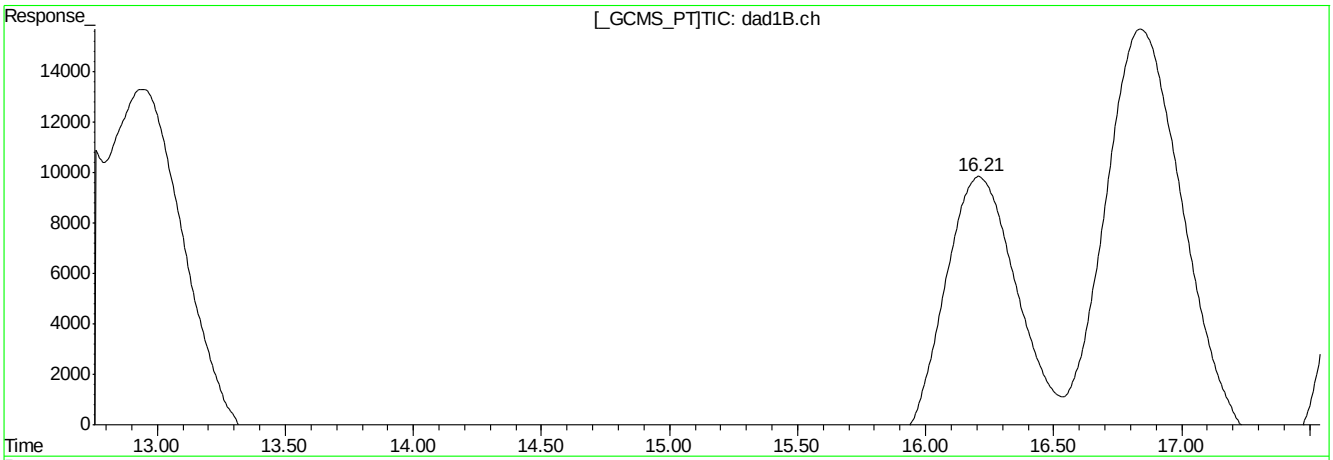
Sample Number:	GBB1757-ECC1748	**Method:**	SW846 8330A
Lab FileID:	BB060400.D	**Analyst approved:**	08/07/18 14:53 William Hustedde
Injection Time:	08/06/18 22:55	**Supervisor approved:**	08/09/18 15:42 Mike Eger

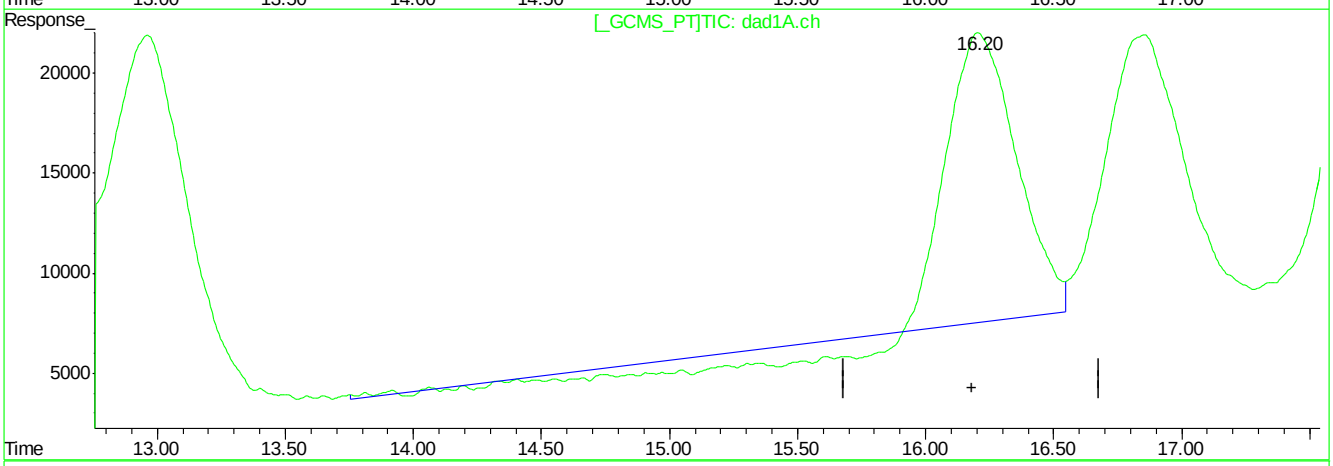
Parameter	CAS	Sig#	R.T. (min.)	Reason
o-Nitrotoluene	88-72-2	2	16.20	Poor instrument integration
PETN	78-11-5	2	19.22	Poor instrument integration

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060400.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060400.D\dad1A.ch
Acq On : 06-Aug-2018, 22:55:16 Operator: williamh
Sample : ecc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:55 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

16.21min 986.963ppb

response 2345997

(18) o-Nitrotoluene #2

16.21min 678.409ppb

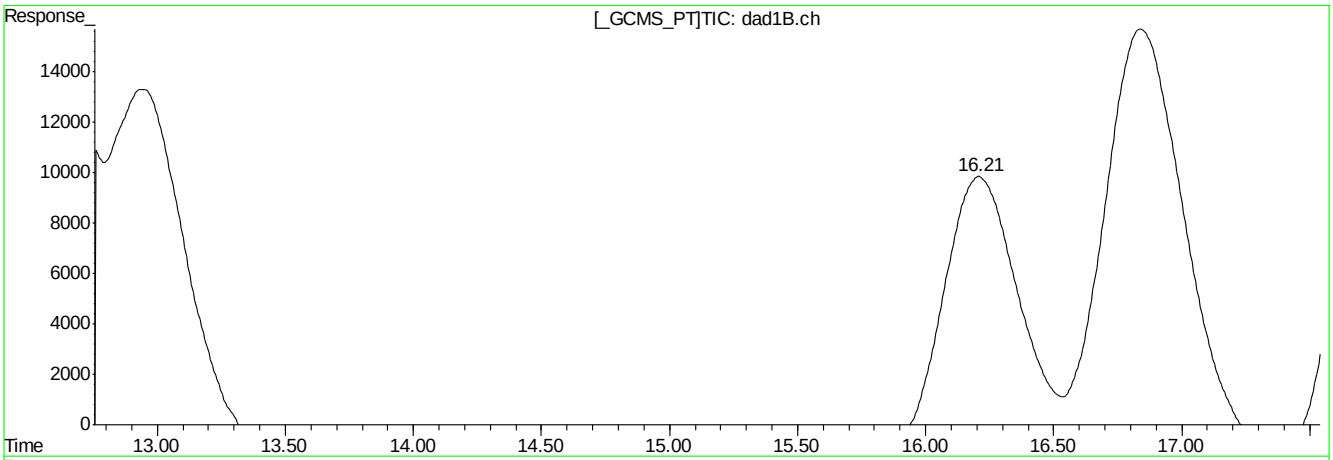
response 2187594

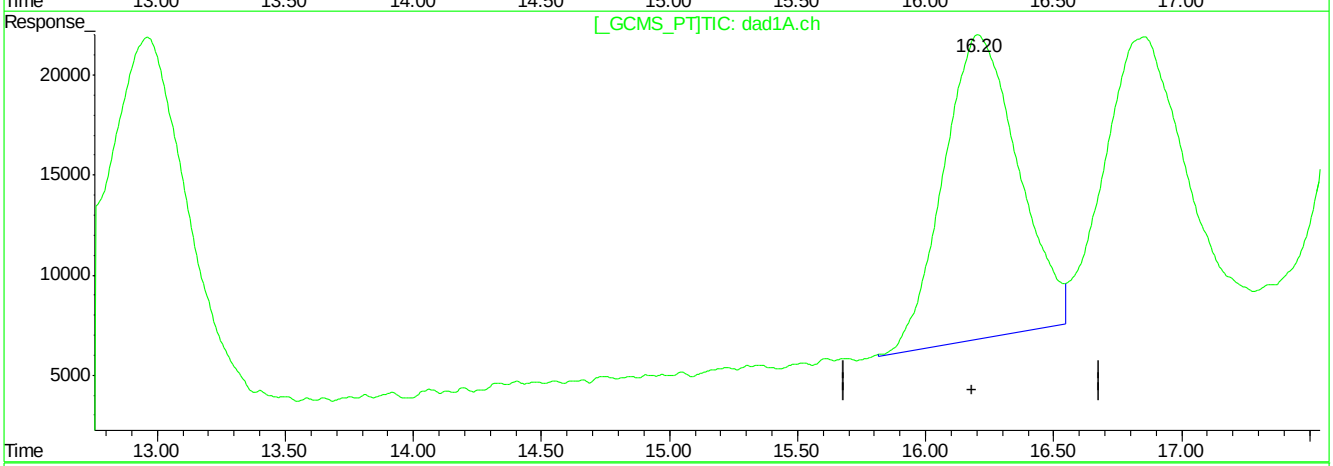
(+) = Expected Retention Time
BB060400.D 8330B_0707PLUS.M Tue Aug 07 13:44:03 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060400.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060400.D\dad1A.ch
Acq On : 06-Aug-2018, 22:55:16 Operator: williamh
Sample : ecc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:55 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(18) o-Nitrotoluene

16.21min 986.963ppb

response 2345997

(18) o-Nitrotoluene #2

16.20min 953.422ppb m

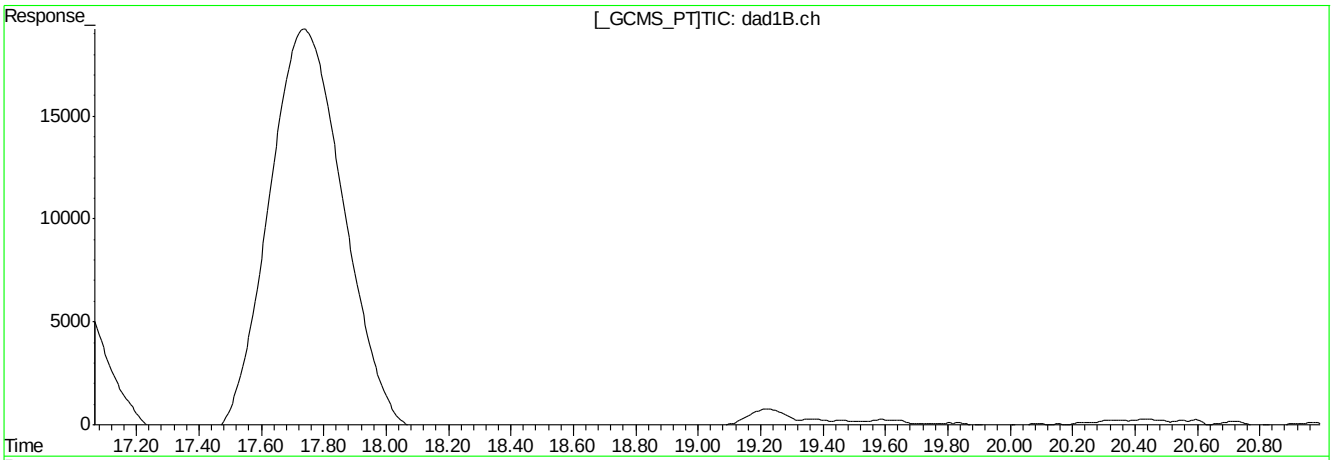
response 3074397

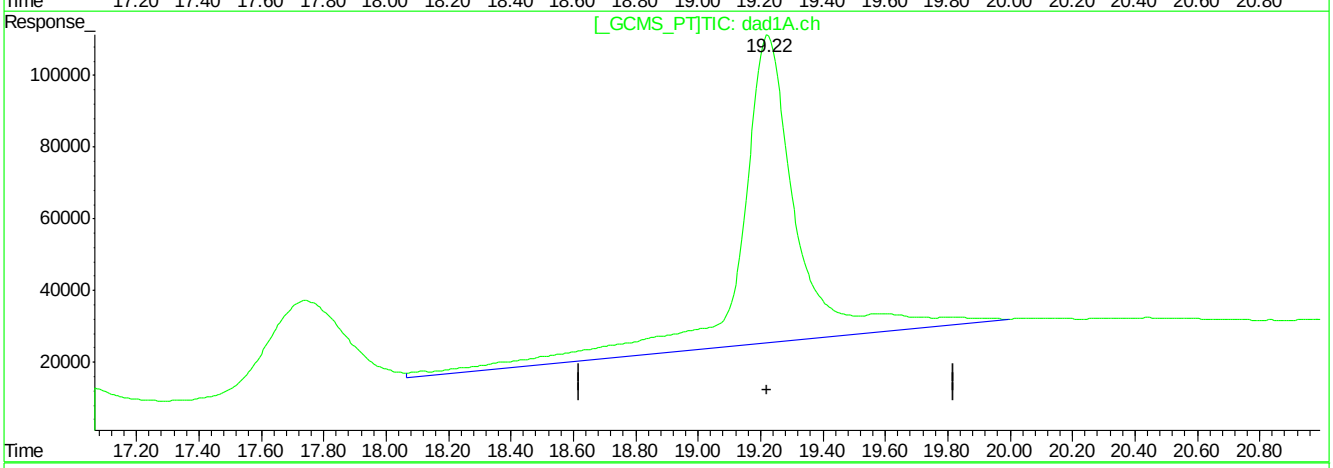
(+) = Expected Retention Time
BB060400.D 8330B_0707PLUS.M Tue Aug 07 13:44:14 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060400.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060400.D\dad1A.ch
Acq On : 06-Aug-2018, 22:55:16 Operator: williamh
Sample : ecc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:55 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

19.23min 7644.206ppb

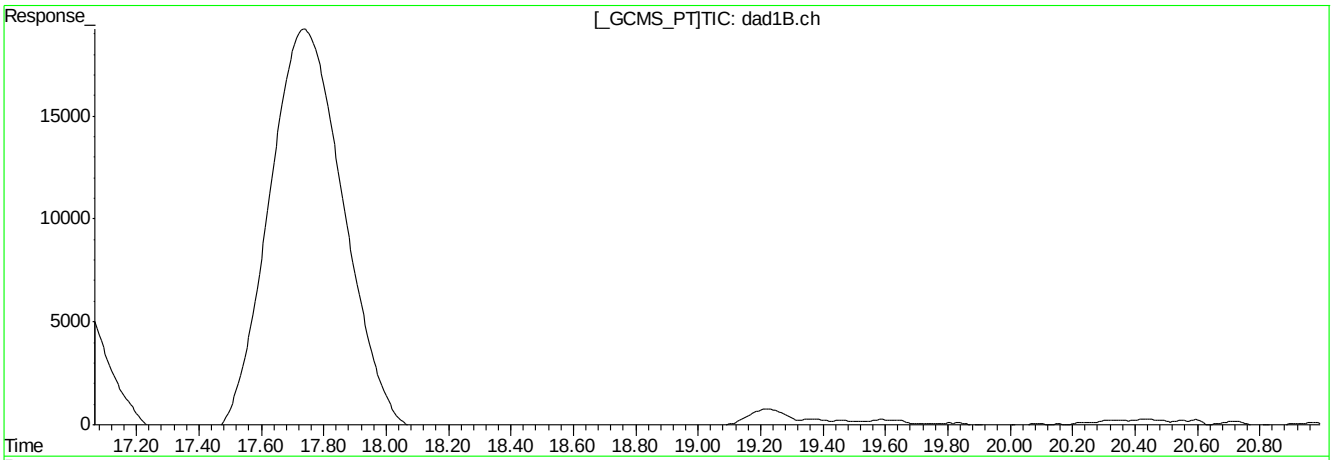
response 10971877

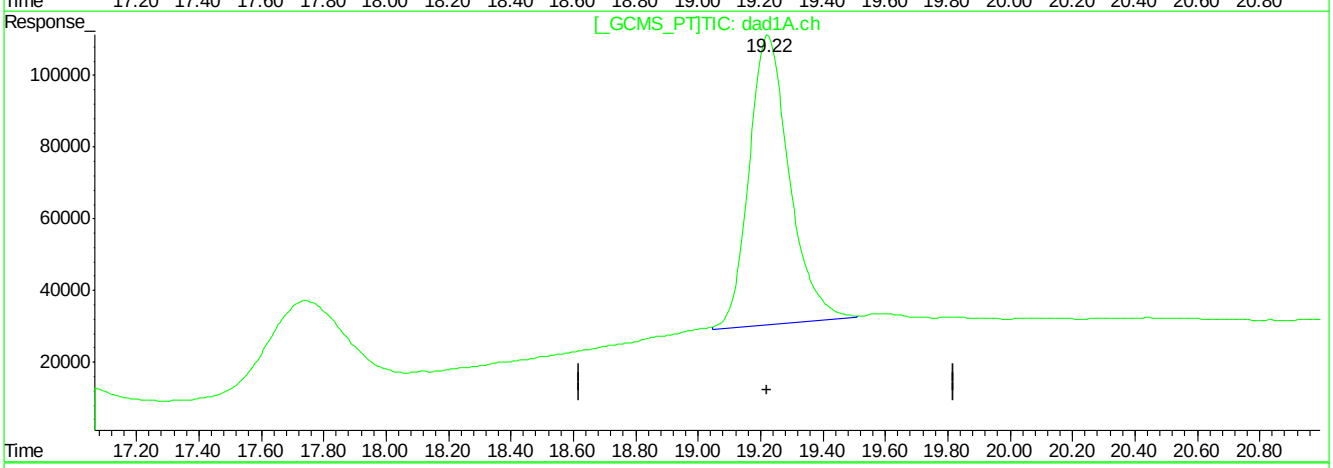
(+) = Expected Retention Time
BB060400.D 8330B_0707PLUS.M Tue Aug 07 13:44:22 2018

Quantitation Report (Qedit)

Signal #1 : C:\HPCHEM\1\DATA\GBB1757\BB060400.D\dad1B.ch Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\GBB1757\BB060400.D\dad1A.ch
Acq On : 06-Aug-2018, 22:55:16 Operator: williamh
Sample : ecc1748-1000 Inst : G1315B
Misc : Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Aug 7 9:55 2018 Quant Results File: 8330B_0707PLUS.RES

Method : D:\MSDCHEM\1\METHODS\8330B_0707PLUS.M (Chemstation Integrator)
Title : Explosives by 8330A,8330B,8332
Last Update : Mon Aug 06 15:04:42 2018
Response via : Multiple Level Calibration





QEdit

(21) PETN

0.00min 0.000ppb d

response 0

(21) PETN #2

19.22min 5017.065ppb m

response 7201091

(+) = Expected Retention Time
BB060400.D 8330B_0707PLUS.M Tue Aug 07 13:44:27 2018

SGS ACCUTEST-ORLANDO

DATE:	7/6/18
COLUMN TYPE:	Extend C18
AMOUNT INJECTED:	100 ul
INSTRUMENT:	HPLC5-BB

HPLC5-BB ANALYSIS LOG

METHODS:	8330A+B
ACQ. METHOD:	8330B
PROC. METHOD:	8330B_0707PLUS.M
CALIB. DATE:	7/6/18
RUN BATCH:	GBB 1748

ANALYST:	WTH
ACETONITRILE LOT #:	
MEOH LOT #:	
HEAD PRESSURE:	292

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
BB 060197	1	ccb	8330		1		✓
BB 98	62	TEST			1		✓
BB 99	1	ccb			1		✓
BB 060200	2	ic1748-20		LC1079	4/400		✓
BB 01	3	ic1748-50			10/400		✓
BB 02	4	ic1748-100			20/400		✓
BB 03	5	ic1748-200			40/400		✓
BB 04	6	ic1748-500			100/400		✓
BB 05	7	icc1748-1000			200/400		✓
BB 06	8	ic1748-2000			400/400		✓
BB 07	9	icv1748-1000 std		E6231, E6248 LC1058, LC1491	20+10+25+25/500		Tetryl, TNT, 4A26 3A46 26DNT, mNTA okay in spk ICV
BB 08	10	icv1748-1000 spk		E6264	20/400		HMX, 24DNT okay to std ICV
BB 09	11	op 70738-BS		op 70738	1		✓
BB 10	12	op 70734-MB			1		ND
BB 11	13	FA55464-1			1		RDX -150
BB 12	14	FA55469-2			1		RDX -130
BB 13	15	FA55467-3			1		RDX -114
BB 14	16	op 70734-MS			1		✓
BB 15	17	op 70734-MSD			1		✓
BB 16	7	cc1748-1000		LC1074	200/400		24-DNT ↓ S1, report S2

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Analyst's Signature: _____

SGS ACCUTEST-ORLANDO

DATE:	7/6/18
COLUMN TYPE:	Extend C18
AMOUNT INJECTED:	100 ul
INSTRUMENT: HPLC5-BB	

HPLC5-BB ANALYSIS LOG

METHODS:	8330A+B
ACQ. METHOD:	8330B
PROC. METHOD:	8330B_07072Plus.M
CALIB. DATE:	7/6/18
RUN BATCH:	GBB

ANALYST:	WFL
ACETONITRILE LOT #:	
MEOH LOT #:	
HEAD PRESSURE:	292

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
BB 060217	1	ccb	8330		1		
BB 18	18	op 70744-BS	↓	op 70744	1		✓
BB 19	19	op 70744-MB		↓	1		✓
BB 20	20	FA55475-3			1		ND
BB 21	21	FA55475-7			1		ND
BB 22	22	FA55475-8			1		ND
BB 23	23	FA55518-1			1		ND
BB 24	24	FA55518-12			1		ND
BB 25	25	FA55518-13		✓	1		ND
BB 26	7	ecc1748-1000	↓	LC1074	200/400		Tetryl ↓ S1
BB							
BB							
BB							
BB							
BB						WFL 7/9/18	
BB							
BB							
BB							
BB							
BB							

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Analyst's Signature: _____

SGS ACCUTEST-ORLANDO

DATE:	8/6/18
COLUMN TYPE:	Extend c18
AMOUNT INJECTED:	100 ul
INSTRUMENT:	HPLC5-BB

HPLC5-BB ANALYSIS LOG

METHODS:	8330 A+B
ACQ. METHOD:	8330B
PROC. METHOD:	8330B_0707PLUS.M
CALIB. DATE:	7/6/18
RUN BATCH:	GBB 1757

ANALYST:	WFH
ACETONITRILE LOT #:	
MEOH LOT #:	
HEAD PRESSURE:	320

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
BB 060382	1	ccb	8330A				
BB 83	2	cc1748-1000	↓	LC1074	250/500		WFH 8/6 Tetryl ↓S1, p-NT↓S2
BB 84	3	op1748-1000 op 71202 BS		op 71202	1		
BB 85	4	op 71202-MB		↓	1		
BB 86	5	FA56228-1			1		
BB 87	6	FA56228-2			1		
BB 88	7	FA56228-3			1		
BB 89	8	FA56228-4			1		
BB 90	9	FA56228-5			1		
BB 91	10	FA56228-6			1		
BB 92	11	FA56228-7			1		
BB 93	12	FA56228-8		—	1		1,3-DNB, NG
BB 94	2	cc1748-1000		LC1074	250/500		Tetryl ↓S1, p-NT↓S2, m-NT↑S2
BB 95	1	ccb					
BB 96	13	FA56228-10		op 71202	1		
BB 97	14	op 71202-MS		↓	1		
BB 98	15	op 71202-MSD			1		
BB 99	16	Spike test		—	1		
BB 060400	2	ccc1748-1000	↓	LC1074	250/500		Tetryl ↓S1, pNT↓2
BB							

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

hplc5_bb_log.xls NF rev. 06/16

Analyst's Signature: [signature]

SGS - ORLANDO

SPE LIQUID SAMPLE PREP REPORT

Date/Time: 08/05/18 0900
Started {mm/dd/yy 24:00}

Date/Time: 08/06/18 0800
Finished {mm/dd/yy 24:00}

Prep Method: 3535A or 537 or 537MOD (circle)

Analytical Method: 8330

Batch#: OP 71202 Ext. By: MB Conc. By: — Vialed By: MB

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Manifold ID	Comments
OP 71202 MB	X	1000	6	N/A	250ul		10ml	N/A	
OP 71202 BS	X	1000				25+25 250 ul			
FA56228-1	6	1030							
-2	6	1040							
-3	5	1040							
-4	5	1040							
-5	5	1030							
-6	5	1030							
-7	6	1040							
-8	5	1050							
-10	2	1040							
FA56228-2 MS	5	520	6	N/A	250ul	25+25 250ul	10ml	N/A	
-2 MSD	5	520	6						
DUP									

MB 08/06/18

Comments:

Surr.1 ID: E6285E Conc: 20 ppm Exp. Date: 12/01/18 Inj. By: MB Ver. By MB
Spk.1 ID: E6264 Conc: 20 ppm Exp. Date: 11/09/18 Inj. By: MB Ver. By MB
Spk.2 ID: 9079B 9078B Conc: 1000 ug/ml 1000 ug/ml Exp. Date: 07/10/19 07/10/19 Inj. By: MB Ver. By MB
Spk.3 ID: — Conc: — Exp. Date: — Inj. By: — Ver. By —

TurboVap Temp (Therm ID): — N-Evap Temp (Therm ID): —
Observed Temp °C: — Corr. Temp °C: — Observed Temp °C: — Corr. Temp °C: —

Methanol Lot # — SPE Lot # S214-0075 pH Paper # 215517
Acetonitrile Lot # 181288 Syringe filter Lot # — Reagent # —
Water Lot# DI H2O Pre-filter Lot# — Reagent # —
Solvent# — Carbon Lot# — Other —

Relinquished By: [signature] Date: 08/06/18
Accepted By: [signature] Date: 8/16/18

ORLD-EXT-0001-3-08-FORM-extwater_spe.xls 032718

9.7.1

9

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H40802W1.CSV Date Analyzed: 08/02/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15087
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:38	MA15087-STD1	1		STD1
11:40	MA15087-STD2	1		STD2
11:41	MA15087-STD3	1		STD3
11:42	MA15087-STD4	1		STD4
11:44	MA15087-STD5	1		STD5
11:46	MA15087-STD6	1		STD6
11:47	MA15087-HSTD1	1		
11:49	MA15087-ICV1	1		
11:51	MA15087-ICB1	1		
11:53	MA15087-CRI1	1		
11:54	MA15087-CCV1	1		
11:55	MA15087-CCB1	1		
11:57	MP34103-MB1	1		
11:58	MP34103-B1	1		
12:00	FA56103-26F	1		(sample used for QC only; not part of login FA56228)
12:01	MP34103-D1	1		
12:03	MP34103-SD1	5		
12:04	MP34103-S1	1		
12:05	MP34103-S2	1		
12:07	ZZZZZZ	1		
12:09	ZZZZZZ	1		
12:10	ZZZZZZ	1		
12:11	MA15087-CCV2	1		
12:13	MA15087-CCB2	1		
12:14	ZZZZZZ	1		
12:16	ZZZZZZ	1		
12:17	ZZZZZZ	1		
12:18	ZZZZZZ	1		
12:20	ZZZZZZ	1		
12:21	ZZZZZZ	1		
12:23	ZZZZZZ	1		
12:24	ZZZZZZ	1		
12:25	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H40802W1.CSV Date Analyzed: 08/02/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15087
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:27	ZZZZZZ	1		
12:28	MA15087-CCV3	1		
12:29	MA15087-CCB3	1		
12:31	FA56228-1	1		
12:32	FA56228-2	1		
12:34	FA56228-3	1		
---------->	Last reportable sample/prep for job FA56228			
12:35	ZZZZZZ	1		
12:36	ZZZZZZ	1		
12:38	ZZZZZZ	1		
12:39	MP34104-MB1	1		
12:40	MP34104-B1	1		
12:42	FA56129-1L	1		(sample used for QC only; not part of login FA56228)
12:43	MP34104-D1	1		
12:45	MA15087-CCV4	1		
12:46	MA15087-CCB4	1		
12:48	MP34104-SD1	5		
12:49	MP34104-S1	1		
12:50	MP34104-S2	1		
12:52	ZZZZZZ	1		
12:53	ZZZZZZ	1		
12:55	ZZZZZZ	1		
12:56	ZZZZZZ	1		
12:57	ZZZZZZ	1		
12:59	ZZZZZZ	1		
13:00	ZZZZZZ	1		
13:01	MA15087-CCV5	1		
13:03	MA15087-CCB5	1		
13:04	ZZZZZZ	1		
13:06	ZZZZZZ	1		
13:07	ZZZZZZ	1		
13:08	ZZZZZZ	1		
13:10	ZZZZZZ	1		
13:11	MP34104-D2	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H40802W1.CSV Date Analyzed: 08/02/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15087
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:12	MP34104-MB2	1		
13:14	MP34104-B2	1		
13:15	MP34104-MB3	1		
13:17	MP34104-B3	1		
13:18	MA15087-CCV6	1		
13:20	MA15087-CCB6	1		
13:21	MA15087-CRI2	1		
13:23	MA15087-CCV7	1		
13:24	MA15087-CCB7	1		

----------> Last reportable CCB for job FA56228
Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H40802W1.CSV Date Analyzed: 08/02/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15087
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg	
11:47	MA15087-HSTD1	1	X	
11:49	MA15087-ICV1	1	X	
11:51	MA15087-ICB1	1	X	
11:53	MA15087-CRI1	1	X	
11:54	MA15087-CCV1	1	X	
11:55	MA15087-CCB1	1	X	
11:57	MP34103-MB1	1	X	
11:58	MP34103-B1	1	X	
12:00	FA56103-26F	1	X	(a)
12:01	MP34103-D1	1	X	
12:03	MP34103-SD1	5	X	
12:04	MP34103-S1	1	X	
12:05	MP34103-S2	1	X	
12:07	ZZZZZZ	1		
12:09	ZZZZZZ	1		
12:10	ZZZZZZ	1		
12:11	MA15087-CCV2	1	X	
12:13	MA15087-CCB2	1	X	
12:14	ZZZZZZ	1		
12:16	ZZZZZZ	1		
12:17	ZZZZZZ	1		
12:18	ZZZZZZ	1		
12:20	ZZZZZZ	1		
12:21	ZZZZZZ	1		
12:23	ZZZZZZ	1		
12:24	ZZZZZZ	1		
12:25	ZZZZZZ	1		
12:27	ZZZZZZ	1		
12:28	MA15087-CCV3	1	X	
12:29	MA15087-CCB3	1	X	
12:31	FA56228-1	1	X	
12:32	FA56228-2	1	X	
12:34	FA56228-3	1	X	
		Element:	Hg	

REPORTED ELEMENTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H40802W1.CSV Date Analyzed: 08/02/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15087
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg	
12:35	ZZZZZZ	1		
12:36	ZZZZZZ	1		
12:38	ZZZZZZ	1		
12:39	MP34104-MB1	1	X	
12:40	MP34104-B1	1	X	
12:42	FA56129-1L	1	X	(a)
12:43	MP34104-D1	1	X	
12:45	MA15087-CCV4	1	X	
12:46	MA15087-CCB4	1	X	
12:48	MP34104-SD1	5	X	
12:49	MP34104-S1	1	X	
12:50	MP34104-S2	1	X	
12:52	ZZZZZZ	1		
12:53	ZZZZZZ	1		
12:55	ZZZZZZ	1		
12:56	ZZZZZZ	1		
12:57	ZZZZZZ	1		
12:59	ZZZZZZ	1		
13:00	ZZZZZZ	1		
13:01	MA15087-CCV5	1	X	
13:03	MA15087-CCB5	1	X	
13:04	ZZZZZZ	1		
13:06	ZZZZZZ	1		
13:07	ZZZZZZ	1		
13:08	ZZZZZZ	1		
13:10	ZZZZZZ	1		
13:11	MP34104-D2	1	X	
13:12	MP34104-MB2	1	X	
13:14	MP34104-B2	1	X	
13:15	MP34104-MB3	1	X	
13:17	MP34104-B3	1	X	
13:18	MA15087-CCV6	1	X	
13:20	MA15087-CCB6	1	X	
		Element:	Hg	

REPORTED ELEMENTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H40802W1.CSV Date Analyzed: 08/02/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15087
Parameters: Hg

Time	Sample Description	Element: Dilution	H g
13:21	MA15087-CRI2	1	X
13:23	MA15087-CCV7	1	X
13:24	MA15087-CCB7	1	X

(a) Sample used for QC only; not part of login FA56228.

Element: H
g

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H40802W1.CSV Date Analyzed: 08/02/18 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA15087 Units: ug/l

Time: / Sample ID:			11:51 ICB1		11:55 CCB1		12:13 CCB2		12:29 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	-0.0226	<0.50	-0.0180	<0.50	-0.0242	<0.50	-0.0132	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H40802W1.CSV Date Analyzed: 08/02/18 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA15087 Units: ug/l

Time: / Sample ID:			12:46 CCB4		13:03 CCB5		13:20 CCB6		13:24 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	-0.0175	<0.50	-0.0176	<0.50	-0.0157	<0.50	-0.0217	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H40802W1.CSV Date Analyzed: 08/02/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA15087 Units: ug/l

Time:		11:49			11:54			12:11	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.01	100.3	3	3.11	103.7	3	3.03	101.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H40802W1.CSV Date Analyzed: 08/02/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA15087 Units: ug/l

Time:		12:28			12:45			13:01	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.04	101.3	3.0	3.00	100.0	3	3.03	101.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H40802W1.CSV Date Analyzed: 08/02/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA15087 Units: ug/l

Time:		13:18			13:23	
Sample ID:	CCV	CCV6		CCV	CCV7	
Metal	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.97	99.0	3	2.96	98.7

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H40802W1.CSV Date Analyzed: 08/02/18 Methods: SW846 7470A
QC Limits: 95 to 105 % Recovery Run ID: MA15087 Units: ug/l

Time:		11:47	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6	5.87	97.8

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H40802W1.CSV Date Analyzed: 08/02/18 Methods: SW846 7470A
QC Limits: 80 to 120 % Recovery Run ID: MA15087 Units: ug/l

Time:			11:53		13:21	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.171	85.5	0.157	78.5*(a)

(*) Outside of QC limits
(anr) Analyte not requested
(a) Possible instrument baseline drift.

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50806W1.CSV Date Analyzed: 08/06/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15095
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:40	MA15095-STD1	1		STD1
12:41	MA15095-STD2	1		STD2
12:42	MA15095-STD3	1		STD3
12:44	MA15095-STD4	1		STD4
12:45	MA15095-STD5	1		STD5
12:47	MA15095-STD6	1		STD6
12:49	MA15095-HSTD1	1		
12:51	MA15095-ICV1	1		
12:53	MA15095-ICB1	1		
12:58	MA15095-CRI1	1		
13:00	MA15095-CCV1	1		
13:01	MA15095-CCB1	1		
13:03	MP34123-MB1	1		
13:04	MP34123-B1	1		
13:06	FA56168-8	1		(sample used for QC only; not part of login FA56228)
13:07	MP34123-D1	1		
13:09	MP34123-SD1	5		
13:10	MP34123-S1	1		
13:11	MP34123-S2	1		
13:13	ZZZZZZ	1		
13:15	ZZZZZZ	1		
13:16	ZZZZZZ	1		
13:18	MA15095-CCV2	1		
13:19	MA15095-CCB2	1		
13:21	ZZZZZZ	1		
13:22	ZZZZZZ	1		
13:24	ZZZZZZ	1		
13:25	ZZZZZZ	1		
13:26	ZZZZZZ	1		
13:28	ZZZZZZ	1		
13:29	ZZZZZZ	1		
13:30	FA56228-4	1		
13:31	FA56228-5	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50806W1.CSV Date Analyzed: 08/06/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15095
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:33	FA56228-6	1		
13:34	MA15095-CCV3	1		
13:35	MA15095-CCB3	1		
13:37	FA56228-7	1		
13:39	FA56228-8	1		
---------->	Last reportable sample/prep for job FA56228			
13:40	ZZZZZZ	1		
13:41	ZZZZZZ	1		
13:43	ZZZZZZ	1		
13:45	MP34124-MB1	1		
13:46	MP34124-B1	1		
13:48	FA56296-1L	1		(sample used for QC only; not part of login FA56228)
13:50	MP34124-D1	1		
13:51	MA15095-CCV4	1		
13:52	MA15095-CCB4	1		
13:54	MP34124-SD1	5		
13:55	MP34124-S1	1		
13:57	MP34124-S2	1		
13:59	FA56224-1L	1		(sample used for QC only; not part of login FA56228)
14:00	ZZZZZZ	1		
14:02	ZZZZZZ	1		
14:03	ZZZZZZ	1		
14:04	ZZZZZZ	1		
14:06	ZZZZZZ	1		
14:07	ZZZZZZ	1		
14:08	MA15095-CCV5	1		
14:10	MA15095-CCB5	1		
14:12	ZZZZZZ	1		
14:13	ZZZZZZ	1		
14:14	ZZZZZZ	1		
14:15	ZZZZZZ	1		
14:17	ZZZZZZ	1		
14:18	ZZZZZZ	1		
14:19	MP34124-D2	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50806W1.CSV Date Analyzed: 08/06/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15095
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:21	MP34124-MB2	1		
14:22	MP34124-B2	1		
14:23	MP34124-MB3	1		
14:25	MA15095-CCV6	1		
14:26	MA15095-CCB6	1		
14:28	MP34124-B3	1		
14:30	MP34125-MB1	1		
14:32	MP34125-B1	1		
14:33	JC70890-11A	1		(sample used for QC only; not part of login FA56228)
14:35	MP34125-D1	1		
14:36	MP34125-SD1	5		
14:37	MP34125-S1	1		
14:39	MP34125-S2	1		
14:40	ZZZZZZ	1		
14:42	ZZZZZZ	1		
14:44	MA15095-CCV7	1		
14:45	MA15095-CCB7	1		
14:47	ZZZZZZ	1		
14:48	ZZZZZZ	1		
14:49	ZZZZZZ	1		
14:51	ZZZZZZ	1		
14:52	ZZZZZZ	1		
14:53	ZZZZZZ	1		
14:55	ZZZZZZ	1		
14:56	ZZZZZZ	1		
14:57	ZZZZZZ	1		
14:59	ZZZZZZ	1		
15:00	MA15095-CCV8	1		
15:01	MA15095-CCB8	1		
15:03	ZZZZZZ	1		
15:04	ZZZZZZ	1		
15:06	ZZZZZZ	1		
15:07	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50806W1.CSV Date Analyzed: 08/06/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15095
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:08	ZZZZZZ	1		
15:10	MP34125-MB2	1		
15:11	MP34125-B2	1		
15:12	MP34125-MB3	1		
15:14	MP34125-B3	1		
15:17	MA15095-CCV9	1		
15:19	MA15095-CCB9	1		
15:23	MA15095-CRI2	1		
15:24	MA15095-CCV10	1		
15:26	MA15095-CCB10	1		

----------> Last reportable CCB for job FA56228
Refer to raw data for calibration curve and standards.

10.2 10

REPORTED ELEMENTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50806W1.CSV Date Analyzed: 08/06/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15095
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg	
12:49	MA15095-HSTD1	1	X	
12:51	MA15095-ICV1	1	X	
12:53	MA15095-ICB1	1	X	
12:58	MA15095-CRI1	1	X	
13:00	MA15095-CCV1	1	X	
13:01	MA15095-CCB1	1	X	
13:03	MP34123-MB1	1	X	
13:04	MP34123-B1	1	X	
13:06	FA56168-8	1	X	(a)
13:07	MP34123-D1	1	X	
13:09	MP34123-SD1	5	X	
13:10	MP34123-S1	1	X	
13:11	MP34123-S2	1	X	
13:13	ZZZZZZ	1		
13:15	ZZZZZZ	1		
13:16	ZZZZZZ	1		
13:18	MA15095-CCV2	1	X	
13:19	MA15095-CCB2	1	X	
13:21	ZZZZZZ	1		
13:22	ZZZZZZ	1		
13:24	ZZZZZZ	1		
13:25	ZZZZZZ	1		
13:26	ZZZZZZ	1		
13:28	ZZZZZZ	1		
13:29	ZZZZZZ	1		
13:30	FA56228-4	1	X	
13:31	FA56228-5	1	X	
13:33	FA56228-6	1	X	
13:34	MA15095-CCV3	1	X	
13:35	MA15095-CCB3	1	X	
13:37	FA56228-7	1	X	
13:39	FA56228-8	1	X	
13:40	ZZZZZZ	1		
		Element:	Hg	

REPORTED ELEMENTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50806W1.CSV Date Analyzed: 08/06/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15095
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg	
13:41	ZZZZZZ	1		
13:43	ZZZZZZ	1		
13:45	MP34124-MB1	1	X	
13:46	MP34124-B1	1	X	
13:48	FA56296-1L	1	X	(a)
13:50	MP34124-D1	1	X	
13:51	MA15095-CCV4	1	X	
13:52	MA15095-CCB4	1	X	
13:54	MP34124-SD1	5	X	
13:55	MP34124-S1	1	X	
13:57	MP34124-S2	1	X	
13:59	FA56224-1L	1	X	(a)
14:00	ZZZZZZ	1		
14:02	ZZZZZZ	1		
14:03	ZZZZZZ	1		
14:04	ZZZZZZ	1		
14:06	ZZZZZZ	1		
14:07	ZZZZZZ	1		
14:08	MA15095-CCV5	1	X	
14:10	MA15095-CCB5	1	X	
14:12	ZZZZZZ	1		
14:13	ZZZZZZ	1		
14:14	ZZZZZZ	1		
14:15	ZZZZZZ	1		
14:17	ZZZZZZ	1		
14:18	ZZZZZZ	1		
14:19	MP34124-D2	1	X	
14:21	MP34124-MB2	1	X	
14:22	MP34124-B2	1	X	
14:23	MP34124-MB3	1	X	
14:25	MA15095-CCV6	1	X	
14:26	MA15095-CCB6	1	X	
14:28	MP34124-B3	1	X	
		Element:	Hg	

REPORTED ELEMENTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50806W1.CSV Date Analyzed: 08/06/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15095
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg	
14:30	MP34125-MB1	1	X	
14:32	MP34125-B1	1	X	
14:33	JC70890-11A	1	X	(a)
14:35	MP34125-D1	1	X	
14:36	MP34125-SD1	5	X	
14:37	MP34125-S1	1	X	
14:39	MP34125-S2	1	X	
14:40	ZZZZZZ	1		
14:42	ZZZZZZ	1		
14:44	MA15095-CCV7	1	X	
14:45	MA15095-CCB7	1	X	
14:47	ZZZZZZ	1		
14:48	ZZZZZZ	1		
14:49	ZZZZZZ	1		
14:51	ZZZZZZ	1		
14:52	ZZZZZZ	1		
14:53	ZZZZZZ	1		
14:55	ZZZZZZ	1		
14:56	ZZZZZZ	1		
14:57	ZZZZZZ	1		
14:59	ZZZZZZ	1		
15:00	MA15095-CCV8	1	X	
15:01	MA15095-CCB8	1	X	
15:03	ZZZZZZ	1		
15:04	ZZZZZZ	1		
15:06	ZZZZZZ	1		
15:07	ZZZZZZ	1		
15:08	ZZZZZZ	1		
15:10	MP34125-MB2	1	X	
15:11	MP34125-B2	1	X	
15:12	MP34125-MB3	1	X	
15:14	MP34125-B3	1	X	
15:17	MA15095-CCV9	1	X	
		Element:	Hg	

REPORTED ELEMENTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50806W1.CSV Date Analyzed: 08/06/18 Methods: SW846 7470A
Analyst: JC Run ID: MA15095
Parameters: Hg

Time	Sample Description	Dilution	Element: Hg
15:19	MA15095-CCB9	1	X
15:23	MA15095-CRI2	1	X
15:24	MA15095-CCV10	1	X
15:26	MA15095-CCB10	1	X

(a) Sample used for QC only; not part of login FA56228.

Element: Hg

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50806W1.CSV Date Analyzed: 08/06/18 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA15095 Units: ug/l

Time: / Sample ID:			12:53 ICB1		13:01 CCB1		13:19 CCB2		13:35 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	-0.0416	<0.50	-0.0380	<0.50	-0.0317	<0.50	-0.0323	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50806W1.CSV Date Analyzed: 08/06/18 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA15095 Units: ug/l

Time: / Sample ID:			13:52 CCB4		14:10 CCB5		14:26 CCB6		14:45 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	-0.0316	<0.50	-0.0317	<0.50	-0.0269	<0.50	-0.0341	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50806W1.CSV Date Analyzed: 08/06/18 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA15095 Units: ug/l

Time:			15:01		15:19		15:26	
Sample ID:			CCB8		CCB9		CCB10	
Metal	RL	IDL	raw	final	raw	final	raw	final
Mercury	0.50	.03	-0.0309	<0.50	-0.0342	<0.50	-0.0343	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50806W1.CSV Date Analyzed: 08/06/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA15095 Units: ug/l

Time:		12:51			13:00			13:18	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.08	102.7	3	3.09	103.0	3	3.03	101.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50806W1.CSV Date Analyzed: 08/06/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA15095 Units: ug/l

Time:		13:34			13:51			14:08	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.99	99.7	3	3.03	101.0	3	3.05	101.7

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50806W1.CSV Date Analyzed: 08/06/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA15095 Units: ug/l

Time:		14:25			14:44			15:00	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.00	100.0	3	3.01	100.3	3	2.97	99.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50806W1.CSV Date Analyzed: 08/06/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA15095 Units: ug/l

Time:		15:17			15:24	
Sample ID:	CCV	CCV9		CCV	CCV10	
Metal	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.94	98.0	3	2.95	98.3

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50806W1.CSV Date Analyzed: 08/06/18 Methods: SW846 7470A
QC Limits: 95 to 105 % Recovery Run ID: MA15095 Units: ug/l

Time:		12:49	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6	5.98	99.7

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: H50806W1.CSV Date Analyzed: 08/06/18 Methods: SW846 7470A
QC Limits: 80 to 120 % Recovery Run ID: MA15095 Units: ug/l

Time:			12:58		15:23	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.177	88.5	0.163	81.5

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15100
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:16	MA15100-STD1	1		STDA
09:20	MA15100-STD2	1		STDB
09:24	MA15100-STD3	1		STDC
09:28	MA15100-STD4	1		STDD
09:32	MA15100-STD5	1		STDE
09:36	MA15100-STD6	1		STDF
09:40	MA15100-STD7	1		STDG
09:44	MA15100-HSTD1	1		
09:47	MA15100-HSTD2	1		
09:51	MA15100-ICV1	1		
09:55	MA15100-ICB1	1		
09:59	MA15100-CRIA1	1		
10:02	MA15100-ICSA1	1		
10:06	MA15100-ICSAB1	1		
10:10	MA15100-CCV1	1		
10:14	MA15100-CCV2	1		
10:18	MA15100-CCB1	1		
10:22	MA15100-CRIA2	1		
11:00	MA15100-CCV3	1		
11:03	MA15100-CCV4	1		
11:07	MA15100-CCB2	1		
11:11	MP34101-MB1	2		
11:15	MP34101-B1	2		
11:19	FA56168-3	2		(sample used for QC only; not part of login FA56228)
11:22	MP34101-D1	2		
11:26	MP34101-SD1	10		
11:30	MP34101-S1	2		
11:34	MP34101-S2	2		
11:38	MP34101-PS1	2		
11:41	ZZZZZZ	2		
11:45	ZZZZZZ	2		
11:49	MA15100-CCV5	1		
11:53	MA15100-CCV6	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15100
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:56	MA15100-CCB3	1		
12:00	ZZZZZZ	2		
12:04	ZZZZZZ	2		
12:08	ZZZZZZ	2		
12:12	ZZZZZZ	2		
12:15	MP34108-MB1	2		
12:19	MP34108-B1	2		
12:23	FA56168-8	2		(sample used for QC only; not part of login FA56228)
12:31	MP34108-SD1	10		
12:34	MP34108-S1	2		
12:38	MA15100-CCV7	1		
12:42	MA15100-CCV8	1		
12:46	MA15100-CCB4	1		
12:50	MP34108-S2	2		
12:53	MP34108-PS1	2		
12:57	ZZZZZZ	2		
13:01	ZZZZZZ	2		
13:05	ZZZZZZ	2		
13:09	ZZZZZZ	2		
13:12	ZZZZZZ	2		
13:16	ZZZZZZ	2		
13:20	ZZZZZZ	2		
13:24	FA56228-1	2		
13:27	MA15100-CCV9	1		
13:31	MA15100-CCV10	1		
13:35	MA15100-CCB5	1		
14:13	MA15100-CCV11	1		
14:17	MA15100-CCV12	1		
14:20	MA15100-CCB6	1		
14:24	FA56228-2	2		
14:28	FA56228-3	2		
14:32	FA56228-4	2		
14:36	FA56228-5	2		

SGS Instrument Runlog
Inorganics Analyses

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15100
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:39	FA56228-6	2		
14:43	FA56228-7	2		
14:47	FA56228-8	2		
14:51	ZZZZZZ	2		
14:55	MP34108-D1	2		
14:58	ZZZZZZ	5		
15:02	MA15100-CCV13	1		
15:06	MA15100-CCV14	1		
15:10	MA15100-CCB7	1		
15:13	ZZZZZZ	5		
15:17	FA56228-1	20		
15:21	FA56228-2	20		
15:25	FA56228-3	20		
15:29	FA56228-6	20		
---------->	Last reportable sample/prep for job FA56228			
15:32	MA15100-CRIA3	1		
15:36	MA15100-ICSA2	1		
15:40	MA15100-ICSAB2	1		
15:44	MA15100-CCV15	1		
15:48	MA15100-CCV16	1		
15:51	MA15100-CCB8	1		
---------->	Last reportable CCB for job FA56228			

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15100
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn	
09:44	MA15100-HSTD1	1																		X					
09:47	MA15100-HSTD2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
09:51	MA15100-ICV1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
09:55	MA15100-ICB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
09:59	MA15100-CRIA1	1	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X		
10:02	MA15100-ICSA1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:06	MA15100-ICSAB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:10	MA15100-CCV1	1																		X					
10:14	MA15100-CCV2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
10:18	MA15100-CCB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10:22	MA15100-CRIA2	1										X												X	
11:00	MA15100-CCV3	1																		X					
11:03	MA15100-CCV4	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
11:07	MA15100-CCB2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11:11	MP34101-MB1	2	X		X		X						X	X		X									
11:15	MP34101-B1	2	X		X		X						X	X		X									
11:19	FA56168-3	2	X		X		X						X	X		X									(a)
11:22	MP34101-D1	2	X		X		X						X	X		X									
11:26	MP34101-SD1	10	X		X		X						X	X		X									
11:30	MP34101-S1	2	X		X		X						X	X		X									
11:34	MP34101-S2	2	X		X		X						X	X		X									
11:38	MP34101-PS1	2																							
11:41	ZZZZZZ	2																							
11:45	ZZZZZZ	2																							
11:49	MA15100-CCV5	1																		X					
11:53	MA15100-CCV6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
11:56	MA15100-CCB3	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12:00	ZZZZZZ	2																							
12:04	ZZZZZZ	2																							
12:08	ZZZZZZ	2																							
12:12	ZZZZZZ	2																							
12:15	MP34108-MB1	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12:19	MP34108-B1	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		Element:	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn	

REPORTED ELEMENTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15100
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element: Dilution	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn	
12:23	FA56168-8	2	X		X			X					X	X		X									(a)
12:31	MP34108-SD1	10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
12:34	MP34108-S1	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
12:38	MA15100-CCV7	1																			X				
12:42	MA15100-CCV8	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	
12:46	MA15100-CCB4	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
12:50	MP34108-S2	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
12:53	MP34108-PS1	2																							
12:57	ZZZZZZ	2																							
13:01	ZZZZZZ	2																							
13:05	ZZZZZZ	2																							
13:09	ZZZZZZ	2																							
13:12	ZZZZZZ	2																							
13:16	ZZZZZZ	2																							
13:20	ZZZZZZ	2																							
13:24	FA56228-1	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
13:27	MA15100-CCV9	1																			X				
13:31	MA15100-CCV10	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	
13:35	MA15100-CCB5	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
14:13	MA15100-CCV11	1																			X				
14:17	MA15100-CCV12	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	
14:20	MA15100-CCB6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
14:24	FA56228-2	2	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
14:28	FA56228-3	2	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
14:32	FA56228-4	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
14:36	FA56228-5	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
14:39	FA56228-6	2	X	X	X		X	X		X	X	X	X	X			X	X	X	X	X		X	X	X
14:43	FA56228-7	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
14:47	FA56228-8	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
14:51	ZZZZZZ	2																							
14:55	MP34108-D1	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
14:58	ZZZZZZ	5																							
15:02	MA15100-CCV13	1																			X				
		Element:	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn	

REPORTED ELEMENTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15100
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element: Dilution	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn
15:06	MA15100-CCV14	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
15:10	MA15100-CCB7	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15:13	ZZZZZZ	5																						
15:17	FA56228-1	20																			X			
15:21	FA56228-2	20							X												X			
15:25	FA56228-3	20							X												X			
15:29	FA56228-6	20			X				X						X	X					X			
15:32	MA15100-CRIA3	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15:36	MA15100-ICSA2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15:40	MA15100-ICSAB2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15:44	MA15100-CCV15	1																		X				
15:48	MA15100-CCV16	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15:51	MA15100-CCB8	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

(a) Sample used for QC only; not part of login FA56228.

Element: Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn

INTERNAL STANDARD SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15100
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
09:16	MA15100-STD1	100	100	100	100	100	100	100	100
09:20	MA15100-STD2	102.5	94.8	96	95.3	96	95.7	96.2	95.6
09:24	MA15100-STD3	105.4	100.4	99.2	99	100.1	100	99.8	98.6
09:28	MA15100-STD4	102.8	97.5	97.9	97.4	97.9	99.4	97.6	95.1
09:32	MA15100-STD5	98.8	100.1	98.9	98.4	99.3	101.7	98.4	96
09:36	MA15100-STD6	94.5	97.6	97.6	96.7	96.2	98.8	94.2	89.7
09:40	MA15100-STD7	96	94.4	93.2	93.3	91.6	94.6	87	83.9
09:44	MA15100-HSTD1	98.2	99.5	99.1	98	98.2	101.1	95.1	94.5
09:47	MA15100-HSTD2	96.4	98.4	97.7	97	97.2	100.1	91.2	87.8
09:51	MA15100-ICV1	103.3	99.2	96.9	96.4	96.6	100.2	93.3	90.4
09:55	MA15100-ICB1	98.4	93.9	96	95.2	93.8	97.2	94.6	91.9
09:59	MA15100-CRIA1	104.9	94.4	95.6	95.1	95.1	97.7	95.2	95.6
10:02	MA15100-ICSA1	87.8	103.6	97.7	95.3	93.2	96.6	83.5	83.4
10:06	MA15100-ICSAB1	91.4	105.1	99.3	97.1	96.1	98.7	86.4	85.1
10:10	MA15100-CCV1	96.6	97.6	96.6	97.2	96.9	101.7	96.3	93.7
10:14	MA15100-CCV2	96.2	96.6	96.4	96.4	95.2	100	92.9	89.2
10:18	MA15100-CCB1	96.8	96.3	96.6	97.5	98.3	101.8	97.7	96.7
10:22	MA15100-CRIA2	97.4	96.6	97.3	96.3	97.2	101.8	98.7	95.4
11:00	MA15100-CCV3	89.7	91.8	92.6	92.4	93	101.2	94.6	86.8
11:03	MA15100-CCV4	96.3	89.7	89.3	89.5	89.3	97.3	89.2	84.3
11:07	MA15100-CCB2	97.4	89.9	91.6	90.6	92.3	99.3	94.9	89.1
11:11	MP34101-MB1	90.6	87.2	87.8	87.7	88.4	98	91.6	70.1
11:15	MP34101-B1	91.5	87.8	86.2	86.2	86.3	98.1	87.3	68.7 !
11:19	FA56168-3	90.8	91.3	92.4	91.6	90.6	101	90.4	71.8
11:22	MP34101-D1	98.6	90.5	91.8	91.6	90.2	100.4	89.7	71.1
11:26	MP34101-SD1	99.2	95.9	95.9	95.8	95.7	102.9	97.5	86.3
11:30	MP34101-S1	95.4	87.8	88.4	87.6	86.4	98.5	85.6	68.5 !
11:34	MP34101-S2	92.3	89.7	89	88.9	87.7	99	86.3	68.4 !
11:38	MP34101-PS1	No results reported for the elements associated with this internal standard.							
11:41	ZZZZZZ	96.9	89.6	90.9	90.9	88.4	99.9	89.1	72.2
11:45	ZZZZZZ	93.9	88.4	90.4	90.3	88.6	99	88.4	70.9
11:49	MA15100-CCV5	92.9	91.9	92.7	92.9	91	99.2	92.9	87
11:53	MA15100-CCV6	99.2	97.8	95.7	95.6	94.6	103.4	93.9	87.5

INTERNAL STANDARD SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15100
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
11:56	MA15100-CCB3	98.8	95.3	94.8	94.1	94.6	102.1	94.4	91.7
12:00	ZZZZZZ	94.6	88.6	89.5	89.9	87.4	99.3	90.1	71.7
12:04	ZZZZZZ	89.9	88.6	89.4	89.3	87.8	99.8	88.5	71.2
12:08	ZZZZZZ	93.9	92.2	93	92.1	91.2	102.5	91.8	73
12:12	ZZZZZZ	96	92.2	93.8	92.9	91	101.7	91.9	72.9
12:15	MP34108-MB1	96.7	93.5	92.8	92.8	92.2	103.4	93	74
12:19	MP34108-B1	88.2	90.5	89.1	88.3	88.1	99.9	86.7	69.6 !
12:23	FA56168-8	101.5	94.7	92	91.2	90.6	101	86.7	72.1
12:31	MP34108-SD1	103	96.7	95.3	95.4	94.5	103.9	101.4	86.2
12:34	MP34108-S1	89	87.8	85.5	85.8	84.7	96.2	81.3	65.3 !
12:38	MA15100-CCV7	99.8	95.8	94.6	94.6	93.3	102.6	99.4	90.2
12:42	MA15100-CCV8	98.5	95.1	93.1	92.7	91.3	100.5	93.4	85.9
12:46	MA15100-CCB4	95.3	95.7	95.6	95.2	95	102.7	102.4	93.8
12:50	MP34108-S2	93.6	90.2	87.8	87.4	86.9	98.2	82	67.6 !
12:53	MP34108-PS1	No results reported for the elements associated with this internal standard.							
12:57	ZZZZZZ	99.5	90.9	88.7	88.4	87.5	98.6	84.7	69.5 !
13:01	ZZZZZZ	90.6	87.8	87	86.4	85	98.3	85.9	68.2 !
13:05	ZZZZZZ	96.4	89.4	89.1	88.3	86.8	99.1	86.5	69.3 !
13:09	ZZZZZZ	93.1	89.8	89	89.3	88.3	100.6	88.1	71.8
13:12	ZZZZZZ	85.4	88.2	88.8	88.2	86.7	99.7	87.1	70.5
13:16	ZZZZZZ	93.9	89.7	89	88.7	87.8	100.4	87.2	71.8
13:20	ZZZZZZ	106.1	91.1	91.2	90.5	90.3	102.3	98	71.6
13:24	FA56228-1	101.7	88.1	86.6	86.1	85.1	98	82.6	67 !
13:27	MA15100-CCV9	99.9	94.5	93.1	92.9	91.9	102.2	99.8	87.6
13:31	MA15100-CCV10	93.8	96.1	93.3	92.6	91.6	101.7	88	85.2
13:35	MA15100-CCB5	103.8	90.6	91.3	90.5	89.6	98.1	95.6	87
14:13	MA15100-CCV11	93	98.8	98.6	98.2	98.3	99.6	97.4	97.3
14:17	MA15100-CCV12	89.8	99.9	99.3	98.7	97.9	99.3	95.2	93.3
14:20	MA15100-CCB6	94.2	98.1	97	97.4	99	99.3	100.5	99.5
14:24	FA56228-2	85.4	94.9	93.6	94.6	91.6	96.9	89.7	74.8
14:28	FA56228-3	97.4	95.9	95.2	95.6	93.2	97.6	90	75
14:32	FA56228-4	93.4	96.8	98.4	98.3	96.4	100.6	96.5	77.6
14:36	FA56228-5	88	92.5	94.1	94	92.4	98.6	94.7	76.5

INTERNAL STANDARD SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
Analyst: DM Run ID: MA15100
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
14:39	FA56228-6	87.6	93.2	91.9	92.2	89.8	95.3	86.4	71.4
14:43	FA56228-7	86.3	92.3	92.9	93.8	93	98.1	95.4	76.1
14:47	FA56228-8	82	91.3	92	93	91.7	97.8	93.4	74.4
14:51	ZZZZZZ	95.6	88	91.9	92.9	90.3	95.9	93.8	73.5
14:55	MP34108-D1	93.3	89.8	88.5	89.3	89.5	96.3	89.5	73.3
14:58	ZZZZZZ	85.2	89.7	89.9	90.6	91.6	95.7	94.8	82.9
15:02	MA15100-CCV13	91.8	95.1	94.5	94.7	94.5	97.7	94.8	91.3
15:06	MA15100-CCV14	91.7	96.8	94.7	94.6	95.2	98.1	93.5	89.4
15:10	MA15100-CCB7	91.7	94.7	94.5	93.9	95.9	97.6	97.5	94.2
15:13	ZZZZZZ	87.8	91.6	90.6	91.2	93.1	97.2	95.1	83.5
15:17	FA56228-1	85.5	92.2	91.7	91.3	92.3	94	92.5	89.2
15:21	FA56228-2	93.4	97.5	97	97.3	97.9	99.2	97.4	95
15:25	FA56228-3	93.8	100.5	98.3	98.7	99.4	101	99.5	96.5
15:29	FA56228-6	98.1	99.6	97.8	98	97.9	100.2	95.3	95.4
15:32	MA15100-CRIA3	87.7	99.3	97.6	98.2	99.2	100.5	99.9	99.4
15:36	MA15100-ICSA2	81.8	98.7	93.6	92.2	91.2	93.7	82.7	84
15:40	MA15100-ICSAB2	76.5	101	94.3	93.1	92.3	94.7	83	84.4
15:44	MA15100-CCV15	81.5	95.5	95.7	96.3	96.6	99	96.1	93.4
15:48	MA15100-CCV16	83.5	94.3	94.3	94.3	94	97.6	92.6	93.1
15:51	MA15100-CCB8	84.4	92	92.3	92.4	94.4	96.5	95.6	94.1

! = Outside limits.

LEGEND: Istd#	Parameter	Limits	CCV/CCB Limits
Istd#1	Lithium	70-130 %	70-130 %
Istd#2	Scandium	70-130 %	70-130 %
Istd#3	Germanium (72-2)	70-130 %	70-130 %
Istd#4	Germanium (74-2)	70-130 %	70-130 %
Istd#5	Indium	70-130 %	70-130 %
Istd#6	Terbium	70-130 %	70-130 %
Istd#7	Bismuth	70-130 %	70-130 %
Istd#8	Tellurium	70-130 %	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
QC Limits: result < RL Run ID: MA15100 Units: ug/l

Time: / Sample ID:			09:55 ICB1		10:18 CCB1		11:07 CCB2		11:56 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	100	4.4	-3.37	<100	-3.05	<100	-3.37	<100	-3.53	<100
Antimony	1.0	.1	0.0263	<1.0	0.0172	<1.0	0.0279	<1.0	0.0157	<1.0
Arsenic	1.0	.1	0.00423	<1.0	0.00467	<1.0	0.00546	<1.0	0.00298	<1.0
Barium	1.0	.1	-0.000370	<1.0	-0.00341	<1.0	-0.00286	<1.0	-0.00737	<1.0
Beryllium	1.0	.1	0.0287	<1.0	0.00199	<1.0	0.00447	<1.0	0.0140	<1.0
Cadmium	1.0	.1	0.00449	<1.0	0.00201	<1.0	0.00335	<1.0	0.00513	<1.0
Calcium	100	7.2	-0.701	<100	-0.478	<100	0.0940	<100	-0.766	<100
Chromium	1.0	.1	0.00222	<1.0	-0.000400	<1.0	-0.00367	<1.0	-0.00264	<1.0
Cobalt	1.0	.1	0.00268	<1.0	0.00330	<1.0	0.00321	<1.0	0.00279	<1.0
Copper	1.0	.1	-0.0542	<10	-0.102	<10	-0.161	<10	-0.175	<10
Iron	100	7.9	0.526	<100	0.836	<100	0.447	<100	0.381	<100
Lead	1.0	.1	0.0357	<1.0	0.00700	<1.0	0.0107	<1.0	0.00796	<1.0
Magnesium	100	5.2	0.212	<100	0.627	<100	0.0594	<100	-0.0673	<100
Manganese	1.0	.1	-0.0194	<1.0	-0.0218	<1.0	-0.0240	<1.0	-0.0259	<1.0
Molybdenum	1.0	.1	anr							
Nickel	1.0	.1	-0.00655	<1.0	-0.00699	<1.0	-0.00602	<1.0	-0.00546	<1.0
Potassium	100	6.6	0.691	<100	0.283	<100	-0.445	<100	-1.09	<100
Selenium	1.0	.11	0.0142	<1.0	0.0109	<1.0	-0.0300	<1.0	-0.00743	<1.0
Silver	1.0	.1	0.00449	<1.0	0.00475	<1.0	0.00638	<1.0	0.00701	<1.0
Sodium	100	4.8	1.01	<100	2.27	<100	5.23	<100	1.20	<100
Strontium	1.0	.1	anr							
Thallium	1.0	.1	0.0742	<1.0	0.0163	<1.0	0.0177	<1.0	0.0185	<1.0
Tin	1.0	.1	anr							
Titanium	1.0	.3	anr							
Vanadium	1.0	.1	-0.0382	<1.0	-0.0396	<1.0	-0.0444	<1.0	-0.0454	<1.0
Zinc	2.0	.29	-0.424	<10	-0.694	<10	-0.675	<10	-0.788	<10

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
QC Limits: result < RL Run ID: MA15100 Units: ug/l

Time: / Sample ID:			12:46 CCB4		13:35 CCB5		14:20 CCB6		15:10 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	100	4.4	-3.45	<100	-3.14	<100	-3.94	<100	0.0705	<100
Antimony	1.0	.1	0.0143	<1.0	0.0119	<1.0	0.0147	<1.0	0.00811	<1.0
Arsenic	1.0	.1	0.00433	<1.0	0.00292	<1.0	0.00844	<1.0	0.000110	<1.0
Barium	1.0	.1	-0.00311	<1.0	-0.00418	<1.0	-0.00141	<1.0	0.0112	<1.0
Beryllium	1.0	.1	0.00603	<1.0	0.00433	<1.0	0.00231	<1.0	-0.00131	<1.0
Cadmium	1.0	.1	0.00214	<1.0	0.00475	<1.0	0.00237	<1.0	0.00187	<1.0
Calcium	100	7.2	-0.740	<100	-0.865	<100	0.0591	<100	0.910	<100
Chromium	1.0	.1	-0.00358	<1.0	-0.00111	<1.0	0.00457	<1.0	0.00120	<1.0
Cobalt	1.0	.1	0.00210	<1.0	0.00556	<1.0	0.00405	<1.0	0.00182	<1.0
Copper	1.0	.1	-0.172	<10	-0.181	<10	-0.0245	<10	-0.0309	<10
Iron	100	7.9	0.334	<100	0.665	<100	0.362	<100	0.276	<100
Lead	1.0	.1	0.00253	<1.0	0.0124	<1.0	0.0214	<1.0	0.0102	<1.0
Magnesium	100	5.2	-0.243	<100	0.170	<100	0.281	<100	0.301	<100
Manganese	1.0	.1	-0.0242	<1.0	-0.0207	<1.0	-0.0215	<1.0	-0.0245	<1.0
Molybdenum	1.0	.1	anr							
Nickel	1.0	.1	-0.00704	<1.0	-0.00134	<1.0	-0.00107	<1.0	-0.00210	<1.0
Potassium	100	6.6	-0.425	<100	0.327	<100	0.0478	<100	-0.563	<100
Selenium	1.0	.11	0.00494	<1.0	0.0104	<1.0	0.0377	<1.0	-0.00476	<1.0
Silver	1.0	.1	0.00830	<1.0	0.0104	<1.0	0.0140	<1.0	0.0113	<1.0
Sodium	100	4.8	0.448	<100	1.82	<100	-0.501	<100	0.0946	<100
Strontium	1.0	.1	anr							
Thallium	1.0	.1	0.0201	<1.0	0.0203	<1.0	0.0289	<1.0	0.0178	<1.0
Tin	1.0	.1	anr							
Titanium	1.0	.3	anr							
Vanadium	1.0	.1	-0.0451	<1.0	-0.0440	<1.0	-0.000680	<1.0	-0.00631	<1.0
Zinc	2.0	.29	-0.835	<10	-0.777	<10	-0.307	<10	0.110	<10

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
QC Limits: result < RL Run ID: MA15100 Units: ug/l

Time: / Sample ID: / Metal	RL	IDL	15:51 CCB8 raw	final
Aluminum	100	4.4	8.56	<100
Antimony	1.0	.1	0.0146	<1.0
Arsenic	1.0	.1	0.00659	<1.0
Barium	1.0	.1	0.0118	<1.0
Beryllium	1.0	.1	-0.00741	<1.0
Cadmium	1.0	.1	0.00192	<1.0
Calcium	100	7.2	0.446	<100
Chromium	1.0	.1	0.00230	<1.0
Cobalt	1.0	.1	0.00257	<1.0
Copper	1.0	.1	-0.0241	<10
Iron	100	7.9	0.978	<100
Lead	1.0	.1	0.0110	<1.0
Magnesium	100	5.2	0.960	<100
Manganese	1.0	.1	-0.0218	<1.0
Molybdenum	1.0	.1	anr	
Nickel	1.0	.1	-0.00274	<1.0
Potassium	100	6.6	1.16	<100
Selenium	1.0	.11	0.0206	<1.0
Silver	1.0	.1	0.0187	<1.0
Sodium	100	4.8	2.32	<100
Strontium	1.0	.1	anr	
Thallium	1.0	.1	0.0203	<1.0
Tin	1.0	.1	anr	
Titanium	1.0	.3	anr	
Vanadium	1.0	.1	0.00132	<1.0
Zinc	2.0	.29	0.179	<10

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15100 Units: ug/l

Time:		09:51			10:10			10:14	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	10000	9450	94.5				10000	9210	92.1
Antimony	100	97.3	97.3				100	93.2	93.2
Arsenic	100	95.9	95.9				100	92.2	92.2
Barium	100	98.2	98.2				100	92.9	92.9
Beryllium	100	101	101.0				100	95.6	95.6
Cadmium	100	98.2	98.2				100	94.3	94.3
Calcium	10000	9700	97.0				10000	9160	91.6
Chromium	100	96.0	96.0				100	91.8	91.8
Cobalt	100	98.6	98.6				100	93.1	93.1
Copper	100	98.1	98.1				100	93.0	93.0
Iron	10000	9610	96.1				10000	9410	94.1
Lead	100	96.6	96.6				100	92.9	92.9
Magnesium	10000	9850	98.5				10000	9420	94.2
Manganese	100	95.4	95.4				100	91.9	91.9
Molybdenum	anr								
Nickel	100	97.2	97.2				100	93.5	93.5
Potassium	10000	9510	95.1				10000	9370	93.7
Selenium	100	98.3	98.3				100	93.2	93.2
Silver	50	53.2	106.4	50	50.3	100.6			
Sodium	10000	9680	96.8				10000	9320	93.2
Strontium	anr								
Thallium	100	95.1	95.1				100	92.6	92.6
Tin	anr								
Titanium	anr								
Vanadium	100	96.7	96.7				100	91.8	91.8
Zinc	100	98.8	98.8				100	94.2	94.2

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15100 Units: ug/l

Time:		11:00			11:03			11:49	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum				10000	9180	91.8			
Antimony				100	95.9	95.9			
Arsenic				100	92.8	92.8			
Barium				100	94.3	94.3			
Beryllium				100	99.6	99.6			
Cadmium				100	96.7	96.7			
Calcium				10000	9230	92.3			
Chromium				100	92.2	92.2			
Cobalt				100	94.9	94.9			
Copper				100	95.0	95.0			
Iron				10000	9670	96.7			
Lead				100	96.6	96.6			
Magnesium				10000	9620	96.2			
Manganese				100	92.8	92.8			
Molybdenum									
Nickel				100	95.0	95.0			
Potassium				10000	9170	91.7			
Selenium				100	93.8	93.8			
Silver	50	48.6	97.2				50	49.6	99.2
Sodium				10000	9590	95.9			
Strontium									
Thallium				100	96.2	96.2			
Tin									
Titanium									
Vanadium				100	93.2	93.2			
Zinc				100	95.8	95.8			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15100 Units: ug/l

Time:		11:53			12:38			12:42	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	10000	9050	90.5				10000	9480	94.8
Antimony	100	91.2	91.2				100	93.7	93.7
Arsenic	100	91.2	91.2				100	94.8	94.8
Barium	100	91.2	91.2				100	93.7	93.7
Beryllium	100	96.2	96.2				100	98.5	98.5
Cadmium	100	91.1	91.1				100	93.5	93.5
Calcium	10000	9060	90.6				10000	9360	93.6
Chromium	100	91.2	91.2				100	95.0	95.0
Cobalt	100	92.4	92.4				100	94.5	94.5
Copper	100	91.6	91.6				100	93.3	93.3
Iron	10000	9470	94.7				10000	9790	97.9
Lead	100	91.7	91.7				100	93.2	93.2
Magnesium	10000	9300	93.0				10000	9650	96.5
Manganese	100	90.3	90.3				100	93.0	93.0
Molybdenum	anr								
Nickel	100	91.1	91.1				100	94.0	94.0
Potassium	10000	9140	91.4				10000	9630	96.3
Selenium	100	90.5	90.5				100	93.5	93.5
Silver				50	48.7	97.4			
Sodium	10000	9270	92.7				10000	9600	96.0
Strontium	anr								
Thallium	100	92.2	92.2				100	92.8	92.8
Tin	anr								
Titanium	anr								
Vanadium	100	91.1	91.1				100	93.4	93.4
Zinc	100	92.9	92.9				100	94.6	94.6

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15100 Units: ug/l

Time:		13:27			13:31			14:13	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum				10000	9290	92.9			
Antimony				100	90.2	90.2			
Arsenic				100	91.1	91.1			
Barium				100	90.2	90.2			
Beryllium				100	95.7	95.7			
Cadmium				100	90.1	90.1			
Calcium				10000	9120	91.2			
Chromium				100	91.1	91.1			
Cobalt				100	90.7	90.7			
Copper				100	90.0	90.0			
Iron				10000	9660	96.6			
Lead				100	90.5	90.5			
Magnesium				10000	9410	94.1			
Manganese				100	90.2	90.2			
Molybdenum									
Nickel				100	90.3	90.3			
Potassium				10000	9180	91.8			
Selenium				100	91.5	91.5			
Silver	50	47.7	95.4				50	50.8	101.6
Sodium				10000	9340	93.4			
Strontium									
Thallium				100	96.0	96.0			
Tin									
Titanium									
Vanadium				100	90.5	90.5			
Zinc				100	91.7	91.7			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15100 Units: ug/l

Time:		14:17			15:02			15:06	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	10000	9660	96.6				10000	9840	98.4
Antimony	100	96.4	96.4				100	98.0	98.0
Arsenic	100	95.6	95.6				100	94.5	94.5
Barium	100	97.7	97.7				100	97.2	97.2
Beryllium	100	95.2	95.2				100	95.6	95.6
Cadmium	100	96.7	96.7				100	97.3	97.3
Calcium	10000	9380	93.8				10000	9540	95.4
Chromium	100	95.2	95.2				100	94.3	94.3
Cobalt	100	95.9	95.9				100	96.4	96.4
Copper	100	94.7	94.7				100	95.9	95.9
Iron	10000	9430	94.3				10000	9620	96.2
Lead	100	97.1	97.1				100	97.5	97.5
Magnesium	10000	9710	97.1				10000	9820	98.2
Manganese	100	93.8	93.8				100	94.9	94.9
Molybdenum	anr								
Nickel	100	96.9	96.9				100	97.9	97.9
Potassium	10000	9580	95.8				10000	9560	95.6
Selenium	100	97.2	97.2				100	97.0	97.0
Silver				50	50.3	100.6			
Sodium	10000	9540	95.4				10000	9630	96.3
Strontium	anr								
Thallium	100	95.0	95.0				100	95.5	95.5
Tin	anr								
Titanium	anr								
Vanadium	100	93.9	93.9				100	95.3	95.3
Zinc	100	98.1	98.1				100	99.3	99.3

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15100 Units: ug/l

Time:		15:44			15:48	
Sample ID:	CCV	CCV15		CCV	CCV16	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum				10000	9510	95.1
Antimony				100	97.0	97.0
Arsenic				100	93.2	93.2
Barium				100	97.5	97.5
Beryllium				100	91.1	91.1
Cadmium				100	96.8	96.8
Calcium				10000	9370	93.7
Chromium				100	91.4	91.4
Cobalt				100	93.3	93.3
Copper				100	93.7	93.7
Iron				10000	9390	93.9
Lead				100	96.5	96.5
Magnesium				10000	9700	97.0
Manganese				100	92.8	92.8
Molybdenum						
Nickel				100	95.0	95.0
Potassium				10000	9450	94.5
Selenium				100	97.2	97.2
Silver	50	49.9	99.8			
Sodium				10000	9490	94.9
Strontium						
Thallium				100	95.6	95.6
Tin						
Titanium						
Vanadium				100	92.0	92.0
Zinc				100	97.4	97.4

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA15100 Units: ug/l

Time:		09:44			09:47	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum				20000	19400	97.0
Antimony				200	194	97.0
Arsenic				200	191	95.5
Barium				200	192	96.0
Beryllium				200	206	103.0
Cadmium				200	193	96.5
Calcium				20000	19500	97.5
Chromium				200	192	96.0
Cobalt				200	192	96.0
Copper				200	192	96.0
Iron				20000	19400	97.0
Lead				200	192	96.0
Magnesium				20000	19400	97.0
Manganese				200	191	95.5
Molybdenum						
Nickel				200	193	96.5
Potassium				20000	19600	98.0
Selenium				200	192	96.0
Silver	100	99.5	99.5			
Sodium				20000	19600	98.0
Strontium						
Thallium				200	196	98.0
Tin						
Titanium						
Vanadium				200	194	97.0
Zinc				200	194	97.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
QC Limits: CRI 70-130% CRIA 80-120% Run ID: MA15100 Units: ug/l

Time:			09:59		10:22		15:32	
Sample ID:	CRI	CRIA	CRIA1		CRIA2		CRIA3	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	100	100	99.2	99.2			104	104.0
Antimony	1.0	1.0	1.04	104.0			1.01	101.0
Arsenic	1.0	1.0	1.03	103.0			1.02	102.0
Barium	1.0	1.0	0.998	99.8			1.03	103.0
Beryllium	1.0	1.0	1.20	120.0			1.07	107.0
Cadmium	1.0	1.0	1.09	109.0			1.05	105.0
Calcium	100	100	107	107.0			110	110.0
Chromium	1.0	1.0	1.07	107.0			1.05	105.0
Cobalt	1.0	1.0	1.06	106.0			1.05	105.0
Copper	1.0	1.0			9.73	97.3	0.449	44.9*(a)
Iron	100	100	105	105.0			105	105.0
Lead	1.0	1.0	1.02	102.0			0.975	97.5
Magnesium	100	100	104	104.0			108	108.0
Manganese	1.0	1.0	1.05	105.0			1.07	107.0
Molybdenum	1.0	1.0	anr					
Nickel	1.0	1.0	1.06	106.0			1.06	106.0
Potassium	100	100	104	104.0			105	105.0
Selenium	1.0	1.0	1.02	102.0			1.10	110.0
Silver	1.0	1.0	1.13	113.0			1.11	111.0
Sodium	100	100	111	111.0			113	113.0
Strontium	1.0	1.0	anr					
Thallium	1.0	1.0	1.02	102.0			1.01	101.0
Tin	1.0	1.0	anr					
Titanium	1.0	1.0	anr					
Vanadium	1.0	1.0	0.953	95.3			1.01	101.0
Zinc	1.0	1.0			8.06	80.6	-0.816	0.0* (a)

(*) Outside of QC limits
(anr) Analyte not requested
(a) Negative bias.

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

File ID: XA080718M2.CSV Date Analyzed: 08/07/18 Methods: SW846 6020A
QC Limits: 80 to 120 % Recovery Run ID: MA15100 Units: ug/l

Time:			10:02		10:06		15:36		15:40	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	100000	100000	97000	97.0	94500	94.5	100000	100.0	99400	99.4
Antimony			0.0470		0.0411		0.0339		0.0347	
Arsenic		20	0.0858		18.8	94.0	0.0826		19.4	97.0
Barium			0.0723		0.0731		0.0639		0.0637	
Beryllium			0.0163		0.0216		0.0104		0.0119	
Cadmium		20	0.406		18.0	90.0	0.450		19.0	95.0
Calcium	100000	100000	93400	93.4	90900	90.9	96900	96.9	96800	96.8
Chromium		20	1.29 (a)		20.2	101.0	1.31		21.2	106.0
Cobalt		20	0.0138		18.6	93.0	0.0113		19.2	96.0
Copper		20	-0.649		16.8	84.0	-0.576		17.4	87.0
Iron	100000	100000	95700	95.7	94000	94.0	98600	98.6	97500	97.5
Lead			0.0146		0.000870		-0.00568		-0.00155	
Magnesium	100000	100000	94200	94.2	92500	92.5	100000	100.0	97200	97.2
Manganese		20	0.287		19.1	95.5	0.286		20.1	100.5
Molybdenum	2000	2000	1950	97.5	1920	96.0	2010	100.5	1980	99.0
Nickel		20	0.137		18.2	91.0	0.159		19.0	95.0
Potassium	100000	100000	97300	97.3	95600	95.6	102000	102.0	99700	99.7
Selenium			0.0688		0.0483		0.0298		0.0288	
Silver		20	0.0324		17.8	89.0	0.0380		18.4	92.0
Sodium	100000	100000	94700	94.7	93300	93.3	99500	99.5	97600	97.6
Strontium			0.921		0.892		0.967		0.955	
Thallium			0.0136		0.00970		0.000780		0.000740	
Tin			0.193		0.193		0.122		0.175	
Titanium	2000	2000	2030	101.5	1980	99.0	2080	104.0	2060	103.0
Vanadium			-0.0277		-0.0206		0.0152		0.0261	
Zinc		20	-1.34		16.4	82.0	-1.06		21.0	105.0

(*) Outside of QC limits
(anr) Analyte not requested
(a) Trace level contamination.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34103 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 08/02/18

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	-0.014	<0.50

Associated samples MP34103: FA56228-1, FA56228-2, FA56228-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34103
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 08/02/18 08/02/18

Metal	FA56103-26F Original	DUP	RPD	QC Limits	FA56103-26F Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	2.9	3	96.7	80-120

Associated samples MP34103: FA56228-1, FA56228-2, FA56228-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34103 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 08/02/18

Metal	FA56103-26F Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.0	3	100.0	3.4	20

Associated samples MP34103: FA56228-1, FA56228-2, FA56228-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34103
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 08/02/18

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	80-120

Associated samples MP34103: FA56228-1, FA56228-2, FA56228-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34103
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 08/02/18

Metal	FA56103-26F Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP34103: FA56228-1, FA56228-2, FA56228-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34108
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 08/02/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.7	22	-0.56	<200
Antimony	2.0	.2	.2	0.026	<2.0
Arsenic	2.0	.2	.21	0.059	<2.0
Barium	2.0	.2	.2	0.25	<2.0
Beryllium	2.0	.2	.2	0.016	<2.0
Cadmium	2.0	.2	.2	0.0010	<2.0
Calcium	200	14	36	24.8	<200
Chromium	2.0	.2	.2	0.54	<2.0
Cobalt	2.0	.2	.2	0.016	<2.0
Copper	20	.2	.2	-0.47	<20
Iron	200	16	23	22.8	<200
Lead	2.0	.2	.2	0.048	<2.0
Magnesium	200	10	19	6.9	<200
Manganese	2.0	.2	.2	0.73	<2.0
Molybdenum	2.0	.2	.39		
Nickel	2.0	.2	.2	0.16	<2.0
Potassium	200	13	75	2.4	<200
Selenium	2.0	.22	.22	0.014	<2.0
Silver	2.0	.2	.2	0.016	<2.0
Sodium	200	9.6	24	11.7	<200
Strontium	2.0	.2	.2		
Thallium	2.0	.2	.2	0.0036	<2.0
Tin	2.0	.2	.2		
Titanium	2.0	.61	.88		
Vanadium	2.0	.2	.24	0.11	<2.0
Zinc	20	.58	1.7	-1.9	<20

Associated samples MP34108: FA56228-1, FA56228-2, FA56228-3, FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34108
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 08/02/18

Metal	FA56168-8 Original	MS	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum	288	18300	20000	90.1	80-120
Antimony	0.0	196	200	98.0	80-120
Arsenic	3.5	201	200	98.8	80-120
Barium	242	453	200	105.5	80-120
Beryllium	0.0	217	200	108.5	80-120
Cadmium	0.0	196	200	98.0	80-120
Calcium	189000	214000(a	20000	125.0(b)	80-120
Chromium	1.1	205	200	102.0	80-120
Cobalt	1.2	208	200	103.4	80-120
Copper	0.0	200	200	100.0	80-120
Iron	0.00	21000	20000	105.0	80-120
Lead	0.21	201	200	100.4	80-120
Magnesium	63.2	20200	20000	100.7	80-120
Manganese	0.70	204	200	101.7	80-120
Molybdenum					
Nickel	3.2	203	200	99.9	80-120
Potassium	16000	37400	20000	107.0	80-120
Selenium	0.0	173	200	86.5	80-120
Silver	0.0	120	100	120.0	80-120
Sodium	18900	40100	20000	106.0	80-120
Strontium					
Thallium	0.29	213	200	106.4	80-120
Tin					
Titanium					
Vanadium	1.1	208	200	103.5	80-120
Zinc	4.2	187	200	91.4	80-120

Associated samples MP34108: FA56228-1, FA56228-2, FA56228-3, FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Above linear range. For QC purposes only.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34108
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date:					08/02/18				08/02/18	
Metal	FA56168-8 Original	MSD	Spikelot MPICPMS1	% Rec	MSD RPD	QC Limit	FA56168-8 Original	DUP	RPD	QC Limits
Aluminum	288	17600	20000	86.6	3.9	20	288	304	5.4	0-20
Antimony	0.0	186	200	93.0	5.2	20	0.0	0.0	NC	0-20
Arsenic	3.5	193	200	94.8	4.1	20	3.5	3.6	2.8	0-20
Barium	242	427	200	92.5	5.9	20	242	264	8.7	0-20
Beryllium	0.0	201	200	100.5	7.7	20	0.0	0.0	NC	0-20
Cadmium	0.0	186	200	93.0	5.2	20	0.0	0.0	NC	0-20
Calcium	189000	202000(a	20000	65.0 (b)	5.8	20	189000	200000	5.7	0-20
Chromium	1.1	196	200	97.5	4.5	20	1.1	1.2	8.7	0-20
Cobalt	1.2	195	200	96.9	6.5	20	1.2	1.3	8.0	0-20
Copper	0.0	190	200	95.0	5.1	20	0.0	0.0	NC	0-20
Iron	0.00	19900	20000	99.5	5.4	20	0.00	0.00	NC	0-20
Lead	0.21	189	200	94.4	6.2	20	0.21	0.0	200.0(c)	0-20
Magnesium	63.2	19100	20000	95.2	5.6	20	63.2	71.8	12.7	0-20
Manganese	0.70	193	200	96.2	5.5	20	0.70	0.85	19.4	0-20
Molybdenum										
Nickel	3.2	192	200	94.4	5.6	20	3.2	3.4	6.1	0-20
Potassium	16000	35800	20000	99.0	4.4	20	16000	17500	9.0	0-20
Selenium	0.0	164	200	82.0	5.3	20	0.0	0.0	NC	0-20
Silver	0.0	101	100	101.0	17.2	20	0.0	0.0	NC	0-20
Sodium	18900	38000	20000	95.5	5.4	20	18900	20000	5.7	0-20
Strontium										
Thallium	0.29	205	200	102.4	3.8	20	0.29	0.0	200.0(c)	0-20
Tin										
Titanium										
Vanadium	1.1	197	200	98.0	5.4	20	1.1	1.3	16.7	0-20
Zinc	4.2	177	200	86.4	5.5	20	4.2	3.0	33.3 (c)	0-20

Associated samples MP34108: FA56228-1, FA56228-2, FA56228-3, FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Above linear range. For QC purposes only.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(c) RPD acceptable due to low duplicate and sample concentrations.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34108
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 08/02/18

Metal	BSP Result	Spikelot MPICPMS1	% Rec	QC Limits
Aluminum	17000	20000	85.0	80-120
Antimony	188	200	94.0	80-120
Arsenic	187	200	93.5	80-120
Barium	191	200	95.5	80-120
Beryllium	206	200	103.0	80-120
Cadmium	191	200	95.5	80-120
Calcium	18600	20000	93.0	80-120
Chromium	192	200	96.0	80-120
Cobalt	197	200	98.5	80-120
Copper	196	200	98.0	80-120
Iron	19800	20000	99.0	80-120
Lead	195	200	97.5	80-120
Magnesium	19300	20000	96.5	80-120
Manganese	192	200	96.0	80-120
Molybdenum				
Nickel	195	200	97.5	80-120
Potassium	18100	20000	90.5	80-120
Selenium	163	200	81.5	80-120
Silver	119	100	119.0(a)	80-120
Sodium	19200	20000	96.0	80-120
Strontium				
Thallium	202	200	101.0	80-120
Tin				
Titanium				
Vanadium	192	200	96.0	80-120
Zinc	178	200	89.0	80-120

Associated samples MP34108: FA56228-1, FA56228-2, FA56228-3, FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Outside DOD QSM control limits. Positive bias, but all sample results <MDL.

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34108
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 08/02/18

Metal	FA56168-8 Original	SDL 2:10	%DIF	QC Limits
Aluminum	288	315	9.2	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	3.54	3.68	3.8	0-10
Barium	242	253	4.4	0-10
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	189000	198000	4.8	0-10
Chromium	1.15	1.13	1.8	0-10
Cobalt	1.23	1.28	4.2	0-10
Copper	0.00	1.00	NC	0-10
Iron	0.00	0.00	NC	0-10
Lead	0.212	0.00	100.0(a)	0-10
Magnesium	63.2	65.6	3.7	0-10
Manganese	0.697	0.00	100.0(a)	0-10
Molybdenum				
Nickel	3.21	3.28	2.2	0-10
Potassium	16000	17000	6.3	0-10
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium	18900	19200	1.3	0-10
Strontium				
Thallium	0.290	0.00	100.0(a)	0-10
Tin				
Titanium				
Vanadium	1.12	0.00	100.0(a)	0-10
Zinc	4.21	10.9	159.0(a)	0-10

Associated samples MP34108: FA56228-1, FA56228-2, FA56228-3, FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34123 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 08/06/18

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	-0.029	<0.50

Associated samples MP34123: FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34123
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 08/06/18 08/06/18

Metal	FA56168-8 Original	DUP	RPD	QC Limits	FA56168-8 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	2.9	3	96.7	80-120

Associated samples MP34123: FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34123 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 08/06/18

Metal	FA56168-8 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.0	3	100.0	3.4	20

Associated samples MP34123: FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34123
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 08/06/18

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	80-120

Associated samples MP34123: FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA56228
Account: EAENYS - EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

QC Batch ID: MP34123 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 08/06/18

Metal	FA56168-8 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP34123: FA56228-4, FA56228-5, FA56228-6, FA56228-7, FA56228-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Instrument Detection Limits

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

Analyte	IDL ug/l
Aluminum	4.35
Antimony	.1
Arsenic	.1
Arsenic	.1
Barium	.1
Beryllium	.1
Boron	.5
Cadmium	.1
Cadmium	.1
Calcium	7.2
Calcium	7.2
Chromium	.1
Chromium	.1
Cobalt	.1
Cobalt	.1
Copper	.1
Copper	.1
Iron	7.9
Iron	7.9
Lead	.1
Magnesium	5.2
Manganese	.1
Manganese	.1
Molybdenum	.1
Nickel	.1
Nickel	.1
Potassium	6.57
Selenium	.11
Selenium	.11
Silver	.1
Sodium	4.8
Strontium	.1
Thallium	.1
Tin	.1
Tin	.1
Titanium	.303
Vanadium	.1
Vanadium	.1
Zinc	.29
Zinc	.29

The above applies to the following instrument runs:
MA15100

Instrument Detection Limits

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Instrument ID: LEEMANHG4 **Effective Date:** 10/01/12

Analyte	IDL ug/l
Mercury	.03

The above applies to the following instrument runs:
MA15087

Instrument Detection Limits

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Instrument ID: LEEMANHG5 **Effective Date:** 10/01/12

Analyte	IDL ug/l
Mercury	.03

The above applies to the following instrument runs:
MA15095

Instrument Linear Ranges

Job Number: FA56228
Account: EAENYS EA Engineering
Project: SCNJR: Picatinny Arsenal, Route 15, Picatinny Arsenal, NJ

Instrument ID: AGICPMS1 **Effective Date:** 05/21/16

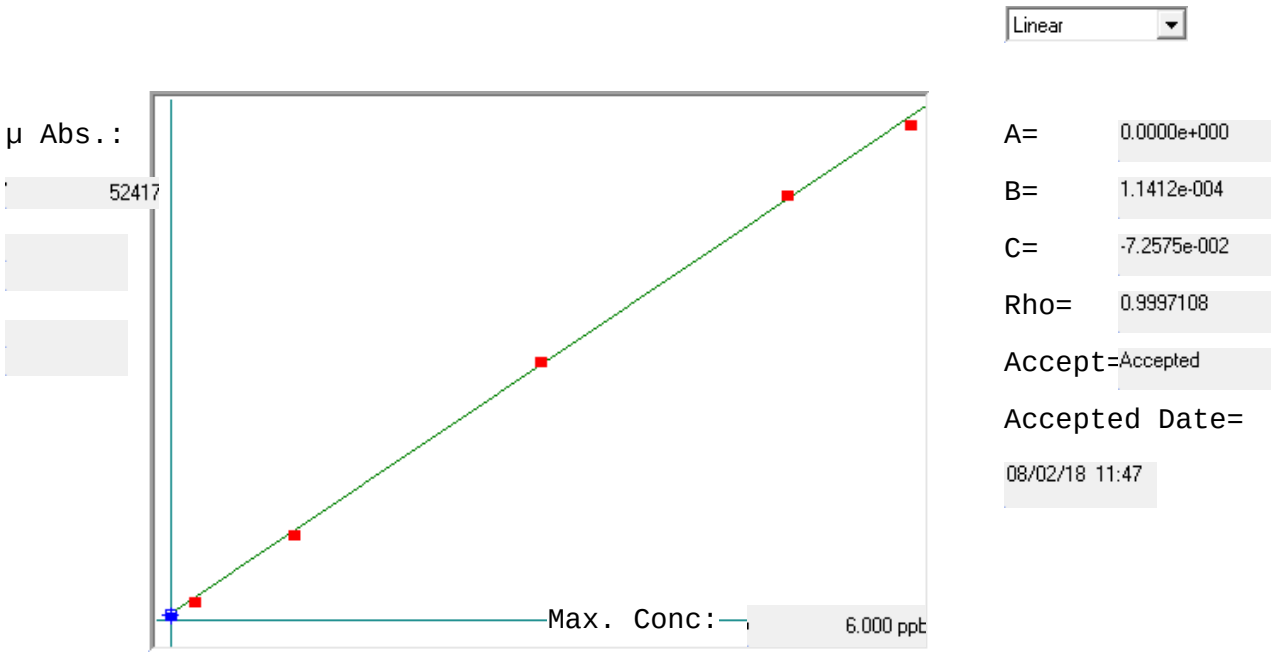
Analyte	Linear Range ug/l
Aluminum	100000
Antimony	1000
Arsenic	1000
Arsenic	1000
Barium	1000
Beryllium	1000
Cadmium	1000
Cadmium	1000
Calcium	100000
Calcium	100000
Chromium	1000
Chromium	1000
Cobalt	1000
Cobalt	1000
Copper	1000
Copper	1000
Iron	100000
Iron	100000
Lead	1000
Magnesium	100000
Manganese	1000
Manganese	1000
Molybdenum	1000
Nickel	1000
Nickel	1000
Potassium	100000
Selenium	1000
Selenium	1000
Silver	100
Sodium	100000
Strontium	1000
Thallium	1000
Tin	1000
Tin	1000
Titanium	1000
Vanadium	1000
Vanadium	1000
Zinc	1000
Zinc	1000

The above applies to the following instrument runs:
MA15100

Metals Analysis

Raw Data

Hg7470/EPA245.1 HG4



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
blank	0.000	0.008	0.008	707	0.000	707				0
.2ppb	0.200	0.175	-0.025	2172	0.0 %	2172				
1ppb	1.000	0.973	-0.027	9165	0.0 %	9165				
3ppb	3.000	3.056	0.056	27418	0.0 %	27418				
5ppb	5.000	5.078	0.078	45129	0.0 %	45129				
6ppb	6.000	5.909	-0.091	52417	0.0 %	52417				

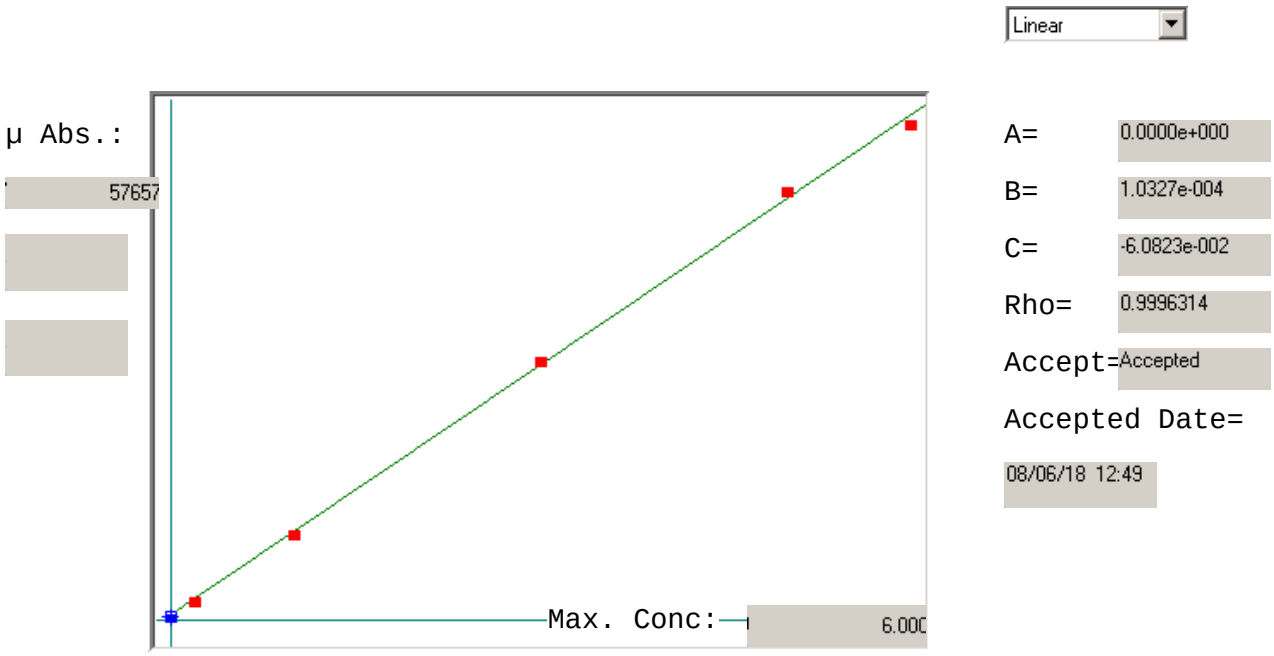
Method: Hg7470/EPA245.1 HG4 Operator: Admin Date of Analysis: 02 Aug 2018 10:04:43

Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
blank - 1	02 Aug 2018 11:38:53	Std	ppb	-	707	1.000	1.000
.2ppb - 1	02 Aug 2018 11:40:09	Std	ppb	-	2172	1.000	1.000
1ppb - 1	02 Aug 2018 11:41:29	Std	ppb	-	9165	1.000	1.000
3ppb - 1	02 Aug 2018 11:42:54	Std	ppb	-	27418	1.000	1.000
5ppb - 1	02 Aug 2018 11:44:25	Std	ppb	-	45129	1.000	1.000
6ppb - 1	02 Aug 2018 11:46:06	Std	ppb	-	52417	1.000	1.000
HSTD - 1	02 Aug 2018 11:47:51	CK STND	ppb	97.8% 5.8696	52069	1.000	1.000
ICV - 1	02 Aug 2018 11:49:37	CK STND	ppb	100.3% 3.0091	27004	1.000	1.000
ICB - 1	02 Aug 2018 11:51:23	CK STND	ppb	-0.0226	438	1.000	1.000
CRI - 1	02 Aug 2018 11:53:04	CK STND	ppb	85.3% 0.1705	2130	1.000	1.000
CCV - 1	02 Aug 2018 11:54:24	CK STND	ppb	103.7% 3.1105	27892	1.000	1.000
CCB - 1	02 Aug 2018 11:55:46	CK STND	ppb	-0.0180	478	1.000	1.000
MP34103-MB1 - 1	02 Aug 2018 11:57:27	SMPL	ppb	-0.0139	514	1.000	1.000
MP34103-B1 - 1	02 Aug 2018 11:58:46	SMPL	ppb	2.9967	26895	1.000	1.000
FA56103-26F - 1	02 Aug 2018 12:00:04	SMPL	ppb	-0.0292	380	1.000	1.000
MP34103-D1 - 1	02 Aug 2018 12:01:45	SMPL	ppb	-0.0163	493	1.000	1.000
MP34103-SD1 - 1	02 Aug 2018 12:03:03	SMPL	ppb	-0.3994	-64	1.000	5.000
MP34103-S1 - 1	02 Aug 2018 12:04:22	SMPL	ppb	2.9393	26392	1.000	1.000
MP34103-S2 - 1	02 Aug 2018 12:05:39	SMPL	ppb	2.9925	26858	1.000	1.000
FA56316-1 - 1	02 Aug 2018 12:07:21	SMPL	ppb	0.0882	1409	1.000	1.000
FA56316-2 - 1	02 Aug 2018 12:09:03	SMPL	ppb	0.1377	1843	1.000	1.000
FA56316-3 - 1	02 Aug 2018 12:10:27	SMPL	ppb	0.0718	1265	1.000	1.000
CCV - 1	02 Aug 2018 12:11:52	CK STND	ppb	101.0% 3.0293	27181	1.000	1.000
CCB - 1	02 Aug 2018 12:13:13	CK STND	ppb	-0.0242	424	1.000	1.000
FA56316-4 - 1	02 Aug 2018 12:14:54	SMPL	ppb	0.0380	969	1.000	1.000
FA56316-5 - 1	02 Aug 2018 12:16:14	SMPL	ppb	0.0134	753	1.000	1.000
FA56152-2 - 1	02 Aug 2018 12:17:35	SMPL	ppb	-0.0246	420	1.000	1.000
FA56161-1 - 1	02 Aug 2018 12:18:54	SMPL	ppb	0.0960	1477	1.000	1.000
FA56168-13 - 1	02 Aug 2018 12:20:33	SMPL	ppb	-0.0044	597	1.000	1.000
FA56168-14 - 1	02 Aug 2018 12:21:53	SMPL	ppb	-0.0071	574	1.000	1.000
FA56168-15 - 1	02 Aug 2018 12:23:12	SMPL	ppb	-0.0003	633	1.000	1.000
FA56185-1 - 1	02 Aug 2018 12:24:30	SMPL	ppb	-0.0038	603	1.000	1.000
FA56185-3 - 1	02 Aug 2018 12:25:49	SMPL	ppb	-0.0062	582	1.000	1.000
FA56209-1 - 1	02 Aug 2018 12:27:07	SMPL	ppb	0.0073	700	1.000	1.000
CCV - 1	02 Aug 2018 12:28:26	CK STND	ppb	101.5% 3.0446	27315	1.000	1.000
CCB - 1	02 Aug 2018 12:29:44	CK STND	ppb	-0.0132	520	1.000	1.000
FA56228-1 - 1	02 Aug 2018 12:31:26	SMPL	ppb	-0.0184	475	1.000	1.000
FA56228-2 - 1	02 Aug 2018 12:32:45	SMPL	ppb	-0.0104	545	1.000	1.000
FA56228-3 - 1	02 Aug 2018 12:34:04	SMPL	ppb	-0.0108	541	1.000	1.000
FA56180-1 - 1	02 Aug 2018 12:35:24	SMPL	ppb	-0.0057	586	1.000	1.000
FA56309-1A - 1	02 Aug 2018 12:36:44	SMPL	ppb	-0.0221	442	1.000	1.000
FA55967-8 - 1	02 Aug 2018 12:38:05	SMPL	ppb	-0.0105	544	1.000	1.000
MP34104-MB1 - 1	02 Aug 2018 12:39:23	SMPL	ppb	-0.0132	520	1.000	1.000
MP34104-B1 - 1	02 Aug 2018 12:40:42	SMPL	ppb	3.0155	27060	1.000	1.000
FA56129-1L - 1	02 Aug 2018 12:42:01	SMPL	ppb	-0.0243	423	1.000	1.000
MP34104-D1 - 1	02 Aug 2018 12:43:43	SMPL	ppb	-0.0197	463	1.000	1.000
CCV - 1	02 Aug 2018 12:45:01	CK STND	ppb	100.2% 3.0047	26965	1.000	1.000
CCB - 1	02 Aug 2018 12:46:19	CK STND	ppb	-0.0175	483	1.000	1.000
MP34104-SD1 - 1	02 Aug 2018 12:48:00	SMPL	ppb	-0.3726	-17	1.000	5.000
MP34104-S1 - 1	02 Aug 2018 12:49:19	SMPL	ppb	3.0096	27008	1.000	1.000
MP34104-S2 - 1	02 Aug 2018 12:50:35	SMPL	ppb	3.0069	26984	1.000	1.000
FA56216-1L - 1	02 Aug 2018 12:52:17	SMPL	ppb	-0.0278	392	1.000	1.000
FA56130-6L - 1	02 Aug 2018 12:53:58	SMPL	ppb	-0.0204	457	1.000	1.000
FA56130-7L - 1	02 Aug 2018 12:55:18	SMPL	ppb	-0.0164	492	1.000	1.000
FA56130-8L - 1	02 Aug 2018 12:56:38	SMPL	ppb	-0.0225	439	1.000	1.000
FA56130-9L - 1	02 Aug 2018 12:57:58	SMPL	ppb	-0.0059	584	1.000	1.000
FA56130-10L - 1	02 Aug 2018 12:59:17	SMPL	ppb	0.0023	656	1.000	1.000
FA56120-1 - 1	02 Aug 2018 13:00:36	SMPL	ppb	-0.0201	460	1.000	1.000
CCV - 1	02 Aug 2018 13:01:55	CK STND	ppb	101.2% 3.0348	27229	1.000	1.000
CCB - 1	02 Aug 2018 13:03:13	CK STND	ppb	-0.0176	482	1.000	1.000
FA56146-1 - 1	02 Aug 2018 13:04:56	SMPL	ppb	-0.0140	513	1.000	1.000
FA56146-2 - 1	02 Aug 2018 13:06:15	SMPL	ppb	-0.0155	500	1.000	1.000
FA56146-3 - 1	02 Aug 2018 13:07:34	SMPL	ppb	-0.0023	616	1.000	1.000
FA56146-4 - 1	02 Aug 2018 13:08:53	SMPL	ppb	-0.0130	522	1.000	1.000
FA56219-1 - 1	02 Aug 2018 13:10:12	SMPL	ppb	-0.0179	479	1.000	1.000
MP34104-D2 - 1	02 Aug 2018 13:11:31	SMPL	ppb	0.0265	868	1.000	1.000
MP34104-MB2 - 1	02 Aug 2018 13:12:51	SMPL	ppb	-0.0163	493	1.000	1.000
MP34104-B2 - 1	02 Aug 2018 13:14:11	SMPL	ppb	3.0446	27315	1.000	1.000
MP34104-MB3 - 1	02 Aug 2018 13:15:30	SMPL	ppb	-0.0283	388	1.000	1.000

Method: Hg7470/EPA245.1 HG4 Operator: Admin Date of Analysis: 02 Aug 2018 10:04:43

Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
MP34104-B3 - 1	02 Aug 2018 13:17:14	SMPL	ppb	2.9736	26693	1.000	1.000
CCV - 1	02 Aug 2018 13:18:33	CK STND	ppb	99.0% 2.9713	26672	1.000	1.000
CCB - 1	02 Aug 2018 13:20:14	CK STND	ppb	-0.0157	498	1.000	1.000
CRI - 1	02 Aug 2018 13:21:58	SMPL	ppb	0.1569	2011	1.000	1.000
CCV - 1	02 Aug 2018 13:23:17	CK STND	ppb	98.8% 2.9639	26608	1.000	1.000
CCB - 1	02 Aug 2018 13:24:41	CK STND	ppb	-0.0217	446	1.000	1.000

Hg7470/EPA245.1 HG5



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
blank	0.000	-0.001	-0.001	582	0.000	582				
0.2ppb	0.200	0.172	-0.028	2251	0.0 %	2251				
1.0ppb	1.000	0.988	-0.012	10160	0.0 %	10160				
3.0ppb	3.000	3.052	0.052	30139	0.0 %	30139				
5.0ppb	5.000	5.095	0.095	49925	0.0 %	49925				
6.0ppb	6.000	5.894	-0.106	57657	0.0 %	57657				

Method: Hg7470/EPA245.1 HG5 Operator: Admin Date of Analysis: 06 Aug 2018 11:41:36

Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
blank - 1	06 Aug 2018 12:40:13	S		-	582	1.000	1.000
0.2ppb - 1	06 Aug 2018 12:41:29	S		-	2251	1.000	1.000
1.0ppb - 1	06 Aug 2018 12:42:49	S		-	10160	1.000	1.000
3.0ppb - 1	06 Aug 2018 12:44:18	S		-	30139	1.000	1.000
5.0ppb - 1	06 Aug 2018 12:45:55	S		-	49925	1.000	1.000
6.0ppb - 1	06 Aug 2018 12:47:46	S		-	57657	1.000	1.000
HSTD - 1	06 Aug 2018 12:49:40	C		99.7% 5.9807	58500	1.000	1.000
ICV - 1	06 Aug 2018 12:51:36	C		102.8% 3.0829	30440	1.000	1.000
ICB - 1	06 Aug 2018 12:53:30	C		-0.0416	186	1.000	1.000
CRI - 1	06 Aug 2018 12:58:56	C		88.5% 0.1770	2303	1.000	1.000
CCV - 1	06 Aug 2018 13:00:13	C		102.9% 3.0859	30469	1.000	1.000
CCB - 1	06 Aug 2018 13:01:41	C		-0.0380	221	1.000	1.000
MP34123-MB1 - 1	06 Aug 2018 13:03:30	U		-0.0294	304	1.000	1.000
MP34123-B1 - 1	06 Aug 2018 13:04:47	U		3.0174	29806	1.000	1.000
FA56168-8 - 1	06 Aug 2018 13:06:05	U		-0.0264	333	1.000	1.000
MP34123-D1 - 1	06 Aug 2018 13:07:54	U		-0.0193	402	1.000	1.000
MP34123-SD1 - 1	06 Aug 2018 13:09:13	U		-0.3764	-140	1.000	5.000
MP34123-S1 - 1	06 Aug 2018 13:10:32	U		2.8826	28501	1.000	1.000
MP34123-S2 - 1	06 Aug 2018 13:11:47	U		3.0333	29960	1.000	1.000
FA56413-1 - 1	06 Aug 2018 13:13:38	U		-0.0008	581	1.000	1.000
FA56413-2 - 1	06 Aug 2018 13:15:30	U		0.1385	1930	1.000	1.000
FA56381-3 - 1	06 Aug 2018 13:16:50	U		-0.0354	246	1.000	1.000
CCV - 1	06 Aug 2018 13:18:18	C		100.9% 3.0256	29886	1.000	1.000
CCB - 1	06 Aug 2018 13:19:36	C		-0.0317	282	1.000	1.000
FA56381-4 - 1	06 Aug 2018 13:21:26	U		-0.0285	313	1.000	1.000
FA56415-6 - 1	06 Aug 2018 13:22:47	U		-0.0265	332	1.000	1.000
FA56425-1 - 1	06 Aug 2018 13:24:06	U		-0.0298	300	1.000	1.000
FA56430-1 - 1	06 Aug 2018 13:25:24	U		-0.0249	348	1.000	1.000
FA56430-2 - 1	06 Aug 2018 13:26:43	U		-0.0249	348	1.000	1.000
FA56185-2 - 1	06 Aug 2018 13:28:01	U		-0.0237	359	1.000	1.000
FA56463-13 - 1	06 Aug 2018 13:29:19	U		-0.0229	367	1.000	1.000
FA56228-4 - 1	06 Aug 2018 13:30:37	U		-0.0221	375	1.000	1.000
FA56228-5 - 1	06 Aug 2018 13:31:55	U		-0.0256	341	1.000	1.000
FA56228-6 - 1	06 Aug 2018 13:33:13	U		-0.0247	350	1.000	1.000
CCV - 1	06 Aug 2018 13:34:32	C		99.6% 2.9889	29530	1.000	1.000
CCB - 1	06 Aug 2018 13:35:50	C		-0.0323	276	1.000	1.000
FA56228-7 - 1	06 Aug 2018 13:37:41	U		-0.0239	358	1.000	1.000
FA56228-8 - 1	06 Aug 2018 13:39:00	U		-0.0245	352	1.000	1.000
FA56384-1 - 1	06 Aug 2018 13:40:19	U		0.0396	972	1.000	1.000
FA56381-1 - 1	06 Aug 2018 13:41:39	U		-0.0259	338	1.000	1.000
FA56381-2 - 1	06 Aug 2018 13:43:03	U		-0.0275	323	1.000	1.000
lot#297547-4191166 - 1	06 Aug 2018 13:44:21	U		-0.0215	381	1.000	1.000
MP34124-MB1 - 1	06 Aug 2018 13:45:39	U		0.0421	997	1.000	1.000
MP34124-B1 - 1	06 Aug 2018 13:46:57	U		3.0369	29995	1.000	1.000
FA56296-1L - 1	06 Aug 2018 13:48:21	U		-0.0212	384	1.000	1.000
MP34124-D1 - 1	06 Aug 2018 13:50:11	U		-0.0166	428	1.000	1.000
CCV - 1	06 Aug 2018 13:51:29	C		101.1% 3.0341	29968	1.000	1.000
CCB - 1	06 Aug 2018 13:52:47	C		-0.0316	283	1.000	1.000
MP34124-SD1 - 1	06 Aug 2018 13:54:37	U		-0.3795	-146	1.000	5.000
MP34124-S1 - 1	06 Aug 2018 13:55:55	U		3.0808	30420	1.000	1.000
MP34124-S2 - 1	06 Aug 2018 13:57:11	U		3.0876	30486	1.000	1.000
FA56224-1L - 1	06 Aug 2018 13:59:02	U		-0.0368	233	1.000	1.000
FA56224-2L - 1	06 Aug 2018 14:00:52	U		-0.0293	305	1.000	1.000
FA56306-1 - 1	06 Aug 2018 14:02:12	U		-0.0223	373	1.000	1.000
JC70890-1A - 1	06 Aug 2018 14:03:32	U		-0.0256	341	1.000	1.000
JC70890-2A - 1	06 Aug 2018 14:04:50	U		-0.0264	333	1.000	1.000
JC70890-3A - 1	06 Aug 2018 14:06:09	U		-0.0222	374	1.000	1.000
JC70890-4A - 1	06 Aug 2018 14:07:27	U		-0.0274	324	1.000	1.000
CCV - 1	06 Aug 2018 14:08:45	C		101.6% 3.0485	30107	1.000	1.000
CCB - 1	06 Aug 2018 14:10:03	C		-0.0317	282	1.000	1.000
JC70890-5A - 1	06 Aug 2018 14:12:00	U		-0.0287	311	1.000	1.000
JC70890-6A - 1	06 Aug 2018 14:13:18	U		-0.0244	353	1.000	1.000
JC70890-7A - 1	06 Aug 2018 14:14:36	U		-0.0231	365	1.000	1.000
JC70890-8A - 1	06 Aug 2018 14:15:55	U		-0.0228	368	1.000	1.000
JC70890-9A - 1	06 Aug 2018 14:17:14	U		-0.0222	374	1.000	1.000
JC70890-10A - 1	06 Aug 2018 14:18:33	U		-0.0231	365	1.000	1.000
MP34124-D2 - 1	06 Aug 2018 14:19:52	U		-0.0210	386	1.000	1.000
MP34124-MB2 - 1	06 Aug 2018 14:21:12	U		-0.0225	371	1.000	1.000
MP34124-B2 - 1	06 Aug 2018 14:22:31	U		3.0336	29963	1.000	1.000

Method: Hg7470/EPA245.1 HG5 Operator: Admin Date of Analysis: 06 Aug 2018 11:41:36

Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
MP34124-MB3 - 1	06 Aug 2018 14:23:50	U		-0.0323	276	1.000	1.000
CCV - 1	06 Aug 2018 14:25:39	C		100.1% 3.0045	29681	1.000	1.000
CCB - 1	06 Aug 2018 14:26:57	C		-0.0269	328	1.000	1.000
MP34124-B3 - 1	06 Aug 2018 14:28:53	U		3.0885	30495	1.000	1.000
MP34125-MB1 - 1	06 Aug 2018 14:30:12	U		-0.0448	155	1.000	1.000
MP34125-B1 - 1	06 Aug 2018 14:32:01	U		2.8504	28189	1.000	1.000
JC70890-11A - 1	06 Aug 2018 14:33:20	U		-0.0360	240	1.000	1.000
MP34125-D1 - 1	06 Aug 2018 14:35:09	U		-0.0300	298	1.000	1.000
MP34125-SD1 - 1	06 Aug 2018 14:36:29	U		-0.3485	-86	1.000	5.000
MP34125-S1 - 1	06 Aug 2018 14:37:49	U		2.9247	28909	1.000	1.000
MP34125-S2 - 1	06 Aug 2018 14:39:06	U		2.8032	27732	1.000	1.000
JC70890-12A - 1	06 Aug 2018 14:40:57	U		-0.0423	179	1.000	1.000
JC70890-13A - 1	06 Aug 2018 14:42:48	U		-0.0263	334	1.000	1.000
CCV - 1	06 Aug 2018 14:44:07	C		100.3% 3.0076	29711	1.000	1.000
CCB - 1	06 Aug 2018 14:45:25	C		-0.0341	259	1.000	1.000
JC70890-14A - 1	06 Aug 2018 14:47:15	U		-0.0332	267	1.000	1.000
JC70890-15A - 1	06 Aug 2018 14:48:34	U		-0.0282	316	1.000	1.000
JC70890-16A - 1	06 Aug 2018 14:49:52	U		-0.0273	325	1.000	1.000
JC70890-17A - 1	06 Aug 2018 14:51:11	U		-0.0230	366	1.000	1.000
JC70890-18A - 1	06 Aug 2018 14:52:30	U		-0.0255	342	1.000	1.000
JC70890-19A - 1	06 Aug 2018 14:53:49	U		-0.0284	314	1.000	1.000
JC70890-20A - 1	06 Aug 2018 14:55:08	U		-0.0233	363	1.000	1.000
JC70890-21A - 1	06 Aug 2018 14:56:27	U		-0.0242	355	1.000	1.000
JC70890-22A - 1	06 Aug 2018 14:57:46	U		-0.0258	339	1.000	1.000
JC70890-23A - 1	06 Aug 2018 14:59:05	U		-0.0161	433	1.000	1.000
CCV - 1	06 Aug 2018 15:00:25	C		98.9% 2.9668	29316	1.000	1.000
CCB - 1	06 Aug 2018 15:01:43	C		-0.0309	290	1.000	1.000
JC70890-24A - 1	06 Aug 2018 15:03:33	U		-0.0257	340	1.000	1.000
JC70890-25A - 1	06 Aug 2018 15:04:53	U		-0.0225	371	1.000	1.000
JC70890-26A - 1	06 Aug 2018 15:06:12	U		-0.0257	340	1.000	1.000
JC70890-27A - 1	06 Aug 2018 15:07:31	U		-0.0215	381	1.000	1.000
JC70890-28A - 1	06 Aug 2018 15:08:50	U		-0.0215	381	1.000	1.000
MP34125-MB2 - 1	06 Aug 2018 15:10:09	U		-0.0289	309	1.000	1.000
MP34125-B2 - 1	06 Aug 2018 15:11:28	U		2.9656	29305	1.000	1.000
MP34125-MB3 - 1	06 Aug 2018 15:12:47	U		-0.0373	228	1.000	1.000
MP34125-B3 - 1	06 Aug 2018 15:14:37	U		2.9770	29415	1.000	1.000
2SB-07/31/18-TC0698 - 1	06 Aug 2018 15:15:56	U		-0.0288	310	1.000	1.000
CCV - 1	06 Aug 2018 15:17:45	C		98.1% 2.9419	29075	1.000	1.000
CCB - 1	06 Aug 2018 15:19:04	C		-0.0342	258	1.000	1.000
9SB-08/01/18-TC0698 - 1	06 Aug 2018 15:20:54	U		-0.0308	291	1.000	1.000
14SB-08/02/18-TC0698 - 1	06 Aug 2018 15:22:13	U		-0.0299	299	1.000	1.000
CRI - 1	06 Aug 2018 15:23:33	U		0.1632	2169	1.000	1.000
CCV - 1	06 Aug 2018 15:24:53	C		98.4% 2.9517	29170	1.000	1.000
CCB - 1	06 Aug 2018 15:26:20	C		-0.0343	257	1.000	1.000

Quantitation Report

File Name 001CALB.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 9:11
Sample Name Blank
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.002	ug/l	-90.92	242.67	5.518E-05	Pulse	0.50	3
As			1	-0.001	ug/l	-245.31	18.33	4.167E-06	Pulse	1.00	3
Mo			1	0.000	ug/l	-426.43	11.33	4.077E-05	Pulse	0.50	3
Pb			1	0.057	ug/l	17.60	9,355.58	2.125E-03	Pulse	1.00	3
Be			1	0.002	ug/l	352.91	0.33	1.545E-06	Pulse	2.00	3
Ag			1	-0.001	ug/l	-27.30	140.00	5.073E-04	Pulse	0.50	3
Ba			1	0.003	ug/l	145.20	58.00	3.174E-05	Pulse	0.50	3
Tl			1	0.003	ug/l	19.06	375.34	6.869E-05	Pulse	0.50	3
Sn			1	0.032	ug/l	40.80	631.13	3.458E-04	Pulse	0.30	3
Sr			1	-0.004	ug/l	-112.92	840.02	4.619E-04	Pulse	0.50	3
[Pb]			1	0.055	ug/l	6.69	4,365.91	8.000E-04	Pulse	0.50	3
Ca			1	0.767	ug/l	124.42	157.33	8.698E-04	Pulse	0.50	3
Ti			1	0.000	ug/l	-15933.28	5.33	3.003E-05	Pulse	0.50	3
Na			1	-0.059	ug/l	-180.77	9,053.05	4.120E-02	Pulse	1.00	3
Mg			1	0.040	ug/l	128.37	549.01	2.500E-03	Pulse	1.00	3
K			1	-0.723	ug/l	-38.90	12,388.56	5.638E-02	Pulse	1.00	3
V			1	0.004	ug/l	110.24	1,008.70	5.572E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	-105.40	261.33	1.443E-03	Pulse	0.50	3
Fe			1	0.044	ug/l	60.33	5,330.75	2.946E-02	Pulse	0.50	3
Co			1	0.000	ug/l	158.70	44.00	2.420E-04	Pulse	0.50	3
Ni			1	0.001	ug/l	192.86	170.00	6.154E-04	Pulse	0.50	3
Cu			1	0.470	ug/l	19.90	35,355.68	1.951E-01	Pulse	0.50	3
Zn			1	0.555	ug/l	30.42	11,159.23	4.042E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	1744.60	6.00	2.152E-05	Pulse	0.50	3
Al			1	0.182	ug/l	61.85	1,004.70	3.639E-03	Pulse	1.00	3
Se			1	0.002	ug/l	783.28	13.00	7.161E-06	Pulse	3.00	3
Sb			1	0.001	ug/l	135.40	163.00	5.909E-04	Pulse	1.00	3
Se			1	-0.001	ug/l	-3773.32	21.33	1.417E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,456,510.33	1.78	100.0	Pulse	0.50	3
1	Sc		219,777.81	1.62	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		181,138.61	2.56	100.0	Pulse	0.30	3
1	In		1,819,817.15	2.57	100.0	Pulse	0.30	3
1	Tb		7,375,191.33	1.99	100.0	Analog	0.50	3
1	Lu		4,401,157.67	1.72	100.0	Pulse	0.50	3
1	Ge		276,058.62	1.74	100.0	Pulse	0.30	3
1	Te		15,041.55	1.61	100.0	Pulse	0.50	3
1	Li		1,598.96	4.89	100.0	Pulse	0.30	3

Quantitation Report

File Name 002CALB.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 9:16
Sample Name CALSTD-1
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	---	267.33	6.295E-05	Pulse	0.50	3
As			1	0.000	ug/l	---	18.33	4.365E-06	Pulse	1.00	3
Mo			1	0.000	ug/l	---	12.67	4.659E-05	Pulse	0.50	3
Pb			1	0.000	ug/l	---	5,942.70	1.399E-03	Pulse	1.00	3
Be			1	0.000	ug/l	---	0.17	7.868E-07	Pulse	2.00	3
Ag			1	0.000	ug/l	---	156.00	5.770E-04	Pulse	0.50	3
Ba			1	0.000	ug/l	---	46.00	2.631E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	---	96.67	1.803E-05	Pulse	0.50	3
Sn			1	0.000	ug/l	---	345.56	1.967E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	---	844.69	4.793E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	---	2,754.90	5.173E-04	Pulse	0.50	3
Ca			1	0.000	ug/l	---	129.33	7.281E-04	Pulse	0.50	3
Ti			1	0.000	ug/l	---	5.33	3.025E-05	Pulse	0.50	3
Na			1	0.000	ug/l	---	8,914.66	4.168E-02	Pulse	1.00	3
Mg			1	0.000	ug/l	---	503.68	2.356E-03	Pulse	1.00	3
K			1	0.000	ug/l	---	12,466.61	5.829E-02	Pulse	1.00	3
V			1	0.000	ug/l	---	946.69	5.315E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	---	259.33	1.453E-03	Pulse	0.50	3
Fe			1	0.000	ug/l	---	4,741.26	2.658E-02	Pulse	0.50	3
Co			1	0.000	ug/l	---	36.67	2.067E-04	Pulse	0.50	3
Ni			1	0.000	ug/l	---	159.33	5.887E-04	Pulse	0.50	3
Cu			1	0.000	ug/l	---	25,508.17	1.430E-01	Pulse	0.50	3
Zn			1	0.000	ug/l	---	9,484.67	3.497E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	---	5.33	2.011E-05	Pulse	0.50	3
Al			1	0.000	ug/l	---	945.02	3.486E-03	Pulse	1.00	3
Se			1	0.000	ug/l	---	12.45	7.021E-06	Pulse	3.00	3
Sb			1	0.000	ug/l	---	149.00	5.503E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	20.67	1.421E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,331,100.33	5.42	100.0	Pulse	0.50	3
1	Sc		214,803.34	7.79	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		178,612.48	4.83	100.0	Pulse	0.30	3
1	In		1,767,521.29	6.77	100.0	Pulse	0.30	3
1	Tb		7,243,295.00	7.17	100.0	Analog	0.50	3
1	Lu		4,259,586.33	7.32	100.0	Pulse	0.50	3
1	Ge		271,603.19	4.55	100.0	Pulse	0.30	3
1	Te		14,611.22	5.55	100.0	Pulse	0.50	3
1	Li		1,430.06	7.18	100.0	Pulse	0.30	3

Quantitation Report

File Name 003CALS.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 9:20
Sample Name CALSTD-2
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.545	ug/l	7.72	8,009.66	1.953E-03	Pulse	0.50	3
As			1	0.510	ug/l	10.01	797.02	1.944E-04	Pulse	1.00	3
Mo			1	0.518	ug/l	6.05	5,156.06	1.993E-02	Pulse	0.50	3
Pb			1	0.459	ug/l	7.04	29,812.55	7.265E-03	Pulse	1.00	3
Be			1	0.655	ug/l	3.82	54.50	2.679E-04	Pulse	2.00	3
Ag			1	0.558	ug/l	4.50	18,660.07	7.211E-02	Pulse	0.50	3
Ba			1	0.515	ug/l	8.41	1,834.76	1.083E-03	Pulse	0.50	3
Tl			1	0.500	ug/l	4.22	41,932.50	8.186E-03	Pulse	0.50	3
Sn			1	0.579	ug/l	5.35	4,839.56	2.855E-03	Pulse	0.30	3
Sr			1	0.498	ug/l	6.21	4,341.85	2.561E-03	Pulse	0.50	3
[Pb]			1	0.427	ug/l	5.11	13,969.07	2.726E-03	Pulse	0.50	3
Ca			1	54.646	ug/l	4.25	1,853.43	1.081E-02	Pulse	0.50	3
Ti			1	0.444	ug/l	22.83	120.00	6.999E-04	Pulse	0.50	3
Na			1	65.895	ug/l	6.88	117,724.12	5.792E-01	Pulse	1.00	3
Mg			1	52.642	ug/l	6.78	39,212.21	1.930E-01	Pulse	1.00	3
K			1	54.107	ug/l	9.93	40,987.65	2.017E-01	Pulse	1.00	3
V			1	0.523	ug/l	3.33	6,534.45	3.812E-02	Pulse	0.50	3
Mn			1	0.571	ug/l	2.31	3,854.40	2.248E-02	Pulse	0.50	3
Fe			1	52.739	ug/l	3.57	597,889.65	3.488E+00	Pulse	0.50	3
Co			1	0.527	ug/l	3.83	13,243.89	7.727E-02	Pulse	0.50	3
Ni			1	0.540	ug/l	3.02	3,879.07	1.499E-02	Pulse	0.50	3
Cu			1	0.445	ug/l	11.74	32,965.41	1.923E-01	Pulse	0.50	3
Zn			1	-1.193	ug/l	-5.13	6,017.28	2.325E-02	Pulse	1.00	3
Cd			1	0.526	ug/l	7.66	2,380.16	9.201E-03	Pulse	0.50	3
Al			1	50.798	ug/l	3.98	11,977.59	4.628E-02	Pulse	1.00	3
Se			1	0.518	ug/l	2.45	63.33	3.732E-05	Pulse	3.00	3
Sb			1	0.511	ug/l	3.03	5,276.10	2.038E-02	Pulse	1.00	3
Se			1	0.486	ug/l	31.90	46.11	3.306E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,127,216.67	3.13	96.2	Mix	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		203,721.66	5.58	94.8	Pulse	0.30	3
1	Ge		171,478.76	2.20	96.0	Pulse	0.30	3
1	In		1,697,550.24	4.63	96.0	Pulse	0.30	3
1	Tb		6,932,102.50	5.74	95.7	Analog	0.50	3
1	Lu		4,111,974.67	5.46	96.5	Pulse	0.50	3
1	Ge		258,912.70	2.01	95.3	Pulse	0.30	3
1	Te		13,971.42	5.53	95.6	Pulse	0.50	3
1	Li		1,465.62	7.23	102.5	Pulse	0.30	3

Quantitation Report

File Name	004CALS.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 9:24
Sample Name	CALSTD-3
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.015	ug/l	0.56	15,282.68	3.582E-03	Pulse	0.50	3
As			1	0.972	ug/l	2.33	1,565.40	3.670E-04	Pulse	1.00	3
Mo			1	0.969	ug/l	0.61	10,019.36	3.727E-02	Pulse	0.50	3
Pb			1	0.932	ug/l	0.96	56,774.67	1.331E-02	Pulse	1.00	3
Be			1	0.979	ug/l	10.43	86.33	4.000E-04	Pulse	2.00	3
Ag			1	1.081	ug/l	1.54	37,388.83	1.391E-01	Pulse	0.50	3
Ba			1	0.950	ug/l	2.22	3,497.69	1.977E-03	Pulse	0.50	3
Tl			1	0.949	ug/l	1.03	82,628.75	1.552E-02	Pulse	0.50	3
Sn			1	1.092	ug/l	0.62	9,225.70	5.214E-03	Pulse	0.30	3
Sr			1	0.917	ug/l	0.51	7,630.23	4.312E-03	Pulse	0.50	3
[Pb]			1	0.884	ug/l	2.42	27,104.11	5.093E-03	Pulse	0.50	3
Ca			1	100.370	ug/l	1.45	3,411.64	1.925E-02	Pulse	0.50	3
Ti			1	0.820	ug/l	14.36	224.00	1.265E-03	Pulse	0.50	3
Na			1	108.134	ug/l	0.95	199,320.93	9.238E-01	Pulse	1.00	3
Mg			1	96.877	ug/l	1.48	76,186.89	3.531E-01	Pulse	1.00	3
K			1	97.668	ug/l	1.47	68,439.76	3.172E-01	Pulse	1.00	3
V			1	0.958	ug/l	2.92	11,588.13	6.540E-02	Pulse	0.50	3
Mn			1	1.041	ug/l	2.14	7,056.64	3.982E-02	Pulse	0.50	3
Fe			1	98.499	ug/l	1.88	1,150,281.33	6.492E+00	Pulse	0.50	3
Co			1	1.021	ug/l	0.40	26,505.46	1.496E-01	Pulse	0.50	3
Ni			1	1.031	ug/l	2.53	7,546.15	2.807E-02	Pulse	0.50	3
Cu			1	0.419	ug/l	13.19	33,563.13	1.894E-01	Pulse	0.50	3
Zn			1	-1.111	ug/l	-4.29	6,466.09	2.406E-02	Pulse	1.00	3
Cd			1	1.029	ug/l	2.01	4,833.32	1.798E-02	Pulse	0.50	3
Al			1	98.310	ug/l	1.39	23,202.11	8.631E-02	Pulse	1.00	3
Se			1	0.998	ug/l	7.05	115.78	6.543E-05	Pulse	3.00	3
Sb			1	0.975	ug/l	0.59	10,321.23	3.839E-02	Pulse	1.00	3
Se			1	1.029	ug/l	4.76	77.89	5.408E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,322,639.67	0.94	99.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		215,769.56	0.94	100.4	Pulse	0.30	3
1	Ge		177,204.74	1.18	99.2	Pulse	0.30	3
1	In		1,769,407.57	0.46	100.1	Pulse	0.30	3
1	Tb		7,240,303.67	0.51	100.0	Analog	0.50	3
1	Lu		4,266,630.00	1.23	100.2	Pulse	0.50	3
1	Ge		268,819.38	0.66	99.0	Pulse	0.30	3
1	Te		14,402.38	0.33	98.6	Pulse	0.50	3
1	Li		1,507.84	2.51	105.4	Pulse	0.30	3

Quantitation Report

File Name	005CALS.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 9:28
Sample Name	CALSTD-4
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	10.180	ug/l	0.14	148,780.43	3.537E-02	Pulse	0.50	3
As			1	9.915	ug/l	0.60	15,573.00	3.702E-03	Pulse	1.00	3
Mo			1	10.064	ug/l	0.50	102,312.18	3.866E-01	Pulse	0.50	3
Pb			1	10.516	ug/l	1.02	571,018.29	1.357E-01	Pulse	1.00	3
Be			1	11.357	ug/l	5.34	969.19	4.632E-03	Pulse	2.00	3
Ag			1	11.233	ug/l	0.94	381,119.18	1.440E+00	Pulse	0.50	3
Ba			1	10.071	ug/l	0.68	35,807.31	2.070E-02	Pulse	0.50	3
Tl			1	9.979	ug/l	1.02	848,147.46	1.631E-01	Pulse	0.50	3
Sn			1	10.198	ug/l	0.05	81,416.10	4.705E-02	Pulse	0.30	3
Sr			1	9.975	ug/l	0.97	72,996.37	4.219E-02	Pulse	0.50	3
[Pb]			1	9.930	ug/l	0.52	269,917.56	5.190E-02	Pulse	0.50	3
Ca			1	996.122	ug/l	0.81	32,285.79	1.846E-01	Pulse	0.50	3
Ti			1	9.742	ug/l	1.80	2,572.18	1.471E-02	Pulse	0.50	3
Na			1	1015.016	ug/l	1.92	1,742,111.33	8.322E+00	Pulse	1.00	3
Mg			1	1019.099	ug/l	0.84	773,041.71	3.692E+00	Pulse	1.00	3
K			1	1006.264	ug/l	1.83	570,625.15	2.726E+00	Pulse	1.00	3
V			1	9.908	ug/l	1.84	109,559.30	6.264E-01	Pulse	0.50	3
Mn			1	10.145	ug/l	0.31	65,655.61	3.754E-01	Pulse	0.50	3
Fe			1	1003.502	ug/l	1.22	11,525,667.00	6.590E+01	Analog	0.50	3
Co			1	10.374	ug/l	0.95	265,406.76	1.517E+00	Pulse	0.50	3
Ni			1	10.508	ug/l	0.13	74,304.42	2.808E-01	Pulse	0.50	3
Cu			1	10.067	ug/l	0.58	220,171.71	1.259E+00	Pulse	0.50	3
Zn			1	8.509	ug/l	2.01	31,375.75	1.186E-01	Pulse	1.00	3
Cd			1	10.417	ug/l	0.87	48,103.59	1.818E-01	Pulse	0.50	3
Al			1	1032.051	ug/l	0.47	231,042.42	8.730E-01	Pulse	1.00	3
Se			1	10.027	ug/l	0.71	1,027.25	5.937E-04	Pulse	3.00	3
Sb			1	10.225	ug/l	0.99	105,192.78	3.975E-01	Pulse	1.00	3
Se			1	9.671	ug/l	4.35	540.79	3.892E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,201,044.50	0.54	97.6	Pulse	0.50	3
1	Sc		209,389.93	1.95	97.5	Pulse	0.30	3
1	Ge		174,903.65	0.25	97.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,730,244.55	1.08	97.9	Pulse	0.30	3
1	Tb		7,197,859.17	0.86	99.4	Analog	0.50	3
1	Lu		4,206,713.17	0.81	98.8	Pulse	0.50	3
1	Ge		264,654.03	0.67	97.4	Pulse	0.30	3
1	Te		13,899.96	1.38	95.1	Pulse	0.50	3
1	Li		1,470.07	9.82	102.8	Pulse	0.30	3

Quantitation Report

File Name 006CALS.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 9:32
Sample Name CALSTD-5
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	44.039	ug/l	2.21	655,969.02	1.528E-01	Pulse	0.50	3
As			1	44.170	ug/l	3.15	70,723.59	1.648E-02	Pulse	1.00	3
Mo			1	44.727	ug/l	2.37	459,196.80	1.718E+00	Pulse	0.50	3
Pb			1	45.770	ug/l	2.41	2,516,326.42	5.861E-01	Pulse	1.00	3
Be			1	47.248	ug/l	4.47	4,138.42	1.927E-02	Pulse	2.00	3
Ag			1	48.513	ug/l	2.51	1,661,868.12	6.218E+00	Pulse	0.50	3
Ba			1	44.210	ug/l	2.44	159,160.05	9.077E-02	Pulse	0.50	3
Tl			1	43.557	ug/l	2.30	3,731,784.00	7.117E-01	Pulse	0.50	3
Sn			1	44.549	ug/l	3.08	359,257.58	2.049E-01	Pulse	0.30	3
Sr			1	44.783	ug/l	3.54	329,161.59	1.878E-01	Pulse	0.50	3
[Pb]			1	43.715	ug/l	2.45	1,188,726.96	2.267E-01	Pulse	0.50	3
Ca			1	4424.526	ug/l	1.10	144,444.61	8.174E-01	Pulse	0.50	3
Ti			1	45.421	ug/l	2.30	12,095.09	6.846E-02	Pulse	0.50	3
Na			1	4389.225	ug/l	2.37	7,702,211.83	3.585E+01	Analog	1.00	3
Mg			1	4425.098	ug/l	2.35	3,443,002.42	1.602E+01	Pulse	1.00	3
K			1	4393.625	ug/l	2.14	2,515,067.08	1.171E+01	Pulse	1.00	3
V			1	43.937	ug/l	1.55	487,599.98	2.760E+00	Pulse	0.50	3
Mn			1	43.932	ug/l	2.53	286,361.65	1.621E+00	Pulse	0.50	3
Fe			1	4454.399	ug/l	1.97	51,667,316.00	2.924E+02	Analog	0.50	3
Co			1	45.302	ug/l	1.49	1,170,755.09	6.626E+00	Pulse	0.50	3
Ni			1	45.812	ug/l	2.68	326,613.20	1.222E+00	Pulse	0.50	3
Cu			1	45.978	ug/l	2.15	925,668.84	5.239E+00	Pulse	0.50	3
Zn			1	46.594	ug/l	2.03	131,709.07	4.927E-01	Pulse	1.00	3
Cd			1	46.047	ug/l	2.57	214,733.43	8.034E-01	Pulse	0.50	3
Al			1	4641.578	ug/l	2.52	1,046,155.00	3.914E+00	Pulse	1.00	3
Se			1	45.276	ug/l	3.22	4,657.12	2.656E-03	Pulse	3.00	3
Sb			1	45.292	ug/l	2.56	470,083.04	1.759E+00	Pulse	1.00	3
Se			1	42.694	ug/l	3.55	2,341.37	1.670E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,244,661.17	1.83	98.4	Pulse	0.50	3
1	Sc		214,933.73	2.29	100.1	Pulse	0.30	3
1	Ge		176,725.87	1.62	98.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,754,289.13	2.69	99.3	Pulse	0.30	3
1	Tb		7,367,068.00	2.08	101.7	Analog	0.50	3
1	Lu		4,294,654.67	2.40	100.8	Pulse	0.50	3
1	Ge		267,376.07	2.17	98.4	Pulse	0.30	3
1	Te		14,032.75	2.90	96.0	Pulse	0.50	3
1	Li		1,413.39	5.40	98.8	Pulse	0.30	3

Quantitation Report

File Name	007CALS.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 9:36
Sample Name	CALSTD-6
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	94.008	ug/l	4.58	1,365,252.46	3.261E-01	Pulse	0.50	3
As			1	93.989	ug/l	4.47	146,762.35	3.505E-02	Pulse	1.00	3
Mo			1	94.771	ug/l	1.63	955,803.44	3.640E+00	Pulse	0.50	3
Pb			1	95.314	ug/l	4.43	5,104,258.50	1.219E+00	Pulse	1.00	3
Be			1	101.240	ug/l	3.63	8,647.51	4.128E-02	Pulse	2.00	3
Ag			1	100.619	ug/l	2.27	3,385,687.83	1.290E+01	Pulse	0.50	3
Ba			1	94.414	ug/l	5.38	329,140.52	1.938E-01	Pulse	0.50	3
Tl			1	91.809	ug/l	4.11	7,523,765.00	1.500E+00	Analog	0.50	3
Sn			1	92.915	ug/l	5.12	725,447.45	4.271E-01	Pulse	0.30	3
Sr			1	94.166	ug/l	4.34	669,760.83	3.943E-01	Pulse	0.50	3
[Pb]			1	92.673	ug/l	3.97	2,407,620.75	4.800E-01	Pulse	0.50	3
Ca			1	9328.346	ug/l	3.73	300,118.37	1.723E+00	Pulse	0.50	3
Ti			1	94.325	ug/l	3.68	24,762.34	1.421E-01	Pulse	0.50	3
Na			1	9432.986	ug/l	4.53	16,123,351.67	7.699E+01	Analog	1.00	3
Mg			1	9465.212	ug/l	4.82	7,176,640.50	3.427E+01	Analog	1.00	3
K			1	9432.630	ug/l	4.72	5,248,220.33	2.506E+01	Analog	1.00	3
V			1	93.888	ug/l	3.70	1,026,281.48	5.891E+00	Pulse	0.50	3
Mn			1	93.896	ug/l	2.95	603,308.77	3.462E+00	Pulse	0.50	3
Fe			1	9379.401	ug/l	2.76	107,287,064.00	6.157E+02	Analog	0.50	3
Co			1	94.752	ug/l	2.99	2,414,701.25	1.386E+01	Pulse	0.50	3
Ni			1	96.100	ug/l	2.70	672,815.31	2.563E+00	Pulse	0.50	3
Cu			1	94.926	ug/l	2.76	1,858,249.04	1.066E+01	Pulse	0.50	3
Zn			1	97.527	ug/l	2.01	260,755.50	9.931E-01	Pulse	1.00	3
Cd			1	96.201	ug/l	1.93	440,689.71	1.678E+00	Pulse	0.50	3
Al			1	9579.561	ug/l	2.49	2,119,857.75	8.074E+00	Pulse	1.00	3
Se			1	95.229	ug/l	4.43	9,477.46	5.579E-03	Pulse	3.00	3
Sb			1	95.232	ug/l	2.27	970,757.04	3.697E+00	Pulse	1.00	3
Se			1	94.515	ug/l	4.85	4,816.16	3.679E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,020,080.83	3.53	94.2	Pulse	0.50	3
1	Sc		209,682.08	4.31	97.6	Pulse	0.30	3
1	Ge		174,338.35	2.74	97.6	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,700,916.67	4.34	96.2	Pulse	0.30	3
1	Tb		7,154,238.50	3.69	98.8	Analog	0.50	3
1	Lu		4,191,949.83	4.10	98.4	Pulse	0.50	3
1	Ge		262,631.93	2.12	96.7	Pulse	0.30	3
1	Te		13,106.06	3.39	89.7	Pulse	0.50	3
1	Li		1,351.17	8.48	94.5	Pulse	0.30	3

Quantitation Report

File Name	008CALS.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 9:40
Sample Name	CALSTD-7
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	204.477	ug/l	4.03	2,842,051.25	7.092E-01	Pulse	0.50	3
As			1	204.468	ug/l	4.46	305,534.42	7.625E-02	Pulse	1.00	3
Mo			1	203.929	ug/l	2.64	1,983,227.96	7.833E+00	Pulse	0.50	3
Pb			1	203.375	ug/l	4.55	10,416,048.33	2.600E+00	Analog	1.00	3
Be			1	217.138	ug/l	5.23	17,922.54	8.854E-02	Pulse	2.00	3
Ag			1	182.642	ug/l	2.98	5,926,232.83	2.341E+01	Analog	0.50	3
Ba			1	204.237	ug/l	4.19	678,077.75	4.192E-01	Pulse	0.50	3
Tl			1	205.707	ug/l	2.58	15,590,343.67	3.361E+00	Analog	0.50	3
Sn			1	204.895	ug/l	4.16	1,523,156.19	9.417E-01	Pulse	0.30	3
Sr			1	204.223	ug/l	4.65	1,381,976.63	8.545E-01	Pulse	0.50	3
[Pb]			1	205.239	ug/l	3.30	4,927,448.67	1.063E+00	Pulse	0.50	3
Ca			1	20479.876	ug/l	2.44	628,998.48	3.781E+00	Pulse	0.50	3
Ti			1	203.996	ug/l	3.23	51,127.12	3.074E-01	Pulse	0.50	3
Na			1	20435.369	ug/l	4.45	33,761,081.33	1.667E+02	Analog	1.00	3
Mg			1	20410.174	ug/l	5.12	14,959,822.67	7.390E+01	Analog	1.00	3
K			1	20434.967	ug/l	4.96	10,977,859.67	5.423E+01	Analog	1.00	3
V			1	204.576	ug/l	2.52	2,134,254.50	1.283E+01	Pulse	0.50	3
Mn			1	204.561	ug/l	2.66	1,254,574.46	7.542E+00	Pulse	0.50	3
Fe			1	20446.525	ug/l	2.62	223,286,144.00	1.342E+03	Analog	0.50	3
Co			1	203.780	ug/l	2.59	4,958,205.67	2.980E+01	Pulse	0.50	3
Ni			1	202.971	ug/l	3.16	1,370,240.63	5.412E+00	Pulse	0.50	3
Cu			1	203.542	ug/l	3.21	3,776,434.75	2.270E+01	Pulse	0.50	3
Zn			1	202.177	ug/l	3.19	511,733.00	2.021E+00	Pulse	1.00	3
Cd			1	202.867	ug/l	3.12	896,090.02	3.539E+00	Pulse	0.50	3
Al			1	20298.229	ug/l	3.14	4,330,524.00	1.711E+01	Pulse	1.00	3
Se			1	203.565	ug/l	4.00	19,279.26	1.192E-02	Pulse	3.00	3
Sb			1	203.550	ug/l	3.64	2,000,501.00	7.902E+00	Pulse	1.00	3
Se			1	204.585	ug/l	3.91	9,731.37	7.946E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,640,722.83	3.16	87.0	Pulse	0.50	3
1	Sc		202,738.81	4.60	94.4	Pulse	0.30	3
1	Ge		166,414.43	2.01	93.2	Pulse	0.30	3
1	In		1,619,329.38	4.11	91.6	Pulse	0.30	3
1	Tb		6,850,351.00	4.60	94.6	Analog	0.50	3
1	Lu		4,011,597.00	4.03	94.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		253,305.86	2.53	93.3	Pulse	0.30	3
1	Te		12,258.85	4.01	83.9	Pulse	0.50	3
1	Li		1,373.39	8.76	96.0	Pulse	0.30	3

Quantitation Report

File Name	009HSAG.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 9:44
Sample Name	HSTD (Ag)
Sample Type	HSTD _Ag
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	93.036	ug/l	0.80	1,369,299.79	3.227E-01	Pulse	0.50	3
As			1	93.359	ug/l	0.54	147,733.58	3.482E-02	Pulse	1.00	3
Mo			1	94.109	ug/l	0.36	962,160.12	3.615E+00	Pulse	0.50	3
Pb			1	94.120	ug/l	0.76	5,107,824.50	1.204E+00	Pulse	1.00	3
Be			1	98.375	ug/l	1.99	8,575.31	4.012E-02	Pulse	2.00	3
Ag			1	99.480	ug/l	1.11	3,393,461.00	1.275E+01	Pulse	0.50	3
Ba			1	93.102	ug/l	0.33	331,864.16	1.911E-01	Pulse	0.50	3
Tl			1	91.317	ug/l	1.25	7,561,037.83	1.492E+00	Analog	0.50	3
Sn			1	92.277	ug/l	0.21	736,617.73	4.242E-01	Pulse	0.30	3
Sr			1	93.254	ug/l	1.26	677,981.44	3.904E-01	Pulse	0.50	3
[Pb]			1	91.987	ug/l	0.50	2,414,554.67	4.765E-01	Pulse	0.50	3
Ca			1	9199.102	ug/l	0.45	300,540.23	1.699E+00	Pulse	0.50	3
Ti			1	93.742	ug/l	1.25	24,989.94	1.413E-01	Pulse	0.50	3
Na			1	9248.849	ug/l	0.83	16,138,175.00	7.549E+01	Analog	1.00	3
Mg			1	9411.967	ug/l	1.08	7,285,549.00	3.408E+01	Analog	1.00	3
K			1	9305.070	ug/l	0.20	5,285,720.83	2.473E+01	Analog	1.00	3
V			1	92.424	ug/l	1.54	1,025,888.79	5.799E+00	Pulse	0.50	3
Mn			1	92.489	ug/l	0.93	603,392.17	3.411E+00	Pulse	0.50	3
Fe			1	9320.936	ug/l	1.76	108,245,629.33	6.119E+02	Analog	0.50	3
Co			1	93.939	ug/l	1.36	2,430,647.25	1.374E+01	Pulse	0.50	3
Ni			1	95.050	ug/l	0.72	674,681.33	2.535E+00	Pulse	0.50	3
Cu			1	93.788	ug/l	1.48	1,864,292.50	1.054E+01	Pulse	0.50	3
Zn			1	95.568	ug/l	0.50	259,219.42	9.739E-01	Pulse	1.00	3
Cd			1	94.832	ug/l	0.22	440,397.35	1.655E+00	Pulse	0.50	3
Al			1	9490.279	ug/l	1.30	2,129,093.75	7.999E+00	Pulse	1.00	3
Se			1	92.966	ug/l	0.73	9,458.00	5.447E-03	Pulse	3.00	3
Sb			1	94.262	ug/l	0.97	974,122.00	3.660E+00	Pulse	1.00	3
Se			1	89.950	ug/l	1.79	4,835.39	3.502E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,067,360.17	0.41	95.1	Pulse	0.50	3
1	Sc		213,780.07	0.62	99.5	Pulse	0.30	3
1	Ge		176,929.80	1.04	99.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,736,459.65	0.16	98.2	Pulse	0.30	3
1	Tb		7,319,621.67	0.81	101.1	Analog	0.50	3
1	Lu		4,242,970.17	0.19	99.6	Pulse	0.50	3
1	Ge		266,178.03	0.66	98.0	Pulse	0.30	3
1	Te		13,809.90	0.88	94.5	Pulse	0.50	3
1	Li		1,404.50	9.23	98.2	Pulse	0.30	3

Quantitation Report

File Name	010HSTD.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 9:47
Sample Name	HSTD
Sample Type	HSTD
Comment	=std 6
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	191.945	ug/l	2.27	2,808,867.42	6.658E-01	Pulse	0.50	3
As			1	190.700	ug/l	3.00	299,999.96	7.112E-02	Pulse	1.00	3
Mo			1	196.835	ug/l	2.80	1,990,563.50	7.560E+00	Pulse	0.50	3
Pb			1	191.843	ug/l	3.19	10,344,251.00	2.452E+00	Analog	1.00	3
Be			1	205.957	ug/l	2.33	17,751.39	8.398E-02	Pulse	2.00	3
Ag			1	174.520	ug/l	2.66	5,888,954.67	2.237E+01	Analog	0.50	3
Ba			1	191.716	ug/l	2.80	675,786.98	3.935E-01	Pulse	0.50	3
Tl			1	195.588	ug/l	2.94	15,534,447.00	3.196E+00	Analog	0.50	3
Sn			1	194.161	ug/l	2.35	1,532,538.48	8.924E-01	Pulse	0.30	3
Sr			1	192.767	ug/l	2.51	1,385,177.00	8.066E-01	Pulse	0.50	3
[Pb]			1	192.286	ug/l	2.26	4,839,335.33	9.955E-01	Pulse	0.50	3
Ca			1	19465.835	ug/l	1.83	626,687.94	3.594E+00	Pulse	0.50	3
Ti			1	196.024	ug/l	2.84	51,499.43	2.953E-01	Pulse	0.50	3
Na			1	19609.837	ug/l	1.70	33,824,706.00	1.600E+02	Analog	1.00	3
Mg			1	19413.788	ug/l	2.31	14,857,773.33	7.030E+01	Analog	1.00	3
K			1	19564.807	ug/l	2.67	10,974,048.67	5.192E+01	Analog	1.00	3
V			1	193.849	ug/l	2.10	2,119,844.42	1.216E+01	Pulse	0.50	3
Mn			1	191.469	ug/l	1.99	1,230,941.96	7.059E+00	Pulse	0.50	3
Fe			1	19432.176	ug/l	1.98	222,437,600.00	1.276E+03	Analog	0.50	3
Co			1	192.448	ug/l	1.89	4,908,240.33	2.815E+01	Pulse	0.50	3
Ni			1	193.251	ug/l	3.42	1,356,592.38	5.153E+00	Pulse	0.50	3
Cu			1	192.210	ug/l	1.68	3,739,991.25	2.145E+01	Pulse	0.50	3
Zn			1	193.786	ug/l	3.17	510,433.16	1.939E+00	Pulse	1.00	3
Cd			1	193.132	ug/l	3.69	887,010.21	3.370E+00	Pulse	0.50	3
Al			1	19355.993	ug/l	3.25	4,294,164.00	1.631E+01	Pulse	1.00	3
Se			1	192.057	ug/l	1.78	19,313.18	1.124E-02	Pulse	3.00	3
Sb			1	194.111	ug/l	3.23	1,983,932.29	7.536E+00	Pulse	1.00	3
Se			1	194.918	ug/l	3.17	9,707.02	7.572E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,863,442.50	2.94	91.2	Pulse	0.50	3
1	Sc		211,444.70	2.53	98.4	Pulse	0.30	3
1	Ge		174,428.83	2.14	97.7	Pulse	0.30	3
1	In		1,717,978.09	2.20	97.2	Pulse	0.30	3
1	Tb		7,253,557.50	2.33	100.1	Analog	0.50	3
1	Lu		4,221,252.08	3.45	99.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		263,444.66	3.17	97.0	Pulse	0.30	3
1	Te		12,828.53	3.11	87.8	Pulse	0.50	3
1	Li		1,378.95	7.13	96.4	Pulse	0.30	3

Quantitation Report

File Name	011_ICV.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 9:51
Sample Name	ICV
Sample Type	ICV
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	96.023	ug/l	2.79	1,394,966.37	3.331E-01	Pulse	0.50	3
As			1	95.917	ug/l	3.37	149,800.82	3.577E-02	Pulse	1.00	3
Mo			1	97.437	ug/l	2.07	979,280.17	3.743E+00	Pulse	0.50	3
Pb			1	96.594	ug/l	2.67	5,174,278.67	1.235E+00	Pulse	1.00	3
Be			1	100.896	ug/l	3.33	8,764.06	4.114E-02	Pulse	2.00	3
Ag			1	53.177	ug/l	2.19	1,783,304.62	6.815E+00	Pulse	0.50	3
Ba			1	98.172	ug/l	4.02	343,953.49	2.015E-01	Pulse	0.50	3
Tl			1	95.119	ug/l	1.58	7,726,404.83	1.554E+00	Analog	0.50	3
Sn			1	107.364	ug/l	3.04	842,512.40	4.935E-01	Pulse	0.30	3
Sr			1	96.131	ug/l	2.92	687,079.10	4.025E-01	Pulse	0.50	3
[Pb]			1	95.391	ug/l	2.14	2,456,074.33	4.941E-01	Pulse	0.50	3
Ca			1	9698.391	ug/l	1.87	309,873.00	1.791E+00	Pulse	0.50	3
Ti			1	99.524	ug/l	3.78	25,941.84	1.500E-01	Pulse	0.50	3
Na			1	9684.491	ug/l	2.75	16,839,366.33	7.905E+01	Analog	1.00	3
Mg			1	9854.334	ug/l	2.95	7,601,292.83	3.568E+01	Analog	1.00	3
K			1	9511.573	ug/l	3.05	5,383,558.83	2.527E+01	Analog	1.00	3
V			1	96.736	ug/l	2.77	1,050,040.98	6.069E+00	Pulse	0.50	3
Mn			1	95.370	ug/l	1.78	608,515.21	3.517E+00	Pulse	0.50	3
Fe			1	9613.559	ug/l	1.89	109,196,480.00	6.311E+02	Analog	0.50	3
Co			1	98.571	ug/l	1.94	2,494,499.08	1.442E+01	Pulse	0.50	3
Ni			1	97.173	ug/l	1.80	678,088.17	2.591E+00	Pulse	0.50	3
Cu			1	98.052	ug/l	1.42	1,905,287.33	1.101E+01	Pulse	0.50	3
Zn			1	98.783	ug/l	1.57	263,100.78	1.005E+00	Pulse	1.00	3
Cd			1	98.196	ug/l	1.38	448,309.00	1.713E+00	Pulse	0.50	3
Al			1	9446.625	ug/l	1.71	2,083,513.12	7.962E+00	Pulse	1.00	3
Se			1	98.282	ug/l	3.46	9,828.30	5.758E-03	Pulse	3.00	3
Sb			1	97.319	ug/l	1.21	988,754.00	3.778E+00	Pulse	1.00	3
Se			1	96.309	ug/l	2.74	4,949.64	3.748E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,972,013.33	1.87	93.3	Pulse	0.50	3
1	Sc		213,135.00	2.67	99.2	Pulse	0.30	3
1	Ge		173,073.94	2.02	96.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,708,188.79	3.14	96.6	Pulse	0.30	3
1	Tb		7,255,319.17	3.10	100.2	Analog	0.50	3
1	Lu		4,189,906.50	2.47	98.4	Pulse	0.50	3
1	Ge		261,708.56	1.36	96.4	Pulse	0.30	3
1	Te		13,209.47	1.85	90.4	Pulse	0.50	3
1	Li		1,477.84	4.56	103.3	Pulse	0.30	3

Quantitation Report

File Name	012_ICB.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 9:55
Sample Name	ICB
Sample Type	ICB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.002	ug/l	144.97	282.67	7.067E-05	Pulse	0.50	3
As			1	0.004	ug/l	72.13	23.67	5.943E-06	Pulse	1.00	3
Mo			1	0.045	ug/l	10.90	452.68	1.757E-03	Pulse	0.50	3
Pb			1	0.036	ug/l	33.72	7,399.28	1.854E-03	Pulse	1.00	3
Be			1	0.029	ug/l	25.87	2.50	1.250E-05	Pulse	2.00	3
Ag			1	0.004	ug/l	0.97	298.00	1.153E-03	Pulse	0.50	3
Ba			1	0.000	ug/l	-762.23	42.00	2.555E-05	Pulse	0.50	3
Tl			1	0.074	ug/l	17.80	6,187.16	1.230E-03	Pulse	0.50	3
Sn			1	0.097	ug/l	35.28	1,058.93	6.412E-04	Pulse	0.30	3
Sr			1	-0.021	ug/l	-6.05	652.01	3.934E-04	Pulse	0.50	3
[Pb]			1	0.034	ug/l	26.08	3,493.04	6.951E-04	Pulse	0.50	3
Ca			1	-0.701	ug/l	-229.45	102.00	5.986E-04	Pulse	0.50	3
Ti			1	0.003	ug/l	751.55	6.00	3.403E-05	Pulse	0.50	3
Na			1	1.006	ug/l	49.63	10,030.18	4.989E-02	Pulse	1.00	3
Mg			1	0.212	ug/l	61.19	627.34	3.125E-03	Pulse	1.00	3
K			1	0.691	ug/l	239.37	12,090.37	6.012E-02	Pulse	1.00	3
V			1	-0.038	ug/l	-5.10	500.01	2.920E-03	Pulse	0.50	3
Mn			1	-0.019	ug/l	-21.87	126.00	7.369E-04	Pulse	0.50	3
Fe			1	0.526	ug/l	20.49	10,467.93	6.110E-02	Pulse	0.50	3
Co			1	0.003	ug/l	28.23	102.00	5.985E-04	Pulse	0.50	3
Ni			1	-0.007	ug/l	-35.58	106.67	4.142E-04	Pulse	0.50	3
Cu			1	-0.054	ug/l	-170.65	23,424.88	1.370E-01	Pulse	0.50	3
Zn			1	-0.424	ug/l	-50.50	7,945.31	3.080E-02	Pulse	1.00	3
Cd			1	0.004	ug/l	28.09	25.33	9.836E-05	Pulse	0.50	3
Al			1	-3.366	ug/l	-2.63	168.33	6.492E-04	Pulse	1.00	3
Se			1	0.014	ug/l	192.30	13.11	7.852E-06	Pulse	3.00	3
Sb			1	0.026	ug/l	16.90	405.01	1.570E-03	Pulse	1.00	3
Se			1	-0.027	ug/l	-218.60	17.78	1.315E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,042,333.83	7.75	94.6	Mix	0.50	3
1	Sc		201,742.31	6.69	93.9	Pulse	0.30	3

Quantitation Report

1	Ge		171,393.63	5.18	96.0	Pulse	0.30	3
1	In		1,658,248.27	6.98	93.8	Pulse	0.30	3
1	Tb		7,042,923.33	7.72	97.2	Analog	0.50	3
1	Lu		4,008,378.50	8.26	94.1	Pulse	0.50	3
1	Ge		258,488.94	4.87	95.2	Pulse	0.30	3
1	Te		13,422.99	5.98	91.9	Pulse	0.50	3
1	Li		1,407.84	15.04	98.4	Pulse	0.30	3

Quantitation Report

File Name	013LCCV.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 9:59
Sample Name	CRIA
Sample Type	CRIA
Comment	=std 2
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.074	ug/l	6.02	15,294.70	3.788E-03	Pulse	0.50	3
As			1	1.028	ug/l	9.17	1,564.06	3.878E-04	Pulse	1.00	3
Mo			1	1.054	ug/l	5.59	10,452.27	4.054E-02	Pulse	0.50	3
Pb			1	1.022	ug/l	7.69	58,365.95	1.446E-02	Pulse	1.00	3
Be			1	1.203	ug/l	9.09	99.33	4.913E-04	Pulse	2.00	3
Ag			1	1.131	ug/l	3.94	37,548.55	1.456E-01	Pulse	0.50	3
Ba			1	0.998	ug/l	5.31	3,477.67	2.074E-03	Pulse	0.50	3
Tl			1	1.019	ug/l	5.39	84,531.25	1.668E-02	Pulse	0.50	3
Sn			1	1.208	ug/l	5.73	9,634.79	5.746E-03	Pulse	0.30	3
Sr			1	1.016	ug/l	8.67	7,925.04	4.729E-03	Pulse	0.50	3
[Pb]			1	0.956	ug/l	6.00	27,693.06	5.463E-03	Pulse	0.50	3
Ca			1	106.789	ug/l	6.59	3,482.99	2.044E-02	Pulse	0.50	3
Ti			1	1.003	ug/l	2.52	263.33	1.541E-03	Pulse	0.50	3
Na			1	111.257	ug/l	6.71	192,113.34	9.493E-01	Pulse	1.00	3
Mg			1	103.530	ug/l	5.80	76,357.92	3.772E-01	Pulse	1.00	3
K			1	103.613	ug/l	7.86	67,380.56	3.330E-01	Pulse	1.00	3
V			1	0.953	ug/l	5.97	11,088.51	6.505E-02	Pulse	0.50	3
Mn			1	1.046	ug/l	4.30	6,820.55	4.000E-02	Pulse	0.50	3
Fe			1	104.584	ug/l	6.29	1,174,262.08	6.892E+00	Pulse	0.50	3
Co			1	1.057	ug/l	5.09	26,385.95	1.548E-01	Pulse	0.50	3
Ni			1	1.057	ug/l	5.99	7,416.10	2.877E-02	Pulse	0.50	3
Cu			1	0.405	ug/l	21.82	32,031.83	1.879E-01	Pulse	0.50	3
Zn			1	-1.149	ug/l	-10.38	6,105.64	2.368E-02	Pulse	1.00	3
Cd			1	1.089	ug/l	6.73	4,900.67	1.901E-02	Pulse	0.50	3
Al			1	99.183	ug/l	4.51	22,452.26	8.705E-02	Pulse	1.00	3
Se			1	1.022	ug/l	10.97	112.00	6.681E-05	Pulse	3.00	3
Sb			1	1.041	ug/l	5.79	10,557.04	4.095E-02	Pulse	1.00	3
Se			1	0.953	ug/l	4.04	71.45	5.114E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,077,378.00	4.57	95.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		202,872.74	5.75	94.4	Pulse	0.30	3
1	Ge		170,772.39	5.39	95.6	Pulse	0.30	3
1	In		1,680,124.83	5.32	95.1	Pulse	0.30	3
1	Tb		7,076,284.50	5.88	97.7	Analog	0.50	3
1	Lu		4,047,373.00	5.83	95.0	Pulse	0.50	3
1	Ge		258,252.19	4.41	95.1	Pulse	0.30	3
1	Te		13,968.71	5.28	95.6	Pulse	0.50	3
1	Li		1,500.07	9.88	104.9	Pulse	0.30	3

Quantitation Report

File Name	014ICSA.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 10:02
Sample Name	ICSA
Sample Type	ICSA
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.293	ug/l	0.69	18,588.88	4.549E-03	Pulse	0.50	3
As			1	0.086	ug/l	9.63	148.67	3.636E-05	Pulse	1.00	3
Mo			1	1953.509	ug/l	0.41	19,415,734.67	7.503E+01	Analog	0.50	3
Pb			1	0.015	ug/l	23.97	6,476.90	1.585E-03	Pulse	1.00	3
Be			1	0.016	ug/l	107.07	1.67	7.422E-06	Pulse	2.00	3
Ag			1	0.032	ug/l	16.27	1,224.04	4.723E-03	Pulse	0.50	3
Ba			1	0.072	ug/l	15.31	288.00	1.748E-04	Pulse	0.50	3
Tl			1	0.014	ug/l	9.06	1,066.70	2.398E-04	Pulse	0.50	3
Sn			1	0.193	ug/l	6.68	1,786.78	1.084E-03	Pulse	0.30	3
Sr			1	0.921	ug/l	5.09	7,132.04	4.331E-03	Pulse	0.50	3
[Pb]			1	0.035	ug/l	11.34	3,101.63	6.968E-04	Pulse	0.50	3
Ca			1	93401.597	ug/l	0.14	3,008,763.75	1.724E+01	Pulse	0.50	3
Ti			1	2029.341	ug/l	0.89	533,502.42	3.057E+00	Pulse	0.50	3
Na			1	94708.304	ug/l	1.00	171,944,597.33	7.727E+02	Analog	1.00	3
Mg			1	94150.633	ug/l	1.17	75,862,178.67	3.409E+02	Analog	1.00	3
K			1	97329.995	ug/l	0.99	57,430,569.33	2.581E+02	Analog	1.00	3
V			1	-0.028	ug/l	-19.36	624.68	3.581E-03	Pulse	0.50	3
Mn			1	0.287	ug/l	9.75	2,102.12	1.203E-02	Pulse	0.50	3
Fe			1	95711.865	ug/l	0.70	1,096,461,546.67	6.283E+03	Analog	0.50	3
Co			1	0.014	ug/l	13.21	386.67	2.219E-03	Pulse	0.50	3
Ni			1	0.137	ug/l	6.70	1,098.04	4.241E-03	Pulse	0.50	3
Cu			1	-0.649	ug/l	-2.21	12,409.35	7.110E-02	Pulse	0.50	3
Zn			1	-1.335	ug/l	-2.40	5,653.50	2.185E-02	Pulse	1.00	3
Cd			1	0.406	ug/l	3.05	1,840.76	7.111E-03	Pulse	0.50	3
Al			1	96962.784	ug/l	0.03	21,140,538.00	8.170E+01	Analog	1.00	3
Se			1	0.069	ug/l	51.42	18.22	1.105E-05	Pulse	3.00	3
Sb			1	0.047	ug/l	3.53	614.68	2.376E-03	Pulse	1.00	3
Se			1	0.052	ug/l	257.42	19.78	1.624E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,452,480.50	2.04	83.5	Pulse	0.50	3
1	Sc		222,575.65	2.60	103.6	Pulse	0.30	3
1	Ge		174,514.17	1.65	97.7	Pulse	0.30	3
1	In		1,647,801.12	2.12	93.2	Pulse	0.30	3
1	Tb		6,996,355.67	2.26	96.6	Analog	0.50	3
1	Lu		4,086,959.25	2.00	95.9	Pulse	0.50	3
1	Ge		258,769.30	1.72	95.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Te		12,186.10	1.59	83.4	Pulse	0.50	3
1	Li		1,255.60	2.51	87.8	Pulse	0.30	3

Quantitation Report

File Name	015ICSB.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 10:06
Sample Name	ICSAB
Sample Type	ICSAB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	20.219	ug/l	3.84	294,379.73	7.018E-02	Pulse	0.50	3
As			1	18.811	ug/l	3.70	29,437.90	7.019E-03	Pulse	1.00	3
Mo			1	1923.565	ug/l	1.31	19,486,066.67	7.388E+01	Analog	0.50	3
Pb			1	0.001	ug/l	537.27	5,911.37	1.410E-03	Pulse	1.00	3
Be			1	0.022	ug/l	62.78	2.17	9.611E-06	Pulse	2.00	3
Ag			1	17.833	ug/l	1.32	602,916.69	2.286E+00	Pulse	0.50	3
Ba			1	0.073	ug/l	9.82	299.33	1.763E-04	Pulse	0.50	3
Tl			1	0.010	ug/l	11.03	812.03	1.766E-04	Pulse	0.50	3
Sn			1	0.193	ug/l	0.38	1,838.99	1.083E-03	Pulse	0.30	3
Sr			1	0.892	ug/l	2.38	7,149.37	4.210E-03	Pulse	0.50	3
[Pb]			1	0.020	ug/l	12.29	2,866.92	6.226E-04	Pulse	0.50	3
Ca			1	90928.990	ug/l	0.54	2,978,081.42	1.678E+01	Pulse	0.50	3
Ti			1	1982.850	ug/l	1.33	529,978.85	2.987E+00	Pulse	0.50	3
Na			1	93317.161	ug/l	1.59	171,812,336.00	7.613E+02	Analog	1.00	3
Mg			1	92537.049	ug/l	1.02	75,624,472.00	3.351E+02	Analog	1.00	3
K			1	95557.033	ug/l	1.46	57,184,582.67	2.534E+02	Analog	1.00	3
V			1	-0.021	ug/l	-21.45	714.68	4.025E-03	Pulse	0.50	3
Mn			1	19.075	ug/l	1.60	124,995.32	7.046E-01	Pulse	0.50	3
Fe			1	93986.984	ug/l	0.18	1,094,706,048.00	6.169E+03	Analog	0.50	3
Co			1	18.566	ug/l	0.73	481,812.73	2.716E+00	Pulse	0.50	3
Ni			1	18.156	ug/l	1.91	127,815.94	4.847E-01	Pulse	0.50	3
Cu			1	16.777	ug/l	0.61	355,296.35	2.002E+00	Pulse	0.50	3
Zn			1	16.426	ug/l	2.56	51,782.17	1.963E-01	Pulse	1.00	3
Cd			1	18.009	ug/l	1.32	82,872.29	3.142E-01	Pulse	0.50	3
Al			1	94468.769	ug/l	1.66	20,992,579.33	7.960E+01	Analog	1.00	3
Se			1	0.048	ug/l	81.05	16.78	9.848E-06	Pulse	3.00	3
Sb			1	0.041	ug/l	12.67	565.68	2.146E-03	Pulse	1.00	3
Se			1	0.019	ug/l	167.06	18.56	1.493E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,605,049.50	2.32	86.4	Mix	0.50	3
1	Sc		225,725.66	2.17	105.1	Pulse	0.30	3
1	Ge		177,438.18	1.61	99.3	Pulse	0.30	3
1	In		1,698,610.52	2.42	96.1	Pulse	0.30	3
1	Tb		7,150,289.83	1.75	98.7	Analog	0.50	3
1	Lu		4,197,666.58	3.62	98.5	Mix	0.50	3
1	Ge		263,776.03	1.73	97.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Te		12,428.96	1.18	85.1	Pulse	0.50	3
1	Li		1,306.72	6.69	91.4	Pulse	0.30	3

Quantitation Report

File Name	016CCVA.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 10:10
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	46.391	ug/l	8.95	667,310.62	1.610E-01	Pulse	0.50	3
As			1	47.134	ug/l	8.53	72,909.44	1.758E-02	Pulse	1.00	3
Mo			1	46.591	ug/l	6.47	471,193.38	1.790E+00	Pulse	0.50	3
Pb			1	47.866	ug/l	8.52	2,541,853.42	6.129E-01	Pulse	1.00	3
Be			1	47.844	ug/l	8.09	4,071.75	1.951E-02	Pulse	2.00	3
Ag			1	50.270	ug/l	6.88	1,696,128.92	6.443E+00	Pulse	0.50	3
Ba			1	46.870	ug/l	9.09	164,053.48	9.623E-02	Pulse	0.50	3
Tl			1	44.628	ug/l	9.83	3,722,726.75	7.292E-01	Pulse	0.50	3
Sn			1	46.570	ug/l	9.28	365,122.78	2.142E-01	Pulse	0.30	3
Sr			1	47.363	ug/l	9.30	338,461.42	1.985E-01	Pulse	0.50	3
[Pb]			1	45.495	ug/l	9.51	1,204,593.50	2.359E-01	Pulse	0.50	3
Ca			1	4624.509	ug/l	7.75	146,908.21	8.543E-01	Pulse	0.50	3
Ti			1	46.077	ug/l	8.82	11,935.67	6.945E-02	Pulse	0.50	3
Na			1	4649.755	ug/l	8.45	7,923,315.17	3.797E+01	Analog	1.00	3
Mg			1	4584.198	ug/l	8.69	3,463,335.25	1.660E+01	Pulse	1.00	3
K			1	4590.152	ug/l	8.50	2,551,068.08	1.223E+01	Pulse	1.00	3
V			1	46.437	ug/l	7.64	501,497.71	2.916E+00	Pulse	0.50	3
Mn			1	46.661	ug/l	8.39	295,918.38	1.721E+00	Pulse	0.50	3
Fe			1	4807.209	ug/l	7.89	54,263,468.00	3.156E+02	Analog	0.50	3
Co			1	47.796	ug/l	7.80	1,202,066.87	6.991E+00	Pulse	0.50	3
Ni			1	47.285	ug/l	7.61	331,931.85	1.261E+00	Pulse	0.50	3
Cu			1	48.215	ug/l	7.55	943,706.27	5.487E+00	Pulse	0.50	3
Zn			1	47.935	ug/l	7.18	133,189.76	5.059E-01	Pulse	1.00	3
Cd			1	47.848	ug/l	6.71	219,780.74	8.348E-01	Pulse	0.50	3
Al			1	4689.390	ug/l	7.09	1,040,897.85	3.954E+00	Pulse	1.00	3
Se			1	47.297	ug/l	9.57	4,728.92	2.774E-03	Pulse	3.00	3
Sb			1	46.973	ug/l	6.85	480,187.53	1.824E+00	Pulse	1.00	3
Se			1	45.051	ug/l	6.94	2,403.71	1.761E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,136,237.50	9.37	96.3	Mix	0.50	3
1	Sc		209,595.08	7.98	97.6	Pulse	0.30	3
1	Ge		172,593.12	7.12	96.6	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,713,357.12	8.17	96.9	Pulse	0.30	3
1	Tb		7,367,288.17	8.34	101.7	Analog	0.50	3
1	Lu		4,167,612.42	8.70	97.8	Pulse	0.50	3
1	Ge		263,993.83	6.15	97.2	Pulse	0.30	3
1	Te		13,691.87	6.63	93.7	Pulse	0.50	3
1	Li		1,381.17	9.44	96.6	Pulse	0.30	3

Quantitation Report

File Name	017_CCV.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 10:14
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	91.818	ug/l	1.62	1,319,618.54	3.185E-01	Pulse	0.50	3
As			1	92.240	ug/l	1.08	142,539.16	3.440E-02	Pulse	1.00	3
Mo			1	92.407	ug/l	1.99	929,094.81	3.549E+00	Pulse	0.50	3
Pb			1	92.943	ug/l	1.33	4,925,678.17	1.189E+00	Pulse	1.00	3
Be			1	95.553	ug/l	0.93	8,083.27	3.896E-02	Pulse	2.00	3
Ag			1	98.087	ug/l	1.40	3,290,707.33	1.257E+01	Pulse	0.50	3
Ba			1	92.920	ug/l	1.12	320,847.22	1.907E-01	Pulse	0.50	3
Tl			1	92.604	ug/l	0.72	7,492,532.67	1.513E+00	Analog	0.50	3
Sn			1	92.235	ug/l	0.46	713,249.63	4.240E-01	Pulse	0.30	3
Sr			1	93.527	ug/l	0.33	658,710.83	3.916E-01	Pulse	0.50	3
[Pb]			1	91.515	ug/l	1.19	2,347,293.92	4.741E-01	Pulse	0.50	3
Ca			1	9161.695	ug/l	0.17	291,410.43	1.692E+00	Pulse	0.50	3
Ti			1	92.825	ug/l	0.36	24,092.80	1.399E-01	Pulse	0.50	3
Na			1	9319.434	ug/l	0.93	15,780,397.67	7.607E+01	Analog	1.00	3
Mg			1	9420.123	ug/l	0.99	7,076,401.50	3.411E+01	Analog	1.00	3
K			1	9373.378	ug/l	1.02	5,166,828.17	2.491E+01	Analog	1.00	3
V			1	91.759	ug/l	0.66	991,686.59	5.757E+00	Pulse	0.50	3
Mn			1	91.866	ug/l	0.83	583,520.38	3.388E+00	Pulse	0.50	3
Fe			1	9407.225	ug/l	0.79	106,371,069.33	6.175E+02	Analog	0.50	3
Co			1	93.119	ug/l	0.11	2,345,912.92	1.362E+01	Pulse	0.50	3
Ni			1	93.465	ug/l	2.55	652,420.06	2.493E+00	Pulse	0.50	3
Cu			1	93.000	ug/l	0.42	1,800,128.67	1.045E+01	Pulse	0.50	3
Zn			1	94.172	ug/l	1.66	251,336.04	9.602E-01	Pulse	1.00	3
Cd			1	94.254	ug/l	2.24	430,430.41	1.644E+00	Pulse	0.50	3
Al			1	9206.738	ug/l	2.19	2,031,273.00	7.760E+00	Pulse	1.00	3
Se			1	93.193	ug/l	0.45	9,184.76	5.460E-03	Pulse	3.00	3
Sb			1	93.187	ug/l	1.07	947,126.83	3.618E+00	Pulse	1.00	3
Se			1	90.991	ug/l	3.49	4,613.78	3.542E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,951,530.83	0.04	92.9	Pulse	0.50	3
1	Sc		207,459.05	0.68	96.6	Pulse	0.30	3
1	Ge		172,249.79	0.33	96.4	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,682,169.10	0.62	95.2	Pulse	0.30	3
1	Tb		7,242,694.17	0.29	100.0	Analog	0.50	3
1	Lu		4,143,723.83	1.00	97.3	Pulse	0.50	3
1	Ge		261,806.84	1.48	96.4	Pulse	0.30	3
1	Te		13,033.33	2.69	89.2	Pulse	0.50	3
1	Li		1,375.61	9.52	96.2	Pulse	0.30	3

Quantitation Report

File Name	018_CCB.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 10:18
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	-414.80	257.33	6.156E-05	Pulse	0.50	3
As			1	0.005	ug/l	130.66	25.33	6.107E-06	Pulse	1.00	3
Mo			1	0.058	ug/l	17.42	598.68	2.266E-03	Pulse	0.50	3
Pb			1	0.007	ug/l	2.62	6,209.80	1.488E-03	Pulse	1.00	3
Be			1	0.002	ug/l	340.80	0.33	1.600E-06	Pulse	2.00	3
Ag			1	0.005	ug/l	10.47	314.00	1.186E-03	Pulse	0.50	3
Ba			1	-0.003	ug/l	-82.70	33.33	1.930E-05	Pulse	0.50	3
Tl			1	0.016	ug/l	14.07	1,488.07	2.850E-04	Pulse	0.50	3
Sn			1	0.032	ug/l	27.50	600.02	3.455E-04	Pulse	0.30	3
Sr			1	-0.026	ug/l	-5.79	646.68	3.721E-04	Pulse	0.50	3
[Pb]			1	0.011	ug/l	29.17	3,005.61	5.768E-04	Pulse	0.50	3
Ca			1	-0.478	ug/l	-211.78	110.00	6.399E-04	Pulse	0.50	3
Ti			1	0.015	ug/l	119.29	9.33	5.354E-05	Pulse	0.50	3
Na			1	2.267	ug/l	3.82	12,443.20	6.017E-02	Pulse	1.00	3
Mg			1	0.627	ug/l	28.43	958.36	4.627E-03	Pulse	1.00	3
K			1	0.283	ug/l	183.55	12,203.44	5.904E-02	Pulse	1.00	3
V			1	-0.040	ug/l	-6.15	488.68	2.831E-03	Pulse	0.50	3
Mn			1	-0.022	ug/l	-21.27	112.67	6.502E-04	Pulse	0.50	3
Fe			1	0.836	ug/l	23.36	14,101.04	8.145E-02	Pulse	0.50	3
Co			1	0.003	ug/l	27.24	119.33	6.897E-04	Pulse	0.50	3
Ni			1	-0.007	ug/l	-20.68	106.67	4.024E-04	Pulse	0.50	3
Cu			1	-0.102	ug/l	-41.91	22,716.71	1.317E-01	Pulse	0.50	3
Zn			1	-0.694	ug/l	-7.05	7,453.11	2.815E-02	Pulse	1.00	3
Cd			1	0.002	ug/l	86.73	14.67	5.512E-05	Pulse	0.50	3
Al			1	-3.049	ug/l	-3.13	243.00	9.170E-04	Pulse	1.00	3
Se			1	0.011	ug/l	390.45	13.22	7.662E-06	Pulse	3.00	3
Sb			1	0.017	ug/l	21.25	322.00	1.216E-03	Pulse	1.00	3
Se			1	0.011	ug/l	155.34	20.67	1.463E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,210,430.83	2.63	97.7	Pulse	0.50	3
1	Sc		206,764.85	2.29	96.3	Pulse	0.30	3

Quantitation Report

1	Ge		172,627.54	2.84	96.6	Pulse	0.30	3
1	In		1,737,419.10	3.14	98.3	Pulse	0.30	3
1	Tb		7,375,292.00	3.45	101.8	Analog	0.50	3
1	Lu		4,173,347.33	2.95	98.0	Pulse	0.50	3
1	Ge		264,781.97	1.88	97.5	Pulse	0.30	3
1	Te		14,128.15	2.35	96.7	Pulse	0.50	3
1	Li		1,384.50	9.84	96.8	Pulse	0.30	3

Quantitation Report

File Name	019SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 10:22
Sample Name	10 PPB CU ZN
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	9.946	ug/l	8.74	144,086.90	3.456E-02	Pulse	0.50	3
As			1	9.756	ug/l	7.59	15,195.04	3.642E-03	Pulse	1.00	3
Mo			1	9.951	ug/l	6.65	99,736.59	3.823E-01	Pulse	0.50	3
Pb			1	10.278	ug/l	8.51	553,382.21	1.327E-01	Pulse	1.00	3
Be			1	10.502	ug/l	7.94	885.52	4.283E-03	Pulse	2.00	3
Ag			1	11.103	ug/l	6.06	371,447.98	1.423E+00	Pulse	0.50	3
Ba			1	9.786	ug/l	7.22	34,445.38	2.011E-02	Pulse	0.50	3
Tl			1	9.713	ug/l	9.41	829,930.00	1.587E-01	Pulse	0.50	3
Sn			1	10.024	ug/l	8.75	79,167.27	4.626E-02	Pulse	0.30	3
Sr			1	9.558	ug/l	8.96	69,218.26	4.045E-02	Pulse	0.50	3
[Pb]			1	9.648	ug/l	9.72	263,700.94	5.044E-02	Pulse	0.50	3
Ca			1	967.398	ug/l	5.82	31,075.85	1.793E-01	Pulse	0.50	3
Ti			1	9.479	ug/l	9.13	2,476.83	1.431E-02	Pulse	0.50	3
Na			1	982.615	ug/l	8.08	1,665,569.50	8.058E+00	Pulse	1.00	3
Mg			1	982.389	ug/l	8.00	735,769.14	3.559E+00	Pulse	1.00	3
K			1	982.361	ug/l	8.05	550,395.79	2.662E+00	Pulse	1.00	3
V			1	9.646	ug/l	7.29	105,658.57	6.100E-01	Pulse	0.50	3
Mn			1	9.950	ug/l	8.67	63,739.31	3.682E-01	Pulse	0.50	3
Fe			1	1005.657	ug/l	8.22	11,433,970.67	6.604E+01	Analog	0.50	3
Co			1	10.146	ug/l	8.43	256,922.05	1.484E+00	Pulse	0.50	3
Ni			1	10.231	ug/l	6.90	71,310.64	2.734E-01	Pulse	0.50	3
Cu			1	9.726	ug/l	8.39	211,474.90	1.221E+00	Pulse	0.50	3
Zn			1	8.062	ug/l	10.28	29,781.94	1.142E-01	Pulse	1.00	3
Cd			1	10.326	ug/l	7.22	46,995.41	1.802E-01	Pulse	0.50	3
Al			1	993.463	ug/l	7.29	219,223.39	8.405E-01	Pulse	1.00	3
Se			1	10.149	ug/l	8.56	1,028.58	6.009E-04	Pulse	3.00	3
Sb			1	10.121	ug/l	6.21	102,663.61	3.934E-01	Pulse	1.00	3
Se			1	9.142	ug/l	12.84	511.45	3.687E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,259,255.33	9.28	98.7	Mix	0.50	3
1	Sc		207,531.16	7.42	96.6	Pulse	0.30	3
1	Ge		173,757.75	6.51	97.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,718,652.36	7.20	97.2	Pulse	0.30	3
1	Tb		7,373,800.00	6.67	101.8	Analog	0.50	3
1	Lu		4,187,975.08	7.67	98.3	Pulse	0.50	3
1	Ge		261,562.82	5.82	96.3	Pulse	0.30	3
1	Te		13,936.06	5.86	95.4	Pulse	0.50	3
1	Li		1,393.39	3.94	97.4	Pulse	0.30	3

Quantitation Report

File Name 020SMPL.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 10:25
Sample Name FA55962-1
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.009	ug/l	49.37	371.34	9.260E-05	Pulse	0.50	3
As			1	-0.003	ug/l	-90.51	13.67	3.395E-06	Pulse	1.00	3
Mo			1	0.022	ug/l	25.19	232.00	9.097E-04	Pulse	0.50	3
Pb			1	0.070	ug/l	7.40	9,188.81	2.289E-03	Pulse	1.00	3
Be			1	0.004	ug/l	254.76	0.50	2.458E-06	Pulse	2.00	3
Ag			1	0.003	ug/l	18.64	238.00	9.313E-04	Pulse	0.50	3
Ba			1	0.107	ug/l	3.56	410.01	2.460E-04	Pulse	0.50	3
Tl			1	0.012	ug/l	13.50	1,066.04	2.075E-04	Pulse	0.50	3
Sn			1	0.015	ug/l	29.39	445.57	2.676E-04	Pulse	0.30	3
Sr			1	0.007	ug/l	42.54	846.69	5.078E-04	Pulse	0.50	3
[Pb]			1	0.055	ug/l	7.90	4,113.84	8.006E-04	Pulse	0.50	3
Ca			1	8.569	ug/l	12.24	388.01	2.310E-03	Pulse	0.50	3
Ti			1	0.007	ug/l	259.49	6.67	4.008E-05	Pulse	0.50	3
Na			1	5.466	ug/l	6.45	17,107.96	8.627E-02	Pulse	1.00	3
Mg			1	0.723	ug/l	13.99	986.36	4.974E-03	Pulse	1.00	3
K			1	1.615	ug/l	45.82	12,410.56	6.257E-02	Pulse	1.00	3
V			1	-0.030	ug/l	-9.85	574.68	3.422E-03	Pulse	0.50	3
Mn			1	0.028	ug/l	30.53	416.67	2.485E-03	Pulse	0.50	3
Fe			1	2.209	ug/l	2.52	28,814.02	1.716E-01	Pulse	0.50	3
Co			1	0.002	ug/l	24.39	80.00	4.769E-04	Pulse	0.50	3
Ni			1	0.000	ug/l	-752.52	149.33	5.838E-04	Pulse	0.50	3
Cu			1	0.085	ug/l	56.79	25,600.94	1.525E-01	Pulse	0.50	3
Zn			1	-0.025	ug/l	-321.13	8,878.72	3.472E-02	Pulse	1.00	3
Cd			1	0.003	ug/l	40.58	18.00	7.037E-05	Pulse	0.50	3
Al			1	-2.889	ug/l	-8.37	268.33	1.051E-03	Pulse	1.00	3
Se			1	0.007	ug/l	78.76	12.44	7.459E-06	Pulse	3.00	3
Sb			1	0.009	ug/l	35.73	229.67	8.996E-04	Pulse	1.00	3
Se			1	-0.027	ug/l	-184.75	17.55	1.315E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,138,619.67	0.59	96.4	Mix	0.50	3
1	Sc		198,461.27	3.33	92.4	Pulse	0.30	3

Quantitation Report

1	Ge		167,999.86	2.39	94.1	Pulse	0.30	3
1	In		1,668,105.45	3.58	94.4	Pulse	0.30	3
1	Tb		7,107,018.00	3.35	98.1	Analog	0.50	3
1	Lu		4,016,604.75	3.68	94.3	Pulse	0.50	3
1	Ge		255,735.57	1.93	94.2	Pulse	0.30	3
1	Te		13,375.64	3.35	91.5	Pulse	0.50	3
1	Li		1,305.61	9.03	91.3	Pulse	0.30	3

Quantitation Report

File Name	021_MB.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 10:29
Sample Name	MP34119-MB1
Sample Type	MB
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.027	ug/l	19.63	454.01	1.094E-04	Pulse	0.50	3
As			1	0.010	ug/l	78.59	25.67	6.191E-06	Pulse	1.00	3
Mo			1	0.036	ug/l	13.97	190.67	7.357E-04	Pulse	0.50	3
Pb			1	0.321	ug/l	1.29	14,297.64	3.446E-03	Pulse	1.00	3
Be			1	0.008	ug/l	147.82	0.50	2.453E-06	Pulse	2.00	3
Ag			1	0.011	ug/l	3.04	330.00	1.273E-03	Pulse	0.50	3
Ba			1	0.062	ug/l	5.98	154.00	8.974E-05	Pulse	0.50	3
Tl			1	0.008	ug/l	2.13	454.01	8.706E-05	Pulse	0.50	3
Sn			1	0.109	ug/l	17.77	768.91	4.476E-04	Pulse	0.30	3
Sr			1	0.016	ug/l	13.40	881.35	5.134E-04	Pulse	0.50	3
[Pb]			1	0.282	ug/l	1.91	6,495.93	1.246E-03	Pulse	0.50	3
Ca			1	23.254	ug/l	4.93	492.68	2.874E-03	Pulse	0.50	3
Ti			1	0.094	ug/l	50.74	17.33	1.012E-04	Pulse	0.50	3
Na			1	11.717	ug/l	2.08	18,308.33	8.947E-02	Pulse	1.00	3
Mg			1	7.024	ug/l	6.20	3,083.58	1.507E-02	Pulse	1.00	3
K			1	3.252	ug/l	7.12	12,810.49	6.260E-02	Pulse	1.00	3
V			1	-0.057	ug/l	-5.94	606.68	3.538E-03	Pulse	0.50	3
Mn			1	0.132	ug/l	11.82	664.68	3.878E-03	Pulse	0.50	3
Fe			1	4.973	ug/l	5.23	32,537.72	1.898E-01	Pulse	0.50	3
Co			1	0.007	ug/l	4.88	123.33	7.193E-04	Pulse	0.50	3
Ni			1	0.049	ug/l	14.76	320.67	1.238E-03	Pulse	0.50	3
Cu			1	0.273	ug/l	16.67	27,111.00	1.581E-01	Pulse	0.50	3
Zn			1	0.380	ug/l	29.23	9,546.04	3.684E-02	Pulse	1.00	3
Cd			1	0.004	ug/l	93.36	13.33	5.146E-05	Pulse	0.50	3
Al			1	57.786	ug/l	2.60	7,211.31	2.783E-02	Pulse	1.00	3
Se			1	-0.052	ug/l	-21.17	9.44	5.503E-06	Pulse	3.00	3
Sb			1	0.038	ug/l	10.96	332.33	1.282E-03	Pulse	1.00	3
Se			1	-0.029	ug/l	-185.11	18.22	1.364E-03	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,214,646.33	0.72	97.8	Pulse	0.50	3
1	Sc		204,631.29	0.69	95.3	Pulse	0.30	3
1	Ge		171,439.74	0.76	96.0	Pulse	0.30	3
1	In		1,716,466.98	1.17	97.1	Pulse	0.30	3
1	Tb		7,354,340.00	0.14	101.5	Analog	0.50	3
1	Lu		4,148,643.08	0.41	97.4	Pulse	0.50	3
1	Ge		259,144.93	0.36	95.4	Pulse	0.30	3
1	Te		13,350.89	1.97	91.4	Pulse	0.50	3
1	Li		1,438.95	6.02	100.6	Pulse	0.30	3

Quantitation Report

File Name	022_BSP.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 10:33
Sample Name	MP34119-B1
Sample Type	BSP
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	209.862	ug/l	2.04	1,459,032.17	3.640E-01	Pulse	0.50	3
As			1	219.419	ug/l	2.34	164,007.94	4.092E-02	Pulse	1.00	3
Mo			1	208.609	ug/l	2.84	1,006,982.17	4.006E+00	Pulse	0.50	3
Pb			1	210.063	ug/l	2.38	5,384,242.83	1.343E+00	Pulse	1.00	3
Be			1	221.083	ug/l	1.61	9,021.83	4.508E-02	Pulse	2.00	3
Ag			1	114.346	ug/l	3.21	1,841,672.08	7.328E+00	Pulse	0.50	3
Ba			1	207.456	ug/l	1.82	343,156.06	2.129E-01	Pulse	0.50	3
Tl			1	206.740	ug/l	2.24	8,101,058.67	1.689E+00	Analog	0.50	3
Sn			1	230.599	ug/l	1.96	854,152.07	5.300E-01	Pulse	0.30	3
Sr			1	206.934	ug/l	1.84	698,080.75	4.331E-01	Pulse	0.50	3
[Pb]			1	196.246	ug/l	2.23	2,437,600.00	5.082E-01	Pulse	0.50	3
Ca			1	19831.061	ug/l	2.17	304,108.81	1.831E+00	Pulse	0.50	3
Ti			1	204.101	ug/l	2.02	25,540.68	1.538E-01	Pulse	0.50	3
Na			1	20283.098	ug/l	1.98	16,566,237.00	8.277E+01	Analog	1.00	3
Mg			1	20448.813	ug/l	2.43	7,409,178.00	3.702E+01	Analog	1.00	3
K			1	20328.147	ug/l	2.09	5,404,062.17	2.700E+01	Analog	1.00	3
V			1	207.654	ug/l	1.13	1,082,005.42	6.514E+00	Pulse	0.50	3
Mn			1	205.329	ug/l	1.87	628,797.37	3.786E+00	Pulse	0.50	3
Fe			1	20567.116	ug/l	1.95	112,125,373.33	6.751E+02	Analog	0.50	3
Co			1	211.805	ug/l	2.27	2,572,595.00	1.549E+01	Pulse	0.50	3
Ni			1	210.003	ug/l	2.51	703,840.96	2.800E+00	Pulse	0.50	3
Cu			1	213.570	ug/l	1.99	1,989,638.58	1.198E+01	Pulse	0.50	3
Zn			1	211.422	ug/l	3.31	269,809.23	1.074E+00	Pulse	1.00	3
Cd			1	210.920	ug/l	2.68	462,485.37	1.840E+00	Pulse	0.50	3
Al			1	18475.280	ug/l	2.99	1,957,032.00	7.786E+00	Pulse	1.00	3
Se			1	200.312	ug/l	0.99	9,456.90	5.867E-03	Pulse	3.00	3
Sb			1	208.526	ug/l	2.62	1,017,496.98	4.048E+00	Pulse	1.00	3
Se			1	199.893	ug/l	3.79	4,782.27	3.889E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,797,377.33	1.78	90.0	Pulse	0.50	3
1	Sc		200,177.75	1.60	93.2	Pulse	0.30	3
1	Ge		166,128.84	1.44	93.0	Pulse	0.30	3
1	In		1,611,909.24	1.40	91.2	Pulse	0.30	3
1	Tb		7,148,389.00	1.66	98.7	Analog	0.50	3
1	Lu		4,009,811.08	2.24	94.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		251,465.59	2.49	92.6	Pulse	0.30	3
1	Te		12,305.50	3.37	84.2	Pulse	0.50	3
1	Li		1,357.83	2.62	94.9	Pulse	0.30	3

Quantitation Report

File Name	023SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 10:37
Sample Name	FA56227-1A
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	7.203	ug/l	4.10	50,074.66	1.255E-02	Pulse	0.50	3
As			1	8.443	ug/l	1.73	6,297.71	1.579E-03	Pulse	1.00	3
Mo			1	16.320	ug/l	1.75	78,327.72	3.135E-01	Pulse	0.50	3
Pb			1	1.833	ug/l	2.52	52,295.82	1.311E-02	Pulse	1.00	3
Be			1	0.202	ug/l	47.17	8.67	4.202E-05	Pulse	2.00	3
Ag			1	0.027	ug/l	4.18	582.68	2.331E-03	Pulse	0.50	3
Ba			1	42.144	ug/l	1.80	69,647.93	4.328E-02	Pulse	0.50	3
Tl			1	0.115	ug/l	18.08	4,318.57	9.593E-04	Pulse	0.50	3
Sn			1	0.555	ug/l	3.50	2,370.17	1.472E-03	Pulse	0.30	3
Sr			1	2717.238	ug/l	1.50	9,144,579.00	5.682E+00	Analog	0.50	3
[Pb]			1	1.925	ug/l	1.42	24,726.51	5.498E-03	Pulse	0.50	3
Ca			1	401898.700	ug/l	0.54	6,132,378.00	3.709E+01	Analog	0.50	3
Ti			1	34.931	ug/l	2.94	4,355.84	2.634E-02	Pulse	0.50	3
Na			1	217992.345	ug/l	2.16	184,860,576.00	8.892E+02	Analog	1.00	3
Mg			1	22881.186	ug/l	2.52	8,611,612.00	4.143E+01	Analog	1.00	3
K			1	9258.307	ug/l	1.68	2,563,528.00	1.233E+01	Pulse	1.00	3
V			1	14.699	ug/l	0.28	77,044.41	4.660E-01	Pulse	0.50	3
Mn			1	75.941	ug/l	0.67	231,638.25	1.401E+00	Pulse	0.50	3
Fe			1	2766.287	ug/l	0.19	15,014,740.33	9.082E+01	Analog	0.50	3
Co			1	2.039	ug/l	2.03	24,687.71	1.493E-01	Pulse	0.50	3
Ni			1	6.369	ug/l	1.88	21,365.13	8.550E-02	Pulse	0.50	3
Cu			1	7.919	ug/l	1.63	96,198.63	5.819E-01	Pulse	0.50	3
Zn			1	141.267	ug/l	8.55	182,011.82	7.289E-01	Pulse	1.00	3
Cd			1	0.362	ug/l	2.77	794.69	3.179E-03	Pulse	0.50	3
Al			1	3996.440	ug/l	2.20	421,518.59	1.687E+00	Pulse	1.00	3
Se			1	3.761	ug/l	0.21	188.44	1.171E-04	Pulse	3.00	3
Sb			1	1.340	ug/l	0.51	6,640.54	2.657E-02	Pulse	1.00	3
Se			1	4.843	ug/l	8.25	133.67	1.081E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,497,318.33	1.06	84.4	Pulse	0.50	3
1	Sc		207,981.04	2.96	96.8	Pulse	0.30	3
1	Ge		165,328.48	1.03	92.6	Pulse	0.30	3
1	In		1,609,809.87	2.35	91.1	Pulse	0.30	3
1	Tb		7,035,524.00	1.76	97.1	Analog	0.50	3
1	Lu		3,990,421.92	1.66	93.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		249,935.42	2.13	92.0	Pulse	0.30	3
1	Te		12,362.88	1.90	84.6	Pulse	0.50	3
1	Li		1,356.72	3.41	94.9	Pulse	0.30	3

Quantitation Report

File Name	024SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 10:40
Sample Name	MP34119-D1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	5.937	ug/l	0.21	41,144.59	1.036E-02	Pulse	0.50	3
As			1	8.157	ug/l	2.98	6,060.31	1.525E-03	Pulse	1.00	3
Mo			1	16.303	ug/l	0.71	76,402.56	3.131E-01	Pulse	0.50	3
Pb			1	1.544	ug/l	1.27	44,722.17	1.126E-02	Pulse	1.00	3
Be			1	0.176	ug/l	12.99	7.50	3.660E-05	Pulse	2.00	3
Ag			1	0.028	ug/l	9.93	576.68	2.363E-03	Pulse	0.50	3
Ba			1	41.660	ug/l	0.96	67,563.38	4.278E-02	Pulse	0.50	3
Tl			1	0.052	ug/l	3.40	1,982.12	4.400E-04	Pulse	0.50	3
Sn			1	0.393	ug/l	10.24	1,737.87	1.100E-03	Pulse	0.30	3
Sr			1	2711.327	ug/l	0.73	8,954,729.00	5.669E+00	Analog	0.50	3
[Pb]			1	1.626	ug/l	0.76	21,273.88	4.723E-03	Pulse	0.50	3
Ca			1	403822.965	ug/l	2.39	6,046,798.33	3.727E+01	Analog	0.50	3
Ti			1	35.708	ug/l	2.45	4,369.20	2.693E-02	Pulse	0.50	3
Na			1	218654.273	ug/l	0.35	182,674,000.00	8.919E+02	Analog	1.00	3
Mg			1	22942.650	ug/l	0.78	8,506,583.00	4.154E+01	Analog	1.00	3
K			1	9237.620	ug/l	1.36	2,519,270.08	1.230E+01	Pulse	1.00	3
V			1	14.724	ug/l	0.70	75,741.98	4.668E-01	Pulse	0.50	3
Mn			1	75.300	ug/l	1.36	225,402.52	1.389E+00	Pulse	0.50	3
Fe			1	2740.117	ug/l	2.00	14,595,913.33	8.996E+01	Analog	0.50	3
Co			1	2.002	ug/l	2.79	23,787.27	1.466E-01	Pulse	0.50	3
Ni			1	6.390	ug/l	1.57	20,928.00	8.577E-02	Pulse	0.50	3
Cu			1	5.559	ug/l	3.43	73,186.59	4.511E-01	Pulse	0.50	3
Zn			1	24.269	ug/l	0.52	37,617.21	1.542E-01	Pulse	1.00	3
Cd			1	0.374	ug/l	3.86	800.69	3.282E-03	Pulse	0.50	3
Al			1	3979.251	ug/l	0.77	409,842.95	1.680E+00	Pulse	1.00	3
Se			1	3.756	ug/l	1.44	184.67	1.169E-04	Pulse	3.00	3
Sb			1	1.297	ug/l	1.48	6,277.75	2.573E-02	Pulse	1.00	3
Se			1	4.363	ug/l	6.77	120.11	9.879E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,504,445.17	0.88	84.5	Pulse	0.50	3
1	Sc		204,806.89	1.58	95.3	Pulse	0.30	3
1	Ge		162,256.55	0.47	90.8	Pulse	0.30	3
1	In		1,579,418.86	0.91	89.4	Pulse	0.30	3
1	Tb		6,983,142.67	0.47	96.4	Analog	0.50	3
1	Lu		3,972,447.25	1.13	93.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		243,977.84	0.67	89.8	Pulse	0.30	3
1	Te		12,164.08	1.32	83.3	Pulse	0.50	3
1	Li		1,281.16	7.01	89.6	Pulse	0.30	3

Quantitation Report

File Name 025SMPL.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 10:44
Sample Name MP34119-SD1
Sample Type Sample
Comment
Prep Dilution 10.000
Auto Dilution N/A
Total Dilution 10.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	6.195	ug/l	0.76	8,916.73	2.211E-03	Pulse	0.50	3
As			1	8.417	ug/l	5.20	1,283.38	3.182E-04	Pulse	1.00	3
Mo			1	16.258	ug/l	2.64	15,856.04	6.249E-02	Pulse	0.50	3
Pb			1	1.750	ug/l	3.47	14,653.61	3.635E-03	Pulse	1.00	3
Be			1	0.247	ug/l	127.31	2.17	1.085E-05	Pulse	2.00	3
Ag			1	0.027	ug/l	31.48	234.67	9.245E-04	Pulse	0.50	3
Ba			1	42.152	ug/l	1.30	14,249.62	8.678E-03	Pulse	0.50	3
Tl			1	0.075	ug/l	2.92	688.69	1.400E-04	Pulse	0.50	3
Sn			1	0.373	ug/l	5.29	604.46	3.681E-04	Pulse	0.30	3
Sr			1	2579.143	ug/l	0.83	1,771,833.04	1.079E+00	Pulse	0.50	3
[Pb]			1	1.766	ug/l	2.09	7,038.81	1.431E-03	Pulse	0.50	3
Ca			1	389074.429	ug/l	1.52	1,201,975.75	7.182E+00	Pulse	0.50	3
Ti			1	36.448	ug/l	4.11	924.03	5.521E-03	Pulse	0.50	3
Na			1	225530.739	ug/l	1.06	36,824,833.33	1.840E+02	Analog	1.00	3
Mg			1	23206.319	ug/l	0.28	1,681,923.59	8.405E+00	Pulse	1.00	3
K			1	9451.562	ug/l	0.73	513,042.17	2.564E+00	Pulse	1.00	3
V			1	14.241	ug/l	0.52	15,830.44	9.458E-02	Pulse	0.50	3
Mn			1	76.681	ug/l	1.87	47,544.54	2.841E-01	Pulse	0.50	3
Fe			1	2705.834	ug/l	2.11	2,976,833.08	1.779E+01	Pulse	0.50	3
Co			1	2.108	ug/l	3.39	5,194.71	3.104E-02	Pulse	0.50	3
Ni			1	6.797	ug/l	2.01	4,747.26	1.871E-02	Pulse	0.50	3
Cu			1	5.862	ug/l	6.67	34,808.59	2.080E-01	Pulse	0.50	3
Zn			1	11.250	ug/l	6.77	11,677.87	4.602E-02	Pulse	1.00	3
Cd			1	0.338	ug/l	11.78	154.67	6.097E-04	Pulse	0.50	3
Al			1	3874.523	ug/l	0.63	83,718.29	3.299E-01	Pulse	1.00	3
Se			1	3.159	ug/l	23.47	41.89	2.551E-05	Pulse	3.00	3
Sb			1	1.361	ug/l	3.50	1,480.06	5.832E-03	Pulse	1.00	3
Se			1	5.110	ug/l	15.62	43.11	3.402E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,919,169.50	1.05	92.3	Pulse	0.50	3
1	Sc		200,117.30	0.87	93.2	Pulse	0.30	3
1	Ge		167,368.20	0.86	93.7	Pulse	0.30	3
1	In		1,642,122.40	0.34	92.9	Pulse	0.30	3
1	Tb		7,212,878.83	0.12	99.6	Analog	0.50	3
1	Lu		4,032,437.83	1.49	94.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		253,755.57	0.56	93.4	Pulse	0.30	3
1	Te		12,674.42	1.54	86.7	Pulse	0.50	3
1	Li		1,335.61	0.76	93.4	Pulse	0.30	3

Quantitation Report

File Name	026SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 10:48
Sample Name	MP34119-S1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	200.202	ug/l	0.92	1,383,774.13	3.472E-01	Pulse	0.50	3
As			1	219.993	ug/l	0.97	163,482.79	4.102E-02	Pulse	1.00	3
Mo			1	210.444	ug/l	0.85	999,410.13	4.042E+00	Pulse	0.50	3
Pb			1	188.264	ug/l	0.71	4,797,560.50	1.204E+00	Pulse	1.00	3
Be			1	186.982	ug/l	0.58	7,868.19	3.812E-02	Pulse	2.00	3
Ag			1	97.594	ug/l	0.47	1,546,499.83	6.254E+00	Pulse	0.50	3
Ba			1	232.314	ug/l	0.74	380,018.56	2.384E-01	Pulse	0.50	3
Tl			1	195.193	ug/l	0.91	7,107,575.00	1.595E+00	Analog	0.50	3
Sn			1	195.787	ug/l	0.98	717,366.22	4.500E-01	Pulse	0.30	3
Sr			1	2886.796	ug/l	0.66	9,621,325.33	6.036E+00	Analog	0.50	3
[Pb]			1	188.723	ug/l	1.52	2,178,440.92	4.888E-01	Pulse	0.50	3
Ca			1	422699.026	ug/l	0.65	6,344,474.67	3.901E+01	Analog	0.50	3
Ti			1	217.257	ug/l	0.70	26,621.54	1.637E-01	Pulse	0.50	3
Na			1	237085.202	ug/l	0.33	199,603,312.00	9.671E+02	Analog	1.00	3
Mg			1	41292.920	ug/l	0.64	15,428,898.00	7.476E+01	Analog	1.00	3
K			1	28326.856	ug/l	0.46	7,761,766.83	3.760E+01	Analog	1.00	3
V			1	213.688	ug/l	0.37	1,090,134.71	6.703E+00	Pulse	0.50	3
Mn			1	263.908	ug/l	0.50	791,256.73	4.865E+00	Pulse	0.50	3
Fe			1	21518.419	ug/l	0.34	114,868,072.00	7.063E+02	Analog	0.50	3
Co			1	197.640	ug/l	1.07	2,350,470.42	1.445E+01	Pulse	0.50	3
Ni			1	193.525	ug/l	0.49	638,128.06	2.580E+00	Pulse	0.50	3
Cu			1	192.642	ug/l	0.85	1,759,500.25	1.082E+01	Pulse	0.50	3
Zn			1	189.592	ug/l	0.94	238,950.32	9.663E-01	Pulse	1.00	3
Cd			1	186.994	ug/l	1.38	403,316.04	1.631E+00	Pulse	0.50	3
Al			1	21008.036	ug/l	1.07	2,189,438.25	8.853E+00	Pulse	1.00	3
Se			1	198.175	ug/l	0.29	9,252.68	5.805E-03	Pulse	3.00	3
Sb			1	172.908	ug/l	1.31	829,973.48	3.357E+00	Pulse	1.00	3
Se			1	204.147	ug/l	1.50	4,733.59	3.972E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,456,956.67	0.43	83.6	Pulse	0.50	3
1	Sc		206,400.25	2.21	96.1	Pulse	0.30	3
1	Ge		162,647.69	2.52	91.1	Pulse	0.30	3
1	In		1,593,911.92	1.88	90.2	Pulse	0.30	3
1	Tb		7,029,466.17	2.18	97.0	Analog	0.50	3
1	Lu		3,984,913.92	1.36	93.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		247,291.61	2.09	91.0	Pulse	0.30	3
1	Te		11,917.91	0.06	81.6	Pulse	0.50	3
1	Li		1,423.39	8.06	99.5	Pulse	0.30	3

Quantitation Report

File Name	027SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 10:52
Sample Name	MP34119-S2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	208.874	ug/l	1.03	1,457,678.50	3.623E-01	Pulse	0.50	3
As			1	227.327	ug/l	0.90	170,570.28	4.239E-02	Pulse	1.00	3
Mo			1	215.457	ug/l	2.83	1,043,028.00	4.138E+00	Pulse	0.50	3
Pb			1	193.214	ug/l	0.14	4,971,795.67	1.236E+00	Pulse	1.00	3
Be			1	193.711	ug/l	0.62	8,220.66	3.950E-02	Pulse	2.00	3
Ag			1	99.391	ug/l	1.92	1,605,587.88	6.369E+00	Pulse	0.50	3
Ba			1	241.879	ug/l	0.78	399,625.19	2.483E-01	Pulse	0.50	3
Tl			1	204.506	ug/l	0.75	7,451,969.83	1.671E+00	Analog	0.50	3
Sn			1	199.341	ug/l	1.28	737,579.07	4.582E-01	Pulse	0.30	3
Sr			1	2918.595	ug/l	1.29	9,824,923.00	6.103E+00	Analog	0.50	3
[Pb]			1	195.858	ug/l	0.68	2,262,314.83	5.072E-01	Pulse	0.50	3
Ca			1	421905.851	ug/l	0.91	6,456,521.67	3.894E+01	Analog	0.50	3
Ti			1	223.888	ug/l	0.78	27,971.35	1.687E-01	Pulse	0.50	3
Na			1	237992.518	ug/l	1.04	202,060,058.67	9.708E+02	Analog	1.00	3
Mg			1	42227.852	ug/l	0.30	15,912,752.33	7.645E+01	Analog	1.00	3
K			1	29360.903	ug/l	0.54	8,112,464.50	3.897E+01	Analog	1.00	3
V			1	219.976	ug/l	0.73	1,144,104.17	6.900E+00	Pulse	0.50	3
Mn			1	272.118	ug/l	0.25	831,846.75	5.017E+00	Pulse	0.50	3
Fe			1	22413.205	ug/l	0.28	121,987,317.33	7.356E+02	Analog	0.50	3
Co			1	202.889	ug/l	1.07	2,460,107.08	1.484E+01	Pulse	0.50	3
Ni			1	198.215	ug/l	1.40	666,264.81	2.643E+00	Pulse	0.50	3
Cu			1	196.616	ug/l	1.23	1,830,315.58	1.104E+01	Pulse	0.50	3
Zn			1	196.426	ug/l	1.49	252,053.47	9.999E-01	Pulse	1.00	3
Cd			1	191.825	ug/l	1.22	421,848.19	1.673E+00	Pulse	0.50	3
Al			1	22200.070	ug/l	1.65	2,358,374.58	9.355E+00	Pulse	1.00	3
Se			1	205.179	ug/l	0.53	9,674.45	6.010E-03	Pulse	3.00	3
Sb			1	174.358	ug/l	1.32	853,282.02	3.385E+00	Pulse	1.00	3
Se			1	210.546	ug/l	1.26	4,947.53	4.096E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,460,292.67	1.32	83.7	Pulse	0.50	3
1	Sc		208,145.90	0.96	96.9	Pulse	0.30	3
1	Ge		165,819.35	1.33	92.8	Pulse	0.30	3
1	In		1,609,787.23	0.80	91.1	Pulse	0.30	3
1	Tb		7,141,204.17	0.51	98.6	Analog	0.50	3
1	Lu		4,023,735.83	0.34	94.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		252,107.89	0.81	92.8	Pulse	0.30	3
1	Te		12,080.68	1.38	82.7	Pulse	0.50	3
1	Li		1,330.05	3.28	93.0	Pulse	0.30	3

Quantitation Report

File Name	028SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 10:56
Sample Name	MP34119-PS1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	25.586	ug/l	4.75	173,964.41	4.443E-02	Pulse	0.50	3
As			1	28.617	ug/l	4.45	20,910.07	5.340E-03	Pulse	1.00	3
Mo			1	36.097	ug/l	1.41	170,902.55	6.933E-01	Pulse	0.50	3
Pb			1	20.591	ug/l	4.37	520,531.87	1.329E-01	Pulse	1.00	3
Be			1	18.391	ug/l	8.22	765.85	3.751E-03	Pulse	2.00	3
Ag			1	5.218	ug/l	1.48	82,558.28	3.349E-01	Pulse	0.50	3
Ba			1	61.618	ug/l	3.10	99,880.04	6.326E-02	Pulse	0.50	3
Tl			1	18.751	ug/l	3.40	683,444.06	1.532E-01	Pulse	0.50	3
Sn			1	22.018	ug/l	4.74	80,151.75	5.078E-02	Pulse	0.30	3
Sr			1	2741.347	ug/l	4.18	9,048,328.33	5.732E+00	Analog	0.50	3
[Pb]			1	20.363	ug/l	3.78	237,292.14	5.320E-02	Pulse	0.50	3
Ca			1	406498.783	ug/l	2.68	6,048,125.50	3.752E+01	Analog	0.50	3
Ti			1	55.140	ug/l	4.24	6,701.94	4.156E-02	Pulse	0.50	3
Na			1	221373.856	ug/l	4.08	184,571,456.00	9.030E+02	Analog	1.00	3
Mg			1	24874.680	ug/l	4.10	9,204,944.33	4.504E+01	Analog	1.00	3
K			1	11078.296	ug/l	4.20	3,013,157.58	1.474E+01	Pulse	1.00	3
V			1	34.878	ug/l	2.29	177,100.07	1.098E+00	Pulse	0.50	3
Mn			1	95.213	ug/l	2.87	283,111.48	1.756E+00	Pulse	0.50	3
Fe			1	4726.073	ug/l	2.74	25,009,991.33	1.551E+02	Analog	0.50	3
Co			1	21.415	ug/l	2.59	252,496.25	1.566E+00	Pulse	0.50	3
Ni			1	25.017	ug/l	2.30	82,351.37	3.341E-01	Pulse	0.50	3
Cu			1	24.948	ug/l	3.57	245,917.30	1.526E+00	Pulse	0.50	3
Zn			1	31.179	ug/l	3.15	46,370.11	1.881E-01	Pulse	1.00	3
Cd			1	18.591	ug/l	2.79	39,977.01	1.622E-01	Pulse	0.50	3
Al			1	5728.599	ug/l	2.64	595,684.04	2.417E+00	Pulse	1.00	3
Se			1	23.245	ug/l	3.28	1,084.92	6.871E-04	Pulse	3.00	3
Sb			1	19.437	ug/l	1.83	93,131.60	3.778E-01	Pulse	1.00	3
Se			1	25.102	ug/l	1.06	588.23	5.008E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,463,822.50	3.16	83.7	Pulse	0.50	3
1	Sc		204,595.52	3.59	95.2	Pulse	0.30	3
1	Ge		161,275.79	2.28	90.3	Pulse	0.30	3
1	In		1,580,010.81	3.50	89.4	Pulse	0.30	3
1	Tb		6,946,803.00	3.92	95.9	Analog	0.50	3
1	Lu		3,919,850.17	3.57	92.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,548.40	1.64	90.8	Pulse	0.30	3
1	Te		11,747.18	3.53	80.4	Pulse	0.50	3
1	Li		1,367.83	4.59	95.6	Pulse	0.30	3

Quantitation Report

File Name	029CCVA.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 11:00
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	42.835	ug/l	3.54	604,764.37	1.486E-01	Pulse	0.50	3
As			1	43.074	ug/l	2.80	65,390.38	1.607E-02	Pulse	1.00	3
Mo			1	45.303	ug/l	2.67	436,581.11	1.740E+00	Pulse	0.50	3
Pb			1	46.334	ug/l	3.24	2,414,605.75	5.933E-01	Pulse	1.00	3
Be			1	47.643	ug/l	3.53	3,828.36	1.943E-02	Pulse	2.00	3
Ag			1	48.608	ug/l	2.92	1,562,990.88	6.230E+00	Pulse	0.50	3
Ba			1	44.614	ug/l	2.95	150,464.42	9.160E-02	Pulse	0.50	3
Tl			1	43.344	ug/l	2.27	3,571,517.67	7.083E-01	Pulse	0.50	3
Sn			1	44.515	ug/l	3.90	336,260.74	2.047E-01	Pulse	0.30	3
Sr			1	44.417	ug/l	3.22	305,882.66	1.862E-01	Pulse	0.50	3
[Pb]			1	43.686	ug/l	3.28	1,142,317.50	2.266E-01	Pulse	0.50	3
Ca			1	4309.917	ug/l	3.31	131,673.01	7.963E-01	Pulse	0.50	3
Ti			1	43.710	ug/l	4.59	10,895.73	6.588E-02	Pulse	0.50	3
Na			1	4528.080	ug/l	3.82	7,286,369.33	3.698E+01	Analog	1.00	3
Mg			1	4402.434	ug/l	3.88	3,141,137.42	1.594E+01	Pulse	1.00	3
K			1	4307.010	ug/l	3.80	2,261,102.50	1.148E+01	Pulse	1.00	3
V			1	43.336	ug/l	2.80	450,143.35	2.722E+00	Pulse	0.50	3
Mn			1	43.792	ug/l	2.94	267,189.82	1.616E+00	Pulse	0.50	3
Fe			1	4569.399	ug/l	3.05	49,607,589.33	3.000E+02	Analog	0.50	3
Co			1	45.224	ug/l	2.82	1,093,912.12	6.614E+00	Pulse	0.50	3
Ni			1	44.850	ug/l	2.54	300,165.73	1.196E+00	Pulse	0.50	3
Cu			1	45.117	ug/l	3.56	850,534.33	5.144E+00	Pulse	0.50	3
Zn			1	45.805	ug/l	3.60	121,661.98	4.850E-01	Pulse	1.00	3
Cd			1	46.258	ug/l	3.20	202,466.44	8.071E-01	Pulse	0.50	3
Al			1	4327.359	ug/l	3.82	915,391.94	3.649E+00	Pulse	1.00	3
Se			1	44.337	ug/l	3.27	4,273.04	2.601E-03	Pulse	3.00	3
Sb			1	45.620	ug/l	2.98	444,431.06	1.771E+00	Pulse	1.00	3
Se			1	43.764	ug/l	1.88	2,169.46	1.711E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,044,563.33	2.49	94.6	Pulse	0.50	3
1	Sc		197,201.98	3.42	91.8	Pulse	0.30	3
1	Ge		165,483.63	3.22	92.6	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,643,713.79	3.15	93.0	Pulse	0.30	3
1	Tb		7,329,011.00	3.42	101.2	Analog	0.50	3
1	Lu		4,072,292.25	3.24	95.6	Pulse	0.50	3
1	Ge		251,025.17	2.96	92.4	Pulse	0.30	3
1	Te		12,683.10	2.51	86.8	Pulse	0.50	3
1	Li		1,283.38	3.15	89.7	Pulse	0.30	3

Quantitation Report

File Name	030_CCV.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 11:03
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	92.156	ug/l	4.18	1,244,208.25	3.197E-01	Pulse	0.50	3
As			1	92.850	ug/l	5.70	134,723.19	3.463E-02	Pulse	1.00	3
Mo			1	95.418	ug/l	3.12	890,602.44	3.665E+00	Pulse	0.50	3
Pb			1	96.623	ug/l	4.48	4,809,557.67	1.236E+00	Pulse	1.00	3
Be			1	99.618	ug/l	3.65	7,818.84	4.062E-02	Pulse	2.00	3
Ag			1	101.662	ug/l	2.77	3,166,271.00	1.303E+01	Pulse	0.50	3
Ba			1	94.330	ug/l	4.41	305,344.23	1.936E-01	Pulse	0.50	3
Tl			1	96.204	ug/l	3.70	7,468,145.17	1.572E+00	Analog	0.50	3
Sn			1	93.654	ug/l	5.14	678,777.63	4.305E-01	Pulse	0.30	3
Sr			1	94.021	ug/l	4.81	620,678.77	3.936E-01	Pulse	0.50	3
[Pb]			1	92.710	ug/l	3.72	2,281,517.83	4.802E-01	Pulse	0.50	3
Ca			1	9230.693	ug/l	2.27	271,935.66	1.705E+00	Pulse	0.50	3
Ti			1	91.761	ug/l	2.50	22,058.43	1.383E-01	Pulse	0.50	3
Na			1	9587.280	ug/l	3.68	15,061,437.67	7.825E+01	Analog	1.00	3
Mg			1	9617.481	ug/l	4.31	6,702,008.83	3.483E+01	Analog	1.00	3
K			1	9168.643	ug/l	3.77	4,689,206.00	2.436E+01	Pulse	1.00	3
V			1	93.243	ug/l	1.32	933,408.79	5.850E+00	Pulse	0.50	3
Mn			1	92.755	ug/l	2.36	545,682.00	3.420E+00	Pulse	0.50	3
Fe			1	9665.911	ug/l	2.97	101,223,042.67	6.345E+02	Analog	0.50	3
Co			1	94.911	ug/l	2.09	2,214,708.42	1.388E+01	Pulse	0.50	3
Ni			1	94.967	ug/l	2.79	615,453.77	2.533E+00	Pulse	0.50	3
Cu			1	94.979	ug/l	2.29	1,702,284.04	1.067E+01	Pulse	0.50	3
Zn			1	95.839	ug/l	3.94	237,281.01	9.765E-01	Pulse	1.00	3
Cd			1	96.717	ug/l	3.27	410,037.51	1.687E+00	Pulse	0.50	3
Al			1	9183.192	ug/l	3.25	1,880,917.33	7.740E+00	Pulse	1.00	3
Se			1	93.824	ug/l	4.74	8,667.30	5.497E-03	Pulse	3.00	3
Sb			1	95.857	ug/l	3.28	904,356.94	3.722E+00	Pulse	1.00	3
Se			1	91.610	ug/l	2.49	4,394.17	3.566E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,754,578.50	3.26	89.2	Pulse	0.50	3
1	Sc		192,612.90	3.01	89.7	Pulse	0.30	3
1	Ge		159,568.54	1.32	89.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,578,747.33	3.98	89.3	Pulse	0.30	3
1	Tb		7,048,495.17	3.68	97.3	Analog	0.50	3
1	Lu		3,896,546.00	4.08	91.5	Pulse	0.50	3
1	Ge		243,120.25	2.34	89.5	Pulse	0.30	3
1	Te		12,324.20	1.19	84.3	Pulse	0.50	3
1	Li		1,376.72	5.69	96.3	Pulse	0.30	3

Quantitation Report

File Name	031_CCB.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 11:07
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.004	ug/l	-46.44	198.67	5.024E-05	Pulse	0.50	3
As			1	0.005	ug/l	10.83	25.33	6.401E-06	Pulse	1.00	3
Mo			1	0.029	ug/l	9.98	282.67	1.149E-03	Pulse	0.50	3
Pb			1	0.011	ug/l	34.36	6,073.75	1.535E-03	Pulse	1.00	3
Be			1	0.004	ug/l	247.96	0.50	2.610E-06	Pulse	2.00	3
Ag			1	0.006	ug/l	39.31	342.67	1.394E-03	Pulse	0.50	3
Ba			1	-0.003	ug/l	-45.97	33.33	2.044E-05	Pulse	0.50	3
Tl			1	0.018	ug/l	17.20	1,552.08	3.071E-04	Pulse	0.50	3
Sn			1	0.052	ug/l	63.76	711.18	4.336E-04	Pulse	0.30	3
Sr			1	-0.011	ug/l	-58.60	705.35	4.319E-04	Pulse	0.50	3
[Pb]			1	0.008	ug/l	60.87	2,837.58	5.609E-04	Pulse	0.50	3
Ca			1	0.094	ug/l	287.23	122.00	7.455E-04	Pulse	0.50	3
Ti			1	-0.012	ug/l	-68.28	2.00	1.228E-05	Pulse	0.50	3
Na			1	5.235	ug/l	7.53	16,283.61	8.438E-02	Pulse	1.00	3
Mg			1	0.059	ug/l	346.20	495.34	2.572E-03	Pulse	1.00	3
K			1	-0.445	ug/l	-115.86	11,022.08	5.711E-02	Pulse	1.00	3
V			1	-0.044	ug/l	-6.90	414.01	2.532E-03	Pulse	0.50	3
Mn			1	-0.024	ug/l	-5.61	93.33	5.705E-04	Pulse	0.50	3
Fe			1	0.447	ug/l	50.56	9,139.01	5.592E-02	Pulse	0.50	3
Co			1	0.003	ug/l	67.88	110.67	6.768E-04	Pulse	0.50	3
Ni			1	-0.006	ug/l	-57.14	105.33	4.283E-04	Pulse	0.50	3
Cu			1	-0.161	ug/l	-9.91	20,488.20	1.252E-01	Pulse	0.50	3
Zn			1	-0.675	ug/l	-4.00	6,970.94	2.833E-02	Pulse	1.00	3
Cd			1	0.003	ug/l	21.77	19.33	7.863E-05	Pulse	0.50	3
Al			1	-3.365	ug/l	-6.41	160.00	6.504E-04	Pulse	1.00	3
Se			1	-0.030	ug/l	-92.80	8.56	5.265E-06	Pulse	3.00	3
Sb			1	0.028	ug/l	15.49	401.34	1.632E-03	Pulse	1.00	3
Se			1	0.003	ug/l	2638.72	18.56	1.433E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,061,327.00	1.69	94.9	Pulse	0.50	3
1	Sc		193,035.72	1.56	89.9	Pulse	0.30	3

Quantitation Report

1	Ge		163,599.43	0.96	91.6	Pulse	0.30	3
1	In		1,631,911.18	2.21	92.3	Pulse	0.30	3
1	Tb		7,189,524.17	2.06	99.3	Analog	0.50	3
1	Lu		3,959,269.83	2.09	92.9	Pulse	0.50	3
1	Ge		246,011.32	0.93	90.6	Pulse	0.30	3
1	Te		13,021.34	3.60	89.1	Pulse	0.50	3
1	Li		1,393.39	2.31	97.4	Pulse	0.30	3

Quantitation Report

File Name	032_MB.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 11:11
Sample Name	MP34101-MB1
Sample Type	MB
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.301	ug/l	1.98	2,300.15	5.848E-04	Pulse	0.50	3
As			1	0.055	ug/l	27.43	57.67	1.470E-05	Pulse	1.00	3
Mo			1	0.141	ug/l	8.47	656.68	2.755E-03	Pulse	0.50	3
Pb			1	0.057	ug/l	10.85	6,927.07	1.762E-03	Pulse	1.00	3
Be			1	0.022	ug/l	115.73	1.00	5.328E-06	Pulse	2.00	3
Ag			1	0.031	ug/l	5.62	610.01	2.562E-03	Pulse	0.50	3
Ba			1	0.134	ug/l	8.84	256.00	1.638E-04	Pulse	0.50	3
Tl			1	0.023	ug/l	18.37	994.03	2.038E-04	Pulse	0.50	3
Sn			1	0.804	ug/l	6.08	3,192.52	2.045E-03	Pulse	0.30	3
Sr			1	0.074	ug/l	7.85	989.36	6.333E-04	Pulse	0.50	3
[Pb]			1	0.051	ug/l	7.40	3,171.64	6.494E-04	Pulse	0.50	3
Ca			1	30.480	ug/l	6.65	554.68	3.541E-03	Pulse	0.50	3
Ti			1	0.152	ug/l	52.31	22.67	1.449E-04	Pulse	0.50	3
Na			1	31.701	ug/l	2.72	32,016.10	1.710E-01	Pulse	1.00	3
Mg			1	8.674	ug/l	0.72	3,382.29	1.806E-02	Pulse	1.00	3
K			1	2.616	ug/l	56.20	11,561.05	6.176E-02	Pulse	1.00	3
V			1	0.157	ug/l	7.57	1,602.74	1.023E-02	Pulse	0.50	3
Mn			1	0.174	ug/l	6.59	732.02	4.669E-03	Pulse	0.50	3
Fe			1	10.934	ug/l	3.41	60,465.27	3.854E-01	Pulse	0.50	3
Co			1	0.019	ug/l	8.77	250.00	1.593E-03	Pulse	0.50	3
Ni			1	0.039	ug/l	20.18	264.00	1.108E-03	Pulse	0.50	3
Cu			1	-0.172	ug/l	-30.77	20,920.68	1.335E-01	Pulse	0.50	3
Zn			1	-1.079	ug/l	-10.33	7,068.97	2.967E-02	Pulse	1.00	3
Cd			1	0.006	ug/l	79.56	18.00	7.608E-05	Pulse	0.50	3
Al			1	0.010	ug/l	1842.65	831.35	3.490E-03	Pulse	1.00	3
Se			1	0.025	ug/l	79.94	12.11	7.760E-06	Pulse	3.00	3
Sb			1	0.112	ug/l	3.55	649.68	2.727E-03	Pulse	1.00	3
Se			1	-0.004	ug/l	-3328.66	14.44	1.413E-03	Pulse	3.00	3

Quantitation Report

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,884,245.83	1.28	91.6	Pulse	0.50	3
1	Sc		187,284.01	2.19	87.2	Pulse	0.30	3
1	Ge		156,793.45	2.84	87.8	Pulse	0.30	3
1	In		1,562,348.65	2.21	88.4	Pulse	0.30	3
1	Tb		7,101,534.83	2.64	98.0	Analog	0.50	3
1	Lu		3,932,301.17	2.00	92.3	Pulse	0.50	3
1	Ge		238,263.72	1.96	87.7	Pulse	0.30	3
1	Te		10,236.88	1.30	70.1	Pulse	0.50	3
1	Li		1,295.60	7.69	90.6	Pulse	0.30	3

Quantitation Report

File Name	033_BSP.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 11:15
Sample Name	MP34101-B1
Sample Type	BSP
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	193.911	ug/l	2.91	1,320,198.04	3.363E-01	Pulse	0.50	3
As			1	188.966	ug/l	2.61	138,326.83	3.524E-02	Pulse	1.00	3
Mo			1	208.455	ug/l	1.17	936,857.42	4.003E+00	Pulse	0.50	3
Pb			1	202.883	ug/l	2.54	5,092,957.83	1.297E+00	Pulse	1.00	3
Be			1	218.496	ug/l	1.02	8,401.57	4.455E-02	Pulse	2.00	3
Ag			1	128.094	ug/l	0.60	1,920,808.08	8.208E+00	Pulse	0.50	3
Ba			1	198.820	ug/l	1.67	311,048.21	2.041E-01	Pulse	0.50	3
Tl			1	204.586	ug/l	1.71	7,778,075.83	1.671E+00	Analog	0.50	3
Sn			1	220.540	ug/l	1.32	772,733.18	5.069E-01	Pulse	0.30	3
Sr			1	197.058	ug/l	2.28	628,750.52	4.125E-01	Pulse	0.50	3
[Pb]			1	191.996	ug/l	2.00	2,313,921.17	4.972E-01	Pulse	0.50	3
Ca			1	19074.298	ug/l	1.30	271,279.27	1.761E+00	Pulse	0.50	3
Ti			1	199.745	ug/l	2.05	23,180.39	1.505E-01	Pulse	0.50	3
Na			1	19818.341	ug/l	0.81	15,252,929.67	8.088E+01	Analog	1.00	3
Mg			1	19726.559	ug/l	0.86	6,735,487.50	3.571E+01	Analog	1.00	3
K			1	18528.260	ug/l	0.86	4,642,448.83	2.462E+01	Pulse	1.00	3
V			1	200.994	ug/l	1.80	971,148.17	6.305E+00	Pulse	0.50	3
Mn			1	199.259	ug/l	2.03	565,868.90	3.674E+00	Pulse	0.50	3
Fe			1	20337.773	ug/l	2.00	102,817,066.67	6.675E+02	Analog	0.50	3
Co			1	207.309	ug/l	2.18	2,335,087.00	1.516E+01	Pulse	0.50	3
Ni			1	202.650	ug/l	0.96	632,326.62	2.702E+00	Pulse	0.50	3
Cu			1	203.427	ug/l	2.18	1,758,442.08	1.142E+01	Pulse	0.50	3
Zn			1	185.920	ug/l	0.16	221,897.54	9.482E-01	Pulse	1.00	3
Cd			1	201.238	ug/l	0.34	410,800.33	1.755E+00	Pulse	0.50	3
Al			1	17422.254	ug/l	1.21	1,718,325.63	7.343E+00	Pulse	1.00	3
Se			1	169.243	ug/l	1.56	7,558.16	4.958E-03	Pulse	3.00	3
Sb			1	197.072	ug/l	0.67	895,254.40	3.826E+00	Pulse	1.00	3
Se			1	195.319	ug/l	1.97	3,816.05	3.801E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,653,918.83	1.18	87.3	Pulse	0.50	3
1	Sc		188,588.51	0.13	87.8	Pulse	0.30	3
1	Ge		154,040.58	0.73	86.2	Pulse	0.30	3
1	In		1,524,563.31	1.65	86.3	Pulse	0.30	3
1	Tb		7,103,206.00	1.39	98.1	Analog	0.50	3
1	Lu		3,926,520.25	1.44	92.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		234,006.66	0.66	86.2	Pulse	0.30	3
1	Te		10,042.79	1.79	68.7	Pulse	0.50	3
1	Li		1,308.94	4.31	91.5	Pulse	0.30	3

Quantitation Report

File Name	034SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 11:19
Sample Name	FA56168-3
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.453	ug/l	3.24	10,362.77	2.583E-03	Pulse	0.50	3
As			1	0.985	ug/l	5.66	754.35	1.880E-04	Pulse	1.00	3
Mo			1	0.684	ug/l	4.84	3,277.63	1.317E-02	Pulse	0.50	3
Pb			1	5.224	ug/l	0.52	139,513.95	3.477E-02	Pulse	1.00	3
Be			1	0.067	ug/l	75.50	2.83	1.447E-05	Pulse	2.00	3
Ag			1	0.099	ug/l	2.71	1,729.42	6.951E-03	Pulse	0.50	3
Ba			1	36.268	ug/l	0.63	59,632.39	3.725E-02	Pulse	0.50	3
Tl			1	0.149	ug/l	18.12	5,965.08	1.238E-03	Pulse	0.50	3
Sn			1	0.752	ug/l	2.70	3,080.28	1.924E-03	Pulse	0.30	3
Sr			1	64.289	ug/l	1.08	215,982.73	1.349E-01	Pulse	0.50	3
[Pb]			1	5.156	ug/l	0.76	66,795.02	1.386E-02	Pulse	0.50	3
Ca			1	15819.220	ug/l	0.56	241,046.54	1.461E+00	Pulse	0.50	3
Ti			1	2.931	ug/l	20.32	369.34	2.238E-03	Pulse	0.50	3
Na			1	39913.840	ug/l	0.99	31,949,957.33	1.628E+02	Analog	1.00	3
Mg			1	5245.299	ug/l	1.14	1,863,491.17	9.498E+00	Pulse	1.00	3
K			1	1073.567	ug/l	0.97	290,611.03	1.481E+00	Pulse	1.00	3
V			1	1.161	ug/l	4.97	6,882.57	4.170E-02	Pulse	0.50	3
Mn			1	111.121	ug/l	1.41	338,202.04	2.049E+00	Pulse	0.50	3
Fe			1	805.723	ug/l	0.94	4,368,392.00	2.647E+01	Pulse	0.50	3
Co			1	0.428	ug/l	3.08	5,194.71	3.148E-02	Pulse	0.50	3
Ni			1	1.735	ug/l	2.31	5,899.58	2.371E-02	Pulse	0.50	3
Cu			1	3.861	ug/l	1.35	58,912.04	3.570E-01	Pulse	0.50	3
Zn			1	10.932	ug/l	3.18	22,062.58	8.867E-02	Pulse	1.00	3
Cd			1	0.203	ug/l	2.01	446.68	1.795E-03	Pulse	0.50	3
Al			1	134.479	ug/l	3.78	14,961.61	6.014E-02	Pulse	1.00	3
Se			1	0.308	ug/l	37.75	25.67	1.603E-05	Pulse	3.00	3
Sb			1	0.631	ug/l	2.28	3,184.95	1.280E-02	Pulse	1.00	3
Se			1	0.927	ug/l	27.07	33.78	3.217E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,820,610.67	0.47	90.4	Pulse	0.50	3
1	Sc		196,192.38	0.70	91.3	Pulse	0.30	3
1	Ge		165,021.07	0.40	92.4	Pulse	0.30	3
1	In		1,601,068.89	0.52	90.6	Pulse	0.30	3
1	Tb		7,318,232.17	0.39	101.0	Analog	0.50	3
1	Lu		4,012,469.25	0.32	94.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		248,825.55	0.49	91.6	Pulse	0.30	3
1	Te		10,493.04	2.38	71.8	Pulse	0.50	3
1	Li		1,298.94	4.71	90.8	Pulse	0.30	3

Quantitation Report

File Name	035SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 11:22
Sample Name	MP34101-D1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.284	ug/l	4.86	9,116.16	2.289E-03	Pulse	0.50	3
As			1	0.933	ug/l	5.82	710.35	1.783E-04	Pulse	1.00	3
Mo			1	0.639	ug/l	2.57	3,066.26	1.233E-02	Pulse	0.50	3
Pb			1	5.126	ug/l	5.09	135,985.44	3.414E-02	Pulse	1.00	3
Be			1	0.093	ug/l	18.28	3.83	1.965E-05	Pulse	2.00	3
Ag			1	0.078	ug/l	1.56	1,384.73	5.567E-03	Pulse	0.50	3
Ba			1	35.866	ug/l	3.55	58,659.81	3.683E-02	Pulse	0.50	3
Tl			1	0.038	ug/l	5.05	1,574.75	3.292E-04	Pulse	0.50	3
Sn			1	0.604	ug/l	1.06	2,526.88	1.585E-03	Pulse	0.30	3
Sr			1	64.068	ug/l	3.64	214,100.42	1.344E-01	Pulse	0.50	3
[Pb]			1	5.031	ug/l	1.98	64,709.05	1.353E-02	Pulse	0.50	3
Ca			1	15636.558	ug/l	3.43	236,609.99	1.444E+00	Pulse	0.50	3
Ti			1	3.044	ug/l	10.59	381.34	2.323E-03	Pulse	0.50	3
Na			1	39646.119	ug/l	3.42	31,434,419.33	1.618E+02	Analog	1.00	3
Mg			1	5211.715	ug/l	3.65	1,833,974.92	9.438E+00	Pulse	1.00	3
K			1	1063.810	ug/l	3.38	285,356.78	1.468E+00	Pulse	1.00	3
V			1	1.137	ug/l	5.04	6,711.84	4.096E-02	Pulse	0.50	3
Mn			1	109.855	ug/l	2.69	332,053.70	2.026E+00	Pulse	0.50	3
Fe			1	796.579	ug/l	3.52	4,288,704.67	2.617E+01	Pulse	0.50	3
Co			1	0.405	ug/l	1.59	4,884.63	2.979E-02	Pulse	0.50	3
Ni			1	1.547	ug/l	5.52	5,273.40	2.121E-02	Pulse	0.50	3
Cu			1	3.412	ug/l	5.57	54,429.07	3.321E-01	Pulse	0.50	3
Zn			1	10.718	ug/l	4.06	21,792.27	8.762E-02	Pulse	1.00	3
Cd			1	0.234	ug/l	13.64	511.34	2.058E-03	Pulse	0.50	3
Al			1	151.017	ug/l	9.85	16,679.72	6.710E-02	Pulse	1.00	3
Se			1	0.341	ug/l	26.98	27.00	1.700E-05	Pulse	3.00	3
Sb			1	0.602	ug/l	2.43	3,041.59	1.223E-02	Pulse	1.00	3
Se			1	0.933	ug/l	47.58	33.55	3.230E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,782,023.00	1.38	89.7	Pulse	0.50	3
1	Sc		194,448.52	2.59	90.5	Pulse	0.30	3
1	Ge		163,951.48	2.10	91.8	Pulse	0.30	3
1	In		1,593,835.28	3.30	90.2	Pulse	0.30	3
1	Tb		7,271,290.83	3.04	100.4	Analog	0.50	3
1	Lu		3,987,163.25	3.29	93.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		248,762.12	1.27	91.6	Pulse	0.30	3
1	Te		10,383.64	1.10	71.1	Pulse	0.50	3
1	Li		1,410.06	3.02	98.6	Pulse	0.30	3

Quantitation Report

File Name	036SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 11:26
Sample Name	MP34101-SD1
Sample Type	Sample
Comment	
Prep Dilution	10.000
Auto Dilution	N/A
Total Dilution	10.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.907	ug/l	11.72	2,955.59	7.242E-04	Pulse	0.50	3
As			1	1.075	ug/l	3.95	181.67	4.444E-05	Pulse	1.00	3
Mo			1	0.672	ug/l	11.62	682.68	2.627E-03	Pulse	0.50	3
Pb			1	5.445	ug/l	2.19	34,128.89	8.355E-03	Pulse	1.00	3
Be			1	0.040	ug/l	2.28	0.50	2.427E-06	Pulse	2.00	3
Ag			1	0.098	ug/l	2.53	476.68	1.833E-03	Pulse	0.50	3
Ba			1	37.256	ug/l	2.32	12,972.67	7.673E-03	Pulse	0.50	3
Tl			1	0.054	ug/l	3.61	556.68	1.071E-04	Pulse	0.50	3
Sn			1	0.419	ug/l	30.77	657.80	3.894E-04	Pulse	0.30	3
Sr			1	64.911	ug/l	2.24	46,700.87	2.762E-02	Pulse	0.50	3
[Pb]			1	5.088	ug/l	4.67	16,356.49	3.150E-03	Pulse	0.50	3
Ca			1	16346.732	ug/l	0.48	51,827.40	3.025E-01	Pulse	0.50	3
Ti			1	3.476	ug/l	38.09	94.67	5.539E-04	Pulse	0.50	3
Na			1	40323.914	ug/l	1.68	6,786,527.83	3.294E+01	Analog	1.00	3
Mg			1	5365.735	ug/l	2.15	400,769.87	1.945E+00	Pulse	1.00	3
K			1	1099.248	ug/l	1.29	72,056.56	3.497E-01	Pulse	1.00	3
V			1	0.941	ug/l	7.23	1,922.10	1.121E-02	Pulse	0.50	3
Mn			1	114.543	ug/l	1.88	72,587.37	4.237E-01	Pulse	0.50	3
Fe			1	836.285	ug/l	1.31	945,153.71	5.516E+00	Pulse	0.50	3
Co			1	0.426	ug/l	3.08	1,102.70	6.437E-03	Pulse	0.50	3
Ni			1	1.796	ug/l	9.58	1,397.39	5.377E-03	Pulse	0.50	3
Cu			1	4.052	ug/l	4.60	32,204.15	1.879E-01	Pulse	0.50	3
Zn			1	10.239	ug/l	8.70	11,710.23	4.503E-02	Pulse	1.00	3
Cd			1	0.234	ug/l	14.90	111.33	4.276E-04	Pulse	0.50	3
Al			1	113.673	ug/l	1.14	3,396.96	1.306E-02	Pulse	1.00	3
Se			1	0.628	ug/l	46.50	18.11	1.070E-05	Pulse	3.00	3
Sb			1	0.685	ug/l	2.37	835.02	3.211E-03	Pulse	1.00	3
Se			1	0.992	ug/l	73.51	22.78	1.805E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,196,841.00	3.81	97.5	Mix	0.50	3
1	Sc		206,078.82	1.55	95.9	Pulse	0.30	3
1	Ge		171,362.17	1.26	95.9	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,690,968.16	1.42	95.7	Pulse	0.30	3
1	Tb		7,451,119.83	1.70	102.9	Analog	0.50	3
1	Lu		4,086,102.08	2.09	95.9	Pulse	0.50	3
1	Ge		260,067.24	1.18	95.8	Pulse	0.30	3
1	Te		12,612.42	1.81	86.3	Pulse	0.50	3
1	Li		1,418.95	4.53	99.2	Pulse	0.30	3

Quantitation Report

File Name	037SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 11:30
Sample Name	MP34101-S1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	202.076	ug/l	2.91	1,370,280.46	3.505E-01	Pulse	0.50	3
As			1	194.758	ug/l	1.36	142,014.98	3.632E-02	Pulse	1.00	3
Mo			1	208.733	ug/l	1.40	954,232.25	4.009E+00	Pulse	0.50	3
Pb			1	208.545	ug/l	2.53	5,214,058.83	1.334E+00	Pulse	1.00	3
Be			1	224.506	ug/l	2.38	8,630.50	4.577E-02	Pulse	2.00	3
Ag			1	125.499	ug/l	1.34	1,914,358.92	8.042E+00	Pulse	0.50	3
Ba			1	240.536	ug/l	2.14	377,145.56	2.469E-01	Pulse	0.50	3
Tl			1	211.150	ug/l	1.77	7,875,549.83	1.725E+00	Analog	0.50	3
Sn			1	225.343	ug/l	1.58	791,248.56	5.179E-01	Pulse	0.30	3
Sr			1	263.358	ug/l	1.53	841,999.69	5.511E-01	Pulse	0.50	3
[Pb]			1	202.126	ug/l	1.80	2,389,704.83	5.235E-01	Pulse	0.50	3
Ca			1	34792.814	ug/l	3.13	507,150.02	3.212E+00	Pulse	0.50	3
Ti			1	204.733	ug/l	4.87	24,349.81	1.542E-01	Pulse	0.50	3
Na			1	60208.074	ug/l	1.76	46,313,153.33	2.456E+02	Analog	1.00	3
Mg			1	25832.711	ug/l	2.31	8,818,120.67	4.677E+01	Analog	1.00	3
K			1	21173.997	ug/l	2.11	5,302,628.50	2.812E+01	Analog	1.00	3
V			1	202.825	ug/l	3.59	1,004,567.96	6.362E+00	Pulse	0.50	3
Mn			1	310.311	ug/l	3.17	903,289.12	5.720E+00	Pulse	0.50	3
Fe			1	21440.695	ug/l	3.55	111,113,986.67	7.037E+02	Analog	0.50	3
Co			1	207.253	ug/l	3.47	2,393,073.83	1.516E+01	Pulse	0.50	3
Ni			1	206.303	ug/l	2.20	654,788.02	2.751E+00	Pulse	0.50	3
Cu			1	207.717	ug/l	3.73	1,840,069.25	1.165E+01	Pulse	0.50	3
Zn			1	197.437	ug/l	1.86	239,182.83	1.005E+00	Pulse	1.00	3
Cd			1	201.154	ug/l	2.15	417,685.21	1.755E+00	Pulse	0.50	3
Al			1	17766.967	ug/l	1.68	1,782,429.25	7.488E+00	Pulse	1.00	3
Se			1	173.714	ug/l	1.38	7,775.25	5.089E-03	Pulse	3.00	3
Sb			1	199.536	ug/l	1.99	922,016.71	3.874E+00	Pulse	1.00	3
Se			1	202.734	ug/l	0.33	3,947.97	3.944E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,565,768.33	1.02	85.6	Pulse	0.50	3
1	Sc		188,577.70	1.17	87.8	Pulse	0.30	3
1	Ge		157,976.06	2.21	88.4	Pulse	0.30	3
1	In		1,527,886.54	0.88	86.4	Pulse	0.30	3
1	Tb		7,131,690.67	1.25	98.5	Analog	0.50	3
1	Lu		3,910,837.50	1.39	91.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		238,055.75	0.81	87.6	Pulse	0.30	3
1	Te		10,008.76	1.23	68.5	Pulse	0.50	3
1	Li		1,364.50	4.99	95.4	Pulse	0.30	3

Quantitation Report

File Name	038SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 11:34
Sample Name	MP34101-S2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	209.632	ug/l	2.75	1,425,943.54	3.636E-01	Pulse	0.50	3
As			1	202.316	ug/l	2.51	147,967.72	3.773E-02	Pulse	1.00	3
Mo			1	215.679	ug/l	2.11	999,708.54	4.142E+00	Pulse	0.50	3
Pb			1	215.630	ug/l	2.17	5,407,796.17	1.379E+00	Pulse	1.00	3
Be			1	225.796	ug/l	2.74	8,873.43	4.604E-02	Pulse	2.00	3
Ag			1	107.886	ug/l	1.59	1,668,656.92	6.914E+00	Pulse	0.50	3
Ba			1	245.155	ug/l	1.95	390,120.42	2.516E-01	Pulse	0.50	3
Tl			1	214.972	ug/l	2.47	8,081,435.83	1.756E+00	Analog	0.50	3
Sn			1	230.076	ug/l	2.30	819,864.45	5.288E-01	Pulse	0.30	3
Sr			1	271.292	ug/l	1.76	880,220.79	5.677E-01	Pulse	0.50	3
[Pb]			1	205.548	ug/l	1.89	2,449,435.75	5.323E-01	Pulse	0.50	3
Ca			1	35620.776	ug/l	1.78	522,397.66	3.288E+00	Pulse	0.50	3
Ti			1	211.280	ug/l	2.25	25,288.39	1.592E-01	Pulse	0.50	3
Na			1	60377.732	ug/l	2.18	47,477,229.33	2.463E+02	Analog	1.00	3
Mg			1	25993.181	ug/l	2.54	9,070,404.67	4.706E+01	Analog	1.00	3
K			1	21585.240	ug/l	1.97	5,525,912.83	2.867E+01	Analog	1.00	3
V			1	210.347	ug/l	2.17	1,048,240.50	6.598E+00	Pulse	0.50	3
Mn			1	315.560	ug/l	1.36	924,197.38	5.817E+00	Pulse	0.50	3
Fe			1	21828.117	ug/l	2.54	113,819,589.33	7.164E+02	Analog	0.50	3
Co			1	212.890	ug/l	2.13	2,473,341.75	1.557E+01	Pulse	0.50	3
Ni			1	209.823	ug/l	1.47	675,255.06	2.798E+00	Pulse	0.50	3
Cu			1	214.903	ug/l	2.75	1,914,703.54	1.205E+01	Pulse	0.50	3
Zn			1	201.438	ug/l	1.82	247,263.72	1.024E+00	Pulse	1.00	3
Cd			1	205.502	ug/l	1.90	432,681.79	1.793E+00	Pulse	0.50	3
Al			1	18328.388	ug/l	1.94	1,864,349.62	7.724E+00	Pulse	1.00	3
Se			1	176.882	ug/l	1.74	8,034.91	5.182E-03	Pulse	3.00	3
Sb			1	202.930	ug/l	1.41	950,816.94	3.939E+00	Pulse	1.00	3
Se			1	209.313	ug/l	2.66	4,066.66	4.072E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,602,081.17	1.12	86.3	Pulse	0.50	3
1	Sc		192,779.08	1.21	89.7	Pulse	0.30	3
1	Ge		158,883.63	0.75	89.0	Pulse	0.30	3
1	In		1,550,541.47	0.62	87.7	Pulse	0.30	3
1	Tb		7,170,832.50	1.06	99.0	Analog	0.50	3
1	Lu		3,922,551.83	0.83	92.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		241,371.74	0.64	88.9	Pulse	0.30	3
1	Te		9,988.09	0.67	68.4	Pulse	0.50	3
1	Li		1,320.05	9.53	92.3	Pulse	0.30	3

Quantitation Report

File Name	039SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 11:38
Sample Name	MP34101-PS1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	19.836	ug/l	0.63	137,979.84	3.446E-02	Pulse	0.50	3
As			1	18.749	ug/l	1.20	14,014.47	3.500E-03	Pulse	1.00	3
Mo			1	19.874	ug/l	0.57	94,756.27	3.817E-01	Pulse	0.50	3
Pb			1	24.436	ug/l	0.70	630,597.21	1.575E-01	Pulse	1.00	3
Be			1	19.941	ug/l	3.43	805.35	4.066E-03	Pulse	2.00	3
Ag			1	5.653	ug/l	1.32	90,051.56	3.628E-01	Pulse	0.50	3
Ba			1	53.155	ug/l	2.22	86,899.73	5.458E-02	Pulse	0.50	3
Tl			1	18.379	ug/l	0.96	722,905.94	1.502E-01	Pulse	0.50	3
Sn			1	21.768	ug/l	2.13	79,945.30	5.021E-02	Pulse	0.30	3
Sr			1	79.688	ug/l	2.41	266,062.87	1.671E-01	Pulse	0.50	3
[Pb]			1	22.920	ug/l	1.24	287,956.27	5.982E-02	Pulse	0.50	3
Ca			1	17026.935	ug/l	1.28	257,213.22	1.572E+00	Pulse	0.50	3
Ti			1	21.740	ug/l	1.91	2,684.20	1.641E-02	Pulse	0.50	3
Na			1	39705.098	ug/l	2.51	32,063,376.67	1.620E+02	Analog	1.00	3
Mg			1	6763.129	ug/l	1.81	2,424,059.42	1.225E+01	Pulse	1.00	3
K			1	2780.263	ug/l	1.49	741,010.10	3.743E+00	Pulse	1.00	3
V			1	19.913	ug/l	1.21	102,979.52	6.294E-01	Pulse	0.50	3
Mn			1	124.514	ug/l	1.60	375,695.09	2.296E+00	Pulse	0.50	3
Fe			1	2717.561	ug/l	1.13	14,597,325.00	8.922E+01	Analog	0.50	3
Co			1	19.721	ug/l	0.95	235,984.14	1.442E+00	Pulse	0.50	3
Ni			1	20.721	ug/l	0.84	68,711.27	2.768E-01	Pulse	0.50	3
Cu			1	22.911	ug/l	0.52	231,138.23	1.413E+00	Pulse	0.50	3
Zn			1	27.747	ug/l	0.23	42,513.66	1.713E-01	Pulse	1.00	3
Cd			1	18.699	ug/l	1.18	40,495.47	1.631E-01	Pulse	0.50	3
Al			1	1783.520	ug/l	0.64	187,365.12	7.548E-01	Pulse	1.00	3
Se			1	16.287	ug/l	3.47	769.80	4.835E-04	Pulse	3.00	3
Sb			1	17.936	ug/l	0.45	86,553.78	3.487E-01	Pulse	1.00	3
Se			1	19.342	ug/l	4.60	409.78	3.892E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,813,912.67	0.69	90.3	Pulse	0.50	3
1	Sc		197,983.61	1.69	92.2	Pulse	0.30	3
1	Ge		163,617.44	0.77	91.6	Pulse	0.30	3
1	In		1,592,721.85	1.90	90.1	Pulse	0.30	3
1	Tb		7,326,492.50	0.66	101.1	Analog	0.50	3
1	Lu		4,004,110.50	0.90	94.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		248,227.62	0.61	91.4	Pulse	0.30	3
1	Te		10,530.39	0.39	72.1	Pulse	0.50	3
1	Li		1,427.83	6.03	99.8	Pulse	0.30	3

Quantitation Report

File Name 040SMPL.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 11:41
Sample Name FA56168-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.911	ug/l	2.08	13,273.87	3.377E-03	Pulse	0.50	3
As			1	0.962	ug/l	5.54	721.68	1.837E-04	Pulse	1.00	3
Mo			1	0.491	ug/l	1.80	2,337.49	9.468E-03	Pulse	0.50	3
Pb			1	2.249	ug/l	3.22	61,949.82	1.576E-02	Pulse	1.00	3
Be			1	0.043	ug/l	47.25	1.83	9.582E-06	Pulse	2.00	3
Ag			1	0.121	ug/l	4.35	2,062.12	8.356E-03	Pulse	0.50	3
Ba			1	33.482	ug/l	2.38	53,740.75	3.439E-02	Pulse	0.50	3
Tl			1	0.049	ug/l	5.88	1,987.46	4.182E-04	Pulse	0.50	3
Sn			1	0.828	ug/l	7.00	3,279.20	2.099E-03	Pulse	0.30	3
Sr			1	60.035	ug/l	2.04	196,933.27	1.260E-01	Pulse	0.50	3
[Pb]			1	2.190	ug/l	4.29	29,359.15	6.184E-03	Pulse	0.50	3
Ca			1	14842.261	ug/l	1.70	222,421.27	1.371E+00	Pulse	0.50	3
Ti			1	4.800	ug/l	6.04	591.34	3.646E-03	Pulse	0.50	3
Na			1	34454.578	ug/l	2.46	27,036,482.67	1.406E+02	Analog	1.00	3
Mg			1	5099.714	ug/l	2.14	1,776,147.04	9.235E+00	Pulse	1.00	3
K			1	1030.940	ug/l	2.21	274,034.71	1.425E+00	Pulse	1.00	3
V			1	1.285	ug/l	2.46	7,398.08	4.558E-02	Pulse	0.50	3
Mn			1	118.224	ug/l	2.57	353,792.93	2.180E+00	Pulse	0.50	3
Fe			1	1179.400	ug/l	2.49	6,285,571.67	3.874E+01	Analog	0.50	3
Co			1	0.506	ug/l	1.13	6,038.29	3.719E-02	Pulse	0.50	3
Ni			1	1.463	ug/l	1.24	4,961.99	2.010E-02	Pulse	0.50	3
Cu			1	5.841	ug/l	8.44	75,786.98	4.667E-01	Pulse	0.50	3
Zn			1	12.571	ug/l	3.69	23,874.06	9.672E-02	Pulse	1.00	3
Cd			1	0.313	ug/l	9.11	679.35	2.755E-03	Pulse	0.50	3
Al			1	185.197	ug/l	3.13	20,115.78	8.150E-02	Pulse	1.00	3
Se			1	0.302	ug/l	15.72	24.78	1.585E-05	Pulse	3.00	3
Sb			1	0.372	ug/l	1.59	1,917.43	7.767E-03	Pulse	1.00	3
Se			1	1.249	ug/l	19.65	40.56	3.843E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,750,713.67	2.35	89.1	Pulse	0.50	3
1	Sc		192,394.20	2.29	89.6	Pulse	0.30	3
1	Ge		162,322.92	2.04	90.9	Pulse	0.30	3
1	In		1,563,211.88	1.53	88.4	Pulse	0.30	3
1	Tb		7,236,517.83	2.06	99.9	Analog	0.50	3
1	Lu		3,930,813.50	1.53	92.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		246,923.64	2.20	90.9	Pulse	0.30	3
1	Te		10,543.74	1.23	72.2	Pulse	0.50	3
1	Li		1,385.61	6.87	96.9	Pulse	0.30	3

Quantitation Report

File Name	041SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 11:45
Sample Name	FA56168-2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.375	ug/l	9.28	9,509.68	2.447E-03	Pulse	0.50	3
As			1	0.904	ug/l	12.38	671.35	1.729E-04	Pulse	1.00	3
Mo			1	0.570	ug/l	4.29	2,697.54	1.100E-02	Pulse	0.50	3
Pb			1	6.095	ug/l	6.22	156,920.50	4.034E-02	Pulse	1.00	3
Be			1	0.057	ug/l	36.96	2.33	1.237E-05	Pulse	2.00	3
Ag			1	0.062	ug/l	5.80	1,121.37	4.568E-03	Pulse	0.50	3
Ba			1	33.634	ug/l	4.43	54,018.19	3.454E-02	Pulse	0.50	3
Tl			1	0.021	ug/l	10.56	886.36	1.885E-04	Pulse	0.50	3
Sn			1	0.579	ug/l	6.05	2,389.05	1.528E-03	Pulse	0.30	3
Sr			1	62.358	ug/l	4.56	204,630.62	1.309E-01	Pulse	0.50	3
[Pb]			1	5.906	ug/l	5.60	74,335.68	1.580E-02	Pulse	0.50	3
Ca			1	15550.368	ug/l	3.40	231,648.40	1.436E+00	Pulse	0.50	3
Ti			1	2.759	ug/l	9.03	340.67	2.108E-03	Pulse	0.50	3
Na			1	36022.368	ug/l	4.75	27,873,862.67	1.470E+02	Analog	1.00	3
Mg			1	5380.074	ug/l	5.35	1,847,335.71	9.742E+00	Pulse	1.00	3
K			1	1061.952	ug/l	4.99	277,994.59	1.466E+00	Pulse	1.00	3
V			1	1.000	ug/l	4.42	5,912.91	3.665E-02	Pulse	0.50	3
Mn			1	122.277	ug/l	3.72	363,754.83	2.255E+00	Pulse	0.50	3
Fe			1	706.214	ug/l	4.07	3,743,067.42	2.321E+01	Pulse	0.50	3
Co			1	0.351	ug/l	6.84	4,171.14	2.586E-02	Pulse	0.50	3
Ni			1	1.363	ug/l	8.91	4,597.23	1.877E-02	Pulse	0.50	3
Cu			1	3.220	ug/l	6.79	51,861.31	3.215E-01	Pulse	0.50	3
Zn			1	8.624	ug/l	5.88	18,961.97	7.733E-02	Pulse	1.00	3
Cd			1	0.188	ug/l	4.49	407.34	1.659E-03	Pulse	0.50	3
Al			1	106.372	ug/l	5.38	11,838.19	4.830E-02	Pulse	1.00	3
Se			1	0.239	ug/l	28.97	22.00	1.400E-05	Pulse	3.00	3
Sb			1	0.529	ug/l	4.10	2,651.19	1.081E-02	Pulse	1.00	3
Se			1	0.622	ug/l	28.86	27.11	2.626E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,712,046.33	4.06	88.4	Pulse	0.50	3
1	Sc		189,897.54	4.15	88.4	Pulse	0.30	3
1	Ge		161,422.76	2.81	90.4	Pulse	0.30	3
1	In		1,565,597.40	3.97	88.6	Pulse	0.30	3
1	Tb		7,171,454.67	4.77	99.0	Analog	0.50	3
1	Lu		3,898,109.83	4.95	91.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		245,345.68	2.97	90.3	Pulse	0.30	3
1	Te		10,360.30	4.42	70.9	Pulse	0.50	3
1	Li		1,342.28	4.46	93.9	Pulse	0.30	3

Quantitation Report

File Name	042CCVA.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 11:49
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	45.959	ug/l	10.01	636,876.69	1.595E-01	Pulse	0.50	3
As			1	45.963	ug/l	9.67	68,489.57	1.714E-02	Pulse	1.00	3
Mo			1	46.500	ug/l	3.91	450,119.40	1.786E+00	Pulse	0.50	3
Pb			1	46.983	ug/l	9.23	2,404,179.83	6.016E-01	Pulse	1.00	3
Be			1	50.440	ug/l	6.04	4,052.91	2.057E-02	Pulse	2.00	3
Ag			1	49.639	ug/l	4.30	1,603,129.38	6.362E+00	Pulse	0.50	3
Ba			1	46.701	ug/l	5.12	153,989.79	9.588E-02	Pulse	0.50	3
Tl			1	43.983	ug/l	8.46	3,543,033.08	7.187E-01	Pulse	0.50	3
Sn			1	46.664	ug/l	5.52	344,631.78	2.146E-01	Pulse	0.30	3
Sr			1	46.662	ug/l	5.33	314,129.33	1.956E-01	Pulse	0.50	3
[Pb]			1	44.798	ug/l	8.12	1,145,488.00	2.323E-01	Pulse	0.50	3
Ca			1	4486.197	ug/l	2.04	137,214.53	8.288E-01	Pulse	0.50	3
Ti			1	45.653	ug/l	1.16	11,393.34	6.881E-02	Pulse	0.50	3
Na			1	4809.453	ug/l	6.26	7,737,927.83	3.928E+01	Analog	1.00	3
Mg			1	4658.728	ug/l	6.02	3,324,008.92	1.687E+01	Pulse	1.00	3
K			1	4587.944	ug/l	5.76	2,408,048.33	1.222E+01	Pulse	1.00	3
V			1	45.604	ug/l	2.91	474,089.85	2.864E+00	Pulse	0.50	3
Mn			1	45.868	ug/l	2.78	280,123.48	1.692E+00	Pulse	0.50	3
Fe			1	4801.502	ug/l	2.99	52,177,994.67	3.152E+02	Analog	0.50	3
Co			1	47.072	ug/l	2.42	1,139,778.34	6.885E+00	Pulse	0.50	3
Ni			1	46.722	ug/l	4.50	314,022.40	1.246E+00	Pulse	0.50	3
Cu			1	47.074	ug/l	3.09	887,348.37	5.360E+00	Pulse	0.50	3
Zn			1	47.676	ug/l	4.27	126,847.91	5.034E-01	Pulse	1.00	3
Cd			1	47.015	ug/l	4.14	206,706.24	8.203E-01	Pulse	0.50	3
Al			1	4568.270	ug/l	3.81	970,834.50	3.852E+00	Pulse	1.00	3
Se			1	46.161	ug/l	4.02	4,350.61	2.708E-03	Pulse	3.00	3
Sb			1	46.030	ug/l	3.72	450,458.07	1.787E+00	Pulse	1.00	3
Se			1	44.566	ug/l	6.36	2,209.57	1.742E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,951,760.50	7.89	92.9	Mix	0.50	3
1	Sc		197,481.07	5.71	91.9	Pulse	0.30	3
1	Ge		165,616.47	2.54	92.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,608,669.45	4.85	91.0	Pulse	0.30	3
1	Tb		7,188,840.50	4.65	99.2	Analog	0.50	3
1	Lu		4,018,637.33	9.16	94.3	Mix	0.50	3
1	Ge		252,242.96	3.65	92.9	Pulse	0.30	3
1	Te		12,708.52	5.17	87.0	Pulse	0.50	3
1	Li		1,328.94	12.74	92.9	Pulse	0.30	3

Quantitation Report

File Name	043_CCV.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 11:53
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	91.230	ug/l	3.39	1,291,875.66	3.165E-01	Pulse	0.50	3
As			1	91.161	ug/l	3.56	138,788.92	3.400E-02	Pulse	1.00	3
Mo			1	91.699	ug/l	3.52	914,060.46	3.522E+00	Pulse	0.50	3
Pb			1	91.738	ug/l	3.17	4,790,401.83	1.173E+00	Pulse	1.00	3
Be			1	96.201	ug/l	2.11	8,241.84	3.923E-02	Pulse	2.00	3
Ag			1	95.972	ug/l	3.42	3,192,081.25	1.230E+01	Pulse	0.50	3
Ba			1	91.213	ug/l	2.80	313,038.83	1.872E-01	Pulse	0.50	3
Tl			1	92.204	ug/l	2.86	7,533,908.50	1.507E+00	Analog	0.50	3
Sn			1	90.003	ug/l	2.77	691,749.64	4.138E-01	Pulse	0.30	3
Sr			1	91.183	ug/l	2.30	638,342.39	3.818E-01	Pulse	0.50	3
[Pb]			1	86.966	ug/l	3.02	2,252,714.50	4.505E-01	Pulse	0.50	3
Ca			1	9055.506	ug/l	2.49	285,826.87	1.672E+00	Pulse	0.50	3
Ti			1	91.105	ug/l	3.04	23,465.38	1.373E-01	Pulse	0.50	3
Na			1	9269.241	ug/l	3.20	15,891,361.33	7.566E+01	Analog	1.00	3
Mg			1	9295.999	ug/l	3.19	7,070,253.83	3.366E+01	Analog	1.00	3
K			1	9138.244	ug/l	3.66	5,102,208.00	2.428E+01	Mix	1.00	3
V			1	91.106	ug/l	2.67	977,076.08	5.716E+00	Pulse	0.50	3
Mn			1	90.343	ug/l	2.76	569,427.65	3.331E+00	Pulse	0.50	3
Fe			1	9474.394	ug/l	2.96	106,302,600.00	6.219E+02	Analog	0.50	3
Co			1	92.400	ug/l	2.90	2,309,839.25	1.351E+01	Pulse	0.50	3
Ni			1	91.080	ug/l	3.68	630,363.23	2.429E+00	Pulse	0.50	3
Cu			1	91.632	ug/l	2.80	1,760,338.75	1.030E+01	Pulse	0.50	3
Zn			1	92.861	ug/l	3.16	245,859.42	9.473E-01	Pulse	1.00	3
Cd			1	91.104	ug/l	2.89	412,561.43	1.589E+00	Pulse	0.50	3
Al			1	9052.990	ug/l	3.08	1,980,509.37	7.631E+00	Pulse	1.00	3
Se			1	90.538	ug/l	1.80	8,870.05	5.305E-03	Pulse	3.00	3
Sb			1	91.160	ug/l	2.81	918,647.67	3.539E+00	Pulse	1.00	3
Se			1	90.777	ug/l	3.28	4,516.09	3.534E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,003,713.67	3.40	93.9	Mix	0.50	3
1	Sc		210,181.11	3.13	97.8	Pulse	0.30	3
1	Ge		170,987.43	2.05	95.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,672,628.61	2.42	94.6	Pulse	0.30	3
1	Tb		7,492,249.50	3.20	103.4	Analog	0.50	3
1	Lu		4,085,024.50	2.98	95.9	Pulse	0.50	3
1	Ge		259,700.93	3.05	95.6	Pulse	0.30	3
1	Te		12,789.18	3.42	87.5	Pulse	0.50	3
1	Li		1,418.95	7.88	99.2	Pulse	0.30	3

Quantitation Report

File Name	044_CCB.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 11:56
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.003	ug/l	-40.24	216.00	5.380E-05	Pulse	0.50	3
As			1	0.003	ug/l	242.14	22.00	5.476E-06	Pulse	1.00	3
Mo			1	0.030	ug/l	21.26	308.67	1.208E-03	Pulse	0.50	3
Pb			1	0.008	ug/l	34.93	6,022.07	1.500E-03	Pulse	1.00	3
Be			1	0.014	ug/l	49.06	1.33	6.511E-06	Pulse	2.00	3
Ag			1	0.007	ug/l	25.15	377.34	1.475E-03	Pulse	0.50	3
Ba			1	-0.007	ug/l	-25.58	18.67	1.117E-05	Pulse	0.50	3
Tl			1	0.018	ug/l	12.83	1,612.08	3.202E-04	Pulse	0.50	3
Sn			1	0.033	ug/l	20.52	581.12	3.477E-04	Pulse	0.30	3
Sr			1	-0.027	ug/l	-24.06	614.01	3.674E-04	Pulse	0.50	3
[Pb]			1	0.011	ug/l	33.56	2,900.26	5.763E-04	Pulse	0.50	3
Ca			1	-0.766	ug/l	-124.91	99.33	5.867E-04	Pulse	0.50	3
Ti			1	-0.020	ug/l	0.00	0.00	0.000E+00	Pulse	0.50	3
Na			1	1.201	ug/l	13.68	10,535.77	5.148E-02	Pulse	1.00	3
Mg			1	-0.067	ug/l	-193.94	432.34	2.113E-03	Pulse	1.00	3
K			1	-1.086	ug/l	-28.46	11,341.92	5.541E-02	Pulse	1.00	3
V			1	-0.045	ug/l	-14.09	417.34	2.467E-03	Pulse	0.50	3
Mn			1	-0.026	ug/l	-6.24	84.67	5.003E-04	Pulse	0.50	3
Fe			1	0.381	ug/l	33.36	8,732.72	5.161E-02	Pulse	0.50	3
Co			1	0.003	ug/l	16.50	104.00	6.146E-04	Pulse	0.50	3
Ni			1	-0.005	ug/l	-54.41	113.33	4.431E-04	Pulse	0.50	3
Cu			1	-0.175	ug/l	-4.16	20,928.01	1.237E-01	Pulse	0.50	3
Zn			1	-0.788	ug/l	-4.52	6,962.93	2.723E-02	Pulse	1.00	3
Cd			1	0.005	ug/l	38.63	28.00	1.096E-04	Pulse	0.50	3
Al			1	-3.526	ug/l	-2.48	131.67	5.148E-04	Pulse	1.00	3
Se			1	-0.007	ug/l	-288.29	11.00	6.587E-06	Pulse	3.00	3
Sb			1	0.016	ug/l	30.01	296.00	1.158E-03	Pulse	1.00	3
Se			1	-0.001	ug/l	-8141.58	19.00	1.418E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,031,544.17	0.81	94.4	Pulse	0.50	3
1	Sc		204,679.42	0.21	95.3	Pulse	0.30	3

Quantitation Report

1	Ge		169,247.61	0.30	94.8	Pulse	0.30	3
1	In		1,671,849.83	0.88	94.6	Pulse	0.30	3
1	Tb		7,398,196.50	0.72	102.1	Analog	0.50	3
1	Lu		4,014,241.75	0.59	94.2	Pulse	0.50	3
1	Ge		255,683.99	0.37	94.1	Pulse	0.30	3
1	Te		13,402.27	1.15	91.7	Pulse	0.50	3
1	Li		1,412.28	3.22	98.8	Pulse	0.30	3

Quantitation Report

File Name 045SMPL.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 12:00
Sample Name FA56168-4
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.334	ug/l	6.49	9,194.86	2.376E-03	Pulse	0.50	3
As			1	0.906	ug/l	12.67	668.68	1.733E-04	Pulse	1.00	3
Mo			1	0.663	ug/l	7.01	3,115.60	1.278E-02	Pulse	0.50	3
Pb			1	5.091	ug/l	7.61	131,206.54	3.392E-02	Pulse	1.00	3
Be			1	0.091	ug/l	4.25	3.67	1.926E-05	Pulse	2.00	3
Ag			1	0.072	ug/l	8.23	1,261.38	5.173E-03	Pulse	0.50	3
Ba			1	36.410	ug/l	7.97	57,610.64	3.739E-02	Pulse	0.50	3
Tl			1	0.043	ug/l	5.51	1,776.10	3.709E-04	Pulse	0.50	3
Sn			1	0.679	ug/l	10.02	2,706.88	1.757E-03	Pulse	0.30	3
Sr			1	63.215	ug/l	6.62	204,507.31	1.327E-01	Pulse	0.50	3
[Pb]			1	4.832	ug/l	11.74	62,090.79	1.302E-02	Pulse	0.50	3
Ca			1	15408.428	ug/l	3.69	227,309.99	1.423E+00	Pulse	0.50	3
Ti			1	3.020	ug/l	21.31	367.34	2.305E-03	Pulse	0.50	3
Na			1	39124.046	ug/l	7.46	30,283,468.00	1.596E+02	Analog	1.00	3
Mg			1	5142.685	ug/l	6.52	1,767,445.87	9.313E+00	Pulse	1.00	3
K			1	1057.290	ug/l	7.27	276,983.68	1.460E+00	Pulse	1.00	3
V			1	1.097	ug/l	9.40	6,338.38	3.971E-02	Pulse	0.50	3
Mn			1	110.011	ug/l	4.13	324,119.97	2.029E+00	Pulse	0.50	3
Fe			1	814.136	ug/l	4.54	4,272,338.33	2.675E+01	Pulse	0.50	3
Co			1	0.432	ug/l	4.54	5,076.68	3.178E-02	Pulse	0.50	3
Ni			1	1.499	ug/l	5.04	5,018.00	2.058E-02	Pulse	0.50	3
Cu			1	4.008	ug/l	8.04	58,324.30	3.652E-01	Pulse	0.50	3
Zn			1	11.646	ug/l	11.33	22,462.72	9.218E-02	Pulse	1.00	3
Cd			1	0.215	ug/l	2.46	463.34	1.899E-03	Pulse	0.50	3
Al			1	134.067	ug/l	6.93	14,613.68	5.996E-02	Pulse	1.00	3
Se			1	0.365	ug/l	63.16	27.00	1.770E-05	Pulse	3.00	3
Sb			1	0.596	ug/l	7.02	2,954.24	1.212E-02	Pulse	1.00	3
Se			1	0.652	ug/l	35.09	28.11	2.684E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,805,248.33	9.95	90.1	Mix	0.50	3
1	Sc		190,341.98	6.69	88.6	Pulse	0.30	3
1	Ge		159,912.56	3.79	89.5	Pulse	0.30	3
1	In		1,545,543.20	5.91	87.4	Pulse	0.30	3
1	Tb		7,190,795.00	7.02	99.3	Analog	0.50	3
1	Lu		3,880,666.58	6.61	91.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		244,178.34	4.37	89.9	Pulse	0.30	3
1	Te		10,476.37	4.83	71.7	Pulse	0.50	3
1	Li		1,353.39	6.91	94.6	Pulse	0.30	3

Quantitation Report

File Name	046SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 12:04
Sample Name	FA56168-5
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.869	ug/l	0.73	6,145.66	1.570E-03	Pulse	0.50	3
As			1	93.152	ug/l	1.05	68,017.79	1.737E-02	Pulse	1.00	3
Mo			1	3.392	ug/l	1.07	15,808.02	6.520E-02	Pulse	0.50	3
Pb			1	0.448	ug/l	3.41	16,666.77	4.257E-03	Pulse	1.00	3
Be			1	0.082	ug/l	88.64	3.33	1.747E-05	Pulse	2.00	3
Ag			1	0.014	ug/l	7.88	364.00	1.501E-03	Pulse	0.50	3
Ba			1	94.366	ug/l	0.54	150,408.87	9.687E-02	Pulse	0.50	3
Tl			1	0.012	ug/l	6.47	565.34	1.199E-04	Pulse	0.50	3
Sn			1	0.537	ug/l	2.34	2,222.37	1.431E-03	Pulse	0.30	3
Sr			1	109.744	ug/l	0.15	357,036.96	2.299E-01	Pulse	0.50	3
[Pb]			1	0.455	ug/l	6.71	7,983.89	1.693E-03	Pulse	0.50	3
Ca			1	33088.261	ug/l	0.58	487,726.05	3.054E+00	Pulse	0.50	3
Ti			1	5.055	ug/l	9.33	612.68	3.838E-03	Pulse	0.50	3
Na			1	11918.359	ug/l	0.90	9,263,094.67	4.866E+01	Analog	1.00	3
Mg			1	8086.897	ug/l	0.94	2,787,687.25	1.464E+01	Pulse	1.00	3
K			1	883.120	ug/l	0.66	233,950.92	1.229E+00	Pulse	1.00	3
V			1	0.934	ug/l	5.77	5,522.80	3.459E-02	Pulse	0.50	3
Mn			1	422.233	ug/l	0.43	1,242,812.88	7.783E+00	Pulse	0.50	3
Fe			1	7692.915	ug/l	0.57	40,320,889.33	2.525E+02	Analog	0.50	3
Co			1	0.732	ug/l	0.25	8,582.58	5.375E-02	Pulse	0.50	3
Ni			1	1.071	ug/l	3.22	3,602.35	1.486E-02	Pulse	0.50	3
Cu			1	-0.148	ug/l	-19.34	21,529.46	1.348E-01	Pulse	0.50	3
Zn			1	6.533	ug/l	1.17	16,259.18	6.706E-02	Pulse	1.00	3
Cd			1	0.095	ug/l	9.24	206.67	8.529E-04	Pulse	0.50	3
Al			1	212.822	ug/l	1.32	22,580.40	9.314E-02	Pulse	1.00	3
Se			1	0.181	ug/l	55.88	19.11	1.230E-05	Pulse	3.00	3
Sb			1	0.096	ug/l	6.28	584.68	2.411E-03	Pulse	1.00	3
Se			1	0.435	ug/l	8.06	23.56	2.264E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,715,628.17	0.75	88.5	Pulse	0.50	3
1	Sc		190,392.20	1.02	88.6	Pulse	0.30	3
1	Ge		159,681.12	0.62	89.4	Pulse	0.30	3
1	In		1,552,748.52	0.44	87.8	Pulse	0.30	3
1	Tb		7,231,814.33	0.39	99.8	Analog	0.50	3
1	Lu		3,915,470.92	1.10	91.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		242,459.38	1.05	89.3	Pulse	0.30	3
1	Te		10,404.99	1.01	71.2	Pulse	0.50	3
1	Li		1,285.61	3.58	89.9	Pulse	0.30	3

Quantitation Report

File Name 047SMPL.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 12:08
Sample Name FA56168-6
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.230	ug/l	5.98	8,790.01	2.196E-03	Pulse	0.50	3
As			1	16.902	ug/l	0.75	12,628.51	3.156E-03	Pulse	1.00	3
Mo			1	0.128	ug/l	7.64	625.35	2.498E-03	Pulse	0.50	3
Pb			1	0.145	ug/l	4.28	9,290.53	2.322E-03	Pulse	1.00	3
Be			1	0.231	ug/l	42.33	9.50	4.793E-05	Pulse	2.00	3
Ag			1	0.015	ug/l	24.02	379.34	1.516E-03	Pulse	0.50	3
Ba			1	79.499	ug/l	0.60	131,541.12	8.161E-02	Pulse	0.50	3
Tl			1	0.006	ug/l	19.47	330.67	6.757E-05	Pulse	0.50	3
Sn			1	0.483	ug/l	2.21	2,105.69	1.306E-03	Pulse	0.30	3
Sr			1	183.125	ug/l	0.39	617,914.12	3.834E-01	Pulse	0.50	3
[Pb]			1	0.159	ug/l	9.05	4,540.62	9.279E-04	Pulse	0.50	3
Ca			1	6698.754	ug/l	1.11	102,838.55	6.190E-01	Pulse	0.50	3
Ti			1	1.217	ug/l	14.20	157.33	9.467E-04	Pulse	0.50	3
Na			1	4869.580	ug/l	0.97	3,942,367.58	1.990E+01	Pulse	1.00	3
Mg			1	540.453	ug/l	0.89	194,268.53	9.808E-01	Pulse	1.00	3
K			1	11652.912	ug/l	0.38	3,070,892.83	1.550E+01	Pulse	1.00	3
V			1	2.571	ug/l	3.73	14,271.92	8.590E-02	Pulse	0.50	3
Mn			1	95.026	ug/l	0.71	291,218.88	1.753E+00	Pulse	0.50	3
Fe			1	9557.270	ug/l	0.68	52,121,625.33	3.137E+02	Analog	0.50	3
Co			1	0.155	ug/l	1.65	1,914.77	1.152E-02	Pulse	0.50	3
Ni			1	2.397	ug/l	4.10	8,140.40	3.254E-02	Pulse	0.50	3
Cu			1	-0.324	ug/l	-6.68	20,780.52	1.251E-01	Pulse	0.50	3
Zn			1	4.118	ug/l	6.36	13,807.61	5.520E-02	Pulse	1.00	3
Cd			1	24.860	ug/l	2.25	54,256.50	2.169E-01	Pulse	0.50	3
Al			1	47.897	ug/l	4.38	5,919.56	2.366E-02	Pulse	1.00	3
Se			1	0.153	ug/l	47.11	18.56	1.151E-05	Pulse	3.00	3
Sb			1	0.074	ug/l	20.61	499.68	1.996E-03	Pulse	1.00	3
Se			1	0.914	ug/l	26.14	34.00	3.193E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,893,415.00	0.25	91.8	Pulse	0.50	3
1	Sc		198,075.64	0.87	92.2	Pulse	0.30	3
1	Ge		166,146.44	0.62	93.0	Pulse	0.30	3
1	In		1,611,830.35	0.97	91.2	Pulse	0.30	3
1	Tb		7,426,683.00	0.20	102.5	Analog	0.50	3
1	Lu		4,001,511.92	0.64	93.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		250,205.40	1.43	92.1	Pulse	0.30	3
1	Te		10,671.15	2.33	73.0	Pulse	0.50	3
1	Li		1,342.28	5.96	93.9	Pulse	0.30	3

Quantitation Report

File Name	048SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 12:12
Sample Name	FA56168-7
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.585	ug/l	4.52	4,305.16	1.077E-03	Pulse	0.50	3
As			1	9.467	ug/l	1.84	7,077.65	1.770E-03	Pulse	1.00	3
Mo			1	0.358	ug/l	3.05	1,746.08	6.919E-03	Pulse	0.50	3
Pb			1	1.438	ug/l	2.66	42,319.11	1.058E-02	Pulse	1.00	3
Be			1	0.034	ug/l	99.86	1.50	7.638E-06	Pulse	2.00	3
Ag			1	0.020	ug/l	12.15	470.01	1.864E-03	Pulse	0.50	3
Ba			1	50.799	ug/l	1.87	83,868.87	5.216E-02	Pulse	0.50	3
Tl			1	0.005	ug/l	24.73	286.00	5.834E-05	Pulse	0.50	3
Sn			1	0.466	ug/l	5.07	2,036.80	1.267E-03	Pulse	0.30	3
Sr			1	29.500	ug/l	0.95	99,961.36	6.216E-02	Pulse	0.50	3
[Pb]			1	1.422	ug/l	2.35	20,546.35	4.196E-03	Pulse	0.50	3
Ca			1	4330.967	ug/l	1.99	67,059.90	4.004E-01	Pulse	0.50	3
Ti			1	0.897	ug/l	24.43	118.00	7.060E-04	Pulse	0.50	3
Na			1	1418.698	ug/l	1.71	1,154,435.00	5.828E+00	Pulse	1.00	3
Mg			1	835.077	ug/l	1.72	299,905.15	1.514E+00	Pulse	1.00	3
K			1	11477.486	ug/l	1.22	3,024,857.67	1.527E+01	Pulse	1.00	3
V			1	0.834	ug/l	7.20	5,265.40	3.146E-02	Pulse	0.50	3
Mn			1	101.750	ug/l	2.21	314,264.74	1.877E+00	Pulse	0.50	3
Fe			1	6533.775	ug/l	1.94	35,915,482.67	2.145E+02	Analog	0.50	3
Co			1	0.097	ug/l	3.22	1,217.38	7.267E-03	Pulse	0.50	3
Ni			1	0.718	ug/l	10.41	2,563.51	1.016E-02	Pulse	0.50	3
Cu			1	17.732	ug/l	1.80	188,514.45	1.126E+00	Pulse	0.50	3
Zn			1	8.506	ug/l	3.27	19,363.70	7.675E-02	Pulse	1.00	3
Cd			1	0.090	ug/l	15.25	203.33	8.051E-04	Pulse	0.50	3
Al			1	24.537	ug/l	6.04	3,486.31	1.382E-02	Pulse	1.00	3
Se			1	0.093	ug/l	15.33	15.67	9.744E-06	Pulse	3.00	3
Sb			1	0.088	ug/l	4.32	571.68	2.266E-03	Pulse	1.00	3
Se			1	0.219	ug/l	46.98	19.67	1.846E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,897,333.00	1.78	91.9	Pulse	0.50	3
1	Sc		198,097.19	1.46	92.2	Pulse	0.30	3
1	Ge		167,488.58	1.46	93.8	Pulse	0.30	3
1	In		1,608,250.11	1.30	91.0	Pulse	0.30	3
1	Tb		7,369,810.33	1.73	101.7	Analog	0.50	3
1	Lu		3,999,986.08	1.54	93.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		252,310.26	1.01	92.9	Pulse	0.30	3
1	Te		10,647.81	1.41	72.9	Pulse	0.50	3
1	Li		1,372.28	15.79	96.0	Pulse	0.30	3

Quantitation Report

File Name	049_MB.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 12:15
Sample Name	MP34108-MB1
Sample Type	MB
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.540	ug/l	4.82	4,018.43	9.997E-04	Pulse	0.50	3
As			1	0.059	ug/l	22.95	61.67	1.534E-05	Pulse	1.00	3
Mo			1	0.026	ug/l	12.13	138.00	5.473E-04	Pulse	0.50	3
Pb			1	0.048	ug/l	16.43	6,848.04	1.703E-03	Pulse	1.00	3
Be			1	0.016	ug/l	153.45	0.83	4.107E-06	Pulse	2.00	3
Ag			1	0.016	ug/l	2.59	404.68	1.605E-03	Pulse	0.50	3
Ba			1	0.253	ug/l	7.29	464.68	2.855E-04	Pulse	0.50	3
Tl			1	0.004	ug/l	40.53	234.00	4.712E-05	Pulse	0.50	3
Sn			1	0.371	ug/l	12.85	1,706.76	1.048E-03	Pulse	0.30	3
Sr			1	0.017	ug/l	168.04	838.69	5.155E-04	Pulse	0.50	3
[Pb]			1	0.056	ug/l	9.01	3,284.33	6.624E-04	Pulse	0.50	3
Ca			1	24.838	ug/l	5.40	500.68	3.020E-03	Pulse	0.50	3
Ti			1	0.152	ug/l	37.94	24.00	1.449E-04	Pulse	0.50	3
Na			1	11.681	ug/l	1.91	17,937.68	8.932E-02	Pulse	1.00	3
Mg			1	6.919	ug/l	6.22	2,987.56	1.488E-02	Pulse	1.00	3
K			1	2.392	ug/l	34.31	12,340.53	6.146E-02	Pulse	1.00	3
V			1	0.112	ug/l	6.57	1,464.06	8.834E-03	Pulse	0.50	3
Mn			1	0.732	ug/l	4.37	2,476.17	1.494E-02	Pulse	0.50	3
Fe			1	22.821	ug/l	6.47	128,514.05	7.756E-01	Pulse	0.50	3
Co			1	0.016	ug/l	1.77	228.00	1.375E-03	Pulse	0.50	3
Ni			1	0.164	ug/l	7.04	698.68	2.772E-03	Pulse	0.50	3
Cu			1	-0.473	ug/l	-16.98	19,357.05	1.168E-01	Pulse	0.50	3
Zn			1	-1.883	ug/l	-6.64	6,483.76	2.572E-02	Pulse	1.00	3
Cd			1	0.001	ug/l	48.63	7.33	2.906E-05	Pulse	0.50	3
Al			1	-0.559	ug/l	-81.80	819.35	3.250E-03	Pulse	1.00	3
Se			1	0.014	ug/l	441.18	12.11	7.420E-06	Pulse	3.00	3
Sb			1	0.026	ug/l	14.98	264.00	1.047E-03	Pulse	1.00	3
Se			1	0.120	ug/l	196.75	17.78	1.653E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,958,752.00	0.83	93.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		200,815.36	1.34	93.5	Pulse	0.30	3
1	Ge		165,750.16	1.70	92.8	Pulse	0.30	3
1	In		1,629,204.97	2.62	92.2	Pulse	0.30	3
1	Tb		7,491,283.83	1.10	103.4	Analog	0.50	3
1	Lu		4,021,186.25	1.30	94.4	Pulse	0.50	3
1	Ge		252,098.03	0.87	92.8	Pulse	0.30	3
1	Te		10,813.89	3.05	74.0	Pulse	0.50	3
1	Li		1,382.28	6.81	96.7	Pulse	0.30	3

Quantitation Report

File Name	050_BSP.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 12:19
Sample Name	MP34108-B1
Sample Type	BSP
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	192.459	ug/l	2.85	1,307,547.21	3.338E-01	Pulse	0.50	3
As			1	186.615	ug/l	2.53	136,326.45	3.480E-02	Pulse	1.00	3
Mo			1	199.504	ug/l	2.49	918,244.93	3.831E+00	Pulse	0.50	3
Pb			1	195.170	ug/l	3.04	4,889,071.50	1.248E+00	Pulse	1.00	3
Be			1	206.398	ug/l	4.02	8,174.64	4.208E-02	Pulse	2.00	3
Ag			1	119.421	ug/l	2.49	1,834,084.21	7.653E+00	Pulse	0.50	3
Ba			1	191.205	ug/l	2.45	305,493.72	1.962E-01	Pulse	0.50	3
Tl			1	201.785	ug/l	3.18	7,617,232.00	1.649E+00	Analog	0.50	3
Sn			1	212.749	ug/l	2.61	761,121.22	4.890E-01	Pulse	0.30	3
Sr			1	190.836	ug/l	2.45	621,838.31	3.995E-01	Pulse	0.50	3
[Pb]			1	184.267	ug/l	2.57	2,205,484.67	4.773E-01	Pulse	0.50	3
Ca			1	18605.733	ug/l	0.47	273,500.55	1.718E+00	Pulse	0.50	3
Ti			1	188.678	ug/l	2.48	22,629.10	1.422E-01	Pulse	0.50	3
Na			1	19201.775	ug/l	2.97	15,225,333.33	7.836E+01	Analog	1.00	3
Mg			1	19293.591	ug/l	3.70	6,785,697.00	3.493E+01	Analog	1.00	3
K			1	18128.845	ug/l	3.20	4,679,625.00	2.409E+01	Pulse	1.00	3
V			1	191.784	ug/l	1.42	957,752.27	6.016E+00	Pulse	0.50	3
Mn			1	191.664	ug/l	1.84	562,528.73	3.534E+00	Pulse	0.50	3
Fe			1	19822.976	ug/l	1.44	103,579,573.33	6.506E+02	Analog	0.50	3
Co			1	197.473	ug/l	0.51	2,299,125.08	1.444E+01	Pulse	0.50	3
Ni			1	194.664	ug/l	2.02	622,150.50	2.596E+00	Pulse	0.50	3
Cu			1	195.750	ug/l	1.37	1,749,712.83	1.099E+01	Pulse	0.50	3
Zn			1	177.823	ug/l	2.47	217,730.40	9.085E-01	Pulse	1.00	3
Cd			1	191.290	ug/l	2.98	399,884.07	1.669E+00	Pulse	0.50	3
Al			1	16992.000	ug/l	2.94	1,716,172.08	7.162E+00	Pulse	1.00	3
Se			1	163.271	ug/l	2.32	7,446.23	4.784E-03	Pulse	3.00	3
Sb			1	188.417	ug/l	3.03	876,524.73	3.658E+00	Pulse	1.00	3
Se			1	189.904	ug/l	4.42	3,753.37	3.696E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,623,230.17	3.00	86.7	Pulse	0.50	3
1	Sc		194,408.11	3.19	90.5	Pulse	0.30	3
1	Ge		159,219.23	1.72	89.1	Pulse	0.30	3
1	In		1,557,119.66	2.25	88.1	Pulse	0.30	3
1	Tb		7,234,231.50	2.03	99.9	Analog	0.50	3
1	Lu		3,919,465.00	3.08	92.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		239,761.14	2.63	88.3	Pulse	0.30	3
1	Te		10,166.88	3.63	69.6	Pulse	0.50	3
1	Li		1,261.16	4.64	88.2	Pulse	0.30	3

Quantitation Report

File Name	051SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 12:23
Sample Name	FA56168-8
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.147	ug/l	0.68	8,171.74	2.052E-03	Pulse	0.50	3
As			1	3.541	ug/l	1.32	2,647.52	6.646E-04	Pulse	1.00	3
Mo			1	5.963	ug/l	1.30	28,362.72	1.146E-01	Pulse	0.50	3
Pb			1	0.212	ug/l	8.34	10,959.18	2.753E-03	Pulse	1.00	3
Be			1	0.024	ug/l	28.36	1.17	5.731E-06	Pulse	2.00	3
Ag			1	0.021	ug/l	17.77	470.01	1.901E-03	Pulse	0.50	3
Ba			1	242.115	ug/l	3.15	397,824.26	2.485E-01	Pulse	0.50	3
Tl			1	0.290	ug/l	11.23	11,021.60	2.385E-03	Pulse	0.50	3
Sn			1	0.485	ug/l	6.03	2,100.13	1.312E-03	Pulse	0.30	3
Sr			1	5534.918	ug/l	1.81	18,532,918.67	1.157E+01	Analog	0.50	3
[Pb]			1	0.233	ug/l	4.72	5,183.47	1.121E-03	Pulse	0.50	3
Ca			1	189016.397	ug/l	1.39	2,865,534.83	1.745E+01	Pulse	0.50	3
Ti			1	0.245	ug/l	22.39	35.33	2.149E-04	Pulse	0.50	3
Na			1	18938.454	ug/l	1.68	15,727,529.00	7.729E+01	Analog	1.00	3
Mg			1	63.231	ug/l	1.40	23,773.40	1.168E-01	Pulse	1.00	3
K			1	15981.892	ug/l	1.76	4,322,377.17	2.124E+01	Pulse	1.00	3
V			1	1.117	ug/l	1.59	6,625.81	4.034E-02	Pulse	0.50	3
Mn			1	0.697	ug/l	5.16	2,348.15	1.430E-02	Pulse	0.50	3
Fe			1	13.299	ug/l	3.83	76,058.21	4.631E-01	Pulse	0.50	3
Co			1	1.225	ug/l	2.37	14,753.63	8.982E-02	Pulse	0.50	3
Ni			1	3.206	ug/l	2.73	10,725.00	4.332E-02	Pulse	0.50	3
Cu			1	0.079	ug/l	50.45	24,211.17	1.474E-01	Pulse	0.50	3
Zn			1	4.213	ug/l	9.86	13,776.58	5.567E-02	Pulse	1.00	3
Cd			1	0.007	ug/l	50.21	20.67	8.314E-05	Pulse	0.50	3
Al			1	288.252	ug/l	1.80	30,921.52	1.249E-01	Pulse	1.00	3
Se			1	0.109	ug/l	52.47	16.33	1.021E-05	Pulse	3.00	3
Sb			1	0.125	ug/l	1.14	735.02	2.968E-03	Pulse	1.00	3
Se			1	0.259	ug/l	111.04	20.22	1.923E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,624,133.17	0.88	86.7	Pulse	0.50	3
1	Sc		203,510.72	1.20	94.7	Pulse	0.30	3
1	Ge		164,290.83	1.97	92.0	Pulse	0.30	3
1	In		1,601,807.12	2.60	90.6	Pulse	0.30	3
1	Tb		7,315,910.17	1.89	101.0	Analog	0.50	3
1	Lu		3,982,910.50	2.41	93.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		247,600.65	2.04	91.2	Pulse	0.30	3
1	Te		10,533.73	1.02	72.1	Pulse	0.50	3
1	Li		1,451.17	9.39	101.5	Pulse	0.30	3

Quantitation Report

File Name 052SMPL.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 12:27
Sample Name MP34108-D1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.562	ug/l	6.69	16,757.89	4.505E-03	Pulse	0.50	3
As			1	6.571	ug/l	3.47	4,578.55	1.229E-03	Pulse	1.00	3
Mo			1	11.143	ug/l	3.71	51,879.43	2.140E-01	Pulse	0.50	3
Pb			1	0.189	ug/l	10.35	9,696.76	2.605E-03	Pulse	1.00	3
Be			1	0.032	ug/l	24.88	1.33	7.245E-06	Pulse	2.00	3
Ag			1	0.021	ug/l	14.65	458.68	1.891E-03	Pulse	0.50	3
Ba			1	494.602	ug/l	4.72	731,103.86	5.076E-01	Pulse	0.50	3
Tl			1	0.048	ug/l	16.22	1,708.09	4.095E-04	Pulse	0.50	3
Sn			1	0.988	ug/l	11.79	3,544.81	2.466E-03	Pulse	0.30	3
Sr			1	11226.220	ug/l	4.97	33,805,581.33	2.347E+01	Analog	0.50	3
[Pb]			1	0.229	ug/l	6.29	4,651.31	1.110E-03	Pulse	0.50	3
Ca			1	380420.373	ug/l	4.84	5,588,894.50	3.511E+01	Analog	0.50	3
Ti			1	0.432	ug/l	7.14	56.67	3.555E-04	Pulse	0.50	3
Na			1	38793.458	ug/l	3.11	29,138,573.33	1.583E+02	Analog	1.00	3
Mg			1	130.371	ug/l	3.95	43,875.53	2.384E-01	Pulse	1.00	3
K			1	34148.785	ug/l	3.72	8,342,154.50	4.532E+01	Analog	1.00	3
V			1	2.067	ug/l	5.09	11,157.89	7.009E-02	Pulse	0.50	3
Mn			1	2.072	ug/l	6.61	6,305.71	3.963E-02	Pulse	0.50	3
Fe			1	20.771	ug/l	3.56	112,796.51	7.083E-01	Pulse	0.50	3
Co			1	2.286	ug/l	3.99	26,654.32	1.674E-01	Pulse	0.50	3
Ni			1	5.883	ug/l	4.10	19,149.49	7.902E-02	Pulse	0.50	3
Cu			1	-0.718	ug/l	-11.29	16,435.68	1.032E-01	Pulse	0.50	3
Zn			1	7.688	ug/l	10.43	17,617.70	7.273E-02	Pulse	1.00	3
Cd			1	0.020	ug/l	19.67	46.67	1.934E-04	Pulse	0.50	3
Al			1	535.281	ug/l	4.78	55,476.95	2.290E-01	Pulse	1.00	3
Se			1	0.127	ug/l	76.88	15.33	1.072E-05	Pulse	3.00	3
Sb			1	0.198	ug/l	4.63	1,065.70	4.393E-03	Pulse	1.00	3
Se			1	0.565	ug/l	12.75	21.89	2.516E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,193,024.75	5.24	78.7	Pulse	0.50	3
1	Sc		184,259.35	4.19	85.8	Pulse	0.30	3
1	Ge		159,429.76	4.88	89.3	Pulse	0.30	3
1	In		1,442,669.91	5.21	81.6	Pulse	0.30	3
1	Tb		6,805,655.00	4.85	94.0	Analog	0.50	3
1	Lu		3,728,338.58	5.11	87.5	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		242,652.78	4.92	89.3	Pulse	0.30	3
1	Te		8,714.79	4.89	59.6	Pulse	0.50	3
1	Li		1,298.94	5.34	90.8	Pulse	0.30	3

Quantitation Report

File Name	053SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 12:31
Sample Name	MP34108-SD1
Sample Type	Sample
Comment	
Prep Dilution	10.000
Auto Dilution	N/A
Total Dilution	10.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.126	ug/l	8.46	1,869.43	4.535E-04	Pulse	0.50	3
As			1	3.675	ug/l	6.05	583.34	1.414E-04	Pulse	1.00	3
Mo			1	6.065	ug/l	5.03	6,041.66	2.334E-02	Pulse	0.50	3
Pb			1	0.228	ug/l	32.15	6,969.76	1.689E-03	Pulse	1.00	3
Be			1	0.119	ug/l	78.03	1.17	5.633E-06	Pulse	2.00	3
Ag			1	0.024	ug/l	33.41	230.67	8.894E-04	Pulse	0.50	3
Ba			1	252.715	ug/l	3.61	86,637.99	5.190E-02	Pulse	0.50	3
Tl			1	0.196	ug/l	5.42	1,828.11	3.385E-04	Pulse	0.50	3
Sn			1	0.326	ug/l	19.36	577.79	3.464E-04	Pulse	0.30	3
Sr			1	5409.261	ug/l	3.33	3,777,340.33	2.262E+00	Pulse	0.50	3
[Pb]			1	0.159	ug/l	32.90	3,237.65	5.995E-04	Pulse	0.50	3
Ca			1	198141.060	ug/l	3.03	622,408.79	3.658E+00	Pulse	0.50	3
Ti			1	0.396	ug/l	44.73	15.33	8.997E-05	Pulse	0.50	3
Na			1	19181.486	ug/l	4.00	3,255,676.58	1.569E+01	Pulse	1.00	3
Mg			1	65.560	ug/l	6.64	5,412.07	2.609E-02	Pulse	1.00	3
K			1	16984.740	ug/l	3.73	946,461.33	4.561E+00	Pulse	1.00	3
V			1	0.810	ug/l	4.15	1,768.09	1.039E-02	Pulse	0.50	3
Mn			1	0.839	ug/l	6.74	774.02	4.545E-03	Pulse	0.50	3
Fe			1	14.812	ug/l	2.56	21,070.76	1.238E-01	Pulse	0.50	3
Co			1	1.277	ug/l	2.05	3,214.95	1.889E-02	Pulse	0.50	3
Ni			1	3.275	ug/l	3.11	2,413.49	9.321E-03	Pulse	0.50	3
Cu			1	1.001	ug/l	21.51	26,235.82	1.541E-01	Pulse	0.50	3
Zn			1	10.912	ug/l	9.24	11,831.30	4.569E-02	Pulse	1.00	3
Cd			1	0.005	ug/l	146.53	7.33	2.849E-05	Pulse	0.50	3
Al			1	314.645	ug/l	2.01	7,767.52	2.999E-02	Pulse	1.00	3
Se			1	-0.204	ug/l	-98.21	9.78	5.830E-06	Pulse	3.00	3
Sb			1	0.118	ug/l	10.85	260.67	1.007E-03	Pulse	1.00	3
Se			1	-0.102	ug/l	-742.02	17.44	1.381E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,403,286.00	1.69	101.4	Analog	0.50	3
1	Sc		207,719.41	3.88	96.7	Pulse	0.30	3
1	Ge		170,252.67	3.00	95.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,670,652.71	2.97	94.5	Pulse	0.30	3
1	Tb		7,524,653.17	1.78	103.9	Analog	0.50	3
1	Lu		4,135,297.75	6.47	97.1	Mix	0.50	3
1	Ge		259,032.66	2.34	95.4	Pulse	0.30	3
1	Te		12,591.76	2.28	86.2	Pulse	0.50	3
1	Li		1,472.29	8.93	103.0	Pulse	0.30	3

Quantitation Report

File Name	054SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 12:34
Sample Name	MP34108-S1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	205.150	ug/l	0.56	1,342,658.50	3.558E-01	Pulse	0.50	3
As			1	200.901	ug/l	0.45	141,363.00	3.746E-02	Pulse	1.00	3
Mo			1	216.096	ug/l	1.28	967,236.88	4.150E+00	Pulse	0.50	3
Pb			1	200.807	ug/l	0.74	4,845,848.50	1.284E+00	Pulse	1.00	3
Be			1	216.710	ug/l	2.17	8,336.21	4.419E-02	Pulse	2.00	3
Ag			1	120.041	ug/l	1.36	1,792,778.08	7.692E+00	Pulse	0.50	3
Ba			1	453.275	ug/l	1.54	696,676.33	4.652E-01	Pulse	0.50	3
Tl			1	213.220	ug/l	0.76	7,551,102.67	1.742E+00	Analog	0.50	3
Sn			1	225.364	ug/l	1.69	775,779.52	5.180E-01	Pulse	0.30	3
Sr			1	5929.914	ug/l	0.69	18,569,700.67	1.240E+01	Analog	0.50	3
[Pb]			1	196.257	ug/l	1.49	2,203,077.83	5.083E-01	Pulse	0.50	3
Ca			1	214023.007	ug/l	1.98	3,016,500.08	1.975E+01	Pulse	0.50	3
Ti			1	209.043	ug/l	2.51	24,048.76	1.575E-01	Pulse	0.50	3
Na			1	40074.223	ug/l	0.45	30,842,469.33	1.635E+02	Analog	1.00	3
Mg			1	20236.283	ug/l	0.78	6,911,475.50	3.664E+01	Analog	1.00	3
K			1	37444.849	ug/l	0.86	9,373,483.33	4.969E+01	Analog	1.00	3
V			1	208.450	ug/l	2.33	998,513.48	6.539E+00	Pulse	0.50	3
Mn			1	203.702	ug/l	2.55	573,518.08	3.756E+00	Pulse	0.50	3
Fe			1	21025.083	ug/l	1.49	105,380,349.33	6.901E+02	Analog	0.50	3
Co			1	208.131	ug/l	2.64	2,324,213.58	1.522E+01	Pulse	0.50	3
Ni			1	202.876	ug/l	1.58	630,432.73	2.705E+00	Pulse	0.50	3
Cu			1	199.845	ug/l	2.03	1,713,074.58	1.122E+01	Pulse	0.50	3
Zn			1	186.567	ug/l	1.62	221,727.70	9.514E-01	Pulse	1.00	3
Cd			1	195.931	ug/l	1.45	398,306.73	1.709E+00	Pulse	0.50	3
Al			1	18307.870	ug/l	0.98	1,798,153.25	7.716E+00	Pulse	1.00	3
Se			1	172.767	ug/l	1.81	7,579.17	5.062E-03	Pulse	3.00	3
Sb			1	196.379	ug/l	1.15	888,426.65	3.812E+00	Pulse	1.00	3
Se			1	205.862	ug/l	2.39	3,818.28	4.005E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,334,578.17	1.37	81.3	Pulse	0.50	3
1	Sc		188,631.37	1.22	87.8	Pulse	0.30	3
1	Ge		152,715.25	0.97	85.5	Pulse	0.30	3
1	In		1,497,635.36	1.60	84.7	Pulse	0.30	3
1	Tb		6,969,885.50	1.90	96.2	Analog	0.50	3
1	Lu		3,773,360.33	1.72	88.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		233,046.61	1.20	85.8	Pulse	0.30	3
1	Te		9,535.22	1.38	65.3	Pulse	0.50	3
1	Li		1,273.38	8.69	89.0	Pulse	0.30	3

Quantitation Report

File Name	055CCVA.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 12:38
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	44.800	ug/l	3.22	635,858.87	1.554E-01	Pulse	0.50	3
As			1	45.062	ug/l	3.80	68,751.46	1.681E-02	Pulse	1.00	3
Mo			1	45.235	ug/l	1.21	446,402.64	1.737E+00	Pulse	0.50	3
Pb			1	45.502	ug/l	2.97	2,383,941.58	5.827E-01	Pulse	1.00	3
Be			1	48.882	ug/l	0.69	4,102.92	1.993E-02	Pulse	2.00	3
Ag			1	48.688	ug/l	0.67	1,603,297.46	6.240E+00	Pulse	0.50	3
Ba			1	45.339	ug/l	1.42	153,537.59	9.308E-02	Pulse	0.50	3
Tl			1	40.341	ug/l	0.66	3,493,488.17	6.592E-01	Pulse	0.50	3
Sn			1	45.236	ug/l	1.60	343,178.35	2.081E-01	Pulse	0.30	3
Sr			1	45.855	ug/l	1.60	317,074.09	1.922E-01	Pulse	0.50	3
[Pb]			1	41.087	ug/l	0.34	1,129,471.54	2.131E-01	Pulse	0.50	3
Ca			1	4474.961	ug/l	1.20	139,621.52	8.267E-01	Pulse	0.50	3
Ti			1	45.055	ug/l	3.66	11,465.39	6.791E-02	Pulse	0.50	3
Na			1	4676.503	ug/l	0.99	7,860,798.67	3.819E+01	Analog	1.00	3
Mg			1	4500.907	ug/l	1.02	3,354,713.42	1.630E+01	Pulse	1.00	3
K			1	4462.816	ug/l	0.95	2,447,043.92	1.189E+01	Pulse	1.00	3
V			1	44.805	ug/l	1.58	475,209.69	2.814E+00	Pulse	0.50	3
Mn			1	44.992	ug/l	2.83	280,271.47	1.660E+00	Pulse	0.50	3
Fe			1	4755.188	ug/l	2.31	52,713,460.00	3.122E+02	Analog	0.50	3
Co			1	46.062	ug/l	2.32	1,137,625.25	6.737E+00	Pulse	0.50	3
Ni			1	45.791	ug/l	1.48	313,822.87	1.221E+00	Pulse	0.50	3
Cu			1	45.725	ug/l	2.34	879,948.73	5.211E+00	Pulse	0.50	3
Zn			1	46.285	ug/l	0.90	125,814.89	4.897E-01	Pulse	1.00	3
Cd			1	45.685	ug/l	0.80	204,794.51	7.971E-01	Pulse	0.50	3
Al			1	4555.693	ug/l	0.99	987,040.25	3.842E+00	Pulse	1.00	3
Se			1	45.351	ug/l	2.13	4,388.28	2.661E-03	Pulse	3.00	3
Sb			1	45.092	ug/l	0.28	449,890.11	1.751E+00	Pulse	1.00	3
Se			1	43.072	ug/l	1.25	2,219.13	1.684E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,299,890.67	1.02	99.4	Analog	0.50	3
1	Sc		205,833.50	0.84	95.8	Pulse	0.30	3
1	Ge		168,910.17	1.78	94.6	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,649,695.25	1.55	93.3	Pulse	0.30	3
1	Tb		7,432,499.83	1.68	102.6	Analog	0.50	3
1	Lu		4,093,898.33	3.47	96.1	Mix	0.50	3
1	Ge		256,935.11	0.59	94.6	Pulse	0.30	3
1	Te		13,175.54	0.87	90.2	Pulse	0.50	3
1	Li		1,427.84	2.36	99.8	Pulse	0.30	3

Quantitation Report

File Name	056_CCV.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 12:42
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	94.987	ug/l	2.60	1,293,441.29	3.295E-01	Pulse	0.50	3
As			1	94.825	ug/l	2.25	138,837.92	3.537E-02	Pulse	1.00	3
Mo			1	93.500	ug/l	1.70	903,744.75	3.591E+00	Pulse	0.50	3
Pb			1	93.203	ug/l	2.95	4,679,452.67	1.192E+00	Pulse	1.00	3
Be			1	98.527	ug/l	2.13	8,206.32	4.018E-02	Pulse	2.00	3
Ag			1	97.822	ug/l	1.94	3,154,767.50	1.254E+01	Pulse	0.50	3
Ba			1	93.734	ug/l	2.51	310,399.78	1.924E-01	Pulse	0.50	3
Tl			1	92.758	ug/l	4.73	7,535,520.67	1.516E+00	Analog	0.50	3
Sn			1	92.881	ug/l	2.29	688,822.54	4.270E-01	Pulse	0.30	3
Sr			1	95.146	ug/l	2.22	642,652.04	3.984E-01	Pulse	0.50	3
[Pb]			1	86.633	ug/l	4.97	2,231,092.92	4.488E-01	Pulse	0.50	3
Ca			1	9362.537	ug/l	1.97	287,334.47	1.729E+00	Pulse	0.50	3
Ti			1	94.955	ug/l	1.41	23,781.14	1.431E-01	Pulse	0.50	3
Na			1	9596.581	ug/l	2.76	15,997,029.33	7.833E+01	Analog	1.00	3
Mg			1	9646.098	ug/l	2.80	7,133,295.33	3.493E+01	Analog	1.00	3
K			1	9630.475	ug/l	3.40	5,225,099.00	2.559E+01	Analog	1.00	3
V			1	93.437	ug/l	1.60	974,355.21	5.862E+00	Pulse	0.50	3
Mn			1	93.011	ug/l	2.43	570,006.35	3.430E+00	Pulse	0.50	3
Fe			1	9793.360	ug/l	2.25	106,843,701.33	6.429E+02	Analog	0.50	3
Co			1	94.479	ug/l	1.35	2,296,700.00	1.382E+01	Pulse	0.50	3
Ni			1	94.000	ug/l	1.54	630,835.44	2.507E+00	Pulse	0.50	3
Cu			1	93.315	ug/l	1.94	1,742,692.71	1.049E+01	Pulse	0.50	3
Zn			1	94.629	ug/l	2.39	242,728.87	9.646E-01	Pulse	1.00	3
Cd			1	93.532	ug/l	2.68	410,602.59	1.632E+00	Pulse	0.50	3
Al			1	9483.107	ug/l	2.63	2,011,190.29	7.993E+00	Pulse	1.00	3
Se			1	93.549	ug/l	4.57	8,838.49	5.481E-03	Pulse	3.00	3
Sb			1	93.719	ug/l	2.11	915,606.56	3.639E+00	Pulse	1.00	3
Se			1	92.409	ug/l	1.81	4,511.42	3.597E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,979,332.83	4.87	93.4	Mix	0.50	3
1	Sc		204,324.89	2.64	95.1	Pulse	0.30	3
1	Ge		166,230.08	1.44	93.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,613,824.10	2.44	91.3	Pulse	0.30	3
1	Tb		7,281,877.50	2.48	100.5	Analog	0.50	3
1	Lu		3,927,158.92	2.41	92.2	Pulse	0.50	3
1	Ge		251,704.27	2.06	92.7	Pulse	0.30	3
1	Te		12,544.39	1.70	85.9	Pulse	0.50	3
1	Li		1,408.95	2.74	98.5	Pulse	0.30	3

Quantitation Report

File Name	057_CCB.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 12:46
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.004	ug/l	-26.24	208.67	5.054E-05	Pulse	0.50	3
As			1	0.004	ug/l	31.91	24.67	5.982E-06	Pulse	1.00	3
Mo			1	0.031	ug/l	12.62	316.00	1.225E-03	Pulse	0.50	3
Pb			1	0.003	ug/l	508.00	5,872.35	1.431E-03	Pulse	1.00	3
Be			1	0.006	ug/l	57.59	0.67	3.247E-06	Pulse	2.00	3
Ag			1	0.008	ug/l	13.27	423.34	1.640E-03	Pulse	0.50	3
Ba			1	-0.003	ug/l	-40.79	33.33	1.992E-05	Pulse	0.50	3
Tl			1	0.020	ug/l	10.94	1,884.78	3.458E-04	Pulse	0.50	3
Sn			1	0.029	ug/l	9.87	552.23	3.290E-04	Pulse	0.30	3
Sr			1	-0.006	ug/l	-144.49	761.35	4.538E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	-1086.13	2,810.91	5.155E-04	Pulse	0.50	3
Ca			1	-0.740	ug/l	-54.02	101.33	5.916E-04	Pulse	0.50	3
Ti			1	-0.012	ug/l	-65.74	2.00	1.184E-05	Pulse	0.50	3
Na			1	0.448	ug/l	70.59	9,312.17	4.533E-02	Pulse	1.00	3
Mg			1	-0.243	ug/l	-32.53	303.33	1.478E-03	Pulse	1.00	3
K			1	-0.425	ug/l	-107.88	11,748.16	5.717E-02	Pulse	1.00	3
V			1	-0.045	ug/l	-4.98	424.68	2.485E-03	Pulse	0.50	3
Mn			1	-0.024	ug/l	-12.63	95.33	5.606E-04	Pulse	0.50	3
Fe			1	0.334	ug/l	26.81	8,274.56	4.852E-02	Pulse	0.50	3
Co			1	0.002	ug/l	47.46	87.33	5.146E-04	Pulse	0.50	3
Ni			1	-0.007	ug/l	-52.92	104.00	4.009E-04	Pulse	0.50	3
Cu			1	-0.172	ug/l	-20.19	21,163.62	1.240E-01	Pulse	0.50	3
Zn			1	-0.835	ug/l	-10.24	6,914.25	2.677E-02	Pulse	1.00	3
Cd			1	0.002	ug/l	86.82	14.67	5.738E-05	Pulse	0.50	3
Al			1	-3.446	ug/l	-5.33	149.67	5.821E-04	Pulse	1.00	3
Se			1	0.005	ug/l	1267.02	12.11	7.311E-06	Pulse	3.00	3
Sb			1	0.014	ug/l	13.34	286.00	1.106E-03	Pulse	1.00	3
Se			1	0.020	ug/l	254.72	20.45	1.497E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,457,225.17	3.08	102.4	Analog	0.50	3
1	Sc		205,605.33	3.31	95.7	Pulse	0.30	3

Quantitation Report

1	Ge		170,813.03	3.36	95.6	Pulse	0.30	3
1	In		1,679,486.84	4.08	95.0	Pulse	0.30	3
1	Tb		7,440,760.00	3.37	102.7	Analog	0.50	3
1	Lu		4,131,237.92	8.72	97.0	Mix	0.50	3
1	Ge		258,500.17	3.61	95.2	Pulse	0.30	3
1	Te		13,703.98	5.32	93.8	Pulse	0.50	3
1	Li		1,362.28	12.48	95.3	Pulse	0.30	3

Quantitation Report

File Name	058SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 12:50
Sample Name	MP34108-S2
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	195.536	ug/l	2.55	1,297,723.92	3.391E-01	Pulse	0.50	3
As			1	192.943	ug/l	3.07	137,666.89	3.598E-02	Pulse	1.00	3
Mo			1	203.767	ug/l	1.55	929,175.88	3.913E+00	Pulse	0.50	3
Pb			1	188.599	ug/l	2.19	4,615,828.50	1.206E+00	Pulse	1.00	3
Be			1	201.377	ug/l	2.59	7,950.39	4.106E-02	Pulse	2.00	3
Ag			1	101.061	ug/l	2.06	1,537,648.92	6.476E+00	Pulse	0.50	3
Ba			1	427.160	ug/l	2.11	673,029.17	4.384E-01	Pulse	0.50	3
Tl			1	204.648	ug/l	2.33	7,307,629.50	1.672E+00	Analog	0.50	3
Sn			1	213.323	ug/l	3.23	752,580.91	4.903E-01	Pulse	0.30	3
Sr			1	5653.367	ug/l	2.38	18,146,684.00	1.182E+01	Analog	0.50	3
[Pb]			1	185.357	ug/l	1.91	2,098,382.42	4.801E-01	Pulse	0.50	3
Ca			1	201591.477	ug/l	2.14	2,916,346.92	1.861E+01	Pulse	0.50	3
Ti			1	195.445	ug/l	1.92	23,080.93	1.473E-01	Pulse	0.50	3
Na			1	37966.717	ug/l	3.33	29,990,401.33	1.549E+02	Analog	1.00	3
Mg			1	19133.107	ug/l	3.69	6,705,743.83	3.464E+01	Analog	1.00	3
K			1	35805.640	ug/l	3.55	9,198,945.33	4.752E+01	Analog	1.00	3
V			1	196.742	ug/l	2.02	967,435.48	6.172E+00	Pulse	0.50	3
Mn			1	192.569	ug/l	2.73	556,484.94	3.550E+00	Pulse	0.50	3
Fe			1	19869.266	ug/l	2.16	102,220,384.00	6.522E+02	Analog	0.50	3
Co			1	194.509	ug/l	1.76	2,229,602.83	1.422E+01	Pulse	0.50	3
Ni			1	192.341	ug/l	1.63	608,934.77	2.565E+00	Pulse	0.50	3
Cu			1	189.527	ug/l	1.89	1,668,783.29	1.065E+01	Pulse	0.50	3
Zn			1	177.049	ug/l	1.15	214,807.24	9.047E-01	Pulse	1.00	3
Cd			1	186.019	ug/l	1.32	385,299.14	1.623E+00	Pulse	0.50	3
Al			1	17560.909	ug/l	1.66	1,757,292.13	7.401E+00	Pulse	1.00	3
Se			1	163.851	ug/l	3.18	7,369.09	4.801E-03	Pulse	3.00	3
Sb			1	185.962	ug/l	1.14	857,185.65	3.610E+00	Pulse	1.00	3
Se			1	194.921	ug/l	2.75	3,745.04	3.793E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,371,805.83	1.87	82.0	Pulse	0.50	3
1	Sc		193,739.03	3.36	90.2	Pulse	0.30	3
1	Ge		156,775.11	1.47	87.8	Pulse	0.30	3
1	In		1,535,638.62	2.19	86.9	Pulse	0.30	3
1	Tb		7,114,964.83	2.46	98.2	Analog	0.50	3
1	Lu		3,828,174.25	2.48	89.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		237,464.92	1.30	87.4	Pulse	0.30	3
1	Te		9,876.72	1.71	67.6	Pulse	0.50	3
1	Li		1,337.83	3.40	93.6	Pulse	0.30	3

Quantitation Report

File Name	059SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 12:53
Sample Name	MP34108-PS1
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	19.811	ug/l	2.31	134,786.56	3.442E-02	Pulse	0.50	3
As			1	21.444	ug/l	1.48	15,677.42	4.003E-03	Pulse	1.00	3
Mo			1	24.504	ug/l	0.87	115,445.70	4.706E-01	Pulse	0.50	3
Pb			1	18.720	ug/l	2.33	473,788.90	1.210E-01	Pulse	1.00	3
Be			1	19.726	ug/l	4.53	803.68	4.023E-03	Pulse	2.00	3
Ag			1	5.365	ug/l	2.17	84,462.78	3.444E-01	Pulse	0.50	3
Ba			1	258.494	ug/l	2.25	417,994.12	2.653E-01	Pulse	0.50	3
Tl			1	18.529	ug/l	1.97	687,885.65	1.514E-01	Pulse	0.50	3
Sn			1	20.910	ug/l	2.95	75,989.52	4.824E-02	Pulse	0.30	3
Sr			1	5467.047	ug/l	2.52	18,009,628.67	1.143E+01	Analog	0.50	3
[Pb]			1	18.240	ug/l	1.77	216,773.95	4.771E-02	Pulse	0.50	3
Ca			1	188474.503	ug/l	1.50	2,787,023.25	1.740E+01	Pulse	0.50	3
Ti			1	19.187	ug/l	3.11	2,320.15	1.448E-02	Pulse	0.50	3
Na			1	20459.216	ug/l	3.48	16,676,170.67	8.349E+01	Analog	1.00	3
Mg			1	1867.091	ug/l	4.14	675,481.19	3.383E+00	Pulse	1.00	3
K			1	17420.681	ug/l	3.75	4,623,245.83	2.315E+01	Pulse	1.00	3
V			1	20.277	ug/l	1.06	102,683.47	6.408E-01	Pulse	0.50	3
Mn			1	19.356	ug/l	2.42	57,380.80	3.582E-01	Pulse	0.50	3
Fe			1	1951.916	ug/l	2.30	10,267,346.00	6.409E+01	Analog	0.50	3
Co			1	20.254	ug/l	2.35	237,307.97	1.481E+00	Pulse	0.50	3
Ni			1	21.546	ug/l	1.13	70,597.29	2.878E-01	Pulse	0.50	3
Cu			1	18.351	ug/l	1.51	185,855.38	1.160E+00	Pulse	0.50	3
Zn			1	20.337	ug/l	1.62	33,081.58	1.349E-01	Pulse	1.00	3
Cd			1	17.857	ug/l	1.25	38,214.64	1.558E-01	Pulse	0.50	3
Al			1	1963.027	ug/l	1.22	203,699.85	8.304E-01	Pulse	1.00	3
Se			1	16.461	ug/l	2.27	770.13	4.886E-04	Pulse	3.00	3
Sb			1	17.283	ug/l	0.99	82,420.19	3.360E-01	Pulse	1.00	3
Se			1	18.434	ug/l	1.74	385.78	3.716E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,544,486.17	1.52	85.2	Pulse	0.50	3
1	Sc		199,906.32	3.77	93.1	Pulse	0.30	3
1	Ge		160,253.25	2.10	89.7	Pulse	0.30	3
1	In		1,575,987.09	2.02	89.2	Pulse	0.30	3
1	Tb		7,308,734.33	2.36	100.9	Analog	0.50	3
1	Lu		3,917,339.50	1.62	92.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		245,310.53	1.04	90.3	Pulse	0.30	3
1	Te		10,385.68	2.90	71.1	Pulse	0.50	3
1	Li		1,327.83	7.18	92.9	Pulse	0.30	3

Quantitation Report

File Name	060SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 12:57
Sample Name	FA56168-9
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.369	ug/l	4.79	9,389.62	2.437E-03	Pulse	0.50	3
As			1	2.611	ug/l	2.02	1,891.76	4.911E-04	Pulse	1.00	3
Mo			1	5.787	ug/l	1.56	26,679.63	1.112E-01	Pulse	0.50	3
Pb			1	0.068	ug/l	2.96	7,071.81	1.836E-03	Pulse	1.00	3
Be			1	0.029	ug/l	63.72	1.33	6.788E-06	Pulse	2.00	3
Ag			1	0.014	ug/l	13.72	347.34	1.448E-03	Pulse	0.50	3
Ba			1	243.448	ug/l	1.19	386,513.97	2.499E-01	Pulse	0.50	3
Tl			1	0.036	ug/l	8.55	1,402.06	3.103E-04	Pulse	0.50	3
Sn			1	0.464	ug/l	0.86	1,954.56	1.263E-03	Pulse	0.30	3
Sr			1	5635.037	ug/l	0.90	18,226,848.67	1.178E+01	Analog	0.50	3
[Pb]			1	0.082	ug/l	7.77	3,291.66	7.288E-04	Pulse	0.50	3
Ca			1	187703.150	ug/l	0.60	2,744,790.33	1.732E+01	Pulse	0.50	3
Ti			1	0.200	ug/l	46.46	28.67	1.811E-04	Pulse	0.50	3
Na			1	19063.963	ug/l	1.27	15,195,413.33	7.780E+01	Analog	1.00	3
Mg			1	48.166	ug/l	1.09	17,491.30	8.955E-02	Pulse	1.00	3
K			1	16163.858	ug/l	1.02	4,195,886.00	2.148E+01	Pulse	1.00	3
V			1	1.032	ug/l	3.58	5,964.26	3.765E-02	Pulse	0.50	3
Mn			1	0.667	ug/l	8.29	2,178.13	1.375E-02	Pulse	0.50	3
Fe			1	8.164	ug/l	7.00	46,664.79	2.945E-01	Pulse	0.50	3
Co			1	1.212	ug/l	0.40	14,077.14	8.885E-02	Pulse	0.50	3
Ni			1	3.123	ug/l	1.76	10,132.01	4.222E-02	Pulse	0.50	3
Cu			1	-0.360	ug/l	-12.94	19,499.21	1.231E-01	Pulse	0.50	3
Zn			1	1.990	ug/l	12.97	10,735.66	4.474E-02	Pulse	1.00	3
Cd			1	0.010	ug/l	12.72	26.67	1.110E-04	Pulse	0.50	3
Al			1	273.625	ug/l	2.09	28,494.92	1.188E-01	Pulse	1.00	3
Se			1	0.038	ug/l	275.11	12.56	8.134E-06	Pulse	3.00	3
Sb			1	0.138	ug/l	2.61	776.35	3.234E-03	Pulse	1.00	3
Se			1	0.182	ug/l	46.79	18.00	1.773E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,517,189.67	0.57	84.7	Pulse	0.50	3
1	Sc		195,333.87	1.50	90.9	Pulse	0.30	3
1	Ge		158,443.22	0.47	88.7	Pulse	0.30	3
1	In		1,547,037.12	1.15	87.5	Pulse	0.30	3
1	Tb		7,142,766.83	0.94	98.6	Analog	0.50	3
1	Lu		3,852,102.33	0.11	90.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		240,006.11	1.66	88.4	Pulse	0.30	3
1	Te		10,159.52	1.42	69.5	Pulse	0.50	3
1	Li		1,423.39	4.12	99.5	Pulse	0.30	3

Quantitation Report

File Name	061SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 13:01
Sample Name	FA56168-10
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.239	ug/l	0.58	14,929.74	3.945E-03	Pulse	0.50	3
As			1	9.421	ug/l	4.65	6,662.51	1.761E-03	Pulse	1.00	3
Mo			1	0.277	ug/l	4.07	1,258.05	5.362E-03	Pulse	0.50	3
Pb			1	1.168	ug/l	0.59	33,529.41	8.860E-03	Pulse	1.00	3
Be			1	0.234	ug/l	18.56	9.17	4.859E-05	Pulse	2.00	3
Ag			1	0.016	ug/l	15.79	376.01	1.602E-03	Pulse	0.50	3
Ba			1	71.519	ug/l	1.27	110,334.44	7.342E-02	Pulse	0.50	3
Tl			1	0.016	ug/l	3.91	680.69	1.486E-04	Pulse	0.50	3
Sn			1	0.531	ug/l	3.93	2,130.14	1.417E-03	Pulse	0.30	3
Sr			1	177.506	ug/l	1.07	558,441.31	3.716E-01	Pulse	0.50	3
[Pb]			1	1.132	ug/l	2.59	15,782.64	3.445E-03	Pulse	0.50	3
Ca			1	34706.454	ug/l	1.57	497,858.99	3.204E+00	Pulse	0.50	3
Ti			1	4.208	ug/l	5.07	497.34	3.200E-03	Pulse	0.50	3
Na			1	9888.121	ug/l	1.36	7,610,263.33	4.037E+01	Analog	1.00	3
Mg			1	7192.437	ug/l	1.18	2,454,963.17	1.302E+01	Pulse	1.00	3
K			1	5266.408	ug/l	1.67	1,326,658.92	7.039E+00	Pulse	1.00	3
V			1	2.825	ug/l	1.12	14,583.47	9.385E-02	Pulse	0.50	3
Mn			1	632.641	ug/l	1.57	1,812,037.71	1.166E+01	Pulse	0.50	3
Fe			1	14761.223	ug/l	1.06	75,288,392.00	4.845E+02	Analog	0.50	3
Co			1	0.573	ug/l	2.24	6,540.46	4.209E-02	Pulse	0.50	3
Ni			1	3.399	ug/l	3.78	10,769.69	4.590E-02	Pulse	0.50	3
Cu			1	2.517	ug/l	2.71	43,901.04	2.825E-01	Pulse	0.50	3
Zn			1	18.272	ug/l	2.67	29,270.79	1.247E-01	Pulse	1.00	3
Cd			1	0.127	ug/l	8.97	265.33	1.130E-03	Pulse	0.50	3
Al			1	222.485	ug/l	0.94	22,815.34	9.721E-02	Pulse	1.00	3
Se			1	0.349	ug/l	9.18	25.89	1.723E-05	Pulse	3.00	3
Sb			1	0.082	ug/l	15.69	502.68	2.141E-03	Pulse	1.00	3
Se			1	1.597	ug/l	17.99	45.00	4.516E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,581,228.17	0.49	85.9	Pulse	0.50	3
1	Sc		188,507.35	1.58	87.8	Pulse	0.30	3
1	Ge		155,389.85	0.67	87.0	Pulse	0.30	3
1	In		1,502,766.85	0.58	85.0	Pulse	0.30	3
1	Tb		7,122,059.83	0.92	98.3	Analog	0.50	3
1	Lu		3,784,246.92	1.23	88.8	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		234,722.13	1.55	86.4	Pulse	0.30	3
1	Te		9,966.77	3.10	68.2	Pulse	0.50	3
1	Li		1,295.61	3.99	90.6	Pulse	0.30	3

Quantitation Report

File Name	062SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 13:05
Sample Name	FA56168-11
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.832	ug/l	5.41	5,767.54	1.506E-03	Pulse	0.50	3
As			1	134.824	ug/l	0.57	96,315.41	2.514E-02	Pulse	1.00	3
Mo			1	1.614	ug/l	2.15	7,446.17	3.103E-02	Pulse	0.50	3
Pb			1	0.106	ug/l	2.62	7,959.86	2.078E-03	Pulse	1.00	3
Be			1	0.034	ug/l	97.23	1.50	7.794E-06	Pulse	2.00	3
Ag			1	0.014	ug/l	12.88	354.67	1.477E-03	Pulse	0.50	3
Ba			1	173.773	ug/l	0.61	273,636.93	1.784E-01	Pulse	0.50	3
Tl			1	0.012	ug/l	6.14	546.68	1.186E-04	Pulse	0.50	3
Sn			1	0.392	ug/l	5.71	1,684.53	1.098E-03	Pulse	0.30	3
Sr			1	119.033	ug/l	1.67	382,555.83	2.494E-01	Pulse	0.50	3
[Pb]			1	0.123	ug/l	11.18	3,852.45	8.357E-04	Pulse	0.50	3
Ca			1	32759.141	ug/l	1.88	481,365.19	3.024E+00	Pulse	0.50	3
Ti			1	2.054	ug/l	15.77	251.34	1.577E-03	Pulse	0.50	3
Na			1	14783.531	ug/l	2.21	11,582,917.67	6.034E+01	Analog	1.00	3
Mg			1	7802.709	ug/l	1.35	2,712,186.42	1.413E+01	Pulse	1.00	3
K			1	946.680	ug/l	1.86	252,065.87	1.313E+00	Pulse	1.00	3
V			1	0.621	ug/l	1.43	3,944.41	2.477E-02	Pulse	0.50	3
Mn			1	451.313	ug/l	2.00	1,324,201.04	8.319E+00	Pulse	0.50	3
Fe			1	8152.865	ug/l	1.46	42,599,352.00	2.676E+02	Analog	0.50	3
Co			1	0.551	ug/l	3.46	6,443.76	4.048E-02	Pulse	0.50	3
Ni			1	1.283	ug/l	1.66	4,244.48	1.769E-02	Pulse	0.50	3
Cu			1	-0.336	ug/l	-7.27	19,806.83	1.244E-01	Pulse	0.50	3
Zn			1	4.945	ug/l	5.56	14,217.24	5.926E-02	Pulse	1.00	3
Cd			1	0.038	ug/l	23.02	84.00	3.506E-04	Pulse	0.50	3
Al			1	76.691	ug/l	0.95	8,588.19	3.579E-02	Pulse	1.00	3
Se			1	0.161	ug/l	22.81	18.00	1.174E-05	Pulse	3.00	3
Sb			1	0.091	ug/l	7.78	555.34	2.313E-03	Pulse	1.00	3
Se			1	0.372	ug/l	36.45	21.67	2.142E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,609,876.67	1.12	86.5	Pulse	0.50	3
1	Sc		191,994.28	1.47	89.4	Pulse	0.30	3
1	Ge		159,205.08	1.36	89.1	Pulse	0.30	3
1	In		1,534,248.13	0.72	86.8	Pulse	0.30	3
1	Tb		7,180,848.00	1.20	99.1	Analog	0.50	3
1	Lu		3,830,853.67	0.87	89.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		239,960.92	1.20	88.3	Pulse	0.30	3
1	Te		10,128.20	2.00	69.3	Pulse	0.50	3
1	Li		1,378.94	7.31	96.4	Pulse	0.30	3

Quantitation Report

File Name	063SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 13:09
Sample Name	FA56168-12
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.662	ug/l	3.89	4,712.59	1.212E-03	Pulse	0.50	3
As			1	1.854	ug/l	2.28	1,361.38	3.501E-04	Pulse	1.00	3
Mo			1	0.706	ug/l	3.56	3,300.30	1.360E-02	Pulse	0.50	3
Pb			1	0.245	ug/l	3.58	11,517.88	2.962E-03	Pulse	1.00	3
Be			1	0.013	ug/l	112.17	0.67	3.452E-06	Pulse	2.00	3
Ag			1	0.011	ug/l	17.30	314.00	1.295E-03	Pulse	0.50	3
Ba			1	22.084	ug/l	3.00	35,412.58	2.269E-02	Pulse	0.50	3
Tl			1	0.007	ug/l	11.30	355.34	7.573E-05	Pulse	0.50	3
Sn			1	0.452	ug/l	3.76	1,929.00	1.236E-03	Pulse	0.30	3
Sr			1	170.669	ug/l	1.52	557,740.38	3.573E-01	Pulse	0.50	3
[Pb]			1	0.254	ug/l	2.62	5,506.90	1.173E-03	Pulse	0.50	3
Ca			1	24130.697	ug/l	0.17	354,147.07	2.228E+00	Pulse	0.50	3
Ti			1	11.148	ug/l	4.71	1,340.05	8.428E-03	Pulse	0.50	3
Na			1	10673.490	ug/l	0.83	8,408,742.50	4.358E+01	Analog	1.00	3
Mg			1	4357.060	ug/l	0.64	1,522,510.38	7.890E+00	Pulse	1.00	3
K			1	436.412	ug/l	0.58	122,864.87	6.367E-01	Pulse	1.00	3
V			1	0.273	ug/l	1.98	2,202.80	1.386E-02	Pulse	0.50	3
Mn			1	394.672	ug/l	0.69	1,156,535.04	7.275E+00	Pulse	0.50	3
Fe			1	197.773	ug/l	1.00	1,036,076.58	6.518E+00	Pulse	0.50	3
Co			1	0.164	ug/l	1.78	1,943.44	1.223E-02	Pulse	0.50	3
Ni			1	0.413	ug/l	5.68	1,477.40	6.092E-03	Pulse	0.50	3
Cu			1	-0.700	ug/l	-0.63	16,571.79	1.042E-01	Pulse	0.50	3
Zn			1	9.240	ug/l	2.09	19,491.84	8.036E-02	Pulse	1.00	3
Cd			1	0.017	ug/l	50.18	40.00	1.647E-04	Pulse	0.50	3
Al			1	167.352	ug/l	1.24	17,945.71	7.398E-02	Pulse	1.00	3
Se			1	0.118	ug/l	39.46	16.33	1.047E-05	Pulse	3.00	3
Sb			1	0.056	ug/l	9.66	395.01	1.629E-03	Pulse	1.00	3
Se			1	0.240	ug/l	28.59	19.78	1.887E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,694,196.50	0.94	88.1	Pulse	0.50	3
1	Sc		192,961.78	0.32	89.8	Pulse	0.30	3
1	Ge		158,972.39	0.72	89.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,561,019.10	0.90	88.3	Pulse	0.30	3
1	Tb		7,286,644.17	0.55	100.6	Analog	0.50	3
1	Lu		3,888,553.42	0.87	91.3	Pulse	0.50	3
1	Ge		242,563.41	0.72	89.3	Pulse	0.30	3
1	Te		10,484.40	1.54	71.8	Pulse	0.50	3
1	Li		1,331.16	5.79	93.1	Pulse	0.30	3

Quantitation Report

File Name 064SMPL.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 13:12
Sample Name FA56168-13
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.503	ug/l	2.67	10,285.40	2.670E-03	Pulse	0.50	3
As			1	6.162	ug/l	1.43	4,442.86	1.153E-03	Pulse	1.00	3
Mo			1	2.015	ug/l	2.30	9,284.31	3.875E-02	Pulse	0.50	3
Pb			1	6.155	ug/l	0.95	156,838.58	4.071E-02	Pulse	1.00	3
Be			1	0.104	ug/l	42.74	4.17	2.195E-05	Pulse	2.00	3
Ag			1	0.020	ug/l	7.99	446.68	1.864E-03	Pulse	0.50	3
Ba			1	36.840	ug/l	1.29	57,978.37	3.783E-02	Pulse	0.50	3
Tl			1	0.016	ug/l	11.72	695.35	1.497E-04	Pulse	0.50	3
Sn			1	0.437	ug/l	12.28	1,837.94	1.200E-03	Pulse	0.30	3
Sr			1	74.134	ug/l	1.37	238,277.83	1.555E-01	Pulse	0.50	3
[Pb]			1	6.037	ug/l	1.43	74,946.45	1.614E-02	Pulse	0.50	3
Ca			1	27411.946	ug/l	1.04	401,168.05	2.531E+00	Pulse	0.50	3
Ti			1	10.854	ug/l	6.37	1,301.38	8.206E-03	Pulse	0.50	3
Na			1	7853.778	ug/l	1.71	6,073,902.00	3.208E+01	Analog	1.00	3
Mg			1	9339.463	ug/l	1.27	3,202,187.17	1.691E+01	Pulse	1.00	3
K			1	796.034	ug/l	0.99	210,841.17	1.113E+00	Pulse	1.00	3
V			1	1.870	ug/l	3.25	10,135.32	6.393E-02	Pulse	0.50	3
Mn			1	297.573	ug/l	0.77	869,663.42	5.486E+00	Pulse	0.50	3
Fe			1	4105.668	ug/l	1.64	21,365,678.67	1.348E+02	Analog	0.50	3
Co			1	1.258	ug/l	0.48	14,613.56	9.217E-02	Pulse	0.50	3
Ni			1	2.203	ug/l	2.87	7,176.69	2.995E-02	Pulse	0.50	3
Cu			1	5.807	ug/l	1.53	73,689.78	4.648E-01	Pulse	0.50	3
Zn			1	21.331	ug/l	0.93	33,483.62	1.398E-01	Pulse	1.00	3
Cd			1	0.259	ug/l	4.62	545.34	2.276E-03	Pulse	0.50	3
Al			1	474.754	ug/l	3.44	48,750.89	2.035E-01	Pulse	1.00	3
Se			1	0.375	ug/l	56.17	27.56	1.798E-05	Pulse	3.00	3
Sb			1	0.116	ug/l	3.25	670.01	2.796E-03	Pulse	1.00	3
Se			1	1.754	ug/l	7.94	49.67	4.821E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,644,334.17	0.46	87.1	Pulse	0.50	3
1	Sc		189,379.03	1.04	88.2	Pulse	0.30	3
1	Ge		158,538.41	0.89	88.8	Pulse	0.30	3
1	In		1,532,582.99	0.66	86.7	Pulse	0.30	3
1	Tb		7,220,776.50	0.55	99.7	Analog	0.50	3
1	Lu		3,852,373.42	0.34	90.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		239,595.56	0.20	88.2	Pulse	0.30	3
1	Te		10,305.61	0.93	70.5	Pulse	0.50	3
1	Li		1,221.16	16.37	85.4	Pulse	0.30	3

Quantitation Report

File Name	065SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 13:16
Sample Name	FA56168-14
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.429	ug/l	4.27	3,114.93	8.068E-04	Pulse	0.50	3
As			1	2.905	ug/l	1.48	2,108.12	5.460E-04	Pulse	1.00	3
Mo			1	2.229	ug/l	2.50	10,319.53	4.285E-02	Pulse	0.50	3
Pb			1	0.228	ug/l	1.16	11,023.55	2.855E-03	Pulse	1.00	3
Be			1	0.005	ug/l	320.86	0.33	1.710E-06	Pulse	2.00	3
Ag			1	0.098	ug/l	1.79	1,647.41	6.839E-03	Pulse	0.50	3
Ba			1	12.709	ug/l	1.85	20,276.05	1.307E-02	Pulse	0.50	3
Tl			1	0.006	ug/l	12.41	298.67	6.426E-05	Pulse	0.50	3
Sn			1	0.430	ug/l	5.93	1,837.88	1.185E-03	Pulse	0.30	3
Sr			1	112.309	ug/l	1.93	365,013.81	2.353E-01	Pulse	0.50	3
[Pb]			1	0.243	ug/l	4.50	5,330.85	1.147E-03	Pulse	0.50	3
Ca			1	21730.170	ug/l	0.95	318,924.01	2.006E+00	Pulse	0.50	3
Ti			1	1.064	ug/l	19.15	132.00	8.318E-04	Pulse	0.50	3
Na			1	9411.034	ug/l	1.51	7,406,468.00	3.843E+01	Analog	1.00	3
Mg			1	4422.646	ug/l	1.81	1,543,585.08	8.009E+00	Pulse	1.00	3
K			1	365.794	ug/l	1.28	104,682.29	5.431E-01	Pulse	1.00	3
V			1	0.181	ug/l	15.80	1,744.75	1.098E-02	Pulse	0.50	3
Mn			1	219.671	ug/l	0.77	643,822.23	4.050E+00	Pulse	0.50	3
Fe			1	87.403	ug/l	1.32	460,248.98	2.895E+00	Pulse	0.50	3
Co			1	0.118	ug/l	2.80	1,408.06	8.858E-03	Pulse	0.50	3
Ni			1	0.204	ug/l	4.13	797.35	3.310E-03	Pulse	0.50	3
Cu			1	-1.003	ug/l	-6.00	13,897.69	8.744E-02	Pulse	0.50	3
Zn			1	4.133	ug/l	2.83	13,311.93	5.527E-02	Pulse	1.00	3
Cd			1	0.013	ug/l	23.93	31.33	1.302E-04	Pulse	0.50	3
Al			1	26.194	ug/l	2.90	3,496.98	1.452E-02	Pulse	1.00	3
Se			1	0.081	ug/l	122.65	14.56	9.392E-06	Pulse	3.00	3
Sb			1	0.039	ug/l	16.73	317.00	1.316E-03	Pulse	1.00	3
Se			1	0.306	ug/l	24.47	21.11	2.014E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,647,992.33	1.33	87.2	Pulse	0.50	3
1	Sc		192,751.78	1.06	89.7	Pulse	0.30	3
1	Ge		158,982.82	1.54	89.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,551,493.58	1.25	87.8	Pulse	0.30	3
1	Tb		7,272,505.33	0.94	100.4	Analog	0.50	3
1	Lu		3,861,116.67	0.28	90.6	Pulse	0.50	3
1	Ge		240,858.07	0.71	88.7	Pulse	0.30	3
1	Te		10,485.69	1.07	71.8	Pulse	0.50	3
1	Li		1,343.39	11.85	93.9	Pulse	0.30	3

Quantitation Report

File Name 066SMPL.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 13:20
Sample Name FA56168-15
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.739	ug/l	30.32	12,148.08	3.079E-03	Pulse	0.50	3
As			1	0.043	ug/l	29.09	49.00	1.242E-05	Pulse	1.00	3
Mo			1	0.035	ug/l	14.89	177.33	7.216E-04	Pulse	0.50	3
Pb			1	0.002	ug/l	212.86	5,567.25	1.412E-03	Pulse	1.00	3
Be			1	0.017	ug/l	42.15	0.83	4.257E-06	Pulse	2.00	3
Ag			1	0.010	ug/l	9.16	294.00	1.196E-03	Pulse	0.50	3
Ba			1	0.584	ug/l	20.54	998.70	6.258E-04	Pulse	0.50	3
Tl			1	0.004	ug/l	8.55	268.67	5.152E-05	Pulse	0.50	3
Sn			1	1.427	ug/l	3.00	5,545.32	3.475E-03	Pulse	0.30	3
Sr			1	1.007	ug/l	4.92	4,125.80	2.586E-03	Pulse	0.50	3
[Pb]			1	-0.007	ug/l	-123.73	2,600.21	4.986E-04	Pulse	0.50	3
Ca			1	207.143	ug/l	6.50	3,234.94	1.985E-02	Pulse	0.50	3
Ti			1	0.182	ug/l	62.78	27.33	1.671E-04	Pulse	0.50	3
Na			1	70.784	ug/l	0.89	64,621.14	3.304E-01	Pulse	1.00	3
Mg			1	55.568	ug/l	8.90	20,136.50	1.030E-01	Pulse	1.00	3
K			1	19.612	ug/l	10.11	16,485.46	8.429E-02	Pulse	1.00	3
V			1	0.140	ug/l	14.73	1,581.40	9.708E-03	Pulse	0.50	3
Mn			1	2.854	ug/l	21.52	8,816.11	5.406E-02	Pulse	0.50	3
Fe			1	23.528	ug/l	24.08	130,336.45	7.988E-01	Pulse	0.50	3
Co			1	0.131	ug/l	13.52	1,598.74	9.804E-03	Pulse	0.50	3
Ni			1	0.533	ug/l	14.39	1,888.77	7.687E-03	Pulse	0.50	3
Cu			1	-0.706	ug/l	-5.81	16,929.46	1.039E-01	Pulse	0.50	3
Zn			1	8.144	ug/l	0.63	18,429.80	7.497E-02	Pulse	1.00	3
Cd			1	0.006	ug/l	9.55	17.33	7.052E-05	Pulse	0.50	3
Al			1	12.528	ug/l	47.47	2,152.16	8.763E-03	Pulse	1.00	3
Se			1	-0.012	ug/l	-62.66	10.67	6.685E-06	Pulse	3.00	3
Sb			1	0.055	ug/l	17.40	396.00	1.612E-03	Pulse	1.00	3
Se			1	0.196	ug/l	84.60	18.89	1.801E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,225,050.33	6.18	98.0	Mix	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		195,588.20	0.39	91.1	Pulse	0.30	3
1	Ge		162,932.44	1.59	91.2	Pulse	0.30	3
1	In		1,595,741.91	0.43	90.3	Pulse	0.30	3
1	Tb		7,407,121.33	1.16	102.3	Analog	0.50	3
1	Lu		3,941,818.75	0.70	92.5	Pulse	0.50	3
1	Ge		245,818.70	0.63	90.5	Pulse	0.30	3
1	Te		10,465.74	1.79	71.6	Pulse	0.50	3
1	Li		1,516.74	5.04	106.1	Pulse	0.30	3

Quantitation Report

File Name 067SMPL.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 13:24
Sample Name FA56228-1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.772	ug/l	1.95	5,296.74	1.402E-03	Pulse	0.50	3
As			1	0.096	ug/l	9.04	84.33	2.232E-05	Pulse	1.00	3
Mo			1	0.342	ug/l	6.49	1,546.07	6.616E-03	Pulse	0.50	3
Pb			1	1.261	ug/l	2.01	35,732.82	9.455E-03	Pulse	1.00	3
Be			1	0.005	ug/l	310.71	0.33	1.778E-06	Pulse	2.00	3
Ag			1	0.009	ug/l	26.08	270.00	1.155E-03	Pulse	0.50	3
Ba			1	49.636	ug/l	1.23	76,675.36	5.096E-02	Pulse	0.50	3
Tl			1	0.007	ug/l	10.75	322.00	7.309E-05	Pulse	0.50	3
Sn			1	0.469	ug/l	0.70	1,917.89	1.275E-03	Pulse	0.30	3
Sr			1	118.372	ug/l	0.08	373,099.20	2.480E-01	Pulse	0.50	3
[Pb]			1	1.288	ug/l	1.57	16,950.43	3.849E-03	Pulse	0.50	3
Ca			1	37472.734	ug/l	0.49	535,025.14	3.459E+00	Pulse	0.50	3
Ti			1	1.374	ug/l	9.44	164.67	1.065E-03	Pulse	0.50	3
Na			1	141503.030	ug/l	0.60	109,291,813.33	5.772E+02	Analog	1.00	3
Mg			1	15554.127	ug/l	1.57	5,331,755.67	2.816E+01	Analog	1.00	3
K			1	1741.400	ug/l	0.92	448,071.05	2.366E+00	Pulse	1.00	3
V			1	0.247	ug/l	11.73	2,018.11	1.305E-02	Pulse	0.50	3
Mn			1	3.198	ug/l	2.26	9,340.26	6.039E-02	Pulse	0.50	3
Fe			1	61.670	ug/l	1.09	317,172.88	2.051E+00	Pulse	0.50	3
Co			1	0.150	ug/l	5.26	1,732.08	1.120E-02	Pulse	0.50	3
Ni			1	1.309	ug/l	3.12	4,217.14	1.804E-02	Pulse	0.50	3
Cu			1	-0.835	ug/l	-0.76	14,963.84	9.674E-02	Pulse	0.50	3
Zn			1	1.546	ug/l	3.93	9,947.90	4.256E-02	Pulse	1.00	3
Cd			1	0.036	ug/l	29.26	78.67	3.362E-04	Pulse	0.50	3
Al			1	22.638	ug/l	5.75	3,044.24	1.302E-02	Pulse	1.00	3
Se			1	0.242	ug/l	43.45	21.22	1.410E-05	Pulse	3.00	3
Sb			1	0.079	ug/l	8.29	484.68	2.074E-03	Pulse	1.00	3
Se			1	0.718	ug/l	15.04	27.55	2.812E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,403,865.67	0.94	82.6	Pulse	0.50	3
1	Sc		189,343.60	1.13	88.1	Pulse	0.30	3
1	Ge		154,674.83	0.55	86.6	Pulse	0.30	3
1	In		1,504,555.11	0.83	85.1	Pulse	0.30	3
1	Tb		7,098,861.17	1.53	98.0	Analog	0.50	3
1	Lu		3,779,743.92	1.01	88.7	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		233,734.65	0.71	86.1	Pulse	0.30	3
1	Te		9,791.99	1.29	67.0	Pulse	0.50	3
1	Li		1,454.50	1.63	101.7	Pulse	0.30	3

Quantitation Report

File Name	068CCVA.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 13:27
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	45.479	ug/l	2.09	621,135.81	1.578E-01	Pulse	0.50	3
As			1	44.955	ug/l	1.97	66,011.20	1.677E-02	Pulse	1.00	3
Mo			1	44.596	ug/l	1.34	432,241.13	1.713E+00	Pulse	0.50	3
Pb			1	45.638	ug/l	2.39	2,300,601.25	5.845E-01	Pulse	1.00	3
Be			1	47.989	ug/l	1.70	3,973.39	1.957E-02	Pulse	2.00	3
Ag			1	47.738	ug/l	0.76	1,543,991.71	6.118E+00	Pulse	0.50	3
Ba			1	44.985	ug/l	1.17	149,977.59	9.236E-02	Pulse	0.50	3
Tl			1	39.133	ug/l	0.50	3,403,039.92	6.395E-01	Pulse	0.50	3
Sn			1	44.749	ug/l	1.34	334,232.48	2.058E-01	Pulse	0.30	3
Sr			1	45.453	ug/l	1.41	309,432.70	1.906E-01	Pulse	0.50	3
[Pb]			1	39.671	ug/l	1.30	1,095,143.63	2.058E-01	Pulse	0.50	3
Ca			1	4488.947	ug/l	1.75	137,922.82	8.293E-01	Pulse	0.50	3
Ti			1	45.529	ug/l	3.33	11,412.02	6.862E-02	Pulse	0.50	3
Na			1	4656.697	ug/l	2.37	7,720,859.00	3.803E+01	Analog	1.00	3
Mg			1	4475.655	ug/l	1.94	3,290,649.33	1.621E+01	Pulse	1.00	3
K			1	4425.668	ug/l	1.85	2,393,843.75	1.179E+01	Pulse	1.00	3
V			1	44.663	ug/l	1.94	466,491.97	2.805E+00	Pulse	0.50	3
Mn			1	44.331	ug/l	2.16	271,989.12	1.635E+00	Pulse	0.50	3
Fe			1	4760.507	ug/l	2.02	51,973,454.67	3.125E+02	Analog	0.50	3
Co			1	45.065	ug/l	2.07	1,096,147.88	6.591E+00	Pulse	0.50	3
Ni			1	44.930	ug/l	1.34	302,428.90	1.199E+00	Pulse	0.50	3
Cu			1	45.018	ug/l	1.27	853,667.94	5.133E+00	Pulse	0.50	3
Zn			1	45.542	ug/l	1.18	121,728.42	4.824E-01	Pulse	1.00	3
Cd			1	45.577	ug/l	0.62	200,669.34	7.952E-01	Pulse	0.50	3
Al			1	4569.758	ug/l	1.36	972,411.00	3.854E+00	Pulse	1.00	3
Se			1	44.979	ug/l	0.97	4,285.37	2.639E-03	Pulse	3.00	3
Sb			1	45.033	ug/l	0.81	441,287.17	1.749E+00	Pulse	1.00	3
Se			1	43.599	ug/l	2.08	2,180.57	1.705E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,321,874.83	0.57	99.8	Analog	0.50	3
1	Sc		203,079.67	1.88	94.5	Pulse	0.30	3
1	Ge		166,347.86	1.85	93.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,624,020.07	1.00	91.9	Pulse	0.30	3
1	Tb		7,403,295.83	1.12	102.2	Analog	0.50	3
1	Lu		3,937,540.42	1.94	92.4	Pulse	0.50	3
1	Ge		252,363.77	1.12	92.9	Pulse	0.30	3
1	Te		12,794.55	1.35	87.6	Pulse	0.50	3
1	Li		1,428.95	3.15	99.9	Pulse	0.30	3

Quantitation Report

File Name	069_CCV.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 13:31
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	91.126	ug/l	0.52	1,245,489.25	3.161E-01	Pulse	0.50	3
As			1	91.054	ug/l	0.39	133,806.86	3.396E-02	Pulse	1.00	3
Mo			1	90.877	ug/l	0.70	878,337.54	3.491E+00	Pulse	0.50	3
Pb			1	90.545	ug/l	1.18	4,563,363.00	1.158E+00	Pulse	1.00	3
Be			1	95.734	ug/l	1.54	8,055.43	3.904E-02	Pulse	2.00	3
Ag			1	94.576	ug/l	0.36	3,050,063.42	1.212E+01	Pulse	0.50	3
Ba			1	90.246	ug/l	0.88	299,868.35	1.853E-01	Pulse	0.50	3
Tl			1	96.007	ug/l	0.61	7,360,955.17	1.569E+00	Analog	0.50	3
Sn			1	89.460	ug/l	0.44	665,718.08	4.113E-01	Pulse	0.30	3
Sr			1	91.854	ug/l	0.94	622,530.67	3.846E-01	Pulse	0.50	3
[Pb]			1	87.907	ug/l	0.77	2,136,720.75	4.554E-01	Pulse	0.50	3
Ca			1	9123.418	ug/l	0.22	280,669.12	1.685E+00	Pulse	0.50	3
Ti			1	90.913	ug/l	0.85	22,821.97	1.370E-01	Pulse	0.50	3
Na			1	9335.955	ug/l	0.26	15,725,523.33	7.620E+01	Analog	1.00	3
Mg			1	9410.173	ug/l	0.94	7,031,411.17	3.407E+01	Analog	1.00	3
K			1	9183.473	ug/l	4.23	5,034,984.50	2.440E+01	Mix	1.00	3
V			1	90.525	ug/l	0.42	946,236.48	5.680E+00	Pulse	0.50	3
Mn			1	90.193	ug/l	0.32	554,087.33	3.326E+00	Pulse	0.50	3
Fe			1	9660.726	ug/l	0.61	105,650,312.00	6.342E+02	Analog	0.50	3
Co			1	90.736	ug/l	0.98	2,210,779.00	1.327E+01	Pulse	0.50	3
Ni			1	90.300	ug/l	0.68	605,964.59	2.408E+00	Pulse	0.50	3
Cu			1	90.032	ug/l	0.78	1,686,209.25	1.012E+01	Pulse	0.50	3
Zn			1	91.653	ug/l	1.22	235,375.06	9.354E-01	Pulse	1.00	3
Cd			1	90.076	ug/l	0.20	395,458.40	1.572E+00	Pulse	0.50	3
Al			1	9287.212	ug/l	1.34	1,969,760.75	7.828E+00	Pulse	1.00	3
Se			1	91.497	ug/l	0.14	8,677.52	5.361E-03	Pulse	3.00	3
Sb			1	90.247	ug/l	0.86	881,689.15	3.504E+00	Pulse	1.00	3
Se			1	89.975	ug/l	1.97	4,361.94	3.503E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,692,194.33	0.49	88.0	Pulse	0.50	3
1	Sc		206,368.34	1.11	96.1	Pulse	0.30	3
1	Ge		166,597.25	0.62	93.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,618,725.80	0.40	91.6	Pulse	0.30	3
1	Tb		7,368,315.33	0.36	101.7	Analog	0.50	3
1	Lu		3,940,258.08	0.38	92.5	Pulse	0.50	3
1	Ge		251,638.60	0.60	92.6	Pulse	0.30	3
1	Te		12,454.98	1.53	85.2	Pulse	0.50	3
1	Li		1,341.16	8.90	93.8	Pulse	0.30	3

Quantitation Report

File Name	070_CCB.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 13:35
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	-0.001	ug/l	-234.07	224.00	5.909E-05	Pulse	0.50	3
As			1	0.003	ug/l	42.51	20.67	5.453E-06	Pulse	1.00	3
Mo			1	0.035	ug/l	7.71	342.67	1.394E-03	Pulse	0.50	3
Pb			1	0.012	ug/l	18.85	5,903.69	1.557E-03	Pulse	1.00	3
Be			1	0.004	ug/l	142.57	0.50	2.554E-06	Pulse	2.00	3
Ag			1	0.010	ug/l	14.93	468.68	1.906E-03	Pulse	0.50	3
Ba			1	-0.004	ug/l	-56.43	28.00	1.773E-05	Pulse	0.50	3
Tl			1	0.020	ug/l	15.82	1,778.10	3.503E-04	Pulse	0.50	3
Sn			1	0.043	ug/l	33.49	625.57	3.959E-04	Pulse	0.30	3
Sr			1	-0.003	ug/l	-196.03	736.69	4.653E-04	Pulse	0.50	3
[Pb]			1	0.006	ug/l	178.61	2,792.90	5.497E-04	Pulse	0.50	3
Ca			1	-0.865	ug/l	-20.78	92.67	5.685E-04	Pulse	0.50	3
Ti			1	0.004	ug/l	588.20	6.00	3.643E-05	Pulse	0.50	3
Na			1	1.817	ug/l	11.27	10,996.36	5.650E-02	Pulse	1.00	3
Mg			1	0.170	ug/l	56.45	578.68	2.971E-03	Pulse	1.00	3
K			1	0.327	ug/l	151.89	11,512.03	5.916E-02	Pulse	1.00	3
V			1	-0.044	ug/l	-6.33	417.34	2.558E-03	Pulse	0.50	3
Mn			1	-0.021	ug/l	-18.81	112.67	6.920E-04	Pulse	0.50	3
Fe			1	0.665	ug/l	17.58	11,454.10	7.022E-02	Pulse	0.50	3
Co			1	0.006	ug/l	34.44	166.67	1.021E-03	Pulse	0.50	3
Ni			1	-0.001	ug/l	-357.56	136.00	5.530E-04	Pulse	0.50	3
Cu			1	-0.181	ug/l	-6.26	20,052.41	1.229E-01	Pulse	0.50	3
Zn			1	-0.777	ug/l	-7.58	6,721.85	2.734E-02	Pulse	1.00	3
Cd			1	0.005	ug/l	19.56	25.33	1.029E-04	Pulse	0.50	3
Al			1	-3.138	ug/l	-1.07	207.00	8.419E-04	Pulse	1.00	3
Se			1	0.010	ug/l	296.81	12.11	7.632E-06	Pulse	3.00	3
Sb			1	0.012	ug/l	34.99	248.67	1.012E-03	Pulse	1.00	3
Se			1	-0.031	ug/l	-109.84	16.56	1.301E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		5,097,016.00	4.58	95.6	Mix	0.50	3
1	Sc		194,645.91	2.05	90.6	Pulse	0.30	3

Quantitation Report

1	Ge		163,105.80	1.54	91.3	Pulse	0.30	3
1	In		1,583,543.45	2.71	89.6	Pulse	0.30	3
1	Tb		7,108,352.33	1.89	98.1	Analog	0.50	3
1	Lu		3,792,678.00	1.68	89.0	Pulse	0.50	3
1	Ge		245,926.56	0.85	90.5	Pulse	0.30	3
1	Te		12,715.18	3.53	87.0	Pulse	0.50	3
1	Li		1,484.51	6.87	103.8	Pulse	0.30	3

Quantitation Report

File Name 071CALB.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 13:45
Sample Name CALSTD-1
Sample Type CalBlk
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.000	ug/l	---	192.00	4.930E-05	Pulse	0.50	3
As			1	0.000	ug/l	---	16.33	4.193E-06	Pulse	1.00	3
Mo			1	0.000	ug/l	---	55.33	2.194E-04	Pulse	0.50	3
Pb			1	0.000	ug/l	---	5,169.12	1.326E-03	Pulse	1.00	3
Be			1	0.000	ug/l	---	1.17	5.708E-06	Pulse	2.00	3
Ag			1	0.000	ug/l	---	190.67	7.557E-04	Pulse	0.50	3
Ba			1	0.000	ug/l	---	47.33	2.915E-05	Pulse	0.50	3
Tl			1	0.000	ug/l	---	320.67	6.722E-05	Pulse	0.50	3
Sn			1	0.000	ug/l	---	397.78	2.440E-04	Pulse	0.30	3
Sr			1	0.000	ug/l	---	620.01	3.793E-04	Pulse	0.50	3
[Pb]			1	0.000	ug/l	---	2,430.18	5.105E-04	Pulse	0.50	3
Ca			1	0.000	ug/l	---	83.33	4.983E-04	Pulse	0.50	3
Ti			1	0.000	ug/l	---	3.33	2.021E-05	Pulse	0.50	3
Na			1	0.000	ug/l	---	10,258.63	5.029E-02	Pulse	1.00	3
Mg			1	0.000	ug/l	---	235.67	1.151E-03	Pulse	1.00	3
K			1	0.000	ug/l	---	11,802.28	5.792E-02	Pulse	1.00	3
V			1	0.000	ug/l	---	470.01	2.802E-03	Pulse	0.50	3
Mn			1	0.000	ug/l	---	249.33	1.489E-03	Pulse	0.50	3
Fe			1	0.000	ug/l	---	5,820.99	3.471E-02	Pulse	0.50	3
Co			1	0.000	ug/l	---	43.33	2.591E-04	Pulse	0.50	3
Ni			1	0.000	ug/l	---	118.67	4.705E-04	Pulse	0.50	3
Cu			1	0.000	ug/l	---	20,909.32	1.249E-01	Pulse	0.50	3
Zn			1	0.000	ug/l	---	7,455.45	2.952E-02	Pulse	1.00	3
Cd			1	0.000	ug/l	---	7.33	2.873E-05	Pulse	0.50	3
Al			1	0.000	ug/l	---	975.36	3.860E-03	Pulse	1.00	3
Se			1	0.000	ug/l	---	11.22	6.873E-06	Pulse	3.00	3
Sb			1	0.000	ug/l	---	146.67	5.799E-04	Pulse	1.00	3
Se			1	0.000	ug/l	---	17.78	1.354E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,762,653.00	1.89	100.0	Analog	0.50	3
1	Sc		203,966.12	3.08	100.0	Pulse	0.30	3

Quantitation Report

1	Ge		167,450.32	2.49	100.0	Pulse	0.30	3
1	In		1,630,883.51	3.15	100.0	Pulse	0.30	3
1	Tb		6,583,210.67	3.28	100.0	Analog	0.50	3
1	Lu		3,901,420.17	2.65	100.0	Pulse	0.50	3
1	Ge		252,688.33	2.59	100.0	Pulse	0.30	3
1	Te		13,182.18	3.84	100.0	Pulse	0.50	3
1	Li		1,505.62	6.07	100.0	Pulse	0.30	3

Quantitation Report

File Name 072CALS.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 13:49
Sample Name CALSTD-2
Sample Type CalStd
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.539	ug/l	1.14	7,365.42	1.880E-03	Pulse	0.50	3
As			1	0.498	ug/l	1.78	718.68	1.835E-04	Pulse	1.00	3
Mo			1	0.499	ug/l	3.02	4,709.94	1.846E-02	Pulse	0.50	3
Pb			1	0.457	ug/l	1.75	26,491.14	6.763E-03	Pulse	1.00	3
Be			1	0.590	ug/l	17.62	50.83	2.468E-04	Pulse	2.00	3
Ag			1	0.545	ug/l	1.43	17,056.51	6.686E-02	Pulse	0.50	3
Ba			1	0.522	ug/l	4.26	1,710.76	1.034E-03	Pulse	0.50	3
Tl			1	0.500	ug/l	0.38	36,552.91	7.571E-03	Pulse	0.50	3
Sn			1	0.745	ug/l	40.79	5,725.22	3.446E-03	Pulse	0.30	3
Sr			1	0.499	ug/l	2.18	3,929.09	2.375E-03	Pulse	0.50	3
[Pb]			1	0.434	ug/l	3.22	12,656.04	2.622E-03	Pulse	0.50	3
Ca			1	57.602	ug/l	3.74	1,819.43	1.083E-02	Pulse	0.50	3
Ti			1	0.467	ug/l	18.64	118.00	7.011E-04	Pulse	0.50	3
Na			1	64.130	ug/l	1.54	111,565.12	5.420E-01	Pulse	1.00	3
Mg			1	52.312	ug/l	0.89	36,119.81	1.755E-01	Pulse	1.00	3
K			1	52.461	ug/l	2.32	38,766.56	1.884E-01	Pulse	1.00	3
V			1	0.485	ug/l	4.91	5,380.76	3.204E-02	Pulse	0.50	3
Mn			1	0.535	ug/l	2.78	3,436.98	2.046E-02	Pulse	0.50	3
Fe			1	51.334	ug/l	2.17	541,587.86	3.224E+00	Pulse	0.50	3
Co			1	0.519	ug/l	0.50	12,026.42	7.158E-02	Pulse	0.50	3
Ni			1	0.552	ug/l	3.32	3,611.68	1.416E-02	Pulse	0.50	3
Cu			1	0.429	ug/l	5.72	28,442.96	1.693E-01	Pulse	0.50	3
Zn			1	-1.248	ug/l	-2.46	4,595.89	1.802E-02	Pulse	1.00	3
Cd			1	0.509	ug/l	1.81	2,115.46	8.292E-03	Pulse	0.50	3
Al			1	47.992	ug/l	0.14	10,945.67	4.291E-02	Pulse	1.00	3
Se			1	0.508	ug/l	20.44	57.78	3.490E-05	Pulse	3.00	3
Sb			1	0.510	ug/l	1.63	4,894.99	1.919E-02	Pulse	1.00	3
Se			1	0.539	ug/l	44.92	44.89	3.339E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,827,908.17	1.46	101.4	Analog	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		205,857.10	1.70	100.9	Pulse	0.30	3
1	Ge		168,024.80	1.91	100.3	Pulse	0.30	3
1	In		1,654,705.80	1.69	101.5	Pulse	0.30	3
1	Tb		6,666,934.50	1.56	101.3	Analog	0.50	3
1	Lu		3,917,477.75	1.46	100.4	Pulse	0.50	3
1	Ge		255,104.06	0.65	101.0	Pulse	0.30	3
1	Te		13,485.76	1.89	102.3	Pulse	0.50	3
1	Li		1,405.62	5.31	93.4	Pulse	0.30	3

Quantitation Report

File Name	073CALS.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 13:53
Sample Name	CALSTD-3
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.049	ug/l	1.74	14,163.86	3.612E-03	Pulse	0.50	3
As			1	0.993	ug/l	2.18	1,419.06	3.619E-04	Pulse	1.00	3
Mo			1	0.975	ug/l	0.94	9,222.29	3.590E-02	Pulse	0.50	3
Pb			1	0.981	ug/l	2.03	50,926.77	1.299E-02	Pulse	1.00	3
Be			1	1.065	ug/l	2.17	91.00	4.411E-04	Pulse	2.00	3
Ag			1	1.084	ug/l	1.00	33,957.00	1.322E-01	Pulse	0.50	3
Ba			1	0.977	ug/l	4.51	3,182.96	1.909E-03	Pulse	0.50	3
Tl			1	1.026	ug/l	1.06	74,370.54	1.547E-02	Pulse	0.50	3
Sn			1	1.110	ug/l	1.36	8,364.18	5.016E-03	Pulse	0.30	3
Sr			1	0.970	ug/l	1.13	7,099.36	4.257E-03	Pulse	0.50	3
[Pb]			1	0.918	ug/l	1.43	23,933.39	4.980E-03	Pulse	0.50	3
Ca			1	101.131	ug/l	1.96	3,132.26	1.864E-02	Pulse	0.50	3
Ti			1	0.928	ug/l	5.67	230.67	1.373E-03	Pulse	0.50	3
Na			1	114.218	ug/l	0.62	191,064.29	9.261E-01	Pulse	1.00	3
Mg			1	103.474	ug/l	0.23	71,378.69	3.460E-01	Pulse	1.00	3
K			1	102.451	ug/l	0.69	64,501.28	3.126E-01	Pulse	1.00	3
V			1	0.965	ug/l	1.21	10,244.05	6.096E-02	Pulse	0.50	3
Mn			1	1.065	ug/l	2.38	6,589.13	3.921E-02	Pulse	0.50	3
Fe			1	101.657	ug/l	1.34	1,067,091.71	6.351E+00	Pulse	0.50	3
Co			1	1.041	ug/l	0.88	24,107.66	1.435E-01	Pulse	0.50	3
Ni			1	1.072	ug/l	4.74	6,941.28	2.703E-02	Pulse	0.50	3
Cu			1	0.541	ug/l	9.58	30,384.54	1.808E-01	Pulse	0.50	3
Zn			1	-0.860	ug/l	-7.06	5,544.80	2.159E-02	Pulse	1.00	3
Cd			1	1.044	ug/l	5.43	4,364.53	1.700E-02	Pulse	0.50	3
Al			1	100.739	ug/l	1.82	22,045.80	8.582E-02	Pulse	1.00	3
Se			1	1.075	ug/l	6.44	110.44	6.623E-05	Pulse	3.00	3
Sb			1	0.998	ug/l	4.09	9,495.80	3.697E-02	Pulse	1.00	3
Se			1	0.865	ug/l	4.06	61.55	4.540E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,806,185.33	0.89	100.9	Analog	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		206,314.53	0.46	101.2	Pulse	0.30	3
1	Ge		168,035.97	0.74	100.3	Pulse	0.30	3
1	In		1,667,526.43	0.19	102.2	Pulse	0.30	3
1	Tb		6,627,365.33	0.86	100.7	Analog	0.50	3
1	Lu		3,921,546.00	1.06	100.5	Pulse	0.50	3
1	Ge		256,906.42	1.17	101.7	Pulse	0.30	3
1	Te		13,557.13	0.72	102.8	Pulse	0.50	3
1	Li		1,541.18	11.52	102.4	Pulse	0.30	3

Quantitation Report

File Name	074CALS.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 13:57
Sample Name	CALSTD-4
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	10.549	ug/l	2.17	140,105.86	3.586E-02	Pulse	0.50	3
As			1	10.509	ug/l	1.60	14,805.73	3.790E-03	Pulse	1.00	3
Mo			1	10.399	ug/l	2.28	95,798.76	3.806E-01	Pulse	0.50	3
Pb			1	10.867	ug/l	2.00	509,823.66	1.305E-01	Pulse	1.00	3
Be			1	10.842	ug/l	3.59	902.85	4.440E-03	Pulse	2.00	3
Ag			1	11.445	ug/l	1.88	349,572.02	1.389E+00	Pulse	0.50	3
Ba			1	10.332	ug/l	4.34	32,783.60	1.991E-02	Pulse	0.50	3
Tl			1	10.555	ug/l	1.88	755,881.44	1.586E-01	Pulse	0.50	3
Sn			1	10.625	ug/l	2.39	75,616.96	4.592E-02	Pulse	0.30	3
Sr			1	10.130	ug/l	2.35	67,312.60	4.088E-02	Pulse	0.50	3
[Pb]			1	10.298	ug/l	2.24	241,482.16	5.066E-02	Pulse	0.50	3
Ca			1	1028.284	ug/l	2.00	30,850.88	1.850E-01	Pulse	0.50	3
Ti			1	9.831	ug/l	5.99	2,392.82	1.435E-02	Pulse	0.50	3
Na			1	1068.092	ug/l	2.88	1,675,954.00	8.240E+00	Pulse	1.00	3
Mg			1	1082.243	ug/l	2.46	733,797.81	3.608E+00	Pulse	1.00	3
K			1	1059.046	ug/l	2.75	547,327.00	2.691E+00	Pulse	1.00	3
V			1	10.267	ug/l	1.53	103,647.87	6.213E-01	Pulse	0.50	3
Mn			1	10.570	ug/l	1.20	62,736.03	3.761E-01	Pulse	0.50	3
Fe			1	1046.647	ug/l	1.45	10,853,380.33	6.506E+01	Analog	0.50	3
Co			1	10.679	ug/l	1.98	245,042.47	1.469E+00	Pulse	0.50	3
Ni			1	11.006	ug/l	3.37	68,770.23	2.732E-01	Pulse	0.50	3
Cu			1	10.426	ug/l	2.72	200,731.65	1.203E+00	Pulse	0.50	3
Zn			1	8.928	ug/l	2.42	28,140.48	1.118E-01	Pulse	1.00	3
Cd			1	10.900	ug/l	2.57	44,584.17	1.771E-01	Pulse	0.50	3
Al			1	1064.664	ug/l	2.45	219,009.67	8.701E-01	Pulse	1.00	3
Se			1	10.526	ug/l	5.39	967.58	5.879E-04	Pulse	3.00	3
Sb			1	10.609	ug/l	2.73	97,553.06	3.876E-01	Pulse	1.00	3
Se			1	10.172	ug/l	1.54	515.67	3.883E-02	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,767,818.17	1.78	100.1	Analog	0.50	3
1	Sc		203,485.97	2.59	99.8	Pulse	0.30	3
1	Ge		166,831.25	1.30	99.6	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,647,147.47	2.11	101.0	Pulse	0.30	3
1	Tb		6,631,622.00	1.94	100.7	Analog	0.50	3
1	Lu		3,907,458.33	1.56	100.2	Pulse	0.50	3
1	Ge		251,791.85	2.01	99.6	Pulse	0.30	3
1	Te		13,284.97	2.65	100.8	Pulse	0.50	3
1	Li		1,530.07	5.29	101.6	Pulse	0.30	3

Quantitation Report

File Name	075CALS.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 14:01
Sample Name	CALSTD-5
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	46.939	ug/l	2.48	618,208.40	1.594E-01	Pulse	0.50	3
As			1	47.015	ug/l	2.16	65,699.15	1.694E-02	Pulse	1.00	3
Mo			1	47.101	ug/l	0.27	430,763.15	1.723E+00	Pulse	0.50	3
Pb			1	48.613	ug/l	1.98	2,246,314.00	5.792E-01	Pulse	1.00	3
Be			1	47.942	ug/l	1.61	3,979.73	1.961E-02	Pulse	2.00	3
Ag			1	50.127	ug/l	0.66	1,519,928.96	6.080E+00	Pulse	0.50	3
Ba			1	47.814	ug/l	1.21	148,230.94	9.205E-02	Pulse	0.50	3
Tl			1	47.354	ug/l	1.17	3,302,497.50	7.112E-01	Pulse	0.50	3
Sn			1	48.296	ug/l	0.60	334,788.79	2.079E-01	Pulse	0.30	3
Sr			1	48.200	ug/l	0.09	310,957.19	1.931E-01	Pulse	0.50	3
[Pb]			1	46.975	ug/l	1.23	1,064,664.29	2.293E-01	Pulse	0.50	3
Ca			1	4653.798	ug/l	2.40	138,108.95	8.353E-01	Pulse	0.50	3
Ti			1	47.626	ug/l	1.59	11,480.74	6.943E-02	Pulse	0.50	3
Na			1	4767.526	ug/l	1.54	7,428,323.67	3.661E+01	Analog	1.00	3
Mg			1	4883.733	ug/l	1.58	3,302,731.50	1.628E+01	Pulse	1.00	3
K			1	4753.846	ug/l	1.55	2,410,139.00	1.188E+01	Pulse	1.00	3
V			1	46.437	ug/l	1.31	463,039.63	2.800E+00	Pulse	0.50	3
Mn			1	46.354	ug/l	1.65	271,864.47	1.644E+00	Pulse	0.50	3
Fe			1	4695.633	ug/l	0.90	48,248,272.00	2.918E+02	Analog	0.50	3
Co			1	48.246	ug/l	1.17	1,097,322.33	6.636E+00	Pulse	0.50	3
Ni			1	48.780	ug/l	1.09	302,342.52	1.209E+00	Pulse	0.50	3
Cu			1	48.105	ug/l	1.30	843,509.15	5.101E+00	Pulse	0.50	3
Zn			1	49.406	ug/l	1.29	121,194.22	4.848E-01	Pulse	1.00	3
Cd			1	48.180	ug/l	1.05	195,711.36	7.829E-01	Pulse	0.50	3
Al			1	4888.799	ug/l	1.19	995,330.54	3.981E+00	Pulse	1.00	3
Se			1	48.357	ug/l	1.06	4,309.60	2.676E-03	Pulse	3.00	3
Sb			1	47.875	ug/l	0.59	436,724.15	1.747E+00	Pulse	1.00	3
Se			1	46.726	ug/l	2.83	2,204.13	1.735E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,643,770.83	0.76	97.5	Analog	0.50	3
1	Sc		202,949.17	1.40	99.5	Pulse	0.30	3
1	Ge		165,368.52	1.19	98.8	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,610,455.74	0.72	98.7	Pulse	0.30	3
1	Tb		6,559,370.00	1.30	99.6	Analog	0.50	3
1	Lu		3,879,222.50	1.81	99.4	Pulse	0.50	3
1	Ge		249,996.73	0.35	98.9	Pulse	0.30	3
1	Te		12,709.16	2.29	96.4	Pulse	0.50	3
1	Li		1,410.06	8.98	93.7	Pulse	0.30	3

Quantitation Report

File Name	076CALS.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 14:05
Sample Name	CALSTD-6
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	95.829	ug/l	1.39	1,273,889.08	3.254E-01	Pulse	0.50	3
As			1	96.440	ug/l	1.14	136,026.00	3.474E-02	Pulse	1.00	3
Mo			1	95.610	ug/l	1.27	885,316.77	3.497E+00	Pulse	0.50	3
Pb			1	97.914	ug/l	0.94	4,561,875.33	1.165E+00	Pulse	1.00	3
Be			1	96.695	ug/l	0.87	8,214.49	3.955E-02	Pulse	2.00	3
Ag			1	99.791	ug/l	0.88	3,063,692.67	1.210E+01	Pulse	0.50	3
Ba			1	98.042	ug/l	0.70	304,802.92	1.887E-01	Pulse	0.50	3
Tl			1	95.008	ug/l	2.42	6,552,790.17	1.427E+00	Analog	0.50	3
Sn			1	96.105	ug/l	1.46	667,721.43	4.134E-01	Pulse	0.30	3
Sr			1	97.505	ug/l	0.96	630,237.81	3.902E-01	Pulse	0.50	3
[Pb]			1	96.161	ug/l	2.32	2,153,139.00	4.688E-01	Pulse	0.50	3
Ca			1	9564.931	ug/l	1.28	287,830.67	1.716E+00	Pulse	0.50	3
Ti			1	96.772	ug/l	0.99	23,658.97	1.411E-01	Pulse	0.50	3
Na			1	9652.670	ug/l	1.30	15,382,586.33	7.407E+01	Analog	1.00	3
Mg			1	9738.964	ug/l	1.49	6,740,535.33	3.246E+01	Analog	1.00	3
K			1	9605.520	ug/l	1.11	4,972,111.17	2.394E+01	Analog	1.00	3
V			1	95.502	ug/l	1.20	965,353.64	5.756E+00	Pulse	0.50	3
Mn			1	95.303	ug/l	1.44	566,645.10	3.379E+00	Pulse	0.50	3
Fe			1	9548.143	ug/l	1.79	99,489,944.00	5.933E+02	Analog	0.50	3
Co			1	96.961	ug/l	2.02	2,236,439.58	1.334E+01	Pulse	0.50	3
Ni			1	98.436	ug/l	1.04	617,655.52	2.440E+00	Pulse	0.50	3
Cu			1	97.416	ug/l	2.36	1,710,820.54	1.020E+01	Pulse	0.50	3
Zn			1	98.407	ug/l	1.65	237,012.19	9.364E-01	Pulse	1.00	3
Cd			1	98.250	ug/l	1.40	404,091.41	1.596E+00	Pulse	0.50	3
Al			1	9726.418	ug/l	1.65	2,004,072.62	7.917E+00	Pulse	1.00	3
Se			1	98.335	ug/l	0.81	8,777.35	5.434E-03	Pulse	3.00	3
Sb			1	97.384	ug/l	1.26	899,332.79	3.553E+00	Pulse	1.00	3
Se			1	94.380	ug/l	1.15	4,393.06	3.490E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,593,907.00	1.91	96.5	Analog	0.50	3
1	Sc		207,711.09	1.29	101.8	Pulse	0.30	3
1	Ge		167,726.44	1.51	100.2	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,615,236.74	1.11	99.0	Pulse	0.30	3
1	Tb		6,540,412.33	1.38	99.3	Analog	0.50	3
1	Lu		3,915,327.83	1.26	100.4	Pulse	0.50	3
1	Ge		253,157.13	1.27	100.2	Pulse	0.30	3
1	Te		12,587.14	1.24	95.5	Pulse	0.50	3
1	Li		1,438.95	1.74	95.6	Pulse	0.30	3

Quantitation Report

File Name	077CALS.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 14:09
Sample Name	CALSTD-7
Sample Type	CalStd
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	202.823	ug/l	3.69	2,638,713.67	6.886E-01	Pulse	0.50	3
As			1	202.501	ug/l	4.10	279,501.51	7.295E-02	Pulse	1.00	3
Mo			1	202.900	ug/l	3.00	1,844,502.84	7.422E+00	Pulse	0.50	3
Pb			1	201.346	ug/l	2.91	9,177,417.67	2.395E+00	Analog	1.00	3
Be			1	202.124	ug/l	4.19	16,951.38	8.267E-02	Pulse	2.00	3
Ag			1	194.069	ug/l	2.97	5,849,261.83	2.354E+01	Analog	0.50	3
Ba			1	201.509	ug/l	2.48	618,881.94	3.878E-01	Pulse	0.50	3
Tl			1	203.130	ug/l	3.12	13,393,379.67	3.051E+00	Analog	0.50	3
Sn			1	202.341	ug/l	2.22	1,388,595.05	8.702E-01	Pulse	0.30	3
Sr			1	201.691	ug/l	2.51	1,287,340.75	8.068E-01	Pulse	0.50	3
[Pb]			1	202.661	ug/l	3.04	4,335,593.67	9.875E-01	Pulse	0.50	3
Ca			1	20302.646	ug/l	3.58	591,276.21	3.642E+00	Pulse	0.50	3
Ti			1	202.216	ug/l	2.49	47,856.23	2.947E-01	Pulse	0.50	3
Na			1	20228.272	ug/l	3.59	31,821,669.33	1.552E+02	Analog	1.00	3
Mg			1	20155.449	ug/l	3.32	13,776,196.33	6.717E+01	Analog	1.00	3
K			1	20255.808	ug/l	3.51	10,340,597.33	5.042E+01	Analog	1.00	3
V			1	203.127	ug/l	2.84	1,987,202.75	1.224E+01	Pulse	0.50	3
Mn			1	203.231	ug/l	3.58	1,169,374.00	7.204E+00	Pulse	0.50	3
Fe			1	20299.676	ug/l	3.51	204,745,552.00	1.261E+03	Analog	0.50	3
Co			1	201.924	ug/l	3.80	4,508,266.33	2.777E+01	Pulse	0.50	3
Ni			1	201.036	ug/l	2.40	1,238,446.33	4.983E+00	Pulse	0.50	3
Cu			1	201.747	ug/l	3.17	3,408,469.33	2.100E+01	Pulse	0.50	3
Zn			1	201.012	ug/l	2.58	467,717.10	1.882E+00	Pulse	1.00	3
Cd			1	201.285	ug/l	2.79	812,813.79	3.270E+00	Pulse	0.50	3
Al			1	20161.359	ug/l	2.53	4,077,926.42	1.641E+01	Pulse	1.00	3
Se			1	201.216	ug/l	2.92	17,731.65	1.111E-02	Pulse	3.00	3
Sb			1	201.809	ug/l	2.86	1,829,627.83	7.362E+00	Pulse	1.00	3
Se			1	203.621	ug/l	2.09	8,924.64	7.515E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,392,963.67	2.76	92.2	Mix	0.50	3
1	Sc		205,271.65	3.76	100.6	Pulse	0.30	3
1	Ge		162,449.80	3.12	97.0	Pulse	0.30	3
1	In		1,596,311.95	2.31	97.9	Pulse	0.30	3
1	Tb		6,458,442.67	2.91	98.1	Analog	0.50	3
1	Lu		3,834,844.33	3.33	98.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		248,648.39	2.61	98.4	Pulse	0.30	3
1	Te		11,877.97	1.11	90.1	Pulse	0.50	3
1	Li		1,422.28	2.98	94.5	Pulse	0.30	3

Quantitation Report

File Name	078CCVA.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 14:13
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	46.855	ug/l	0.30	616,564.42	1.591E-01	Pulse	0.50	3
As			1	47.682	ug/l	0.70	66,569.85	1.718E-02	Pulse	1.00	3
Mo			1	47.381	ug/l	0.95	430,257.50	1.733E+00	Pulse	0.50	3
Pb			1	49.066	ug/l	0.87	2,264,990.50	5.846E-01	Pulse	1.00	3
Be			1	47.991	ug/l	2.84	3,954.06	1.963E-02	Pulse	2.00	3
Ag			1	50.771	ug/l	0.37	1,528,577.25	6.158E+00	Pulse	0.50	3
Ba			1	48.392	ug/l	0.38	149,284.83	9.316E-02	Pulse	0.50	3
Tl			1	47.885	ug/l	2.10	3,336,444.25	7.192E-01	Pulse	0.50	3
Sn			1	47.711	ug/l	0.14	329,097.44	2.054E-01	Pulse	0.30	3
Sr			1	48.284	ug/l	0.30	309,951.75	1.934E-01	Pulse	0.50	3
[Pb]			1	47.262	ug/l	2.12	1,070,180.33	2.307E-01	Pulse	0.50	3
Ca			1	4666.799	ug/l	0.63	138,290.15	8.376E-01	Pulse	0.50	3
Ti			1	46.761	ug/l	1.47	11,254.59	6.817E-02	Pulse	0.50	3
Na			1	4797.768	ug/l	1.58	7,420,511.33	3.684E+01	Analog	1.00	3
Mg			1	4924.256	ug/l	1.39	3,305,682.42	1.641E+01	Pulse	1.00	3
K			1	4798.106	ug/l	1.31	2,414,654.25	1.199E+01	Pulse	1.00	3
V			1	46.478	ug/l	0.15	462,734.74	2.803E+00	Pulse	0.50	3
Mn			1	46.436	ug/l	0.44	271,926.38	1.647E+00	Pulse	0.50	3
Fe			1	4728.212	ug/l	0.55	48,506,345.33	2.938E+02	Analog	0.50	3
Co			1	48.383	ug/l	0.66	1,098,732.92	6.655E+00	Pulse	0.50	3
Ni			1	49.097	ug/l	0.85	302,154.74	1.217E+00	Pulse	0.50	3
Cu			1	48.641	ug/l	0.12	851,350.33	5.157E+00	Pulse	0.50	3
Zn			1	50.131	ug/l	1.09	121,996.21	4.915E-01	Pulse	1.00	3
Cd			1	49.058	ug/l	0.41	197,865.64	7.971E-01	Pulse	0.50	3
Al			1	4872.620	ug/l	0.75	985,034.23	3.968E+00	Pulse	1.00	3
Se			1	48.293	ug/l	1.00	4,282.15	2.672E-03	Pulse	3.00	3
Sb			1	48.329	ug/l	0.59	437,742.94	1.763E+00	Pulse	1.00	3
Se			1	46.724	ug/l	1.26	2,225.91	1.735E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,640,482.17	1.87	97.4	Analog	0.50	3
1	Sc		201,459.31	1.45	98.8	Pulse	0.30	3
1	Ge		165,095.97	0.47	98.6	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,602,458.10	0.51	98.3	Pulse	0.30	3
1	Tb		6,558,100.83	1.12	99.6	Analog	0.50	3
1	Lu		3,874,723.42	0.41	99.3	Pulse	0.50	3
1	Ge		248,230.48	0.54	98.2	Pulse	0.30	3
1	Te		12,832.65	1.46	97.3	Pulse	0.50	3
1	Li		1,400.06	0.86	93.0	Pulse	0.30	3

Quantitation Report

File Name	079_CCV.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 14:17
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	95.232	ug/l	1.18	1,244,721.79	3.234E-01	Pulse	0.50	3
As			1	95.630	ug/l	0.52	132,619.83	3.445E-02	Pulse	1.00	3
Mo			1	95.059	ug/l	1.33	867,498.87	3.477E+00	Pulse	0.50	3
Pb			1	97.067	ug/l	0.96	4,446,481.00	1.155E+00	Pulse	1.00	3
Be			1	95.170	ug/l	0.64	7,929.71	3.893E-02	Pulse	2.00	3
Ag			1	99.240	ug/l	1.41	3,002,662.08	1.204E+01	Pulse	0.50	3
Ba			1	97.721	ug/l	0.49	300,225.40	1.881E-01	Pulse	0.50	3
Tl			1	95.044	ug/l	1.14	6,472,061.50	1.427E+00	Analog	0.50	3
Sn			1	96.230	ug/l	0.76	660,736.87	4.140E-01	Pulse	0.30	3
Sr			1	97.424	ug/l	0.56	622,298.73	3.899E-01	Pulse	0.50	3
[Pb]			1	94.924	ug/l	1.56	2,098,347.29	4.628E-01	Pulse	0.50	3
Ca			1	9383.855	ug/l	0.34	280,088.76	1.684E+00	Pulse	0.50	3
Ti			1	94.035	ug/l	1.91	22,799.27	1.371E-01	Pulse	0.50	3
Na			1	9535.418	ug/l	1.21	14,904,217.00	7.317E+01	Analog	1.00	3
Mg			1	9709.199	ug/l	0.54	6,591,275.33	3.236E+01	Analog	1.00	3
K			1	9578.582	ug/l	0.61	4,863,098.17	2.387E+01	Analog	1.00	3
V			1	93.915	ug/l	0.17	941,626.25	5.661E+00	Pulse	0.50	3
Mn			1	93.818	ug/l	1.67	553,268.02	3.326E+00	Pulse	0.50	3
Fe			1	9432.822	ug/l	1.10	97,491,413.33	5.861E+02	Analog	0.50	3
Co			1	95.881	ug/l	0.35	2,193,754.92	1.319E+01	Pulse	0.50	3
Ni			1	96.899	ug/l	0.54	599,266.77	2.402E+00	Pulse	0.50	3
Cu			1	94.680	ug/l	0.77	1,649,994.25	9.919E+00	Pulse	0.50	3
Zn			1	98.096	ug/l	0.94	232,890.11	9.335E-01	Pulse	1.00	3
Cd			1	96.721	ug/l	1.51	392,058.53	1.572E+00	Pulse	0.50	3
Al			1	9655.319	ug/l	0.86	1,960,841.96	7.860E+00	Pulse	1.00	3
Se			1	97.200	ug/l	0.68	8,573.81	5.372E-03	Pulse	3.00	3
Sb			1	96.447	ug/l	1.57	877,804.08	3.519E+00	Pulse	1.00	3
Se			1	95.446	ug/l	1.12	4,341.94	3.530E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,534,543.67	1.11	95.2	Pulse	0.50	3
1	Sc		203,714.17	0.78	99.9	Pulse	0.30	3
1	Ge		166,346.76	0.88	99.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,596,113.55	0.36	97.9	Pulse	0.30	3
1	Tb		6,537,540.67	0.99	99.3	Analog	0.50	3
1	Lu		3,849,350.25	0.44	98.7	Pulse	0.50	3
1	Ge		249,496.49	1.00	98.7	Pulse	0.30	3
1	Te		12,301.53	0.33	93.3	Pulse	0.50	3
1	Li		1,352.28	6.77	89.8	Pulse	0.30	3

Quantitation Report

File Name 080_CCB.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 14:20
Sample Name CCB
Sample Type CCB
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.005	ug/l	43.84	247.33	6.481E-05	Pulse	0.50	3
As			1	0.008	ug/l	48.24	27.67	7.234E-06	Pulse	1.00	3
Mo			1	0.033	ug/l	16.87	348.00	1.415E-03	Pulse	0.50	3
Pb			1	0.021	ug/l	11.25	6,034.41	1.580E-03	Pulse	1.00	3
Be			1	0.002	ug/l	146.51	1.33	6.651E-06	Pulse	2.00	3
Ag			1	0.014	ug/l	11.13	604.68	2.456E-03	Pulse	0.50	3
Ba			1	-0.001	ug/l	-218.84	42.67	2.643E-05	Pulse	0.50	3
Tl			1	0.029	ug/l	13.58	2,395.51	5.004E-04	Pulse	0.50	3
Sn			1	0.033	ug/l	35.86	624.46	3.869E-04	Pulse	0.30	3
Sr			1	-0.001	ug/l	-345.85	608.68	3.768E-04	Pulse	0.50	3
[Pb]			1	0.014	ug/l	37.31	2,779.57	5.808E-04	Pulse	0.50	3
Ca			1	0.059	ug/l	212.15	82.67	5.089E-04	Pulse	0.50	3
Ti			1	0.003	ug/l	278.60	4.00	2.470E-05	Pulse	0.50	3
Na			1	-0.501	ug/l	-2.00	9,297.82	4.645E-02	Pulse	1.00	3
Mg			1	0.281	ug/l	40.69	418.67	2.088E-03	Pulse	1.00	3
K			1	0.048	ug/l	79.87	11,617.75	5.804E-02	Pulse	1.00	3
V			1	-0.001	ug/l	-291.35	448.68	2.761E-03	Pulse	0.50	3
Mn			1	-0.022	ug/l	-16.07	118.00	7.255E-04	Pulse	0.50	3
Fe			1	0.362	ug/l	32.09	9,301.63	5.720E-02	Pulse	0.50	3
Co			1	0.004	ug/l	40.66	132.67	8.158E-04	Pulse	0.50	3
Ni			1	-0.001	ug/l	-147.73	109.33	4.440E-04	Pulse	0.50	3
Cu			1	-0.025	ug/l	-142.13	19,882.92	1.224E-01	Pulse	0.50	3
Zn			1	-0.307	ug/l	-10.08	6,566.46	2.669E-02	Pulse	1.00	3
Cd			1	0.002	ug/l	134.10	16.67	6.726E-05	Pulse	0.50	3
Al			1	-3.943	ug/l	-4.97	160.67	6.515E-04	Pulse	1.00	3
Se			1	0.038	ug/l	62.70	14.45	8.951E-06	Pulse	3.00	3
Sb			1	0.015	ug/l	17.25	274.33	1.116E-03	Pulse	1.00	3
Se			1	-0.022	ug/l	-218.08	16.67	1.272E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,785,264.33	0.63	100.5	Mix	0.50	3
1	Sc		200,178.35	1.52	98.1	Pulse	0.30	3

Quantitation Report

1	Ge		162,466.99	1.01	97.0	Pulse	0.30	3
1	In		1,615,271.08	0.98	99.0	Pulse	0.30	3
1	Tb		6,533,837.50	0.75	99.3	Analog	0.50	3
1	Lu		3,819,041.08	1.07	97.9	Pulse	0.50	3
1	Ge		246,046.68	1.62	97.4	Pulse	0.30	3
1	Te		13,112.08	1.08	99.5	Pulse	0.50	3
1	Li		1,417.84	4.73	94.2	Pulse	0.30	3

Quantitation Report

File Name 081SMPL.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 14:24
Sample Name FA56228-2
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.308	ug/l	2.15	8,492.54	2.270E-03	Pulse	0.50	3
As			1	0.220	ug/l	12.20	163.67	4.375E-05	Pulse	1.00	3
Mo			1	0.504	ug/l	2.93	2,256.15	9.436E-03	Pulse	0.50	3
Pb			1	0.223	ug/l	4.61	9,911.21	2.650E-03	Pulse	1.00	3
Be			1	0.006	ug/l	458.28	1.33	6.873E-06	Pulse	2.00	3
Ag			1	0.106	ug/l	5.09	1,714.08	7.169E-03	Pulse	0.50	3
Ba			1	56.960	ug/l	0.68	81,902.51	5.484E-02	Pulse	0.50	3
Tl			1	0.034	ug/l	21.35	1,375.39	3.220E-04	Pulse	0.50	3
Sn			1	0.674	ug/l	3.37	2,529.08	1.694E-03	Pulse	0.30	3
Sr			1	236.041	ug/l	0.41	705,301.58	4.722E-01	Pulse	0.50	3
[Pb]			1	0.248	ug/l	4.07	4,762.01	1.114E-03	Pulse	0.50	3
Ca			1	51594.956	ug/l	1.26	725,468.13	4.628E+00	Pulse	0.50	3
Ti			1	0.200	ug/l	31.09	26.00	1.661E-04	Pulse	0.50	3
Na			1	212952.340	ug/l	0.45	157,978,970.67	8.165E+02	Analog	1.00	3
Mg			1	13239.064	ug/l	0.40	4,268,275.00	2.206E+01	Pulse	1.00	3
K			1	3102.986	ug/l	0.43	757,557.42	3.915E+00	Pulse	1.00	3
V			1	0.369	ug/l	7.50	2,182.80	1.393E-02	Pulse	0.50	3
Mn			1	42.273	ug/l	1.22	117,649.32	7.505E-01	Pulse	0.50	3
Fe			1	121.530	ug/l	1.11	597,259.92	3.810E+00	Pulse	0.50	3
Co			1	0.175	ug/l	4.70	1,922.10	1.226E-02	Pulse	0.50	3
Ni			1	0.869	ug/l	0.75	2,686.20	1.123E-02	Pulse	0.50	3
Cu			1	0.268	ug/l	5.95	21,752.25	1.388E-01	Pulse	0.50	3
Zn			1	6.723	ug/l	1.13	14,465.43	6.049E-02	Pulse	1.00	3
Cd			1	0.041	ug/l	4.26	87.33	3.653E-04	Pulse	0.50	3
Al			1	0.245	ug/l	131.44	946.69	3.960E-03	Pulse	1.00	3
Se			1	0.433	ug/l	9.35	28.11	1.882E-05	Pulse	3.00	3
Sb			1	0.112	ug/l	11.26	628.68	2.629E-03	Pulse	1.00	3
Se			1	0.719	ug/l	38.00	26.33	2.678E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,273,121.00	0.54	89.7	Pulse	0.50	3
1	Sc		193,480.84	0.62	94.9	Pulse	0.30	3
1	Ge		156,764.69	1.12	93.6	Pulse	0.30	3
1	In		1,493,517.09	0.74	91.6	Pulse	0.30	3
1	Tb		6,380,377.67	1.97	96.9	Analog	0.50	3
1	Lu		3,740,368.25	1.04	95.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		239,129.04	0.74	94.6	Pulse	0.30	3
1	Te		9,854.68	1.69	74.8	Pulse	0.50	3
1	Li		1,285.60	8.21	85.4	Pulse	0.30	3

Quantitation Report

File Name	082SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 14:28
Sample Name	FA56228-3
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.024	ug/l	5.39	6,763.86	1.788E-03	Pulse	0.50	3
As			1	0.129	ug/l	16.90	104.00	2.750E-05	Pulse	1.00	3
Mo			1	0.496	ug/l	3.44	2,244.14	9.292E-03	Pulse	0.50	3
Pb			1	1.359	ug/l	1.51	35,591.87	9.405E-03	Pulse	1.00	3
Be			1	-0.007	ug/l	-274.89	0.83	4.282E-06	Pulse	2.00	3
Ag			1	0.068	ug/l	5.53	1,184.71	4.905E-03	Pulse	0.50	3
Ba			1	38.960	ug/l	0.32	57,013.24	3.752E-02	Pulse	0.50	3
Tl			1	0.016	ug/l	12.14	804.69	1.878E-04	Pulse	0.50	3
Sn			1	0.533	ug/l	9.07	2,113.47	1.390E-03	Pulse	0.30	3
Sr			1	192.301	ug/l	1.23	584,680.41	3.848E-01	Pulse	0.50	3
[Pb]			1	1.420	ug/l	0.98	17,015.82	3.969E-03	Pulse	0.50	3
Ca			1	48864.808	ug/l	0.64	698,725.25	4.383E+00	Pulse	0.50	3
Ti			1	0.713	ug/l	2.84	86.00	5.395E-04	Pulse	0.50	3
Na			1	252977.504	ug/l	1.01	189,807,802.67	9.700E+02	Analog	1.00	3
Mg			1	16321.834	ug/l	1.03	5,321,926.00	2.720E+01	Analog	1.00	3
K			1	2246.942	ug/l	1.10	557,915.77	2.851E+00	Pulse	1.00	3
V			1	0.489	ug/l	5.32	2,794.21	1.753E-02	Pulse	0.50	3
Mn			1	4.379	ug/l	1.27	12,606.78	7.908E-02	Pulse	0.50	3
Fe			1	333.636	ug/l	0.82	1,657,758.83	1.040E+01	Pulse	0.50	3
Co			1	0.243	ug/l	0.90	2,706.20	1.698E-02	Pulse	0.50	3
Ni			1	0.827	ug/l	1.84	2,589.52	1.072E-02	Pulse	0.50	3
Cu			1	-0.568	ug/l	-3.89	15,229.36	9.554E-02	Pulse	0.50	3
Zn			1	2.628	ug/l	7.95	10,051.96	4.162E-02	Pulse	1.00	3
Cd			1	0.045	ug/l	17.35	96.00	3.977E-04	Pulse	0.50	3
Al			1	20.162	ug/l	3.42	2,912.89	1.206E-02	Pulse	1.00	3
Se			1	1.375	ug/l	6.93	68.11	4.483E-05	Pulse	3.00	3
Sb			1	0.093	ug/l	6.27	549.34	2.275E-03	Pulse	1.00	3
Se			1	1.987	ug/l	13.78	49.56	5.014E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,287,279.17	0.77	90.0	Pulse	0.50	3
1	Sc		195,693.42	1.01	95.9	Pulse	0.30	3
1	Ge		159,411.65	0.53	95.2	Pulse	0.30	3
1	In		1,519,546.50	0.78	93.2	Pulse	0.30	3
1	Tb		6,427,057.67	0.63	97.6	Analog	0.50	3
1	Lu		3,784,480.75	0.92	97.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		241,479.96	0.54	95.6	Pulse	0.30	3
1	Te		9,882.04	0.49	75.0	Pulse	0.50	3
1	Li		1,466.73	10.05	97.4	Pulse	0.30	3

Quantitation Report

File Name	083SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 14:32
Sample Name	FA56228-4
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.926	ug/l	0.16	12,876.94	3.319E-03	Pulse	0.50	3
As			1	0.261	ug/l	7.15	198.33	5.112E-05	Pulse	1.00	3
Mo			1	3.147	ug/l	0.36	14,350.19	5.777E-02	Pulse	0.50	3
Pb			1	0.109	ug/l	4.26	7,668.06	1.976E-03	Pulse	1.00	3
Be			1	-0.007	ug/l	-260.35	0.83	4.222E-06	Pulse	2.00	3
Ag			1	0.070	ug/l	4.74	1,240.04	4.993E-03	Pulse	0.50	3
Ba			1	8.324	ug/l	2.34	12,644.45	8.039E-03	Pulse	0.50	3
Tl			1	0.001	ug/l	55.27	360.67	7.845E-05	Pulse	0.50	3
Sn			1	0.546	ug/l	3.27	2,230.15	1.418E-03	Pulse	0.30	3
Sr			1	251.907	ug/l	0.70	792,666.39	5.040E-01	Pulse	0.50	3
[Pb]			1	0.123	ug/l	4.87	3,727.08	8.107E-04	Pulse	0.50	3
Ca			1	3478.980	ug/l	0.12	51,485.81	3.125E-01	Pulse	0.50	3
Ti			1	0.228	ug/l	22.63	30.67	1.862E-04	Pulse	0.50	3
Na			1	17978.209	ug/l	0.59	13,615,042.00	6.898E+01	Analog	1.00	3
Mg			1	485.967	ug/l	0.24	160,054.26	8.109E-01	Pulse	1.00	3
K			1	34371.746	ug/l	0.40	8,445,449.67	4.279E+01	Analog	1.00	3
V			1	0.332	ug/l	8.17	2,110.79	1.281E-02	Pulse	0.50	3
Mn			1	0.654	ug/l	6.56	2,154.12	1.308E-02	Pulse	0.50	3
Fe			1	16.209	ug/l	0.76	88,673.14	5.383E-01	Pulse	0.50	3
Co			1	0.047	ug/l	7.29	578.68	3.512E-03	Pulse	0.50	3
Ni			1	1.159	ug/l	3.29	3,685.03	1.483E-02	Pulse	0.50	3
Cu			1	-0.608	ug/l	-3.38	15,396.17	9.346E-02	Pulse	0.50	3
Zn			1	2.253	ug/l	10.41	9,907.89	3.990E-02	Pulse	1.00	3
Cd			1	0.015	ug/l	14.45	38.00	1.531E-04	Pulse	0.50	3
Al			1	3.775	ug/l	9.32	1,340.05	5.395E-03	Pulse	1.00	3
Se			1	0.040	ug/l	152.66	12.56	7.980E-06	Pulse	3.00	3
Sb			1	1.377	ug/l	1.51	6,380.45	2.569E-02	Pulse	1.00	3
Se			1	0.262	ug/l	16.22	18.78	1.836E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,596,996.33	0.60	96.5	Pulse	0.50	3
1	Sc		197,384.18	0.15	96.8	Pulse	0.30	3
1	Ge		164,737.76	0.38	98.4	Pulse	0.30	3
1	In		1,572,902.13	0.82	96.4	Pulse	0.30	3
1	Tb		6,625,696.83	1.11	100.6	Analog	0.50	3
1	Lu		3,879,946.50	0.27	99.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		248,386.34	1.25	98.3	Pulse	0.30	3
1	Te		10,226.89	1.05	77.6	Pulse	0.50	3
1	Li		1,406.72	2.79	93.4	Pulse	0.30	3

Quantitation Report

File Name 084SMPL.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 14:36
Sample Name FA56228-5
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.827	ug/l	6.69	5,504.93	1.454E-03	Pulse	0.50	3
As			1	0.099	ug/l	21.35	83.67	2.209E-05	Pulse	1.00	3
Mo			1	0.041	ug/l	17.25	231.33	9.742E-04	Pulse	0.50	3
Pb			1	-0.034	ug/l	-10.28	4,247.20	1.121E-03	Pulse	1.00	3
Be			1	0.007	ug/l	225.81	1.33	7.071E-06	Pulse	2.00	3
Ag			1	0.039	ug/l	3.56	747.35	3.146E-03	Pulse	0.50	3
Ba			1	10.275	ug/l	0.70	14,945.53	9.916E-03	Pulse	0.50	3
Tl			1	0.001	ug/l	11.43	337.33	7.478E-05	Pulse	0.50	3
Sn			1	0.402	ug/l	7.06	1,670.10	1.108E-03	Pulse	0.30	3
Sr			1	81.333	ug/l	0.89	245,602.14	1.630E-01	Pulse	0.50	3
[Pb]			1	-0.032	ug/l	-12.16	1,947.45	4.317E-04	Pulse	0.50	3
Ca			1	23913.301	ug/l	0.82	337,935.70	2.145E+00	Pulse	0.50	3
Ti			1	0.205	ug/l	47.04	26.67	1.694E-04	Pulse	0.50	3
Na			1	4149.096	ug/l	0.79	3,010,798.92	1.596E+01	Pulse	1.00	3
Mg			1	14868.445	ug/l	1.10	4,674,377.00	2.478E+01	Analog	1.00	3
K			1	1106.965	ug/l	0.67	270,572.26	1.434E+00	Pulse	1.00	3
V			1	0.394	ug/l	1.29	2,309.48	1.466E-02	Pulse	0.50	3
Mn			1	4.585	ug/l	1.13	13,033.05	8.274E-02	Pulse	0.50	3
Fe			1	204.778	ug/l	0.62	1,007,569.33	6.396E+00	Pulse	0.50	3
Co			1	0.045	ug/l	7.33	528.01	3.352E-03	Pulse	0.50	3
Ni			1	2.555	ug/l	2.19	7,630.86	3.213E-02	Pulse	0.50	3
Cu			1	-0.704	ug/l	-2.87	13,941.71	8.851E-02	Pulse	0.50	3
Zn			1	4.912	ug/l	1.63	12,386.98	5.215E-02	Pulse	1.00	3
Cd			1	0.098	ug/l	21.15	196.00	8.256E-04	Pulse	0.50	3
Al			1	0.778	ug/l	15.16	992.03	4.176E-03	Pulse	1.00	3
Se			1	0.515	ug/l	13.15	31.78	2.108E-05	Pulse	3.00	3
Sb			1	0.039	ug/l	5.52	308.33	1.298E-03	Pulse	1.00	3
Se			1	1.101	ug/l	7.85	34.11	3.381E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,511,364.83	0.50	94.7	Pulse	0.50	3
1	Sc		188,680.10	0.67	92.5	Pulse	0.30	3
1	Ge		157,527.13	0.54	94.1	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,507,135.08	0.94	92.4	Pulse	0.30	3
1	Tb		6,490,469.33	0.63	98.6	Analog	0.50	3
1	Lu		3,787,373.50	0.29	97.1	Pulse	0.50	3
1	Ge		237,531.86	0.39	94.0	Pulse	0.30	3
1	Te		10,088.81	0.24	76.5	Pulse	0.50	3
1	Li		1,325.61	1.62	88.0	Pulse	0.30	3

Quantitation Report

File Name	085SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 14:39
Sample Name	FA56228-6
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.839	ug/l	0.31	24,389.28	6.566E-03	Pulse	0.50	3
As			1	1.328	ug/l	4.22	904.02	2.434E-04	Pulse	1.00	3
Mo			1	0.277	ug/l	3.65	1,232.05	5.290E-03	Pulse	0.50	3
Pb			1	0.263	ug/l	2.09	10,736.37	2.890E-03	Pulse	1.00	3
Be			1	-0.002	ug/l	-1012.65	1.00	5.259E-06	Pulse	2.00	3
Ag			1	0.049	ug/l	12.37	867.36	3.725E-03	Pulse	0.50	3
Ba			1	517.600	ug/l	1.25	729,126.48	4.981E-01	Pulse	0.50	3
Tl			1	0.003	ug/l	1.28	376.01	9.137E-05	Pulse	0.50	3
Sn			1	0.597	ug/l	8.13	2,235.71	1.528E-03	Pulse	0.30	3
Sr			1	488.818	ug/l	1.44	1,430,948.87	9.775E-01	Pulse	0.50	3
[Pb]			1	0.296	ug/l	3.56	5,067.43	1.231E-03	Pulse	0.50	3
Ca			1	147920.885	ug/l	2.15	2,040,682.04	1.327E+01	Pulse	0.50	3
Ti			1	5.485	ug/l	0.99	618.01	4.018E-03	Pulse	0.50	3
Na			1	187058.469	ug/l	1.67	136,292,714.67	7.172E+02	Analog	1.00	3
Mg			1	71473.070	ug/l	1.35	22,631,308.00	1.191E+02	Analog	1.00	3
K			1	2513.742	ug/l	1.23	604,842.33	3.183E+00	Pulse	1.00	3
V			1	0.744	ug/l	2.18	3,880.40	2.523E-02	Pulse	0.50	3
Mn			1	1286.842	ug/l	1.45	3,507,524.42	2.280E+01	Pulse	0.50	3
Fe			1	6856.982	ug/l	0.88	32,772,312.67	2.131E+02	Analog	0.50	3
Co			1	1.195	ug/l	0.34	12,685.50	8.246E-02	Pulse	0.50	3
Ni			1	3.543	ug/l	1.00	10,336.12	4.438E-02	Pulse	0.50	3
Cu			1	-0.457	ug/l	-4.68	15,582.99	1.013E-01	Pulse	0.50	3
Zn			1	4.343	ug/l	5.83	11,534.45	4.952E-02	Pulse	1.00	3
Cd			1	0.036	ug/l	28.53	74.00	3.176E-04	Pulse	0.50	3
Al			1	131.150	ug/l	1.59	13,326.12	5.721E-02	Pulse	1.00	3
Se			1	0.067	ug/l	39.98	12.78	8.732E-06	Pulse	3.00	3
Sb			1	0.077	ug/l	14.44	461.01	1.979E-03	Pulse	1.00	3
Se			1	1.079	ug/l	24.68	31.44	3.342E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,115,147.83	0.45	86.4	Pulse	0.50	3
1	Sc		190,043.47	0.76	93.2	Pulse	0.30	3
1	Ge		153,834.49	1.21	91.9	Pulse	0.30	3
1	In		1,463,943.59	1.13	89.8	Pulse	0.30	3
1	Tb		6,270,533.67	0.28	95.3	Analog	0.50	3
1	Lu		3,714,525.75	0.89	95.2	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		232,922.45	0.67	92.2	Pulse	0.30	3
1	Te		9,409.11	0.16	71.4	Pulse	0.50	3
1	Li		1,318.94	7.02	87.6	Pulse	0.30	3

Quantitation Report

File Name 086SMPL.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 14:43
Sample Name FA56228-7
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.663	ug/l	4.48	4,443.86	1.175E-03	Pulse	0.50	3
As			1	1.390	ug/l	1.97	962.03	2.545E-04	Pulse	1.00	3
Mo			1	7.128	ug/l	2.26	30,941.48	1.306E-01	Pulse	0.50	3
Pb			1	0.118	ug/l	6.19	7,654.05	2.025E-03	Pulse	1.00	3
Be			1	-0.006	ug/l	-318.60	0.83	4.432E-06	Pulse	2.00	3
Ag			1	0.039	ug/l	4.44	740.02	3.123E-03	Pulse	0.50	3
Ba			1	12.426	ug/l	1.62	18,184.48	1.199E-02	Pulse	0.50	3
Tl			1	0.008	ug/l	34.22	590.01	1.297E-04	Pulse	0.50	3
Sn			1	0.486	ug/l	8.33	1,954.56	1.288E-03	Pulse	0.30	3
Sr			1	66.641	ug/l	0.87	202,692.42	1.336E-01	Pulse	0.50	3
[Pb]			1	0.117	ug/l	2.35	3,615.06	7.954E-04	Pulse	0.50	3
Ca			1	24607.439	ug/l	1.31	343,354.13	2.208E+00	Pulse	0.50	3
Ti			1	0.243	ug/l	37.12	30.67	1.973E-04	Pulse	0.50	3
Na			1	14796.666	ug/l	0.80	10,688,186.00	5.678E+01	Analog	1.00	3
Mg			1	2224.406	ug/l	0.75	697,898.79	3.707E+00	Pulse	1.00	3
K			1	1717.538	ug/l	0.84	412,826.34	2.193E+00	Pulse	1.00	3
V			1	0.583	ug/l	5.74	3,164.94	2.035E-02	Pulse	0.50	3
Mn			1	46.392	ug/l	0.28	128,092.34	8.235E-01	Pulse	0.50	3
Fe			1	35.626	ug/l	15.45	177,694.13	1.141E+00	Pulse	0.50	3
Co			1	0.060	ug/l	11.41	686.02	4.408E-03	Pulse	0.50	3
Ni			1	0.215	ug/l	2.40	744.02	3.139E-03	Pulse	0.50	3
Cu			1	0.575	ug/l	3.91	24,054.96	1.547E-01	Pulse	0.50	3
Zn			1	1.738	ug/l	5.96	8,891.39	3.752E-02	Pulse	1.00	3
Cd			1	0.019	ug/l	17.50	43.33	1.831E-04	Pulse	0.50	3
Al			1	2.756	ug/l	15.56	1,180.04	4.981E-03	Pulse	1.00	3
Se			1	0.067	ug/l	111.49	13.22	8.725E-06	Pulse	3.00	3
Sb			1	0.121	ug/l	3.63	660.34	2.787E-03	Pulse	1.00	3
Se			1	0.419	ug/l	15.99	21.33	2.125E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,544,912.67	0.80	95.4	Pulse	0.50	3
1	Sc		188,240.95	0.20	92.3	Pulse	0.30	3
1	Ge		155,546.48	0.86	92.9	Pulse	0.30	3
1	In		1,517,232.20	0.76	93.0	Pulse	0.30	3
1	Tb		6,455,818.00	0.76	98.1	Analog	0.50	3
1	Lu		3,781,080.83	1.37	96.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		236,986.37	1.35	93.8	Pulse	0.30	3
1	Te		10,032.80	1.73	76.1	Pulse	0.50	3
1	Li		1,298.94	6.09	86.3	Pulse	0.30	3

Quantitation Report

File Name	087SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 14:47
Sample Name	FA56228-8
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.329	ug/l	1.68	2,278.81	6.075E-04	Pulse	0.50	3
As			1	0.114	ug/l	23.13	92.67	2.470E-05	Pulse	1.00	3
Mo			1	0.078	ug/l	20.10	387.34	1.648E-03	Pulse	0.50	3
Pb			1	0.072	ug/l	5.30	6,584.94	1.756E-03	Pulse	1.00	3
Be			1	-0.015	ug/l	-90.70	0.50	2.706E-06	Pulse	2.00	3
Ag			1	0.047	ug/l	39.06	843.36	3.594E-03	Pulse	0.50	3
Ba			1	20.130	ug/l	0.95	29,012.53	1.940E-02	Pulse	0.50	3
Tl			1	-0.003	ug/l	-12.91	200.00	4.498E-05	Pulse	0.50	3
Sn			1	0.422	ug/l	2.74	1,720.10	1.150E-03	Pulse	0.30	3
Sr			1	568.434	ug/l	1.01	1,699,915.63	1.137E+00	Pulse	0.50	3
[Pb]			1	0.077	ug/l	6.84	3,100.29	6.973E-04	Pulse	0.50	3
Ca			1	34413.940	ug/l	1.18	475,698.60	3.087E+00	Pulse	0.50	3
Ti			1	0.234	ug/l	17.30	29.33	1.906E-04	Pulse	0.50	3
Na			1	10412.167	ug/l	0.76	7,440,773.33	3.997E+01	Analog	1.00	3
Mg			1	8590.688	ug/l	0.65	2,664,920.75	1.432E+01	Pulse	1.00	3
K			1	914.823	ug/l	0.73	222,492.90	1.195E+00	Pulse	1.00	3
V			1	0.296	ug/l	8.35	1,802.76	1.170E-02	Pulse	0.50	3
Mn			1	1.721	ug/l	1.52	4,928.64	3.199E-02	Pulse	0.50	3
Fe			1	58.074	ug/l	1.65	283,326.52	1.839E+00	Pulse	0.50	3
Co			1	0.034	ug/l	7.22	402.01	2.610E-03	Pulse	0.50	3
Ni			1	0.451	ug/l	2.86	1,422.72	6.056E-03	Pulse	0.50	3
Cu			1	-0.456	ug/l	-7.49	15,612.34	1.013E-01	Pulse	0.50	3
Zn			1	8.931	ug/l	0.27	16,602.47	7.067E-02	Pulse	1.00	3
Cd			1	0.005	ug/l	76.80	16.67	7.106E-05	Pulse	0.50	3
Al			1	36.209	ug/l	6.85	4,368.15	1.859E-02	Pulse	1.00	3
Se			1	0.074	ug/l	91.89	13.33	8.910E-06	Pulse	3.00	3
Sb			1	0.018	ug/l	16.62	213.00	9.064E-04	Pulse	1.00	3
Se			1	0.305	ug/l	10.84	18.78	1.916E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,446,168.00	0.48	93.4	Pulse	0.50	3
1	Sc		186,170.46	1.19	91.3	Pulse	0.30	3
1	Ge		154,099.51	1.33	92.0	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,495,539.18	0.71	91.7	Pulse	0.30	3
1	Tb		6,437,962.50	0.59	97.8	Analog	0.50	3
1	Lu		3,750,909.42	0.36	96.1	Pulse	0.50	3
1	Ge		234,941.75	0.60	93.0	Pulse	0.30	3
1	Te		9,804.67	2.26	74.4	Pulse	0.50	3
1	Li		1,234.49	0.68	82.0	Pulse	0.30	3

Quantitation Report

File Name	088SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 14:51
Sample Name	FA56309-1A
Sample Type	Sample
Comment	
Prep Dilution	2.000
Auto Dilution	N/A
Total Dilution	2.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.104	ug/l	16.79	7,013.98	1.923E-03	Pulse	0.50	3
As			1	0.070	ug/l	8.93	61.67	1.687E-05	Pulse	1.00	3
Mo			1	0.079	ug/l	3.07	390.68	1.666E-03	Pulse	0.50	3
Pb			1	0.015	ug/l	123.91	5,143.45	1.413E-03	Pulse	1.00	3
Be			1	-0.015	ug/l	-91.45	0.50	2.711E-06	Pulse	2.00	3
Ag			1	0.074	ug/l	36.07	1,224.05	5.218E-03	Pulse	0.50	3
Ba			1	0.092	ug/l	13.11	172.67	1.174E-04	Pulse	0.50	3
Tl			1	-0.002	ug/l	-63.61	224.67	5.043E-05	Pulse	0.50	3
Sn			1	0.624	ug/l	10.76	2,324.60	1.584E-03	Pulse	0.30	3
Sr			1	0.999	ug/l	3.60	3,493.67	2.375E-03	Pulse	0.50	3
[Pb]			1	0.014	ug/l	55.55	2,427.51	5.439E-04	Pulse	0.50	3
Ca			1	143.455	ug/l	10.67	2,048.11	1.336E-02	Pulse	0.50	3
Ti			1	0.148	ug/l	50.98	20.00	1.283E-04	Pulse	0.50	3
Na			1	560.632	ug/l	6.52	393,800.21	2.200E+00	Pulse	1.00	3
Mg			1	32.620	ug/l	8.00	9,930.47	5.550E-02	Pulse	1.00	3
K			1	5.973	ug/l	44.87	11,704.47	6.534E-02	Pulse	1.00	3
V			1	0.368	ug/l	7.25	2,130.79	1.388E-02	Pulse	0.50	3
Mn			1	1.136	ug/l	19.87	3,322.31	2.161E-02	Pulse	0.50	3
Fe			1	12.887	ug/l	15.65	66,831.70	4.350E-01	Pulse	0.50	3
Co			1	0.026	ug/l	28.32	313.34	2.055E-03	Pulse	0.50	3
Ni			1	0.213	ug/l	11.63	732.01	3.112E-03	Pulse	0.50	3
Cu			1	-0.519	ug/l	-24.71	15,047.21	9.806E-02	Pulse	0.50	3
Zn			1	0.296	ug/l	73.32	7,239.70	3.088E-02	Pulse	1.00	3
Cd			1	0.002	ug/l	165.96	10.00	4.296E-05	Pulse	0.50	3
Al			1	6.138	ug/l	30.02	1,491.06	6.356E-03	Pulse	1.00	3
Se			1	0.003	ug/l	590.46	10.22	6.964E-06	Pulse	3.00	3
Sb			1	0.022	ug/l	17.79	228.00	9.728E-04	Pulse	1.00	3
Se			1	0.231	ug/l	82.96	17.11	1.779E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,468,618.33	5.76	93.8	Mix	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		179,484.29	6.05	88.0	Pulse	0.30	3
1	Ge		153,836.61	5.70	91.9	Pulse	0.30	3
1	In		1,472,561.64	6.23	90.3	Pulse	0.30	3
1	Tb		6,310,052.00	5.92	95.9	Analog	0.50	3
1	Lu		3,651,424.25	6.22	93.6	Pulse	0.50	3
1	Ge		234,670.61	4.61	92.9	Pulse	0.30	3
1	Te		9,682.63	5.92	73.5	Pulse	0.50	3
1	Li		1,438.95	5.37	95.6	Pulse	0.30	3

Quantitation Report

File Name 089SMPL.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 14:55
Sample Name MP34108-D1
Sample Type Sample
Comment
Prep Dilution 2.000
Auto Dilution N/A
Total Dilution 2.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.202	ug/l	1.31	7,712.88	2.090E-03	Pulse	0.50	3
As			1	3.604	ug/l	3.71	2,410.49	6.534E-04	Pulse	1.00	3
Mo			1	6.225	ug/l	2.53	25,724.28	1.141E-01	Pulse	0.50	3
Pb			1	0.056	ug/l	5.74	6,126.44	1.660E-03	Pulse	1.00	3
Be			1	-0.001	ug/l	-2199.69	1.00	5.489E-06	Pulse	2.00	3
Ag			1	0.041	ug/l	40.02	728.02	3.230E-03	Pulse	0.50	3
Ba			1	264.162	ug/l	1.80	371,124.44	2.542E-01	Pulse	0.50	3
Tl			1	0.002	ug/l	44.90	336.67	7.901E-05	Pulse	0.50	3
Sn			1	0.391	ug/l	10.93	1,582.30	1.084E-03	Pulse	0.30	3
Sr			1	5551.833	ug/l	2.02	16,201,951.00	1.110E+01	Analog	0.50	3
[Pb]			1	0.076	ug/l	11.87	2,966.26	6.963E-04	Pulse	0.50	3
Ca			1	199825.176	ug/l	3.31	2,653,575.00	1.792E+01	Pulse	0.50	3
Ti			1	0.227	ug/l	49.53	27.33	1.858E-04	Pulse	0.50	3
Na			1	20041.839	ug/l	0.89	14,087,312.67	7.689E+01	Analog	1.00	3
Mg			1	71.841	ug/l	2.04	22,140.22	1.209E-01	Pulse	1.00	3
K			1	17530.022	ug/l	1.84	4,003,202.58	2.185E+01	Pulse	1.00	3
V			1	1.254	ug/l	3.07	6,008.28	4.058E-02	Pulse	0.50	3
Mn			1	0.846	ug/l	4.49	2,439.50	1.648E-02	Pulse	0.50	3
Fe			1	10.470	ug/l	2.42	53,300.83	3.600E-01	Pulse	0.50	3
Co			1	1.300	ug/l	2.34	13,277.23	8.965E-02	Pulse	0.50	3
Ni			1	3.447	ug/l	4.85	9,733.82	4.318E-02	Pulse	0.50	3
Cu			1	-0.393	ug/l	-8.96	15,488.90	1.046E-01	Pulse	0.50	3
Zn			1	3.049	ug/l	9.30	9,823.18	4.356E-02	Pulse	1.00	3
Cd			1	0.003	ug/l	132.72	12.00	5.356E-05	Pulse	0.50	3
Al			1	303.760	ug/l	2.06	28,739.61	1.274E-01	Pulse	1.00	3
Se			1	0.055	ug/l	101.79	12.22	8.379E-06	Pulse	3.00	3
Sb			1	0.095	ug/l	4.39	523.01	2.319E-03	Pulse	1.00	3
Se			1	0.241	ug/l	102.16	17.33	1.798E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,261,375.00	1.56	89.5	Pulse	0.50	3
1	Sc		183,223.40	0.99	89.8	Pulse	0.30	3
1	Ge		148,126.97	2.37	88.5	Pulse	0.30	3
1	In		1,459,952.17	0.81	89.5	Pulse	0.30	3
1	Tb		6,337,398.17	1.36	96.3	Analog	0.50	3
1	Lu		3,690,545.25	1.61	94.6	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		225,602.67	2.53	89.3	Pulse	0.30	3
1	Te		9,665.30	1.46	73.3	Pulse	0.50	3
1	Li		1,404.50	3.10	93.3	Pulse	0.30	3

Quantitation Report

File Name 090SMPL.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 14:58
Sample Name FA56168-10
Sample Type Sample
Comment
Prep Dilution 5.000
Auto Dilution N/A
Total Dilution 5.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	2.195	ug/l	3.46	5,650.17	1.540E-03	Pulse	0.50	3
As			1	9.918	ug/l	1.04	2,637.85	7.188E-04	Pulse	1.00	3
Mo			1	0.249	ug/l	8.03	466.68	2.040E-03	Pulse	0.50	3
Pb			1	1.081	ug/l	3.42	14,294.97	3.895E-03	Pulse	1.00	3
Be			1	0.119	ug/l	130.95	2.83	1.541E-05	Pulse	2.00	3
Ag			1	0.039	ug/l	40.35	386.67	1.691E-03	Pulse	0.50	3
Ba			1	72.456	ug/l	1.46	41,683.11	2.792E-02	Pulse	0.50	3
Tl			1	-0.011	ug/l	-16.14	158.67	3.515E-05	Pulse	0.50	3
Sn			1	0.356	ug/l	36.55	822.28	5.505E-04	Pulse	0.30	3
Sr			1	172.985	ug/l	1.06	207,091.29	1.387E-01	Pulse	0.50	3
[Pb]			1	1.021	ug/l	1.55	6,792.03	1.505E-03	Pulse	0.50	3
Ca			1	35421.530	ug/l	1.10	191,415.22	1.271E+00	Pulse	0.50	3
Ti			1	4.607	ug/l	8.75	205.33	1.363E-03	Pulse	0.50	3
Na			1	9859.395	ug/l	0.59	2,774,453.17	1.517E+01	Pulse	1.00	3
Mg			1	7766.095	ug/l	1.04	946,809.18	5.177E+00	Pulse	1.00	3
K			1	5522.377	ug/l	0.58	512,805.27	2.804E+00	Pulse	1.00	3
V			1	2.967	ug/l	3.23	5,803.55	3.855E-02	Pulse	0.50	3
Mn			1	644.150	ug/l	1.68	687,604.15	4.567E+00	Pulse	0.50	3
Fe			1	14352.752	ug/l	0.60	26,858,874.00	1.784E+02	Analog	0.50	3
Co			1	0.573	ug/l	4.90	2,411.49	1.602E-02	Pulse	0.50	3
Ni			1	3.571	ug/l	0.14	4,159.13	1.817E-02	Pulse	0.50	3
Cu			1	0.763	ug/l	10.09	21,183.64	1.407E-01	Pulse	0.50	3
Zn			1	13.709	ug/l	5.12	12,536.75	5.478E-02	Pulse	1.00	3
Cd			1	0.109	ug/l	21.24	88.00	3.838E-04	Pulse	0.50	3
Al			1	223.681	ug/l	1.97	9,213.81	4.026E-02	Pulse	1.00	3
Se			1	0.200	ug/l	53.97	13.56	9.083E-06	Pulse	3.00	3
Sb			1	0.046	ug/l	41.13	209.67	9.169E-04	Pulse	1.00	3
Se			1	1.453	ug/l	43.44	26.55	2.424E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,513,592.33	0.27	94.8	Mix	0.50	3
1	Sc		182,892.69	0.98	89.7	Pulse	0.30	3
1	Ge		150,571.51	0.83	89.9	Pulse	0.30	3
1	In		1,493,134.77	0.60	91.6	Pulse	0.30	3
1	Tb		6,299,781.17	0.68	95.7	Analog	0.50	3
1	Lu		3,670,079.00	0.81	94.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		228,901.84	1.42	90.6	Pulse	0.30	3
1	Te		10,933.35	1.48	82.9	Pulse	0.50	3
1	Li		1,283.38	2.50	85.2	Pulse	0.30	3

Quantitation Report

File Name	091CCVA.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 15:02
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	46.104	ug/l	2.15	589,838.23	1.566E-01	Pulse	0.50	3
As			1	46.381	ug/l	1.46	62,960.02	1.671E-02	Pulse	1.00	3
Mo			1	47.077	ug/l	2.06	411,852.00	1.722E+00	Pulse	0.50	3
Pb			1	49.122	ug/l	1.72	2,204,770.92	5.852E-01	Pulse	1.00	3
Be			1	48.439	ug/l	1.66	3,843.87	1.982E-02	Pulse	2.00	3
Ag			1	50.273	ug/l	1.79	1,458,213.42	6.098E+00	Pulse	0.50	3
Ba			1	48.060	ug/l	2.25	142,481.37	9.252E-02	Pulse	0.50	3
Tl			1	47.597	ug/l	1.84	3,227,527.25	7.149E-01	Pulse	0.50	3
Sn			1	47.993	ug/l	2.38	318,140.31	2.066E-01	Pulse	0.30	3
Sr			1	48.353	ug/l	2.01	298,300.78	1.937E-01	Pulse	0.50	3
[Pb]			1	47.311	ug/l	2.22	1,042,527.83	2.309E-01	Pulse	0.50	3
Ca			1	4625.468	ug/l	2.45	131,285.91	8.302E-01	Pulse	0.50	3
Ti			1	47.140	ug/l	2.94	10,867.70	6.872E-02	Pulse	0.50	3
Na			1	4806.871	ug/l	1.05	7,160,122.17	3.691E+01	Analog	1.00	3
Mg			1	4908.026	ug/l	1.19	3,173,099.42	1.636E+01	Pulse	1.00	3
K			1	4749.746	ug/l	1.83	2,301,978.17	1.187E+01	Pulse	1.00	3
V			1	46.487	ug/l	2.27	443,311.27	2.803E+00	Pulse	0.50	3
Mn			1	46.525	ug/l	2.28	260,967.60	1.650E+00	Pulse	0.50	3
Fe			1	4730.577	ug/l	1.52	46,488,957.33	2.940E+02	Analog	0.50	3
Co			1	47.850	ug/l	2.15	1,040,830.12	6.582E+00	Pulse	0.50	3
Ni			1	48.339	ug/l	1.51	286,621.12	1.198E+00	Pulse	0.50	3
Cu			1	48.158	ug/l	2.60	807,536.23	5.107E+00	Pulse	0.50	3
Zn			1	49.679	ug/l	1.60	116,544.79	4.873E-01	Pulse	1.00	3
Cd			1	48.861	ug/l	1.56	189,880.27	7.939E-01	Pulse	0.50	3
Al			1	4850.559	ug/l	1.60	944,732.79	3.950E+00	Pulse	1.00	3
Se			1	48.133	ug/l	2.45	4,101.89	2.663E-03	Pulse	3.00	3
Sb			1	48.238	ug/l	1.85	420,930.67	1.760E+00	Pulse	1.00	3
Se			1	46.853	ug/l	4.41	2,091.67	1.740E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,515,674.50	1.48	94.8	Mix	0.50	3
1	Sc		194,014.96	1.48	95.1	Pulse	0.30	3
1	Ge		158,183.85	2.01	94.5	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,540,499.49	2.24	94.5	Pulse	0.30	3
1	Tb		6,430,469.00	1.83	97.7	Analog	0.50	3
1	Lu		3,767,989.67	1.66	96.6	Pulse	0.50	3
1	Ge		239,187.47	1.42	94.7	Pulse	0.30	3
1	Te		12,036.70	3.76	91.3	Pulse	0.50	3
1	Li		1,382.28	2.92	91.8	Pulse	0.30	3

Quantitation Report

File Name	092_CCV.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 15:06
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	94.291	ug/l	1.49	1,204,029.58	3.202E-01	Pulse	0.50	3
As			1	94.464	ug/l	0.69	127,992.12	3.403E-02	Pulse	1.00	3
Mo			1	95.924	ug/l	0.86	838,264.58	3.509E+00	Pulse	0.50	3
Pb			1	97.494	ug/l	2.01	4,362,835.67	1.160E+00	Pulse	1.00	3
Be			1	95.556	ug/l	1.75	7,711.63	3.908E-02	Pulse	2.00	3
Ag			1	99.584	ug/l	1.46	2,885,046.42	1.208E+01	Pulse	0.50	3
Ba			1	97.175	ug/l	1.93	290,450.89	1.870E-01	Pulse	0.50	3
Tl			1	95.529	ug/l	1.82	6,386,320.83	1.435E+00	Analog	0.50	3
Sn			1	95.728	ug/l	1.96	639,473.78	4.118E-01	Pulse	0.30	3
Sr			1	96.980	ug/l	2.00	602,667.81	3.881E-01	Pulse	0.50	3
[Pb]			1	94.994	ug/l	1.73	2,061,644.04	4.631E-01	Pulse	0.50	3
Ca			1	9543.958	ug/l	2.58	271,474.05	1.713E+00	Pulse	0.50	3
Ti			1	96.609	ug/l	0.64	22,331.39	1.408E-01	Pulse	0.50	3
Na			1	9626.188	ug/l	1.82	14,573,408.33	7.386E+01	Analog	1.00	3
Mg			1	9821.394	ug/l	1.74	6,457,873.00	3.273E+01	Analog	1.00	3
K			1	9555.333	ug/l	2.00	4,698,724.83	2.382E+01	Pulse	1.00	3
V			1	95.287	ug/l	2.27	910,489.50	5.743E+00	Pulse	0.50	3
Mn			1	94.920	ug/l	2.79	533,463.40	3.365E+00	Pulse	0.50	3
Fe			1	9615.863	ug/l	2.31	94,719,712.00	5.975E+02	Analog	0.50	3
Co			1	96.370	ug/l	1.77	2,101,561.92	1.326E+01	Pulse	0.50	3
Ni			1	97.887	ug/l	1.36	579,615.77	2.426E+00	Pulse	0.50	3
Cu			1	95.858	ug/l	2.15	1,591,903.29	1.004E+01	Pulse	0.50	3
Zn			1	99.304	ug/l	2.00	225,629.43	9.446E-01	Pulse	1.00	3
Cd			1	97.262	ug/l	2.14	377,473.54	1.580E+00	Pulse	0.50	3
Al			1	9840.139	ug/l	2.11	1,913,200.46	8.010E+00	Pulse	1.00	3
Se			1	97.005	ug/l	1.02	8,325.59	5.361E-03	Pulse	3.00	3
Sb			1	98.000	ug/l	2.40	853,942.94	3.575E+00	Pulse	1.00	3
Se			1	96.062	ug/l	2.71	4,183.13	3.552E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,452,159.00	1.44	93.5	Pulse	0.50	3
1	Sc		197,348.49	1.87	96.8	Pulse	0.30	3
1	Ge		158,590.77	2.47	94.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,553,189.83	1.77	95.2	Pulse	0.30	3
1	Tb		6,456,716.00	1.82	98.1	Analog	0.50	3
1	Lu		3,761,099.42	1.56	96.4	Pulse	0.50	3
1	Ge		238,917.28	1.92	94.6	Pulse	0.30	3
1	Te		11,781.17	2.53	89.4	Pulse	0.50	3
1	Li		1,381.17	6.76	91.7	Pulse	0.30	3

Quantitation Report

File Name	093_CCB.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 15:10
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.001	ug/l	168.22	201.33	5.339E-05	Pulse	0.50	3
As			1	0.000	ug/l	3619.27	16.00	4.233E-06	Pulse	1.00	3
Mo			1	0.021	ug/l	25.22	235.33	9.919E-04	Pulse	0.50	3
Pb			1	0.010	ug/l	15.88	5,459.55	1.447E-03	Pulse	1.00	3
Be			1	-0.001	ug/l	-483.64	1.00	5.174E-06	Pulse	2.00	3
Ag			1	0.011	ug/l	24.53	504.68	2.125E-03	Pulse	0.50	3
Ba			1	0.011	ug/l	3.85	79.33	5.071E-05	Pulse	0.50	3
Tl			1	0.018	ug/l	22.86	1,550.08	3.341E-04	Pulse	0.50	3
Sn			1	0.016	ug/l	1.39	488.90	3.125E-04	Pulse	0.30	3
Sr			1	0.003	ug/l	149.09	614.01	3.925E-04	Pulse	0.50	3
[Pb]			1	0.010	ug/l	61.12	2,586.87	5.573E-04	Pulse	0.50	3
Ca			1	0.910	ug/l	67.30	104.67	6.616E-04	Pulse	0.50	3
Ti			1	-0.008	ug/l	-62.09	1.33	8.438E-06	Pulse	0.50	3
Na			1	0.095	ug/l	253.44	9,852.76	5.102E-02	Pulse	1.00	3
Mg			1	0.301	ug/l	10.48	416.34	2.156E-03	Pulse	1.00	3
K			1	-0.563	ug/l	-9.38	10,913.36	5.652E-02	Pulse	1.00	3
V			1	-0.006	ug/l	-89.81	383.34	2.422E-03	Pulse	0.50	3
Mn			1	-0.025	ug/l	-10.24	98.00	6.194E-04	Pulse	0.50	3
Fe			1	0.276	ug/l	30.17	8,203.79	5.185E-02	Pulse	0.50	3
Co			1	0.002	ug/l	43.49	80.67	5.100E-04	Pulse	0.50	3
Ni			1	-0.002	ug/l	-100.55	99.33	4.184E-04	Pulse	0.50	3
Cu			1	-0.031	ug/l	-78.06	19,260.29	1.217E-01	Pulse	0.50	3
Zn			1	0.110	ug/l	29.80	7,245.70	3.053E-02	Pulse	1.00	3
Cd			1	0.002	ug/l	155.35	14.00	5.914E-05	Pulse	0.50	3
Al			1	0.071	ug/l	197.55	929.69	3.917E-03	Pulse	1.00	3
Se			1	-0.005	ug/l	-445.72	10.33	6.610E-06	Pulse	3.00	3
Sb			1	0.008	ug/l	49.43	208.00	8.759E-04	Pulse	1.00	3
Se			1	-0.022	ug/l	-366.41	15.89	1.274E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,642,084.33	0.53	97.5	Pulse	0.50	3
1	Sc		193,094.91	0.76	94.7	Pulse	0.30	3

Quantitation Report

1	Ge		158,241.15	0.32	94.5	Pulse	0.30	3
1	In		1,564,382.89	0.62	95.9	Pulse	0.30	3
1	Tb		6,422,872.17	1.04	97.6	Analog	0.50	3
1	Lu		3,772,809.17	0.86	96.7	Pulse	0.50	3
1	Ge		237,372.72	0.62	93.9	Pulse	0.30	3
1	Te		12,414.91	2.99	94.2	Pulse	0.50	3
1	Li		1,381.17	9.45	91.7	Pulse	0.30	3

Quantitation Report

File Name	094SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 15:13
Sample Name	FA56168-11
Sample Type	Sample
Comment	
Prep Dilution	5.000
Auto Dilution	N/A
Total Dilution	5.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.896	ug/l	3.08	2,444.83	6.577E-04	Pulse	0.50	3
As			1	143.893	ug/l	0.44	38,555.36	1.037E-02	Pulse	1.00	3
Mo			1	1.670	ug/l	2.53	2,864.23	1.243E-02	Pulse	0.50	3
Pb			1	-0.048	ug/l	-3.31	4,500.60	1.211E-03	Pulse	1.00	3
Be			1	-0.037	ug/l	-86.31	0.50	2.646E-06	Pulse	2.00	3
Ag			1	0.058	ug/l	31.59	498.01	2.163E-03	Pulse	0.50	3
Ba			1	179.868	ug/l	0.26	105,128.21	6.926E-02	Pulse	0.50	3
Tl			1	0.023	ug/l	29.41	616.68	1.361E-04	Pulse	0.50	3
Sn			1	0.396	ug/l	17.00	887.81	5.848E-04	Pulse	0.30	3
Sr			1	122.672	ug/l	1.06	149,448.82	9.847E-02	Pulse	0.50	3
[Pb]			1	-0.025	ug/l	-32.92	2,202.82	4.864E-04	Pulse	0.50	3
Ca			1	34080.375	ug/l	0.67	185,504.18	1.223E+00	Pulse	0.50	3
Ti			1	1.499	ug/l	5.00	69.33	4.572E-04	Pulse	0.50	3
Na			1	14873.645	ug/l	1.52	4,271,166.17	2.286E+01	Mix	1.00	3
Mg			1	8502.713	ug/l	1.94	1,058,904.96	5.668E+00	Pulse	1.00	3
K			1	1001.099	ug/l	1.65	103,825.34	5.557E-01	Pulse	1.00	3
V			1	0.766	ug/l	5.60	1,824.09	1.203E-02	Pulse	0.50	3
Mn			1	478.266	ug/l	0.77	514,323.59	3.391E+00	Pulse	0.50	3
Fe			1	8202.721	ug/l	1.15	15,463,276.33	1.020E+02	Analog	0.50	3
Co			1	0.609	ug/l	2.05	2,578.18	1.700E-02	Pulse	0.50	3
Ni			1	1.398	ug/l	5.93	1,704.08	7.398E-03	Pulse	0.50	3
Cu			1	-2.036	ug/l	-1.09	12,553.43	8.277E-02	Pulse	0.50	3
Zn			1	0.079	ug/l	252.96	6,832.55	2.966E-02	Pulse	1.00	3
Cd			1	0.041	ug/l	26.84	37.33	1.622E-04	Pulse	0.50	3
Al			1	82.966	ug/l	4.00	3,998.74	1.736E-02	Pulse	1.00	3
Se			1	0.027	ug/l	374.12	10.89	7.176E-06	Pulse	3.00	3
Sb			1	0.102	ug/l	9.00	305.33	1.326E-03	Pulse	1.00	3
Se			1	1.206	ug/l	40.83	24.67	2.243E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,529,069.67	0.26	95.1	Pulse	0.50	3
1	Sc		186,863.37	1.85	91.6	Pulse	0.30	3
1	Ge		151,660.85	0.58	90.6	Pulse	0.30	3
1	In		1,517,816.26	1.03	93.1	Pulse	0.30	3
1	Tb		6,396,669.67	0.95	97.2	Analog	0.50	3
1	Lu		3,717,573.92	0.29	95.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		230,359.39	0.50	91.2	Pulse	0.30	3
1	Te		11,009.34	1.17	83.5	Pulse	0.50	3
1	Li		1,322.27	2.53	87.8	Pulse	0.30	3

Quantitation Report

File Name	095SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 15:17
Sample Name	FA56228-1
Sample Type	Sample
Comment	
Prep Dilution	20.000
Auto Dilution	N/A
Total Dilution	20.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.921	ug/l	16.07	742.02	2.056E-04	Pulse	0.50	3
As			1	0.107	ug/l	165.59	21.67	6.126E-06	Pulse	1.00	3
Mo			1	0.356	ug/l	8.88	200.67	8.707E-04	Pulse	0.50	3
Pb			1	0.910	ug/l	28.36	6,741.34	1.866E-03	Pulse	1.00	3
Be			1	-0.196	ug/l	-72.98	0.33	1.692E-06	Pulse	2.00	3
Ag			1	0.068	ug/l	36.58	268.00	1.168E-03	Pulse	0.50	3
Ba			1	54.036	ug/l	8.29	7,841.72	5.229E-03	Pulse	0.50	3
Tl			1	-0.014	ug/l	-52.99	248.00	5.661E-05	Pulse	0.50	3
Sn			1	0.058	ug/l	91.20	385.56	2.565E-04	Pulse	0.30	3
Sr			1	128.957	ug/l	7.47	39,243.96	2.616E-02	Pulse	0.50	3
[Pb]			1	0.821	ug/l	32.12	3,114.30	7.105E-04	Pulse	0.50	3
Ca			1	40384.289	ug/l	9.53	55,414.53	3.627E-01	Pulse	0.50	3
Ti			1	0.858	ug/l	50.52	12.67	8.273E-05	Pulse	0.50	3
Na			1	147179.282	ug/l	7.86	10,581,969.67	5.648E+01	Analog	1.00	3
Mg			1	16650.441	ug/l	7.39	520,150.30	2.775E+00	Pulse	1.00	3
K			1	1940.274	ug/l	8.28	56,077.82	2.991E-01	Pulse	1.00	3
V			1	0.333	ug/l	22.53	583.34	3.806E-03	Pulse	0.50	3
Mn			1	4.343	ug/l	15.66	1,402.06	9.185E-03	Pulse	0.50	3
Fe			1	71.481	ug/l	9.91	39,248.87	2.568E-01	Pulse	0.50	3
Co			1	0.172	ug/l	18.87	219.33	1.440E-03	Pulse	0.50	3
Ni			1	1.398	ug/l	9.59	508.68	2.203E-03	Pulse	0.50	3
Cu			1	-9.763	ug/l	-9.69	11,386.05	7.441E-02	Pulse	0.50	3
Zn			1	-37.456	ug/l	-5.85	2,819.88	1.226E-02	Pulse	1.00	3
Cd			1	0.060	ug/l	8.31	18.00	7.787E-05	Pulse	0.50	3
Al			1	-46.440	ug/l	-9.31	454.01	1.970E-03	Pulse	1.00	3
Se			1	0.931	ug/l	63.30	14.11	9.442E-06	Pulse	3.00	3
Sb			1	-0.066	ug/l	-20.99	106.33	4.595E-04	Pulse	1.00	3
Se			1	2.810	ug/l	53.50	21.89	1.871E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,405,467.17	8.44	92.5	Pulse	0.50	3
1	Sc		188,086.57	7.37	92.2	Pulse	0.30	3
1	Ge		153,561.53	8.05	91.7	Pulse	0.30	3
1	In		1,505,644.45	7.30	92.3	Pulse	0.30	3
1	Tb		6,190,244.50	7.56	94.0	Analog	0.50	3
1	Lu		3,626,932.08	7.64	93.0	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		230,814.84	7.29	91.3	Pulse	0.30	3
1	Te		11,763.22	5.80	89.2	Pulse	0.50	3
1	Li		1,286.71	12.58	85.5	Pulse	0.30	3

Quantitation Report

File Name 096SMPL.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 15:21
Sample Name FA56228-2
Sample Type Sample
Comment
Prep Dilution 20.000
Auto Dilution N/A
Total Dilution 20.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.694	ug/l	4.28	634.68	1.672E-04	Pulse	0.50	3
As			1	0.289	ug/l	75.43	35.67	9.399E-06	Pulse	1.00	3
Mo			1	0.403	ug/l	12.05	235.33	9.567E-04	Pulse	0.50	3
Pb			1	-0.542	ug/l	-4.62	3,810.10	1.003E-03	Pulse	1.00	3
Be			1	-0.279	ug/l	0.00	0.00	0.000E+00	Pulse	2.00	3
Ag			1	0.052	ug/l	63.89	264.00	1.072E-03	Pulse	0.50	3
Ba			1	56.869	ug/l	1.66	8,780.15	5.502E-03	Pulse	0.50	3
Tl			1	-0.033	ug/l	-17.96	197.33	4.256E-05	Pulse	0.50	3
Sn			1	-0.102	ug/l	-61.92	354.45	2.221E-04	Pulse	0.30	3
Sr			1	235.658	ug/l	0.14	75,793.81	4.749E-02	Pulse	0.50	3
[Pb]			1	-0.496	ug/l	-9.07	1,807.44	3.897E-04	Pulse	0.50	3
Ca			1	53234.453	ug/l	0.27	77,641.13	4.780E-01	Pulse	0.50	3
Ti			1	-0.108	ug/l	-157.35	2.00	1.234E-05	Pulse	0.50	3
Na			1	222923.341	ug/l	1.84	16,999,136.67	8.552E+01	Analog	1.00	3
Mg			1	14033.787	ug/l	1.95	465,033.62	2.339E+00	Pulse	1.00	3
K			1	3219.601	ug/l	1.12	91,081.12	4.582E-01	Pulse	1.00	3
V			1	0.323	ug/l	18.71	613.34	3.775E-03	Pulse	0.50	3
Mn			1	42.110	ug/l	2.06	12,361.96	7.610E-02	Pulse	0.50	3
Fe			1	120.440	ug/l	0.85	66,415.49	4.089E-01	Pulse	0.50	3
Co			1	0.168	ug/l	10.65	229.33	1.412E-03	Pulse	0.50	3
Ni			1	0.663	ug/l	21.38	318.00	1.292E-03	Pulse	0.50	3
Cu			1	-10.044	ug/l	-1.21	11,851.00	7.296E-02	Pulse	0.50	3
Zn			1	-28.922	ug/l	-5.62	3,982.75	1.619E-02	Pulse	1.00	3
Cd			1	0.022	ug/l	119.81	11.33	4.621E-05	Pulse	0.50	3
Al			1	-70.916	ug/l	-1.75	239.67	9.747E-04	Pulse	1.00	3
Se			1	0.332	ug/l	184.35	12.45	7.789E-06	Pulse	3.00	3
Sb			1	-0.073	ug/l	-15.33	109.67	4.460E-04	Pulse	1.00	3
Se			1	1.404	ug/l	66.13	20.22	1.612E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,638,553.00	1.03	97.4	Pulse	0.50	3
1	Sc		198,822.47	1.94	97.5	Pulse	0.30	3
1	Ge		162,442.13	0.48	97.0	Pulse	0.30	3
1	In		1,596,048.34	0.71	97.9	Pulse	0.30	3
1	Tb		6,530,104.00	1.03	99.2	Analog	0.50	3
1	Lu		3,797,355.83	0.50	97.3	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		245,964.80	1.13	97.3	Pulse	0.30	3
1	Te		12,528.36	1.61	95.0	Pulse	0.50	3
1	Li		1,406.73	2.02	93.4	Pulse	0.30	3

Quantitation Report

File Name 097SMPL.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 15:25
Sample Name FA56228-3
Sample Type Sample
Comment
Prep Dilution 20.000
Auto Dilution N/A
Total Dilution 20.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.628	ug/l	3.80	1,268.71	3.257E-04	Pulse	0.50	3
As			1	0.191	ug/l	71.80	29.67	7.636E-06	Pulse	1.00	3
Mo			1	0.373	ug/l	7.19	224.67	9.012E-04	Pulse	0.50	3
Pb			1	1.089	ug/l	3.54	7,687.40	1.973E-03	Pulse	1.00	3
Be			1	0.079	ug/l	304.10	1.50	7.324E-06	Pulse	2.00	3
Ag			1	0.044	ug/l	52.62	255.33	1.025E-03	Pulse	0.50	3
Ba			1	41.632	ug/l	2.86	6,542.54	4.035E-03	Pulse	0.50	3
Tl			1	-0.037	ug/l	-20.50	186.00	3.927E-05	Pulse	0.50	3
Sn			1	-0.141	ug/l	-216.09	345.56	2.137E-04	Pulse	0.30	3
Sr			1	181.365	ug/l	0.84	59,383.55	3.663E-02	Pulse	0.50	3
[Pb]			1	1.069	ug/l	4.57	3,651.73	7.708E-04	Pulse	0.50	3
Ca			1	47794.029	ug/l	1.40	70,602.17	4.292E-01	Pulse	0.50	3
Ti			1	1.064	ug/l	64.42	16.00	9.772E-05	Pulse	0.50	3
Na			1	244310.642	ug/l	1.11	19,201,818.00	9.372E+01	Analog	1.00	3
Mg			1	16136.787	ug/l	1.16	551,129.83	2.690E+00	Pulse	1.00	3
K			1	2155.539	ug/l	1.34	66,770.11	3.259E-01	Pulse	1.00	3
V			1	0.416	ug/l	29.38	666.68	4.055E-03	Pulse	0.50	3
Mn			1	8.133	ug/l	1.21	2,616.18	1.590E-02	Pulse	0.50	3
Fe			1	351.872	ug/l	1.27	185,539.16	1.128E+00	Pulse	0.50	3
Co			1	0.272	ug/l	10.94	350.67	2.132E-03	Pulse	0.50	3
Ni			1	0.917	ug/l	8.97	400.68	1.607E-03	Pulse	0.50	3
Cu			1	-10.262	ug/l	-2.73	11,816.99	7.182E-02	Pulse	0.50	3
Zn			1	-37.165	ug/l	-0.41	3,090.25	1.239E-02	Pulse	1.00	3
Cd			1	0.037	ug/l	16.27	14.67	5.883E-05	Pulse	0.50	3
Al			1	-37.693	ug/l	-17.07	580.01	2.326E-03	Pulse	1.00	3
Se			1	1.976	ug/l	42.39	20.00	1.233E-05	Pulse	3.00	3
Sb			1	-0.072	ug/l	-11.83	112.00	4.492E-04	Pulse	1.00	3
Se			1	2.310	ug/l	70.94	22.67	1.779E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,738,501.00	1.50	99.5	Mix	0.50	3
1	Sc		204,904.62	0.95	100.5	Pulse	0.30	3
1	Ge		164,529.96	1.46	98.3	Pulse	0.30	3
1	In		1,621,039.66	1.16	99.4	Pulse	0.30	3
1	Tb		6,651,256.50	1.79	101.0	Analog	0.50	3
1	Lu		3,896,693.50	1.41	99.9	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		249,380.85	1.16	98.7	Pulse	0.30	3
1	Te		12,724.49	1.11	96.5	Pulse	0.50	3
1	Li		1,412.28	4.22	93.8	Pulse	0.30	3

Quantitation Report

File Name	098SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 15:29
Sample Name	FA56228-6
Sample Type	Sample
Comment	
Prep Dilution	20.000
Auto Dilution	N/A
Total Dilution	20.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	3.733	ug/l	2.10	2,614.19	6.829E-04	Pulse	0.50	3
As			1	1.385	ug/l	32.73	111.33	2.914E-05	Pulse	1.00	3
Mo			1	0.222	ug/l	16.27	154.67	6.253E-04	Pulse	0.50	3
Pb			1	-0.449	ug/l	-13.33	4,052.49	1.059E-03	Pulse	1.00	3
Be			1	-0.118	ug/l	-62.06	0.67	3.299E-06	Pulse	2.00	3
Ag			1	0.010	ug/l	206.93	202.67	8.192E-04	Pulse	0.50	3
Ba			1	469.417	ug/l	0.68	72,195.08	4.520E-02	Pulse	0.50	3
Tl			1	-0.047	ug/l	-1.40	146.00	3.217E-05	Pulse	0.50	3
Sn			1	0.004	ug/l	974.25	391.12	2.449E-04	Pulse	0.30	3
Sr			1	446.924	ug/l	1.60	143,294.39	8.972E-02	Pulse	0.50	3
[Pb]			1	-0.324	ug/l	-11.66	1,959.45	4.317E-04	Pulse	0.50	3
Ca			1	137893.274	ug/l	1.26	202,539.26	1.237E+00	Pulse	0.50	3
Ti			1	4.030	ug/l	12.11	51.33	3.139E-04	Pulse	0.50	3
Na			1	172987.563	ug/l	2.36	13,483,555.67	6.637E+01	Analog	1.00	3
Mg			1	67939.103	ug/l	1.59	2,300,119.00	1.132E+01	Pulse	1.00	3
K			1	2348.945	ug/l	1.57	71,096.38	3.499E-01	Pulse	1.00	3
V			1	0.858	ug/l	6.89	882.02	5.387E-03	Pulse	0.50	3
Mn			1	1226.919	ug/l	1.27	356,111.60	2.175E+00	Pulse	0.50	3
Fe			1	6433.676	ug/l	1.40	3,277,288.50	2.002E+01	Pulse	0.50	3
Co			1	1.090	ug/l	2.95	1,269.38	7.755E-03	Pulse	0.50	3
Ni			1	3.554	ug/l	6.51	1,206.04	4.874E-03	Pulse	0.50	3
Cu			1	-10.584	ug/l	-0.87	11,485.45	7.016E-02	Pulse	0.50	3
Zn			1	-37.628	ug/l	-0.17	3,014.57	1.218E-02	Pulse	1.00	3
Cd			1	0.051	ug/l	80.22	17.33	7.013E-05	Pulse	0.50	3
Al			1	51.365	ug/l	9.84	1,472.39	5.949E-03	Pulse	1.00	3
Se			1	-0.320	ug/l	-136.49	9.56	5.989E-06	Pulse	3.00	3
Sb			1	-0.073	ug/l	-43.22	110.67	4.469E-04	Pulse	1.00	3
Se			1	2.882	ug/l	58.23	23.67	1.885E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,539,294.00	1.59	95.3	Pulse	0.50	3
1	Sc		203,210.86	1.99	99.6	Pulse	0.30	3
1	Ge		163,715.65	1.68	97.8	Pulse	0.30	3
1	In		1,597,359.86	1.52	97.9	Pulse	0.30	3
1	Tb		6,594,281.67	0.83	100.2	Analog	0.50	3
1	Lu		3,828,104.25	1.21	98.1	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		247,548.32	1.09	98.0	Pulse	0.30	3
1	Te		12,574.39	1.78	95.4	Pulse	0.50	3
1	Li		1,476.73	2.01	98.1	Pulse	0.30	3

Quantitation Report

File Name 099SMPL.d
File Path D:\2018\08-August\xa080718m1.b
Method File
Method Path
Acq Time 8/7/2018 15:32
Sample Name CRIA
Sample Type Sample
Comment
Prep Dilution 1.000
Auto Dilution N/A
Total Dilution 1.000
Operator Name admin
Acq Mode Spectrum
Cal Title
Cal Type External Calibration
Last Calib 8/7/2018 14:11
Bkg File
Bkg Mode Count Subtraction except for ISTD
Interference File
FQ Blank File
VIS Fit Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.050	ug/l	1.87	13,858.95	3.613E-03	Pulse	0.50	3
As			1	1.016	ug/l	4.09	1,420.39	3.703E-04	Pulse	1.00	3
Mo			1	1.015	ug/l	0.71	9,259.64	3.734E-02	Pulse	0.50	3
Pb			1	0.975	ug/l	0.93	49,533.00	1.291E-02	Pulse	1.00	3
Be			1	1.069	ug/l	2.51	89.67	4.429E-04	Pulse	2.00	3
Ag			1	1.115	ug/l	2.44	33,713.83	1.360E-01	Pulse	0.50	3
Ba			1	1.026	ug/l	5.77	3,239.64	2.004E-03	Pulse	0.50	3
Tl			1	1.006	ug/l	1.17	72,182.52	1.517E-02	Pulse	0.50	3
Sn			1	1.162	ug/l	1.78	8,476.46	5.241E-03	Pulse	0.30	3
Sr			1	1.009	ug/l	1.29	7,138.71	4.414E-03	Pulse	0.50	3
[Pb]			1	0.905	ug/l	1.25	23,393.97	4.917E-03	Pulse	0.50	3
Ca			1	110.276	ug/l	4.52	3,312.29	2.028E-02	Pulse	0.50	3
Ti			1	0.990	ug/l	11.84	238.67	1.463E-03	Pulse	0.50	3
Na			1	113.425	ug/l	1.94	186,270.19	9.200E-01	Pulse	1.00	3
Mg			1	108.322	ug/l	1.56	73,318.31	3.621E-01	Pulse	1.00	3
K			1	105.131	ug/l	1.69	64,652.14	3.193E-01	Pulse	1.00	3
V			1	1.012	ug/l	2.04	10,415.47	6.375E-02	Pulse	0.50	3
Mn			1	1.068	ug/l	1.34	6,425.75	3.932E-02	Pulse	0.50	3
Fe			1	105.077	ug/l	3.12	1,072,164.71	6.563E+00	Pulse	0.50	3
Co			1	1.052	ug/l	2.63	23,693.13	1.450E-01	Pulse	0.50	3
Ni			1	1.061	ug/l	5.04	6,633.15	2.676E-02	Pulse	0.50	3
Cu			1	0.449	ug/l	12.29	27,994.31	1.714E-01	Pulse	0.50	3
Zn			1	-0.816	ug/l	-8.96	5,453.78	2.200E-02	Pulse	1.00	3
Cd			1	1.054	ug/l	2.71	4,255.84	1.716E-02	Pulse	0.50	3
Al			1	104.195	ug/l	2.09	21,978.73	8.863E-02	Pulse	1.00	3
Se			1	1.099	ug/l	5.88	109.22	6.752E-05	Pulse	3.00	3
Sb			1	1.013	ug/l	1.50	9,307.37	3.753E-02	Pulse	1.00	3
Se			1	0.931	ug/l	20.52	62.67	4.784E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,758,081.50	1.04	99.9	Analog	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Sc		202,501.46	1.83	99.3	Pulse	0.30	3
1	Ge		163,436.55	2.35	97.6	Pulse	0.30	3
1	In		1,617,560.98	1.30	99.2	Pulse	0.30	3
1	Tb		6,614,965.00	0.88	100.5	Analog	0.50	3
1	Lu		3,836,586.83	1.07	98.3	Pulse	0.50	3
1	Ge		248,032.28	1.91	98.2	Pulse	0.30	3
1	Te		13,103.47	0.70	99.4	Pulse	0.50	3
1	Li		1,320.05	8.97	87.7	Pulse	0.30	3

Quantitation Report

File Name	100SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 15:36
Sample Name	ICSA
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	1.308	ug/l	1.43	16,354.20	4.490E-03	Pulse	0.50	3
As			1	0.083	ug/l	6.60	123.67	3.395E-05	Pulse	1.00	3
Mo			1	2007.003	ug/l	1.75	17,095,510.00	7.341E+01	Analog	0.50	3
Pb			1	-0.006	ug/l	-52.82	4,582.29	1.258E-03	Pulse	1.00	3
Be			1	0.010	ug/l	60.05	2.00	9.947E-06	Pulse	2.00	3
Ag			1	0.038	ug/l	7.59	1,248.04	5.359E-03	Pulse	0.50	3
Ba			1	0.064	ug/l	17.34	226.00	1.522E-04	Pulse	0.50	3
Tl			1	0.001	ug/l	89.88	310.67	7.889E-05	Pulse	0.50	3
Sn			1	0.122	ug/l	6.49	1,143.38	7.692E-04	Pulse	0.30	3
Sr			1	0.967	ug/l	3.55	6,309.74	4.244E-03	Pulse	0.50	3
[Pb]			1	0.010	ug/l	34.81	2,198.81	5.582E-04	Pulse	0.50	3
Ca			1	96922.182	ug/l	1.41	2,725,660.17	1.739E+01	Pulse	0.50	3
Ti			1	2079.362	ug/l	2.22	475,064.87	3.031E+00	Pulse	0.50	3
Na			1	99511.482	ug/l	1.01	153,567,584.00	7.631E+02	Analog	1.00	3
Mg			1	100255.727	ug/l	1.00	67,232,569.33	3.341E+02	Analog	1.00	3
K			1	102307.377	ug/l	1.14	51,200,846.67	2.544E+02	Analog	1.00	3
V			1	0.015	ug/l	45.47	583.34	3.719E-03	Pulse	0.50	3
Mn			1	0.286	ug/l	2.35	1,822.76	1.163E-02	Pulse	0.50	3
Fe			1	98623.016	ug/l	1.47	960,572,821.33	6.128E+03	Analog	0.50	3
Co			1	0.011	ug/l	16.19	284.67	1.817E-03	Pulse	0.50	3
Ni			1	0.159	ug/l	2.84	1,028.03	4.413E-03	Pulse	0.50	3
Cu			1	-0.576	ug/l	-2.81	10,248.08	6.537E-02	Pulse	0.50	3
Zn			1	-1.062	ug/l	-2.89	4,594.55	1.973E-02	Pulse	1.00	3
Cd			1	0.450	ug/l	9.51	1,706.75	7.334E-03	Pulse	0.50	3
Al			1	100023.304	ug/l	1.05	18,952,543.33	8.138E+01	Analog	1.00	3
Se			1	0.030	ug/l	79.54	12.67	8.516E-06	Pulse	3.00	3
Sb			1	0.034	ug/l	9.00	423.01	1.818E-03	Pulse	1.00	3
Se			1	0.110	ug/l	107.30	19.44	1.761E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,939,304.25	0.60	82.7	Pulse	0.50	3
1	Sc		201,235.16	0.86	98.7	Pulse	0.30	3
1	Ge		156,764.63	0.84	93.6	Pulse	0.30	3
1	In		1,486,888.06	1.20	91.2	Pulse	0.30	3
1	Tb		6,167,693.17	0.33	93.7	Analog	0.50	3
1	Lu		3,642,772.58	0.59	93.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		232,883.45	1.63	92.2	Pulse	0.30	3
1	Te		11,066.79	1.69	84.0	Pulse	0.50	3
1	Li		1,232.27	2.57	81.8	Pulse	0.30	3

Quantitation Report

File Name	101SMPL.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 15:40
Sample Name	ICSAB
Sample Type	Sample
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	21.170	ug/l	3.29	264,709.53	7.192E-02	Pulse	0.50	3
As			1	19.408	ug/l	1.30	25,754.96	6.996E-03	Pulse	1.00	3
Mo			1	1981.284	ug/l	2.19	17,049,992.67	7.247E+01	Analog	0.50	3
Pb			1	-0.002	ug/l	-280.85	4,810.01	1.307E-03	Pulse	1.00	3
Be			1	0.012	ug/l	106.59	2.17	1.057E-05	Pulse	2.00	3
Ag			1	18.440	ug/l	1.54	526,336.07	2.237E+00	Pulse	0.50	3
Ba			1	0.064	ug/l	9.95	228.67	1.517E-04	Pulse	0.50	3
Tl			1	0.001	ug/l	105.95	309.34	7.832E-05	Pulse	0.50	3
Sn			1	0.175	ug/l	19.42	1,498.96	9.978E-04	Pulse	0.30	3
Sr			1	0.955	ug/l	1.82	6,315.75	4.195E-03	Pulse	0.50	3
[Pb]			1	0.015	ug/l	24.17	2,302.17	5.827E-04	Pulse	0.50	3
Ca			1	96845.058	ug/l	1.99	2,743,450.83	1.737E+01	Pulse	0.50	3
Ti			1	2064.214	ug/l	2.05	475,086.15	3.009E+00	Pulse	0.50	3
Na			1	97643.377	ug/l	0.71	154,167,792.00	7.488E+02	Analog	1.00	3
Mg			1	97232.339	ug/l	1.10	66,713,016.00	3.240E+02	Analog	1.00	3
K			1	99728.679	ug/l	0.57	51,064,825.33	2.480E+02	Analog	1.00	3
V			1	0.026	ug/l	17.25	691.35	4.376E-03	Pulse	0.50	3
Mn			1	20.065	ug/l	2.48	112,518.56	7.125E-01	Pulse	0.50	3
Fe			1	97533.850	ug/l	1.37	957,033,066.67	6.060E+03	Analog	0.50	3
Co			1	19.248	ug/l	1.39	418,129.17	2.648E+00	Pulse	0.50	3
Ni			1	18.986	ug/l	1.53	110,824.75	4.710E-01	Pulse	0.50	3
Cu			1	17.448	ug/l	2.63	304,745.45	1.930E+00	Pulse	0.50	3
Zn			1	20.976	ug/l	3.16	52,413.89	2.228E-01	Pulse	1.00	3
Cd			1	19.038	ug/l	1.84	72,784.95	3.094E-01	Pulse	0.50	3
Al			1	99395.976	ug/l	1.20	19,030,580.00	8.087E+01	Analog	1.00	3
Se			1	0.029	ug/l	91.73	12.78	8.465E-06	Pulse	3.00	3
Sb			1	0.035	ug/l	11.84	435.01	1.847E-03	Pulse	1.00	3
Se			1	0.057	ug/l	76.81	17.44	1.565E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		3,951,364.92	2.01	83.0	Pulse	0.50	3
1	Sc		205,904.40	1.53	101.0	Pulse	0.30	3
1	Ge		157,946.49	1.94	94.3	Pulse	0.30	3
1	In		1,505,787.58	2.65	92.3	Pulse	0.30	3
1	Tb		6,233,404.83	2.71	94.7	Analog	0.50	3
1	Lu		3,682,123.67	2.40	94.4	Pulse	0.50	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Ge		235,339.59	2.30	93.1	Pulse	0.30	3
1	Te		11,128.14	2.79	84.4	Pulse	0.50	3
1	Li		1,151.15	10.76	76.5	Pulse	0.30	3

Quantitation Report

File Name	102CCVA.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 15:44
Sample Name	CCV (Ag)
Sample Type	CCV_Ag
Comment	=std 4
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	45.930	ug/l	1.80	588,698.44	1.560E-01	Pulse	0.50	3
As			1	46.591	ug/l	2.25	63,355.34	1.679E-02	Pulse	1.00	3
Mo			1	47.241	ug/l	0.57	420,348.48	1.728E+00	Pulse	0.50	3
Pb			1	48.632	ug/l	2.48	2,186,581.33	5.794E-01	Pulse	1.00	3
Be			1	45.215	ug/l	3.96	3,602.65	1.850E-02	Pulse	2.00	3
Ag			1	49.914	ug/l	0.87	1,472,462.92	6.054E+00	Pulse	0.50	3
Ba			1	47.904	ug/l	1.90	145,251.93	9.222E-02	Pulse	0.50	3
Tl			1	46.533	ug/l	1.94	3,198,679.25	6.989E-01	Pulse	0.50	3
Sn			1	48.046	ug/l	1.11	325,762.95	2.068E-01	Pulse	0.30	3
Sr			1	48.341	ug/l	1.35	305,027.62	1.937E-01	Pulse	0.50	3
[Pb]			1	46.440	ug/l	1.29	1,037,591.58	2.267E-01	Pulse	0.50	3
Ca			1	4676.095	ug/l	0.49	134,507.33	8.393E-01	Pulse	0.50	3
Ti			1	46.751	ug/l	3.12	10,923.07	6.816E-02	Pulse	0.50	3
Na			1	4721.624	ug/l	1.88	7,062,338.33	3.626E+01	Analog	1.00	3
Mg			1	4846.984	ug/l	1.55	3,146,646.67	1.615E+01	Pulse	1.00	3
K			1	4768.915	ug/l	1.50	2,320,982.08	1.191E+01	Pulse	1.00	3
V			1	45.954	ug/l	1.69	444,113.67	2.771E+00	Pulse	0.50	3
Mn			1	46.656	ug/l	0.34	265,219.28	1.655E+00	Pulse	0.50	3
Fe			1	4738.876	ug/l	0.86	47,190,768.00	2.945E+02	Analog	0.50	3
Co			1	47.209	ug/l	0.38	1,040,657.94	6.494E+00	Pulse	0.50	3
Ni			1	47.544	ug/l	0.73	286,703.26	1.179E+00	Pulse	0.50	3
Cu			1	47.400	ug/l	1.58	805,826.38	5.028E+00	Pulse	0.50	3
Zn			1	49.046	ug/l	0.89	117,105.96	4.815E-01	Pulse	1.00	3
Cd			1	48.283	ug/l	0.69	190,822.53	7.845E-01	Pulse	0.50	3
Al			1	4763.813	ug/l	0.82	943,643.00	3.880E+00	Pulse	1.00	3
Se			1	48.941	ug/l	0.79	4,266.03	2.708E-03	Pulse	3.00	3
Sb			1	48.204	ug/l	0.56	427,813.97	1.759E+00	Pulse	1.00	3
Se			1	47.329	ug/l	4.95	2,161.23	1.757E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,577,954.33	1.90	96.1	Analog	0.50	3
1	Sc		194,822.07	1.19	95.5	Pulse	0.30	3
1	Ge		160,260.67	0.24	95.7	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,575,373.69	1.78	96.6	Pulse	0.30	3
1	Tb		6,515,521.83	1.81	99.0	Analog	0.50	3
1	Lu		3,774,909.67	1.85	96.8	Pulse	0.50	3
1	Ge		243,234.63	1.10	96.3	Pulse	0.30	3
1	Te		12,306.29	1.66	93.4	Pulse	0.50	3
1	Li		1,227.82	10.19	81.5	Pulse	0.30	3

Quantitation Report

File Name	103_CCV.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 15:48
Sample Name	CCV
Sample Type	CCV
Comment	=std 5
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	91.359	ug/l	0.51	1,161,655.29	3.102E-01	Pulse	0.50	3
As			1	93.194	ug/l	0.54	125,728.08	3.358E-02	Pulse	1.00	3
Mo			1	94.615	ug/l	0.97	824,779.08	3.461E+00	Pulse	0.50	3
Pb			1	96.522	ug/l	0.44	4,301,373.00	1.149E+00	Pulse	1.00	3
Be			1	91.114	ug/l	1.52	7,165.93	3.727E-02	Pulse	2.00	3
Ag			1	98.243	ug/l	0.48	2,839,463.92	1.192E+01	Pulse	0.50	3
Ba			1	97.502	ug/l	0.27	287,745.10	1.877E-01	Pulse	0.50	3
Tl			1	95.618	ug/l	1.29	6,332,424.83	1.436E+00	Analog	0.50	3
Sn			1	96.515	ug/l	0.42	636,576.17	4.152E-01	Pulse	0.30	3
Sr			1	97.217	ug/l	0.46	596,511.08	3.891E-01	Pulse	0.50	3
[Pb]			1	94.888	ug/l	2.61	2,039,792.75	4.626E-01	Pulse	0.50	3
Ca			1	9370.212	ug/l	1.06	265,456.25	1.681E+00	Pulse	0.50	3
Ti			1	93.248	ug/l	0.29	21,462.43	1.359E-01	Pulse	0.50	3
Na			1	9488.021	ug/l	1.03	13,998,914.33	7.280E+01	Analog	1.00	3
Mg			1	9698.403	ug/l	1.01	6,214,755.83	3.232E+01	Analog	1.00	3
K			1	9452.444	ug/l	0.69	4,530,175.83	2.356E+01	Pulse	1.00	3
V			1	92.013	ug/l	1.24	875,607.64	5.546E+00	Pulse	0.50	3
Mn			1	92.805	ug/l	0.62	519,504.63	3.290E+00	Pulse	0.50	3
Fe			1	9385.946	ug/l	0.94	92,077,240.00	5.832E+02	Analog	0.50	3
Co			1	93.265	ug/l	0.81	2,025,395.00	1.283E+01	Pulse	0.50	3
Ni			1	95.005	ug/l	1.11	561,203.21	2.355E+00	Pulse	0.50	3
Cu			1	93.691	ug/l	0.52	1,550,012.00	9.817E+00	Pulse	0.50	3
Zn			1	97.357	ug/l	1.02	220,828.39	9.267E-01	Pulse	1.00	3
Cd			1	96.815	ug/l	0.78	374,873.60	1.573E+00	Pulse	0.50	3
Al			1	9512.956	ug/l	0.67	1,845,390.42	7.744E+00	Pulse	1.00	3
Se			1	97.187	ug/l	0.90	8,234.77	5.371E-03	Pulse	3.00	3
Sb			1	96.954	ug/l	1.33	842,901.25	3.537E+00	Pulse	1.00	3
Se			1	92.093	ug/l	1.08	4,179.68	3.406E-01	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,410,329.67	1.61	92.6	Mix	0.50	3
1	Sc		192,297.09	0.99	94.3	Pulse	0.30	3
1	Ge		157,894.21	1.04	94.3	Pulse	0.30	3

Quantitation Report

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	In		1,533,211.68	0.14	94.0	Pulse	0.30	3
1	Tb		6,422,128.83	0.45	97.6	Analog	0.50	3
1	Lu		3,744,620.83	0.25	96.0	Pulse	0.50	3
1	Ge		238,313.50	0.69	94.3	Pulse	0.30	3
1	Te		12,272.21	1.13	93.1	Pulse	0.50	3
1	Li		1,256.71	10.09	83.5	Pulse	0.30	3

Quantitation Report

File Name	104_CCB.d
File Path	D:\2018\08-August\xa080718m1.b
Method File	
Method Path	
Acq Time	8/7/2018 15:51
Sample Name	CCB
Sample Type	CCB
Comment	
Prep Dilution	1.000
Auto Dilution	N/A
Total Dilution	1.000
Operator Name	admin
Acq Mode	Spectrum
Cal Title	
Cal Type	External Calibration
Last Calib	8/7/2018 14:11
Bkg File	
Bkg Mode	Count Subtraction except for ISTD
Interference File	
FQ Blank File	
VIS Fit	Point to Point

Tune Step	Tune File
1	

FullQuant Table

Element	Mass	ISTD	Tune	Conc	Units	RSD(%)	CPS	Ratio	Det	Time(sec)	Rep
Cr			1	0.002	ug/l	41.12	211.33	5.713E-05	Pulse	0.50	3
As			1	0.007	ug/l	95.29	24.33	6.566E-06	Pulse	1.00	3
Mo			1	0.059	ug/l	6.40	558.68	2.392E-03	Pulse	0.50	3
Pb			1	0.011	ug/l	27.88	5,389.53	1.457E-03	Pulse	1.00	3
Be			1	-0.007	ug/l	-88.69	0.50	2.678E-06	Pulse	2.00	3
Ag			1	0.019	ug/l	5.67	706.02	3.023E-03	Pulse	0.50	3
Ba			1	0.012	ug/l	58.17	80.00	5.189E-05	Pulse	0.50	3
Tl			1	0.020	ug/l	15.50	1,692.09	3.717E-04	Pulse	0.50	3
Sn			1	0.020	ug/l	40.08	507.79	3.298E-04	Pulse	0.30	3
Sr			1	0.003	ug/l	325.54	601.34	3.907E-04	Pulse	0.50	3
[Pb]			1	0.008	ug/l	59.32	2,502.86	5.499E-04	Pulse	0.50	3
Ca			1	0.446	ug/l	147.57	89.33	5.783E-04	Pulse	0.50	3
Ti			1	0.013	ug/l	120.99	6.00	3.887E-05	Pulse	0.50	3
Na			1	2.324	ug/l	7.92	12,776.74	6.811E-02	Pulse	1.00	3
Mg			1	0.960	ug/l	13.11	816.02	4.350E-03	Pulse	1.00	3
K			1	1.162	ug/l	75.26	11,406.63	6.081E-02	Pulse	1.00	3
V			1	0.001	ug/l	500.83	445.34	2.882E-03	Pulse	0.50	3
Mn			1	-0.022	ug/l	-32.20	110.67	7.172E-04	Pulse	0.50	3
Fe			1	0.978	ug/l	13.26	14,751.69	9.548E-02	Pulse	0.50	3
Co			1	0.003	ug/l	85.22	94.67	6.132E-04	Pulse	0.50	3
Ni			1	-0.003	ug/l	-71.38	94.00	4.025E-04	Pulse	0.50	3
Cu			1	-0.024	ug/l	-22.92	18,916.62	1.224E-01	Pulse	0.50	3
Zn			1	0.179	ug/l	57.87	7,278.05	3.116E-02	Pulse	1.00	3
Cd			1	0.002	ug/l	1.08	14.00	5.994E-05	Pulse	0.50	3
Al			1	8.562	ug/l	8.02	2,529.16	1.083E-02	Pulse	1.00	3
Se			1	0.021	ug/l	150.40	12.33	8.010E-06	Pulse	3.00	3
Sb			1	0.015	ug/l	20.46	259.33	1.111E-03	Pulse	1.00	3
Se			1	0.074	ug/l	132.44	20.22	1.625E-03	Pulse	3.00	3

ISTD Table

Tune	Element	Mass	CPS	RSD(%)	ISTD Recovery%	Det	Time(sec)	Rep
1	Bi		4,551,957.50	0.27	95.6	Pulse	0.50	3
1	Sc		187,564.25	0.72	92.0	Pulse	0.30	3

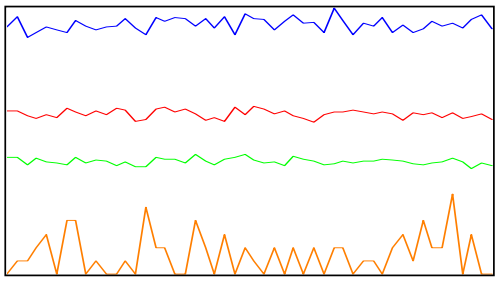
Quantitation Report

1	Ge		154,541.40	0.67	92.3	Pulse	0.30	3
1	In		1,539,452.61	0.86	94.4	Pulse	0.30	3
1	Tb		6,351,408.17	0.79	96.5	Analog	0.50	3
1	Lu		3,700,534.58	0.90	94.9	Pulse	0.50	3
1	Ge		233,577.86	0.56	92.4	Pulse	0.30	3
1	Te		12,409.57	1.92	94.1	Pulse	0.50	3
1	Li		1,271.16	5.63	84.4	Pulse	0.30	3

Tune Report

Batch Folder	D:\2018\08-August\xa080718m1.b
Acq. Date-Time	8/7/2018 9:04
Report Comment	080718Tune
Instrument Name	G3281A JP12151709

[2]



Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59	5000	3001	30009.45	5000.00	
89	5000	2112	21120.53	5000.00	
205	10000	9358	93577.56	5000.00	
78	20	1			

Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	
89		-	
205		-	
78		-	

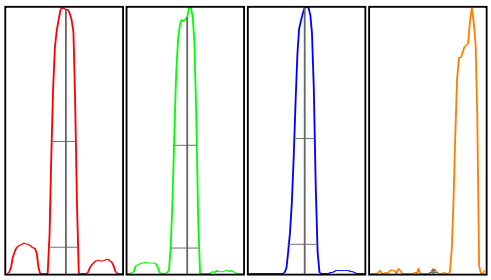
Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	2.58	8.00	
89	2.81	8.00	
205	2.60	8.00	
78	104.66		

Mass	Background (Actual)	Background (Required)	Background (Flag)
59	0.30	2	
89	0.10	2	
205	0.10	2	
78	0.00	5	

Ratio	156/140	0.273 %	
Ratio	70/140	2.177 %	

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.412

Tune Report



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-10% (Actual)	W-10% (Required)	W-10% (Flag)
59	2989.16	59.05	58.9 - 59.1		0.61	0.748	0.900	
89	2104.52	89.05	88.9 - 89.1		0.57	0.724	0.900	
205	9530.49	205.00	204.9 - 205.1		0.51	0.723	0.900	
78	4.00	78.15	-		0.11	0.210		

Integration Time [sec] 0.1 **Acquisition Time [sec]** 29.92 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Nebulizer Pump	0.10 rps
RF Matching	1.70 V	S/C Temp	2 ℃
Smpl Depth	9.0 mm	Gas Switch	Dilution Gas
Carrier Gas	0.80 L/min	Makeup/Dilution Gas	0.35 L/min
Option Gas	0.0 %		

Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-40 V
Extract 2	-150.0 V	Cell Exit	-70 V
Omega Bias	-75 V	Deflect	1.6 V
Omega Lens	8.5 V	Plate Bias	-60 V

Cell Parameters

Use Gas	true	OctP Bias	-18.0 V
He Flow	5.0 mL/min	OctP RF	190 V
H2 Flow	0.0 mL/min	Energy Discrimination	3.0 V
3rd Gas Flow	0 %		

History

	Sensitivity										
Created Date	Channel 1 Mass	Channel 1 Count	Channel 1 RSD%	Channel 2 Mass	Channel 2 Count	Channel 2 RSD%	Channel 3 Mass	Channel 3 Count	Channel 3 RSD%	Oxide Mass	Oxide Ratio
8/7/2018 8:53 AM	7	4548.8406	2.2060576	89	21082.534	1.9836177	205	17969.042	1.8697058	156/140	1.23 %

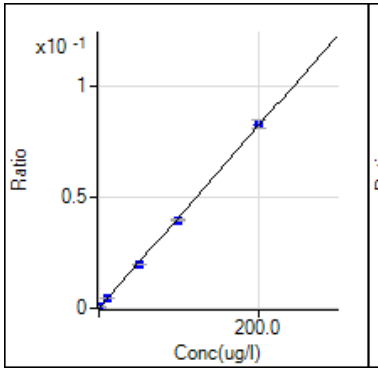
History

		Background										
Integration Time	Sampling Period	Channel 1 Mass	Channel 1 Count	Channel 2 Mass	Channel 2 Count	Channel 3 Mass	Channel 3 Count	Channel 1 Mass	Channel 1 Axis	Channel 1 W-10%	Channel 1 W-50%	Channel 1 Height
0.100 sec	0.311 sec	7	0.5	89	1.9500002	205	8.4500023	7	7	0.7652881	0.6573835	4524.9413

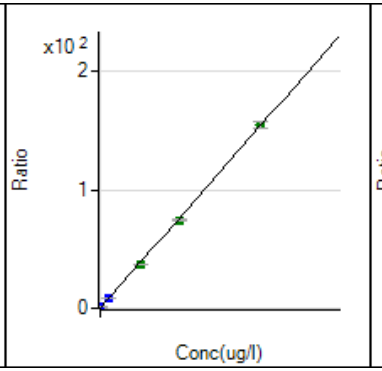
History

Resolution/Axis											
Channel 2 Mass	Channel 2 Axis	Channel 2 W-10%	Channel 2 W-50%	Channel 2 Height	Channel 3 Mass	Channel 3 Axis	Channel 3 W-10%	Channel 3 W-50%	Acquisition Time	Channel 3 Height	Integration Time
89	89	0.7456188	0.5889221	21083.243	205	205	0.7511283	0.5027253	00:00:23	17898.023	0.100 sec

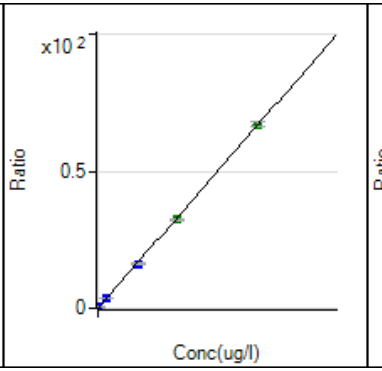
Calibration for D:\2018\08-August\xa080718m1.b\091CCVA.d



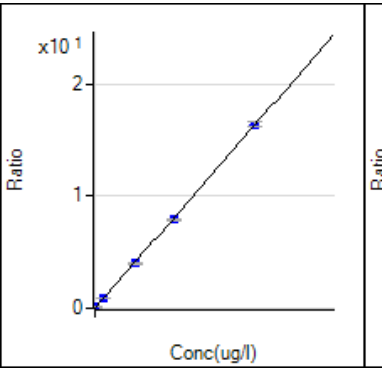
9 Be [2] / ISTD: 45 Sc
y = 4.090E-4 x + 5.708E-6
R 0.9997
DL 0.009638
BEC 0.01396



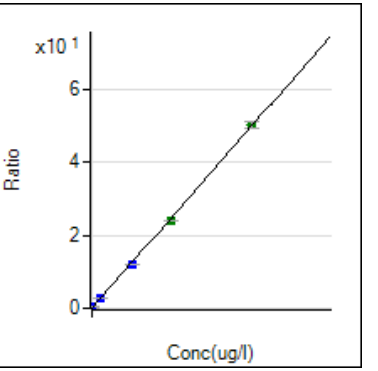
23 Na [2] / ISTD: 45 Sc
y = 7.668E-3 x + 5.029E-2
R 0.9997
DL 0.1262
BEC 6.559



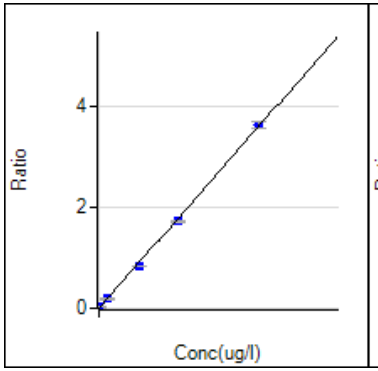
24 Mg [2] / ISTD: 45 Sc
y = 3.332E-3 x + 1.151E-3
R 0.9998
DL 0.1843
BEC 0.3455



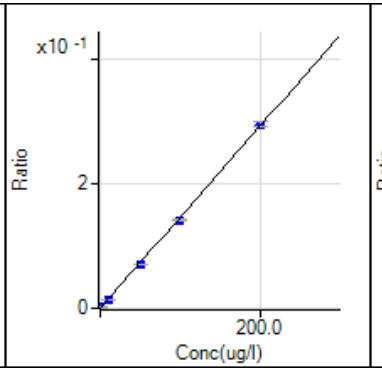
27 Al [2] / ISTD: 74 Ge
y = 8.136E-4 x + 3.860E-3
R 0.9998
DL 0.1215
BEC 4.744



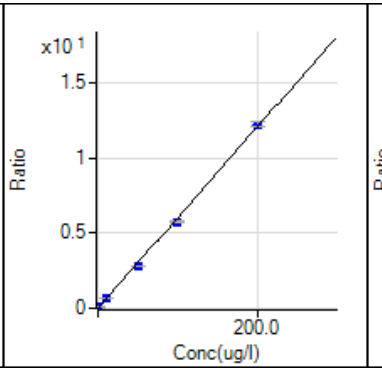
39 K [2] / ISTD: 45 Sc
y = 2.486E-3 x + 5.792E-2
R 0.9996
DL 3.241
BEC 23.3



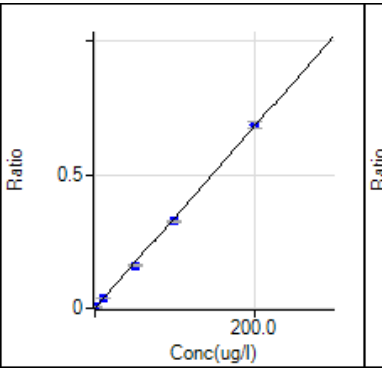
44 Ca [2] / ISTD: 72 Ge
y = 1.794E-4 x + 4.983E-4
R 0.9995
DL 2.883
BEC 2.778



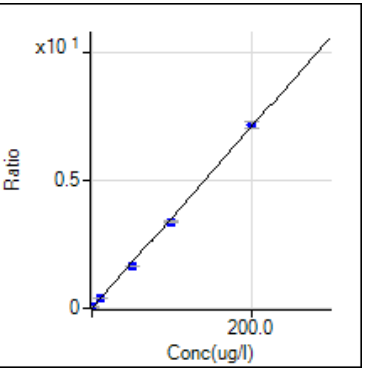
47 Ti [2] / ISTD: 72 Ge
y = 1.457E-3 x + 2.021E-5
R 0.9997
DL 0.03819
BEC 0.01386



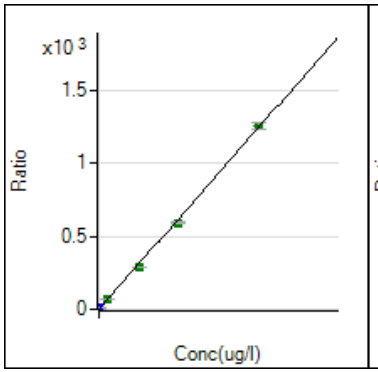
51 V [2] / ISTD: 72 Ge
y = 6.024E-2 x + 2.802E-3
R 0.9995
DL 0.01462
BEC 0.04651



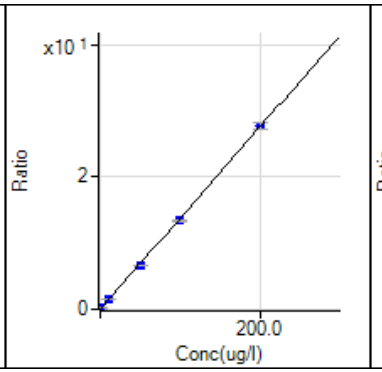
52 Cr [2] / ISTD: 175 Lu
y = 3.395E-3 x + 4.930E-5
R 0.9995
DL 0.005214
BEC 0.01452



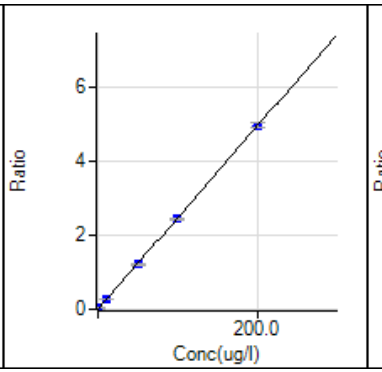
55 Mn [2] / ISTD: 72 Ge
y = 3.544E-2 x + 1.489E-3
R 0.9994
DL 0.0006868
BEC 0.04201



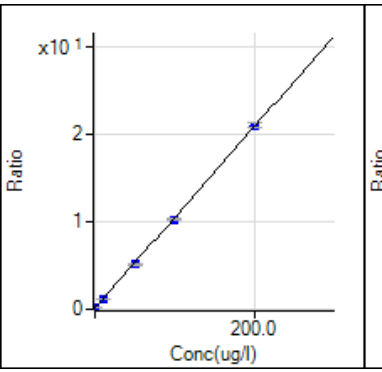
56 Fe [2] / ISTD: 72 Ge
y = 6.213E-2 x + 3.471E-2
R 0.9995
DL 0.1763
BEC 0.5587



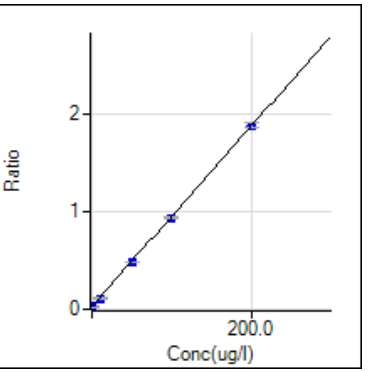
59 Co [2] / ISTD: 72 Ge
y = 1.375E-1 x + 2.591E-4
R 0.9998
DL 0.0008612
BEC 0.001884



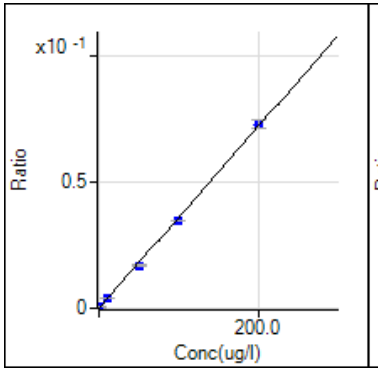
60 Ni [2] / ISTD: 74 Ge
y = 2.478E-2 x + 4.705E-4
R 0.9999
DL 0.008523
BEC 0.01898



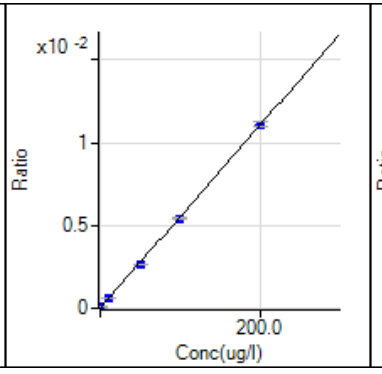
63 Cu [2] / ISTD: 72 Ge
y = 1.034E-1 x + 1.249E-1
R 0.9998
DL 0.0677
BEC 1.207



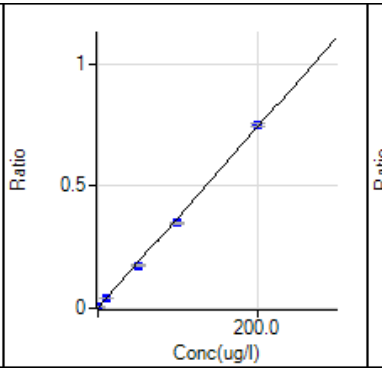
66 Zn [2] / ISTD: 74 Ge
y = 9.215E-3 x + 2.952E-2
R 0.9999
DL 0.2025
BEC 3.203



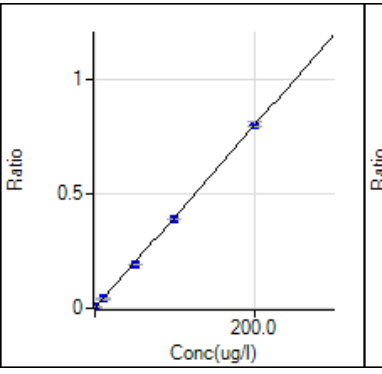
75 As [2] / ISTD: 175 Lu
y = 3.602E-4 x + 4.193E-6
R 0.9996
DL 0.004983
BEC 0.01164



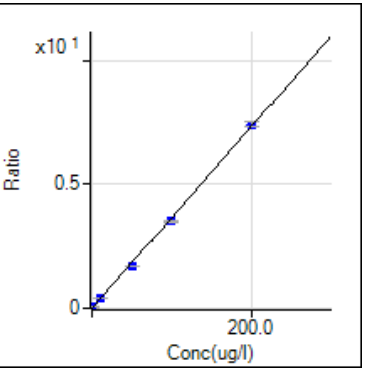
78 Se [2] / ISTD: 115 In
y = 5.519E-5 x + 6.873E-6
R 0.9999
DL 0.04479
BEC 0.1245



82 Se [2] / ISTD: 125 Te
y = 3.684E-3 x + 1.354E-3
R 0.9993
DL 0.1642
BEC 0.3675

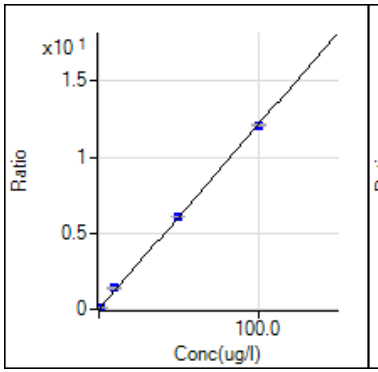


88 Sr [2] / ISTD: 115 In
y = 3.998E-3 x + 3.793E-4
R 0.9998
DL 0.03267
BEC 0.09486

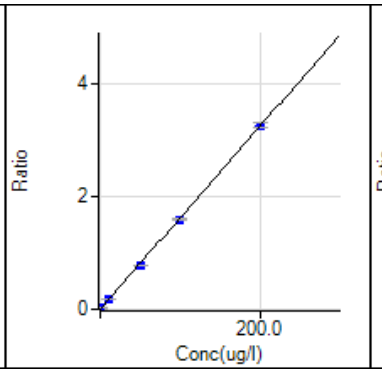


95 Mo [2] / ISTD: 74 Ge
y = 3.658E-2 x + 2.194E-4
R 0.9995
DL 0.002836
BEC 0.005999

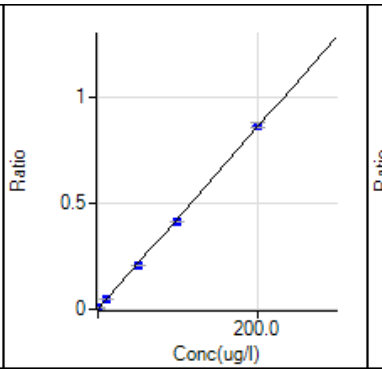
Calibration for D:\2018\08-August\xa080718m1.b\091CCVA.d



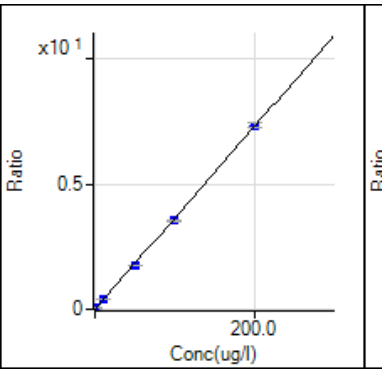
107 Ag [2] / ISTD: 74 Ge
y = 1.213E-1 x + 7.557E-4
R 0.9999
DL 0.003017
BEC 0.006232



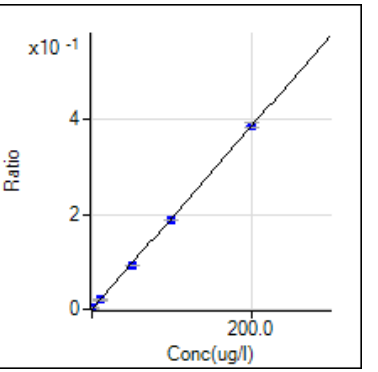
111 Cd [2] / ISTD: 74 Ge
y = 1.625E-2 x + 2.873E-5
R 0.9999
DL 0.004672
BEC 0.001768



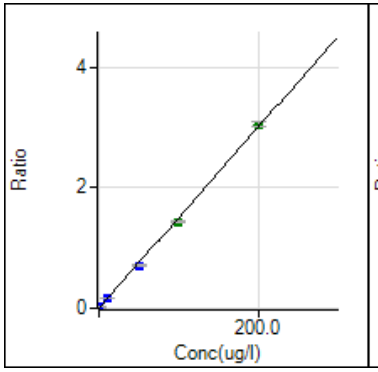
118 Sn [2] / ISTD: 115 In
y = 4.299E-3 x + 2.440E-4
R 0.9997
DL 0.01637
BEC 0.05676



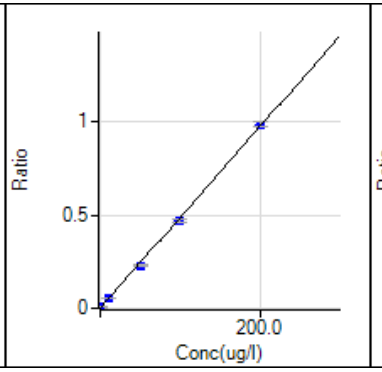
121 Sb [2] / ISTD: 74 Ge
y = 3.648E-2 x + 5.799E-4
R 0.9998
DL 0.004705
BEC 0.0159



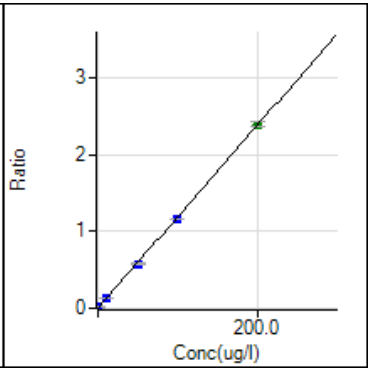
137 Ba [2] / ISTD: 115 In
y = 1.925E-3 x + 2.915E-5
R 0.9999
DL 0.0167
BEC 0.01514



205 Tl [2] / ISTD: 209 Bi
y = 1.502E-2 x + 6.722E-5
R 0.9994
DL 0.003568
BEC 0.004476



206 [Pb] [2] / ISTD: 209 Bi
y = 4.870E-3 x + 5.105E-4
R 0.9996
DL 0.02249
BEC 0.1048



208 Pb [2] / ISTD: 175 Lu
y = 1.189E-2 x + 1.326E-3
R 0.9999
DL 0.009496
BEC 0.1115

SGS Accutest - Orlando Mercury Digestion Log

Method of Digestion: SW846-7470A / 7471B / EPA 245.1 (circle one) MP # 34103

Matrix: Water / Soil / TCLPW / TCLPS / SPLP / Other (circle one)

Analyst: JC

Thermometer I.D.: MERCURY

Date/Time started (mm/dd/yy 24:00): 08/02/18 1 08:50

Correction Factor(°C): -1

Date/Time ended (mm/dd/yy/ 24:00): 08/02/18 110:50

Temp Observed/Corrected(°C): 93/92

HotBlock I.D.: 8 Balance ID ——— Pipette # Used: 0003294 Pipette # Used: PU08121

Digestion Tube Lot #302316-8143154 Filter Lot #: 1019Z17J-P pH paper Lot#: 220416 PTFE Chips Lot #: ———

Reagents:[A]	HNO_3	HCL	H_2SO_4	$KMnO_4$	$K_2S_2O_8$	$SnCl_2$	$NaCl/NH_2OH$-HCL
Lot/Met#:	0000197345	———	0000177544	MET6095	MET6094	10214100	MET6092

Sample #		Wt., g	Init.Vol(ml)	pH<2	Fin.Vol.(ml)	Comments
STD1 Cal. Blank			50.0	N/A	50.0	
STD2 0.1ml [B]			↓	N/A	↓	
STD3 0.5ml [B]				N/A		
STD4 1.5ml [B]				N/A		
STD5 2.5ml [B]				N/A		
STD6 3.0ml [B]				N/A		
ICV 1.5ml [F]				N/A		
ICB				N/A		
CRI 0.1ml [B]				N/A		
CCV 1.5ml [B]				N/A		
CCB			↓	N/A	↓	
Method Blank			50.0	N/A	50.0	
Blank Spk. 1.5ml [F]			↓	N/A	↓	
Matrix Spk 1.5ml [F]				✓		
Mat. Spk.Dup 1.5ml [F]				✓		
Duplicate				✓		
1qc [C] FA56103-26F	[D] 26			✓		
2 FA56316-1	1			✓		
3 -2	↓			✓		
4 -3				✓		
5 -4				✓		
6 -5	↓			✓		
7 FA56152-2	2			✓		
8 FA56161-1	1			✓		
9 FA56168-13				✓		
10 -14	↓			✓		
11 -15	↓			✓		
12 FA56185-1	4			(1)		(1) Received pH >2, preserved in lab
13 ~~-2~~ -3	↓			✓		
14 FA56209 ~~-3~~ -1	6			(1)		
15 FA56228-1	4			(1)		
16 -2	↓			✓		
17 -3	↓			(1)		
18 FA56180-1	8			(1)		
19 FA56309-1A	4			N/A		
20 ~~FA56~~ FA55967-8	4		↓	✓	↓	
21[E]						
22[E] JC 08/02/18						
23[E]						
24[E]						

Analyst/Date: Jordan Cuvar, 08/02/18 QC Rev./Date: [signature] 08/02/18

10ppm int. met#	60116	100ppb(curve,bs,ms,msd,cri,ccv)met#	6080
10ppm int. 2nd met#	60169	100ppb 2nd(ICV)met#	6093

*JC 08/02/18

A For reagent volumes used consult SOP MET 105 or MET 106, current revision
B Amount of 100 ppb standard added (100ppb standard prepared from 10ppm Intermediate).
C Parent sample used to prepare MS, MSD, DUP
D Bottle number
E Additional Matrix QC
F Amount of 100 ppb 2nd source standard added (100ppb 2nd source standard prepared from 10ppm Intermediate 2nd).

DOD

SGS Accutest - Orlando **Metals Digestion Log Water**

Method of digestion(circle one): SW846-3010A / SW846-3005A / EPA 200.7 / EPA 200.8 / SM3030C

MP #: ~~34108~~ 34108 08/02/18 IT

Prep Date/Time (mm/dd/yy 24:00): 08/02/18 0910

HotBlock I.D. 7

Thermometer I.D. 213

Correction Factor (°C) -1

Temperature Observed/Corrected (°C) 94 / 93

pH paper lot# 220416

Volume

Spk. Sol. [A]	Used(ml)	Pipette #
ACC 1074	0.05	MU45274
ACC 1051	0.2	KU15244
MET 6081	1.0	KU15244

Dig. Tube Lot#: MP3065

Added [B]: HNO_3 HCL

Lot# 0000197345 0000190962

Sample #	D	Initial Volume(ml)	pH<2	Final Volume(ml)	Comments
Method Blank(MB)		50.0	N/A	50.0	
Spike Blank(SB)			N/A		
Matrix Spike(MS)			✓		
Matrix Spike Dup(MSD)			✓		
Duplicate(DUP)			✓		
1 QC [C] FA56168-8	1		✓		
2 -9			✓		
3 -10			✓		
4 -11			✓		
5 -12			✓		
6 -13			✓		
7 -14			✓		
8 -15	↓		✓		
9 FA56228-1	4		✓		
10 -2			✓		
11 -3			✓		
12 -4			✓		
13 -5			✓		
14 -6			✓		
15 -7			✓		
16 -8	↓	↓	✓	↓	
17 FA56309-1A	4	50.0	✓	50.0	
18					
19 -08-02-18 IT					
20					
21 [E]					
22 [E]					
23 [E]					
24 [E]					

Analyst: Date: 08-02-18

QC Review: Date: 8.2.18

A Used for SB, MS, MSD
B For reagent volumes used consult SOP MET 103, current revision
C Parent sample used to prepare MS, MSD, DUP
D Bottle Number
E Additional matrix QC

SGS Accutest - Orlando Mercury Digestion Log

Method of Digestion: SW846-7470A / 7471B / EPA 245.1 (circle one) MP # 34123

Matrix: Water / Soil / TCLPW / TCLPS / SPLP / Other (circle one)

Analyst: JC Thermometer I.D.: 213

Date/Time started (mm/dd/yy 24:00) 08/06/18 / 10:00 Correction Factor(°C): -1

Date/Time ended (mm/dd/yy 24:00) 08/06/18 / 12:00 Temp Observed/Corrected(°C): 96 / 95

HotBlock I.D.: 7 Balance ID — Pipette # Used: 0003294 Pipette # Used: PUD 8121

Digestion Tube Lot # 297547-419166 Filter Lot #: 1019217J-P pH paper Lot#: 220416 PTFE Chips Lot #: —

Reagents:[A]	HNO_3	HCL	H_2SO_4	$KMnO_4$	$K_2S_8O_8$	$SnCL_2$	NaCl/NH_2OH-HCL
Lot/Met#:	111710	—	0000177544	MET6095	MET6094	10214100	MET6092

Sample #		Wt., g	Init.Vol(ml)	pH<2	Fin.Vol.(ml)	Comments
STD1 Cal. Blank			50.0	N/A	50.0	
STD2 0.1ml [B]			↓	N/A	↓	
STD3 0.5ml [B]			↓	N/A	↓	
STD4 1.5ml [B]			↓	N/A	↓	
STD5 2.5ml [B]			↓	N/A	↓	
STD6 3.0ml [B]			↓	N/A	↓	
ICV 1.5ml [F]			↓	N/A	↓	
ICB			↓	N/A	↓	
CRI 0.1ml [B]			↓	N/A	↓	
CCV 1.5ml [B]			↓	N/A	↓	
CCB			↓	N/A	↓	
Method Blank			50.0	N/A	50.0	
Blank Spk. 1.5ml [F]			↓	N/A	↓	
Matrix Spk 1.5ml [F]			↓	✓	↓	
Mat. Spk.Dup 1.5ml [F]			↓	✓	↓	
Duplicate			↓	✓	↓	
1QC [C]	FA56168-8	D 1	↓	✓	↓	
2	FA56413-1	↓	↓	✓	↓	
3	↓ -2	↓	↓	✓	↓	
4	FA56381-3	4	↓	✓	↓	
5	↓ -4	↓	↓	✓	↓	
6	FA56415-6	↓	↓	✓	↓	
7	FA56425-1	14	↓	✓	↓	
8	FA56430-1	↓	↓	✓	↓	
9	↓ -2	↓	↓	✓	↓	
10	FA56185-2	4	↓	✓	↓	
11	FA56463-13	11	↓	✓	↓	
12	FA56469-1	11	↓	✓	↓	
13	FA56228-4	4	↓	(1)	↓	(1) bottle received pH >2; preserved in lab
14	↓ -5	↓	↓	↓	↓	
15	-6	↓	↓	↓	↓	
16	-7	↓	↓	↓	↓	
17	↓ -8	↓	↓	↓	↓	
18	FA56384-1	12	↓	✓	↓	
19	FA56381-1	13	↓	(2)	↓	(2) N/P bottle; no preserved bottle received
20	↓ -2	↓	↓	↓	↓	
21 [E]	Tube lot#297547-419166	NA	↓	NA	↓	
22 [E]						
23 [E]	JC 08/06/18					
24 [E]						

Analyst/Date Jordan Cuvor, 08/06/18 QC Rev./Date [signature], 8/6/18

10ppm int. met# 6016 100ppb(curve,bs,ms,msd,cri,ccv)met# 6080

10ppm int. 2nd met# 6069 100ppb 2nd(ICV)met# 6093

A For reagent volumes used consult SOP MET 105 or MET 106, current revision
B Amount of 100 ppb standard added (100ppb standard prepared from 10ppm Intermediate).
C Parent sample used to prepare MS, MSD, DUP
D Bottle number
E Additional Matrix QC
F Amount of 100 ppb 2nd source standard added (100ppb 2nd source standard prepared from 10ppm Intermediate 2nd).

MCGI

USEPA Data Validation

Organic & Inorganic

Data Validation Report

Area C
Picatinny Arsenal
Route 15, NJ

Lab SDG's No. FA55914, FA55941 & FA56228

MCGI Project No. EA881802-5914

Prepared for:

EA Engineering, Science & Technology, Inc.
Hunt Valley, MD

Prepared by:

"MCGI"

Meridian Consultant Group, Inc.

Environmental Services & Data Validation

1997 Annapolis Exchange Pkwy, Suite 300
Annapolis, MD 21401
Phone:(301)803-9207 Fax:(410)972-4701
www.meridiancgi.com

November 2017

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- SUPPORT DOCUMENTATION, Refer to the electronic Data Package PDF file.

GLOSSARY OF ACRONYMS & TERMS

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the **Organic** Data Validation.

Acronyms:

BFB	Bromofluorobenzene (volatile instrument performance check)
BNA	Base/Neutral/Acid
CCCs	Calibration Check Compounds
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRDL	Contract Required Detection Limit
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
%D	Percent Difference
DCB	Decachlorobiphenyl (Pesticide/PCB/ surrogate compound)
DFTPP	Decafluorotriphenylphosphine (semivolatile instrument performance check)
DSF	Data Summary Form
ECD	Electron-Capture Detector
EICP	Extended Ion Current Profile
EPA	United States Environmental Protection Agency
GC	Gas Chromatography
GC/EC	Gas Chromatography/Electron Capture
GC/MS	Gas Chromatography/Mass Spectra
GPC	Gel Permeation Chromatography (Clean Up)
ICAL	Initial Calibration
IS	Internal Standard
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
m/z	The ratio of mass (m) to charge (z) of ions measured by GC/MS
OADS	Organic Analysis Data Sheet (Form 1)
ORDA	Organic Regional Data Assessment
PCB	Poly Chlorinated Biphenyl
PEM	Performance Evaluation Mixture

QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control
%R	Percent Recovery of spiked amount
RF	Response Factor
RIC	Reconstructed Ion Chromatogram
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
RT	Retention Time
RTW	Retention Time Window
SDG	Sample Delivery Group
SMC	System Monitoring Compound
SOP	Standard Operation Procedures
SOW	Statement of Work
SPCCs	System Performance Check Compounds
SSL	Samples Shipping Log
SVOA	Semivolatile Organic Analyte
TCL	Target Compound List
TCX	Tetrachloro-m-Xylene (Pesticide/PCB surrogate compound)
TIC	Tentatively Identified Compound
TPH	Total Petroleum Hydrocarbons
UCL	Upper Control Limit
VOA	Volatile Organic Analyte
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples

Any sample related to a particular QC analysis.

Case A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbances and/or emissions versus concentration of the standards. .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Performance Evaluation Mixture

A standard used to verify that the ICAL sequence is stable throughout the GC or GC/MS analyses.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:
- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis

GLOSSARY OF ACRONYMS & TERMS

One or more of the following acronyms and terms may have been used in the descriptive process of the **Inorganic** Data Validation.

Acronyms:

AA	Atomic Absorption
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CF	Calibration Factor
CLP	Contract Laboratory Program
COC	Chain of Custody
CRDL	Contract Required Detection Limit
CSF	Complete SDG File
CV	Cold Vapor
%D	Percent Difference
EPA	United States Environmental Protection Agency
ICAL	Initial Calibration
ICB	Initial Calibration Blank
ICP	Inductively Coupled Plasma
ICS	Interference Check Sample
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
LCS	Laboratory Control Sample
LCL	Lower Control Limit
MCL	Maximum Contamination Level
MDC	Minimum Detectable Concentration
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MSA	Method of Standard Addition
PB	Preparation Blank
PCB	Poly Chlorinated Biphenyl
QA/QC	Quality Assurance/Quality Control
QAPjP	Quality Assurance Project Plan
QC	Quality Control

%R	Percent Recovery of spiked amount
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
SDG	Sample Delivery Group
SOP	Standard Operation Procedures
SOW	Statement of Work
SSL	Samples Shipping Log
TAL	Target Analyte List
UCL	Upper Control Limit
VTSR	Validated Time of Sample Receipt

Terms:

Associated Samples

Any sample related to a particular QC analysis. For Example:
- For ICV, all samples run under the same calibration curve.
- For duplicate RPD, all SDG samples digested/distilled of the same matrix.

Case A finite, usually predetermined number of samples collected over a given time period for a particular site. A Case consists of one or more Sample Delivery Group(s).

Continuing Calibration Blank (CCB)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Continuing Calibration Verification (CCV)

A deionized water sample run every ten (10) samples designed to detect any carryover contamination.

Contract Compliance Screening (CCS)

A process in which the SMO inspects the data for contractual compliance and provides EMSL-LV laboratories and the Regions with their findings.

Contractual Holding Time

The time from VTSR (validated time of sample receipt) to laboratory extraction and /or analysis.

Data Validation Qualifier (DVQ)

This refers to the column on the data summary form in which EPA Region III and other qualifiers have been placed by the data validator.

Data Validation Result (DVR)

This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit.

Field Blank Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are rinsate blank (RB), field blanks (FB) and trip blank (TB).

Field Duplicate

A duplicate sample generated in the field; not in the laboratory.

Initial Calibration (ICAL)

The establishment of a calibration curve with the appropriate number of standards and concentration ranges. The calibration curve plots absorbancies and/or emissions versus concentration of the standards.

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Initial Calibration Blank (ICB)

First blank run after the calibration curve .

Initial Calibration Verification (ICV)

First standard run after the calibration curve .

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Introduction of a known concentration of a compound into a sample to provide information about the effect of sample matrix on the extraction and/or measurement methodology.

Post Digestion Spike

The addition of known amount of standard after digestion. (Also identified as analytical spike, or spike, for furnace analyses.)

Preparation Blank (PB)

Blank taken through the digestion process to detect internal laboratory contamination.

Sample Delivery Group (SDG)

Defined by one of the following, whichever occurs first:
- case of sample
- each twenty field samples in a case or
- each 14-day calendar period during which field samples in a case are received, beginning with the receipt of the first sample in the SDG.

Serial Dilution

A sample run at a specific dilution to determine whether any significant chemical or physical interferences exist due to sample matrix effect, for ICP only.

Technical Holding Time

The time from sample collection to laboratory extraction and /or analysis.

COMMUNICATION RECORDS

N/A

GLOSSARY OF DATA VALIDATION QUALIFIERS

GLOSSARY OF DATA QUALIFIER CODES

CODES RELATED TO IDENTIFICATION:

(Confidence concerning presence or absence of compounds)

U	=	Not detected above the level of the associated value. The associated value is either the approximate sample quantitation or detection limit.
NO CODE	=	Confirmed identification
U1	=	Not detected substantially above the level reported in laboratory or field blanks.
R	=	Unusable results. Analyte may or may not be present in the sample.
N	=	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION:

(Can be used for both positive results and sample quantitation limits)

J	=	Analyte present. Reported value may not be accurate or precise (estimated value).
J+	=	Analyte present. Reported value may be biased high. Result is estimated high.
J-	=	Analyte present. Reported value may be biased low. Result is estimated low.
UJ	=	Not detected. Quantitation limit may be inaccurate or imprecise (Estimated).
UJ-	=	Not detected. Quantitation limit is probably higher.

OTHER CODES:

NJ	=	Qualitative identification questionable. Presumptively present at approximate quantity.
Q	=	No analytical result.
X	=	Data not Validated.

DATA VALIDATION REPORT NARRATIVE

MCGI

Meridian Consultant Group, Inc.
Environmental Services & Data Validation
1997 Annapolis Exchange Pkwy., Suite 300
Annapolis, MD 21401

(301)803-9207 Phone
(410)972-4701 Fax
www.meridiancgi.com

DATE: September 7, 2018

SUBJECT: USEPA Organic & Inorganic Data Validation Report
Volatile, Explosives, Metals/Individual Metals & Mercury (Hg)
Accutest Lab SDG's No. FA55914, FA55941 & FA56228
Site: Area C - Picatinny Arsenal, Route 15, NJ
MCGI Project No. EA881802-5914

FROM: Sherif N. Mina
Meridian Consultant Group, Inc.

TO: Mr. Frank DeSantis
EA Engineering, Science & Technology, Inc.

OVERVIEW

This report consists of three (3) Sample Delivery Groups (SDGs) for a total of thirty (30) samples submitted to SGS Laboratories, Orlando, FL, for Volatile, Explosives, Metals/Individual Metals & Hg analyses according to SW-846 Methods 8260C, 8330, 6020 & 7470A, respectively. Details about each SDG are listed in separate sections below. The samples were analyzed in accordance with the Chain-of-Custody (COC).

The analytical results were validated according to the pertinent parts of U.S. Environmental Protection Agency (USEPA) National Functional Guidelines for Organic Data Review & USEPA National Functional Guidelines for Inorganic Data Review, dated August 2014; Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, dated January 2009; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses.

Deviation from USEPA NFG: The "U" qualifier recommended by USEPA NFG for blank contamination was replaced by the "U1" qualifier to clearly indicate blank contamination on the EDDs.

Calibrations: SW-846 Method 8260C was used for the volatile analysis. For the data validation purpose, a 30% RSD for the initial calibrations & 25% D for the continuing calibrations were used as the QC limits for all compounds of concern, as the basis for qualifying the data.

GENERAL NOTES

- ***Electronic Data Deliverable (EDD):*** Several rows in the electronic data deliverable (EDD) are marked with an "X" and hidden from the EDDs by the validator. These rows may include quality control samples such as Method Blanks, Laboratory Control Samples, Matrix Spikes, or Matrix Spike Duplicates which are not validated. Additionally, some field sample results may not be used since only one (1) result for each compound is reported after validation. The following list indicates some instances in which an "X" may be placed in the DVQ column:
  1. The compounds in an analysis that have exceeded the instrument calibration range.
  2. All compounds in a diluted analysis that were within the calibration range in the initial analysis.
  3. All compounds in either the initial analysis or re-analysis of a sample, depending on which analysis is not reported on the EDD.

  Although QC samples and some field samples results may not be used, all data were reviewed and considered in the overall assessment.

- ***Data Validation Qualifier (DVQ)*:**This refers to the column on the data summary form in which EPA and other qualifiers have been placed by the data validator.

- ***Data Validation Result (DVR):***This refers to the column on the data summary form used to report results that have been modified by the data validator. A result in the DVR column that is qualified "U" indicates a modification of the reporting limit. Results in the DVR column supersede those reported by the laboratory.

- ***Tentatively Identified Compounds (TICs):*** The TICs, if applicable, were reviewed during data validation.

- ***Compound Quantitation:*** Positive results for compounds which are below the CRQL were qualified as estimated "J" on the EDD.

1-SDG: FA55914

This SDG consisted of ten (10) aqueous samples submitted to SGS Laboratories, Orlando, FL, for Volatile, Explosives, Metals/Individual Metals & Hg analyses according to SW-846 Methods 8260C, 8330, 6020 & 7470A, respectively. One (1) trip & one (1) field blanks were identified in this sample set. No field duplicate pairs were identified in this SDG. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION				Analysis			
Field ID	**Lab ID**	**SDG**	**Matrix**	**V**	**X**	**M**	**H**
SB1-5	FA55914-01	FA55914	Aqueous	x		x	x
SB1-6	FA55914-02		Aqueous	x	x	x	x
MW25-6A	FA55914-03		Aqueous	x		x	
MW25-6B	FA55914-04		Aqueous	x		x	
DM19-1	FA55914-05		Aqueous	x			
DM19-2	FA55914-06		Aqueous			x	
DM-25-2	FA55914-07		Aqueous	x			
DM-25-8	FA55914-08		Aqueous			x	
FB	FA55914-09		Aqueous	x	x	x	x
TB	FA55914-10		Aqueous	x			

V=Volatile, X=Explosives, M=Metals/Individual Metals, H=Hg

Duplicates: NA

ORGANIC VALIDATION

SUMMARY

All samples were successfully analyzed for all target compounds according to U.S. Environmental Protection Agency (USEPA) National Functional Guidelines for Organic Data Review, dated August 2014; Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, dated January 2009; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods, except as noted in the Major Problem section. Refer to Minor Problems for information regarding biases identified during data validation.

Data Validation Summary

Parameters		V			X		
		q	t	a	q	t	a
*	Data Completeness		8	0		2	0
*	Holding Time		8	0		2	0
*	Instrument Performance (BFB/DFTPP)		8	0		2	0
	Calibrations	x	8	4	x	2	2
*	Laboratory and Field Blanks analyses		8	0		2	0
*	Surrogate Recoveries		8	0		2	0
*	Matrix Spike/Matrix Spike Duplicate		8	0		2	0
*	Laboratory Control Sample(LCS)		8	0		2	0
*	Laboratory and/or Field Duplicates		8	0		2	0
*	Internal Standards		8	0		2	0
*	Compound Identification		8	0		2	0
*	Compound Quantitation		8	0		2	0
*	Sample Preservation		8	0		2	0
* All Criteria were met for that Parameter. V=Volatile, X=Explosives							

q=qualified; t=total number of samples analyzed; a=number of samples affected

MAJOR PROBLEMS

- None noted.

MINOR PROBLEMS

Volatile:

- ***Calibrations:*** The initial calibration, 07/25/2018, associated with all samples, failed the %RSD precision criteria of 30%, for Chloroethane. Quantitation limits for this compound in all associated samples were qualified "UJ".

Explosives:

- ***Calibrations:*** The initial calibration, associated with all samples, failed the %RSD precision

criteria @ 31.6% for m-Nitrotoluene. Quantitation limits for this compound in all associated samples were qualified "UJ".

NOTES

- ***Blank Contaminants:*** The maximum concentration of all compounds found in the analyses of the trip, field or laboratory method blanks are listed in the following table. Associated samples with positive results of these contaminants maybe qualified "U1" or "J+", based on the concentration level found in the samples, according to USEPA National Functional Guideline for Organic Data Review, dated August 2014.

Analytical Fraction	**Compound**	Maximum Concentration	Units	Blank Type	Associated Samples
Volatile	Hexachlorobutadiene	0.45	ug/L	Method	All
	Methylen Chloride*	2.0	ug/L	Field	All
	Toluene	2.0	ug/L	Field	All
Explosives	None				

*Common lab contaminant

INORGANIC VALIDATION

SUMMARY

All samples were successfully analyzed for all target compounds according to U.S. Environmental Protection Agency (USEPA) National Functional Guidelines for Inorganic Data Review, dated August 2014; Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, dated January 2009; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. Refer to Minor Problems for information regarding biases identified during data validation.

Data Validation Summary

Parameters		M		
		q	t	a
*	Data Completeness		3	0
*	Holding Time		3	0
	Calibration Verification	x	3	3
	Laboratory and Field Blanks analyses	x	3	3
*	ICP Interference Check Sample results		3	0
*	Matrix Spike recoveries (MS)		3	0
*	Laboratory and Field Duplicates		3	0
*	Laboratory Control Sample(LCS)		3	0
	Serial Dilution results	x	3	3
*	Furnace Atomic Absorption results (FAA)		3	0
*	Analyte Identification		3	0
*	Analyte Quantitation		3	0
*	Sample Preservation		3	0
* All Criteria were met for that Parameter, M=Metals				

q=qualified; t=total number of samples analyzed; a=number of samples affected

Note: Individual analytes are not reflected in the above Data Validation Summary table.

MAJOR ISSUES

- None noted.

MINOR ISSUES

- Laboratory and Field Blanks analyses: Analytes detected in the laboratory and/or equipment blanks, that affect sample results, with concentration above the instrument detection limit (IDL) are listed below. Associated samples with positive results of these contaminants maybe qualified "U1" or "J+", based on the concentration level found in the samples, according to USEPA National Functional Guideline for Inorganic Data Review, dated August 2014.

Analyte	Blank Type
Ba	FB
Ca	FB
Cr	FB
Cu	PB, FB
Fe	FB
Mg	FB
Mn	FB
Ni	FB
K	FB
Na	FB
Zn	PB, FB

CB = Container Blank
PB = Preparation Blank
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank
FB = Field Blank
EB = Equipment Blank

- ***Calibration:*** The low calibration check standard displayed high recovery for Zn analyte. The "J" qualifier for positive results for this analyte was superseded by either "U1" or "J+" due to blank contamination.

- ***Serial Dilution:*** The laboratory serial dilution for Ca, Mg, K & Na displayed a %D outside the QC limit. Positive results were qualified "J", unless superseded by the "U1" qualifier.

NOTES

- None noted.

2-SDG: FA55941

This SDG consisted of ten (10) aqueous samples submitted to SGS Laboratories, Orlando, FL, for Volatile, Explosives, Metals & Hg analyses according to SW-846 Methods 8260C, 8330, 6020 & 7470A, respectively. One (1) trip & one (1) field blanks; and one (1) aqueous field duplicate pair were identified in this sample set. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION				Analysis			
Field ID	**Lab ID**	**SDG**	**Matrix**	**V**	**X**	**M**	**H**
SB2-1A	FA55941-01	FA55941	Aqueous	x	x	x	x
SB2-2	FA55941-02		Aqueous	x	x	x	x
SB2-3	FA55941-03		Aqueous	x	x	x	x
SB3-1B	FA55941-04		Aqueous	x	x	x	x
SB3-2	FA55941-05		Aqueous	x	x	x	x
SB3-3	FA55941-06		Aqueous	x	x	x	x
DUP-C	FA55941-07		Aqueous	x	x	x	x
SB1-7	FA55941-08		Aqueous	x	x	x	x
FB	FA55941-09		Aqueous	x	x	x	x
TB	FA55941-10		Aqueous	x			

V=Volatile, X=Explosives, M=Metals, H=Hg

Duplicates: DUP-C/SB3-2

- ***Field Duplicates:*** For the associated aqueous & soil field duplicate pairs, an RPD of 50% was used as the QC limit for results that are at or above the CRQL, no qualification was applied based on the RPD when results are less than CRQL. Whenever a positive result for a compound is detected in one sample but not in the other, regardless of the CRQL, "J" & "UJ" qualifiers were applied to that compound in the field duplicate pair. A table summarizing the RPDs for the associated aqueous field duplicate pair is provided below.

Compound	DUP-SD	SD34-3	RPD	Qualifier
Volatile				
	ND	ND		
Explosives				
	ND	ND		
Metals/Hg				
Arsenic	0.95 J	0.94 J	NA	
Barium	7.5	7.6	1	
Calcium	20400	20300	0	
Iron	ND	34.8 J	NA	J, UJ
Lead	0.2 J	0.22 J	NA	
Magnesium	5520	5480	1	
Manganese	23.9	24	0	
Potassium	1600	1590	1	
Sodium	3940	3770	4	
Thallium	ND	0.22 J	NA	J, UJ
Vanadium	0.33 J	0.35 J	NA	

ORGANIC VALIDATION

SUMMARY

All samples were successfully analyzed for all target compounds according to U.S. Environmental Protection Agency (USEPA) National Functional Guidelines for Organic Data Review, dated August 2014; Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, dated January 2009; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods, except as noted in the Major Problem section. Refer to Minor Problems for information regarding biases identified during data validation.

Data Validation Summary

Parameters		V			X		
		q	t	a	q	t	a
*	Data Completeness		10	0		9	0
*	Holding Time		10	0		9	0
*	Instrument Performance (BFB/DFTPP)		10	0		9	0
	Calibrations	x	10	10	x	9	9
*	Laboratory and Field Blanks analyses		10	0		9	0
*	Surrogate Recoveries		10	0		9	0
*	Matrix Spike/Matrix Spike Duplicate		10	0		9	0
*	Laboratory Control Sample(LCS)		10	0		9	0
*	Laboratory and/or Field Duplicates		10	0		9	0
*	Internal Standards		10	0		9	0
*	Compound Identification		10	0		9	0
*	Compound Quantitation		10	0		9	0
*	Sample Preservation		10	0		9	0
* All Criteria were met for that Parameter. V=Volatile, X=Explosives							

q=qualified; t=total number of samples analyzed; a=number of samples affected

MAJOR PROBLEMS

- None noted.

MINOR PROBLEMS

Volatile:

- ***Calibrations:*** The initial calibration, 07/25/2018, associated with all samples, failed the %RSD precision criteria of 30%, for Chloroethane. Quantitation limits for this compound in all associated samples were qualified "UJ".

Explosives:

- ***Calibrations:*** The initial calibration, associated with all samples, failed the %RSD precision

criteria @ 31.6% for m-Nitrotoluene. Quantitation limits for this compound in all associated samples were qualified "UJ".

NOTES

- ***Blank Contaminants:*** The maximum concentration of all compounds found in the analyses of the trip, field or laboratory method blanks are listed in the following table. Associated samples with positive results of these contaminants maybe qualified "U1" or "J+", based on the concentration level found in the samples, according to USEPA National Functional Guideline for Organic Data Review, dated August 2014.

Analytical Fraction	**Compound**	Maximum Concentration	Units	Blank Type	Associated Samples
Volatile	Hexachlorobutadiene	0.46	ug/L	Method	All
	Toluene	0.8	ug/L	Field	All
Explosives	None				

*Common lab contaminant

INORGANIC VALIDATION

SUMMARY

All samples were successfully analyzed for all target compounds according to U.S. Environmental Protection Agency (USEPA) National Functional Guidelines for Inorganic Data Review, dated August 2014; Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, dated January 2009; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. Refer to Minor Problems for information regarding biases identified during data validation.

Data Validation Summary

Parameters		M		
		q	t	a
*	Data Completeness		9	0
*	Holding Time		9	0
	Calibration Verification	x	9	9
	Laboratory and Field Blanks analyses	x	9	9
*	ICP Interference Check Sample results		9	0
*	Matrix Spike recoveries (MS)		9	0
*	Laboratory and Field Duplicates		9	0
*	Laboratory Control Sample(LCS)		9	0
	Serial Dilution results	x	9	9
*	Furnace Atomic Absorption results (FAA)		9	0
*	Analyte Identification		9	0
*	Analyte Quantitation		9	0
*	Sample Preservation		9	0
* All Criteria were met for that Parameter, M=Metals				

q=qualified; t=total number of samples analyzed; a=number of samples affected

Note: Individual analytes are not reflected in the above Data Validation Summary table.

MAJOR ISSUES

- None noted.

MINOR ISSUES

- Laboratory and Field Blanks analyses: Analytes detected in the laboratory and/or equipment blanks, that affect sample results, with concentration above the instrument detection limit (IDL) are listed below. Associated samples with positive results of these contaminants maybe qualified "U1" or "J+", based on the concentration level found in the samples, according to USEPA National Functional Guideline for Inorganic Data Review, dated August 2014.

Analyte	Blank Type
Ca	FB
Cr	FB
Cu	PB
Mg	FB
Zn	PB, FB

CB = Container Blank
PB = Preparation Blank
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank
FB = Field Blank
EB = Equipment Blank

- ***Calibration:*** The low calibration check standard displayed high recovery for Zn analyte. The "J" qualifier for positive results for this analyte was superseded by "U1" qualifier due to blank contamination.

  The low calibration check standard displayed low recovery for Hg analyte. Quantitation limit for this analyte in all samples were qualified "UJ".

- ***Serial Dilution:*** The laboratory serial dilution for Ca, Mg, K & Na displayed a %D outside the QC limit. Positive results were qualified "J", unless superseded by the "U1" qualifier.

NOTES

- None noted.

3-SDG: FA56228

This SDG consisted of ten (10) aqueous samples submitted to SGS Laboratories, Orlando, FL, for Volatile, Explosives, Metals & Hg analyses according to SW-846 Methods 8260C, 8330, 6020 & 7470A, respectively. One (1) trip & one (1) field blanks were identified in this sample set. No field duplicate pairs were identified in this SDG. The samples were analyzed in accordance with the Chain-of-Custody (COC), see Sample Identification Summary.

Sample Identification Summary

SAMPLE INFORMATION				Analysis			
Field ID	**Lab ID**	**SDG**	**Matrix**	**V**	**X**	**M**	**H**
SB1-1	FA56228-01	FA56228	Aqueous	x	x	x	x
SB1-2	FA56228-02		Aqueous	x	x	x	x
SB1-3	FA56228-03		Aqueous	x	x	x	x
SB4-1	FA56228-04		Aqueous	x	x	x	x
SB4-2	FA56228-05		Aqueous	x	x	x	x
SB4-3	FA56228-06		Aqueous	x	x	x	x
SB4-4	FA56228-07		Aqueous	x	x	x	x
FB	FA56228-08		Aqueous	x	x	x	x
TB	FA56228-09		Aqueous	x			
SB1-5	FA56228-10		Aqueous		x		

V=Volatile, X=Explosives, M=Metals, H=Hg

Duplicates: NA

ORGANIC VALIDATION

SUMMARY

All samples were successfully analyzed for all target compounds according to U.S. Environmental Protection Agency (USEPA) National Functional Guidelines for Organic Data Review, dated August 2014; Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, dated January 2009; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. All instruments and method sensitivities were according to the specified analytical methods, except as noted in the Major Problem section. Refer to Minor Problems for information regarding biases identified during data validation.

Data Validation Summary

	Parameters	V			X		
		q	t	a	q	t	a
*	Data Completeness		9	0		9	0
*	Holding Time		9	0		9	0
*	Instrument Performance (BFB/DFTPP)		9	0		9	0
	Calibrations	x	9	9	x	9	9
*	Laboratory and Field Blanks analyses		9	0		9	0
*	Surrogate Recoveries		9	0		9	0
	Matrix Spike/Matrix Spike Duplicate		9	0	x	9	1
*	Laboratory Control Sample(LCS)		9	0		9	0
*	Laboratory and/or Field Duplicates		9	0		9	0
*	Internal Standards		9	0		9	0
*	Compound Identification		9	0		9	0
*	Compound Quantitation		9	0		9	0
*	Sample Preservation		9	0		9	0
* All Criteria were met for that Parameter. V=Volatile, X=Explosives							

q=qualified; t=total number of samples analyzed; a=number of samples affected

MAJOR PROBLEMS

- None noted.

MINOR PROBLEMS

Volatile:

- ***Calibrations:*** The initial calibration, 07/25/2018, associated with all samples, failed the %RSD precision criteria of 30%, for Chloroethane. Quantitation limits for this compound in all associated samples were qualified "UJ".

Explosives:

- ***Calibrations:*** The initial calibration, associated with all samples, failed the %RSD precision

criteria @ 31.6% for m-Nitrotoluene. Quantitation limits for this compound in all associated samples were qualified "UJ".

- ***Matrix Spike/Matrix Spike Duplicate (MS/MSD):*** The explosives aqueous MS of sample FA56228-2 displayed low recoveries for HMX & p-Nitrotoluene. No positive results were detected for these compounds in the parent sample. Quantitation limits in the parent sample for these compounds were qualified "UJ".

NOTES

- ***Blank Contaminants:*** The maximum concentration of all compounds found in the analyses of the trip, field or laboratory method blanks are listed in the following table. Associated samples with positive results of these contaminants maybe qualified "U1" or "J+", based on the concentration level found in the samples, according to USEPA National Functional Guideline for Organic Data Review, dated August 2014.

Analytical Fraction	**Compound**	Maximum Concentration	Units	Blank Type	Associated Samples
Volatile	Hexachlorobutadiene	0.41	ug/L	Method	All
Explosives	None				

*Common lab contaminant

- ***Matrix Spike/Matrix Spike Duplicate (MS/MSD):*** The volatile aqueous MS of sample FA56349-1 (from a different project) displayed high recoveyy for Acetone. No action was taken.

- ***Matrix Spike/Matrix Spike Duplicate (MS/MSD):*** The explosives aqueous MS/MSD of sample FA56228-2 displayed an RPD outside the QC limit for 2,6-Dinitrotoluene. No positive result was detected for this compound in the parent sample. No data were qualified.

- ***Lab Control Sample (LCS):*** The explosives aqueous LCS's displayed high recovery for 2,4,6-Trinitrotoluene. No positive results were detected for this compound in the associated aqueous samples. No data were qualified.

INORGANIC VALIDATION

SUMMARY

All samples were successfully analyzed for all target compounds according to U.S. Environmental Protection Agency (USEPA) National Functional Guidelines for Inorganic Data Review, dated August 2014; Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, dated January 2009; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. Refer to Minor Problems for information regarding biases identified during data validation.

Data Validation Summary

Parameters		M		
		q	t	a
*	Data Completeness		8	0
*	Holding Time		8	0
	Calibration Verification	x	8	8
	Laboratory and Field Blanks analyses	x	8	7
*	ICP Interference Check Sample results		8	0
*	Matrix Spike recoveries (MS)		8	0
*	Laboratory and Field Duplicates		8	0
*	Laboratory Control Sample(LCS)		8	0
*	Serial Dilution results		8	0
*	Furnace Atomic Absorption results (FAA)		8	0
*	Analyte Identification		8	0
*	Analyte Quantitation		8	0
*	Sample Preservation		8	0
* All Criteria were met for that Parameter, M=Metals				

q=qualified; t=total number of samples analyzed; a=number of samples affected

Note: Individual analytes are not reflected in the above Data Validation Summary table.

MAJOR ISSUES

- ***Calibration:*** The low calibration check standard displayed 0% recovery for Zn analyte. Positive results & quantitation limits were qualified "J" & "R", respectively, unless superseded by the "U1" qualifier.

MINOR ISSUES

- Laboratory and Field Blanks analyses: Analytes detected in the laboratory and/or equipment blanks, that affect sample results, with concentration above the instrument detection limit (IDL) are listed below. Associated samples with positive results of these contaminants maybe qualified "U1" or "J+", based on the concentration level found in the samples, according to USEPA National Functional Guideline for Inorganic Data Review, dated August 2014.

Analyte	Blank Type
Al	FB
Ba	FB
Ca	FB
Cr	FB
Fe	FB
Mg	FB
Mn	FB
Ni	FB
K	FB
Na	FB
Va	FB
Zn	FB

CB = Container Blank
PB = Preparation Blank
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank
FB = Field Blank
EB = Equipment Blank

- ***Calibration:*** The low calibration check standard displayed low recovery for Cu. Positive results & quantitation limits were qualified "J" & "UJ", respectively.

  The low calibration check standard displayed low recovery for Hg analyte. Quantitation limit for this analyte in all samples were qualified "UJ".

NOTES

- ***Matrix Spike/Matrix Spike Duplicate (MS/MSD):*** The MSD of sample FA56168-8 (from a different project) displayed low recovery for Ca analyte. However, the native sample's concentration for this analyte was >4x the spike amount. No action was taken.

REPORT CONTENT STATEMENT

All data for this project were reviewed in accordance with the pertinent parts of the U.S. Environmental Protection Agency (USEPA) National Functional Guidelines for Organic Data Review & USEPA National Functional Guidelines for Inorganic Data Review, dated August 2014; Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, dated January 2009; along with the Quality Assurance/Quality Control (QA/QC) requirements for the analytical methods used for the analyses. The text of the report addresses only those problems affecting data usability.

ATTACHMENTS

l) Glossary of Data Qualifiers
2) Electronic Data Deliverable (EDD). These include:
   (a) All results for target compounds with qualifier codes where applicable.
   (b) All unusable detection limits (qualified "R"), where applicable.
3) Electronic Data Package (.pdf file) as Support Documentation

DCN: EA881802-5914

Respectfully Submitted,

Sherif N. Mina Date: September 7, 2018
Sherif N. Mina

QA/Review: SM

APPENDIX C

LONG-TERM MONITORING DATA BY MONITORING WELL

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Table 1 Well SB1-1 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	SB1-1				SB1-1				SB1-1				SB1-1				SB1-1				SB1-1				SB1-1			
			Sample Depth (ft)	83-93				83-93				83-93				83-93				83-93				83-93				83-93			
			Date Sampled	1/26/2010				7/20/2010				4/12/2011				11/1/2011				7/27/2012				3/20/2013				10/24/2013			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc		MD	MR	Conc		MD	MR	Conc		MD	MR	Conc		MD	MR
Volatile Organic Compounds (µg/L)																															
Vinyl chloride	6.6	1	PQL	ND	U	Unk	1	ND	U	0.2	1	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.4	1.5	NR				ND	U	0.1	1.5
Metals (µg/L)																															
Arsenic	49.6	3	PQL	ND	U	3.3	1.1	ND	U	3	10	0.57		0.21	6	ND	U	0.21	5	ND	U	0.33	5	NR				0.38	J	0.33	5
Lead	50	5	GWQC	**19.6**		1.6	0.6	**25.9**		1.5	3	**50**		2.61	15	**5.2**	J	2.6	15	**19**		2.6	15	**34**		2.6	15	**53**		2.6	15
Thallium	NA	2	PQL, NJMCL, FEDMCL	0.63	U	Unk	0.63	ND	U	3	8	ND	U	4.91	40	ND	U	4.9	40	ND	U	0.05	1	NR				ND	U	0.05	1

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).

MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 1 Well SB1-1 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	SB1-1 (10 um filter)				SB1-1 (0.45 um filter)				SB1-1				SB1-1				SB1-1				SB1-1				SB1-1				DUP-C				SB1-1			
			Sample Depth (ft)	83-93				83-93				83-93				83-93				83-93				83-93				83-93				83-93				83-93			
			Date Sampled	10/24/2013				10/24/2013				4/1/2014				8/19/2014				9/2/2015				7/6/2016				7/13/2017				7/13/2017				7/30/2018			
			LOC Source	Conc		MD	MR	Conc		MD	MR	Conc		MD	MR	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																							
Vinyl chloride	6.6	1	PQL	NR				NR				NR				ND	U	0.1	1.5	ND	U	0.45	0.50	ND	U	0.69	1	ND	U	0.41	0.5	ND	U	0.41	0.5	ND	U	0.41	0.5
Metals (µg/L)																																							
Arsenic	49.6	3	PQL	NR				NR				NR				ND	U	0.33	5					ND	U	4	2	ND	U	0.21	1	ND	U	0.21	1	ND	U	0.21	1
Lead	50	5	GWQC	ND	U	2.6	15	ND	U	2.6	15	NR				**42**		2.6	15	1.8	J	2.0	1.0	3		2	1	2.6		0.2	1	2.4		0.2	1	1.3	J	0.2	1
Thallium	NA	2	PQL, NJMCL, FEDMCL	NR				NR				ND	U	0.20	1.0	NR				NR				NR				NR				NR				ND	U	0.2	1

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).

MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 2 Well SB1-2 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	SB1-2				SB1-2				SB1-2				SB1-2				SB1-2				SB1-2				SB1-2				SB1-2 (10 um filter)				SB1-2 (10 um filter)			
			Sample Depth (ft)	8-18				8-18				8-18				8-18				8-18				8-18				8-18				83-93				83-93			
			Date Sampled	1/26/2010				7/20/2010				4/12/2011				11/3/2011				7/27/2012				3/20/2013				10/24/2013				10/24/2013				10/24/2013			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																							
Vinyl chloride	6.6	1	PQL	ND	U	Unk	1	ND	U	0.2	1	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.4	1.5	NR				ND	U	0.1	1.5	NR				NR			
Metals (µg/L)																																								
Arsenic	49.6	3	PQL	ND	U	3.3	1.1	ND	U	3	10	0.67		0.21	6	ND	U	0.21	5	0.35	J	0.33	5	NR				ND	U	0.33	5	NR				NR			
Lead	50	5	GWQC	**35.7**		1.6	0.6	**26.8**		1.5	3	**78**		2.61	15	ND	U	2.6	15	**15**		2.6	15	**32**		2.6	15	**33**		2.6	15	ND	U	2.6	15	ND	U	2.6	15
Thallium	NA	2	PQL, NJMCL, FEDMCL	ND	U	Unk	0.63	ND	U	3	8	**5.8**	J	4.91	40	ND	U	4.9	40	ND	U	0.05	1	ND	U	0.05	1	ND	U	0.05	1	NR				NR			

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 2 Well SB1-2 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID		SB1-2				SB1-2 DUP				SB1-2				SB1-2 DUP				SB1-2				SB1-2				SB1-2				SB1-2				SB1-2			
			Sample Depth (ft)		83-93				83-93				83-93				83-93				83-93				83-93				83-93				83-93				83-93			
			Date Sampled		4/1/2014				4/1/2014				8/19/2014				8/19/2014				9/2/2015				7/6/2016				7/13/2017				7/30/2018							
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL				
Volatile Organic Compounds (µg/L)																																								
Vinyl chloride	6.6	1	PQL	NR				NR				ND	U	0.1	1.5	ND	U	0.1	1.5	ND	U	0.45	0.50	ND	U	0.69	1	ND	U	0.41	0.5	ND	U	0.41	0.5				
Metals (µg/L)																																								
Arsenic	49.6	3	PQL	NR				NR				0.69	J	0.33	5	0.63	J	0.33	5	ND	U	4.0	2.0	2.1	J	4	2	0.31	J	0.21	1	0.22	J	0.21	1				
Lead	50	5	GWQC	NR				NR				**86**		2.6	15	**73**		2.6	15	ND	U	2.0	1.0	ND	U	2	1	0.31	J	0.2	1	0.22	J	0.2	1				
Thallium	NA	2	PQL, NJMCL, FEDMCL	ND	U	0.20	1.0	ND	U	0.20	1.0	NR				NR				NR				NR				ND	U	0.2	1	ND	U	0.2	1				

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 3 Well SB1-3 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	SB1-3				SB1-3				SB1-3				SB1-3				SB1-3				SB1-3				SB1-3				SB1-3				SB1-3			
			Sample Depth (ft)	24-34				24-34				24-34				24-34				24-34				3/20/2013				10/24/2013				4/1/2014				8/19/2014			
			Date Sampled	1/26/2010				7/20/2010				4/12/2011				11/1/2011				7/27/2012																	
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																							
Vinyl chloride	6.6	1	PQL	ND	U	Unk	1	ND	U	0.2	1	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.4	1.5	NR				ND	U	0.1	1.5	NR				ND	U	0.1	1.5
Metals (µg/L)																																							
Arsenic	49.6	3	PQL	ND	U	3.3	1.1	ND	U	3	10	0.6	U	0.21	6	ND	U	0.21	5	ND	U	0.33	5	NR				ND	U	0.33	5	NR				ND	U	0.33	5
Lead	50	5	GWQC	4.6	J	1.6	0.6	**20.8**		1.5	3	**8.2**	J	2.61	15	**16**		2.6	15	**11**	J	2.6	15	**16**		2.6	15	**29**		2.6	15	**24**		5.0	15	**5.6**	J	2.6	15
Thallium	NA	2	PQL, NJMCL, FEDMCL	ND	U	Unk	0.63	ND	U	3	8	ND	U	4.91	40	ND	U	4.9	40	ND	U	0.05	1	NR				ND	U	0.05	1	ND	U	0.20	1.0				

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).

MDL = Method detection limit.
MRL = Method reporting limit.
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ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 3 Well SB1-3 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	SB1-3				DUP090215				SB1-3				DUPC2110215				SB1-3				DUP-D-050416				SB1-3				DUP-C-2				SB1-3				SB1-3			
			Sample Depth (ft)	24-34				24-34				24-34				24-34				24-34				24-34				24-34				24-34				24-34				24-34			
			Date Sampled	9/2/2015				9/2/2015				11/2/2015				11/2/2015				5/4/2016				5/4/2016				7/6/2016				7/6/2016				7/13/2017				7/30/2018			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																											
Vinyl chloride	6.6	1	PQL	ND	U	0.45	0.50	ND	U	0.45	0.50	NR				NR				NR				NR				ND	U	0.69	1	ND	U	0.69	1	ND	U	0.41	0.5	ND	U	0.41	0.5
Metals (µg/L)																																											
Arsenic	49.6	3	PQL	ND	U	4.0	2.0	ND	U	4.0	2.0	NR				NR				3.5	J	4	2	NR				ND	U	4	2	ND	U	4	2	ND	U	0.21	1	ND	U	0.21	1
Lead	50	5	GWQC	ND	U	2.0	1.0	ND	U	2.0	1.0	**6.3**		2	1	**6.3**		2	1	1.9	J	2	1	1.9	J	2	1	1.4	J	2	1	**1.5**	J	2	1	3.3		0.2	1	1.4	J	0.2	1
Thallium	NA	2	PQL, NJMCL, FEDMCL	ND	U	2.0	1.0	ND	U	2.0	1.0	NR				NR				NR				NR				NR				NR				ND	U	0.2	1	ND	U	0.2	1

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).

MDL = Method detection limit.
MRL = Method reporting limit.
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NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 4 Well SB1-5 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	SB1-5				SB1-5				SB1-5				SB1-5				SB1-5				SB1-5				SB1-5				SB1-5				SB1-5				SB1-5				SB1-5			
			Sample Depth (ft)	90-100				90-100				90-100				90-100				90-100				90-100				90-100				90-100				90-100				90-100				90-100			
			Date Sampled	1/26/2010				7/20/2010				4/13/2011				11/1/2011				7/27/2012				3/18/2013				10/24/2013				4/1/2014				8/19/2014				9/3/2015				9/7/2016				7/13/2017				7/17/2018			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																																			
Vinyl chloride	6.6	1	PQL	ND	U	Unk	1	ND	U	0.2	1	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.4	1.5	NR				ND	U	0.1	1.5	NR				ND	U	0.1	1.5	ND	U	0.45	0.50	ND	U	0.69	1	ND	U	0.41	0.5	ND	U	0.41	0.5
Metals (µg/L)																																																			
Arsenic	49.6	3	PQL	2.1	J	3.3	1.1	ND	U	3	10	ND	U	0.66	15	ND	U	0.21	5	0.35	J	0.33	5	NR				ND	U	0.33	5	NR				0.36	J	0.33	5	ND	U	4.0	2.0	2.3	J	4	2	0.64	J	0.21	1	0.43	J	0.21	1
Lead	50	5	GWQC	2.3	J	1.6	0.6	22.3		1.5	3	ND	U	2.61	15	ND	U	2.6	15	ND	U	2.6	15	ND	U	2.6	15	ND	U	2.6	15	NR				ND	U	2.6	15	2.5		2.0	1.0	384		10	5	32.1		0.2	1	7.5		0.2	1
Thallium	NA	2	PQL, NJMCL, FEDMCL	ND	U	Unk	0.63	ND	U	3	8	ND	U	4.91	40	ND	U	4.9	40	ND	U	0.05	1	NR				0.1	UB	0.05	1	ND	U	0.20	1.0	NR				NR				NR				NR				ND	U	0.2	1

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).

MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 5 SB1-6 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	SB1-6				SB1-6				SB1-6				SB1-6				SB1-6				SB1-6				SB1-6				SB1-6				SB1-6				SB1-6			
			Sample Depth (ft)	8-18				8-18				8-18				8-18				8-18				8-18				8-18				8-18				8-18				8-18			
			Date Sampled	1/28/2010				7/20/2010				4/14/2011				11/3/2011				7/27/2012				3/20/2013				10/24/2013				4/1/2014				8/19/2014				9/2/2015				7/7/2016				7/13/2017				7/17/2018			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																																		
Vinyl chloride	6.6	1	PQL	ND	U	Unk	1	ND	U	0.2	1	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.4	1.5	NR				ND	U	0.1	1.5	NR				ND	U	0.1	1.5	ND	U	0.45	0.50	ND	U	0.69	1	ND	U	0.41	0.5	ND	U	0.41	0.5
Metals (µg/L)																																																		
Arsenic	49.6	3	PQL	ND	U	3.3	1.1	ND	U	3	10	0.92		0.21	6	0.59	J	0.21	5	0.92	J	0.33	5	NR				0.89	J	0.33	5	NR				0.48	J	0.33	5	ND	U	4.0	2.0	ND	U	4	2	0.31	J	0.21	1	0.22	J	0.21	1
Lead	50	5	GWQC	ND	U	1.6	0.6	**14.6**		1.5	3	ND	U	2.61	15	ND	U	2.6	15	ND	U	2.6	15	ND	U	2.6	15	ND	U	2.6	15	NR				ND	U	2.6	15	ND	U	2.0	1.0	ND	U	2	1	0.35	J	0.2	1	0.37	J	0.2	1
Thallium	NA	2	PQL, NJMCL, FEDMCL	ND	U			ND	U	3	8	ND	U	4.91	40	ND	U	4.9	40	ND	U	0.05	1	NR				ND	U	0.05	1	ND	U	0.20	1.0	NR				NR				NR				NR				NR				ND	U	0.2	1

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).

MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 6 Well SB1-7 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	SB1-7				SB1-7				SB1-7				SB1-7				SB1-7				SB1-7				SB1-7				SB1-7				SB1-7				SB1-7				SB1-7				SB1-7			
			Sample Depth (ft)	9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5			
			Date Sampled	1/28/2010				7/20/2010				4/14/2011				11/3/2011				7/27/2012				3/20/2013				10/24/2013				4/1/2014				8/19/2014				9/2/2015				7/7/2016				7/13/2017				7/18/2018			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																																			
Vinyl chloride	6.6	1	PQL	ND	U	Unk	1	ND	U	0.2	1	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.4	1.5	NR				ND	U	0.1	1.5	NR				ND	U	0.1	1.5	ND	U	0.45	0.50	ND	U	0.69	1	ND	U	0.41	0.5	ND	U	0.41	0.5
Metals (µg/L)																																																			
Arsenic	49.6	3	PQL	ND	U	3.3	1.1	ND	U	3	10	ND	U	0.21	6	ND	U	0.21	5	ND	U	0.33	5	NR				0.36	J	0.33	5	NR				ND	U	0.33	5	ND	U	4.0	2.0	ND	U	4	2	0.32	J	0.21	1	ND	U	0.21	1
Lead	50	5	GWQC	1.2	J	1.6	0.6	15.1		1.5	3	ND	U	2.61	15	ND	U	2.6	15	ND	U	2.6	15	ND	U	2.6	15	ND	U	2.6	15	NR				ND	U	2.6	15	ND	U	2.0	1.0	1.1	J	2	1	0.34	J	0.2	1	ND	U	0.2	1
Thallium	NA	2	PQL, NJMCL, FEDMCL	ND	U	Unk	0.63	ND	U	3	8	ND	U	4.91	40	ND	U	4.9	40	ND	U	0.05	1	NR				ND	U	0.05	1	ND	U	0.20	1.0	NR				NR				NR				NR				ND	U	0.2	1

Notes:

Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).

MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 7 Well SB2-1A Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	SB2-1A				SB2-1A				SB2-1A				SB2-1A				SB2-1A				SB2-1A				SB2-1A				SB2-1A				SB2-1A				SB2-1A			
			Sample Depth (ft)	158-168				158-168				158-168				158-168				158-168				158-168				158-168				158-168				158-168				158-168			
			Date Sampled	2/2/2010				8/4/2010				4/15/2011				11/4/2011				7/26/2012				March 2013				10/22/2013				4/2/2014				9/22/2015				7/6/2016				7/17/2017				7/18/2018			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																																
Vinyl chloride	6.6	1	PQL	ND	U	Unk	1	ND	U	0.2	1	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.4	1.5	NR				ND	U	0.1	1.5	NR				ND	U	0.45	0.5	ND	U	0.69	1	ND	U	0.41	0.5	ND	U	0.41	0.5
Metals (µg/L)																																																	
Arsenic	49.6	3	PQL	**8.3**	J	3.3	1.1	ND	U	3	10	2.6		0.21	6	0.65	J	0.21	5	0.81	J	0.33	5	NR				1.2	J	0.33	5	NR				**5.6**		4.0	2.0	**6.5**		4	2	**3.3**		0.21	1	**3.8**		0.21	1
Lead	50	5	GWQC	2.2	J	1.6	0.6	**6.05**		1.5	3	**11**	J	2.61	15	ND	U	2.6	15	**10**	J	2.6	15	NR				2.6	J	2.6	15	NR				3.7		2.0	1.0	1.1	J	2	1	1.2	J	0.2	1	**7.5**		0.2	1
Thallium	NA	2	PQL, NJMCL, FEDMCL	ND	U	Unk	0.63	ND	U	3	8	ND	U	4.91	40	ND	U	4.9	40	ND	UJ	0.05	1	NR				ND	U	0.05	1	ND	U	0.20	1.0	NR				NR				ND	U	0.2	1	ND	U	0.2	1

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).

MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 8 Well SB2-2 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	SB2-2				SB2-2				SB2-2				SB2-2				SB2-2				SB2-2				SB2-2				SB2-2				SB2-2				SB2-2				SB2-2				SB2-2			
			Sample Depth (ft)	25-35				25-35				25-35				25-35				25-35				25-35				25-35				25-35				25-35				25-35				25-35			
			Date Sampled	2/2/2010				8/4/2010				4/15/2011				11/4/2011				7/26/2012				3/21/2013				10/22/2013				4/2/2014				9/22/2015				11/2/2015				5/4/2016				7/6/2016				7/17/2017			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																																	
Vinyl chloride	6.6	1	PQL	ND	U	Unk	1	ND	U	0.2	1	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.4	1.5	NR				ND	U	0.1	1.5	NR				ND	U	0.45	0.5	NR				NR				ND	U	0.69	1	ND	U	0.41	0.5	ND	U	0.41	0.5
Metals (µg/L)																																																	
Arsenic	49.6	3	PQL	7.3	J	3.3	1.1	6.45	J	3	10	5.3	J	0.21	6	5.1		0.21	5	6.5		0.33	5	4.9	J	0.33	5	8.8		0.33	5	6.6		1.0	5.0	13.3		4.0	2.0	10.6		4	2	8.1	J	4	2	7.2		4	2	7.1		0.21	1	8.6		0.21	1
Lead	50	5	GWQC	2.3	J	1.6	0.6	ND		1.5	3	ND	U	2.61	15	ND	U	2.6	15	ND	U	2.6	15	NR				ND	U	2.6	15	NR				3.8		2.0	1.0	NR				NR				ND	U	2	1	0.44	J	0.2	1	1.1	J	0.2	1
Thallium	NA	2	PQL, NJMCL, FEDMCL	ND	U	Unk	0.63	ND	U	3	8	6.4	J	4.91	40	ND	U	4.9	40	ND	UJ	0.05	1	ND	U	0.05	1	ND	UJ	0.05	1	ND	U	0.20	1.0	ND	U	2.0	1.0	NR				NR				NR				NR				ND	U	0.2	1

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).

MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 9 Well SB2-3 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	SB2-3				SB2-3				SB2-3				SB2-3				SB2-3				SB2-3				SB2-3				SB2-3				SB2-3				SB2-3			
			Sample Depth (ft)	243-253				243-253				243-253				243-253				243-253				243-253				243-253				243-253				243-253				243-253			
			Date Sampled	2/2/2010				8/4/2010				4/15/2011				11/4/2011				7/26/2012				March 2013				10/22/2013				4/2/2014				9/22/2015				7/6/2016				7/17/2017				7/18/2018			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																																
Vinyl chloride	6.6	1	PQL	ND	U	Unk	1	ND	U	0.2	1	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.4	1.5	NR				ND	U	0.1	1.5	NR				ND	U	0.45	0.5	ND	U	0.69	1	ND	U	0.41	0.5	ND	U	0.41	0.5
Metals (µg/L)																																																
Arsenic	49.6	3	PQL	ND	U	3.3	1.1	ND	U	3	10	ND	U	0.21	6	ND	U	0.21	5	ND	U	0.33	5	NR				ND	U	0.33	5	NR				ND	U	4.0	2.0	ND	U	4	2	ND	U	0.21	1	ND	U	0.21	1
Lead	50	5	GWQC	1.4	J	1.6	0.6	2.6		1.5	3	ND	U	2.61	15	ND	U	2.6	15	ND	U	2.6	15	NR				ND	U	2.6	15	NR				ND	U	2.0	1.0	ND	U	2	1	0.48	J	0.2	1	0.81	J	0.2	1
Thallium	NA	2	PQL, NJMCL, FEDMCL	ND	U	Unk	0.63	ND	U	3	8	ND	U	4.91	40	ND	U	4.9	40	ND	UJ	0.05	1	NR				ND	U	0.05	1	ND	U	0.20	1.0	NR				NR				NR				ND	U	0.2	1

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 10 Well SB3-1B Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	SB3-1B				SB3-1B				SB3-1B				SB3-1B DUP				SB3-1B				SB3-1B				SB3-1B				SB3-1B				SB3-1B				SB3-1B				SB3-1B				SB3-1B				SB3-1B			
			Sample Depth (ft)	326-336				326-336				326-336				326-336				326-336				326-336				326-336				326-336				326-336				326-336				326-336				326-336				326-336			
			Date Sampled	1/27/2010				3/17/2010				7/21/2010				7/21/2010				4/18/2011				11/4/2011				7/30/2012				3/20/2013				10/24/2013				6/2/2014				9/22/2015				7/6/2016				7/17/2017				7/18/2018			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (ug/L)																																																							
Vinyl chloride	6.6	1	PQL	ND	U	Unk	1	ND	U	Unk	1	ND	U	0.2	1	ND	U	0.4	1	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.4	1.5	NR				ND	U	0.1	1.5	NR				ND	U	0.45	0.5	ND	U	0.69	1	ND	U	0.41	0.5	ND	U	0.41	0.5
Metals (ug/L)																																																						
Arsenic	49.6	3	PQL	ND	U	3.3	1.1	NR	NA	NA	NA	ND	U	3	10	ND	U	3	10	5.6	UB	25	4.4	1.2	J	0.21	5	1.1	J	0.33	5	NR				1.1	J	0.33	5	NR				ND	U	4.0	2.0	ND	U	4	2	1.1	J	0.21	1	1.2	J	0.21	1
Lead	50	5	GWQC	0.61	J	1.6	0.6	NR		NA	NA	12.3	I	1.5	3	14.2	I	1.5	3	ND	U	2.61	15	ND	U	2.6	15	ND	U	2.6	15	NR				ND	U	2.6	15	NR				ND	U	2.0	1.0	ND	U	2	1	0.37	J	0.2	1	0.34	J	0.2	1
Thallium	NA	2	PQL, NJMCL, FEDMCL	ND	U	Unk	0.63	NR	NA	NA	NA	ND	U	3	8	ND	U	3	8	ND	U	4.91	40	ND	U	4.9	40	0.068	UB	0.05	1	NR				ND	U	0.05	1	ND	U	0.20	1.0	NR				NR				NR				ND	U	0.2	1

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
I = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).

MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
ug/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 11 Well SB3-2 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	SB3-2				SB3-2				SB3-2				SB3-2				SB3-2				SB3-2				SB3-2				SB3-2				SB3-2				DUP-C-1				SB3-2				SB3-2				DUP-C			
			Sample Depth (ft)	170-180				170-180				170-180				170-180				170-180				170-180				170-180				170-180				170-180				170-180				170-180				170-180				170-180			
			Date Sampled	1/27/2010				7/21/2010				4/18/2011				11/4/2011				7/30/2012				3/21/2013				10/22/2013				4/2/2014				9/22/2015				7/6/2016				7/6/2016				7/17/2017				7/18/2018				7/18/2018			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																																						
Vinyl chloride	6.6	1	PQL	ND	U	Unk	1	ND	U	0.2	1	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.4	1.5	NR				ND	U	0.1	1.5	NR				ND	U	0.45	0.5	ND	UJ	0.69	1	ND	U	0.69	1	ND	U	0.41	0.5	ND	U	0.41	0.5	ND	U	0.41	0.5
Metals (µg/L)																																																						
Arsenic	49.6	3	PQL	1.5	J	3.3	1.1	ND	U	3	10	0.91		0.21	6	1	J	0.21	5	1	J	0.33	5	NR				0.94	J	0.33	5	NR				ND	U	4.0	2.0	ND	U	4	2	ND	U	4	2	0.82	J	0.21	1	0.94	J	0.21	1	0.95	J	0.21	1
Lead	50	5	GWQC	ND	U	1.6	0.6	**11.5**		1.5	3	ND	U	2.61	15	ND	U	2.6	15	ND	U	2.6	15	ND	U	2.6	15	ND		2.6	15	NR				ND	U	2.0	1.0	ND	U	2	1	ND	U	2	1	ND	U	0.2	1	0.22	J	0.2	1	0.2	J	0.2	1
Thallium	NA	2	PQL, NJMCL, FEDMCL	ND	U	Unk	0.63	ND	U	3	8	ND	U	4.91	40	ND	U	4.9	40	ND	U	0.05	1	NR				0.05	J	0.05	1	ND	U	0.20	1.0	NR				NR				NR				NR				0.22	J	0.2	1	ND	UJ	0.2	1

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).

MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 12 Well SB-3-3 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	SB3-3				SB3-3				SB3-3				SB3-3				SB3-3				SB3-3				SB3-3				SB3-3				SB3-3				SB3-3				SB3-3			
			Sample Depth (ft)	21-31				21-31				21-31				21-31				21-31				21-31				21-31				21-31				21-31				21-31				21-31			
			Date Sampled	1/27/2010				8/5/2010				4/18/2011				11/4/2011				7/30/2012				March 2013				10/22/2013				4/2/2014				9/22/2015				7/6/2016				7/17/2017				7/18/2018			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																																	
Vinyl chloride	6.6	1	PQL	ND	U	Unk	1	ND	U	0.2	1	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.4	1.5	NR				ND	U	0.1	1.5	NR				ND	U	0.45	0.5	ND	U	0.69	1	ND	U	0.41	0.5	ND	U	0.41	0.5
Metals (µg/L)																																																	
Arsenic	49.6	3	PQL	ND	U	3.3	1.1	ND	U	3	10	ND	U	0.21	6	ND	U	0.21	5	0.82	J	0.33	5	NR				ND	U	0.33	5	NR				ND	U	4.0	2.0	ND	U	4.0	2.0	ND	U	0.21	1	ND	U	0.21	1
Lead	50	5	GWQC	ND	U	1.6	0.6	3.99		1.5	3	ND	U	2.61	15	ND	U	2.6	15	5.4	J	2.6	15	NR				ND	U	2.6	15	NR				ND	U	2.0	1.0	ND	U	2.0	1.0	ND	U	0.2	1	ND	U	0.2	1
Thallium	NA	2	PQL, NJMCL, FEDMCL	ND	U	Unk	0.63	ND	U	3	8	ND	U	4.91	40	ND	U	4.9	40	ND	U	0.05	1	NR				ND	U	0.05	1	ND	U	0.20	1.0	NR				NR				ND	U	0.2	1	ND	U	0.2	1

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 13 Well SB4-1 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	SB4-1				SB4-1 DUP				SB4-1				SB4-1				SB4-1				SB4-1				SB4-1				SB4-1				SB4-1				SB4-1				SB4-1				SB4-1				SB4-1				SB4-1			
			Sample Depth (ft)	369-379				369-379				369-379				369-379				369-379				369-379				369-379				369-379				369-379				369-379				369-379				369-379				369-379			
			Date Sampled	1/11/2010				1/11/2010				3/17/2010				8/3/2010				4/20/2011				11/1/2011				7/31/2012				March 2013				10/25/2013				4/3/2014				8/21/2014				9/22/2015				7/7/2016				7/14/2017				7/30/2018			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																																										
Vinyl chloride	6.6	1	PQL	ND	U	Unk	1	ND	U	Unk	1	ND	U	Unk	1	ND	U	0.2	1	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.4	1.5	NR				ND	U	0.1	1.5	NR				ND	U	0.1	1.5	ND	U	0.45	0.5	ND	U	0.69	1	ND	U	0.41	0.5	ND	U	0.41	0.5
Metals (µg/L)																																																									
Arsenic	49.6	3	PQL	ND	U	3.3	1.1	ND	U	3.3	1.1	NR	NA	NA	NA	ND	U	3	10	0.26		0.21	6	0.22	J	0.21	5	ND	U	0.33	5	NR				ND	U	0.33	5	NR				ND	U	0.33	5	ND	U	4.0	2.0	ND	U	4	2	0.31	J	0.21	1	0.26	J	0.21	1
Lead	50	5	GWQC	1	J	1.6	0.6	1.3		1.6	0.6	NR	NA	NA	NA	ND	U	1.5	3	ND	U	2.61	15	ND	U	2.6	15	ND	U	2.6	15	NR				ND	U	2.6	15	NR				ND	U	2.6	15	ND	U	2.0	1.0	ND	U	2	1	0.42	J	0.2	1	ND	U	0.2	1
Thallium	NA	2	PQL, NJMCL, FEDMCL	ND	U	Unk	0.63	ND	U	Unk	0.63	NR	NA	NA	NA	ND	U	3	8	ND	U	4.91	40	ND	U	4.9	40	ND	U	0.05	1	NR				ND	U	0.05	1	ND	U	0.20	1.0	NR				NR				NR				NR				ND	U	0.2	1

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 14 Well SB4-2 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	SB4-2				SB4-2				SB4-2				SB4-2				SB4-2				SB4-2				SB4-2				SB4-2				SB4-2				SB4-2				SB4-2				SB4-2				SB4-2			
			Sample Depth (ft)	36-46				36-46				36-46				36-46				36-46				36-46				36-46				36-46				36-46				36-46				36-46				36-46				36-46			
			Date Sampled	1/12/2010				8/3/2010				4/20/2011				11/1/2011				7/31/2012				March 2013				10/25/2013				4/3/2014				1/12/2010				8/21/2014				9/22/2015				7/7/2016				7/14/2017				7/30/2018			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																																						
Vinyl chloride	6.6	1	PQL	ND	U	Unk	1	ND	U	0.2	1	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.4	1.5	NR				ND	U	0.1	1.5	NR				ND	U	Unk	1	ND	U	0.1	1.5	ND	U	0.45	0.5	ND	U	0.69	1	ND	U	0.41	0.5	< 0.5	U	0.41	0.5
Metals (µg/L)																																																						
Arsenic	49.6	3	PQL	ND	U	3.3	1.1	ND	U	3	10	ND	U	0.21	6	0.23	J	0.21	5	ND	U	0.33	5	NR				ND	U	0.33	5	NR				ND	U	3.3	1.1	ND	U	0.33	5	ND	U	4.0	2.0	ND	U	4.0	2.0	ND	U	0.21	1	ND	U	0.21	1
Lead	50	5	GWQC	2.8	J	1.6	0.6	ND		1.5	3	ND	U	2.61	15	ND	U	2.6	15	ND	U	2.6	15	NR				ND	U	2.6	15	NR				2.4	J	1.6	0.6	ND	U	2.6	15	ND	U	2.0	1.0	ND	U	2.0	1.0	ND	U	0.2	1	ND	U	0.2	1
Thallium	NA	2	PQL, NJMCL, FEDMCL	ND	U	Unk	0.63	ND	U	3	8	ND	U	4.91	40	ND	U	4.9	40	ND	U	0.05	1	NR				0.089	UB	0.05	1	ND	U	0.20	1.0	ND	U	Unk	0.36	NR				NR				NR				NR				ND	U	0.2	1

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 15 Well SB4-3 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	SB4-3				SB4-3				SB4-3				SB4-3				SB4-3				SB4-3				SB4-3				SB4-3				SB4-3				SB4-3			
			Sample Depth (ft)	92-102				92-102				92-102				92-102				92-102				92-102				92-102				92-102				92-102				92-102			
			Date Sampled	8/3/2010				4/20/2011				11/1/2011				7/31/2012				March 2013				10/25/2013				4/3/2014				8/21/2014				9/22/2015				7/7/2016				7/14/2017				7/30/2018			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																																
Vinyl chloride	6.6	1	PQL	ND	U	0.2	1	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.4	1.5	NR				ND	U	0.1	1.5	NR				ND	U	0.1	1.5	ND	U	0.45	0.5	ND	U	0.69	1	ND	U	0.41	0.5	ND	U	0.41	0.5
Metals (µg/L)																																																	
Arsenic	49.6	3	PQL	ND	U	3	10	2.7	J	0.21	6	2.9	J	0.21	5	1.9	J	0.33	5	NR				2.1	J	0.33	5	NR				2.3	J	0.33	5	5.2		4.0	2.0	4.5		4.0	2.0	2.5		0.21	1	1.3	J	0.21	1
Lead	50	5	GWQC	ND		1.5	3	ND	U	2.61	15	ND	U	2.6	15	ND	U	2.6	15	NR				ND	U	2.6	15	NR				ND	U	2.6	15	3.6		2.0	1.0	ND	U	2.0	1.0	0.24	J	0.2	1	0.26	J	0.2	1
Thallium	NA	2	PQL, NJMCL, FEDMCL	ND	U	3	8	ND	U	4.91	40	ND	U	4.9	40	ND	U	0.05	1	NR				0.053	J	0.05	1	ND	U	0.20	1.0	NR				NR				NR				NR				ND	U	0.2	1

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 16 Well SB4-4 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	SB4-4				SB4-4				SB4-4				SB4-4				SB4-4				SB4-4				SB4-4				SB4-4				SB4-4				DUP C 092215				SB4-4				SB4-4				SB4-4			
			Sample Depth (ft)	155-165				155-165				155-165				155-165				155-165				155-165				155-165				155-165				155-165				155-165				155-165				155-165				155-165			
			Date Sampled	1/12/2010				8/3/2010				4/20/2011				11/1/2011				7/31/2012				March 2013				10/25/2013				4/3/2014				8/21/2014				9/22/2015				9/22/2015				7/7/2016				7/14/2017				7/30/2018			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																																						
Vinyl chloride	6.6	1	PQL	ND	U	Unk	1	ND	U	0.2	1	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.4	1.5	NR				ND	UJ	0.1	1.5	NR				ND	U	0.1	1.5	ND	U	0.45	0.5	ND	U	0.45	0.5	ND	U	0.69	1	ND	U	0.41	0.5	ND	U	0.41	0.5
Metals (µg/L)																																																						
Arsenic	49.6	3	PQL	ND	U	3.3	1.1	ND	U	3	10	ND	U	0.21	6	1.5	J	0.21	5	1.5	J	0.33	5	NR				1.3	J	0.33	5	NR				1.5	J	0.33	5	2.2	J	4.0	2.0	2.2	J	4.0	2.0	2.1	J	4	2	1.4	J	0.21	1	1.4	J	0.21	1
Lead	50	5	GWQC	ND	U	1.6	0.6	ND		1.5	3	ND	U	2.61	15	ND	U	2.6	15	ND	U	2.6	15	NR				ND	U	2.6	15	NR				ND	U	2.6	15	ND	U	2.0	1.0	ND	U	2.0	1.0	ND	U	2	1	ND	U	0.2	1	ND	U	0.2	1
Thallium	NA	2	PQL, NJMCL, FEDMCL	ND	U	Unk	0.36	ND	U	3	8	ND	U	4.91	40	ND	U	4.9	40	ND	U	0.05	1	NR				ND	U	0.05	1	ND	U	0.20	1.0	NR				NR				NR				NR				NR				NR				ND	U	0.2	1

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
POL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
ug/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 17 Well MW25-6A Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	MW25-6A				MW25-6A				MW25-6A				MW25-6A				MW25-6A				MW25-6A				MW25-6A				MW25-6A DUP			
			Sample Depth (ft)	10-20				10-20				10-20				10-20				10-20				10-20				10-20				10-20			
			Date Sampled	1/13/2010				7/15/2010				4/21/2011				11/2/2011				7/25/2012				3/19/2013				10/21/2013				10/21/2013			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																			
Vinyl chloride	6.6	1	PQL	ND	U	Unk	1	ND	U	0.2	1	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.1	1.5	ND	UJ	0.1	1.5	ND	U	0.1	1.5
Metals (µg/L)																																			
Arsenic	49.6	3	PQL	1.7	J	3.3	1.1	ND	U	3	10	1.2	J	0.21	6	**3.6**	J	0.21	5	**3.7**	J	0.33	5	0.96	J	0.33	5	1.2	J	0.33	5	1.2	J	0.33	5
Lead	50	5	GWQC	1.1	J	1.6	0.6	ND	U	1.5	3	ND	U	2.61	15	ND	U	2.6	15	ND	U	2.6	15	ND	U	2.6	15	ND	U	2.6	15	ND	U	2.6	15
Thallium	NA	2	PQL, NJMCL, FEDMCL	NR				NR				NR				NR				ND	U	0.05	1	ND	U	0.05	1	0.16	UB	0.05	1	0.11	UB	0.05	1

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 17 Well MW25-6A Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	MW25-6A				MW25-6A DUP				MW25-6A				C-DUP001(081814)				C-MW-25-6A				MW25-6A				MW25-6A				MW25-6A				MW25-6A				MW25-6A			
			Sample Depth (ft)	10-20				10-20				10-20				10-20				10-20				10-20				10-20				10-20				10-20				10-20			
			Date Sampled	3/31/2014				3/31/2014				8/18/2014				8/18/2014				9/2/2015				11/2/2015				5/4/2016				7/5/2016				7/13/2017				7/17/2018			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc		MDL	MRL
Volatile Organic Compounds (µg/L)																																											
Vinyl chloride	6.6	1	PQL	ND	U	0.40	1.5	ND	U	0.40	1.5	ND	U	0.1	1.5	ND	U	0.1	1.5	ND	U	0.45	0.50	< 0.5	U	0.25	0.5	ND	U	0.69	1	ND	U	0.69	1	ND	U	0.41	0.5	ND	U	0.41	0.5
Metals (µg/L)																																											
Arsenic	49.6	3	PQL	0.52	J	1.0	5.0	0.60	J	1.0	5.0	1.6	J	0.33	5	1.9	J	0.33	5	**3.2**	J	4.0	2.0	**6.4**		4	2	**3.2**	J	4	2	**4.7**	J-	4	2	**4.5**		0.21	1	**4.1**		0.21	1
Lead	50	5	GWQC	ND	U	5.0	15	ND	U	5.0	15	ND	U	2.6	15	ND	U	2.6	15	ND	U	2.0	1.0	NR				NR				ND	U	2	1	NR				NR			
Thallium	NA	2	PQL, NJMCL, FEDMCL	NR				NR				NR				NR				NR				NR				NR				NR				NR				NR			

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 18 Well MW25-6B Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	MW25-6B				MW25-6B DUP				MW25-6B				MW25-6B				MW25-6B				MW25-6B				MW25-6B				MW25-6B			
			Sample Depth (ft)	65-75				65-75				65-75				65-75				65-75				65-75				65-75				65-75			
			Date Sampled	7/15/2010				7/15/2010				4/21/2011				11/3/2011				7/25/2012				3/19/2013				10/21/2013				3/31/2014			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																			
Vinyl chloride	6.6	1	PQL	ND	U	Unk	1	ND	U	0.2	1	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.4	1.5	ND	U	0.1	1.5	ND	U	0.1	1.5	ND	U	0.40	1.5
Metals (µg/L)																																			
Arsenic	49.6	3	PQL	3	J	3.3	1.1	ND	U	3	10	2	J	0.21	6	1.2	J	0.21	5	1.7	J	0.33	5	1.5	J	0.33	5	1.1	J	0.33	5	1.6	J	1.0	5.0
Lead	50	5	GWQC	1.8	J	1.6	0.6	1.85	J	1.5	3	ND	U	2.61	15	ND	U	2.6	15	ND	U	2.6	15	ND	U	2.6	15	ND	U	2.6	15	ND	U	5.0	15
Thallium	NA	2	PQL, NJMCL, FEDMCL	NR				NR				NR				NR				ND	U	0.05	1	ND	U	0.05	1	ND	U	0.05	1	NR			

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 18 Well MW25-6B Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	MW25-6B				C-MW25-6B				MW25-6B				DUPC110215				MW25-6B				DUP-C-050416				MW25-6B				MW25-6B				MW25-6B			
			Sample Depth (ft)	65-75				65-75				65-75				65-75				65-75				65-75				65-75				65-75				65-75			
			Date Sampled	8/18/2014				9/2/2015				11/2/2015				11/2/2015				5/4/2016				5/4/2016				7/5/2016				7/13/2017				7/17/2018			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																							
Vinyl chloride	6.6	1	PQL	ND	U	0.1	1.5	ND	U	0.45	0.50	ND	U	0.25	0.5	ND	U	0.25	0.5	ND	U	0.69	1	ND	U	0.69	1	ND	U	0.69	1	ND	U	0.41	0.5	ND	U	0.41	0.5
Metals (µg/L)																																							
Arsenic	49.6	3	PQL	1.6	J	0.33	5	ND	U	4.0	2.0	ND	U	4	2	ND	U	4	2	**3.3**	J	4	2	2.2	J	4	2	ND	UJ	4	2	0.23	J	0.21	1	0.25	J	0.21	1
Lead	50	5	GWQC	ND	U	2.6	15	ND	U	2.0	1.0	NR				NR				NR				NR				ND	U	2	1	NR				NR			
Thallium	NA	2	PQL, NJMCL, FEDMCL	NR				NR				NR				NR				NR				NR				NR				NR				NR			

Notes:
Conc = Concentration.
FEDMCL = Federal maximum contaminant level.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NJMCL = New Jersey maximum contaminant level.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 19 Well MW-17 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	MW-17				MW-17				MW-17				MW-17 DUP				MW-17				MW-17				MW-17			
			Sample Depth (ft)	7-17				7-17				7-17				7-17				7-17				7-17				7-17			
			Date Sampled	1/19/2010				7/22/2010				4/20/2011				4/20/2011				11/3/2011				7/26/2012				March 2013			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Metals (µg/L)																															
Lead	50	5	GWQC	4.8	J	1.6	0.06	**21**		1.5	3	**5.3**	J	2.61	15	**6.5**	J	2.61	15	**18**	J	2.6	15	**9.4**	J	2.6	15	NR			

Notes:
Conc = Concentration.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).

MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NR = Not reported.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 19 Well MW-17 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	MW-17				MW-17				MW-17				MW-17				MW-17				DUP-C-L			
			Sample Depth (ft)	7-17				7-17				7-17				7-17				7-17				7-17			
			Date Sampled	10/23/2013				April 2014				8/19/2014				9/3/2015				7/5/2016				7/5/2016			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Metals (µg/L)																											
Lead	50	5	GWQC	17	J	2.6	15	NR				ND	U	2.6	15	1.1	J	2.0	1.0	2	J	2	1	2.1		2	1

Notes:
Conc = Concentration.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).

MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NR = Not reported.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 20 Well MW25-8 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	MW25-8				MW25-8				MW25-8				MW25-8				MW25-8				MW25-8				MW25-8			
			Sample Depth (ft)	20-30				20-30				20-30				20-30				20-30				20-30				20-30			
			Date Sampled	1/18/2010				7/22/2010				4/15/2011				11/3/2011				7/25/2012				March 2013				10/23/2013			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Metals (µg/L)																															
Arsenic	49.6	3	PQL	**9.4**	J	3.3	1.1	**8.04**	J	3	10	**13**	J	0.21	6	**6.7**		0.21	5	**9.1**		0.33	5	NR				**9.5**		0.33	5
Lead	50	5	GWQC	1.8	J	1.6	0.6	**15.2**		1.5	3	ND	U	2.61	15	ND	U	2.6	15	ND	U	2.6	15	NR				ND	U	2.6	15

Notes:

Conc = Concentration.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 20 Well MW25-8 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID		MW25-8				MW25-8				MW25-8				MW25-8				MW25-8				MW25-8			
			Sample Depth (ft)		20-30				20-30				20-30				20-30				20-30				20-30			
			Date Sampled		April 2014				8/21/2014				9/3/2015				7/5/2016				7/13/2017				7/17/2018			
			LOC Source	Conc	Qual	MDL	MRL		Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Metals (µg/L)																												
Arsenic	49.6	3	PQL	NR					**10**		0.33	5	**35.0**		4.0	2.0	**37**		4	2	**16.8**		0.21	1	**26.3**		0.21	1
Lead	50	5	GWQC	NR					NR				NR				NR				NR				NR			

Notes:

Conc = Concentration.
ft = Feet.
GWQC = Groundwater quality criteria.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 21 Well DM19-1 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	DM19-1				DM19-1				DM19-1 DUP				DM19-1				DM19-1				DM19-1				DM19-1			
			Sample Depth (ft)	9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5			
			Date Sampled	1/28/2010				7/15/2010				7/15/2010				4/13/2011				11/2/2011				7/26/2012				3/19/2013			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																															
Vinyl chloride	6.6	1	PQL	**5.3**		Unk	1	**10.6**		0.2	1	**10.2**		0.2	1	ND	U	0.4	1.5	ND	U	0.4	1.5	**24**		0.4	1.5	**1.6**		0.1	1.5
Metals (µg/L)																															
Arsenic	49.6	3	PQL	NR				NR				NR				NR				NR				**7.8**		0.33	5	**3.4**	J	0.33	5

Notes:
Conc = Concentration.
ft = Feet.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).

MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 21 Well DM19-1 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	DM19-1				DM19-1				DM19-1				DM-19-1				DM19-1				DM19-1				DM19-1				DM19-1				DM19-1			
			Sample Depth (ft)	9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5			
			Date Sampled	10/21/2013				3/31/2014				8/18/2014				9/3/2015				11/2/2015				5/4/2016				7/5/2016				7/13/2017				7/17/2018			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																																							
Vinyl chloride	6.6	1	PQL	19		0.1	1.5	16		0.40	1.5	15		0.1	1.5	12.5		0.45	0.50	4		0.25	0.5	5.6		0.69	1	8		0.69	1	2.4		0.41	0.5	5.8		0.41	0.5
Metals (µg/L)																																							
Arsenic	49.6	3	PQL	3.3	J	0.33	5	3.2	J	1.0	5.0	4.8	J	0.33	5	2.8	J	4.0	2.0	3.4	J	4	2	4.5	J	4	2	3.8	J	4	2	NR				NR			

Notes:
Conc = Concentration.
ft = Feet.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).

MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 22 Well DM19-2 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	DM19-2				DM19-2				DM19-2				DM19-2				DM19-2				DM19-2				DM19-2				DM19-2			
			Sample Depth (ft)	9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5			
			Date Sampled	1/19/2010				7/15/2010				4/13/2011				11/2/2011				7/26/2012				3/19/2013				10/21/2013				April 2014			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Metals (µg/L)																																			
Arsenic	49.6	3	PQL	**45.1**		3.3	1.1	**80.3**		3	10	**97**		0.21	6	**60**		0.21	5	**95**		0.33	5	**52**		0.33	5	**43**		0.33	5	NR			

Notes:

Conc = Concentration.
ft = Feet.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).

MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 22 Well DM19-2 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	DM19-2				DMW19-2				DM19-2				DUP-C-AS-1				DM19-2				DM19-2			
			Sample Depth (ft)	9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5				9.5-19.5			
			Date Sampled	8/18/2014				9/3/2015				7/5/2016				7/5/2016				7/13/2017				7/17/2018			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Metals (µg/L)																											
Arsenic	49.6	3	PQL	**87**		0.33	5	**51.2**		4.0	2.0	**27.8**		4	2	**27.5**		4	2	**66.3**		0.21	1	**140**		0.21	1

Notes:

Conc = Concentration.
ft = Feet.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).

MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 23 Well DM25-2 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	DM25-2				DM25-2				DM25-2				DM25-2 (Dup)				DM25-2				DM25-2				DM25-2			
			Sample Depth (ft)	10.1-20.1				10.1-20.1				10.1-20.1				10.1-20.1				10.1-20.1				10.1-20.1				10.1-20.1			
			Date Sampled	1/18/2010				7/15/2010				4/18/2011				4/18/2011				11/2/2011				7/25/2012				March 2013			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																															
Vinyl chloride	6.6	1	PQL	**7**		Unk	1	**2.88**		0.2	1	**7.3**		0.4	1.5	**8.5**		0.4	1.5	**1.5**	J	0.4	1.5	**1.5**		0.4	1.5	NR			
Metals (µg/L)																															
Arsenic	49.6	3	PQL	**11.8**		3.3	1.1	**5.55**	J	3	10	14	UB	0.21	6	12	UB	0.21	6	**4.7**	J	0.21	5	**4.5**	J	0.33	5	NR			

Notes:
Conc = Concentration.
ft = Feet.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
UB = Compound considered non-detect at the listed value due to associated blank contamination.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 23 Well DM25-2 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	DM25-2				DM25-2				DM25-2				DMW25-2				DM25-2				DM25-2				DM25-2			
			Sample Depth (ft)	10.1-20.1				10.1-20.1				10.1-20.1				10.1-20.1				10.1-20.1				10.1-20.1				10.1-20.1			
			Date Sampled	10/23/2013				April 2014				8/21/2014				9/3/2015				7/5/2016				7/5/2016				7/17/2018			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Volatile Organic Compounds (µg/L)																															
Vinyl chloride	6.6	1	PQL	1	J	0.1	1.5	NR				0.92	J	0.1	1.5	**1.4**		0.45	0.50	**1**		0.69	1	**1.4**		0.41	0.5	0.76	J	0.41	0.5
Metals (µg/L)																															
Arsenic	49.6	3	PQL	**4.3**	J	0.33	5	NR				**4.4**	J	0.33	5	**5.2**		4.0	2.0	**3.7**	J	4	2	NR				NR			

Notes:
Conc = Concentration.
ft = Feet.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
UB = Compound considered non-detect at the listed value due to associated blank contamination.
Unk = Unknown.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 24 Well 1181-3 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	1181-3				1181-3				1181-3				1181-3				1181-3				1181-3				1181-3				1181-3				1181-3			
			Sample Depth (ft)	12.5-22.5				12.5-22.5				12.5-22.5				12.5-22.5				12.5-22.5				12.5-22.5				12.5-22.5				12.5-22.5				12.5-22.5			
			Date Sampled	2/3/2010				7/22/2010				4/13/2011				11/2/2011				7/31/2012				March 2013				10/23/2013				April 2014				9/3/2015				7/5/2016			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Metals (µg/L)																																									
Arsenic	49.6	3	PQL	**24**		3.3	1.1	**11.8**		3	10	**9.9**	J	0.21	6	**7.7**		0.21	5	**13**		0.33	5	NR				**26**		0.33	5	NR				**7.0**		4.0	2.0	**4.6**	J-	4.0	2.0

Notes:

Conc = Concentration.
ft = Feet.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 25 Well MW180-1 Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	MW180-1				MW180-1 DUP				MW180-1				MW180-1				MW180-1				MW180-1				MW180-1				MW180-1				MW180-1				MW180-1			
			Sample Depth (ft)	5-15				5-15				5-15				5-15				5-15				5-15				5-15				5-15				5-15				5-15			
			Date Sampled	2/3/2010				40212				7/19/2010				4/13/2011				11/2/2011				7/31/2012				March 2013				10/23/2013				April 2014				9/19/2014				September 2015			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Metals (µg/L)																																														
Arsenic	49.6	3	PQL	**112**		5-15	10	**8.8**	J	3	10	**9.46**	J	3	10	**17**	J	0.21	6	**12**		0.21	5	**13**		0.33	5	NR				**14**		0.33	5	NR				1.8	J	0.33	5	NR			

Notes:
Conc = Concentration.
ft = Feet.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).

MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NR = Not reported.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 26 Well C1-B Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	C1-B				C1-B				C1-B				C1-B				C1-B				C1-B				C1-B			
			Sample Depth (ft)	12.3-22.3				12.3-22.3				12.3-22.3				12.3-22.3				12.3-22.3				12.3-22.3				12.3-22.3			
			Date Sampled	1/5/2010				6/17/2010								11/2/2011								7/27/2012				3/20/2013			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Metals (µg/L)																															
Arsenic	49.6	3	PQL	**4.9**	J	3.3	1.1	**7.55**	J	3	10	**8.8**	J	0.21	6	**5.1**		0.21	5	**8.4**		0.33	5	**8.4**		0.21	6	**6.6**		0.33	5

Notes:
Conc = Concentration.
ft = Feet.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NR = Not reported.
NS = Not sampled.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

Table 26 Well C1-B Long-Term Monitoring Data

Constituent	Trigger Level	LOC	Sample ID	C1-B				C1-B				C1-B				C1-B				C1-B			
			Sample Depth (ft)	12.3-22.3				12.3-22.3				12.3-22.3				12.3-22.3				12.3-22.3			
			Date Sampled	10/23/2013				April 2014				8/18/2014				September 2015				7/5/2016			
			LOC Source	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL	Conc	Qual	MDL	MRL
Metals (µg/L)																							
Arsenic	49.6	3	PQL	**5.8**		0.33	5	NR				**20**		0.33	5	NS				**9.4**	J-	4	2

Notes:
Conc = Concentration.
ft = Feet.
J = Estimated value.
LOC = Level of concern (LOC) is the lowest of the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and any non-zero MCL Goal (40 Code of Federal Regulations 141), the New Jersey (NJ) Drinking Water Quality Act MCLs (New Jersey Administrative Code [N.J.A.C.] 7:10-16), and the NJ Groundwater Quality Criteria (N.J.A.C. 7:9-6). If a chemical is not listed under these promulgated standards, then the LOC is taken from the lowest of the United States Environmental Protection Agency (USEPA) Regional Screening Levels for Tapwater Risk-Based Concentrations (USEPA 2010) and the USEPA Federal Drinking Water Health Advisories (USEPA 2009a).
MDL = Method detection limit.
MRL = Method reporting limit.
NA = Not available and/or non-applicable.
ND = Non-detect.
NR = Not reported.
NS = Not sampled.
PQL = Practical quantitation limit.
Qual = Qualifier.
U = The contaminant was not detected in the sample above the reporting limit.
µg/L = Micrograms per liter.
Indicates the value is greater than the Applicable or Relevant and Appropriate Requirement.
Indicates value is greater than the Trigger Level.

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