Data Evaluation Summary Report

Remedial Investigation/Feasibility Study Oversight
U.S. Oil Recovery Superfund Site
Area of Investigation 1
Pasadena, Harris County, Texas
EPA Identification No. TXN000607093

Remedial Action Contract 2 Full Service
Contract: EP-W-06-004
Task Order: 0144-RSBD-A6MY

Prepared for
U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

Prepared by
EA Engineering, Science, and Technology, Inc., PBC
405 S. Highway 121 Bypass
Building C, Suite 100
Lewisville, Texas 75067
(972) 315-3922

September 2017
Revision: 00

9987292

This page intentionally left blank

CONTENTS

Page

LIST OF TABLES
LIST OF ACRONYMS AND ABBREVIATIONS
1. INTRODUCTION 1

2. PURPOSE 1

3. DATA SUMMARY 2

4. QUALITY ASSURANCE/QUALITY CONTROL 2

4.1 CHAIN OF CUSTODY AND SAMPLE RECEIPT 3
4.2 HOLDING TIMES 4
4.3 CALIBRATION CRITERIA 4
4.4 BLANK DETECTIONS 4
4.5 LABORATORY CONTROL SAMPLES 4
4.6 SURROGATE RECOVERIES 4
4.7 MATRIX SPIKE, MATRIX SPIKE DUPLICATE AND LABORATORY DUPLICATE SAMPLES 5
4.8 POST-DIGESTION SPIKE SAMPLE 5
4.9 ICP SERIAL DILUTION 6
4.10 TARGET COMPOUND IDENTIFICATION 6
4.11 SAMPLE QUANTITATION AND REPORTED DETECTION LIMITS 6

5. DATA EVALUATION PARAMETERS 7

5.1 DATA CATEGORIES 7
5.2 MEASUREMENT QUALITY OBJECTIVES 9

5.2.1 Precision 9
5.2.2 Accuracy 9
5.2.3 Representativeness 10
5.2.4 Completeness 10
5.2.5 Comparability 11
5.2.6 Sensitivity 11

5.3 DETECTION AND QUANTITATION LIMITS 12

6. DATA QUALITY OBJECTIVES AND CONCLUSIONS 12

6.1 MEDIA VARIABILITY 12
6.2 LABORATORY PERFORMANCE PROBLEMS 13
6.3 CONCLUSIONS 13

7. REFERENCES 14

APPENDIX A: DATA SUMMARY TABLE AND RELATIVE PERCENT DIFFERENCE CALCULATIONS
APPENDIX B: LABORATORY ANALYTICAL DATA REPORT
APPENDIX C: DATA VALIDATION REPORT

LIST OF TABLES

Number	Title
1	Data Validation Qualifiers
2	Quality Assurance Indicator Criteria

LIST OF ACRONYMS AND ABBREVIATIONS

bgs	Below ground surface
CRQL	Contract-required Quantitation Limit
DESR	Data Evaluation Summary Report
DQO	Data quality objectives
EA	EA Engineering, Science, and Technology, Inc., PBC
EPA	U.S. Environmental Protection Agency
FS	Feasibility Study
ft	Feet/foot
ICP	Inductively-coupled plasma
LCS	Laboratory control sample
LL	Low-level
MDL	Method detection limit
MS	Matrix spike
MSD	Matrix spike duplicate
PARCC	Precision, accuracy, representativeness, completeness, and comparability
%R	Percent recovery
PRP	Potentially responsible party
QA	Quality assurance
QC	Quality control
RI	Remedial Investigation
RPD	Relative percent difference
SAP	Sampling and Analysis Plan
SDG	Sample delivery group
site	U.S. Oil Recovery, Area of Investigation 1
SOP	Standard operating procedure
SOW	Statement of Work
SQL	Sample quantitation limit
SVOC	Semivolatile organic compound
SW	EPA SW-846
TestAmerica	TestAmerica Laboratories, Inc.

1. INTRODUCTION

This document presents the Data Evaluation Summary Report (DESR) prepared by EA Engineering, Science, and Technology, Inc., PBC (EA) for the U.S. Oil Recovery (site), Area of Investigation 1, located in Pasadena, Harris County, Texas. This DESR documents and summarizes the analytical data collected during the Remedial Investigation (RI) and Feasibility Study (FS) oversight activities in November 2016. EA produced this DESR for the U.S. Environmental Protection Agency (EPA) Region 6 as part of Task Order No. 0144-RSBD-A6MY under Remedial Action Contract No. EP-W-06-004, in accordance with the Statement of Work (SOW) issued by EPA (2016a).

The purpose of the field investigation was to collect sufficient data to support the RI/FS oversight for the site. This DESR discusses the background soil sample results collected during the November 2016 oversight activities. The EPA SOW (2016a) and the EPA-approved Work Plan (EA 2016a) set forth the framework and requirements for this effort.

The purpose of the DESR is presented in Section 2. A data summary that compiles, tabulates, and summarizes the data collected during the November 2016 RI/FS activities is provided in Section 3. The quality assurance (QA)/quality control (QC) findings are presented in Section 4. Data evaluation parameters are presented in Section 5. The data quality objective (DQO) assessment and conclusions are presented in Section 6. References are provided in Section 7. Supporting materials follow the text.

2. PURPOSE

The purpose of this DESR is to summarize the analytical data quality and usability in accordance with the DQOs and data quality indicators presented in the EPA guidance (EPA 2002; 2006a). The DQO process is a series of planning steps designed to ensure that the type, quantity, and quality of environmental data used in decision-making are appropriate for the intended application.

The overall QA objectives are as follows:

- Collect split samples consistent with the Sampling and Analysis Plan (SAP) (EA 2016b)
- Obtain data of known quality to verify the potentially responsible party (PRP) assessment of the nature and extent of contamination and human health and ecological risks at the site
- Document the performance of the PRP's quality program, including performance of the work and required changes, if any, to planned work at the site.

In order to address the goals of the study, soil samples were collected as outlined in the SAP (EA 2016b) and analyzed for semivolatile organic compounds (SVOCs), pesticides, herbicides, and metals including mercury.

3. DATA SUMMARY

This section presents a summary of the soil data collected during the field investigation conducted 22 November 2016. EA collected four split samples from two soil sample locations including BGSB10 from 0.0 feet (ft) below ground surface (bgs) to 0.5 ft bgs and 1.0 to 2.0 ft bgs, and location BGSB22 from 0.0 to 0.5 ft bgs and 1.0 to 2.0 ft bgs. The samples were shipped overnight to the TestAmerica Laboratories, Inc. (TestAmerica) Pittsburgh, Pennsylvania, facility for analysis. The sample analysis parameters and testing methods are provided below.

- SVOCs—EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846 (SW) 8270D low-level (LL)
- Organochlorine pesticides—EPA SW8081B LL
- Chlorinated herbicides—EPA SW8151A
- Metals (project-specific list)—EPA SW6020A
- Mercury—EPA SW7471B.

The analytical data results for the November 2016 sampling event are included in the TestAmerica sample delivery group (SDG) 180-61122. The TestAmerica laboratory data report for the samples collected in November 2016 is included in Appendix B of this DESR. The split sample results for both TestAmerica and the PRP laboratory are presented in Appendix A.

4. QUALITY ASSURANCE/QUALITY CONTROL

This section describes the QA/QC findings from the data validation performed on the analytical data for the samples collected November 2016. The following sections present the QA/QC results of the validation performed in accordance with the following documents:

- *EPA National Functional Guidelines for Inorganic Superfund Methods Data Review, 540-R-2016-001* (EPA 2016b)
- *EPA National Functional Guidelines for Superfund Organic Methods Data Review, 540-R-2016-002* (EPA 2016c)

- *SAP, Remedial Investigation/Feasibility Study Oversight, U.S. Oil Recovery Superfund Site, Area of Investigation 1, Pasadena, Harris County, Texas* (EA 2016b).

The qualifier definitions presented on Table 1 provide a brief explanation for the data qualifiers that may be applied to the analytical data during the validation process. The definitions are consistent with EPA guidance (2016b; 2016c).

TABLE 1 DATA VALIDATION QUALIFIERS

Qualifier	Definition
Data Qualifier Definitions	
No Qualifier	Indicates that the data are acceptable both qualitatively and quantitatively.
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample. The data are valid for project use to achieve project data quality objectives (DQOs).
J+	The result is an estimated concentration, but the result may be biased high. The data are valid for project use to achieve project DQOs.
J-	The result is an estimated concentration, but the result may be biased low. The data are valid for project use to achieve project DQOs.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate. The data are valid for project use to achieve project DQOs.
R	The sample results are not usable to achieve project DQOs based on certain QC criteria outside of acceptance limits. The analyte may or may not be present in the sample.

The data validation findings are summarized in the following sections and also in the Data Validation Report included in Appendix C. The following sections address data validation findings that resulted in the qualification of data. Data quality indicator exceedances that did not result in qualification of data are not included in the following sections but are presented in the individual sample delivery group data validation reports.

4.1 CHAIN OF CUSTODY AND SAMPLE RECEIPT

SDG 180-61122

The samples were received by TestAmerica under appropriate chain of custody, in good condition, and the cooler temperature was 2.5 degrees centigrade upon receipt at the laboratory.

4.2 HOLDING TIMES

SDG 180-61122

The samples were extracted and analyzed within the method-specific holding times.

4.3 CALIBRATION CRITERIA

SDG 180-61122

No calibration criteria were exceeded that resulted in data qualification.

4.4 BLANK DETECTIONS

SDG 180-61122

Laboratory method and calibration blanks were prepared and analyzed along with project samples. Results are within method QC criteria for all analytical parameters.

4.5 LABORATORY CONTROL SAMPLES

Laboratory control samples (LCSs) were prepared and analyzed as required by the analytical method. The LCS percent recovery (%R) is within method control limits for target analytes, with the exceptions noted below.

SDG 180-61122

- SVOCs—the LCS %Rs are below method control limits for benzaldehyde and hexachloroethane. The benzaldehyde result for sample BGSB22-(0.0-0.5)-161122-S was already "J" qualified because the result is an estimated value below the reporting limit. A "J-" qualifier was applied to reflect potential low bias data. The other project sample results for benzaldehyde, as well as the results for hexachloroethane, are non-detect and have been flagged as estimated with the "UJ-" qualifier due to evidence of potential low bias.

- Pesticides—the LCS %Rs are below method control limits for delta-BHC, 4,4'-dichlorodiphenyltrichloroethane (DDT), and methoxychlor. The corresponding project sample results are "UJ" and "J" qualified, signifying estimated non-detect and detect values due to evidence of potential low bias.

4.6 SURROGATE RECOVERIES

The surrogate %Rs are within method QC criteria with the exceptions noted below.

SDG 180-61122

Surrogate recoveries were within method control criteria for this SDG or did not result in data qualification due to required sample dilution.

4.7 MATRIX SPIKE, MATRIX SPIKE DUPLICATE AND LABORATORY DUPLICATE SAMPLES

Matrix spike (MS), matrix spike duplicate (MSD), and laboratory duplicate samples were prepared and analyzed according to the analytical method and project requirements. The %R and relative percent difference (RPD) for the QC samples is within project-specific QC limits, with the exceptions noted below.

SDG 180-61122

- SVOCs—the %Rs are below project-specific QC limits for the MS and/or MSD samples prepared with sample BGSB22-(0.0-0.5)-161122-S for SVOC analytes 1,4-dioxane, 2,4-dimethylphenol, 2,4-dinitrophenol, atrazine, benzaldehyde, benzo(b)fluoranthene, benzo(k)fluoranthene, bis(2-chloroethoxy)methane, bis(2-chloroethyl)ether, hexachlorobutadiene, hexachlorocyclopentadiene, hexachloroethane, naphthalene, nitrobenzene, phenol, pyrene, and 3,3'-dichlorobenzidine. The results for these analytes in the associated sample have been flagged "UJ" as estimated non-detect and flagged "J-" for estimated detect values.

- SVOCs—the %Rs for caprolactam are below 10 percent for the MS/MSD samples prepared with sample BGSB22-(0.0-0.5)-161122-S. The caprolactam result for this sample has been qualified "R" signifying rejected and not usable data.

- Metals—the %Rs are below project-specified QC limits for the MS and/or MSD prepared with sample BGSB22-(0.0-0.5)-161122-S for arsenic, barium, and zinc. The results for these analytes in the associated sample are "J-"qualified due to potential low bias.

4.8 POST-DIGESTION SPIKE SAMPLE

The post-digestion spike sample was prepared and analyzed according to analytical method requirements to assess spike recovery within a sample matrix. Spike results met QC limits with the exceptions noted below.

SDG 180-61122

- The manganese %R for sample BGSB22-(0.0-0.5)-161122-S exceeded QC limits and the result has been "J-"qualified as estimated data due to potential low bias.

4.9 ICP SERIAL DILUTION

The inductively-coupled plasma (ICP) serial dilution sample was prepared and analyzed according to method and project requirements to assess whether significant physical or chemical interferences exist due to sample matrix. ICP serial dilution results met QC limits with the exceptions noted below.

SDG 180-61122

- The percent difference for the ICP serial dilution sample BGSB22-(0.0-0.5)-161122-S exceeded QC limits for beryllium, and the result has been "J" qualified signifying estimated data.

4.10 TARGET COMPOUND IDENTIFICATION

Target compound identification was assessed for the SVOC and pesticide methods analyzed by gas chromatography and gas chromatography/mass spectrometry. Mass spectra criteria and/or second column confirmation criteria were within acceptance limits for detected analytes with the exceptions noted below.

SDG 180-61122

- The second column confirmation for sample BGSB22-(0.0-0.5)-161122-S for pesticide analytes 4,4'-dichlorodiphenyldichloroethane (DDD), 4,4'-DDT, 4.4'-dichlorodiphenyldichloroethylene, heptachlor, and heptachlor epoxide exceeded the method acceptance limits; the lower values are reported and are "J" qualified

- The second column confirmation for sample BGSB10-(0.0-0.5)-161122-S for pesticide analytes cis-chlordane, dieldrin, and heptachlor epoxide exceeded the method acceptance limits; the lower values are reported and are "J" qualified

- The second column confirmation for sample BGSB10-(1-2)-161122-S for pesticide analytes cis-chlordane and 4,4'-DDD exceeded the method acceptance limits; the lower values are reported and are "J" qualified.

4.11 SAMPLE QUANTITATION AND REPORTED DETECTION LIMITS

Project samples were analyzed at various dilutions as required by the analytical method, due to elevated concentrations of target analytes in the sample and using a low-level method for analysis or due to sample matrix interference. The analytical results for project samples were reported on a dry-weight basis (corrected for percent moisture). Detected data results below the reporting limit and above the method detection limit (MDL) were "J" qualified as estimated values. Non-detected sample results were reported at the MDL with a "U" qualifier. Samples requiring dilutions are listed below.

SDG 180-61122

- Sample BGSB10-(0.0-0.5)-161122-S (10-fold dilution for SVOCs, 5-fold dilution for organochlorine pesticides, and 20-fold dilution for herbicides)
- Sample BGSB10-(1-2)-161122-S (5-fold dilution for SVOCs, 5-fold dilution for organochlorine pesticides, and 20-fold dilution for herbicides)
- Sample BGSB22-(0.0-0.5)-161122-S (5-fold dilution for organochlorine pesticides and 20-fold dilution for herbicides)
- Sample BGSB22-(1-2)-161122-S (5-fold dilution for organochlorine pesticides, 20-fold dilution for herbicides, and 10-fold dilution for manganese).

5. DATA EVALUATION PARAMETERS

The data were evaluated for acceptable quality and quantity based on the quality indicator parameters including precision, accuracy, representativeness, completeness, and comparability, (PARCC). To the extent possible, EA followed EPA's data quality assessment process (EPA 2006b; 2006c). This evaluation helps determine whether limitations should be placed on the data and to verify that the type, quality, and quantity of data that are collected are appropriate for their intended use. The PARCC parameters were reviewed for the laboratory analytical data results and are discussed in the following sections.

A well-defined QA/QC process is integral to the generation of analytical data of known and documented quality. The QC process includes those activities required during data collection to produce data of sufficient quality to support the decisions that will be made based on the data (e.g., comparison to the PRP sample data). After environmental data are collected, QA activities focus on evaluating the quality of the data in order to determine the data usability with respect to the support for remedial or enforcement decisions. Table 2 presents the acceptance criteria for definitive laboratory data for chemical analyses of investigation samples only.

5.1 DATA CATEGORIES

In order to produce data suitable for decision-making, an appropriate analytical technique must be selected. The EPA Superfund program has developed two descriptive categories of analytical techniques: (1) field-based techniques and (2) fixed-laboratory techniques. The type of data generated depends on the qualitative and quantitative DQOs developed for a project. Regardless of how the data were analyzed, they must be of adequate quality for the decision-making process for which they were collected. For this project, analysis was performed using fixed-laboratory techniques.

Rigorous analytical methods are used to generate analyte-specific, definitive data. The definitive quality of the data is assured by: (1) using standard operating procedures (SOPs) and QC processes during data collection; (2) documented control and traceability of reference standards, calibrations, and instrument performance; and (3) acceptable performance of field and laboratory QC procedures within the defined limits established for these procedures.

TABLE 2 QUALITY ASSURANCE INDICATOR CRITERIA

Indicator Parameter	Analytical Parameter	QC Sample[a]	Acceptance Criteria for Laboratory Analysis
Accuracy (percent recovery)	SVOCs, Pesticides, Herbicides	MS MSD Blanks[b]	50 to 150 percent recovery (MS/MSD) Less than CRQL (blanks)
	Metals, Mercury	MS/MSD LCS Reference samples Blanks[b]	75 to 125 percent recovery (MS/MSD) 80 to 120 percent recovery (LCS) Limits per supplier (Ref sample) Less than CRQL (blanks)
Precision (RPD)	SVOCs, Pesticides, Herbicides	MS MSD Field duplicates	30 percent RPD (MS/MSD) 50 percent RPD (Field duplicates)
	Metals, Mercury	MS MSD or MD Field duplicates Lab duplicates	20 percent RPD (MS, MSD, MD aqueous) 35 percent RPD (MS, MSD, MD solid) 50 percent RPD (field duplicates) 25 percent (lab duplicates)
Sensitivity (quantitation limits)	Analytical tests	MS MD or MSD Field duplicates Lab duplicates	Not applicable
Completeness	The objective for data completeness is 90 percent.		
Representativeness	The sampling network and analytical methods for this site are designed to provide data that are representative of site conditions.		
Comparability	The use of standard published sampling and analytical methods, and the use of QC samples, will ensure data of known quality. These data can be compared to other data of known quality.		

NOTE:

[a] Not all listed QC samples apply to all analytical parameters. QC samples are analytical method specific.

[b] May include method blanks, reagent blanks, instrument blanks, calibration blanks, trip blanks and field blanks.

CRQL = Contract-required Quantitation Limit
LCS = Laboratory control sample
MD = Matrix duplicate
MS = Matrix spike
MSD = Matrix spike duplicate
QC = Quality control
RPD = Relative percent difference
SVOC = Semivolatile organic compound

5.2 MEASUREMENT QUALITY OBJECTIVES

Analytical results were evaluated in accordance with PARCC parameters to document the quality of the data and to ensure that the data are of sufficient quality to meet the project objectives. Of these PARCC parameters, precision and accuracy were evaluated quantitatively by collecting the QC check samples listed in Table 2.

The sections below describe each of the PARCC parameters and how they were assessed to meet the DOQs for this project.

5.2.1 Precision

Precision is the degree of mutual agreement between individual measurements of the same property under similar conditions. Usually, combined field and laboratory precision is evaluated by collecting and analyzing field duplicates and then calculating the variance between the samples, typically as a relative percent difference (RPD).

RPD is calculated as follows: $$RPD = \frac{|A - B|}{(A + B)/2} \times 100\%$$

where: A = first duplicate concentration
B = second duplicate concentration.

Field sampling precision is typically evaluated by analyzing field duplicate samples; however, field duplicates of split samples were not collected during this sampling event. RPD evaluations are documented in the individual laboratory report for the sample delivery group that was validated for LCS and LCS duplicate pair. A summary of the soil samples collected is presented in Appendix A. A comparison of the PRP sample results and the split sample results collected by EA is discussed in Section 5.2.5.

5.2.2 Accuracy

Accuracy is the degree to which a measurement agrees with its true value and is expressed as percent recovery; acceptance criteria for each analytical methodology are stated in Table 2. Accuracy is assessed by comparing LCS and surrogate recoveries to associated QC limits. Through the process of data validation and review, LCS, and surrogate recoveries were evaluated for compliance with acceptance criteria for accuracy for each applicable analytical methodology.

LCSs or blank spikes are also analyzed at a frequency of 5 percent or per analytical batch. Surrogate standards, where available, are added to every sample analyzed for organic

constituents. The results of the spiked samples are used to calculate the percent recovery for evaluating accuracy. The evaluations of percent recovery are documented in Appendix C.

$$\text{Percent Recovery} = \frac{S - C}{T} \times 100\%$$

where: S = measured spike sample concentration
C = sample concentration
T = true or actual concentration of the spike.

5.2.3 Representativeness

Representativeness is a qualitative parameter and is defined by the degree to which data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or a process or environmental condition. Representativeness requirements are satisfied by: (1) ensuring the SAP (EA 2016b) and the PRP sampling plans are followed; (2) verifying that samples are collected in accordance with the appropriate PRP SOPs, or that appropriate sampling techniques are used when PRP SOPs are not available; (3) following proper analytical procedures; and (4) not exceeding required maximum holding times.

EA observed the following deviation from PRP sampling plan during the field activities: samples SB-01 through SB-07 were relocated to the south due to the presence of concrete debris. Further information can be found in the project Daily Field Reports and Field Logbook, which were submitted to EPA in December 2016.

Samples were analyzed using EPA approved analytical methods. The PRP and EA split samples were analyzed within the holding time specified by EPA guidance and the analytical methods. Minor QC issues affecting the results that may or may not result in data qualification are identified in the laboratory data report case narrative (Appendix B).

5.2.4 Completeness

Completeness is defined as the percentage of measurements determined to be valid. The validity of sample results is determined through the data validation process. The rejected (R) sample results, if any, are considered to be invalid data. The data that are qualified as estimated (J, J-, or J+) or estimated non-detect data (UJ) are considered to be valid and usable to achieve project DQOs. The completeness is calculated and reported for each method and analyte combination. The number of valid results divided by the number of possible individual analyte results, expressed as a percentage, determines the completeness of the data set.

The percent of data completeness for the November 2016 sampling event is acceptable. Based on the data review, the completeness of deliverables is 100 percent. One SVOC data result is

"R" qualified, signifying rejected or unusable data; caprolactam for sample BGSB22-(0.0-0.5)-161122-S. The analytical data achieve greater than the 90 percent data completeness objective and the project DQOs. The November 2016 sample data are usable and meet the objectives of the site RI/FS oversight.

5.2.5 Comparability

Comparability of data is a qualitative parameter that expresses the confidence with which one data set may be compared to another. Comparability is attained by achieving the QA objectives for PARCC and may be measured by calculating the RPD between the PRP and EA split sample data results. For the purpose of making an evaluation, the field duplicate sample RPD criteria of 50 percent has been used to make a comparison of the EA and PRP split sample data. Due to differences in analytical method reporting limits between TestAmerica and the PRP laboratory, RPD was calculated when a concentration of an analyte was reported by both laboratories above the method detection limit. There were 5 analytical methods and 117 analytes reported by both EA and the PRP laboratories for each sample. The comparison of results is listed below and summarized on Table A-2.

SDG 180-61122

- Sample BGSB10-(0.0-0.5)-161122-S—17 of 18 SVOC detects exceed 50 percent RPD; 2 of 2 pesticide detects exceed 50 percent RPD; 2 of 16 metal and mercury detects exceed 50 percent RPD; no herbicide data meet criteria for comparison

- Sample BGSB10-(1-2)-161122-S—5 of 18 SVOC detects exceed 50 percent RPD; 2 of 18 metal and mercury detects exceed 50 percent RPD; no pesticide or herbicide data meet criteria for comparison

- Sample BGSB22-(0.0-0.5)-161122-S—7 of 8 SVOC detects exceed 50 percent RPD; 2 of 3 pesticide detects exceed 50 percent RPD; 11 of 16 metal and mercury detects exceed 50 percent RPD; no herbicide data meet criteria for comparison

- Sample BGSB22-(1-2)-161122-S—11 of 16 metal and mercury detects exceed 50 percent RPD; no SVOC, pesticide, or herbicide data meet criteria for comparison.

5.2.6 Sensitivity

Sensitivity is the measure of the signal from an instrument that represents an actual deflection or response above instrument noise. The analytical sensitivity is measured by the achievable MDL and reported with the applicable dilution factors, preparation factors, and dry-weight correction for each individual sample to achieve the method reporting limit or sample quantitation limit (SQL).

Ideally the method reporting limit provided by the laboratories is sufficient to achieve the project required screening values (i.e., human health screening levels) however, the laboratory is also able to report data to the MDL and "J" flag as estimated data in order to achieve screening criteria. The reporting limits listed on Table A-2 are the laboratory's MDL adjusted for sample dilution and percent moisture.

5.3 DETECTION AND QUANTITATION LIMITS

The analytical parameters and the quantitation limits reported by the laboratories for this project are determined by the analytical methods and implementation of the methods by the individual laboratories. The MDL is the minimum concentration of an analyte that can be reliably distinguished from background noise for a specific analytical method. The reporting limit represents the lowest concentration of an analyte that can be accurately and reproducibly quantified in a sample matrix. The method reporting limit or SQL for specific analytical methods and sample matrices, such as air, soil, or water, are typically an order of magnitude higher than the MDL to allow for matrix effects and 99 percent data confidence.

For this project, sample results were reported as estimated values below the method reporting limit or SQL. The MDL and reporting limits for each analyte is presented in the laboratory's electronic data deliverable.

6. DATA QUALITY OBJECTIVES AND CONCLUSIONS

Based on the data validation findings summarized in Section 4, the EA split sample data were determined to be usable as qualified.

The objective of the field oversight and split sample collection was to obtain split sample results of known quality that may support the RI/FS oversight. Based upon an overall review of the results presented within this DESR, the issues of importance in this evaluation are discussed in the following sections.

6.1 MEDIA VARIABILITY

EA split sample results were compared to the PRP sample results in order to assess the following: (1) if the PRP sampling process was consistent with their sampling plan, and (2) if the PRP laboratory was properly reporting data. Of the 117 analytes reported by both laboratories, the sample results were within the applied 50 percent RPD criterion with the exceptions discussed in Section 5.2.5. Variability of sample data could be due to soil matrix effects and non-homogeneity of soil samples, laboratory analysis procedures, and laboratory achievable MDL and method reporting limits.

6.2 LABORATORY PERFORMANCE PROBLEMS

TestAmerica's performance met the required laboratory QC protocol and data quality indicator criteria. Refer to Section 4 for a more detailed discussion of laboratory data quality.

6.3 CONCLUSIONS

The split sample analytical results for the November 2016 sampling event met overall project objectives for the quantity and quality of data required to support the decision-making process for the RI/FS oversight. Data qualified as estimated (J-, J+ and UJ) and data with no qualifiers are usable to achieve project objectives. Qualitatively, the EA sample data are comparable to the PRP sample data with noted soil matrix and laboratory analytical method variability and reporting limits. Although sample detections reported by both laboratories may not compare within 50 percent RPD, data values can still be used to assess nature and extent of contamination and to determine if a potential for human health or ecological risk exists at the site.

7. REFERENCES

EA Engineering, Science, and Technology, Inc., PBC (EA). 2016a. *Remedial Investigation/Feasibility Study Oversight Work Plan for U.S. Oil Recovery Superfund Site, Pasadena, Harris County, Texas.* Revision 01. August.

———. 2016b. *Sampling and Analysis Plan for Remedial Investigation/Feasibility Study Oversight, U.S. Oil Recovery Superfund Site, Pasadena, Harris County, Texas.* Revision 01. November.

U.S. Environmental Protection Agency (EPA). 2002. *Guidance for Quality Assurance Project Plans(QA/G-5).* EPA/240/R-02/009. OEI. Washington, D.C. December.

———. 2006a. *Guidance on Systematic Planning Using the Data Quality Objectives Process (QA/G-4).* EPA/240/B-06/001. OEI. Washington, D.C. February.

———. 2006b. *Data Quality Assessment: A Reviewer's Guide (QA/G-9R).* EPA/240/B-06/002. OEI. Washington, D.C. February.

———. 2006c. *Data Quality Assessment: Statistical Methods for Practitioners (QA/G-9S).* EPA/240/B-06/003. OEI. Washington, D.C. February.

———. 2016a. *Statement of Work for Remedial Investigation/Feasibility Study Oversight, US Oil Recovery Superfund Site, 400 N Richey Property (AOI-1), Harris County, Texas.* June.

———. 2016b. *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Inorganic Methods Data Review, EPA 540-R-2016-001.* September.

———. 2016c. *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, EPA 540-R-2016-002.* September.

Appendix A

Data Summary Table and
Relative Percent Difference Calculations

This page intentionally left blank

Table A-1 Split Sample Results

SampleID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	EAQual	Units	RL	MDL	QCLot	QCRun	Dilution	Analytical Group
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	1,1'-BIPHENYL	92-52-4	SOIL	ND	N/A	MG/KG	0.359	0.0324	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	1,2,4,5-TETRACHLOROBENZENE	95-94-3	SOIL	ND	N/A	MG/KG	0.359	0.0275	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	1,4-DIOXANE	123-91-1	SOIL	ND	N/A	MG/KG	0.725	0.0416	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	1-METHYLNAPHTHALENE	90-12-0	SOIL	ND	N/A	MG/KG	0.0728	0.00774	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,2'-OXYBIS[1-CHLOROPROPANE]	108-60-1	SOIL	ND	N/A	MG/KG	0.0728	0.00783	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,3,4,6-TETRACHLOROPHENOL	58-90-2	SOIL	ND	N/A	MG/KG	0.359	0.0233	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4,5-TRICHLOROPHENOL	95-95-4	SOIL	ND	N/A	MG/KG	0.359	0.0387	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4,6-TRICHLOROPHENOL	88-06-2	SOIL	ND	N/A	MG/KG	0.359	0.0543	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4-DICHLOROPHENOL	120-83-2	SOIL	ND	N/A	MG/KG	0.0728	0.00728	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4-DIMETHYLPHENOL	105-67-9	SOIL	ND	N/A	MG/KG	0.359	0.0567	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4-DINITROPHENOL	51-28-5	SOIL	ND	N/A	MG/KG	1.85	0.432	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4-DINITROTOLUENE	121-14-2	SOIL	ND	N/A	MG/KG	0.359	0.0293	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,6-DINITROTOLUENE	606-20-2	SOIL	ND	N/A	MG/KG	0.359	0.0374	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-CHLORONAPHTHALENE	91-58-7	SOIL	ND	N/A	MG/KG	0.0728	0.00757	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-CHLOROPHENOL	95-57-8	SOIL	ND	N/A	MG/KG	0.359	0.0297	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-METHYLNAPHTHALENE	91-57-6	SOIL	ND	N/A	MG/KG	0.0728	0.00652	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-METHYLPHENOL	95-48-7	SOIL	ND	N/A	MG/KG	0.359	0.0253	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-NITROANILINE	88-74-4	SOIL	ND	N/A	MG/KG	1.85	0.162	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-NITROPHENOL	88-75-5	SOIL	ND	N/A	MG/KG	0.359	0.04	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	3,3'-DICHLOROBENZIDINE	91-94-1	SOIL	ND	N/A	MG/KG	0.359	0.0383	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	3-NITROANILINE	99-09-2	SOIL	ND	N/A	MG/KG	1.85	0.149	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4,6-DINITRO-2-METHYLPHENOL	534-52-1	SOIL	ND	N/A	MG/KG	1.85	0.146	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-BROMOPHENYL PHENYL ETHER	101-55-3	SOIL	ND	N/A	MG/KG	0.359	0.0316	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-CHLORO-3-METHYLPHENOL	59-50-7	SOIL	ND	N/A	MG/KG	0.359	0.0334	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-CHLOROPHENYL PHENYL ETHER	7005-72-3	SOIL	ND	N/A	MG/KG	0.359	0.0403	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-NITROANILINE	100-01-6	SOIL	ND	N/A	MG/KG	1.85	0.147	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-NITROPHENOL	100-02-7	SOIL	ND	N/A	MG/KG	1.85	0.132	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ACENAPHTHENE	83-32-9	SOIL	0.017	N/A	MG/KG	0.0728	0.00697	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ACENAPHTHYLENE	208-96-8	SOIL	0.0222	N/A	MG/KG	0.0728	0.00831	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ACETOPHENONE	98-86-2	SOIL	ND	N/A	MG/KG	0.359	0.0298	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ANTHRACENE	120-12-7	SOIL	0.0631	N/A	MG/KG	0.0728	0.0071	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ATRAZINE	1912-24-9	SOIL	ND	N/A	MG/KG	0.359	0.0353	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZALDEHYDE	100-52-7	SOIL	0.359	UJ	MG/KG	0.359	0.0544	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[A]ANTHRACENE	56-55-3	SOIL	0.712	N/A	MG/KG	0.0728	0.00909	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[A]PYRENE	50-32-8	SOIL	0.811	N/A	MG/KG	0.0728	0.00726	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[B]FLUORANTHENE	205-99-2	SOIL	1.22	N/A	MG/KG	0.0728	0.0114	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[G,H,I]PERYLENE	191-24-2	SOIL	0.851	N/A	MG/KG	0.0728	0.00722	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[K]FLUORANTHENE	207-08-9	SOIL	0.424	N/A	MG/KG	0.0728	0.0147	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BIS(2-CHLOROETHOXY)METHANE	111-91-1	SOIL	ND	N/A	MG/KG	0.359	0.0239	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BIS(2-CHLOROETHYL)ETHER	111-44-4	SOIL	ND	N/A	MG/KG	0.0728	0.00974	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	SOIL	0.134	N/A	MG/KG	0.725	0.0586	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BUTYL BENZYL PHTHALATE	85-68-7	SOIL	0.359	N/A	MG/KG	0.359	0.0496	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	CAPROLACTAM	105-60-2	SOIL	1.85	N/A	MG/KG	1.85	0.274	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	CARBAZOLE	86-74-8	SOIL	0.0664	N/A	MG/KG	0.0728	0.00668	180-195402	180-195402	10	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/25/2016	11/25/2016	11/25/2016	8270D_LL	CHRYSENE	218-01-9	SOIL	1.03	N/A	MG/KG	0.0728	0.00864	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DIBENZ(A,H)ANTHRACENE	53-70-3	SOIL	0.206	N/A	MG/KG	0.0728	0.00807	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DIBENZOFURAN	132-64-9	SOIL	0.359	N/A	MG/KG	0.359	0.0357	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DIETHYL PHTHALATE	84-66-2	SOIL	ND	N/A	MG/KG	0.359	0.0396	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DIMETHYL PHTHALATE	131-11-3	SOIL	ND	N/A	MG/KG	0.359	0.0395	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DI-N-BUTYL PHTHALATE	84-74-2	SOIL	ND	N/A	MG/KG	0.359	0.0454	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DI-N-OCTYL PHTHALATE	117-84-0	SOIL	ND	N/A	MG/KG	0.359	0.0382	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	FLUORANTHENE	206-44-0	SOIL	1.54	N/A	MG/KG	0.0728	0.00776	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	FLUORENE	86-73-7	SOIL	ND	N/A	MG/KG	0.0728	0.00956	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	HEXACHLOROBENZENE	118-74-1	SOIL	ND	N/A	MG/KG	0.0728	0.00773	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	HEXACHLOROBUTADIENE	87-68-3	SOIL	ND	N/A	MG/KG	0.0728	0.00812	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	HEXACHLOROCYCLOPENTADIENE	77-47-4	SOIL	ND	N/A	MG/KG	0.359	0.0391	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	HEXACHLOROETHANE	67-72-1	SOIL	ND	UJ	MG/KG	0.359	0.0261	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	INDENO[1,2,3-CD]PYRENE	193-39-5	SOIL	0.71	N/A	MG/KG	0.0728	0.00747	180-195402	180-195402	10	SEMI-VOLATILE

This page intentionally left blank

Table A-1 Split Sample Results

SampleID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	EAQual	Units	RL	MDL	QCLot	QCRun	Dilution	Analytical Group
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ISOPHORONE	78-59-1	SOIL	ND	N/A	MG/KG	0.359	0.0273	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	METHYLPHENOL, 3 & 4	106-44-5	SOIL	ND	N/A	MG/KG	0.359	0.0355	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	NAPHTHALENE	91-20-3	SOIL	ND	N/A	MG/KG	0.0728	0.00625	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	NITROBENZENE	98-95-3	SOIL	ND	N/A	MG/KG	0.725	0.0302	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	N-NITROSODI-N-PROPYLAMINE	621-64-7	SOIL	ND	N/A	MG/KG	0.0728	0.00851	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	N-NITROSODIPHENYLAMINE	86-30-6	SOIL	ND	N/A	MG/KG	0.359	0.0336	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	PENTACHLOROPHENOL	87-86-5	SOIL	ND	N/A	MG/KG	0.359	0.0324	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	PHENANTHRENE	85-01-8	SOIL	0.375	N/A	MG/KG	0.0728	0.0115	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	PHENOL	108-95-2	SOIL	ND	N/A	MG/KG	0.359	0.00857	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	PYRENE	129-00-0	SOIL	1.09	N/A	MG/KG	0.0728	0.00733	180-195402	180-195402	10	SEMI-VOLATILE
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	4,4'-DDD	72-54-8	SOIL	0.00097	N/A	MG/KG	0.000459	0.0000468	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	4,4'-DDE	72-55-9	SOIL	ND	N/A	MG/KG	0.000459	0.000146	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	4,4'-DDT	50-29-3	SOIL	0.000459	UJ	MG/KG	0.000459	0.0000468	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ALDRIN	309-00-2	SOIL	0.000148	N/A	MG/KG	0.000459	0.0000485	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ALPHA-BHC	319-84-6	SOIL	ND	N/A	MG/KG	0.000459	0.000135	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	BETA-BHC	319-85-7	SOIL	ND	N/A	MG/KG	0.000459	0.000103	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	CIS-CHLORDANE	5103-71-9	SOIL	0.00115	J	MG/KG	0.000459	0.0000738	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	DELTA-BHC	319-86-8	SOIL	0.000459	UJ	MG/KG	0.000459	0.000164	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	DIELDRIN	60-57-1	SOIL	0.0014	J	MG/KG	0.000459	0.0000435	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDOSULFAN I	959-98-8	SOIL	ND	N/A	MG/KG	0.000459	0.0000292	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDOSULFAN II	33213-65-9	SOIL	ND	N/A	MG/KG	0.000459	0.00014	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDOSULFAN SULFATE	1031-07-8	SOIL	ND	N/A	MG/KG	0.000459	0.0000584	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDRIN	72-20-8	SOIL	ND	N/A	MG/KG	0.000459	0.000134	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDRIN ALDEHYDE	7421-93-4	SOIL	ND	N/A	MG/KG	0.000459	0.000135	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDRIN KETONE	53494-70-5	SOIL	ND	N/A	MG/KG	0.000459	0.000153	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	GAMMA-BHC (LINDANE)	58-89-9	SOIL	ND	N/A	MG/KG	0.000459	0.0000947	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	HEPTACHLOR	76-44-8	SOIL	ND	N/A	MG/KG	0.000459	0.0000397	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	HEPTACHLOR EPOXIDE	1024-57-3	SOIL	0.000183	J	MG/KG	0.000459	0.0000551	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	METHOXYCHLOR	72-43-5	SOIL	0.000459	UJ	MG/KG	0.000459	0.000133	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	TOXAPHENE	8001-35-2	SOIL	ND	N/A	MG/KG	0.0184	0.0151	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	TRANS-CHLORDANE	5103-74-2	SOIL	ND	N/A	MG/KG	0.000459	0.0000358	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	2,4,5-T	93-76-5	SOIL	ND	U	MG/KG	0.022	0.00276	180-195866	180-195866	20	HERBICIDES
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	2,4-D	94-75-7	SOIL	ND	U	MG/KG	0.0881	0.00603	180-195866	180-195866	20	HERBICIDES
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	2,4-DB	94-82-6	SOIL	ND	U	MG/KG	0.0881	0.00675	180-195866	180-195866	20	HERBICIDES
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	DALAPON	75-99-0	SOIL	ND	N/A	MG/KG	0.0992	0.00782	180-195866	180-195866	20	HERBICIDES
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	DICAMBA	1918-00-9	SOIL	ND	N/A	MG/KG	0.0441	0.00528	180-195866	180-195866	20	HERBICIDES
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	DICHLORPROP	120-36-5	SOIL	ND	N/A	MG/KG	0.0881	0.0104	180-195866	180-195866	20	HERBICIDES
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	DINOSEB	88-85-7	SOIL	ND	U	MG/KG	0.0132	0.00501	180-195866	180-195866	20	HERBICIDES
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	MCPA	94-74-6	SOIL	ND	U	MG/KG	8.81	1.82	180-195866	180-195866	20	HERBICIDES
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	MCPP	93-65-2	SOIL	ND	U	MG/KG	8.81	1.77	180-195866	180-195866	20	HERBICIDES
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	SILVEX (2,4,5-TP)	93-72-1	SOIL	ND	U	MG/KG	0.022	0.00232	180-195866	180-195866	20	HERBICIDES
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	ALUMINUM	7429-90-5	SOIL	9360	N/A	MG/KG	2.62	0.504	180-196391	180-196391	1	METALS
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	ANTIMONY	7440-36-0	SOIL	0.41	N/A	MG/KG	0.175	0.0251	180-196391	180-196391	1	METALS
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	ARSENIC	7440-38-2	SOIL	2.94	N/A	MG/KG	0.0874	0.0126	180-196391	180-196391	1	METALS
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	BARIUM	7440-39-3	SOIL	109	N/A	MG/KG	0.874	0.0129	180-196391	180-196391	1	METALS
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	BERYLLIUM	7440-41-7	SOIL	0.608	N/A	MG/KG	0.0874	0.00656	180-196391	180-196391	1	METALS
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	BORON	7440-42-8	SOIL	5.83	N/A	MG/KG	1.75	0.279	180-196391	180-196391	1	METALS
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	CADMIUM	7440-43-9	SOIL	0.204	N/A	MG/KG	0.0874	0.0114	180-196391	180-196391	1	METALS
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	CHROMIUM	7440-47-3	SOIL	14.3	N/A	MG/KG	0.175	0.0456	180-196391	180-196391	1	METALS
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	COBALT	7440-48-4	SOIL	5.56	N/A	MG/KG	0.0437	0.00219	180-196391	180-196391	1	METALS
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	COPPER	7440-50-8	SOIL	13	N/A	MG/KG	0.175	0.0456	180-196391	180-196391	1	METALS
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	LEAD	7439-92-1	SOIL	40.5	N/A	MG/KG	0.0874	0.00796	180-196391	180-196391	1	METALS
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	MANGANESE	7439-96-5	SOIL	215	N/A	MG/KG	0.437	0.031	180-196391	180-196391	1	METALS
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/2/2016	7471B	MERCURY	7439-97-6	SOIL	0.0294	N/A	MG/KG	0.0358	0.00801	180-196111	180-196111	1	METALS
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	NICKEL	7440-02-0	SOIL	10.2	N/A	MG/KG	0.0874	0.034	180-196391	180-196391	1	METALS
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	SELENIUM	7782-49-2	SOIL	0.482	N/A	MG/KG	0.437	0.0386	180-196391	180-196391	1	METALS
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	SILVER	7440-22-4	SOIL	0.0945	N/A	MG/KG	0.0874	0.00717	180-196391	180-196391	1	METALS
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	THALLIUM	7440-28-0	SOIL	0.0915	N/A	MG/KG	0.0874	0.00227	180-196391	180-196391	1	METALS

This page intentionally left blank

Table A-1 Split Sample Results

SampleID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	EAQual	Units	RL	MDL	QCLot	QCRun	Dilution	Analytical Group
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	VANADIUM	7440-62-2	SOIL	19	N/A	MG/KG	0.0874	0.0612	180-196391	180-196391	1	METALS
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	ZINC	7440-66-6	SOIL	82.5	N/A	MG/KG	0.437	0.169	180-196391	180-196391	1	METALS
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	NA	11/25/2016	MOISTURE	PERCENT MOISTURE	STL00177	SOIL	9.2	N/A	%	0.1	0.1	180-195434	180-195434	1	GENERAL CHEM
BGSB10-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	NA	11/25/2016	MOISTURE	PERCENT SOLIDS	STL00234	SOIL	90.8	N/A	%	0.1	0.1	180-195434	180-195434	1	GENERAL CHEM
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	1,1'-BIPHENYL	92-52-4	SOIL	ND	N/A	MG/KG	0.182	0.0164	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	1,2,4,5-TETRACHLOROBENZENE	95-94-3	SOIL	ND	N/A	MG/KG	0.182	0.0139	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	1,4-DIOXANE	123-91-1	SOIL	ND	N/A	MG/KG	0.367	0.0211	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	1-METHYLNAPHTHALENE	90-12-0	SOIL	ND	N/A	MG/KG	0.0369	0.00392	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,2'-OXYBIS[1-CHLOROPROPANE]	108-60-1	SOIL	ND	N/A	MG/KG	0.0369	0.00396	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,3,4,6-TETRACHLOROPHENOL	58-90-2	SOIL	ND	N/A	MG/KG	0.182	0.0118	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4,5-TRICHLOROPHENOL	95-95-4	SOIL	ND	N/A	MG/KG	0.182	0.0196	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4,6-TRICHLOROPHENOL	88-06-2	SOIL	ND	N/A	MG/KG	0.182	0.0275	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4-DICHLOROPHENOL	120-83-2	SOIL	ND	N/A	MG/KG	0.0369	0.00368	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4-DIMETHYLPHENOL	105-67-9	SOIL	ND	N/A	MG/KG	0.182	0.0287	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4-DINITROPHENOL	51-28-5	SOIL	ND	N/A	MG/KG	0.936	0.219	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4-DINITROTOLUENE	121-14-2	SOIL	ND	N/A	MG/KG	0.182	0.0148	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,6-DINITROTOLUENE	606-20-2	SOIL	ND	N/A	MG/KG	0.182	0.0189	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-CHLORONAPHTHALENE	91-58-7	SOIL	ND	N/A	MG/KG	0.0369	0.00383	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-CHLOROPHENOL	95-57-8	SOIL	ND	N/A	MG/KG	0.182	0.015	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-METHYLNAPHTHALENE	91-57-6	SOIL	0.00638	N/A	MG/KG	0.0369	0.0033	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-METHYLPHENOL	95-48-7	SOIL	ND	N/A	MG/KG	0.182	0.0128	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-NITROANILINE	88-74-4	SOIL	ND	N/A	MG/KG	0.936	0.0822	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-NITROPHENOL	88-75-5	SOIL	ND	N/A	MG/KG	0.182	0.0202	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	3,3'-DICHLOROBENZIDINE	91-94-1	SOIL	ND	N/A	MG/KG	0.182	0.0194	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	3-NITROANILINE	99-09-2	SOIL	ND	N/A	MG/KG	0.936	0.0756	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4,6-DINITRO-2-METHYLPHENOL	534-52-1	SOIL	ND	N/A	MG/KG	0.936	0.0738	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-BROMOPHENYL PHENYL ETHER	101-55-3	SOIL	ND	N/A	MG/KG	0.182	0.016	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-CHLORO-3-METHYLPHENOL	59-50-7	SOIL	ND	N/A	MG/KG	0.182	0.0169	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-CHLOROPHENYL PHENYL ETHER	7005-72-3	SOIL	ND	N/A	MG/KG	0.182	0.0204	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-NITROANILINE	100-01-6	SOIL	ND	N/A	MG/KG	0.936	0.0744	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-NITROPHENOL	100-02-7	SOIL	ND	N/A	MG/KG	0.936	0.067	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ACENAPHTHENE	83-32-9	SOIL	0.00775	N/A	MG/KG	0.0369	0.00353	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ACENAPHTHYLENE	208-96-8	SOIL	0.0147	N/A	MG/KG	0.0369	0.00421	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ACETOPHENONE	98-86-2	SOIL	ND	N/A	MG/KG	0.182	0.0151	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ANTHRACENE	120-12-7	SOIL	0.0383	N/A	MG/KG	0.0369	0.00359	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ATRAZINE	1912-24-9	SOIL	ND	N/A	MG/KG	0.182	0.0179	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZALDEHYDE	100-52-7	SOIL	0.182	UJ	MG/KG	0.182	0.0275	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[A]ANTHRACENE	56-55-3	SOIL	0.299	N/A	MG/KG	0.0369	0.0046	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[A]PYRENE	50-32-8	SOIL	0.319	N/A	MG/KG	0.0369	0.00367	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[B]FLUORANTHENE	205-99-2	SOIL	0.449	N/A	MG/KG	0.0369	0.00577	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[G,H,I]PERYLENE	191-24-2	SOIL	0.312	N/A	MG/KG	0.0369	0.00365	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[K]FLUORANTHENE	207-08-9	SOIL	0.195	N/A	MG/KG	0.0369	0.00742	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BIS(2-CHLOROETHOXY)METHANE	111-91-1	SOIL	ND	N/A	MG/KG	0.182	0.0121	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BIS(2-CHLOROETHYL)ETHER	111-44-4	SOIL	ND	N/A	MG/KG	0.0369	0.00493	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	SOIL	0.118	N/A	MG/KG	0.367	0.0297	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BUTYL BENZYL PHTHALATE	85-68-7	SOIL	0.0473	N/A	MG/KG	0.182	0.0251	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	CAPROLACTAM	105-60-2	SOIL	ND	N/A	MG/KG	0.936	0.139	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	CARBAZOLE	86-74-8	SOIL	0.0244	N/A	MG/KG	0.0369	0.00338	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	CHRYSENE	218-01-9	SOIL	0.399	N/A	MG/KG	0.0369	0.00437	180-195402	180-195402	6	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DIBENZ(A,H)ANTHRACENE	53-70-3	SOIL	0.0783	N/A	MG/KG	0.0369	0.00408	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DIBENZOFURAN	132-64-9	SOIL	ND	N/A	MG/KG	0.182	0.0181	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DIETHYL PHTHALATE	84-66-2	SOIL	ND	N/A	MG/KG	0.182	0.0201	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DIMETHYL PHTHALATE	131-11-3	SOIL	ND	N/A	MG/KG	0.182	0.02	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DI-N-BUTYL PHTHALATE	84-74-2	SOIL	ND	N/A	MG/KG	0.182	0.023	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DI-N-OCTYL PHTHALATE	117-84-0	SOIL	ND	N/A	MG/KG	0.182	0.0193	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	FLUORANTHENE	206-44-0	SOIL	0.6	N/A	MG/KG	0.0369	0.00393	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	FLUORENE	86-73-7	SOIL	ND	N/A	MG/KG	0.0369	0.00484	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	HEXACHLOROBENZENE	118-74-1	SOIL	ND	N/A	MG/KG	0.0369	0.00391	180-195402	180-195402	5	SEMI-VOLATILE

This page intentionally left blank

Table A-1 Split Sample Results

SampleID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	EAQual	Units	RL	MDL	QCLot	QCRun	Dilution	Analytical Group
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	HEXACHLOROBUTADIENE	87-68-3	SOIL	ND	N/A	MG/KG	0.0369	0.00411	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	HEXACHLOROCYCLOPENTADIENE	77-47-4	SOIL	ND	N/A	MG/KG	0.182	0.0198	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	HEXACHLOROETHANE	67-72-1	SOIL	0.182	UJ	MG/KG	0.182	0.0132	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	INDENO[1,2,3-CD]PYRENE	193-39-5	SOIL	0.268	N/A	MG/KG	0.0369	0.00378	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ISOPHORONE	78-59-1	SOIL	ND	N/A	MG/KG	0.182	0.0138	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	METHYLPHENOL, 3 & 4	106-44-5	SOIL	ND	N/A	MG/KG	0.182	0.018	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	NAPHTHALENE	91-20-3	SOIL	ND	N/A	MG/KG	0.0369	0.00317	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	NITROBENZENE	98-95-3	SOIL	ND	N/A	MG/KG	0.367	0.0153	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	N-NITROSODI-N-PROPYLAMINE	621-64-7	SOIL	ND	N/A	MG/KG	0.0369	0.00431	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	N-NITROSODIPHENYLAMINE	86-30-6	SOIL	ND	N/A	MG/KG	0.182	0.017	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	PENTACHLOROPHENOL	87-86-5	SOIL	ND	N/A	MG/KG	0.182	0.0164	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	PHENANTHRENE	85-01-8	SOIL	0.173	N/A	MG/KG	0.0369	0.00584	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	PHENOL	108-95-2	SOIL	ND	N/A	MG/KG	0.182	0.00434	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	PYRENE	129-00-0	SOIL	0.417	N/A	MG/KG	0.0369	0.00371	180-195402	180-195402	5	SEMI-VOLATILE
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	4,4'-DDD	72-54-8	SOIL	0.000319	J	MG/KG	0.000459	0.0000468	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	4,4'-DDE	72-55-9	SOIL	ND	N/A	MG/KG	0.000459	0.000146	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	4,4'-DDT	50-29-3	SOIL	0.000459	UJ	MG/KG	0.000459	0.0000468	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ALDRIN	309-00-2	SOIL	0.0000811	N/A	MG/KG	0.000459	0.0000484	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ALPHA-BHC	319-84-6	SOIL	ND	N/A	MG/KG	0.000459	0.000135	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	BETA-BHC	319-85-7	SOIL	ND	N/A	MG/KG	0.000459	0.000103	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	CIS-CHLORDANE	5103-71-9	SOIL	0.000621	J	MG/KG	0.000459	0.0000738	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	DELTA-BHC	319-86-8	SOIL	0.000459	UJ	MG/KG	0.000459	0.000163	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	DIELDRIN	60-57-1	SOIL	0.000899	N/A	MG/KG	0.000459	0.0000435	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDOSULFAN I	959-98-8	SOIL	ND	N/A	MG/KG	0.000459	0.0000292	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDOSULFAN II	33213-65-9	SOIL	ND	N/A	MG/KG	0.000459	0.00014	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDOSULFAN SULFATE	1031-07-8	SOIL	ND	N/A	MG/KG	0.000459	0.0000583	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDRIN	72-20-8	SOIL	ND	N/A	MG/KG	0.000459	0.000134	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDRIN ALDEHYDE	7421-93-4	SOIL	ND	N/A	MG/KG	0.000459	0.000135	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDRIN KETONE	53494-70-5	SOIL	ND	N/A	MG/KG	0.000459	0.000153	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	GAMMA-BHC (LINDANE)	58-89-9	SOIL	ND	N/A	MG/KG	0.000459	0.0000947	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	HEPTACHLOR	76-44-8	SOIL	ND	N/A	MG/KG	0.000459	0.0000396	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	HEPTACHLOR EPOXIDE	1024-57-3	SOIL	ND	N/A	MG/KG	0.000459	0.000055	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	METHOXYCHLOR	72-43-5	SOIL	0.000459	UJ	MG/KG	0.000459	0.000133	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	TOXAPHENE	8001-35-2	SOIL	ND	N/A	MG/KG	0.0183	0.0151	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	TRANS-CHLORDANE	5103-74-2	SOIL	ND	N/A	MG/KG	0.000459	0.0000358	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	2,4,5-T	93-76-5	SOIL	ND	U	MG/KG	0.022	0.00276	180-195866	180-195866	20	HERBICIDES
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	2,4-D	94-75-7	SOIL	ND	U	MG/KG	0.0881	0.00603	180-195866	180-195866	20	HERBICIDES
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	2,4-DB	94-82-6	SOIL	ND	U	MG/KG	0.0881	0.00674	180-195866	180-195866	20	HERBICIDES
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	DALAPON	75-99-0	SOIL	ND	N/A	MG/KG	0.0991	0.00781	180-195866	180-195866	20	HERBICIDES
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	DICAMBA	1918-00-9	SOIL	ND	N/A	MG/KG	0.044	0.00527	180-195866	180-195866	20	HERBICIDES
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	DICHLORPROP	120-36-5	SOIL	ND	N/A	MG/KG	0.0881	0.0104	180-195866	180-195866	20	HERBICIDES
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	DINOSEB	88-85-7	SOIL	ND	U	MG/KG	0.0132	0.00501	180-195866	180-195866	20	HERBICIDES
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	MCPA	94-74-6	SOIL	ND	U	MG/KG	8.81	1.81	180-195866	180-195866	20	HERBICIDES
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	MCPP	93-65-2	SOIL	ND	U	MG/KG	8.81	1.77	180-195866	180-195866	20	HERBICIDES
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	SILVEX (2,4,5-TP)	93-72-1	SOIL	ND	U	MG/KG	0.022	0.00231	180-195866	180-195866	20	HERBICIDES
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	ALUMINUM	7429-90-5	SOIL	9720	N/A	MG/KG	3.27	0.629	180-196391	180-196391	1	METALS
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	ANTIMONY	7440-36-0	SOIL	0.473	N/A	MG/KG	0.218	0.0313	180-196391	180-196391	1	METALS
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	ARSENIC	7440-38-2	SOIL	2.72	N/A	MG/KG	0.109	0.0157	180-196391	180-196391	1	METALS
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	BARIUM	7440-39-3	SOIL	110	N/A	MG/KG	1.09	0.0161	180-196391	180-196391	1	METALS
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	BERYLLIUM	7440-41-7	SOIL	0.615	N/A	MG/KG	0.109	0.00818	180-196391	180-196391	1	METALS
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	BORON	7440-42-8	SOIL	6.22	N/A	MG/KG	2.18	0.347	180-196391	180-196391	1	METALS
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	CADMIUM	7440-43-9	SOIL	0.306	N/A	MG/KG	0.109	0.0142	180-196391	180-196391	1	METALS
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	CHROMIUM	7440-47-3	SOIL	14.4	N/A	MG/KG	0.218	0.0569	180-196391	180-196391	1	METALS
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	COBALT	7440-48-4	SOIL	4.65	N/A	MG/KG	0.0545	0.00273	180-196391	180-196391	1	METALS
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	COPPER	7440-50-8	SOIL	10.6	N/A	MG/KG	0.218	0.0568	180-196391	180-196391	1	METALS
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	LEAD	7439-92-1	SOIL	89.5	N/A	MG/KG	0.109	0.00992	180-196391	180-196391	1	METALS
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	MANGANESE	7439-96-5	SOIL	217	N/A	MG/KG	0.545	0.0387	180-196391	180-196391	1	METALS
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/2/2016	7471B	MERCURY	7439-97-6	SOIL	0.0711	N/A	MG/KG	0.0307	0.00688	180-196111	180-196111	1	METALS

This page intentionally left blank

Table A-1 Split Sample Results

SampleID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	EAQual	Units	RL	MDL	QCLot	QCRun	Dilution	Analytical Group
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	NICKEL	7440-02-0	SOIL	10	N/A	MG/KG	0.109	0.0424	180-196391	180-196391	1	METALS
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	SELENIUM	7782-49-2	SOIL	0.29	N/A	MG/KG	0.545	0.0482	180-196391	180-196391	1	METALS
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	SILVER	7440-22-4	SOIL	0.384	N/A	MG/KG	0.109	0.00894	180-196391	180-196391	1	METALS
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	THALLIUM	7440-28-0	SOIL	0.0944	N/A	MG/KG	0.109	0.00283	180-196391	180-196391	1	METALS
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	VANADIUM	7440-62-2	SOIL	17.8	N/A	MG/KG	0.109	0.0763	180-196391	180-196391	1	METALS
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	ZINC	7440-66-6	SOIL	76.9	N/A	MG/KG	0.545	0.211	180-196391	180-196391	1	METALS
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	NA	11/25/2016	MOISTURE	PERCENT MOISTURE	STL00177	SOIL	9.2	N/A	%	0.1	0.1	180-195434	180-195434	1	GENERAL CHEM
BGSB10-(1-2)-161122-S	11/22/2016	11/23/2016	NA	11/25/2016	MOISTURE	PERCENT SOLIDS	STL00234	SOIL	90.8	N/A	%	0.1	0.1	180-195434	180-195434	1	GENERAL CHEM
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	1,1'-BIPHENYL	92-52-4	SOIL	ND	N/A	MG/KG	0.0357	0.00322	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	1,2,4,5-TETRACHLOROBENZENE	95-94-3	SOIL	ND	N/A	MG/KG	0.0357	0.00273	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	1,4-DIOXANE	123-91-1	SOIL	0.0721	UJ	MG/KG	0.0721	0.00413	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	1-METHYLNAPHTHALENE	90-12-0	SOIL	ND	N/A	MG/KG	0.00724	0.000769	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,2'-OXYBIS[1-CHLOROPROPANE]	108-60-1	SOIL	ND	N/A	MG/KG	0.00724	0.000778	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,3,4,6-TETRACHLOROPHENOL	58-90-2	SOIL	ND	N/A	MG/KG	0.0357	0.00232	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4,5-TRICHLOROPHENOL	95-95-4	SOIL	ND	N/A	MG/KG	0.0357	0.00385	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4,6-TRICHLOROPHENOL	88-06-2	SOIL	ND	N/A	MG/KG	0.0357	0.0054	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4-DICHLOROPHENOL	120-83-2	SOIL	ND	N/A	MG/KG	0.00724	0.000723	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4-DIMETHYLPHENOL	105-67-9	SOIL	0.0357	UJ	MG/KG	0.0357	0.00564	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4-DINITROPHENOL	51-28-5	SOIL	0.184	UJ	MG/KG	0.184	0.0429	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4-DINITROTOLUENE	121-14-2	SOIL	ND	N/A	MG/KG	0.0357	0.00291	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,6-DINITROTOLUENE	606-20-2	SOIL	ND	N/A	MG/KG	0.0357	0.00372	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-CHLORONAPHTHALENE	91-58-7	SOIL	ND	N/A	MG/KG	0.00724	0.000752	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-CHLOROPHENOL	95-57-8	SOIL	ND	N/A	MG/KG	0.0357	0.00295	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-METHYLNAPHTHALENE	91-57-6	SOIL	0.00137	N/A	MG/KG	0.00724	0.000648	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-METHYLPHENOL	95-48-7	SOIL	ND	N/A	MG/KG	0.0357	0.00252	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-NITROANILINE	88-74-4	SOIL	ND	N/A	MG/KG	0.184	0.0161	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-NITROPHENOL	88-75-5	SOIL	ND	N/A	MG/KG	0.0357	0.00397	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	3,3'-DICHLOROBENZIDINE	91-94-1	SOIL	0.0357	UJ	MG/KG	0.0357	0.00381	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	3-NITROANILINE	99-09-2	SOIL	ND	N/A	MG/KG	0.184	0.0148	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4,6-DINITRO-2-METHYLPHENOL	534-52-1	SOIL	ND	N/A	MG/KG	0.184	0.0145	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-BROMOPHENYL PHENYL ETHER	101-55-3	SOIL	ND	N/A	MG/KG	0.0357	0.00314	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-CHLORO-3-METHYLPHENOL	59-50-7	SOIL	ND	N/A	MG/KG	0.0357	0.00332	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-CHLOROPHENYL PHENYL ETHER	7005-72-3	SOIL	ND	N/A	MG/KG	0.0357	0.00401	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-NITROANILINE	100-01-6	SOIL	ND	N/A	MG/KG	0.184	0.0146	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-NITROPHENOL	100-02-7	SOIL	ND	N/A	MG/KG	0.184	0.0131	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ACENAPHTHENE	83-32-9	SOIL	ND	N/A	MG/KG	0.00724	0.000692	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ACENAPHTHYLENE	208-96-8	SOIL	0.00396	N/A	MG/KG	0.00724	0.000826	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ACETOPHENONE	98-86-2	SOIL	0.0169	N/A	MG/KG	0.0357	0.00296	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ANTHRACENE	120-12-7	SOIL	0.00362	N/A	MG/KG	0.00724	0.000705	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ATRAZINE	1912-24-9	SOIL	0.0357	UJ	MG/KG	0.0357	0.00351	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZALDEHYDE	100-52-7	SOIL	0.00751	J-	MG/KG	0.0357	0.0054	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[A]ANTHRACENE	56-55-3	SOIL	0.014	N/A	MG/KG	0.00724	0.000903	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[A]PYRENE	50-32-8	SOIL	0.0132	N/A	MG/KG	0.00724	0.000721	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[B]FLUORANTHENE	205-99-2	SOIL	0.0202	J-	MG/KG	0.00724	0.00113	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[G,H,I]PERYLENE	191-24-2	SOIL	0.0165	N/A	MG/KG	0.00724	0.000717	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[K]FLUORANTHENE	207-08-9	SOIL	0.00857	J-	MG/KG	0.00724	0.00146	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BIS(2-CHLOROETHOXY)METHANE	111-91-1	SOIL	0.0357	UJ	MG/KG	0.0357	0.00237	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BIS(2-CHLOROETHYL)ETHER	111-44-4	SOIL	0.00724	UJ	MG/KG	0.00724	0.000967	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	SOIL	0.031	N/A	MG/KG	0.0721	0.00582	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BUTYL BENZYL PHTHALATE	85-68-7	SOIL	0.00591	N/A	MG/KG	0.0357	0.00493	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	CAPROLACTAM	105-60-2	SOIL	0.184	R	MG/KG	0.184	0.0272	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	CARBAZOLE	86-74-8	SOIL	0.00176	N/A	MG/KG	0.00724	0.000664	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/25/2016	11/25/2016	11/25/2016	8270D_LL	CHRYSENE	218-01-9	SOIL	0.0159	N/A	MG/KG	0.00724	0.000858	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DIBENZ(A,H)ANTHRACENE	53-70-3	SOIL	0.00336	N/A	MG/KG	0.00724	0.000802	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DIBENZOFURAN	132-64-9	SOIL	ND	N/A	MG/KG	0.0357	0.00355	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DIETHYL PHTHALATE	84-66-2	SOIL	ND	N/A	MG/KG	0.0357	0.00394	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DIMETHYL PHTHALATE	131-11-3	SOIL	ND	N/A	MG/KG	0.0357	0.00393	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DI-N-BUTYL PHTHALATE	84-74-2	SOIL	0.00485	N/A	MG/KG	0.0357	0.00452	180-195402	180-195402	1	SEMI-VOLATILE

This page intentionally left blank

Table A-1 Split Sample Results

SampleID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	EAQual	Units	RL	MDL	QCLot	QCRun	Dilution	Analytical Group
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DI-N-OCTYL PHTHALATE	117-84-0	SOIL	ND	N/A	MG/KG	0.0357	0.0038	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	FLUORANTHENE	206-44-0	SOIL	0.0179	N/A	MG/KG	0.00724	0.000771	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	FLUORENE	86-73-7	SOIL	ND	N/A	MG/KG	0.00724	0.00095	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	HEXACHLOROBENZENE	118-74-1	SOIL	ND	N/A	MG/KG	0.00724	0.000768	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	HEXACHLOROBUTADIENE	87-68-3	SOIL	0.00724	UJ	MG/KG	0.00724	0.000807	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	HEXACHLOROCYCLOPENTADIENE	77-47-4	SOIL	0.0357	UJ	MG/KG	0.0357	0.00389	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	HEXACHLOROETHANE	67-72-1	SOIL	0.0357	UJ	MG/KG	0.0357	0.00259	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	INDENO[1,2,3-CD]PYRENE	193-39-5	SOIL	0.0118	N/A	MG/KG	0.00724	0.000743	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ISOPHORONE	78-59-1	SOIL	ND	N/A	MG/KG	0.0357	0.00272	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	METHYLPHENOL, 3 & 4	106-44-5	SOIL	ND	N/A	MG/KG	0.0357	0.00353	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	NAPHTHALENE	91-20-3	SOIL	0.00724	UJ	MG/KG	0.00724	0.000621	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	NITROBENZENE	98-95-3	SOIL	0.0721	UJ	MG/KG	0.0721	0.003	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	N-NITROSODI-N-PROPYLAMINE	621-64-7	SOIL	ND	N/A	MG/KG	0.00724	0.000845	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	N-NITROSODIPHENYLAMINE	86-30-6	SOIL	ND	N/A	MG/KG	0.0357	0.00334	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	PENTACHLOROPHENOL	87-86-5	SOIL	ND	N/A	MG/KG	0.0357	0.00322	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	PHENANTHRENE	85-01-8	SOIL	ND	N/A	MG/KG	0.00724	0.00115	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	PHENOL	108-95-2	SOIL	0.0357	UJ	MG/KG	0.0357	0.000852	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	PYRENE	129-00-0	SOIL	0.0168	J-	MG/KG	0.00724	0.000729	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	4,4'-DDD	72-54-8	SOIL	0.000472	J	MG/KG	0.00045	0.0000459	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	4,4'-DDE	72-55-9	SOIL	0.005	J	MG/KG	0.00045	0.000143	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	4,4'-DDT	50-29-3	SOIL	0.0042	J-	MG/KG	0.00045	0.0000459	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ALDRIN	309-00-2	SOIL	ND	N/A	MG/KG	0.00045	0.0000475	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ALPHA-BHC	319-84-6	SOIL	ND	N/A	MG/KG	0.00045	0.000132	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	BETA-BHC	319-85-7	SOIL	ND	N/A	MG/KG	0.00045	0.000101	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	CIS-CHLORDANE	5103-71-9	SOIL	ND	N/A	MG/KG	0.00045	0.0000724	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	DELTA-BHC	319-86-8	SOIL	0.00045	UJ	MG/KG	0.00045	0.00016	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	DIELDRIN	60-57-1	SOIL	ND	N/A	MG/KG	0.00045	0.0000427	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDOSULFAN I	959-98-8	SOIL	ND	N/A	MG/KG	0.00045	0.0000286	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDOSULFAN II	33213-65-9	SOIL	ND	N/A	MG/KG	0.00045	0.000138	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDOSULFAN SULFATE	1031-07-8	SOIL	ND	N/A	MG/KG	0.00045	0.0000573	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDRIN	72-20-8	SOIL	ND	N/A	MG/KG	0.00045	0.000131	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDRIN ALDEHYDE	7421-93-4	SOIL	ND	N/A	MG/KG	0.00045	0.000132	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDRIN KETONE	53494-70-5	SOIL	ND	N/A	MG/KG	0.00045	0.00015	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	GAMMA-BHC (LINDANE)	58-89-9	SOIL	0.00045	N/A	MG/KG	0.00045	0.0000929	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	HEPTACHLOR	76-44-8	SOIL	0.000251	J	MG/KG	0.00045	0.0000389	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	HEPTACHLOR EPOXIDE	1024-57-3	SOIL	0.000906	J	MG/KG	0.00045	0.000054	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	METHOXYCHLOR	72-43-5	SOIL	0.00045	UJ	MG/KG	0.00045	0.000131	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	TOXAPHENE	8001-35-2	SOIL	ND	N/A	MG/KG	0.018	0.0148	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	TRANS-CHLORDANE	5103-74-2	SOIL	ND	N/A	MG/KG	0.00045	0.0000351	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	2,4,5-T	93-76-5	SOIL	ND	U	MG/KG	0.0218	0.00273	180-195866	180-195866	20	HERBICIDES
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	2,4-D	94-75-7	SOIL	ND	U	MG/KG	0.087	0.00595	180-195866	180-195866	20	HERBICIDES
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	2,4-DB	94-82-6	SOIL	ND	U	MG/KG	0.087	0.00666	180-195866	180-195866	20	HERBICIDES
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	DALAPON	75-99-0	SOIL	ND	N/A	MG/KG	0.0979	0.00772	180-195866	180-195866	20	HERBICIDES
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	DICAMBA	1918-00-9	SOIL	ND	N/A	MG/KG	0.0435	0.00521	180-195866	180-195866	20	HERBICIDES
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	DICHLORPROP	120-36-5	SOIL	ND	N/A	MG/KG	0.087	0.0103	180-195866	180-195866	20	HERBICIDES
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	DINOSEB	88-85-7	SOIL	ND	U	MG/KG	0.0131	0.00495	180-195866	180-195866	20	HERBICIDES
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	MCPA	94-74-6	SOIL	ND	U	MG/KG	8.7	1.79	180-195866	180-195866	20	HERBICIDES
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	MCPP	93-65-2	SOIL	ND	U	MG/KG	8.7	1.75	180-195866	180-195866	20	HERBICIDES
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	SILVEX (2,4,5-TP)	93-72-1	SOIL	ND	U	MG/KG	0.0218	0.00229	180-195866	180-195866	20	HERBICIDES
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	ALUMINUM	7429-90-5	SOIL	5750	N/A	MG/KG	3.17	0.609	180-196391	180-196391	1	METALS
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	ANTIMONY	7440-36-0	SOIL	0.379	None	MG/KG	0.211	0.0303	180-196391	180-196391	1	METALS
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	ARSENIC	7440-38-2	SOIL	3.01	J-	MG/KG	0.106	0.0152	180-196391	180-196391	1	METALS
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	BARIUM	7440-39-3	SOIL	140	J-	MG/KG	1.06	0.0156	180-196391	180-196391	1	METALS
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	BERYLLIUM	7440-41-7	SOIL	0.43	J	MG/KG	0.106	0.00792	180-196391	180-196391	1	METALS
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	BORON	7440-42-8	SOIL	3.01	N/A	MG/KG	2.11	0.337	180-196391	180-196391	1	METALS
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	CADMIUM	7440-43-9	SOIL	0.294	N/A	MG/KG	0.106	0.0137	180-196391	180-196391	1	METALS
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	CHROMIUM	7440-47-3	SOIL	7.5	N/A	MG/KG	0.211	0.0551	180-196391	180-196391	1	METALS
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	COBALT	7440-48-4	SOIL	7.81	N/A	MG/KG	0.0528	0.00264	180-196391	180-196391	1	METALS

This page intentionally left blank

Table A-1 Split Sample Results

SampleID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	EAQual	Units	RL	MDL	QCLot	QCRun	Dilution	Analytical Group
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	COPPER	7440-50-8	SOIL	10.1	N/A	MG/KG	0.211	0.055	180-196391	180-196391	1	METALS
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	LEAD	7439-92-1	SOIL	67.5	N/A	MG/KG	0.106	0.00961	180-196391	180-196391	1	METALS
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	MANGANESE	7439-96-5	SOIL	404	J-	MG/KG	0.528	0.0375	180-196391	180-196391	1	METALS
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/2/2016	7471B	MERCURY	7439-97-6	SOIL	0.066	N/A	MG/KG	0.0359	0.00804	180-196111	180-196111	1	METALS
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	NICKEL	7440-02-0	SOIL	6.57	N/A	MG/KG	0.106	0.0411	180-196391	180-196391	1	METALS
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	SELENIUM	7782-49-2	SOIL	0.512	N/A	MG/KG	0.528	0.0467	180-196391	180-196391	1	METALS
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	SILVER	7440-22-4	SOIL	0.0592	N/A	MG/KG	0.106	0.00866	180-196391	180-196391	1	METALS
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	THALLIUM	7440-28-0	SOIL	0.0623	N/A	MG/KG	0.106	0.00275	180-196391	180-196391	1	METALS
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	VANADIUM	7440-62-2	SOIL	17.9	N/A	MG/KG	0.106	0.0739	180-196391	180-196391	1	METALS
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	ZINC	7440-66-6	SOIL	110	J-	MG/KG	0.528	0.204	180-196391	180-196391	1	METALS
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	NA	11/25/2016	MOISTURE	PERCENT MOISTURE	STL00177	SOIL	8.1	N/A	%	0.1	0.1	180-195434	180-195434	1	GENERAL CHEM
BGSB22-(0.0-0.5)-161122-S	11/22/2016	11/23/2016	NA	11/25/2016	MOISTURE	PERCENT SOLIDS	STL00234	SOIL	91.9	N/A	%	0.1	0.1	180-195434	180-195434	1	GENERAL CHEM
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	1,1'-BIPHENYL	92-52-4	SOIL	ND	N/A	MG/KG	0.0406	0.00366	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	1,2,4,5-TETRACHLOROBENZENE	95-94-3	SOIL	ND	N/A	MG/KG	0.0406	0.00311	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	1,4-DIOXANE	123-91-1	SOIL	ND	N/A	MG/KG	0.082	0.0047	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	1-METHYLNAPHTHALENE	90-12-0	SOIL	ND	N/A	MG/KG	0.00824	0.000875	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,2'-OXYBIS[1-CHLOROPROPANE]	108-60-1	SOIL	ND	N/A	MG/KG	0.00824	0.000885	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,3,4,6-TETRACHLOROPHENOL	58-90-2	SOIL	ND	N/A	MG/KG	0.0406	0.00264	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4,5-TRICHLOROPHENOL	95-95-4	SOIL	ND	N/A	MG/KG	0.0406	0.00438	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4,6-TRICHLOROPHENOL	88-06-2	SOIL	ND	N/A	MG/KG	0.0406	0.00614	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4-DICHLOROPHENOL	120-83-2	SOIL	ND	N/A	MG/KG	0.00824	0.000823	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4-DIMETHYLPHENOL	105-67-9	SOIL	ND	N/A	MG/KG	0.0406	0.00641	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4-DINITROPHENOL	51-28-5	SOIL	ND	N/A	MG/KG	0.209	0.0488	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,4-DINITROTOLUENE	121-14-2	SOIL	ND	N/A	MG/KG	0.0406	0.00331	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2,6-DINITROTOLUENE	606-20-2	SOIL	ND	N/A	MG/KG	0.0406	0.00423	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-CHLORONAPHTHALENE	91-58-7	SOIL	ND	N/A	MG/KG	0.00824	0.000856	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-CHLOROPHENOL	95-57-8	SOIL	ND	N/A	MG/KG	0.0406	0.00335	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-METHYLNAPHTHALENE	91-57-6	SOIL	ND	N/A	MG/KG	0.00824	0.000737	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-METHYLPHENOL	95-48-7	SOIL	ND	N/A	MG/KG	0.0406	0.00287	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-NITROANILINE	88-74-4	SOIL	ND	N/A	MG/KG	0.209	0.0184	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	2-NITROPHENOL	88-75-5	SOIL	ND	N/A	MG/KG	0.0406	0.00452	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	3,3'-DICHLOROBENZIDINE	91-94-1	SOIL	ND	N/A	MG/KG	0.0406	0.00434	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	3-NITROANILINE	99-09-2	SOIL	ND	N/A	MG/KG	0.209	0.0169	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4,6-DINITRO-2-METHYLPHENOL	534-52-1	SOIL	ND	N/A	MG/KG	0.209	0.0165	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-BROMOPHENYL PHENYL ETHER	101-55-3	SOIL	ND	N/A	MG/KG	0.0406	0.00357	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-CHLORO-3-METHYLPHENOL	59-50-7	SOIL	ND	N/A	MG/KG	0.0406	0.00378	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-CHLOROPHENYL PHENYL ETHER	7005-72-3	SOIL	ND	N/A	MG/KG	0.0406	0.00456	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-NITROANILINE	100-01-6	SOIL	ND	N/A	MG/KG	0.209	0.0166	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	4-NITROPHENOL	100-02-7	SOIL	ND	N/A	MG/KG	0.209	0.015	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ACENAPHTHENE	83-32-9	SOIL	ND	N/A	MG/KG	0.00824	0.000788	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ACENAPHTHYLENE	208-96-8	SOIL	ND	N/A	MG/KG	0.00824	0.000939	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ACETOPHENONE	98-86-2	SOIL	ND	N/A	MG/KG	0.0406	0.00337	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ANTHRACENE	120-12-7	SOIL	ND	N/A	MG/KG	0.00824	0.000802	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ATRAZINE	1912-24-9	SOIL	ND	N/A	MG/KG	0.0406	0.00399	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZALDEHYDE	100-52-7	SOIL	0.0406	UJ	MG/KG	0.0406	0.00615	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[A]ANTHRACENE	56-55-3	SOIL	ND	N/A	MG/KG	0.00824	0.00103	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[A]PYRENE	50-32-8	SOIL	ND	N/A	MG/KG	0.00824	0.000821	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[B]FLUORANTHENE	205-99-2	SOIL	ND	N/A	MG/KG	0.00824	0.00129	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[G,H,I]PERYLENE	191-24-2	SOIL	ND	N/A	MG/KG	0.00824	0.000816	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BENZO[K]FLUORANTHENE	207-08-9	SOIL	ND	N/A	MG/KG	0.00824	0.00166	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BIS(2-CHLOROETHOXY)METHANE	111-91-1	SOIL	ND	N/A	MG/KG	0.0406	0.0027	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BIS(2-CHLOROETHYL)ETHER	111-44-4	SOIL	ND	N/A	MG/KG	0.00824	0.0011	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	SOIL	ND	N/A	MG/KG	0.082	0.00663	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	BUTYL BENZYL PHTHALATE	85-68-7	SOIL	ND	N/A	MG/KG	0.0406	0.0056	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	CAPROLACTAM	105-60-2	SOIL	ND	N/A	MG/KG	0.209	0.031	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	CARBAZOLE	86-74-8	SOIL	ND	N/A	MG/KG	0.00824	0.000756	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	CHRYSENE	218-01-9	SOIL	ND	N/A	MG/KG	0.00824	0.000976	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DIBENZ(A,H)ANTHRACENE	53-70-3	SOIL	ND	N/A	MG/KG	0.00824	0.000912	180-195402	180-195402	1	SEMI-VOLATILE

This page intentionally left blank

Table A-1 Split Sample Results

SampleID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	EAQual	Units	RL	MDL	QCLot	QCRun	Dilution	Analytical Group
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DIBENZOFURAN	132-64-9	SOIL	ND	N/A	MG/KG	0.0406	0.00403	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DIETHYL PHTHALATE	84-66-2	SOIL	ND	N/A	MG/KG	0.0406	0.00448	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DIMETHYL PHTHALATE	131-11-3	SOIL	ND	N/A	MG/KG	0.0406	0.00447	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DI-N-BUTYL PHTHALATE	84-74-2	SOIL	ND	N/A	MG/KG	0.0406	0.00514	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	DI-N-OCTYL PHTHALATE	117-84-0	SOIL	ND	N/A	MG/KG	0.0406	0.00432	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	FLUORANTHENE	206-44-0	SOIL	ND	N/A	MG/KG	0.00824	0.000877	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	FLUORENE	86-73-7	SOIL	ND	N/A	MG/KG	0.00824	0.00108	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	HEXACHLOROBENZENE	118-74-1	SOIL	ND	N/A	MG/KG	0.00824	0.000874	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	HEXACHLOROBUTADIENE	87-68-3	SOIL	ND	N/A	MG/KG	0.00824	0.000918	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	HEXACHLOROCYCLOPENTADIENE	77-47-4	SOIL	ND	N/A	MG/KG	0.0406	0.00442	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	HEXACHLOROETHANE	67-72-1	SOIL	0.0406	UJ	MG/KG	0.0406	0.00295	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	INDENO[1,2,3-CD]PYRENE	193-39-5	SOIL	ND	N/A	MG/KG	0.00824	0.000845	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	ISOPHORONE	78-59-1	SOIL	ND	N/A	MG/KG	0.0406	0.00309	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	METHYLPHENOL, 3 & 4	106-44-5	SOIL	ND	N/A	MG/KG	0.0406	0.00401	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	NAPHTHALENE	91-20-3	SOIL	ND	N/A	MG/KG	0.00824	0.000707	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	NITROBENZENE	98-95-3	SOIL	ND	N/A	MG/KG	0.082	0.00341	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	N-NITROSODI-N-PROPYLAMINE	621-64-7	SOIL	ND	N/A	MG/KG	0.00824	0.000962	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	N-NITROSODIPHENYLAMINE	86-30-6	SOIL	ND	N/A	MG/KG	0.0406	0.0038	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	PENTACHLOROPHENOL	87-86-5	SOIL	ND	N/A	MG/KG	0.0406	0.00367	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	PHENANTHRENE	85-01-8	SOIL	ND	N/A	MG/KG	0.00824	0.0013	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	PHENOL	108-95-2	SOIL	ND	N/A	MG/KG	0.0406	0.000969	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/25/2016	11/25/2016	8270D_LL	PYRENE	129-00-0	SOIL	ND	N/A	MG/KG	0.00824	0.000829	180-195402	180-195402	1	SEMI-VOLATILE
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	4,4'-DDD	72-54-8	SOIL	0.000512	N/A	MG/KG	0.000512	0.0000522	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	4,4'-DDE	72-55-9	SOIL	ND	N/A	MG/KG	0.000512	0.000163	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	4,4'-DDT	50-29-3	SOIL	0.000512	UJ	MG/KG	0.000512	0.0000522	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ALDRIN	309-00-2	SOIL	ND	N/A	MG/KG	0.000512	0.0000541	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ALPHA-BHC	319-84-6	SOIL	ND	N/A	MG/KG	0.000512	0.000151	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	BETA-BHC	319-85-7	SOIL	ND	N/A	MG/KG	0.000512	0.000115	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	CIS-CHLORDANE	5103-71-9	SOIL	ND	N/A	MG/KG	0.000512	0.0000824	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	DELTA-BHC	319-86-8	SOIL	0.000512	UJ	MG/KG	0.000512	0.000183	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	DIELDRIN	60-57-1	SOIL	ND	N/A	MG/KG	0.000512	0.0000486	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDOSULFAN I	959-98-8	SOIL	ND	N/A	MG/KG	0.000512	0.0000326	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDOSULFAN II	33213-65-9	SOIL	ND	N/A	MG/KG	0.000512	0.000157	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDOSULFAN SULFATE	1031-07-8	SOIL	ND	N/A	MG/KG	0.000512	0.0000652	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDRIN	72-20-8	SOIL	ND	N/A	MG/KG	0.000512	0.000149	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDRIN ALDEHYDE	7421-93-4	SOIL	ND	N/A	MG/KG	0.000512	0.000151	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	ENDRIN KETONE	53494-70-5	SOIL	ND	N/A	MG/KG	0.000512	0.000171	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	GAMMA-BHC (LINDANE)	58-89-9	SOIL	ND	N/A	MG/KG	0.000512	0.000106	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	HEPTACHLOR	76-44-8	SOIL	ND	N/A	MG/KG	0.000512	0.0000443	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	HEPTACHLOR EPOXIDE	1024-57-3	SOIL	ND	N/A	MG/KG	0.000512	0.0000615	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	METHOXYCHLOR	72-43-5	SOIL	0.000512	UJ	MG/KG	0.000512	0.000149	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	TOXAPHENE	8001-35-2	SOIL	ND	N/A	MG/KG	0.0205	0.0169	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/30/2016	12/1/2016	8081B_LL	TRANS-CHLORDANE	5103-74-2	SOIL	ND	N/A	MG/KG	0.000512	0.00004	180-195949	180-195949	5	PESTICIDES_ORGP
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	2,4,5-T	93-76-5	SOIL	ND	U	MG/KG	0.0249	0.00312	180-195866	180-195866	20	HERBICIDES
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	2,4-D	94-75-7	SOIL	ND	U	MG/KG	0.0995	0.00681	180-195866	180-195866	20	HERBICIDES
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	2,4-DB	94-82-6	SOIL	ND	U	MG/KG	0.0995	0.00761	180-195866	180-195866	20	HERBICIDES
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	DALAPON	75-99-0	SOIL	ND	N/A	MG/KG	0.112	0.00882	180-195866	180-195866	20	HERBICIDES
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	DICAMBA	1918-00-9	SOIL	ND	N/A	MG/KG	0.0497	0.00596	180-195866	180-195866	20	HERBICIDES
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	DICHLORPROP	120-36-5	SOIL	ND	N/A	MG/KG	0.0995	0.0118	180-195866	180-195866	20	HERBICIDES
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	DINOSEB	88-85-7	SOIL	ND	U	MG/KG	0.0149	0.00566	180-195866	180-195866	20	HERBICIDES
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	MCPA	94-74-6	SOIL	ND	U	MG/KG	9.95	2.05	180-195866	180-195866	20	HERBICIDES
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	MCPP	93-65-2	SOIL	ND	U	MG/KG	9.95	2	180-195866	180-195866	20	HERBICIDES
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/27/2016	11/30/2016	8151A	SILVEX (2,4,5-TP)	93-72-1	SOIL	ND	U	MG/KG	0.0249	0.00261	180-195866	180-195866	20	HERBICIDES
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	ALUMINUM	7429-90-5	SOIL	24800	N/A	MG/KG	3.19	0.614	180-196391	180-196391	1	METALS
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	ANTIMONY	7440-36-0	SOIL	0.419	N/A	MG/KG	0.213	0.0306	180-196391	180-196391	1	METALS
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	ARSENIC	7440-38-2	SOIL	11.2	N/A	MG/KG	0.106	0.0153	180-196391	180-196391	1	METALS
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	BARIUM	7440-39-3	SOIL	486	N/A	MG/KG	1.06	0.0158	180-196391	180-196391	1	METALS
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	BERYLLIUM	7440-41-7	SOIL	2.48	N/A	MG/KG	0.106	0.00799	180-196391	180-196391	1	METALS

This page intentionally left blank

Table A-1 Split Sample Results

SampleID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	EAQual	Units	RL	MDL	QCLot	QCRun	Dilution	Analytical Group
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	BORON	7440-42-8	SOIL	7.36	N/A	MG/KG	2.13	0.339	180-196391	180-196391	1	METALS
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	CADMIUM	7440-43-9	SOIL	0.425	N/A	MG/KG	0.106	0.0138	180-196391	180-196391	1	METALS
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	CHROMIUM	7440-47-3	SOIL	26.4	N/A	MG/KG	0.213	0.0556	180-196391	180-196391	1	METALS
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	COBALT	7440-48-4	SOIL	97.5	N/A	MG/KG	0.0532	0.00266	180-196391	180-196391	1	METALS
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	COPPER	7440-50-8	SOIL	18.5	N/A	MG/KG	0.213	0.0555	180-196391	180-196391	1	METALS
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	LEAD	7439-92-1	SOIL	107	N/A	MG/KG	0.106	0.00969	180-196391	180-196391	1	METALS
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/6/2016	6020A	MANGANESE	7439-96-5	SOIL	7470	N/A	MG/KG	5.32	0.378	180-196495	180-196495	10	METALS
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/2/2016	7471B	MERCURY	7439-97-6	SOIL	0.00927	N/A	MG/KG	0.0404	0.00906	180-196111	180-196111	1	METALS
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	NICKEL	7440-02-0	SOIL	95.6	N/A	MG/KG	0.106	0.0414	180-196391	180-196391	1	METALS
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	SELENIUM	7782-49-2	SOIL	2.6	N/A	MG/KG	0.532	0.0471	180-196391	180-196391	1	METALS
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	SILVER	7440-22-4	SOIL	0.0529	N/A	MG/KG	0.106	0.00873	180-196391	180-196391	1	METALS
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	THALLIUM	7440-28-0	SOIL	0.325	N/A	MG/KG	0.106	0.00277	180-196391	180-196391	1	METALS
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	VANADIUM	7440-62-2	SOIL	99.6	N/A	MG/KG	0.106	0.0745	180-196391	180-196391	1	METALS
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	11/28/2016	12/5/2016	6020A	ZINC	7440-66-6	SOIL	37.1	N/A	MG/KG	0.532	0.206	180-196391	180-196391	1	METALS
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	NA	11/25/2016	MOISTURE	PERCENT MOISTURE	STL00177	SOIL	19.7	N/A	%	0.1	0.1	180-195434	180-195434	1	GENERAL CHEM
BGSB22-(1-2)-161122-S	11/22/2016	11/23/2016	NA	11/25/2016	MOISTURE	PERCENT SOLIDS	STL00234	SOIL	80.3	N/A	%	0.1	0.1	180-195434	180-195434	1	GENERAL CHEM

NOTES:
J = Estimated value
MDL = Maximum detection limit
mg/kg = miligrams per kilogram
NA = Not applicable
QC = Quality control
RL = Reporting limit
U = Undetected

This page intentionally left blank

Table A-2 Data Comparison Summary, November 2016

Sample Location ID	Method	Analyte	Parameter	EA Results			PRP Results			RPD[2]
				Result (mg/kg)	Qualifier	MDL (mg/kg)	Result mg/kg	Qualifier[1]	MDL (mg/kg)	
BGSB10-(0.0-0.5)-161122-S	8270D_LL	1,1'-BIPHENYL	SEMI-VOLATILE	ND		0.0324	<0.0019		0.0019	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	1,2,4,5-TETRACHLOROBENZENE	SEMI-VOLATILE	ND		0.0275	<0.0011		0.0011	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	1,4-DIOXANE	SEMI-VOLATILE	ND		0.0416	<0.0024		0.0024	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	1-METHYLNAPHTHALENE	SEMI-VOLATILE	ND		0.00774	<0.0016		0.0016	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	2,2'-OXYBIS[1-CHLOROPROPANE]	SEMI-VOLATILE	ND		0.00783	NR		NR	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	2,3,4,6-TETRACHLOROPHENOL	SEMI-VOLATILE	ND		0.0233	<0.0032		0.0032	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	2,4,5-TRICHLOROPHENOL	SEMI-VOLATILE	ND		0.0387	<0.0027		0.0027	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	2,4,6-TRICHLOROPHENOL	SEMI-VOLATILE	ND		0.0543	<0.0019		0.0019	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	2,4-DICHLOROPHENOL	SEMI-VOLATILE	ND		0.00728	<0.0014		0.0014	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	2,4-DIMETHYLPHENOL	SEMI-VOLATILE	ND		0.0567	<0.0036		0.0036	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	2,4-DINITROPHENOL	SEMI-VOLATILE	ND		0.432	<0.0049	JL	0.0049	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	2,4-DINITROTOLUENE	SEMI-VOLATILE	ND		0.0293	<0.00098		0.00098	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	2,6-DINITROTOLUENE	SEMI-VOLATILE	ND		0.0374	<0.0036		0.0036	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	2-CHLORONAPHTHALENE	SEMI-VOLATILE	ND		0.00757	<0.0014		0.0014	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	2-CHLOROPHENOL	SEMI-VOLATILE	ND		0.0297	<0.0014		0.0014	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	2-METHYLNAPHTHALENE	SEMI-VOLATILE	ND		0.00652	<0.00055		0.00055	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	2-METHYLPHENOL	SEMI-VOLATILE	ND		0.0253	<0.0012		0.0012	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	2-NITROANILINE	SEMI-VOLATILE	ND		0.162	<0.0021	JL	0.0021	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	2-NITROPHENOL	SEMI-VOLATILE	ND		0.04	<0.0027		0.0027	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	3,3'-DICHLOROBENZIDINE	SEMI-VOLATILE	ND		0.0383	<0.0027		0.0027	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	3-NITROANILINE	SEMI-VOLATILE	ND		0.149	<0.0021		0.0021	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	4,6-DINITRO-2-METHYLPHENOL	SEMI-VOLATILE	ND		0.146	<0.0023		0.0023	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	4-BROMOPHENYL PHENYL ETHER	SEMI-VOLATILE	ND		0.0316	<0.0017		0.0017	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	4-CHLORO-3-METHYLPHENOL	SEMI-VOLATILE	ND		0.0334	<0.00077		0.00077	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	4-CHLOROPHENYL PHENYL ETHER	SEMI-VOLATILE	ND		0.0403	<0.0016		0.0016	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	4-NITROANILINE	SEMI-VOLATILE	ND		0.147	<0.0024		0.0024	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	4-NITROPHENOL	SEMI-VOLATILE	ND		0.132	<0.0021		0.0021	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	ACENAPHTHENE	SEMI-VOLATILE	0.017		0.00697	0.0042		0.00055	**121**
BGSB10-(0.0-0.5)-161122-S	8270D_LL	ACENAPHTHYLENE	SEMI-VOLATILE	0.0222		0.00831	0.0038		0.0011	**142**
BGSB10-(0.0-0.5)-161122-S	8270D_LL	ACETOPHENONE	SEMI-VOLATILE	ND		0.0298	<0.00087		0.00087	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	ANTHRACENE	SEMI-VOLATILE	0.0631		0.0071	0.029		0.00055	**74**
BGSB10-(0.0-0.5)-161122-S	8270D_LL	ATRAZINE	SEMI-VOLATILE	ND		0.0353	<0.0022		0.0022	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	BENZALDEHYDE	SEMI-VOLATILE	ND	UJ	0.0544	<0.0013	JL	0.0013	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	BENZO[A]ANTHRACENE	SEMI-VOLATILE	0.712		0.00909	0.32		0.0017	**76**
BGSB10-(0.0-0.5)-161122-S	8270D_LL	BENZO[A]PYRENE	SEMI-VOLATILE	0.811		0.00726	0.39		0.0055	**70**
BGSB10-(0.0-0.5)-161122-S	8270D_LL	BENZO[B]FLUORANTHENE	SEMI-VOLATILE	1.22		0.0114	0.6		0.0066	**68**

Table A-2 Data Comparison Summary, November 2016

Sample Location ID	Method	Analyte	Parameter	EA Results			PRP Results			RPD[2]
				Result (mg/kg)	Qualifier	MDL (mg/kg)	Result mg/kg	Qualifier[1]	MDL (mg/kg)	
BGSB10-(0.0-0.5)-161122-S	8270D_LL	BENZO[G,H,I]PERYLENE	SEMI-VOLATILE	0.851		0.00722	0.27		0.00077	**104**
BGSB10-(0.0-0.5)-161122-S	8270D_LL	BENZO[K]FLUORANTHENE	SEMI-VOLATILE	0.424		0.0147	0.23		0.0049	**59**
BGSB10-(0.0-0.5)-161122-S	8270D_LL	BIS(2-CHLOROETHOXY)METHANE	SEMI-VOLATILE	ND		0.0239	<0.00098		0.00098	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	BIS(2-CHLOROETHYL)ETHER	SEMI-VOLATILE	ND		0.00974	<0.0012		0.0012	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	Bis(2-chloroisopropyl)ether	SEMI-VOLATILE	NR		NR	<0.0015		0.0015	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	BIS(2-ETHYLHEXYL) PHTHALATE	SEMI-VOLATILE	0.134		0.0586	0.08		0.0019	50
BGSB10-(0.0-0.5)-161122-S	8270D_LL	BUTYL BENZYL PHTHALATE	SEMI-VOLATILE	0.359		0.0496	0.029		0.0014	**170**
BGSB10-(0.0-0.5)-161122-S	8270D_LL	CAPROLACTAM	SEMI-VOLATILE	1.85		0.274	<0.0013		0.0013	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	CARBAZOLE	SEMI-VOLATILE	0.0664		0.00668	0.026		0.0013	**87**
BGSB10-(0.0-0.5)-161122-S	8270D_LL	CHRYSENE	SEMI-VOLATILE	1.03		0.00864	0.43		0.0044	**82**
BGSB10-(0.0-0.5)-161122-S	8270D_LL	DIBENZ(A,H)ANTHRACENE	SEMI-VOLATILE	0.206		0.00807	0.07		0.0017	**99**
BGSB10-(0.0-0.5)-161122-S	8270D_LL	DIBENZOFURAN	SEMI-VOLATILE	0.359		0.0357	0.0025		0.00077	**197**
BGSB10-(0.0-0.5)-161122-S	8270D_LL	DIETHYL PHTHALATE	SEMI-VOLATILE	ND		0.0396	<0.0011		0.0011	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	DIMETHYL PHTHALATE	SEMI-VOLATILE	ND		0.0395	<0.00087		0.00087	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	DI-N-BUTYL PHTHALATE	SEMI-VOLATILE	ND		0.0454	0.0044		0.0013	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	DI-N-OCTYL PHTHALATE	SEMI-VOLATILE	ND		0.0382	<0.00098		0.00098	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	FLUORANTHENE	SEMI-VOLATILE	1.54		0.00776	0.59		0.0060	**89**
BGSB10-(0.0-0.5)-161122-S	8270D_LL	FLUORENE	SEMI-VOLATILE	ND		0.00956	0.0047		0.0012	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	HEXACHLOROBENZENE	SEMI-VOLATILE	ND		0.00773	<0.00098		0.00098	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	HEXACHLOROBUTADIENE	SEMI-VOLATILE	ND		0.00812	<0.0013		0.0013	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	HEXACHLOROCYCLOPENTADIENE	SEMI-VOLATILE	ND		0.0391	<0.00087		0.00087	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	HEXACHLOROETHANE	SEMI-VOLATILE	ND	UJ	0.0261	<0.0016		0.0016	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	INDENO[1,2,3-CD]PYRENE	SEMI-VOLATILE	0.71		0.00747	0.3		0.00087	**81**
BGSB10-(0.0-0.5)-161122-S	8270D_LL	ISOPHORONE	SEMI-VOLATILE	ND		0.0273	<0.00087		0.00087	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	METHYLPHENOL, 3 & 4	SEMI-VOLATILE	ND		0.0355	<0.0011		0.0011	NA
							<0.0011		0.0011	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	NAPHTHALENE	SEMI-VOLATILE	ND		0.00625	<0.00066		0.00066	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	NITROBENZENE	SEMI-VOLATILE	ND		0.0302	<0.00098		0.00098	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	N-NITROSODI-N-PROPYLAMINE	SEMI-VOLATILE	ND		0.00851	<0.0012		0.0012	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	N-NITROSODIPHENYLAMINE	SEMI-VOLATILE	ND		0.0336	<0.00077		0.00077	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	PENTACHLOROPHENOL	SEMI-VOLATILE	ND		0.0324	<0.0036		0.0036	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	PHENANTHRENE	SEMI-VOLATILE	0.375		0.0115	0.14		0.0016	**91**
BGSB10-(0.0-0.5)-161122-S	8270D_LL	PHENOL	SEMI-VOLATILE	ND		0.00857	<0.0012		0.0012	NA
BGSB10-(0.0-0.5)-161122-S	8270D_LL	PYRENE	SEMI-VOLATILE	1.09		0.00733	0.48		0.0033	**78**
BGSB10-(0.0-0.5)-161122-S	8081B_LL	4,4'-DDD	PESTICIDES_ORGP	0.00097		4.68E-05	0.0024	J	0.00055	**85**
BGSB10-(0.0-0.5)-161122-S	8081B_LL	4,4'-DDE	PESTICIDES_ORGP	ND		0.000146	<0.00055		0.00055	NA

Table A-2 Data Comparison Summary, November 2016

Sample Location ID	Method	Analyte	Parameter	EA Results			PRP Results			RPD[2]
				Result (mg/kg)	Qualifier	MDL (mg/kg)	Result mg/kg	Qualifier[1]	MDL (mg/kg)	
BGSB10-(0.0-0.5)-161122-S	8081B_LL	4,4'-DDT	PESTICIDES_ORGP	ND	UJ	4.68E-05	0.0015		0.00055	NA
BGSB10-(0.0-0.5)-161122-S	8081B_LL	ALDRIN	PESTICIDES_ORGP	0.000148		4.85E-05	<0.00033		0.00033	NA
BGSB10-(0.0-0.5)-161122-S	8081B_LL	ALPHA-BHC	PESTICIDES_ORGP	ND		0.000135	<0.00033		0.00033	NA
BGSB10-(0.0-0.5)-161122-S	8081B_LL	BETA-BHC	PESTICIDES_ORGP	ND		0.000103	0.0026	J	0.00033	NA
BGSB10-(0.0-0.5)-161122-S	8081B_LL	CIS-CHLORDANE	PESTICIDES_ORGP	0.00115	J	7.38E-05	<0.00022		0.00022	NA
BGSB10-(0.0-0.5)-161122-S	8081B_LL	DELTA-BHC	PESTICIDES_ORGP	ND	UJ	0.000164	<0.00022	JL	0.00022	NA
BGSB10-(0.0-0.5)-161122-S	8081B_LL	DIELDRIN	PESTICIDES_ORGP	0.0014	J	4.35E-05	0.0026	J	0.00055	**60**
BGSB10-(0.0-0.5)-161122-S	8081B_LL	ENDOSULFAN I	PESTICIDES_ORGP	ND		2.92E-05	<0.00033		0.00033	NA
BGSB10-(0.0-0.5)-161122-S	8081B_LL	ENDOSULFAN II	PESTICIDES_ORGP	ND		0.00014	<0.00065		0.00065	NA
BGSB10-(0.0-0.5)-161122-S	8081B_LL	ENDOSULFAN SULFATE	PESTICIDES_ORGP	ND		5.84E-05	<0.00065		0.00065	NA
BGSB10-(0.0-0.5)-161122-S	8081B_LL	ENDRIN	PESTICIDES_ORGP	ND		0.000134	<0.00065		0.00065	NA
BGSB10-(0.0-0.5)-161122-S	8081B_LL	ENDRIN ALDEHYDE	PESTICIDES_ORGP	ND		0.000135	<0.00065		0.00065	NA
BGSB10-(0.0-0.5)-161122-S	8081B_LL	ENDRIN KETONE	PESTICIDES_ORGP	ND		0.000153	0.0026		0.00065	NA
BGSB10-(0.0-0.5)-161122-S	8081B_LL	GAMMA-BHC (LINDANE)	PESTICIDES_ORGP	ND		9.47E-05	<0.00022		0.00022	NA
BGSB10-(0.0-0.5)-161122-S	8081B_LL	HEPTACHLOR	PESTICIDES_ORGP	ND		3.97E-05	<0.00033		0.00033	NA
BGSB10-(0.0-0.5)-161122-S	8081B_LL	HEPTACHLOR EPOXIDE	PESTICIDES_ORGP	0.000183	J	5.51E-05	<0.00033		0.00033	NA
BGSB10-(0.0-0.5)-161122-S	8081B_LL	METHOXYCHLOR	PESTICIDES_ORGP	ND	UJ	0.000133	<0.0037		0.0037	NA
BGSB10-(0.0-0.5)-161122-S	8081B_LL	TOXAPHENE	PESTICIDES_ORGP	ND		0.0151	<0.0052		0.0052	NA
BGSB10-(0.0-0.5)-161122-S	8081B_LL	TRANS-CHLORDANE	PESTICIDES_ORGP	ND		3.58E-05	0.0022		0.00022	NA
BGSB10-(0.0-0.5)-161122-S	8151A	2,4,5-T	HERBICIDES	ND	U	0.00276	<0.0015		0.0015	NA
BGSB10-(0.0-0.5)-161122-S	8151A	2,4-D	HERBICIDES	ND	U	0.00603	<0.00077		0.00077	NA
BGSB10-(0.0-0.5)-161122-S	8151A	2,4-DB	HERBICIDES	ND	U	0.00675	<0.00098		0.00098	NA
BGSB10-(0.0-0.5)-161122-S	8151A	DALAPON	HERBICIDES	ND		0.00782	<0.0013		0.0013	NA
BGSB10-(0.0-0.5)-161122-S	8151A	DICAMBA	HERBICIDES	ND		0.00528	<0.0014		0.0014	NA
BGSB10-(0.0-0.5)-161122-S	8151A	DICHLORPROP	HERBICIDES	ND		0.0104	0.0027	J	0.0017	NA
BGSB10-(0.0-0.5)-161122-S	8151A	DINOSEB	HERBICIDES	ND	U	0.00501	<0.0015		0.0015	NA
BGSB10-(0.0-0.5)-161122-S	8151A	MCPA	HERBICIDES	ND	U	1.82	<0.11		0.11	NA
BGSB10-(0.0-0.5)-161122-S	8151A	MCPP	HERBICIDES	ND	U	1.77	1.3	J	0.17	NA
BGSB10-(0.0-0.5)-161122-S	8151A	SILVEX (2,4,5-TP)	HERBICIDES	ND	U	0.00232	<0.0019		0.0019	NA
BGSB10-(0.0-0.5)-161122-S	6020A	ALUMINUM	METALS	9360		0.504	5420		20.0	**53**
BGSB10-(0.0-0.5)-161122-S	6020A	ANTIMONY	METALS	0.41		0.0251	<0.200		0.200	NA
BGSB10-(0.0-0.5)-161122-S	6020A	ARSENIC	METALS	2.94		0.0126	2.37		0.100	21
BGSB10-(0.0-0.5)-161122-S	6020A	BARIUM	METALS	109		0.0129	87.6		0.0800	22
BGSB10-(0.0-0.5)-161122-S	6020A	BERYLLIUM	METALS	0.608		0.00656	0.372		0.0500	48
BGSB10-(0.0-0.5)-161122-S	6020A	BORON	METALS	5.83		0.279	3.18		1.40	**59**
BGSB10-(0.0-0.5)-161122-S	6020A	CADMIUM	METALS	0.204		0.0114	0.229		0.0500	12

Table A-2 Data Comparison Summary, November 2016

Sample Location ID	Method	Analyte	Parameter	EA Results			PRP Results			RPD[2]
				Result (mg/kg)	Qualifier	MDL (mg/kg)	Result mg/kg	Qualifier[1]	MDL (mg/kg)	
BGSB10-(0.0-0.5)-161122-S	6020A	CHROMIUM	METALS	14.3		0.0456	9.5		0.0900	40
BGSB10-(0.0-0.5)-161122-S	6020A	COBALT	METALS	5.56		0.00219	4.6		0.0700	19
BGSB10-(0.0-0.5)-161122-S	6020A	COPPER	METALS	13		0.0456	10.1		0.100	25
BGSB10-(0.0-0.5)-161122-S	6020A	LEAD	METALS	40.5		0.00796	27.4		0.0500	39
BGSB10-(0.0-0.5)-161122-S	6020A	MANGANESE	METALS	215		0.031	185		10.0	15
BGSB10-(0.0-0.5)-161122-S	7471B	MERCURY	METALS	0.0294		0.00801	0.0289		0.000534	2
BGSB10-(0.0-0.5)-161122-S	6020A	NICKEL	METALS	10.2		0.034	8.17		0.0900	22
BGSB10-(0.0-0.5)-161122-S	6020A	SELENIUM	METALS	0.482		0.0386	0.373		0.180	25
BGSB10-(0.0-0.5)-161122-S	6020A	SILVER	METALS	0.0945		0.00717	<0.0800		0.0800	NA
BGSB10-(0.0-0.5)-161122-S	6020A	THALLIUM	METALS	0.0915		0.00227	<0.0700		0.0700	NA
BGSB10-(0.0-0.5)-161122-S	6020A	VANADIUM	METALS	19		0.0612	15.4		0.230	21
BGSB10-(0.0-0.5)-161122-S	6020A	ZINC	METALS	82.5		0.169	72.8		0.250	12
BGSB10-(1-2)-161122-S	8270D_LL	1,1'-BIPHENYL	SEMI-VOLATILE	ND		0.0164	<0.0019		0.0019	NA
BGSB10-(1-2)-161122-S	8270D_LL	1,2,4,5-TETRACHLOROBENZENE	SEMI-VOLATILE	ND		0.0139	<0.0011		0.0011	NA
BGSB10-(1-2)-161122-S	8270D_LL	1,4-DIOXANE	SEMI-VOLATILE	ND		0.0211	<0.0024	JL	0.0024	NA
BGSB10-(1-2)-161122-S	8270D_LL	1-METHYLNAPHTHALENE	SEMI-VOLATILE	ND		0.00392	<0.0017		0.0017	NA
BGSB10-(1-2)-161122-S	8270D_LL	2,2'-OXYBIS[1-CHLOROPROPANE]	SEMI-VOLATILE	ND		0.00396	NR		NR	NA
BGSB10-(1-2)-161122-S	8270D_LL	2,3,4,6-TETRACHLOROPHENOL	SEMI-VOLATILE	ND		0.0118	<0.0032		0.0032	NA
BGSB10-(1-2)-161122-S	8270D_LL	2,4,5-TRICHLOROPHENOL	SEMI-VOLATILE	ND		0.0196	<0.0028		0.0028	NA
BGSB10-(1-2)-161122-S	8270D_LL	2,4,6-TRICHLOROPHENOL	SEMI-VOLATILE	ND		0.0275	<0.0019		0.0019	NA
BGSB10-(1-2)-161122-S	8270D_LL	2,4-DICHLOROPHENOL	SEMI-VOLATILE	ND		0.00368	<0.0014		0.0014	NA
BGSB10-(1-2)-161122-S	8270D_LL	2,4-DIMETHYLPHENOL	SEMI-VOLATILE	ND		0.0287	<0.0036	JL	0.0036	NA
BGSB10-(1-2)-161122-S	8270D_LL	2,4-DINITROPHENOL	SEMI-VOLATILE	ND		0.219	<0.0050	JL	0.0050	NA
BGSB10-(1-2)-161122-S	8270D_LL	2,4-DINITROTOLUENE	SEMI-VOLATILE	ND		0.0148	<0.00099		0.00099	NA
BGSB10-(1-2)-161122-S	8270D_LL	2,6-DINITROTOLUENE	SEMI-VOLATILE	ND		0.0189	<0.0036		0.0036	NA
BGSB10-(1-2)-161122-S	8270D_LL	2-CHLORONAPHTHALENE	SEMI-VOLATILE	ND		0.00383	<0.0014	JL	0.0014	NA
BGSB10-(1-2)-161122-S	8270D_LL	2-CHLOROPHENOL	SEMI-VOLATILE	ND		0.015	<0.0014		0.0014	NA
BGSB10-(1-2)-161122-S	8270D_LL	2-METHYLNAPHTHALENE	SEMI-VOLATILE	0.00638		0.0033	0.0031		0.00055	**69**
BGSB10-(1-2)-161122-S	8270D_LL	2-METHYLPHENOL	SEMI-VOLATILE	ND		0.0128	<0.0012		0.0012	NA
BGSB10-(1-2)-161122-S	8270D_LL	2-NITROANILINE	SEMI-VOLATILE	ND		0.0822	<0.0021		0.0021	NA
BGSB10-(1-2)-161122-S	8270D_LL	2-NITROPHENOL	SEMI-VOLATILE	ND		0.0202	<0.0028	JL	0.0028	NA
BGSB10-(1-2)-161122-S	8270D_LL	3,3'-DICHLOROBENZIDINE	SEMI-VOLATILE	ND		0.0194	<0.0028	JL	0.0028	NA
BGSB10-(1-2)-161122-S	8270D_LL	3-NITROANILINE	SEMI-VOLATILE	ND		0.0756	<0.0021	JL	0.0021	NA
BGSB10-(1-2)-161122-S	8270D_LL	4,6-DINITRO-2-METHYLPHENOL	SEMI-VOLATILE	ND		0.0738	<0.0023	JL	0.0023	NA
BGSB10-(1-2)-161122-S	8270D_LL	4-BROMOPHENYL PHENYL ETHER	SEMI-VOLATILE	ND		0.016	<0.0018		0.0018	NA
BGSB10-(1-2)-161122-S	8270D_LL	4-CHLORO-3-METHYLPHENOL	SEMI-VOLATILE	ND		0.0169	<0.00077		0.00077	NA

Table A-2 Data Comparison Summary, November 2016

Sample Location ID	Method	Analyte	Parameter	EA Results			PRP Results			RPD[2]
				Result (mg/kg)	Qualifier	MDL (mg/kg)	Result mg/kg	Qualifier[1]	MDL (mg/kg)	
BGSB10-(1-2)-161122-S	8270D_LL	4-CHLOROPHENYL PHENYL ETHER	SEMI-VOLATILE	ND		0.0204	<0.0017		0.0017	NA
BGSB10-(1-2)-161122-S	8270D_LL	4-NITROANILINE	SEMI-VOLATILE	ND		0.0744	<0.0024		0.0024	NA
BGSB10-(1-2)-161122-S	8270D_LL	4-NITROPHENOL	SEMI-VOLATILE	ND		0.067	<0.0021	R	0.0021	NA
BGSB10-(1-2)-161122-S	8270D_LL	ACENAPHTHENE	SEMI-VOLATILE	0.00775		0.00353	0.0092		0.00055	17
BGSB10-(1-2)-161122-S	8270D_LL	ACENAPHTHYLENE	SEMI-VOLATILE	0.0147		0.00421	0.0042		0.0011	**111**
BGSB10-(1-2)-161122-S	8270D_LL	ACETOPHENONE	SEMI-VOLATILE	<0.182		0.0151	<0.00088	JL	0.00088	NA
BGSB10-(1-2)-161122-S	8270D_LL	ANTHRACENE	SEMI-VOLATILE	0.0383		0.00359	0.078		0.00055	**68**
BGSB10-(1-2)-161122-S	8270D_LL	ATRAZINE	SEMI-VOLATILE	ND		0.0179	<0.0022		0.0022	NA
BGSB10-(1-2)-161122-S	8270D_LL	BENZALDEHYDE	SEMI-VOLATILE	ND	UJ	0.0275	<0.0013	R	0.0013	NA
BGSB10-(1-2)-161122-S	8270D_LL	BENZO[A]ANTHRACENE	SEMI-VOLATILE	0.299		0.0046	0.29	JL	0.0088	3
BGSB10-(1-2)-161122-S	8270D_LL	BENZO[A]PYRENE	SEMI-VOLATILE	0.319		0.00367	0.36	JL	0.0055	12
BGSB10-(1-2)-161122-S	8270D_LL	BENZO[B]FLUORANTHENE	SEMI-VOLATILE	0.449		0.00577	0.51	JL	0.0066	13
BGSB10-(1-2)-161122-S	8270D_LL	BENZO[G,H,I]PERYLENE	SEMI-VOLATILE	0.312		0.00365	0.23		0.00077	30
BGSB10-(1-2)-161122-S	8270D_LL	BENZO[K]FLUORANTHENE	SEMI-VOLATILE	0.195		0.00742	0.25	JL	0.0050	25
BGSB10-(1-2)-161122-S	8270D_LL	BIS(2-CHLOROETHOXY)METHANE	SEMI-VOLATILE	ND		0.0121	<0.00099		0.00099	NA
BGSB10-(1-2)-161122-S	8270D_LL	BIS(2-CHLOROETHYL)ETHER	SEMI-VOLATILE	ND		0.00493	<0.0012		0.0012	NA
BGSB10-(1-2)-161122-S	8270D_LL	Bis(2-chloroisopropyl)ether	SEMI-VOLATILE	NR		NR	<0.0015	JL	0.0015	NA
BGSB10-(1-2)-161122-S	8270D_LL	BIS(2-ETHYLHEXYL) PHTHALATE	SEMI-VOLATILE	0.118		0.0297	0.26	JL	0.0094	**75**
BGSB10-(1-2)-161122-S	8270D_LL	BUTYL BENZYL PHTHALATE	SEMI-VOLATILE	0.0473		0.0251	0.061		0.0014	25
BGSB10-(1-2)-161122-S	8270D_LL	CAPROLACTAM	SEMI-VOLATILE	ND		0.139	<0.0013	JL	0.0013	NA
BGSB10-(1-2)-161122-S	8270D_LL	CARBAZOLE	SEMI-VOLATILE	0.0244		0.00338	0.032		0.0013	27
BGSB10-(1-2)-161122-S	8270D_LL	CHRYSENE	SEMI-VOLATILE	0.399		0.00437	0.43	JL	0.0044	7
BGSB10-(1-2)-161122-S	8270D_LL	DIBENZ(A,H)ANTHRACENE	SEMI-VOLATILE	0.0783		0.00408	0.06	JL	0.0018	26
BGSB10-(1-2)-161122-S	8270D_LL	DIBENZOFURAN	SEMI-VOLATILE	ND		0.0181	0.005		0.00077	NA
BGSB10-(1-2)-161122-S	8270D_LL	DIETHYL PHTHALATE	SEMI-VOLATILE	ND		0.0201	<0.0011		0.0011	NA
BGSB10-(1-2)-161122-S	8270D_LL	DIMETHYL PHTHALATE	SEMI-VOLATILE	ND		0.02	<0.00088		0.00088	NA
BGSB10-(1-2)-161122-S	8270D_LL	DI-N-BUTYL PHTHALATE	SEMI-VOLATILE	ND		0.023	0.0053		0.0013	NA
BGSB10-(1-2)-161122-S	8270D_LL	DI-N-OCTYL PHTHALATE	SEMI-VOLATILE	ND		0.0193	<0.00099		0.00099	NA
BGSB10-(1-2)-161122-S	8270D_LL	FLUORANTHENE	SEMI-VOLATILE	0.6		0.00393	0.63	JL	0.0061	5
BGSB10-(1-2)-161122-S	8270D_LL	FLUORENE	SEMI-VOLATILE	ND		0.00484	0.013		0.0012	NA
BGSB10-(1-2)-161122-S	8270D_LL	HEXACHLOROBENZENE	SEMI-VOLATILE	ND		0.00391	<0.00099		0.00099	NA
BGSB10-(1-2)-161122-S	8270D_LL	HEXACHLOROBUTADIENE	SEMI-VOLATILE	ND		0.00411	<0.0013		0.0013	NA
BGSB10-(1-2)-161122-S	8270D_LL	HEXACHLOROCYCLOPENTADIENE	SEMI-VOLATILE	ND		0.0198	<0.00088	R	0.00088	NA
BGSB10-(1-2)-161122-S	8270D_LL	HEXACHLOROETHANE	SEMI-VOLATILE	NA	UJ	0.0132	<0.0017	JL	0.0017	NA
BGSB10-(1-2)-161122-S	8270D_LL	INDENO[1,2,3-CD]PYRENE	SEMI-VOLATILE	0.268		0.00378	0.28		0.00088	4
BGSB10-(1-2)-161122-S	8270D_LL	ISOPHORONE	SEMI-VOLATILE	ND		0.0138	<0.00088	JL	0.00088	NA

Table A-2 Data Comparison Summary, November 2016

Sample Location ID	Method	Analyte	Parameter	EA Results			PRP Results			RPD[2]
				Result (mg/kg)	Qualifier	MDL (mg/kg)	Result mg/kg	Qualifier[1]	MDL (mg/kg)	
BGSB10-(1-2)-161122-S	8270D_LL	METHYLPHENOL, 3 & 4	SEMI-VOLATILE	ND		0.018	<0.0011		0.0011	NA
							<0.0011		0.0011	NA
BGSB10-(1-2)-161122-S	8270D_LL	NAPHTHALENE	SEMI-VOLATILE	ND		0.00317	0.0024	JL	0.00066	NA
BGSB10-(1-2)-161122-S	8270D_LL	NITROBENZENE	SEMI-VOLATILE	ND		0.0153	<0.00099		0.00099	NA
BGSB10-(1-2)-161122-S	8270D_LL	N-NITROSODI-N-PROPYLAMINE	SEMI-VOLATILE	ND		0.00431	<0.0012		0.0012	NA
BGSB10-(1-2)-161122-S	8270D_LL	N-NITROSODIPHENYLAMINE	SEMI-VOLATILE	ND		0.017	<0.00077		0.00077	NA
BGSB10-(1-2)-161122-S	8270D_LL	PENTACHLOROPHENOL	SEMI-VOLATILE	ND		0.0164	<0.0036		0.0036	NA
BGSB10-(1-2)-161122-S	8270D_LL	PHENANTHRENE	SEMI-VOLATILE	0.173		0.00584	0.3	JL	0.0017	**54**
BGSB10-(1-2)-161122-S	8270D_LL	PHENOL	SEMI-VOLATILE	ND		0.00434	<0.0012		0.0012	NA
BGSB10-(1-2)-161122-S	8270D_LL	PYRENE	SEMI-VOLATILE	0.417		0.00371	0.58	JL	0.0033	33
BGSB10-(1-2)-161122-S	8081B_LL	4,4'-DDD	PESTICIDES_ORGP	0.000319	J	4.68E-05	<0.00055		0.00055	NA
BGSB10-(1-2)-161122-S	8081B_LL	4,4'-DDE	PESTICIDES_ORGP	ND	UJ	0.000146	<0.00055		0.00055	NA
BGSB10-(1-2)-161122-S	8081B_LL	4,4'-DDT	PESTICIDES_ORGP	ND		4.68E-05	<0.00055		0.00055	NA
BGSB10-(1-2)-161122-S	8081B_LL	ALDRIN	PESTICIDES_ORGP	0.0000811		4.84E-05	<0.00033		0.00033	NA
BGSB10-(1-2)-161122-S	8081B_LL	ALPHA-BHC	PESTICIDES_ORGP	ND		0.000135	<0.00033		0.00033	NA
BGSB10-(1-2)-161122-S	8081B_LL	BETA-BHC	PESTICIDES_ORGP	ND	UJ	0.000103	<0.00033		0.00033	NA
BGSB10-(1-2)-161122-S	8081B_LL	CIS-CHLORDANE	PESTICIDES_ORGP	0.000621	J	7.38E-05	<0.00022		0.00022	NA
BGSB10-(1-2)-161122-S	8081B_LL	DELTA-BHC	PESTICIDES_ORGP	ND		0.000163	<0.00022	JL	0.00022	NA
BGSB10-(1-2)-161122-S	8081B_LL	DIELDRIN	PESTICIDES_ORGP	0.000899		4.35E-05	<0.00055		0.00055	NA
BGSB10-(1-2)-161122-S	8081B_LL	ENDOSULFAN I	PESTICIDES_ORGP	ND		2.92E-05	<0.00033		0.00033	NA
BGSB10-(1-2)-161122-S	8081B_LL	ENDOSULFAN II	PESTICIDES_ORGP	ND		0.00014	<0.00066		0.00066	NA
BGSB10-(1-2)-161122-S	8081B_LL	ENDOSULFAN SULFATE	PESTICIDES_ORGP	ND		5.83E-05	<0.00066		0.00066	NA
BGSB10-(1-2)-161122-S	8081B_LL	ENDRIN	PESTICIDES_ORGP	ND		0.000134	<0.00066		0.00066	NA
BGSB10-(1-2)-161122-S	8081B_LL	ENDRIN ALDEHYDE	PESTICIDES_ORGP	ND		0.000135	<0.00066		0.00066	NA
BGSB10-(1-2)-161122-S	8081B_LL	ENDRIN KETONE	PESTICIDES_ORGP	ND		0.000153	<0.00066		0.00066	NA
BGSB10-(1-2)-161122-S	8081B_LL	GAMMA-BHC (LINDANE)	PESTICIDES_ORGP	ND		9.47E-05	<0.00022		0.00022	NA
BGSB10-(1-2)-161122-S	8081B_LL	HEPTACHLOR	PESTICIDES_ORGP	ND		3.96E-05	<0.00033		0.00033	NA
BGSB10-(1-2)-161122-S	8081B_LL	HEPTACHLOR EPOXIDE	PESTICIDES_ORGP	ND		0.000055	<0.00033		0.00033	NA
BGSB10-(1-2)-161122-S	8081B_LL	METHOXYCHLOR	PESTICIDES_ORGP	ND	UJ	0.000133	<0.0037		0.0037	NA
BGSB10-(1-2)-161122-S	8081B_LL	TOXAPHENE	PESTICIDES_ORGP	ND		0.0151	<0.0053		0.0053	NA
BGSB10-(1-2)-161122-S	8081B_LL	TRANS-CHLORDANE	PESTICIDES_ORGP	ND		3.58E-05	<0.00022		0.00022	NA
BGSB10-(1-2)-161122-S	8151A	2,4,5-T	HERBICIDES	ND	U	0.00276	<0.0015		0.0015	NA
BGSB10-(1-2)-161122-S	8151A	2,4-D	HERBICIDES	ND	U	0.00603	<0.00077		0.00077	NA
BGSB10-(1-2)-161122-S	8151A	2,4-DB	HERBICIDES	ND	U	0.00674	<0.00099		0.00099	NA
BGSB10-(1-2)-161122-S	8151A	DALAPON	HERBICIDES	ND		0.00781	0.016	J	0.0013	NA
BGSB10-(1-2)-161122-S	8151A	DICAMBA	HERBICIDES	ND		0.00527	<0.0014		0.0014	NA

Table A-2 Data Comparison Summary, November 2016

Sample Location ID	Method	Analyte	Parameter	EA Results			PRP Results			RPD[2]
				Result (mg/kg)	Qualifier	MDL (mg/kg)	Result mg/kg	Qualifier[1]	MDL (mg/kg)	
BGSB10-(1-2)-161122-S	8151A	DICHLORPROP	HERBICIDES	ND		0.0104	<0.0018		0.0018	NA
BGSB10-(1-2)-161122-S	8151A	DINOSEB	HERBICIDES	ND	U	0.00501	<0.0015		0.0015	NA
BGSB10-(1-2)-161122-S	8151A	MCPA	HERBICIDES	ND	U	1.81	<0.11		0.11	NA
BGSB10-(1-2)-161122-S	8151A	MCPP	HERBICIDES	ND	U	1.77	<0.18		0.18	NA
BGSB10-(1-2)-161122-S	8151A	SILVEX (2,4,5-TP)	HERBICIDES	ND	U	0.00231	<0.0019		0.0019	NA
BGSB10-(1-2)-161122-S	6020A	ALUMINUM	METALS	9720		0.629	6660		20.9	37
BGSB10-(1-2)-161122-S	6020A	ANTIMONY	METALS	0.473		0.0313	<0.209		0.209	NA
BGSB10-(1-2)-161122-S	6020A	ARSENIC	METALS	2.72		0.0157	3.03		0.104	11
BGSB10-(1-2)-161122-S	6020A	BARIUM	METALS	110		0.0161	107		0.0835	3
BGSB10-(1-2)-161122-S	6020A	BERYLLIUM	METALS	0.615		0.00818	0.489		0.0522	23
BGSB10-(1-2)-161122-S	6020A	BORON	METALS	6.22		0.347	3.69		1.46	**51**
BGSB10-(1-2)-161122-S	6020A	CADMIUM	METALS	0.306		0.0142	0.376		0.0522	21
BGSB10-(1-2)-161122-S	6020A	CHROMIUM	METALS	14.4		0.0569	14.5		0.0939	1
BGSB10-(1-2)-161122-S	6020A	COBALT	METALS	4.65		0.00273	4.86		0.0731	4
BGSB10-(1-2)-161122-S	6020A	COPPER	METALS	10.6		0.0568	11.4		0.104	7
BGSB10-(1-2)-161122-S	6020A	LEAD	METALS	89.5		0.00992	83.3		0.0522	7
BGSB10-(1-2)-161122-S	6020A	MANGANESE	METALS	217		0.0387	186		10.4	15
BGSB10-(1-2)-161122-S	7471B	MERCURY	METALS	0.0711		0.00688	0.0754		0.000547	6
BGSB10-(1-2)-161122-S	6020A	NICKEL	METALS	10		0.0424	9.67		0.0939	3
BGSB10-(1-2)-161122-S	6020A	SELENIUM	METALS	0.29		0.0482	0.356		0.188	20
BGSB10-(1-2)-161122-S	6020A	SILVER	METALS	0.384		0.00894	0.212		0.0835	**58**
BGSB10-(1-2)-161122-S	6020A	THALLIUM	METALS	0.0944		0.00283	0.0742	U	0.0731	24
BGSB10-(1-2)-161122-S	6020A	VANADIUM	METALS	17.8		0.0763	16.8		0.240	6
BGSB10-(1-2)-161122-S	6020A	ZINC	METALS	76.9		0.211	88.4		0.261	14
BGSB22-(0.0-0.5)-161122-S	8270D_LL	1,1'-BIPHENYL	SEMI-VOLATILE	ND		0.00322	<0.0018		0.0018	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	1,2,4,5-TETRACHLOROBENZENE	SEMI-VOLATILE	ND		0.00273	<0.0011		0.0011	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	1,4-DIOXANE	SEMI-VOLATILE	ND	U	0.00413	<0.0024		0.0024	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	1-METHYLNAPHTHALENE	SEMI-VOLATILE	ND		0.000769	<0.0016		0.0016	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	2,2'-OXYBIS[1-CHLOROPROPANE]	SEMI-VOLATILE	ND		0.000778	NR		NR	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	2,3,4,6-TETRACHLOROPHENOL	SEMI-VOLATILE	ND		0.00232	<0.0032		0.0032	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	2,4,5-TRICHLOROPHENOL	SEMI-VOLATILE	ND		0.00385	<0.0027		0.0027	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	2,4,6-TRICHLOROPHENOL	SEMI-VOLATILE	ND		0.0054	<0.0018		0.0018	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	2,4-DICHLOROPHENOL	SEMI-VOLATILE	ND		0.000723	<0.0014		0.0014	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	2,4-DIMETHYLPHENOL	SEMI-VOLATILE	ND	UJ	0.00564	<0.0036		0.0036	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	2,4-DINITROPHENOL	SEMI-VOLATILE	ND	UJ	0.0429	<0.0049		0.0049	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	2,4-DINITROTOLUENE	SEMI-VOLATILE	ND		0.00291	<0.00098		0.00098	NA

Table A-2 Data Comparison Summary, November 2016

Sample Location ID	Method	Analyte	Parameter	EA Results			PRP Results			RPD[2]
				Result (mg/kg)	Qualifier	MDL (mg/kg)	Result mg/kg	Qualifier[1]	MDL (mg/kg)	
BGSB22-(0.0-0.5)-161122-S	8270D_LL	2,6-DINITROTOLUENE	SEMI-VOLATILE	ND		0.00372	<0.0036		0.0036	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	2-CHLORONAPHTHALENE	SEMI-VOLATILE	ND		0.000752	<0.0014		0.0014	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	2-CHLOROPHENOL	SEMI-VOLATILE	ND		0.00295	<0.0014		0.0014	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	2-METHYLNAPHTHALENE	SEMI-VOLATILE	0.00137		0.000648	<0.00054		0.00054	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	2-METHYLPHENOL	SEMI-VOLATILE	ND		0.00252	<0.0012		0.0012	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	2-NITROANILINE	SEMI-VOLATILE	ND		0.0161	<0.0021		0.0021	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	2-NITROPHENOL	SEMI-VOLATILE	ND		0.00397	<0.0027		0.0027	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	3,3'-DICHLOROBENZIDINE	SEMI-VOLATILE	ND	UJ	0.00381	<0.0027		0.0027	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	3-NITROANILINE	SEMI-VOLATILE	ND		0.0148	<0.0021		0.0021	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	4,6-DINITRO-2-METHYLPHENOL	SEMI-VOLATILE	ND		0.0145	<0.0023		0.0023	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	4-BROMOPHENYL PHENYL ETHER	SEMI-VOLATILE	ND		0.00314	<0.0017		0.0017	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	4-CHLORO-3-METHYLPHENOL	SEMI-VOLATILE	ND		0.00332	<0.00076		0.00076	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	4-CHLOROPHENYL PHENYL ETHER	SEMI-VOLATILE	ND		0.00401	<0.0016		0.0016	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	4-NITROANILINE	SEMI-VOLATILE	ND		0.0146	<0.0024		0.0024	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	4-NITROPHENOL	SEMI-VOLATILE	ND		0.0131	<0.0021		0.0021	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	ACENAPHTHENE	SEMI-VOLATILE	ND		0.000692	<0.00054		0.00054	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	ACENAPHTHYLENE	SEMI-VOLATILE	0.00396		0.000826	<0.0011		0.0011	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	ACETOPHENONE	SEMI-VOLATILE	0.0169		0.00296	0.0019		0.00087	**160**
BGSB22-(0.0-0.5)-161122-S	8270D_LL	ANTHRACENE	SEMI-VOLATILE	0.00362		0.000705	<0.00054		0.00054	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	ATRAZINE	SEMI-VOLATILE	ND	UJ	0.00351	<0.0022		0.0022	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	BENZALDEHYDE	SEMI-VOLATILE	0.00751	J-	0.0054	<0.0013	JL	0.0013	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	BENZO[A]ANTHRACENE	SEMI-VOLATILE	0.014		0.000903	0.0037		0.0017	**116**
BGSB22-(0.0-0.5)-161122-S	8270D_LL	BENZO[A]PYRENE	SEMI-VOLATILE	0.0132		0.000721	<0.0011		0.0011	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	BENZO[B]FLUORANTHENE	SEMI-VOLATILE	0.0202	J-	0.00113	0.0063		0.0013	**105**
BGSB22-(0.0-0.5)-161122-S	8270D_LL	BENZO[G,H,I]PERYLENE	SEMI-VOLATILE	0.0165		0.000717	<0.00076		0.00076	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	BENZO[K]FLUORANTHENE	SEMI-VOLATILE	0.00857	J-	0.00146	0.0061		0.00098	34
BGSB22-(0.0-0.5)-161122-S	8270D_LL	BIS(2-CHLOROETHOXY)METHANE	SEMI-VOLATILE	ND	UJ	0.00237	<0.00098		0.00098	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	BIS(2-CHLOROETHYL)ETHER	SEMI-VOLATILE	ND	UJ	0.000967	<0.0012		0.0012	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	Bis(2-chloroisopropyl)ether	SEMI-VOLATILE	NR		NR	<0.0015		0.0015	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	BIS(2-ETHYLHEXYL) PHTHALATE	SEMI-VOLATILE	0.031		0.00582	0.015	U	0.0018	**70**
BGSB22-(0.0-0.5)-161122-S	8270D_LL	BUTYL BENZYL PHTHALATE	SEMI-VOLATILE	0.00591		0.00493	<0.0014		0.0014	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	CAPROLACTAM	SEMI-VOLATILE	0.184	R	0.0272	<0.0013		0.0013	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	CARBAZOLE	SEMI-VOLATILE	0.00176		0.000664	<0.0013		0.0013	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	CHRYSENE	SEMI-VOLATILE	0.0159		0.000858	0.0061		0.00087	**89**
BGSB22-(0.0-0.5)-161122-S	8270D_LL	DIBENZ(A,H)ANTHRACENE	SEMI-VOLATILE	0.00336		0.000802	<0.0017		0.0017	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	DIBENZOFURAN	SEMI-VOLATILE	ND		0.00355	<0.00076		0.00076	NA

Table A-2 Data Comparison Summary, November 2016

Sample Location ID	Method	Analyte	Parameter	EA Results			PRP Results			RPD[2]
				Result (mg/kg)	Qualifier	MDL (mg/kg)	Result mg/kg	Qualifier[1]	MDL (mg/kg)	
BGSB22-(0.0-0.5)-161122-S	8270D_LL	DIETHYL PHTHALATE	SEMI-VOLATILE	ND		0.00394	<0.0011		0.0011	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	DIMETHYL PHTHALATE	SEMI-VOLATILE	ND		0.00393	<0.00087		0.00087	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	DI-N-BUTYL PHTHALATE	SEMI-VOLATILE	0.00485		0.00452	<0.0013		0.0013	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	DI-N-OCTYL PHTHALATE	SEMI-VOLATILE	ND		0.0038	<0.00098		0.00098	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	FLUORANTHENE	SEMI-VOLATILE	0.0179		0.000771	0.0063		0.0012	**96**
BGSB22-(0.0-0.5)-161122-S	8270D_LL	FLUORENE	SEMI-VOLATILE	ND		0.00095	<0.0012		0.0012	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	HEXACHLOROBENZENE	SEMI-VOLATILE	ND		0.000768	<0.00098		0.00098	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	HEXACHLOROBUTADIENE	SEMI-VOLATILE	ND	UJ	0.000807	<0.0013		0.0013	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	HEXACHLOROCYCLOPENTADIENE	SEMI-VOLATILE	ND	UJ	0.00389	<0.00087		0.00087	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	HEXACHLOROETHANE	SEMI-VOLATILE	ND	UJ	0.00259	<0.0016		0.0016	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	INDENO[1,2,3-CD]PYRENE	SEMI-VOLATILE	0.0118		0.000743	<0.00087		0.00087	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	ISOPHORONE	SEMI-VOLATILE	ND		0.00272	<0.00087		0.00087	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	METHYLPHENOL, 3 & 4	SEMI-VOLATILE	ND		0.00353	<0.0011		0.0011	NA
							<0.0011		0.0011	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	NAPHTHALENE	SEMI-VOLATILE	ND	UJ	0.000621	<0.00065		0.00065	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	NITROBENZENE	SEMI-VOLATILE	ND	UJ	0.003	<0.00098		0.00098	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	N-NITROSODI-N-PROPYLAMINE	SEMI-VOLATILE	ND		0.000845	<0.0012		0.0012	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	N-NITROSODIPHENYLAMINE	SEMI-VOLATILE	ND		0.00334	<0.00076		0.00076	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	PENTACHLOROPHENOL	SEMI-VOLATILE	ND		0.00322	<0.0036		0.0036	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	PHENANTHRENE	SEMI-VOLATILE	ND		0.00115	0.0019		0.0016	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	PHENOL	SEMI-VOLATILE	ND		0.000852	<0.0012		0.0012	NA
BGSB22-(0.0-0.5)-161122-S	8270D_LL	PYRENE	SEMI-VOLATILE	0.0168	J-	0.000729	0.0059		0.00065	**96**
BGSB22-(0.0-0.5)-161122-S	8081B_LL	4,4'-DDD	PESTICIDES_ORGP	0.000472	J	4.59E-05	<0.00054		0.00054	NA
BGSB22-(0.0-0.5)-161122-S	8081B_LL	4,4'-DDE	PESTICIDES_ORGP	0.005	J	0.000143	0.0075	J	0.00054	40
BGSB22-(0.0-0.5)-161122-S	8081B_LL	4,4'-DDT	PESTICIDES_ORGP	0.0042	J-	4.59E-05	0.014		0.00054	**108**
BGSB22-(0.0-0.5)-161122-S	8081B_LL	ALDRIN	PESTICIDES_ORGP	ND		4.75E-05	<0.00033		0.00033	NA
BGSB22-(0.0-0.5)-161122-S	8081B_LL	ALPHA-BHC	PESTICIDES_ORGP	ND		0.000132	<0.00033		0.00033	NA
BGSB22-(0.0-0.5)-161122-S	8081B_LL	BETA-BHC	PESTICIDES_ORGP	ND		0.000101	<0.00033		0.00033	NA
BGSB22-(0.0-0.5)-161122-S	8081B_LL	CIS-CHLORDANE	PESTICIDES_ORGP	ND		7.24E-05	<0.00022		0.00022	NA
BGSB22-(0.0-0.5)-161122-S	8081B_LL	DELTA-BHC	PESTICIDES_ORGP	ND	UJ	0.00016	<0.00022	JL	0.00022	NA
BGSB22-(0.0-0.5)-161122-S	8081B_LL	DIELDRIN	PESTICIDES_ORGP	ND		4.27E-05	<0.00054		0.00054	NA
BGSB22-(0.0-0.5)-161122-S	8081B_LL	ENDOSULFAN I	PESTICIDES_ORGP	ND		2.86E-05	0.0015	J	0.00033	NA
BGSB22-(0.0-0.5)-161122-S	8081B_LL	ENDOSULFAN II	PESTICIDES_ORGP	ND		0.000138	<0.00065		0.00065	NA
BGSB22-(0.0-0.5)-161122-S	8081B_LL	ENDOSULFAN SULFATE	PESTICIDES_ORGP	ND		5.73E-05	0.003	J	0.00065	NA
BGSB22-(0.0-0.5)-161122-S	8081B_LL	ENDRIN	PESTICIDES_ORGP	ND		0.000131	<0.00065		0.00065	NA
BGSB22-(0.0-0.5)-161122-S	8081B_LL	ENDRIN ALDEHYDE	PESTICIDES_ORGP	ND		0.000132	<0.00065		0.00065	NA

Table A-2 Data Comparison Summary, November 2016

Sample Location ID	Method	Analyte	Parameter	EA Results			PRP Results			RPD[2]
				Result (mg/kg)	Qualifier	MDL (mg/kg)	Result mg/kg	Qualifier[1]	MDL (mg/kg)	
BGSB22-(0.0-0.5)-161122-S	8081B_LL	ENDRIN KETONE	PESTICIDES_ORGP	ND		0.00015	<0.00065		0.00065	NA
BGSB22-(0.0-0.5)-161122-S	8081B_LL	GAMMA-BHC (LINDANE)	PESTICIDES_ORGP	ND		9.29E-05	<0.00022		0.00022	NA
BGSB22-(0.0-0.5)-161122-S	8081B_LL	HEPTACHLOR	PESTICIDES_ORGP	0.000251	J	3.89E-05	<0.00033		0.00033	NA
BGSB22-(0.0-0.5)-161122-S	8081B_LL	HEPTACHLOR EPOXIDE	PESTICIDES_ORGP	0.000906	J	0.000054	0.0062		0.00033	**149**
BGSB22-(0.0-0.5)-161122-S	8081B_LL	METHOXYCHLOR	PESTICIDES_ORGP	ND	UJ	0.000131	<0.0037		0.0037	NA
BGSB22-(0.0-0.5)-161122-S	8081B_LL	TOXAPHENE	PESTICIDES_ORGP	ND		0.0148	<0.0052		0.0052	NA
BGSB22-(0.0-0.5)-161122-S	8081B_LL	TRANS-CHLORDANE	PESTICIDES_ORGP	ND		3.51E-05	<0.00022		0.00022	NA
BGSB22-(0.0-0.5)-161122-S	8151A	2,4,5-T	HERBICIDES	ND	U	0.00273	<0.0015	J	0.0015	NA
BGSB22-(0.0-0.5)-161122-S	8151A	2,4-D	HERBICIDES	ND	U	0.00595	<0.00076	J	0.00076	NA
BGSB22-(0.0-0.5)-161122-S	8151A	2,4-DB	HERBICIDES	ND	U	0.00666	0.021	J	0.00098	NA
BGSB22-(0.0-0.5)-161122-S	8151A	DALAPON	HERBICIDES	ND		0.00772	<0.0013		0.0013	NA
BGSB22-(0.0-0.5)-161122-S	8151A	DICAMBA	HERBICIDES	ND		0.00521	<0.0014	J	0.0014	NA
BGSB22-(0.0-0.5)-161122-S	8151A	DICHLORPROP	HERBICIDES	ND		0.0103	0.021	J	0.0017	NA
BGSB22-(0.0-0.5)-161122-S	8151A	DINOSEB	HERBICIDES	ND	U	0.00495	<0.0015	J	0.0015	NA
BGSB22-(0.0-0.5)-161122-S	8151A	MCPA	HERBICIDES	ND	U	1.79	<0.11	J	0.11	NA
BGSB22-(0.0-0.5)-161122-S	8151A	MCPP	HERBICIDES	ND	U	1.75	<0.17	J	0.17	NA
BGSB22-(0.0-0.5)-161122-S	8151A	SILVEX (2,4,5-TP)	HERBICIDES	ND	U	0.00229	<0.0018	J	0.0018	NA
BGSB22-(0.0-0.5)-161122-S	6020A	ALUMINUM	METALS	5750		0.609	2920		9.95	**65**
BGSB22-(0.0-0.5)-161122-S	6020A	ANTIMONY	METALS	0.379		0.0303	<0.199		0.199	NA
BGSB22-(0.0-0.5)-161122-S	6020A	ARSENIC	METALS	3.01	J-	0.0152	1.23		0.0995	**84**
BGSB22-(0.0-0.5)-161122-S	6020A	BARIUM	METALS	140	J-	0.0156	50.9		0.0796	**93**
BGSB22-(0.0-0.5)-161122-S	6020A	BERYLLIUM	METALS	0.43	J	0.00792	0.201		0.0498	**73**
BGSB22-(0.0-0.5)-161122-S	6020A	BORON	METALS	3.01		0.337	1.69		1.39	**56**
BGSB22-(0.0-0.5)-161122-S	6020A	CADMIUM	METALS	0.294		0.0137	0.204		0.0498	36
BGSB22-(0.0-0.5)-161122-S	6020A	CHROMIUM	METALS	7.5		0.0551	4.54		0.0896	49
BGSB22-(0.0-0.5)-161122-S	6020A	COBALT	METALS	7.81		0.00264	1.91		0.0697	**121**
BGSB22-(0.0-0.5)-161122-S	6020A	COPPER	METALS	10.1		0.055	6.67		0.0995	41
BGSB22-(0.0-0.5)-161122-S	6020A	LEAD	METALS	67.5		0.00961	39.1		0.0498	**53**
BGSB22-(0.0-0.5)-161122-S	6020A	MANGANESE	METALS	404	J-	0.0375	76.9		0.0995	**136**
BGSB22-(0.0-0.5)-161122-S	7471B	MERCURY	METALS	0.066		0.00804	0.0601		0.000527	9
BGSB22-(0.0-0.5)-161122-S	6020A	NICKEL	METALS	6.57		0.0411	3.61		0.0896	**58**
BGSB22-(0.0-0.5)-161122-S	6020A	SELENIUM	METALS	0.512		0.0467	0.217		0.179	**81**
BGSB22-(0.0-0.5)-161122-S	6020A	SILVER	METALS	0.0592		0.00866	<0.0796		0.0796	NA
BGSB22-(0.0-0.5)-161122-S	6020A	THALLIUM	METALS	0.0623		0.00275	<0.0697		0.0697	NA
BGSB22-(0.0-0.5)-161122-S	6020A	VANADIUM	METALS	17.9		0.0739	8.26		0.229	**74**
BGSB22-(0.0-0.5)-161122-S	6020A	ZINC	METALS	110	J-	0.204	82.8		0.249	28

Table A-2 Data Comparison Summary, November 2016

Sample Location ID	Method	Analyte	Parameter	EA Results			PRP Results			RPD[2]
				Result (mg/kg)	Qualifier	MDL (mg/kg)	Result mg/kg	Qualifier[1]	MDL (mg/kg)	
BGSB22-(1-2)-161122-S	8270D_LL	1,1'-BIPHENYL	SEMI-VOLATILE	ND		0.00366	<0.0021		0.0021	NA
BGSB22-(1-2)-161122-S	8270D_LL	1,2,4,5-TETRACHLOROBENZENE	SEMI-VOLATILE	ND		0.00311	<0.0012		0.0012	NA
BGSB22-(1-2)-161122-S	8270D_LL	1,4-DIOXANE	SEMI-VOLATILE	ND		0.0047	<0.0027		0.0027	NA
BGSB22-(1-2)-161122-S	8270D_LL	1-METHYLNAPHTHALENE	SEMI-VOLATILE	ND		0.000875	<0.0018		0.0018	NA
BGSB22-(1-2)-161122-S	8270D_LL	2,2'-OXYBIS[1-CHLOROPROPANE]	SEMI-VOLATILE	ND		0.000885	NR		NR	NA
BGSB22-(1-2)-161122-S	8270D_LL	2,3,4,6-TETRACHLOROPHENOL	SEMI-VOLATILE	ND		0.00264	<0.0035		0.0035	NA
BGSB22-(1-2)-161122-S	8270D_LL	2,4,5-TRICHLOROPHENOL	SEMI-VOLATILE	ND		0.00438	<0.0031		0.0031	NA
BGSB22-(1-2)-161122-S	8270D_LL	2,4,6-TRICHLOROPHENOL	SEMI-VOLATILE	ND		0.00614	<0.0021		0.0021	NA
BGSB22-(1-2)-161122-S	8270D_LL	2,4-DICHLOROPHENOL	SEMI-VOLATILE	ND		0.000823	<0.0016		0.0016	NA
BGSB22-(1-2)-161122-S	8270D_LL	2,4-DIMETHYLPHENOL	SEMI-VOLATILE	ND		0.00641	<0.0040		0.0040	NA
BGSB22-(1-2)-161122-S	8270D_LL	2,4-DINITROPHENOL	SEMI-VOLATILE	ND		0.0488	<0.0055		0.0055	NA
BGSB22-(1-2)-161122-S	8270D_LL	2,4-DINITROTOLUENE	SEMI-VOLATILE	ND		0.00331	<0.0011		0.0011	NA
BGSB22-(1-2)-161122-S	8270D_LL	2,6-DINITROTOLUENE	SEMI-VOLATILE	ND		0.00423	<0.0040		0.0040	NA
BGSB22-(1-2)-161122-S	8270D_LL	2-CHLORONAPHTHALENE	SEMI-VOLATILE	ND		0.000856	<0.0016		0.0016	NA
BGSB22-(1-2)-161122-S	8270D_LL	2-CHLOROPHENOL	SEMI-VOLATILE	ND		0.00335	<0.0016		0.0016	NA
BGSB22-(1-2)-161122-S	8270D_LL	2-METHYLNAPHTHALENE	SEMI-VOLATILE	ND		0.000737	<0.00061		0.00061	NA
BGSB22-(1-2)-161122-S	8270D_LL	2-METHYLPHENOL	SEMI-VOLATILE	ND		0.00287	<0.0013		0.0013	NA
BGSB22-(1-2)-161122-S	8270D_LL	2-NITROANILINE	SEMI-VOLATILE	ND		0.0184	<0.0023		0.0023	NA
BGSB22-(1-2)-161122-S	8270D_LL	2-NITROPHENOL	SEMI-VOLATILE	ND		0.00452	<0.0031		0.0031	NA
BGSB22-(1-2)-161122-S	8270D_LL	3,3'-DICHLOROBENZIDINE	SEMI-VOLATILE	ND		0.00434	<0.0031		0.0031	NA
BGSB22-(1-2)-161122-S	8270D_LL	3-NITROANILINE	SEMI-VOLATILE	ND		0.0169	<0.0023		0.0023	NA
BGSB22-(1-2)-161122-S	8270D_LL	4,6-DINITRO-2-METHYLPHENOL	SEMI-VOLATILE	ND		0.0165	<0.0026		0.0026	NA
BGSB22-(1-2)-161122-S	8270D_LL	4-BROMOPHENYL PHENYL ETHER	SEMI-VOLATILE	ND		0.00357	<0.0020		0.0020	NA
BGSB22-(1-2)-161122-S	8270D_LL	4-CHLORO-3-METHYLPHENOL	SEMI-VOLATILE	ND		0.00378	<0.00086		0.00086	NA
BGSB22-(1-2)-161122-S	8270D_LL	4-CHLOROPHENYL PHENYL ETHER	SEMI-VOLATILE	ND		0.00456	<0.0018		0.0018	NA
BGSB22-(1-2)-161122-S	8270D_LL	4-NITROANILINE	SEMI-VOLATILE	ND		0.0166	<0.0027		0.0027	NA
BGSB22-(1-2)-161122-S	8270D_LL	4-NITROPHENOL	SEMI-VOLATILE	ND		0.015	<0.0023		0.0023	NA
BGSB22-(1-2)-161122-S	8270D_LL	ACENAPHTHENE	SEMI-VOLATILE	ND		0.000788	<0.00061		0.00061	NA
BGSB22-(1-2)-161122-S	8270D_LL	ACENAPHTHYLENE	SEMI-VOLATILE	ND		0.000939	<0.0012		0.0012	NA
BGSB22-(1-2)-161122-S	8270D_LL	ACETOPHENONE	SEMI-VOLATILE	ND		0.00337	<0.00098		0.00098	NA
BGSB22-(1-2)-161122-S	8270D_LL	ANTHRACENE	SEMI-VOLATILE	ND		0.000802	<0.00061		0.00061	NA
BGSB22-(1-2)-161122-S	8270D_LL	ATRAZINE	SEMI-VOLATILE	ND		0.00399	<0.0024		0.0024	NA
BGSB22-(1-2)-161122-S	8270D_LL	BENZALDEHYDE	SEMI-VOLATILE	ND	UJ	0.00615	<0.0015	JL	0.0015	NA
BGSB22-(1-2)-161122-S	8270D_LL	BENZO[A]ANTHRACENE	SEMI-VOLATILE	ND		0.00103	<0.0020		0.0020	NA
BGSB22-(1-2)-161122-S	8270D_LL	BENZO[A]PYRENE	SEMI-VOLATILE	ND		0.000821	<0.0012		0.0012	NA
BGSB22-(1-2)-161122-S	8270D_LL	BENZO[B]FLUORANTHENE	SEMI-VOLATILE	ND		0.00129	<0.0015		0.0015	NA

Table A-2 Data Comparison Summary, November 2016

Sample Location ID	Method	Analyte	Parameter	EA Results			PRP Results			RPD[2]
				Result (mg/kg)	Qualifier	MDL (mg/kg)	Result mg/kg	Qualifier[1]	MDL (mg/kg)	
BGSB22-(1-2)-161122-S	8270D_LL	BENZO[G,H,I]PERYLENE	SEMI-VOLATILE	ND		0.000816	<0.00086		0.00086	NA
BGSB22-(1-2)-161122-S	8270D_LL	BENZO[K]FLUORANTHENE	SEMI-VOLATILE	ND		0.00166	<0.0011		0.0011	NA
BGSB22-(1-2)-161122-S	8270D_LL	BIS(2-CHLOROETHOXY)METHANE	SEMI-VOLATILE	ND		0.0027	<0.0011		0.0011	NA
BGSB22-(1-2)-161122-S	8270D_LL	BIS(2-CHLOROETHYL)ETHER	SEMI-VOLATILE	ND		0.0011	<0.0013		0.0013	NA
BGSB22-(1-2)-161122-S	8270D_LL	Bis(2-chloroisopropyl)ether	SEMI-VOLATILE	NR		NR	<0.0017		0.0017	NA
BGSB22-(1-2)-161122-S	8270D_LL	BIS(2-ETHYLHEXYL) PHTHALATE	SEMI-VOLATILE	ND		0.00663	<0.0021		0.0021	NA
BGSB22-(1-2)-161122-S	8270D_LL	BUTYL BENZYL PHTHALATE	SEMI-VOLATILE	ND		0.0056	<0.0016		0.0016	NA
BGSB22-(1-2)-161122-S	8270D_LL	CAPROLACTAM	SEMI-VOLATILE	ND		0.031	<0.0015		0.0015	NA
BGSB22-(1-2)-161122-S	8270D_LL	CARBAZOLE	SEMI-VOLATILE	ND		0.000756	<0.0015		0.0015	NA
BGSB22-(1-2)-161122-S	8270D_LL	CHRYSENE	SEMI-VOLATILE	ND		0.000976	<0.00098		0.00098	NA
BGSB22-(1-2)-161122-S	8270D_LL	DIBENZ(A,H)ANTHRACENE	SEMI-VOLATILE	ND		0.000912	<0.0020		0.0020	NA
BGSB22-(1-2)-161122-S	8270D_LL	DIBENZOFURAN	SEMI-VOLATILE	ND		0.00403	<0.00086		0.00086	NA
BGSB22-(1-2)-161122-S	8270D_LL	DIETHYL PHTHALATE	SEMI-VOLATILE	ND		0.00448	<0.0012		0.0012	NA
BGSB22-(1-2)-161122-S	8270D_LL	DIMETHYL PHTHALATE	SEMI-VOLATILE	ND		0.00447	<0.00098		0.00098	NA
BGSB22-(1-2)-161122-S	8270D_LL	DI-N-BUTYL PHTHALATE	SEMI-VOLATILE	ND		0.00514	<0.0015		0.0015	NA
BGSB22-(1-2)-161122-S	8270D_LL	DI-N-OCTYL PHTHALATE	SEMI-VOLATILE	ND		0.00432	<0.0011		0.0011	NA
BGSB22-(1-2)-161122-S	8270D_LL	FLUORANTHENE	SEMI-VOLATILE	ND		0.000877	<0.0013		0.0013	NA
BGSB22-(1-2)-161122-S	8270D_LL	FLUORENE	SEMI-VOLATILE	ND		0.00108	<0.0013		0.0013	NA
BGSB22-(1-2)-161122-S	8270D_LL	HEXACHLOROBENZENE	SEMI-VOLATILE	ND		0.000874	<0.0011		0.0011	NA
BGSB22-(1-2)-161122-S	8270D_LL	HEXACHLOROBUTADIENE	SEMI-VOLATILE	ND		0.000918	<0.0015		0.0015	NA
BGSB22-(1-2)-161122-S	8270D_LL	HEXACHLOROCYCLOPENTADIENE	SEMI-VOLATILE	ND		0.00442	<0.00098		0.00098	NA
BGSB22-(1-2)-161122-S	8270D_LL	HEXACHLOROETHANE	SEMI-VOLATILE	ND	UJ	0.00295	<0.0018		0.0018	NA
BGSB22-(1-2)-161122-S	8270D_LL	INDENO[1,2,3-CD]PYRENE	SEMI-VOLATILE	ND		0.000845	<0.00098		0.00098	NA
BGSB22-(1-2)-161122-S	8270D_LL	ISOPHORONE	SEMI-VOLATILE	ND		0.00309	<0.00098		0.00098	NA
BGSB22-(1-2)-161122-S	8270D_LL	METHYLPHENOL, 3 & 4	SEMI-VOLATILE	ND		0.00401	<0.0012		0.0012	NA
							<0.0012		0.0012	NA
BGSB22-(1-2)-161122-S	8270D_LL	NAPHTHALENE	SEMI-VOLATILE	ND		0.000707	<0.00073		0.00073	NA
BGSB22-(1-2)-161122-S	8270D_LL	NITROBENZENE	SEMI-VOLATILE	ND		0.00341	<0.0011		0.0011	NA
BGSB22-(1-2)-161122-S	8270D_LL	N-NITROSODI-N-PROPYLAMINE	SEMI-VOLATILE	ND		0.000962	<0.0013		0.0013	NA
BGSB22-(1-2)-161122-S	8270D_LL	N-NITROSODIPHENYLAMINE	SEMI-VOLATILE	ND		0.0038	<0.00086		0.00086	NA
BGSB22-(1-2)-161122-S	8270D_LL	PENTACHLOROPHENOL	SEMI-VOLATILE	ND		0.00367	<0.0040		0.0040	NA
BGSB22-(1-2)-161122-S	8270D_LL	PHENANTHRENE	SEMI-VOLATILE	ND		0.0013	<0.0018		0.0018	NA
BGSB22-(1-2)-161122-S	8270D_LL	PHENOL	SEMI-VOLATILE	ND		0.000969	<0.0013		0.0013	NA
BGSB22-(1-2)-161122-S	8270D_LL	PYRENE	SEMI-VOLATILE	ND		0.000829	<0.00073		0.00073	NA
BGSB22-(1-2)-161122-S	8081B_LL	4,4'-DDD	PESTICIDES_ORGP	0.000512		5.22E-05	<0.00061		0.00061	NA
BGSB22-(1-2)-161122-S	8081B_LL	4,4'-DDE	PESTICIDES_ORGP	ND		0.000163	<0.00061		0.00061	NA

Table A-2 Data Comparison Summary, November 2016

Sample Location ID	Method	Analyte	Parameter	EA Results			PRP Results			RPD[2]
				Result (mg/kg)	Qualifier	MDL (mg/kg)	Result mg/kg	Qualifier[1]	MDL (mg/kg)	
BGSB22-(1-2)-161122-S	8081B_LL	4,4'-DDT	PESTICIDES_ORGP	ND	UJ	5.22E-05	<0.00061		0.00061	NA
BGSB22-(1-2)-161122-S	8081B_LL	ALDRIN	PESTICIDES_ORGP	ND		5.41E-05	<0.00037		0.00037	NA
BGSB22-(1-2)-161122-S	8081B_LL	ALPHA-BHC	PESTICIDES_ORGP	ND		0.000151	<0.00037		0.00037	NA
BGSB22-(1-2)-161122-S	8081B_LL	BETA-BHC	PESTICIDES_ORGP	ND		0.000115	<0.00037		0.00037	NA
BGSB22-(1-2)-161122-S	8081B_LL	CIS-CHLORDANE	PESTICIDES_ORGP	ND		8.24E-05	<0.00025		0.00025	NA
BGSB22-(1-2)-161122-S	8081B_LL	DELTA-BHC	PESTICIDES_ORGP	ND	UJ	0.000183	<0.00025	JL	0.00025	NA
BGSB22-(1-2)-161122-S	8081B_LL	DIELDRIN	PESTICIDES_ORGP	ND		4.86E-05	<0.00061		0.00061	NA
BGSB22-(1-2)-161122-S	8081B_LL	ENDOSULFAN I	PESTICIDES_ORGP	ND		3.26E-05	<0.00037		0.00037	NA
BGSB22-(1-2)-161122-S	8081B_LL	ENDOSULFAN II	PESTICIDES_ORGP	ND		0.000157	<0.00074		0.00074	NA
BGSB22-(1-2)-161122-S	8081B_LL	ENDOSULFAN SULFATE	PESTICIDES_ORGP	ND		6.52E-05	<0.00074		0.00074	NA
BGSB22-(1-2)-161122-S	8081B_LL	ENDRIN	PESTICIDES_ORGP	ND		0.000149	<0.00074		0.00074	NA
BGSB22-(1-2)-161122-S	8081B_LL	ENDRIN ALDEHYDE	PESTICIDES_ORGP	ND		0.000151	<0.00074		0.00074	NA
BGSB22-(1-2)-161122-S	8081B_LL	ENDRIN KETONE	PESTICIDES_ORGP	ND		0.000171	<0.00074		0.00074	NA
BGSB22-(1-2)-161122-S	8081B_LL	GAMMA-BHC (LINDANE)	PESTICIDES_ORGP	ND		0.000106	<0.00025		0.00025	NA
BGSB22-(1-2)-161122-S	8081B_LL	HEPTACHLOR	PESTICIDES_ORGP	ND		4.43E-05	<0.00037		0.00037	NA
BGSB22-(1-2)-161122-S	8081B_LL	HEPTACHLOR EPOXIDE	PESTICIDES_ORGP	ND		6.15E-05	<0.00037		0.00037	NA
BGSB22-(1-2)-161122-S	8081B_LL	METHOXYCHLOR	PESTICIDES_ORGP	ND	UJ	0.000149	<0.0042		0.0042	NA
BGSB22-(1-2)-161122-S	8081B_LL	TOXAPHENE	PESTICIDES_ORGP	ND		0.0169	<0.0059		0.0059	NA
BGSB22-(1-2)-161122-S	8081B_LL	TRANS-CHLORDANE	PESTICIDES_ORGP	ND		0.00004	<0.00025		0.00025	NA
BGSB22-(1-2)-161122-S	8151A	2,4,5-T	HERBICIDES	ND	U	0.00312	<0.0017		0.0017	NA
BGSB22-(1-2)-161122-S	8151A	2,4-D	HERBICIDES	ND	U	0.00681	<0.00086		0.00086	NA
BGSB22-(1-2)-161122-S	8151A	2,4-DB	HERBICIDES	ND	U	0.00761	<0.0011		0.0011	NA
BGSB22-(1-2)-161122-S	8151A	DALAPON	HERBICIDES	ND		0.00882	<0.0015		0.0015	NA
BGSB22-(1-2)-161122-S	8151A	DICAMBA	HERBICIDES	ND		0.00596	<0.0016		0.0016	NA
BGSB22-(1-2)-161122-S	8151A	DICHLORPROP	HERBICIDES	ND		0.0118	<0.0020		0.0020	NA
BGSB22-(1-2)-161122-S	8151A	DINOSEB	HERBICIDES	ND	U	0.00566	<0.0017		0.0017	NA
BGSB22-(1-2)-161122-S	8151A	MCPA	HERBICIDES	ND	U	2.05	<0.12		0.12	NA
BGSB22-(1-2)-161122-S	8151A	MCPP	HERBICIDES	ND	U	2	<0.20		0.20	NA
BGSB22-(1-2)-161122-S	8151A	SILVEX (2,4,5-TP)	HERBICIDES	ND	U	0.00261	<0.0021		0.0021	NA
BGSB22-(1-2)-161122-S	6020A	ALUMINUM	METALS	24800		0.614	17000		46.8	37
BGSB22-(1-2)-161122-S	6020A	ANTIMONY	METALS	0.419		0.0306	<0.234		0.234	NA
BGSB22-(1-2)-161122-S	6020A	ARSENIC	METALS	11.2		0.0153	2.23		0.117	**134**
BGSB22-(1-2)-161122-S	6020A	BARIUM	METALS	486		0.0158	224		18.7	**74**
BGSB22-(1-2)-161122-S	6020A	BERYLLIUM	METALS	2.48		0.00799	1.37		0.0585	**58**
BGSB22-(1-2)-161122-S	6020A	BORON	METALS	7.36		0.339	4.73		1.64	44
BGSB22-(1-2)-161122-S	6020A	CADMIUM	METALS	0.425		0.0138	<0.0585		0.0585	NA

Table A-2 Data Comparison Summary, November 2016

Sample Location ID	Method	Analyte	Parameter	EA Results			PRP Results			RPD[2]
				Result (mg/kg)	Qualifier	MDL (mg/kg)	Result mg/kg	Qualifier[1]	MDL (mg/kg)	
BGSB22-(1-2)-161122-S	6020A	CHROMIUM	METALS	26.4		0.0556	17.8		0.105	39
BGSB22-(1-2)-161122-S	6020A	COBALT	METALS	97.5		0.00266	8.08		0.0819	**169**
BGSB22-(1-2)-161122-S	6020A	COPPER	METALS	18.5		0.0555	7.89		0.117	**80**
BGSB22-(1-2)-161122-S	6020A	LEAD	METALS	107		0.00969	13.6		0.0585	**155**
BGSB22-(1-2)-161122-S	6020A	MANGANESE	METALS	7470		0.378	225		23.4	**188**
BGSB22-(1-2)-161122-S	7471B	MERCURY	METALS	0.00927		0.00906	0.00967		0.000626	4
BGSB22-(1-2)-161122-S	6020A	NICKEL	METALS	95.6		0.0414	14.3		0.105	**148**
BGSB22-(1-2)-161122-S	6020A	SELENIUM	METALS	2.6		0.0471	0.755		0.211	**110**
BGSB22-(1-2)-161122-S	6020A	SILVER	METALS	0.0529		0.00873	<0.0936		0.0936	NA
BGSB22-(1-2)-161122-S	6020A	THALLIUM	METALS	0.325		0.00277	0.141	U	0.0819	**79**
BGSB22-(1-2)-161122-S	6020A	VANADIUM	METALS	99.6		0.0745	37.8		0.269	**90**
BGSB22-(1-2)-161122-S	6020A	ZINC	METALS	37.1		0.206	24.7		0.293	40

NOTES:

RPDs exceeding the 50 percent criterion are in bold type.

[1] PRP qualifier definitions are unknown

[2] RPD only calculated for analytes detected above the MDL by both the EA and PRP laboratories

U = Value not detected above the MDL

J = Estimated value

MDL = Method Detection Limit

NA = Not applicable

NR = Not reported

RPD = Relative percent difference

mg/kg = miligram per kilogram

Appendix B

Laboratory Analytical Report
(Electronically on compact disc)

This page intentionally left blank

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 180-61122-1

Job Description: U.S. Oil Recovery Superfund Site

For:
EA Engineering, Science, and Technology
7995 E. Prentice Ave, Suite 206E
Greenwood Village, CO 80111

Attention: Pamela J Moss

Approved for release.
Carrie L Gamber
Senior Project Manager
12/8/2016 3:54 PM

Carrie L Gamber, Senior Project Manager
301 Alpha Drive, Pittsburgh, PA, 15238
(412)963-2428
carrie.gamber@testamericainc.com
12/08/2016

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager or designee who has signed this report.

Table of Contents

Cover Title Page 1

Data Summaries 6

Definitions 6

Case Narrative 7

Detection Summary 8

Client Sample Results 12

Default Detection Limits 40

Surrogate Summary 43

QC Sample Results 44

QC Association 56

Chronicle 59

Certification Summary 63

Method Summary 64

Sample Summary 65

Detection Limit Exceptions 66

Manual Integration Summary 67

Reagent Traceability 79

COAs 163

Organic Sample Data 288

GC/MS Semi VOA 288

Method 8270D Low Level 288

Method 8270D Low Level QC Summary 289

Method 8270D Low Level Sample Data 301

Standards Data 386

Method 8270D Low Level ICAL Data 386

Method 8270D Low Level CCAL Data 448

Table of Contents

Raw QC Data 455

Method 8270D Low Level Tune Data 455

Method 8270D Low Level Blank Data 472

Method 8270D Low Level LCS/LCSD Data 482

Method 8270D Low Level MS/MSD Data 490

Method 8270D Low Level Run Logs 504

Method 8270D Low Level Prep Data 506

GC Semi VOA 507

Method 8081B Low Level 507

Method 8081B Low Level QC Summary 508

Method 8081B Low Level Sample Data 517

Standards Data 572

Method 8081B Low Level ICAL Data 572

Method 8081B Low Level Resolution Data 673

Method 8081B Low Level PEM Data 675

Method 8081B Low Level CCAL Data 683

Raw QC Data 707

Method 8081B Low Level Blank Data 707

Method 8081B Low Level LCS/LCSD Data 721

Method 8081B Low Level Run Logs 733

Method 8081B Low Level Prep Data 740

Method 8151A 741

Method 8151A QC Summary 742

Method 8151A Sample Data 748

Standards Data 788

Method 8151A ICAL Data 788

Table of Contents

Method 8151A CCAL Data 846

Raw QC Data 880

Method 8151A Blank Data 880

Method 8151A LCS/LCSD Data 890

Method 8151A Run Logs 901

Method 8151A Prep Data 904

Inorganic Sample Data 906

Metals Data 906

Met Cover Page 907

Met Sample Data 908

Met QC Data 912

Met ICV/CCV 912

Met CRQL 918

Met Blanks 921

Met ICSA/ICSAB 928

Met MS/MSD/PDS 932

Met LCS/LCSD 937

Met Serial Dilution 939

Met MDL 940

Met Linear Ranges 944

Met Preparation Log 945

Met Analysis Run Log 947

Met ICP/MS Int Stds 957

Met Prep Data 961

Met Raw Data 965

General Chemistry Data 1215

Table of Contents

Gen Chem Cover Page 1216

Gen Chem MDL 1217

Gen Chem Analysis Run Log 1219

Gen Chem Prep Data 1220

Shipping and Receiving Documents 1221

Client Chain of Custody 1222

Sample Receipt Checklist 1224

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

GC Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
U	Indicates the analyte was analyzed for but not detected.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
W	PS: Post-digestion spike was outside control limits
V	Serial Dilution exceeds the control limits
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: EA Engineering, Science, and Technology

Project: U.S. Oil Recovery Superfund Site

Report Number: 180-61122-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 11/23/2016 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5º C.

SEMIVOLATILES
The following sample was diluted due to the nature of the sample matrix: BGSB10-(0.0-0.5)-161122-S (180-61122-3) and BGSB10-(1-2) -161122-S (180-61122-4). Elevated reporting limits (RLs) are provided.

3,3'-Dichlorobenzidine, Caprolactam and Hexachlorocyclopentadiene failed the recovery criteria low for the MS/MSD of sample BGSB22-(0.0-0.5)-161122-SMS (180-61122-1) in batch 180-195402.

PESTICIDES
The following samples were diluted due to the nature of the sample matrix: BGSB22-(0.0-0.5)-161122-S (180-61122-1), BGSB22-(1-2) -161122-S (180-61122-2), BGSB10-(0.0-0.5)-161122-S (180-61122-3) and BGSB10-(1-2)-161122-S (180-61122-4). Elevated reporting limits (RLs) are provided. Sample extracts were dark yellow in color.

DCB Decachlorobiphenyl (Surr) failed the surrogate recovery criteria high for BGSB10-(0.0-0.5)-161122-S (180-61122-3) and BGSB10-(1-2)-161122-S (180-61122-4). At least one surrogate recovered within QC limits. All data was reported.

CHLORINATED HERBICIDES
The laboratory control sample (LCS) for 195524 recovered outside control limits for the following analytes: 2,4,5-T, 2,4-D, 2,4-DB, Dinoseb, MCPA, MCPP and Silvex (2,4,5-TP). These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

The continuing calibration verification (CCV) associated with batch 195866 recovered above the upper control limit for 2,4,5-T, MCPA and MCPP. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

METALS
Several analytes failed the recovery criteria low for the MS/MSD of sample BGSB22-(0.0-0.5)-161122-S (180-61122-1) in batch 180-196391. Aluminum failed the recovery criteria high. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

The serial dilution performed for the following sample associated with batch 195582 was outside control limits for beryllium: BGSB22-(0.0-0.5)-161122-S (180-61122-1)

GENERAL CHEMISTRY
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: U.S. Oil Recovery Superfund Site

TestAmerica Job ID: 180-61122-1

Client Sample ID: BGSB22-(0.0-0.5)-161122-S — Lab Sample ID: 180-61122-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	0.00137	J	0.00724	0.000648	mg/Kg	1	☼	8270D LL	Total/NA
Acenaphthylene	0.00396	J	0.00724	0.000826	mg/Kg	1	☼	8270D LL	Total/NA
Acetophenone	0.0169	J	0.0357	0.00296	mg/Kg	1	☼	8270D LL	Total/NA
Anthracene	0.00362	J	0.00724	0.000705	mg/Kg	1	☼	8270D LL	Total/NA
Benzaldehyde	0.00751	J	0.0357	0.00540	mg/Kg	1	☼	8270D LL	Total/NA
Benzo[a]anthracene	0.0140		0.00724	0.000903	mg/Kg	1	☼	8270D LL	Total/NA
Benzo[b]fluoranthene	0.0202		0.00724	0.00113	mg/Kg	1	☼	8270D LL	Total/NA
Benzo[k]fluoranthene	0.00857		0.00724	0.00146	mg/Kg	1	☼	8270D LL	Total/NA
Benzo[g,h,i]perylene	0.0165		0.00724	0.000717	mg/Kg	1	☼	8270D LL	Total/NA
Benzo[a]pyrene	0.0132		0.00724	0.000721	mg/Kg	1	☼	8270D LL	Total/NA
Bis(2-ethylhexyl) phthalate	0.0310	J	0.0721	0.00582	mg/Kg	1	☼	8270D LL	Total/NA
Butyl benzyl phthalate	0.00591	J	0.0357	0.00493	mg/Kg	1	☼	8270D LL	Total/NA
Carbazole	0.00176	J	0.00724	0.000664	mg/Kg	1	☼	8270D LL	Total/NA
Dibenz(a,h)anthracene	0.00336	J	0.00724	0.000802	mg/Kg	1	☼	8270D LL	Total/NA
Di-n-butyl phthalate	0.00485	J	0.0357	0.00452	mg/Kg	1	☼	8270D LL	Total/NA
Fluoranthene	0.0179		0.00724	0.000771	mg/Kg	1	☼	8270D LL	Total/NA
Indeno[1,2,3-cd]pyrene	0.0118		0.00724	0.000743	mg/Kg	1	☼	8270D LL	Total/NA
Phenanthrene	0.00554	J	0.00724	0.00115	mg/Kg	1	☼	8270D LL	Total/NA
Pyrene	0.0168		0.00724	0.000729	mg/Kg	1	☼	8270D LL	Total/NA
4,4'-DDD	0.000472	p	0.000450	0.0000459	mg/Kg	5	☼	8081B_LL	Total/NA
4,4'-DDE	0.00500	p	0.000450	0.000143	mg/Kg	5	☼	8081B_LL	Total/NA
4,4'-DDT	0.00420	p	0.000450	0.0000459	mg/Kg	5	☼	8081B_LL	Total/NA
Heptachlor	0.000251	J p	0.000450	0.0000389	mg/Kg	5	☼	8081B_LL	Total/NA
Heptachlor epoxide	0.000906	p	0.000450	0.0000540	mg/Kg	5	☼	8081B_LL	Total/NA
Silver	0.0592	J	0.106	0.00866	mg/Kg	1	☼	6020A	Total/NA
Aluminum	5750		3.17	0.609	mg/Kg	1	☼	6020A	Total/NA
Arsenic	3.01	F1	0.106	0.0152	mg/Kg	1	☼	6020A	Total/NA
Boron	3.01		2.11	0.337	mg/Kg	1	☼	6020A	Total/NA
Barium	140	F1	1.06	0.0156	mg/Kg	1	☼	6020A	Total/NA
Beryllium	0.430		0.106	0.00792	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.294		0.106	0.0137	mg/Kg	1	☼	6020A	Total/NA
Cobalt	7.81		0.0528	0.00264	mg/Kg	1	☼	6020A	Total/NA
Chromium	7.50		0.211	0.0551	mg/Kg	1	☼	6020A	Total/NA
Copper	10.1		0.211	0.0550	mg/Kg	1	☼	6020A	Total/NA
Manganese	404		0.528	0.0375	mg/Kg	1	☼	6020A	Total/NA
Nickel	6.57		0.106	0.0411	mg/Kg	1	☼	6020A	Total/NA
Lead	67.5		0.106	0.00961	mg/Kg	1	☼	6020A	Total/NA
Antimony	0.379	F1	0.211	0.0303	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.512	J	0.528	0.0467	mg/Kg	1	☼	6020A	Total/NA
Vanadium	17.9		0.106	0.0739	mg/Kg	1	☼	6020A	Total/NA
Zinc	110	F1	0.528	0.204	mg/Kg	1	☼	6020A	Total/NA
Thallium	0.0623	J	0.106	0.00275	mg/Kg	1	☼	6020A	Total/NA
Mercury	0.0660		0.0359	0.00804	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BGSB22-(1-2)-161122-S — Lab Sample ID: 180-61122-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Silver	0.0529	J	0.106	0.00873	mg/Kg	1	☼	6020A	Total/NA
Aluminum	24800		3.19	0.614	mg/Kg	1	☼	6020A	Total/NA
Arsenic	11.2		0.106	0.0153	mg/Kg	1	☼	6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BGSB22-(1-2)-161122-S (Continued) — Lab Sample ID: 180-61122-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	7.36		2.13	0.339	mg/Kg	1	☼	6020A	Total/NA
Barium	486		1.06	0.0158	mg/Kg	1	☼	6020A	Total/NA
Beryllium	2.48		0.106	0.00799	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.425		0.106	0.0138	mg/Kg	1	☼	6020A	Total/NA
Cobalt	97.5		0.0532	0.00266	mg/Kg	1	☼	6020A	Total/NA
Chromium	26.4		0.213	0.0556	mg/Kg	1	☼	6020A	Total/NA
Copper	18.5		0.213	0.0555	mg/Kg	1	☼	6020A	Total/NA
Manganese	7470		5.32	0.378	mg/Kg	10	☼	6020A	Total/NA
Nickel	95.6		0.106	0.0414	mg/Kg	1	☼	6020A	Total/NA
Lead	107		0.106	0.00969	mg/Kg	1	☼	6020A	Total/NA
Antimony	0.419		0.213	0.0306	mg/Kg	1	☼	6020A	Total/NA
Selenium	2.60		0.532	0.0471	mg/Kg	1	☼	6020A	Total/NA
Vanadium	99.6		0.106	0.0745	mg/Kg	1	☼	6020A	Total/NA
Zinc	37.1		0.532	0.206	mg/Kg	1	☼	6020A	Total/NA
Thallium	0.325		0.106	0.00277	mg/Kg	1	☼	6020A	Total/NA
Mercury	0.00927	J	0.0404	0.00906	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BGSB10-(0.0-0.5)-161122-S — Lab Sample ID: 180-61122-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.0170	J	0.0728	0.00697	mg/Kg	10	☼	8270D LL	Total/NA
Acenaphthylene	0.0222	J	0.0728	0.00831	mg/Kg	10	☼	8270D LL	Total/NA
Anthracene	0.0631	J	0.0728	0.00710	mg/Kg	10	☼	8270D LL	Total/NA
Benzo[a]anthracene	0.712		0.0728	0.00909	mg/Kg	10	☼	8270D LL	Total/NA
Benzo[b]fluoranthene	1.22		0.0728	0.0114	mg/Kg	10	☼	8270D LL	Total/NA
Benzo[k]fluoranthene	0.424		0.0728	0.0147	mg/Kg	10	☼	8270D LL	Total/NA
Benzo[g,h,i]perylene	0.851		0.0728	0.00722	mg/Kg	10	☼	8270D LL	Total/NA
Benzo[a]pyrene	0.811		0.0728	0.00726	mg/Kg	10	☼	8270D LL	Total/NA
Bis(2-ethylhexyl) phthalate	0.134	J	0.725	0.0586	mg/Kg	10	☼	8270D LL	Total/NA
Carbazole	0.0664	J	0.0728	0.00668	mg/Kg	10	☼	8270D LL	Total/NA
Dibenz(a,h)anthracene	0.206		0.0728	0.00807	mg/Kg	10	☼	8270D LL	Total/NA
Fluoranthene	1.54		0.0728	0.00776	mg/Kg	10	☼	8270D LL	Total/NA
Indeno[1,2,3-cd]pyrene	0.710		0.0728	0.00747	mg/Kg	10	☼	8270D LL	Total/NA
Phenanthrene	0.375		0.0728	0.0115	mg/Kg	10	☼	8270D LL	Total/NA
Pyrene	1.09		0.0728	0.00733	mg/Kg	10	☼	8270D LL	Total/NA
Aldrin	0.000148	J	0.000459	0.0000485	mg/Kg	5	☼	8081B_LL	Total/NA
cis-Chlordane	0.00115	p	0.000459	0.0000738	mg/Kg	5	☼	8081B_LL	Total/NA
4,4'-DDD	0.000970		0.000459	0.0000468	mg/Kg	5	☼	8081B_LL	Total/NA
Dieldrin	0.00140	p	0.000459	0.0000435	mg/Kg	5	☼	8081B_LL	Total/NA
Heptachlor epoxide	0.000183	J p	0.000459	0.0000551	mg/Kg	5	☼	8081B_LL	Total/NA
Silver	0.0945		0.0874	0.00717	mg/Kg	1	☼	6020A	Total/NA
Aluminum	9360		2.62	0.504	mg/Kg	1	☼	6020A	Total/NA
Arsenic	2.94		0.0874	0.0126	mg/Kg	1	☼	6020A	Total/NA
Boron	5.83		1.75	0.279	mg/Kg	1	☼	6020A	Total/NA
Barium	109		0.874	0.0129	mg/Kg	1	☼	6020A	Total/NA
Beryllium	0.608		0.0874	0.00656	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.204		0.0874	0.0114	mg/Kg	1	☼	6020A	Total/NA
Cobalt	5.56		0.0437	0.00219	mg/Kg	1	☼	6020A	Total/NA
Chromium	14.3		0.175	0.0456	mg/Kg	1	☼	6020A	Total/NA
Copper	13.0		0.175	0.0456	mg/Kg	1	☼	6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BGSB10-(0.0-0.5)-161122-S (Continued) — Lab Sample ID: 180-61122-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	215		0.437	0.0310	mg/Kg	1	☼	6020A	Total/NA
Nickel	10.2		0.0874	0.0340	mg/Kg	1	☼	6020A	Total/NA
Lead	40.5		0.0874	0.00796	mg/Kg	1	☼	6020A	Total/NA
Antimony	0.410		0.175	0.0251	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.482		0.437	0.0386	mg/Kg	1	☼	6020A	Total/NA
Vanadium	19.0		0.0874	0.0612	mg/Kg	1	☼	6020A	Total/NA
Zinc	82.5		0.437	0.169	mg/Kg	1	☼	6020A	Total/NA
Thallium	0.0915		0.0874	0.00227	mg/Kg	1	☼	6020A	Total/NA
Mercury	0.0294	J	0.0358	0.00801	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BGSB10-(1-2)-161122-S — Lab Sample ID: 180-61122-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	0.00638	J	0.0369	0.00330	mg/Kg	5	☼	8270D LL	Total/NA
Acenaphthene	0.00775	J	0.0369	0.00353	mg/Kg	5	☼	8270D LL	Total/NA
Acenaphthylene	0.0147	J	0.0369	0.00421	mg/Kg	5	☼	8270D LL	Total/NA
Anthracene	0.0383		0.0369	0.00359	mg/Kg	5	☼	8270D LL	Total/NA
Benzo[a]anthracene	0.299		0.0369	0.00460	mg/Kg	5	☼	8270D LL	Total/NA
Benzo[b]fluoranthene	0.449		0.0369	0.00577	mg/Kg	5	☼	8270D LL	Total/NA
Benzo[k]fluoranthene	0.195		0.0369	0.00742	mg/Kg	5	☼	8270D LL	Total/NA
Benzo[g,h,i]perylene	0.312		0.0369	0.00365	mg/Kg	5	☼	8270D LL	Total/NA
Benzo[a]pyrene	0.319		0.0369	0.00367	mg/Kg	5	☼	8270D LL	Total/NA
Bis(2-ethylhexyl) phthalate	0.118	J	0.367	0.0297	mg/Kg	5	☼	8270D LL	Total/NA
Butyl benzyl phthalate	0.0473	J	0.182	0.0251	mg/Kg	5	☼	8270D LL	Total/NA
Carbazole	0.0244	J	0.0369	0.00338	mg/Kg	5	☼	8270D LL	Total/NA
Dibenz(a,h)anthracene	0.0783		0.0369	0.00408	mg/Kg	5	☼	8270D LL	Total/NA
Fluoranthene	0.600		0.0369	0.00393	mg/Kg	5	☼	8270D LL	Total/NA
Indeno[1,2,3-cd]pyrene	0.268		0.0369	0.00378	mg/Kg	5	☼	8270D LL	Total/NA
Phenanthrene	0.173		0.0369	0.00584	mg/Kg	5	☼	8270D LL	Total/NA
Pyrene	0.417		0.0369	0.00371	mg/Kg	5	☼	8270D LL	Total/NA
Aldrin	0.0000811	J	0.000459	0.0000484	mg/Kg	5	☼	8081B_LL	Total/NA
cis-Chlordane	0.000621	p	0.000459	0.0000738	mg/Kg	5	☼	8081B_LL	Total/NA
4,4'-DDD	0.000319	J p	0.000459	0.0000468	mg/Kg	5	☼	8081B_LL	Total/NA
Dieldrin	0.000899		0.000459	0.0000435	mg/Kg	5	☼	8081B_LL	Total/NA
Silver	0.384		0.109	0.00894	mg/Kg	1	☼	6020A	Total/NA
Aluminum	9720		3.27	0.629	mg/Kg	1	☼	6020A	Total/NA
Arsenic	2.72		0.109	0.0157	mg/Kg	1	☼	6020A	Total/NA
Boron	6.22		2.18	0.347	mg/Kg	1	☼	6020A	Total/NA
Barium	110		1.09	0.0161	mg/Kg	1	☼	6020A	Total/NA
Beryllium	0.615		0.109	0.00818	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.306		0.109	0.0142	mg/Kg	1	☼	6020A	Total/NA
Cobalt	4.65		0.0545	0.00273	mg/Kg	1	☼	6020A	Total/NA
Chromium	14.4		0.218	0.0569	mg/Kg	1	☼	6020A	Total/NA
Copper	10.6		0.218	0.0568	mg/Kg	1	☼	6020A	Total/NA
Manganese	217		0.545	0.0387	mg/Kg	1	☼	6020A	Total/NA
Nickel	10.0		0.109	0.0424	mg/Kg	1	☼	6020A	Total/NA
Lead	89.5		0.109	0.00992	mg/Kg	1	☼	6020A	Total/NA
Antimony	0.473		0.218	0.0313	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.290	J	0.545	0.0482	mg/Kg	1	☼	6020A	Total/NA
Vanadium	17.8		0.109	0.0763	mg/Kg	1	☼	6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BGSB10-(1-2)-161122-S (Continued) — Lab Sample ID: 180-61122-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	76.9		0.545	0.211	mg/Kg	1	☼	6020A	Total/NA
Thallium	0.0944	J	0.109	0.00283	mg/Kg	1	☼	6020A	Total/NA
Mercury	0.0711		0.0307	0.00688	mg/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Client Sample ID: BGSB22-(0.0-0.5)-161122-S
Date Collected: 11/22/16 09:35
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-1
Matrix: Solid
Percent Solids: 91.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.00322	U	0.0357	0.00322	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
1,4-Dioxane	0.00413	U	0.0721	0.00413	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
1-Methylnaphthalene	0.000769	U	0.00724	0.000769	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
1,2,4,5-Tetrachlorobenzene	0.00273	U	0.0357	0.00273	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
2-Chloronaphthalene	0.000752	U	0.00724	0.000752	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
2-Chlorophenol	0.00295	U	0.0357	0.00295	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
2,4-Dichlorophenol	0.000723	U	0.00724	0.000723	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
2,4-Dimethylphenol	0.00564	U	0.0357	0.00564	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
2,4-Dinitrophenol	0.0429	U	0.184	0.0429	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
2,4-Dinitrotoluene	0.00291	U	0.0357	0.00291	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
2,6-Dinitrotoluene	0.00372	U	0.0357	0.00372	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
2-Methylnaphthalene	**0.00137**	**J**	0.00724	0.000648	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
2-Methylphenol	0.00252	U	0.0357	0.00252	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Methylphenol, 3 & 4	0.00353	U	0.0357	0.00353	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
2-Nitroaniline	0.0161	U	0.184	0.0161	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
3-Nitroaniline	0.0148	U	0.184	0.0148	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
4-Nitroaniline	0.0146	U	0.184	0.0146	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
2-Nitrophenol	0.00397	U	0.0357	0.00397	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
4-Nitrophenol	0.0131	U	0.184	0.0131	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
2,2'-oxybis[1-chloropropane]	0.000778	U	0.00724	0.000778	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
2,3,4,6-Tetrachlorophenol	0.00232	U	0.0357	0.00232	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
2,4,5-Trichlorophenol	0.00385	U	0.0357	0.00385	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
2,4,6-Trichlorophenol	0.00540	U	0.0357	0.00540	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
4-Chloro-3-methylphenol	0.00332	U	0.0357	0.00332	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
4-Chlorophenyl phenyl ether	0.00401	U	0.0357	0.00401	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
4,6-Dinitro-2-methylphenol	0.0145	U	0.184	0.0145	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Acenaphthene	0.000692	U	0.00724	0.000692	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Acenaphthylene	**0.00396**	**J**	0.00724	0.000826	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Acetophenone	**0.0169**	**J**	0.0357	0.00296	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Anthracene	**0.00362**	**J**	0.00724	0.000705	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Atrazine	0.00351	U	0.0357	0.00351	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Benzaldehyde	**0.00751**	**J**	0.0357	0.00540	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Benzo[a]anthracene	**0.0140**		0.00724	0.000903	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Benzo[b]fluoranthene	**0.0202**		0.00724	0.00113	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Benzo[k]fluoranthene	**0.00857**		0.00724	0.00146	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Benzo[g,h,i]perylene	**0.0165**		0.00724	0.000717	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Benzo[a]pyrene	**0.0132**		0.00724	0.000721	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Bis(2-chloroethoxy)methane	0.00237	U	0.0357	0.00237	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Bis(2-chloroethyl)ether	0.000967	U	0.00724	0.000967	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Bis(2-ethylhexyl) phthalate	**0.0310**	**J**	0.0721	0.00582	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
4-Bromophenyl phenyl ether	0.00314	U	0.0357	0.00314	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Butyl benzyl phthalate	**0.00591**	**J**	0.0357	0.00493	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Caprolactam	0.0272	U F1	0.184	0.0272	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Carbazole	**0.00176**	**J**	0.00724	0.000664	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Dibenz(a,h)anthracene	**0.00336**	**J**	0.00724	0.000802	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Dibenzofuran	0.00355	U	0.0357	0.00355	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Di-n-butyl phthalate	**0.00485**	**J**	0.0357	0.00452	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Di-n-octyl phthalate	0.00380	U	0.0357	0.00380	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Diethyl phthalate	0.00394	U	0.0357	0.00394	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Client Sample ID: BGSB22-(0.0-0.5)-161122-S
Date Collected: 11/22/16 09:35
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-1
Matrix: Solid
Percent Solids: 91.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	0.00393	U	0.0357	0.00393	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Fluoranthene	**0.0179**		0.00724	0.000771	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Fluorene	0.000950	U	0.00724	0.000950	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Hexachlorobenzene	0.000768	U	0.00724	0.000768	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Hexachlorobutadiene	0.000807	U	0.00724	0.000807	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Hexachlorocyclopentadiene	0.00389	U F1	0.0357	0.00389	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Hexachloroethane	0.00259	U	0.0357	0.00259	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Indeno[1,2,3-cd]pyrene	**0.0118**		0.00724	0.000743	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Isophorone	0.00272	U	0.0357	0.00272	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Naphthalene	0.000621	U	0.00724	0.000621	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Nitrobenzene	0.00300	U	0.0721	0.00300	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
N-Nitrosodiphenylamine	0.00334	U	0.0357	0.00334	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
N-Nitrosodi-n-propylamine	0.000845	U	0.00724	0.000845	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Pentachlorophenol	0.00322	U	0.0357	0.00322	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Phenanthrene	**0.00554**	**J**	0.00724	0.00115	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Phenol	0.000852	U	0.0357	0.000852	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
Pyrene	**0.0168**		0.00724	0.000729	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1
3,3'-Dichlorobenzidine	0.00381	U F1	0.0357	0.00381	mg/Kg	☼	11/25/16 02:15	11/25/16 18:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*62*		*42 - 100*	*11/25/16 02:15*	*11/25/16 18:33*	*1*
2-Fluorophenol (Surr)	*57*		*21 - 107*	*11/25/16 02:15*	*11/25/16 18:33*	*1*
2,4,6-Tribromophenol (Surr)	*75*		*20 - 134*	*11/25/16 02:15*	*11/25/16 18:33*	*1*
Nitrobenzene-d5 (Surr)	*61*		*35 - 109*	*11/25/16 02:15*	*11/25/16 18:33*	*1*
Phenol-d5 (Surr)	*61*		*29 - 105*	*11/25/16 02:15*	*11/25/16 18:33*	*1*
Terphenyl-d14 (Surr)	*64*		*36 - 113*	*11/25/16 02:15*	*11/25/16 18:33*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Client Sample ID: BGSB22-(1-2)-161122-S
Date Collected: 11/22/16 09:40
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-2
Matrix: Solid
Percent Solids: 80.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.00366	U	0.0406	0.00366	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
1,4-Dioxane	0.00470	U	0.0820	0.00470	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
1-Methylnaphthalene	0.000875	U	0.00824	0.000875	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
1,2,4,5-Tetrachlorobenzene	0.00311	U	0.0406	0.00311	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
2-Chloronaphthalene	0.000856	U	0.00824	0.000856	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
2-Chlorophenol	0.00335	U	0.0406	0.00335	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
2,4-Dichlorophenol	0.000823	U	0.00824	0.000823	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
2,4-Dimethylphenol	0.00641	U	0.0406	0.00641	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
2,4-Dinitrophenol	0.0488	U	0.209	0.0488	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
2,4-Dinitrotoluene	0.00331	U	0.0406	0.00331	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
2,6-Dinitrotoluene	0.00423	U	0.0406	0.00423	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
2-Methylnaphthalene	0.000737	U	0.00824	0.000737	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
2-Methylphenol	0.00287	U	0.0406	0.00287	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Methylphenol, 3 & 4	0.00401	U	0.0406	0.00401	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
2-Nitroaniline	0.0184	U	0.209	0.0184	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
3-Nitroaniline	0.0169	U	0.209	0.0169	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
4-Nitroaniline	0.0166	U	0.209	0.0166	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
2-Nitrophenol	0.00452	U	0.0406	0.00452	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
4-Nitrophenol	0.0150	U	0.209	0.0150	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
2,2'-oxybis[1-chloropropane]	0.000885	U	0.00824	0.000885	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
2,3,4,6-Tetrachlorophenol	0.00264	U	0.0406	0.00264	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
2,4,5-Trichlorophenol	0.00438	U	0.0406	0.00438	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
2,4,6-Trichlorophenol	0.00614	U	0.0406	0.00614	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
4-Chloro-3-methylphenol	0.00378	U	0.0406	0.00378	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
4-Chlorophenyl phenyl ether	0.00456	U	0.0406	0.00456	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
4,6-Dinitro-2-methylphenol	0.0165	U	0.209	0.0165	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Acenaphthene	0.000788	U	0.00824	0.000788	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Acenaphthylene	0.000939	U	0.00824	0.000939	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Acetophenone	0.00337	U	0.0406	0.00337	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Anthracene	0.000802	U	0.00824	0.000802	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Atrazine	0.00399	U	0.0406	0.00399	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Benzaldehyde	0.00615	U	0.0406	0.00615	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Benzo[a]anthracene	0.00103	U	0.00824	0.00103	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Benzo[b]fluoranthene	0.00129	U	0.00824	0.00129	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Benzo[k]fluoranthene	0.00166	U	0.00824	0.00166	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Benzo[g,h,i]perylene	0.000816	U	0.00824	0.000816	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Benzo[a]pyrene	0.000821	U	0.00824	0.000821	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Bis(2-chloroethoxy)methane	0.00270	U	0.0406	0.00270	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Bis(2-chloroethyl)ether	0.00110	U	0.00824	0.00110	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Bis(2-ethylhexyl) phthalate	0.00663	U	0.0820	0.00663	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
4-Bromophenyl phenyl ether	0.00357	U	0.0406	0.00357	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Butyl benzyl phthalate	0.00560	U	0.0406	0.00560	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Caprolactam	0.0310	U	0.209	0.0310	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Carbazole	0.000756	U	0.00824	0.000756	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Dibenz(a,h)anthracene	0.000912	U	0.00824	0.000912	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Dibenzofuran	0.00403	U	0.0406	0.00403	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Di-n-butyl phthalate	0.00514	U	0.0406	0.00514	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Di-n-octyl phthalate	0.00432	U	0.0406	0.00432	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Diethyl phthalate	0.00448	U	0.0406	0.00448	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Client Sample ID: BGSB22-(1-2)-161122-S
Date Collected: 11/22/16 09:40
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-2
Matrix: Solid
Percent Solids: 80.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	0.00447	U	0.0406	0.00447	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Fluoranthene	0.000877	U	0.00824	0.000877	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Fluorene	0.00108	U	0.00824	0.00108	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Hexachlorobenzene	0.000874	U	0.00824	0.000874	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Hexachlorobutadiene	0.000918	U	0.00824	0.000918	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Hexachlorocyclopentadiene	0.00442	U	0.0406	0.00442	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Hexachloroethane	0.00295	U	0.0406	0.00295	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Indeno[1,2,3-cd]pyrene	0.000845	U	0.00824	0.000845	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Isophorone	0.00309	U	0.0406	0.00309	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Naphthalene	0.000707	U	0.00824	0.000707	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Nitrobenzene	0.00341	U	0.0820	0.00341	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
N-Nitrosodiphenylamine	0.00380	U	0.0406	0.00380	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
N-Nitrosodi-n-propylamine	0.000962	U	0.00824	0.000962	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Pentachlorophenol	0.00367	U	0.0406	0.00367	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Phenanthrene	0.00130	U	0.00824	0.00130	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Phenol	0.000969	U	0.0406	0.000969	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
Pyrene	0.000829	U	0.00824	0.000829	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1
3,3'-Dichlorobenzidine	0.00434	U	0.0406	0.00434	mg/Kg	☼	11/25/16 02:15	11/25/16 19:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*60*		*42 - 100*	*11/25/16 02:15*	*11/25/16 19:53*	*1*
2-Fluorophenol (Surr)	*61*		*21 - 107*	*11/25/16 02:15*	*11/25/16 19:53*	*1*
2,4,6-Tribromophenol (Surr)	*76*		*20 - 134*	*11/25/16 02:15*	*11/25/16 19:53*	*1*
Nitrobenzene-d5 (Surr)	*63*		*35 - 109*	*11/25/16 02:15*	*11/25/16 19:53*	*1*
Phenol-d5 (Surr)	*63*		*29 - 105*	*11/25/16 02:15*	*11/25/16 19:53*	*1*
Terphenyl-d14 (Surr)	*62*		*36 - 113*	*11/25/16 02:15*	*11/25/16 19:53*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Client Sample ID: BGSB10-(0.0-0.5)-161122-S
Date Collected: 11/22/16 15:30
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-3
Matrix: Solid
Percent Solids: 90.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.0324	U	0.359	0.0324	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
1,4-Dioxane	0.0416	U	0.725	0.0416	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
1-Methylnaphthalene	0.00774	U	0.0728	0.00774	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
1,2,4,5-Tetrachlorobenzene	0.0275	U	0.359	0.0275	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
2-Chloronaphthalene	0.00757	U	0.0728	0.00757	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
2-Chlorophenol	0.0297	U	0.359	0.0297	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
2,4-Dichlorophenol	0.00728	U	0.0728	0.00728	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
2,4-Dimethylphenol	0.0567	U	0.359	0.0567	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
2,4-Dinitrophenol	0.432	U	1.85	0.432	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
2,4-Dinitrotoluene	0.0293	U	0.359	0.0293	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
2,6-Dinitrotoluene	0.0374	U	0.359	0.0374	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
2-Methylnaphthalene	0.00652	U	0.0728	0.00652	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
2-Methylphenol	0.0253	U	0.359	0.0253	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Methylphenol, 3 & 4	0.0355	U	0.359	0.0355	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
2-Nitroaniline	0.162	U	1.85	0.162	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
3-Nitroaniline	0.149	U	1.85	0.149	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
4-Nitroaniline	0.147	U	1.85	0.147	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
2-Nitrophenol	0.0400	U	0.359	0.0400	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
4-Nitrophenol	0.132	U	1.85	0.132	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
2,2'-oxybis[1-chloropropane]	0.00783	U	0.0728	0.00783	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
2,3,4,6-Tetrachlorophenol	0.0233	U	0.359	0.0233	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
2,4,5-Trichlorophenol	0.0387	U	0.359	0.0387	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
2,4,6-Trichlorophenol	0.0543	U	0.359	0.0543	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
4-Chloro-3-methylphenol	0.0334	U	0.359	0.0334	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
4-Chlorophenyl phenyl ether	0.0403	U	0.359	0.0403	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
4,6-Dinitro-2-methylphenol	0.146	U	1.85	0.146	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Acenaphthene	**0.0170**	**J**	0.0728	0.00697	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Acenaphthylene	**0.0222**	**J**	0.0728	0.00831	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Acetophenone	0.0298	U	0.359	0.0298	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Anthracene	**0.0631**	**J**	0.0728	0.00710	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Atrazine	0.0353	U	0.359	0.0353	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Benzaldehyde	0.0544	U	0.359	0.0544	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Benzo[a]anthracene	**0.712**		0.0728	0.00909	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Benzo[b]fluoranthene	**1.22**		0.0728	0.0114	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Benzo[k]fluoranthene	**0.424**		0.0728	0.0147	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Benzo[g,h,i]perylene	**0.851**		0.0728	0.00722	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Benzo[a]pyrene	**0.811**		0.0728	0.00726	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Bis(2-chloroethoxy)methane	0.0239	U	0.359	0.0239	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Bis(2-chloroethyl)ether	0.00974	U	0.0728	0.00974	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Bis(2-ethylhexyl) phthalate	**0.134**	**J**	0.725	0.0586	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
4-Bromophenyl phenyl ether	0.0316	U	0.359	0.0316	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Butyl benzyl phthalate	0.0496	U	0.359	0.0496	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Caprolactam	0.274	U	1.85	0.274	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Carbazole	**0.0664**	**J**	0.0728	0.00668	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Dibenz(a,h)anthracene	**0.206**		0.0728	0.00807	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Dibenzofuran	0.0357	U	0.359	0.0357	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Di-n-butyl phthalate	0.0454	U	0.359	0.0454	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Di-n-octyl phthalate	0.0382	U	0.359	0.0382	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Diethyl phthalate	0.0396	U	0.359	0.0396	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Client Sample ID: BGSB10-(0.0-0.5)-161122-S
Date Collected: 11/22/16 15:30
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-3
Matrix: Solid
Percent Solids: 90.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	0.0395	U	0.359	0.0395	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Fluoranthene	**1.54**		0.0728	0.00776	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Fluorene	0.00956	U	0.0728	0.00956	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Hexachlorobenzene	0.00773	U	0.0728	0.00773	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Hexachlorobutadiene	0.00812	U	0.0728	0.00812	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Hexachlorocyclopentadiene	0.0391	U	0.359	0.0391	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Hexachloroethane	0.0261	U	0.359	0.0261	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Indeno[1,2,3-cd]pyrene	**0.710**		0.0728	0.00747	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Isophorone	0.0273	U	0.359	0.0273	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Naphthalene	0.00625	U	0.0728	0.00625	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Nitrobenzene	0.0302	U	0.725	0.0302	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
N-Nitrosodiphenylamine	0.0336	U	0.359	0.0336	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
N-Nitrosodi-n-propylamine	0.00851	U	0.0728	0.00851	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Pentachlorophenol	0.0324	U	0.359	0.0324	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Phenanthrene	**0.375**		0.0728	0.0115	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Phenol	0.00857	U	0.359	0.00857	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
Pyrene	**1.09**		0.0728	0.00733	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10
3,3'-Dichlorobenzidine	0.0383	U	0.359	0.0383	mg/Kg	☼	11/25/16 02:15	11/25/16 20:19	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*42 - 100*	*11/25/16 02:15*	*11/25/16 20:19*	*10*
2-Fluorophenol (Surr)	*53*		*21 - 107*	*11/25/16 02:15*	*11/25/16 20:19*	*10*
2,4,6-Tribromophenol (Surr)	*94*		*20 - 134*	*11/25/16 02:15*	*11/25/16 20:19*	*10*
Nitrobenzene-d5 (Surr)	*65*		*35 - 109*	*11/25/16 02:15*	*11/25/16 20:19*	*10*
Phenol-d5 (Surr)	*69*		*29 - 105*	*11/25/16 02:15*	*11/25/16 20:19*	*10*
Terphenyl-d14 (Surr)	*83*		*36 - 113*	*11/25/16 02:15*	*11/25/16 20:19*	*10*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Client Sample ID: BGSB10-(1-2)-161122-S
Date Collected: 11/22/16 15:35
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-4
Matrix: Solid
Percent Solids: 90.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.0164	U	0.182	0.0164	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
1,4-Dioxane	0.0211	U	0.367	0.0211	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
1-Methylnaphthalene	0.00392	U	0.0369	0.00392	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
1,2,4,5-Tetrachlorobenzene	0.0139	U	0.182	0.0139	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
2-Chloronaphthalene	0.00383	U	0.0369	0.00383	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
2-Chlorophenol	0.0150	U	0.182	0.0150	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
2,4-Dichlorophenol	0.00368	U	0.0369	0.00368	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
2,4-Dimethylphenol	0.0287	U	0.182	0.0287	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
2,4-Dinitrophenol	0.219	U	0.936	0.219	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
2,4-Dinitrotoluene	0.0148	U	0.182	0.0148	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
2,6-Dinitrotoluene	0.0189	U	0.182	0.0189	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
2-Methylnaphthalene	**0.00638**	**J**	0.0369	0.00330	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
2-Methylphenol	0.0128	U	0.182	0.0128	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Methylphenol, 3 & 4	0.0180	U	0.182	0.0180	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
2-Nitroaniline	0.0822	U	0.936	0.0822	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
3-Nitroaniline	0.0756	U	0.936	0.0756	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
4-Nitroaniline	0.0744	U	0.936	0.0744	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
2-Nitrophenol	0.0202	U	0.182	0.0202	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
4-Nitrophenol	0.0670	U	0.936	0.0670	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
2,2'-oxybis[1-chloropropane]	0.00396	U	0.0369	0.00396	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
2,3,4,6-Tetrachlorophenol	0.0118	U	0.182	0.0118	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
2,4,5-Trichlorophenol	0.0196	U	0.182	0.0196	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
2,4,6-Trichlorophenol	0.0275	U	0.182	0.0275	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
4-Chloro-3-methylphenol	0.0169	U	0.182	0.0169	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
4-Chlorophenyl phenyl ether	0.0204	U	0.182	0.0204	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
4,6-Dinitro-2-methylphenol	0.0738	U	0.936	0.0738	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Acenaphthene	**0.00775**	**J**	0.0369	0.00353	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Acenaphthylene	**0.0147**	**J**	0.0369	0.00421	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Acetophenone	0.0151	U	0.182	0.0151	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Anthracene	**0.0383**		0.0369	0.00359	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Atrazine	0.0179	U	0.182	0.0179	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Benzaldehyde	0.0275	U	0.182	0.0275	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Benzo[a]anthracene	**0.299**		0.0369	0.00460	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Benzo[b]fluoranthene	**0.449**		0.0369	0.00577	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Benzo[k]fluoranthene	**0.195**		0.0369	0.00742	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Benzo[g,h,i]perylene	**0.312**		0.0369	0.00365	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Benzo[a]pyrene	**0.319**		0.0369	0.00367	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Bis(2-chloroethoxy)methane	0.0121	U	0.182	0.0121	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Bis(2-chloroethyl)ether	0.00493	U	0.0369	0.00493	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Bis(2-ethylhexyl) phthalate	**0.118**	**J**	0.367	0.0297	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
4-Bromophenyl phenyl ether	0.0160	U	0.182	0.0160	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Butyl benzyl phthalate	**0.0473**	**J**	0.182	0.0251	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Caprolactam	0.139	U	0.936	0.139	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Carbazole	**0.0244**	**J**	0.0369	0.00338	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Dibenz(a,h)anthracene	**0.0783**		0.0369	0.00408	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Dibenzofuran	0.0181	U	0.182	0.0181	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Di-n-butyl phthalate	0.0230	U	0.182	0.0230	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Di-n-octyl phthalate	0.0193	U	0.182	0.0193	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Diethyl phthalate	0.0201	U	0.182	0.0201	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Client Sample ID: BGSB10-(1-2)-161122-S
Date Collected: 11/22/16 15:35
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-4
Matrix: Solid
Percent Solids: 90.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	0.0200	U	0.182	0.0200	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Fluoranthene	**0.600**		0.0369	0.00393	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Fluorene	0.00484	U	0.0369	0.00484	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Hexachlorobenzene	0.00391	U	0.0369	0.00391	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Hexachlorobutadiene	0.00411	U	0.0369	0.00411	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Hexachlorocyclopentadiene	0.0198	U	0.182	0.0198	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Hexachloroethane	0.0132	U	0.182	0.0132	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Indeno[1,2,3-cd]pyrene	**0.268**		0.0369	0.00378	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Isophorone	0.0138	U	0.182	0.0138	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Naphthalene	0.00317	U	0.0369	0.00317	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Nitrobenzene	0.0153	U	0.367	0.0153	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
N-Nitrosodiphenylamine	0.0170	U	0.182	0.0170	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
N-Nitrosodi-n-propylamine	0.00431	U	0.0369	0.00431	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Pentachlorophenol	0.0164	U	0.182	0.0164	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Phenanthrene	**0.173**		0.0369	0.00584	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Phenol	0.00434	U	0.182	0.00434	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
Pyrene	**0.417**		0.0369	0.00371	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5
3,3'-Dichlorobenzidine	0.0194	U	0.182	0.0194	mg/Kg	☼	11/25/16 02:15	11/25/16 20:46	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*68*		*42 - 100*	*11/25/16 02:15*	*11/25/16 20:46*	*5*
2-Fluorophenol (Surr)	*59*		*21 - 107*	*11/25/16 02:15*	*11/25/16 20:46*	*5*
2,4,6-Tribromophenol (Surr)	*84*		*20 - 134*	*11/25/16 02:15*	*11/25/16 20:46*	*5*
Nitrobenzene-d5 (Surr)	*69*		*35 - 109*	*11/25/16 02:15*	*11/25/16 20:46*	*5*
Phenol-d5 (Surr)	*66*		*29 - 105*	*11/25/16 02:15*	*11/25/16 20:46*	*5*
Terphenyl-d14 (Surr)	*71*		*36 - 113*	*11/25/16 02:15*	*11/25/16 20:46*	*5*

Method: 8081B_LL - Organochlorine Pesticides (GC)

Client Sample ID: BGSB22-(0.0-0.5)-161122-S
Date Collected: 11/22/16 09:35
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-1
Matrix: Solid
Percent Solids: 91.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.0000475	U	0.000450	0.0000475	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
alpha-BHC	0.000132	U	0.000450	0.000132	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
beta-BHC	0.000101	U	0.000450	0.000101	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
delta-BHC	0.000160	U	0.000450	0.000160	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
gamma-BHC (Lindane)	0.0000929	U	0.000450	0.0000929	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
cis-Chlordane	0.0000724	U	0.000450	0.0000724	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
trans-Chlordane	0.0000351	U	0.000450	0.0000351	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
4,4'-DDD	**0.000472**	**p**	0.000450	0.0000459	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
4,4'-DDE	**0.00500**	**p**	0.000450	0.000143	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
4,4'-DDT	**0.00420**	**p**	0.000450	0.0000459	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
Dieldrin	0.0000427	U	0.000450	0.0000427	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
Endosulfan I	0.0000286	U	0.000450	0.0000286	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
Endosulfan II	0.000138	U	0.000450	0.000138	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
Endosulfan sulfate	0.0000573	U	0.000450	0.0000573	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
Endrin	0.000131	U	0.000450	0.000131	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
Endrin aldehyde	0.000132	U	0.000450	0.000132	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
Endrin ketone	0.000150	U	0.000450	0.000150	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
Heptachlor	**0.000251**	**J p**	0.000450	0.0000389	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
Heptachlor epoxide	**0.000906**	**p**	0.000450	0.0000540	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
Methoxychlor	0.000131	U	0.000450	0.000131	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5
Toxaphene	0.0148	U	0.0180	0.0148	mg/Kg	☼	11/30/16 04:24	12/01/16 15:17	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*63*		*32 - 114*	*11/30/16 04:24*	*12/01/16 15:17*	*5*
Tetrachloro-m-xylene	*62*		*32 - 114*	*11/30/16 04:24*	*12/01/16 15:17*	*5*
DCB Decachlorobiphenyl (Surr)	*84*		*26 - 143*	*11/30/16 04:24*	*12/01/16 15:17*	*5*
DCB Decachlorobiphenyl (Surr)	*92*		*26 - 143*	*11/30/16 04:24*	*12/01/16 15:17*	*5*

Method: 8081B_LL - Organochlorine Pesticides (GC)

Client Sample ID: BGSB22-(1-2)-161122-S
Date Collected: 11/22/16 09:40
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-2
Matrix: Solid
Percent Solids: 80.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.0000541	U	0.000512	0.0000541	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
alpha-BHC	0.000151	U	0.000512	0.000151	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
beta-BHC	0.000115	U	0.000512	0.000115	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
delta-BHC	0.000183	U	0.000512	0.000183	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
gamma-BHC (Lindane)	0.000106	U	0.000512	0.000106	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
cis-Chlordane	0.0000824	U	0.000512	0.0000824	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
trans-Chlordane	0.0000400	U	0.000512	0.0000400	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
4,4'-DDD	0.0000522	U	0.000512	0.0000522	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
4,4'-DDE	0.000163	U	0.000512	0.000163	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
4,4'-DDT	0.0000522	U	0.000512	0.0000522	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
Dieldrin	0.0000486	U	0.000512	0.0000486	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
Endosulfan I	0.0000326	U	0.000512	0.0000326	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
Endosulfan II	0.000157	U	0.000512	0.000157	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
Endosulfan sulfate	0.0000652	U	0.000512	0.0000652	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
Endrin	0.000149	U	0.000512	0.000149	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
Endrin aldehyde	0.000151	U	0.000512	0.000151	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
Endrin ketone	0.000171	U	0.000512	0.000171	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
Heptachlor	0.0000443	U	0.000512	0.0000443	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
Heptachlor epoxide	0.0000615	U	0.000512	0.0000615	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
Methoxychlor	0.000149	U	0.000512	0.000149	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5
Toxaphene	0.0169	U	0.0205	0.0169	mg/Kg	☼	11/30/16 04:24	12/01/16 15:32	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*63*		*32 - 114*	*11/30/16 04:24*	*12/01/16 15:32*	*5*
Tetrachloro-m-xylene	*61*		*32 - 114*	*11/30/16 04:24*	*12/01/16 15:32*	*5*
DCB Decachlorobiphenyl (Surr)	*77*		*26 - 143*	*11/30/16 04:24*	*12/01/16 15:32*	*5*
DCB Decachlorobiphenyl (Surr)	*77*		*26 - 143*	*11/30/16 04:24*	*12/01/16 15:32*	*5*

Method: 8081B_LL - Organochlorine Pesticides (GC)

Client Sample ID: BGSB10-(0.0-0.5)-161122-S
Date Collected: 11/22/16 15:30
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-3
Matrix: Solid
Percent Solids: 90.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	**0.000148**	**J**	0.000459	0.0000485	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
alpha-BHC	0.000135	U	0.000459	0.000135	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
beta-BHC	0.000103	U	0.000459	0.000103	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
delta-BHC	0.000164	U	0.000459	0.000164	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
gamma-BHC (Lindane)	0.0000947	U	0.000459	0.0000947	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
cis-Chlordane	**0.00115**	**p**	0.000459	0.0000738	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
trans-Chlordane	0.0000358	U	0.000459	0.0000358	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
4,4'-DDD	**0.000970**		0.000459	0.0000468	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
4,4'-DDE	0.000146	U	0.000459	0.000146	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
4,4'-DDT	0.0000468	U	0.000459	0.0000468	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
Dieldrin	**0.00140**	**p**	0.000459	0.0000435	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
Endosulfan I	0.0000292	U	0.000459	0.0000292	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
Endosulfan II	0.000140	U	0.000459	0.000140	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
Endosulfan sulfate	0.0000584	U	0.000459	0.0000584	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
Endrin	0.000134	U	0.000459	0.000134	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
Endrin aldehyde	0.000135	U	0.000459	0.000135	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
Endrin ketone	0.000153	U	0.000459	0.000153	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
Heptachlor	0.0000397	U	0.000459	0.0000397	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
Heptachlor epoxide	**0.000183**	**J p**	0.000459	0.0000551	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
Methoxychlor	0.000133	U	0.000459	0.000133	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5
Toxaphene	0.0151	U	0.0184	0.0151	mg/Kg	☼	11/30/16 04:24	12/01/16 15:48	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*76*		*32 - 114*	*11/30/16 04:24*	*12/01/16 15:48*	*5*
Tetrachloro-m-xylene	*74*		*32 - 114*	*11/30/16 04:24*	*12/01/16 15:48*	*5*
DCB Decachlorobiphenyl (Surr)	*166*	*X*	*26 - 143*	*11/30/16 04:24*	*12/01/16 15:48*	*5*
DCB Decachlorobiphenyl (Surr)	*193*	*X*	*26 - 143*	*11/30/16 04:24*	*12/01/16 15:48*	*5*

Method: 8081B_LL - Organochlorine Pesticides (GC)

Client Sample ID: BGSB10-(1-2)-161122-S
Date Collected: 11/22/16 15:35
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-4
Matrix: Solid
Percent Solids: 90.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	**0.0000811**	**J**	0.000459	0.0000484	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
alpha-BHC	0.000135	U	0.000459	0.000135	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
beta-BHC	0.000103	U	0.000459	0.000103	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
delta-BHC	0.000163	U	0.000459	0.000163	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
gamma-BHC (Lindane)	0.0000947	U	0.000459	0.0000947	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
cis-Chlordane	**0.000621**	**p**	0.000459	0.0000738	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
trans-Chlordane	0.0000358	U	0.000459	0.0000358	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
4,4'-DDD	**0.000319**	**J p**	0.000459	0.0000468	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
4,4'-DDE	0.000146	U	0.000459	0.000146	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
4,4'-DDT	0.0000468	U	0.000459	0.0000468	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
Dieldrin	**0.000899**		0.000459	0.0000435	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
Endosulfan I	0.0000292	U	0.000459	0.0000292	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
Endosulfan II	0.000140	U	0.000459	0.000140	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
Endosulfan sulfate	0.0000583	U	0.000459	0.0000583	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
Endrin	0.000134	U	0.000459	0.000134	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
Endrin aldehyde	0.000135	U	0.000459	0.000135	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
Endrin ketone	0.000153	U	0.000459	0.000153	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
Heptachlor	0.0000396	U	0.000459	0.0000396	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
Heptachlor epoxide	0.0000550	U	0.000459	0.0000550	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
Methoxychlor	0.000133	U	0.000459	0.000133	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5
Toxaphene	0.0151	U	0.0183	0.0151	mg/Kg	☼	11/30/16 04:24	12/01/16 16:03	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*32 - 114*	*11/30/16 04:24*	*12/01/16 16:03*	*5*
Tetrachloro-m-xylene	*56*		*32 - 114*	*11/30/16 04:24*	*12/01/16 16:03*	*5*
DCB Decachlorobiphenyl (Surr)	*93*	*p*	*26 - 143*	*11/30/16 04:24*	*12/01/16 16:03*	*5*
DCB Decachlorobiphenyl (Surr)	*152*	*X*	*26 - 143*	*11/30/16 04:24*	*12/01/16 16:03*	*5*

Method: 8151A - Herbicides (GC)

Client Sample ID: BGSB22-(0.0-0.5)-161122-S
Date Collected: 11/22/16 09:35
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-1
Matrix: Solid
Percent Solids: 91.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	0.00273	U *	0.0218	0.00273	mg/Kg	☼	11/27/16 09:29	11/30/16 15:14	20
2,4-D	0.00595	U *	0.0870	0.00595	mg/Kg	☼	11/27/16 09:29	11/30/16 15:14	20
Silvex (2,4,5-TP)	0.00229	U *	0.0218	0.00229	mg/Kg	☼	11/27/16 09:29	11/30/16 15:14	20
Dalapon	0.00772	U	0.0979	0.00772	mg/Kg	☼	11/27/16 09:29	11/30/16 15:14	20
2,4-DB	0.00666	U *	0.0870	0.00666	mg/Kg	☼	11/27/16 09:29	11/30/16 15:14	20
Dicamba	0.00521	U	0.0435	0.00521	mg/Kg	☼	11/27/16 09:29	11/30/16 15:14	20
Dichlorprop	0.0103	U	0.0870	0.0103	mg/Kg	☼	11/27/16 09:29	11/30/16 15:14	20
Dinoseb	0.00495	U *	0.0131	0.00495	mg/Kg	☼	11/27/16 09:29	11/30/16 15:14	20
MCPA	1.79	U *	8.70	1.79	mg/Kg	☼	11/27/16 09:29	11/30/16 15:14	20
MCPP	1.75	U *	8.70	1.75	mg/Kg	☼	11/27/16 09:29	11/30/16 15:14	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*46*		*19 - 122*	*11/27/16 09:29*	*11/30/16 15:14*	*20*
2,4-Dichlorophenylacetic acid	*48*		*19 - 122*	*11/27/16 09:29*	*11/30/16 15:14*	*20*

Method: 8151A - Herbicides (GC)

Client Sample ID: BGSB22-(1-2)-161122-S
Date Collected: 11/22/16 09:40
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-2
Matrix: Solid
Percent Solids: 80.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	0.00312	U *	0.0249	0.00312	mg/Kg	☼	11/27/16 09:29	11/30/16 15:38	20
2,4-D	0.00681	U *	0.0995	0.00681	mg/Kg	☼	11/27/16 09:29	11/30/16 15:38	20
Silvex (2,4,5-TP)	0.00261	U *	0.0249	0.00261	mg/Kg	☼	11/27/16 09:29	11/30/16 15:38	20
Dalapon	0.00882	U	0.112	0.00882	mg/Kg	☼	11/27/16 09:29	11/30/16 15:38	20
2,4-DB	0.00761	U *	0.0995	0.00761	mg/Kg	☼	11/27/16 09:29	11/30/16 15:38	20
Dicamba	0.00596	U	0.0497	0.00596	mg/Kg	☼	11/27/16 09:29	11/30/16 15:38	20
Dichlorprop	0.0118	U	0.0995	0.0118	mg/Kg	☼	11/27/16 09:29	11/30/16 15:38	20
Dinoseb	0.00566	U *	0.0149	0.00566	mg/Kg	☼	11/27/16 09:29	11/30/16 15:38	20
MCPA	2.05	U *	9.95	2.05	mg/Kg	☼	11/27/16 09:29	11/30/16 15:38	20
MCPP	2.00	U *	9.95	2.00	mg/Kg	☼	11/27/16 09:29	11/30/16 15:38	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*45*		*19 - 122*	*11/27/16 09:29*	*11/30/16 15:38*	*20*
2,4-Dichlorophenylacetic acid	*48*		*19 - 122*	*11/27/16 09:29*	*11/30/16 15:38*	*20*

Method: 8151A - Herbicides (GC)

Client Sample ID: BGSB10-(0.0-0.5)-161122-S
Date Collected: 11/22/16 15:30
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-3
Matrix: Solid
Percent Solids: 90.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	0.00276	U *	0.0220	0.00276	mg/Kg	☼	11/27/16 09:30	11/30/16 16:02	20
2,4-D	0.00603	U *	0.0881	0.00603	mg/Kg	☼	11/27/16 09:30	11/30/16 16:02	20
Silvex (2,4,5-TP)	0.00232	U *	0.0220	0.00232	mg/Kg	☼	11/27/16 09:30	11/30/16 16:02	20
Dalapon	0.00782	U	0.0992	0.00782	mg/Kg	☼	11/27/16 09:30	11/30/16 16:02	20
2,4-DB	0.00675	U *	0.0881	0.00675	mg/Kg	☼	11/27/16 09:30	11/30/16 16:02	20
Dicamba	0.00528	U	0.0441	0.00528	mg/Kg	☼	11/27/16 09:30	11/30/16 16:02	20
Dichlorprop	0.0104	U	0.0881	0.0104	mg/Kg	☼	11/27/16 09:30	11/30/16 16:02	20
Dinoseb	0.00501	U *	0.0132	0.00501	mg/Kg	☼	11/27/16 09:30	11/30/16 16:02	20
MCPA	1.82	U *	8.81	1.82	mg/Kg	☼	11/27/16 09:30	11/30/16 16:02	20
MCPP	1.77	U *	8.81	1.77	mg/Kg	☼	11/27/16 09:30	11/30/16 16:02	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*41*		*19 - 122*	*11/27/16 09:30*	*11/30/16 16:02*	*20*
2,4-Dichlorophenylacetic acid	*44*		*19 - 122*	*11/27/16 09:30*	*11/30/16 16:02*	*20*

Method: 8151A - Herbicides (GC)

Client Sample ID: BGSB10-(1-2)-161122-S
Date Collected: 11/22/16 15:35
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-4
Matrix: Solid
Percent Solids: 90.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	0.00276	U *	0.0220	0.00276	mg/Kg	☼	11/27/16 09:30	11/30/16 16:25	20
2,4-D	0.00603	U *	0.0881	0.00603	mg/Kg	☼	11/27/16 09:30	11/30/16 16:25	20
Silvex (2,4,5-TP)	0.00231	U *	0.0220	0.00231	mg/Kg	☼	11/27/16 09:30	11/30/16 16:25	20
Dalapon	0.00781	U	0.0991	0.00781	mg/Kg	☼	11/27/16 09:30	11/30/16 16:25	20
2,4-DB	0.00674	U *	0.0881	0.00674	mg/Kg	☼	11/27/16 09:30	11/30/16 16:25	20
Dicamba	0.00527	U	0.0440	0.00527	mg/Kg	☼	11/27/16 09:30	11/30/16 16:25	20
Dichlorprop	0.0104	U	0.0881	0.0104	mg/Kg	☼	11/27/16 09:30	11/30/16 16:25	20
Dinoseb	0.00501	U *	0.0132	0.00501	mg/Kg	☼	11/27/16 09:30	11/30/16 16:25	20
MCPA	1.81	U *	8.81	1.81	mg/Kg	☼	11/27/16 09:30	11/30/16 16:25	20
MCPP	1.77	U *	8.81	1.77	mg/Kg	☼	11/27/16 09:30	11/30/16 16:25	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*47*		*19 - 122*	*11/27/16 09:30*	*11/30/16 16:25*	*20*
2,4-Dichlorophenylacetic acid	*50*		*19 - 122*	*11/27/16 09:30*	*11/30/16 16:25*	*20*

Method: 6020A - Metals (ICP/MS)

Client Sample ID: BGSB22-(0.0-0.5)-161122-S
Date Collected: 11/22/16 09:35
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-1
Matrix: Solid
Percent Solids: 91.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.0592	J	0.106	0.00866	mg/Kg	☼	11/28/16 07:42	12/05/16 18:17	1
Aluminum	5750		3.17	0.609	mg/Kg	☼	11/28/16 07:42	12/05/16 18:17	1
Arsenic	3.01	F1	0.106	0.0152	mg/Kg	☼	11/28/16 07:42	12/05/16 18:17	1
Boron	3.01		2.11	0.337	mg/Kg	☼	11/28/16 07:42	12/05/16 18:17	1
Barium	140	F1	1.06	0.0156	mg/Kg	☼	11/28/16 07:42	12/05/16 18:17	1
Beryllium	0.430		0.106	0.00792	mg/Kg	☼	11/28/16 07:42	12/05/16 18:17	1
Cadmium	0.294		0.106	0.0137	mg/Kg	☼	11/28/16 07:42	12/05/16 18:17	1
Cobalt	7.81		0.0528	0.00264	mg/Kg	☼	11/28/16 07:42	12/05/16 18:17	1
Chromium	7.50		0.211	0.0551	mg/Kg	☼	11/28/16 07:42	12/05/16 18:17	1
Copper	10.1		0.211	0.0550	mg/Kg	☼	11/28/16 07:42	12/05/16 18:17	1
Manganese	404		0.528	0.0375	mg/Kg	☼	11/28/16 07:42	12/05/16 18:17	1
Nickel	6.57		0.106	0.0411	mg/Kg	☼	11/28/16 07:42	12/05/16 18:17	1
Lead	67.5		0.106	0.00961	mg/Kg	☼	11/28/16 07:42	12/05/16 18:17	1
Antimony	0.379	F1	0.211	0.0303	mg/Kg	☼	11/28/16 07:42	12/05/16 18:17	1
Selenium	0.512	J	0.528	0.0467	mg/Kg	☼	11/28/16 07:42	12/05/16 18:17	1
Vanadium	17.9		0.106	0.0739	mg/Kg	☼	11/28/16 07:42	12/05/16 18:17	1
Zinc	110	F1	0.528	0.204	mg/Kg	☼	11/28/16 07:42	12/05/16 18:17	1
Thallium	0.0623	J	0.106	0.00275	mg/Kg	☼	11/28/16 07:42	12/05/16 18:17	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: BGSB22-(1-2)-161122-S
Date Collected: 11/22/16 09:40
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-2
Matrix: Solid
Percent Solids: 80.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.0529	J	0.106	0.00873	mg/Kg	☼	11/28/16 07:42	12/05/16 18:42	1
Aluminum	24800		3.19	0.614	mg/Kg	☼	11/28/16 07:42	12/05/16 18:42	1
Arsenic	11.2		0.106	0.0153	mg/Kg	☼	11/28/16 07:42	12/05/16 18:42	1
Boron	7.36		2.13	0.339	mg/Kg	☼	11/28/16 07:42	12/05/16 18:42	1
Barium	486		1.06	0.0158	mg/Kg	☼	11/28/16 07:42	12/05/16 18:42	1
Beryllium	2.48		0.106	0.00799	mg/Kg	☼	11/28/16 07:42	12/05/16 18:42	1
Cadmium	0.425		0.106	0.0138	mg/Kg	☼	11/28/16 07:42	12/05/16 18:42	1
Cobalt	97.5		0.0532	0.00266	mg/Kg	☼	11/28/16 07:42	12/05/16 18:42	1
Chromium	26.4		0.213	0.0556	mg/Kg	☼	11/28/16 07:42	12/05/16 18:42	1
Copper	18.5		0.213	0.0555	mg/Kg	☼	11/28/16 07:42	12/05/16 18:42	1
Manganese	7470		5.32	0.378	mg/Kg	☼	11/28/16 07:42	12/06/16 13:18	10
Nickel	95.6		0.106	0.0414	mg/Kg	☼	11/28/16 07:42	12/05/16 18:42	1
Lead	107		0.106	0.00969	mg/Kg	☼	11/28/16 07:42	12/05/16 18:42	1
Antimony	0.419		0.213	0.0306	mg/Kg	☼	11/28/16 07:42	12/05/16 18:42	1
Selenium	2.60		0.532	0.0471	mg/Kg	☼	11/28/16 07:42	12/05/16 18:42	1
Vanadium	99.6		0.106	0.0745	mg/Kg	☼	11/28/16 07:42	12/05/16 18:42	1
Zinc	37.1		0.532	0.206	mg/Kg	☼	11/28/16 07:42	12/05/16 18:42	1
Thallium	0.325		0.106	0.00277	mg/Kg	☼	11/28/16 07:42	12/05/16 18:42	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: BGSB10-(0.0-0.5)-161122-S
Date Collected: 11/22/16 15:30
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-3
Matrix: Solid
Percent Solids: 90.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.0945		0.0874	0.00717	mg/Kg	☼	11/28/16 07:42	12/05/16 18:48	1
Aluminum	9360		2.62	0.504	mg/Kg	☼	11/28/16 07:42	12/05/16 18:48	1
Arsenic	2.94		0.0874	0.0126	mg/Kg	☼	11/28/16 07:42	12/05/16 18:48	1
Boron	5.83		1.75	0.279	mg/Kg	☼	11/28/16 07:42	12/05/16 18:48	1
Barium	109		0.874	0.0129	mg/Kg	☼	11/28/16 07:42	12/05/16 18:48	1
Beryllium	0.608		0.0874	0.00656	mg/Kg	☼	11/28/16 07:42	12/05/16 18:48	1
Cadmium	0.204		0.0874	0.0114	mg/Kg	☼	11/28/16 07:42	12/05/16 18:48	1
Cobalt	5.56		0.0437	0.00219	mg/Kg	☼	11/28/16 07:42	12/05/16 18:48	1
Chromium	14.3		0.175	0.0456	mg/Kg	☼	11/28/16 07:42	12/05/16 18:48	1
Copper	13.0		0.175	0.0456	mg/Kg	☼	11/28/16 07:42	12/05/16 18:48	1
Manganese	215		0.437	0.0310	mg/Kg	☼	11/28/16 07:42	12/05/16 18:48	1
Nickel	10.2		0.0874	0.0340	mg/Kg	☼	11/28/16 07:42	12/05/16 18:48	1
Lead	40.5		0.0874	0.00796	mg/Kg	☼	11/28/16 07:42	12/05/16 18:48	1
Antimony	0.410		0.175	0.0251	mg/Kg	☼	11/28/16 07:42	12/05/16 18:48	1
Selenium	0.482		0.437	0.0386	mg/Kg	☼	11/28/16 07:42	12/05/16 18:48	1
Vanadium	19.0		0.0874	0.0612	mg/Kg	☼	11/28/16 07:42	12/05/16 18:48	1
Zinc	82.5		0.437	0.169	mg/Kg	☼	11/28/16 07:42	12/05/16 18:48	1
Thallium	0.0915		0.0874	0.00227	mg/Kg	☼	11/28/16 07:42	12/05/16 18:48	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: BGSB10-(1-2)-161122-S
Date Collected: 11/22/16 15:35
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-4
Matrix: Solid
Percent Solids: 90.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.384		0.109	0.00894	mg/Kg	☼	11/28/16 07:42	12/05/16 19:03	1
Aluminum	9720		3.27	0.629	mg/Kg	☼	11/28/16 07:42	12/05/16 19:03	1
Arsenic	2.72		0.109	0.0157	mg/Kg	☼	11/28/16 07:42	12/05/16 19:03	1
Boron	6.22		2.18	0.347	mg/Kg	☼	11/28/16 07:42	12/05/16 19:03	1
Barium	110		1.09	0.0161	mg/Kg	☼	11/28/16 07:42	12/05/16 19:03	1
Beryllium	0.615		0.109	0.00818	mg/Kg	☼	11/28/16 07:42	12/05/16 19:03	1
Cadmium	0.306		0.109	0.0142	mg/Kg	☼	11/28/16 07:42	12/05/16 19:03	1
Cobalt	4.65		0.0545	0.00273	mg/Kg	☼	11/28/16 07:42	12/05/16 19:03	1
Chromium	14.4		0.218	0.0569	mg/Kg	☼	11/28/16 07:42	12/05/16 19:03	1
Copper	10.6		0.218	0.0568	mg/Kg	☼	11/28/16 07:42	12/05/16 19:03	1
Manganese	217		0.545	0.0387	mg/Kg	☼	11/28/16 07:42	12/05/16 19:03	1
Nickel	10.0		0.109	0.0424	mg/Kg	☼	11/28/16 07:42	12/05/16 19:03	1
Lead	89.5		0.109	0.00992	mg/Kg	☼	11/28/16 07:42	12/05/16 19:03	1
Antimony	0.473		0.218	0.0313	mg/Kg	☼	11/28/16 07:42	12/05/16 19:03	1
Selenium	0.290	J	0.545	0.0482	mg/Kg	☼	11/28/16 07:42	12/05/16 19:03	1
Vanadium	17.8		0.109	0.0763	mg/Kg	☼	11/28/16 07:42	12/05/16 19:03	1
Zinc	76.9		0.545	0.211	mg/Kg	☼	11/28/16 07:42	12/05/16 19:03	1
Thallium	0.0944	J	0.109	0.00283	mg/Kg	☼	11/28/16 07:42	12/05/16 19:03	1

Method: 7471B - Mercury (CVAA)

Client Sample ID: BGSB22-(0.0-0.5)-161122-S
Date Collected: 11/22/16 09:35
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-1
Matrix: Solid
Percent Solids: 91.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0660		0.0359	0.00804	mg/Kg	☼	11/28/16 12:49	12/02/16 08:37	1

Method: 7471B - Mercury (CVAA)

Client Sample ID: BGSB22-(1-2)-161122-S
Date Collected: 11/22/16 09:40
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-2
Matrix: Solid
Percent Solids: 80.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00927	J	0.0404	0.00906	mg/Kg	☼	11/28/16 12:49	12/02/16 08:39	1

Method: 7471B - Mercury (CVAA)

Client Sample ID: BGSB10-(0.0-0.5)-161122-S
Date Collected: 11/22/16 15:30
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-3
Matrix: Solid
Percent Solids: 90.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0294	J	0.0358	0.00801	mg/Kg	☼	11/28/16 12:49	12/02/16 08:59	1

Method: 7471B - Mercury (CVAA)

Client Sample ID: BGSB10-(1-2)-161122-S
Date Collected: 11/22/16 15:35
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-4
Matrix: Solid
Percent Solids: 90.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0711		0.0307	0.00688	mg/Kg	☼	11/28/16 12:49	12/02/16 09:01	1

General Chemistry

Client Sample ID: BGSB22-(0.0-0.5)-161122-S
Date Collected: 11/22/16 09:35
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.1		0.1	0.1	%			11/25/16 11:02	1
Percent Solids	91.9		0.1	0.1	%			11/25/16 11:02	1

General Chemistry

Client Sample ID: BGSB22-(1-2)-161122-S
Date Collected: 11/22/16 09:40
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-2
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19.7		0.1	0.1	%			11/25/16 11:02	1
Percent Solids	80.3		0.1	0.1	%			11/25/16 11:02	1

General Chemistry

Client Sample ID: BGSB10-(0.0-0.5)-161122-S
Date Collected: 11/22/16 15:30
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.2		0.1	0.1	%			11/25/16 11:02	1
Percent Solids	90.8		0.1	0.1	%			11/25/16 11:02	1

General Chemistry

Client Sample ID: BGSB10-(1-2)-161122-S
Date Collected: 11/22/16 15:35
Date Received: 11/23/16 09:30

Lab Sample ID: 180-61122-4
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**9.2**		0.1	0.1	%			11/25/16 11:02	1
Percent Solids	**90.8**		0.1	0.1	%			11/25/16 11:02	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Prep: 3541

Analyte	RL	MDL	Units	Method
1,1'-Biphenyl	0.0330	0.00298	mg/Kg	8270D LL
1,2,4,5-Tetrachlorobenzene	0.0330	0.00253	mg/Kg	8270D LL
1,4-Dioxane	0.0667	0.00383	mg/Kg	8270D LL
1-Methylnaphthalene	0.00670	0.000712	mg/Kg	8270D LL
2,2'-oxybis[1-chloropropane]	0.00670	0.000720	mg/Kg	8270D LL
2,3,4,6-Tetrachlorophenol	0.0330	0.00214	mg/Kg	8270D LL
2,4,5-Trichlorophenol	0.0330	0.00356	mg/Kg	8270D LL
2,4,6-Trichlorophenol	0.0330	0.00499	mg/Kg	8270D LL
2,4-Dichlorophenol	0.00670	0.000669	mg/Kg	8270D LL
2,4-Dimethylphenol	0.0330	0.00522	mg/Kg	8270D LL
2,4-Dinitrophenol	0.170	0.0397	mg/Kg	8270D LL
2,4-Dinitrotoluene	0.0330	0.00269	mg/Kg	8270D LL
2,6-Dinitrotoluene	0.0330	0.00344	mg/Kg	8270D LL
2-Chloronaphthalene	0.00670	0.000696	mg/Kg	8270D LL
2-Chlorophenol	0.0330	0.00273	mg/Kg	8270D LL
2-Methylnaphthalene	0.00670	0.000600	mg/Kg	8270D LL
2-Methylphenol	0.0330	0.00233	mg/Kg	8270D LL
2-Nitroaniline	0.170	0.0149	mg/Kg	8270D LL
2-Nitrophenol	0.0330	0.00368	mg/Kg	8270D LL
3,3'-Dichlorobenzidine	0.0330	0.00353	mg/Kg	8270D LL
3-Nitroaniline	0.170	0.0137	mg/Kg	8270D LL
4,6-Dinitro-2-methylphenol	0.170	0.0134	mg/Kg	8270D LL
4-Bromophenyl phenyl ether	0.0330	0.00290	mg/Kg	8270D LL
4-Chloro-3-methylphenol	0.0330	0.00307	mg/Kg	8270D LL
4-Chlorophenyl phenyl ether	0.0330	0.00371	mg/Kg	8270D LL
4-Nitroaniline	0.170	0.0135	mg/Kg	8270D LL
4-Nitrophenol	0.170	0.0122	mg/Kg	8270D LL
Acenaphthene	0.00670	0.000641	mg/Kg	8270D LL
Acenaphthylene	0.00670	0.000764	mg/Kg	8270D LL
Acetophenone	0.0330	0.00274	mg/Kg	8270D LL
Anthracene	0.00670	0.000653	mg/Kg	8270D LL
Atrazine	0.0330	0.00325	mg/Kg	8270D LL
Benzaldehyde	0.0330	0.00500	mg/Kg	8270D LL
Benzo[a]anthracene	0.00670	0.000836	mg/Kg	8270D LL
Benzo[a]pyrene	0.00670	0.000668	mg/Kg	8270D LL
Benzo[b]fluoranthene	0.00670	0.00105	mg/Kg	8270D LL
Benzo[g,h,i]perylene	0.00670	0.000664	mg/Kg	8270D LL
Benzo[k]fluoranthene	0.00670	0.00135	mg/Kg	8270D LL
Bis(2-chloroethoxy)methane	0.0330	0.00220	mg/Kg	8270D LL
Bis(2-chloroethyl)ether	0.00670	0.000895	mg/Kg	8270D LL
Bis(2-ethylhexyl) phthalate	0.0667	0.00539	mg/Kg	8270D LL
Butyl benzyl phthalate	0.0330	0.00456	mg/Kg	8270D LL
Caprolactam	0.170	0.0252	mg/Kg	8270D LL
Carbazole	0.00670	0.000615	mg/Kg	8270D LL
Dibenz(a,h)anthracene	0.00670	0.000742	mg/Kg	8270D LL
Dibenzofuran	0.0330	0.00328	mg/Kg	8270D LL
Diethyl phthalate	0.0330	0.00364	mg/Kg	8270D LL
Dimethyl phthalate	0.0330	0.00363	mg/Kg	8270D LL
Di-n-butyl phthalate	0.0330	0.00418	mg/Kg	8270D LL
Di-n-octyl phthalate	0.0330	0.00352	mg/Kg	8270D LL
Fluoranthene	0.00670	0.000713	mg/Kg	8270D LL

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Prep: 3541

Analyte	RL	MDL	Units	Method
Fluorene	0.00670	0.000879	mg/Kg	8270D LL
Hexachlorobenzene	0.00670	0.000711	mg/Kg	8270D LL
Hexachlorobutadiene	0.00670	0.000747	mg/Kg	8270D LL
Hexachlorocyclopentadiene	0.0330	0.00360	mg/Kg	8270D LL
Hexachloroethane	0.0330	0.00240	mg/Kg	8270D LL
Indeno[1,2,3-cd]pyrene	0.00670	0.000687	mg/Kg	8270D LL
Isophorone	0.0330	0.00251	mg/Kg	8270D LL
Methylphenol, 3 & 4	0.0330	0.00327	mg/Kg	8270D LL
Naphthalene	0.00670	0.000575	mg/Kg	8270D LL
Nitrobenzene	0.0667	0.00278	mg/Kg	8270D LL
N-Nitrosodi-n-propylamine	0.00670	0.000782	mg/Kg	8270D LL
N-Nitrosodiphenylamine	0.0330	0.00309	mg/Kg	8270D LL
Pentachlorophenol	0.0330	0.00298	mg/Kg	8270D LL
Phenanthrene	0.00670	0.00106	mg/Kg	8270D LL
Phenol	0.0330	0.000788	mg/Kg	8270D LL
Pyrene	0.00670	0.000675	mg/Kg	8270D LL

Method: 8081B_LL - Organochlorine Pesticides (GC)

Prep: 3541

Analyte	RL	MDL	Units	Method
4,4'-DDD	0.0000833	0.00000850	mg/Kg	8081B_LL
4,4'-DDE	0.0000833	0.0000265	mg/Kg	8081B_LL
4,4'-DDT	0.0000833	0.00000850	mg/Kg	8081B_LL
Aldrin	0.0000833	0.00000880	mg/Kg	8081B_LL
alpha-BHC	0.0000833	0.0000245	mg/Kg	8081B_LL
beta-BHC	0.0000833	0.0000187	mg/Kg	8081B_LL
cis-Chlordane	0.0000833	0.0000134	mg/Kg	8081B_LL
delta-BHC	0.0000833	0.0000297	mg/Kg	8081B_LL
Dieldrin	0.0000833	0.00000790	mg/Kg	8081B_LL
Endosulfan I	0.0000833	0.00000530	mg/Kg	8081B_LL
Endosulfan II	0.0000833	0.0000255	mg/Kg	8081B_LL
Endosulfan sulfate	0.0000833	0.0000106	mg/Kg	8081B_LL
Endrin	0.0000833	0.0000243	mg/Kg	8081B_LL
Endrin aldehyde	0.0000833	0.0000245	mg/Kg	8081B_LL
Endrin ketone	0.0000833	0.0000278	mg/Kg	8081B_LL
gamma-BHC (Lindane)	0.0000833	0.0000172	mg/Kg	8081B_LL
Heptachlor	0.0000833	0.00000720	mg/Kg	8081B_LL
Heptachlor epoxide	0.0000833	0.0000100	mg/Kg	8081B_LL
Methoxychlor	0.0000833	0.0000242	mg/Kg	8081B_LL
Toxaphene	0.00333	0.00274	mg/Kg	8081B_LL
trans-Chlordane	0.0000833	0.00000650	mg/Kg	8081B_LL

Method: 8151A - Herbicides (GC)

Prep: 8151A

Analyte	RL	MDL	Units	Method
2,4,5-T	0.0200	0.00251	mg/Kg	8151A
2,4-D	0.0800	0.00547	mg/Kg	8151A
2,4-DB	0.0800	0.00612	mg/Kg	8151A
Dalapon	0.0900	0.00710	mg/Kg	8151A
Dicamba	0.0400	0.00479	mg/Kg	8151A

Default Detection Limits

Client: EA Engineering, Science, and Technology
Project/Site: U.S. Oil Recovery Superfund Site

TestAmerica Job ID: 180-61122-1

Method: 8151A - Herbicides (GC) (Continued)

Prep: 8151A

Analyte	RL	MDL	Units	Method
Dichlorprop	0.0800	0.00948	mg/Kg	8151A
Dinoseb	0.0120	0.00455	mg/Kg	8151A
MCPA	8.00	1.65	mg/Kg	8151A
MCPP	8.00	1.61	mg/Kg	8151A
Silvex (2,4,5-TP)	0.0200	0.00210	mg/Kg	8151A

Method: 6020A - Metals (ICP/MS)

Prep: 3050B

Analyte	RL	MDL	Units	Method
Aluminum	3.00	0.577	mg/Kg	6020A
Antimony	0.200	0.0287	mg/Kg	6020A
Arsenic	0.100	0.0144	mg/Kg	6020A
Barium	1.00	0.0148	mg/Kg	6020A
Beryllium	0.100	0.00750	mg/Kg	6020A
Boron	2.00	0.319	mg/Kg	6020A
Cadmium	0.100	0.0130	mg/Kg	6020A
Chromium	0.200	0.0522	mg/Kg	6020A
Cobalt	0.0500	0.00250	mg/Kg	6020A
Copper	0.200	0.0521	mg/Kg	6020A
Lead	0.100	0.00910	mg/Kg	6020A
Manganese	0.500	0.0355	mg/Kg	6020A
Nickel	0.100	0.0389	mg/Kg	6020A
Selenium	0.500	0.0442	mg/Kg	6020A
Silver	0.100	0.00820	mg/Kg	6020A
Thallium	0.100	0.00260	mg/Kg	6020A
Vanadium	0.100	0.0700	mg/Kg	6020A
Zinc	0.500	0.194	mg/Kg	6020A

Method: 7471B - Mercury (CVAA)

Prep: 7471B

Analyte	RL	MDL	Units	Method
Mercury	0.0330	0.00739	mg/Kg	7471B

General Chemistry

Analyte	RL	MDL	Units	Method
Percent Moisture	0.1	0.1	%	2540G
Percent Solids	0.1	0.1	%	2540G

Surrogate Summary

Client: EA Engineering, Science, and Technology
Project/Site: U.S. Oil Recovery Superfund Site

TestAmerica Job ID: 180-61122-1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	TBP	NBZ	PHL	TPH
Lab Sample ID	Client Sample ID	(42-100)	(21-107)	(20-134)	(35-109)	(29-105)	(36-113)
180-61122-1	BGSB22-(0.0-0.5)-161122-S	62	57	75	61	61	64
180-61122-1 MS	BGSB22-(0.0-0.5)-161122-S	61	52	79	59	60	62
180-61122-1 MSD	BGSB22-(0.0-0.5)-161122-S	67	56	88	65	66	67
180-61122-2	BGSB22-(1-2)-161122-S	60	61	76	63	63	62
180-61122-3	BGSB10-(0.0-0.5)-161122-S	73	53	94	65	69	83
180-61122-4	BGSB10-(1-2)-161122-S	68	59	84	69	66	71
LCS 180-195373/2-A	Lab Control Sample	68	71	87	74	70	74
MB 180-195373/1-A	Method Blank	62	60	76	61	61	76

Surrogate Legend

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

Method: 8081B_LL - Organochlorine Pesticides (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TCX1	TCX2	DCB1	DCB2
Lab Sample ID	Client Sample ID	(32-114)	(32-114)	(26-143)	(26-143)
180-61122-1	BGSB22-(0.0-0.5)-161122-S	63	62	84	92
180-61122-2	BGSB22-(1-2)-161122-S	63	61	77	77
180-61122-3	BGSB10-(0.0-0.5)-161122-S	76	74	166 X	193 X
180-61122-4	BGSB10-(1-2)-161122-S	60	56	93 p	152 X
LCS 180-195769/2-A	Lab Control Sample	83	74	91	99
MB 180-195769/1-A	Method Blank	80	76	99	92

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl (Surr)

Method: 8151A - Herbicides (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		DCPA1	DCPA2
Lab Sample ID	Client Sample ID	(19-122)	(19-122)
180-61122-1	BGSB22-(0.0-0.5)-161122-S	46	48
180-61122-2	BGSB22-(1-2)-161122-S	45	48
180-61122-3	BGSB10-(0.0-0.5)-161122-S	41	44
180-61122-4	BGSB10-(1-2)-161122-S	47	50
LCS 180-195524/2-A	Lab Control Sample	99	103
MB 180-195524/1-A	Method Blank	43	46

Surrogate Legend

DCPA = 2,4-Dichlorophenylacetic acid

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 180-195373/1-A
Matrix: Solid
Analysis Batch: 195402

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195373

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.00298	U	0.0330	0.00298	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
1,4-Dioxane	0.00383	U	0.0667	0.00383	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
1-Methylnaphthalene	0.000712	U	0.00670	0.000712	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
1,2,4,5-Tetrachlorobenzene	0.00253	U	0.0330	0.00253	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
2-Chloronaphthalene	0.000696	U	0.00670	0.000696	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
2-Chlorophenol	0.00273	U	0.0330	0.00273	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
2,4-Dichlorophenol	0.000669	U	0.00670	0.000669	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
2,4-Dimethylphenol	0.00522	U	0.0330	0.00522	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
2,4-Dinitrophenol	0.0397	U	0.170	0.0397	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
2,4-Dinitrotoluene	0.00269	U	0.0330	0.00269	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
2,6-Dinitrotoluene	0.00344	U	0.0330	0.00344	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
2-Methylnaphthalene	0.000600	U	0.00670	0.000600	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
2-Methylphenol	0.00233	U	0.0330	0.00233	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Methylphenol, 3 & 4	0.00327	U	0.0330	0.00327	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
2-Nitroaniline	0.0149	U	0.170	0.0149	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
3-Nitroaniline	0.0137	U	0.170	0.0137	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
4-Nitroaniline	0.0135	U	0.170	0.0135	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
2-Nitrophenol	0.00368	U	0.0330	0.00368	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
4-Nitrophenol	0.0122	U	0.170	0.0122	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
2,2'-oxybis[1-chloropropane]	0.000720	U	0.00670	0.000720	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
2,3,4,6-Tetrachlorophenol	0.00214	U	0.0330	0.00214	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
2,4,5-Trichlorophenol	0.00356	U	0.0330	0.00356	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
2,4,6-Trichlorophenol	0.00499	U	0.0330	0.00499	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
4-Chloro-3-methylphenol	0.00307	U	0.0330	0.00307	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
4-Chlorophenyl phenyl ether	0.00371	U	0.0330	0.00371	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
4,6-Dinitro-2-methylphenol	0.0134	U	0.170	0.0134	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Acenaphthene	0.000641	U	0.00670	0.000641	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Acenaphthylene	0.000764	U	0.00670	0.000764	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Acetophenone	0.00274	U	0.0330	0.00274	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Anthracene	0.000653	U	0.00670	0.000653	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Atrazine	0.00325	U	0.0330	0.00325	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Benzaldehyde	0.00500	U	0.0330	0.00500	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Benzo[a]anthracene	0.000836	U	0.00670	0.000836	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Benzo[b]fluoranthene	0.00105	U	0.00670	0.00105	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Benzo[k]fluoranthene	0.00135	U	0.00670	0.00135	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Benzo[g,h,i]perylene	0.000664	U	0.00670	0.000664	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Benzo[a]pyrene	0.000668	U	0.00670	0.000668	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Bis(2-chloroethoxy)methane	0.00220	U	0.0330	0.00220	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Bis(2-chloroethyl)ether	0.000895	U	0.00670	0.000895	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Bis(2-ethylhexyl) phthalate	0.00539	U	0.0667	0.00539	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
4-Bromophenyl phenyl ether	0.00290	U	0.0330	0.00290	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Butyl benzyl phthalate	0.00456	U	0.0330	0.00456	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Caprolactam	0.0252	U	0.170	0.0252	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Carbazole	0.000615	U	0.00670	0.000615	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Dibenz(a,h)anthracene	0.000742	U	0.00670	0.000742	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Dibenzofuran	0.00328	U	0.0330	0.00328	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Di-n-butyl phthalate	0.00418	U	0.0330	0.00418	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Di-n-octyl phthalate	0.00352	U	0.0330	0.00352	mg/Kg		11/25/16 02:15	11/25/16 10:08	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: MB 180-195373/1-A
Matrix: Solid
Analysis Batch: 195402

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195373

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diethyl phthalate	0.00364	U	0.0330	0.00364	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Dimethyl phthalate	0.00363	U	0.0330	0.00363	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Fluoranthene	0.000713	U	0.00670	0.000713	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Fluorene	0.000879	U	0.00670	0.000879	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Hexachlorobenzene	0.000711	U	0.00670	0.000711	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Hexachlorobutadiene	0.000747	U	0.00670	0.000747	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Hexachlorocyclopentadiene	0.00360	U	0.0330	0.00360	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Hexachloroethane	0.00240	U	0.0330	0.00240	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Indeno[1,2,3-cd]pyrene	0.000687	U	0.00670	0.000687	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Isophorone	0.00251	U	0.0330	0.00251	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Naphthalene	0.000575	U	0.00670	0.000575	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Nitrobenzene	0.00278	U	0.0667	0.00278	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
N-Nitrosodiphenylamine	0.00309	U	0.0330	0.00309	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
N-Nitrosodi-n-propylamine	0.000782	U	0.00670	0.000782	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Pentachlorophenol	0.00298	U	0.0330	0.00298	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Phenanthrene	0.00106	U	0.00670	0.00106	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Phenol	0.000788	U	0.0330	0.000788	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
Pyrene	0.000675	U	0.00670	0.000675	mg/Kg		11/25/16 02:15	11/25/16 10:08	1
3,3'-Dichlorobenzidine	0.00353	U	0.0330	0.00353	mg/Kg		11/25/16 02:15	11/25/16 10:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*62*		*42 - 100*	*11/25/16 02:15*	*11/25/16 10:08*	*1*
2-Fluorophenol (Surr)	*60*		*21 - 107*	*11/25/16 02:15*	*11/25/16 10:08*	*1*
2,4,6-Tribromophenol (Surr)	*76*		*20 - 134*	*11/25/16 02:15*	*11/25/16 10:08*	*1*
Nitrobenzene-d5 (Surr)	*61*		*35 - 109*	*11/25/16 02:15*	*11/25/16 10:08*	*1*
Phenol-d5 (Surr)	*61*		*29 - 105*	*11/25/16 02:15*	*11/25/16 10:08*	*1*
Terphenyl-d14 (Surr)	*76*		*36 - 113*	*11/25/16 02:15*	*11/25/16 10:08*	*1*

Lab Sample ID: LCS 180-195373/2-A
Matrix: Solid
Analysis Batch: 195402

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195373

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	0.667	0.4610		mg/Kg		69	40 - 100
1,4-Dioxane	0.667	0.4336		mg/Kg		65	19 - 107
1-Methylnaphthalene	0.667	0.4603		mg/Kg		69	41 - 100
1,2,4,5-Tetrachlorobenzene	0.667	0.4730		mg/Kg		71	38 - 100
2-Chloronaphthalene	0.667	0.4498		mg/Kg		67	39 - 100
2-Chlorophenol	0.667	0.4554		mg/Kg		68	38 - 100
2,4-Dichlorophenol	0.667	0.4734		mg/Kg		71	40 - 100
2,4-Dimethylphenol	0.667	0.4951		mg/Kg		74	38 - 100
2,4-Dinitrophenol	1.33	1.065		mg/Kg		80	36 - 103
2,4-Dinitrotoluene	0.667	0.5605		mg/Kg		84	42 - 110
2,6-Dinitrotoluene	0.667	0.5449		mg/Kg		82	43 - 105
2-Methylnaphthalene	0.667	0.4627		mg/Kg		69	39 - 100
2-Methylphenol	0.667	0.4692		mg/Kg		70	38 - 100
Methylphenol, 3 & 4	0.667	0.4885		mg/Kg		73	40 - 100
2-Nitroaniline	0.667	0.5541		mg/Kg		83	33 - 118

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 180-195373/2-A
Matrix: Solid
Analysis Batch: 195402

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195373

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
3-Nitroaniline	0.667	0.5101		mg/Kg		77	42 - 105
4-Nitroaniline	0.667	0.5364		mg/Kg		80	33 - 115
2-Nitrophenol	0.667	0.5300		mg/Kg		79	40 - 103
4-Nitrophenol	1.33	1.194		mg/Kg		90	26 - 133
2,2'-oxybis[1-chloropropane]	0.667	0.4627		mg/Kg		69	23 - 104
2,3,4,6-Tetrachlorophenol	0.667	0.5129		mg/Kg		77	41 - 100
2,4,5-Trichlorophenol	0.667	0.5017		mg/Kg		75	42 - 100
2,4,6-Trichlorophenol	0.667	0.5025		mg/Kg		75	41 - 103
4-Chloro-3-methylphenol	0.667	0.5495		mg/Kg		82	40 - 104
4-Chlorophenyl phenyl ether	0.667	0.4971		mg/Kg		75	43 - 100
4,6-Dinitro-2-methylphenol	1.33	1.161		mg/Kg		87	45 - 102
Acenaphthene	0.667	0.4620		mg/Kg		69	39 - 100
Acenaphthylene	0.667	0.4546		mg/Kg		68	42 - 100
Acetophenone	0.667	0.4340		mg/Kg		65	31 - 100
Anthracene	0.667	0.4803		mg/Kg		72	43 - 100
Atrazine	0.667	0.4651		mg/Kg		70	21 - 108
Benzaldehyde	0.667	0.3684		mg/Kg		55	10 - 133
Benzo[a]anthracene	0.667	0.4936		mg/Kg		74	43 - 100
Benzo[b]fluoranthene	0.667	0.4528		mg/Kg		68	40 - 100
Benzo[k]fluoranthene	0.667	0.4431		mg/Kg		66	44 - 100
Benzo[g,h,i]perylene	0.667	0.4664		mg/Kg		70	41 - 102
Benzo[a]pyrene	0.667	0.4694		mg/Kg		70	43 - 100
Bis(2-chloroethoxy)methane	0.667	0.4339		mg/Kg		65	39 - 100
Bis(2-chloroethyl)ether	0.667	0.4214		mg/Kg		63	36 - 100
Bis(2-ethylhexyl) phthalate	0.667	0.5206		mg/Kg		78	43 - 106
4-Bromophenyl phenyl ether	0.667	0.5155		mg/Kg		77	44 - 100
Butyl benzyl phthalate	0.667	0.5038		mg/Kg		76	42 - 108
Caprolactam	0.667	0.5944		mg/Kg		89	37 - 112
Carbazole	0.667	0.4813		mg/Kg		72	42 - 100
Dibenz(a,h)anthracene	0.667	0.5138		mg/Kg		77	40 - 104
Dibenzofuran	0.667	0.4488		mg/Kg		67	42 - 100
Di-n-butyl phthalate	0.667	0.5176		mg/Kg		78	44 - 105
Di-n-octyl phthalate	0.667	0.5428		mg/Kg		81	41 - 103
Diethyl phthalate	0.667	0.4924		mg/Kg		74	41 - 101
Dimethyl phthalate	0.667	0.4985		mg/Kg		75	44 - 100
Fluoranthene	0.667	0.5142		mg/Kg		77	41 - 104
Fluorene	0.667	0.4728		mg/Kg		71	41 - 100
Hexachlorobenzene	0.667	0.4908		mg/Kg		74	43 - 100
Hexachlorobutadiene	0.667	0.4307		mg/Kg		65	35 - 100
Hexachlorocyclopentadiene	0.667	0.4544		mg/Kg		68	32 - 102
Hexachloroethane	0.667	0.3899		mg/Kg		58	35 - 100
Indeno[1,2,3-cd]pyrene	0.667	0.4848		mg/Kg		73	41 - 104
Isophorone	0.667	0.4575		mg/Kg		69	36 - 102
Naphthalene	0.667	0.4452		mg/Kg		67	38 - 100
Nitrobenzene	0.667	0.4631		mg/Kg		69	34 - 100
N-Nitrosodiphenylamine	0.667	0.4964		mg/Kg		74	41 - 100
N-Nitrosodi-n-propylamine	0.667	0.4815		mg/Kg		72	37 - 100
Pentachlorophenol	1.33	0.9957		mg/Kg		75	34 - 102

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 180-195373/2-A
Matrix: Solid
Analysis Batch: 195402

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195373

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenanthrene	0.667	0.4445		mg/Kg		67	41 - 100
Phenol	0.667	0.4512		mg/Kg		68	36 - 100
Pyrene	0.667	0.4162		mg/Kg		62	42 - 100
3,3'-Dichlorobenzidine	0.667	0.4304		mg/Kg		65	30 - 103

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*68*		*42 - 100*
2-Fluorophenol (Surr)	*71*		*21 - 107*
2,4,6-Tribromophenol (Surr)	*87*		*20 - 134*
Nitrobenzene-d5 (Surr)	*74*		*35 - 109*
Phenol-d5 (Surr)	*70*		*29 - 105*
Terphenyl-d14 (Surr)	*74*		*36 - 113*

Lab Sample ID: 180-61122-1 MS
Matrix: Solid
Analysis Batch: 195402

Client Sample ID: BGSB22-(0.0-0.5)-161122-S
Prep Type: Total/NA
Prep Batch: 195373

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	0.00322	U	0.720	0.4629		mg/Kg	☼	64	40 - 100
1,4-Dioxane	0.00413	U	0.720	0.2815		mg/Kg	☼	39	19 - 107
1-Methylnaphthalene	0.000769	U	0.720	0.4384		mg/Kg	☼	61	41 - 100
1,2,4,5-Tetrachlorobenzene	0.00273	U	0.720	0.4481		mg/Kg	☼	62	38 - 100
2-Chloronaphthalene	0.000752	U	0.720	0.4540		mg/Kg	☼	63	39 - 100
2-Chlorophenol	0.00295	U	0.720	0.4333		mg/Kg	☼	60	38 - 100
2,4-Dichlorophenol	0.000723	U	0.720	0.4608		mg/Kg	☼	64	40 - 100
2,4-Dimethylphenol	0.00564	U	0.720	0.4074		mg/Kg	☼	57	38 - 100
2,4-Dinitrophenol	0.0429	U	1.44	0.5790		mg/Kg	☼	40	36 - 103
2,4-Dinitrotoluene	0.00291	U	0.720	0.5892		mg/Kg	☼	82	42 - 110
2,6-Dinitrotoluene	0.00372	U	0.720	0.5662		mg/Kg	☼	79	43 - 105
2-Methylnaphthalene	0.00137	J	0.720	0.4409		mg/Kg	☼	61	39 - 100
2-Methylphenol	0.00252	U	0.720	0.4623		mg/Kg	☼	64	38 - 100
Methylphenol, 3 & 4	0.00353	U	0.720	0.4938		mg/Kg	☼	69	40 - 100
2-Nitroaniline	0.0161	U	0.720	0.5845		mg/Kg	☼	81	33 - 118
3-Nitroaniline	0.0148	U	0.720	0.4917		mg/Kg	☼	68	42 - 105
4-Nitroaniline	0.0146	U	0.720	0.5175		mg/Kg	☼	72	33 - 115
2-Nitrophenol	0.00397	U	0.720	0.4789		mg/Kg	☼	66	40 - 103
4-Nitrophenol	0.0131	U	1.44	1.024		mg/Kg	☼	71	26 - 133
2,2'-oxybis[1-chloropropane]	0.000778	U	0.720	0.4441		mg/Kg	☼	62	23 - 104
2,3,4,6-Tetrachlorophenol	0.00232	U	0.720	0.5199		mg/Kg	☼	72	41 - 100
2,4,5-Trichlorophenol	0.00385	U	0.720	0.5317		mg/Kg	☼	74	42 - 100
2,4,6-Trichlorophenol	0.00540	U	0.720	0.5191		mg/Kg	☼	72	41 - 103
4-Chloro-3-methylphenol	0.00332	U	0.720	0.5486		mg/Kg	☼	76	40 - 104
4-Chlorophenyl phenyl ether	0.00401	U	0.720	0.5065		mg/Kg	☼	70	43 - 100
4,6-Dinitro-2-methylphenol	0.0145	U	1.44	0.9143		mg/Kg	☼	63	45 - 102
Acenaphthene	0.000692	U	0.720	0.4682		mg/Kg	☼	65	39 - 100
Acenaphthylene	0.00396	J	0.720	0.4619		mg/Kg	☼	64	42 - 100
Acetophenone	0.0169	J	0.720	0.4677		mg/Kg	☼	63	31 - 100
Anthracene	0.00362	J	0.720	0.4840		mg/Kg	☼	67	43 - 100

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: 180-61122-1 MS
Matrix: Solid
Analysis Batch: 195402

Client Sample ID: BGSB22-(0.0-0.5)-161122-S
Prep Type: Total/NA
Prep Batch: 195373

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	0.00351	U	0.720	0.3695		mg/Kg	☼	51	21 - 108
Benzaldehyde	0.00751	J	0.720	0.4077		mg/Kg	☼	56	10 - 133
Benzo[a]anthracene	0.0140		0.720	0.5363		mg/Kg	☼	73	43 - 100
Benzo[b]fluoranthene	0.0202		0.720	0.4487		mg/Kg	☼	59	40 - 100
Benzo[k]fluoranthene	0.00857		0.720	0.4090		mg/Kg	☼	56	44 - 100
Benzo[g,h,i]perylene	0.0165		0.720	0.5336		mg/Kg	☼	72	41 - 102
Benzo[a]pyrene	0.0132		0.720	0.4528		mg/Kg	☼	61	43 - 100
Bis(2-chloroethoxy)methane	0.00237	U	0.720	0.4118		mg/Kg	☼	57	39 - 100
Bis(2-chloroethyl)ether	0.000967	U	0.720	0.3864		mg/Kg	☼	54	36 - 100
Bis(2-ethylhexyl) phthalate	0.0310	J	0.720	0.6488		mg/Kg	☼	86	43 - 106
4-Bromophenyl phenyl ether	0.00314	U	0.720	0.5054		mg/Kg	☼	70	44 - 100
Butyl benzyl phthalate	0.00591	J	0.720	0.5228		mg/Kg	☼	72	42 - 108
Caprolactam	0.0272	U F1	0.720	0.05352	J F1	mg/Kg	☼	7	37 - 112
Carbazole	0.00176	J	0.720	0.4961		mg/Kg	☼	69	42 - 100
Dibenz(a,h)anthracene	0.00336	J	0.720	0.5640		mg/Kg	☼	78	40 - 104
Dibenzofuran	0.00355	U	0.720	0.4559		mg/Kg	☼	63	42 - 100
Di-n-butyl phthalate	0.00485	J	0.720	0.5481		mg/Kg	☼	75	44 - 105
Di-n-octyl phthalate	0.00380	U	0.720	0.5079		mg/Kg	☼	71	41 - 103
Diethyl phthalate	0.00394	U	0.720	0.5179		mg/Kg	☼	72	41 - 101
Dimethyl phthalate	0.00393	U	0.720	0.5192		mg/Kg	☼	72	44 - 100
Fluoranthene	0.0179		0.720	0.5278		mg/Kg	☼	71	41 - 104
Fluorene	0.000950	U	0.720	0.4841		mg/Kg	☼	67	41 - 100
Hexachlorobenzene	0.000768	U	0.720	0.4817		mg/Kg	☼	67	43 - 100
Hexachlorobutadiene	0.000807	U	0.720	0.3781		mg/Kg	☼	52	35 - 100
Hexachlorocyclopentadiene	0.00389	U F1	0.720	0.1241	F1	mg/Kg	☼	17	32 - 102
Hexachloroethane	0.00259	U	0.720	0.3251		mg/Kg	☼	45	35 - 100
Indeno[1,2,3-cd]pyrene	0.0118		0.720	0.5310		mg/Kg	☼	72	41 - 104
Isophorone	0.00272	U	0.720	0.4313		mg/Kg	☼	60	36 - 102
Naphthalene	0.000621	U	0.720	0.4173		mg/Kg	☼	58	38 - 100
Nitrobenzene	0.00300	U	0.720	0.4035		mg/Kg	☼	56	34 - 100
N-Nitrosodiphenylamine	0.00334	U	0.720	0.4680		mg/Kg	☼	65	41 - 100
N-Nitrosodi-n-propylamine	0.000845	U	0.720	0.4940		mg/Kg	☼	69	37 - 100
Pentachlorophenol	0.00322	U	1.44	0.8971		mg/Kg	☼	62	34 - 102
Phenanthrene	0.00554	J	0.720	0.4587		mg/Kg	☼	63	41 - 100
Phenol	0.000852	U	0.720	0.4057		mg/Kg	☼	56	36 - 100
Pyrene	0.0168		0.720	0.4130		mg/Kg	☼	55	42 - 100
3,3'-Dichlorobenzidine	0.00381	U F1	0.720	0.1450	F1	mg/Kg	☼	20	30 - 103

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*61*		*42 - 100*
2-Fluorophenol (Surr)	*52*		*21 - 107*
2,4,6-Tribromophenol (Surr)	*79*		*20 - 134*
Nitrobenzene-d5 (Surr)	*59*		*35 - 109*
Phenol-d5 (Surr)	*60*		*29 - 105*
Terphenyl-d14 (Surr)	*62*		*36 - 113*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: 180-61122-1 MSD
Matrix: Solid
Analysis Batch: 195402

Client Sample ID: BGSB22-(0.0-0.5)-161122-S
Prep Type: Total/NA
Prep Batch: 195373

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1'-Biphenyl	0.00322	U	0.716	0.5114		mg/Kg	☼	71	40 - 100	10	20
1,4-Dioxane	0.00413	U	0.716	0.3058		mg/Kg	☼	43	19 - 107	8	20
1-Methylnaphthalene	0.000769	U	0.716	0.4835		mg/Kg	☼	68	41 - 100	10	20
1,2,4,5-Tetrachlorobenzene	0.00273	U	0.716	0.5022		mg/Kg	☼	70	38 - 100	11	20
2-Chloronaphthalene	0.000752	U	0.716	0.5017		mg/Kg	☼	70	39 - 100	10	20
2-Chlorophenol	0.00295	U	0.716	0.4669		mg/Kg	☼	65	38 - 100	7	20
2,4-Dichlorophenol	0.000723	U	0.716	0.4978		mg/Kg	☼	70	40 - 100	8	20
2,4-Dimethylphenol	0.00564	U	0.716	0.4546		mg/Kg	☼	64	38 - 100	11	20
2,4-Dinitrophenol	0.0429	U	1.43	0.6500		mg/Kg	☼	45	36 - 103	12	23
2,4-Dinitrotoluene	0.00291	U	0.716	0.6584		mg/Kg	☼	92	42 - 110	11	21
2,6-Dinitrotoluene	0.00372	U	0.716	0.6175		mg/Kg	☼	86	43 - 105	9	20
2-Methylnaphthalene	0.00137	J	0.716	0.4866		mg/Kg	☼	68	39 - 100	10	21
2-Methylphenol	0.00252	U	0.716	0.5014		mg/Kg	☼	70	38 - 100	8	20
Methylphenol, 3 & 4	0.00353	U	0.716	0.5340		mg/Kg	☼	75	40 - 100	8	20
2-Nitroaniline	0.0161	U	0.716	0.6513		mg/Kg	☼	91	33 - 118	11	23
3-Nitroaniline	0.0148	U	0.716	0.5564		mg/Kg	☼	78	42 - 105	12	20
4-Nitroaniline	0.0146	U	0.716	0.5669		mg/Kg	☼	79	33 - 115	9	20
2-Nitrophenol	0.00397	U	0.716	0.5280		mg/Kg	☼	74	40 - 103	10	22
4-Nitrophenol	0.0131	U	1.43	1.154		mg/Kg	☼	81	26 - 133	12	20
2,2'-oxybis[1-chloropropane]	0.000778	U	0.716	0.4758		mg/Kg	☼	66	23 - 104	7	20
2,3,4,6-Tetrachlorophenol	0.00232	U	0.716	0.5856		mg/Kg	☼	82	41 - 100	12	25
2,4,5-Trichlorophenol	0.00385	U	0.716	0.5850		mg/Kg	☼	82	42 - 100	10	22
2,4,6-Trichlorophenol	0.00540	U	0.716	0.5742		mg/Kg	☼	80	41 - 103	10	25
4-Chloro-3-methylphenol	0.00332	U	0.716	0.6064		mg/Kg	☼	85	40 - 104	10	20
4-Chlorophenyl phenyl ether	0.00401	U	0.716	0.5537		mg/Kg	☼	77	43 - 100	9	22
4,6-Dinitro-2-methylphenol	0.0145	U	1.43	1.012		mg/Kg	☼	71	45 - 102	10	20
Acenaphthene	0.000692	U	0.716	0.5187		mg/Kg	☼	72	39 - 100	10	20
Acenaphthylene	0.00396	J	0.716	0.5150		mg/Kg	☼	71	42 - 100	11	20
Acetophenone	0.0169	J	0.716	0.5056		mg/Kg	☼	68	31 - 100	8	20
Anthracene	0.00362	J	0.716	0.5344		mg/Kg	☼	74	43 - 100	10	20
Atrazine	0.00351	U	0.716	0.3956		mg/Kg	☼	55	21 - 108	7	20
Benzaldehyde	0.00751	J	0.716	0.4511		mg/Kg	☼	62	10 - 133	10	20
Benzo[a]anthracene	0.0140		0.716	0.5818		mg/Kg	☼	79	43 - 100	8	20
Benzo[b]fluoranthene	0.0202		0.716	0.4814		mg/Kg	☼	64	40 - 100	7	20
Benzo[k]fluoranthene	0.00857		0.716	0.4538		mg/Kg	☼	62	44 - 100	10	20
Benzo[g,h,i]perylene	0.0165		0.716	0.5850		mg/Kg	☼	79	41 - 102	9	20
Benzo[a]pyrene	0.0132		0.716	0.4914		mg/Kg	☼	67	43 - 100	8	20
Bis(2-chloroethoxy)methane	0.00237	U	0.716	0.4518		mg/Kg	☼	63	39 - 100	9	20
Bis(2-chloroethyl)ether	0.000967	U	0.716	0.4156		mg/Kg	☼	58	36 - 100	7	20
Bis(2-ethylhexyl) phthalate	0.0310	J	0.716	0.6854		mg/Kg	☼	91	43 - 106	5	20
4-Bromophenyl phenyl ether	0.00314	U	0.716	0.5498		mg/Kg	☼	77	44 - 100	8	20
Butyl benzyl phthalate	0.00591	J	0.716	0.5625		mg/Kg	☼	78	42 - 108	7	20
Caprolactam	0.0272	U F1	0.716	0.06227	J F1	mg/Kg	☼	9	37 - 112	15	20
Carbazole	0.00176	J	0.716	0.5358		mg/Kg	☼	75	42 - 100	8	20
Dibenz(a,h)anthracene	0.00336	J	0.716	0.6075		mg/Kg	☼	84	40 - 104	7	26
Dibenzofuran	0.00355	U	0.716	0.5018		mg/Kg	☼	70	42 - 100	10	23
Di-n-butyl phthalate	0.00485	J	0.716	0.6024		mg/Kg	☼	84	44 - 105	9	20
Di-n-octyl phthalate	0.00380	U	0.716	0.5547		mg/Kg	☼	78	41 - 103	9	20

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: 180-61122-1 MSD
Matrix: Solid
Analysis Batch: 195402

Client Sample ID: BGSB22-(0.0-0.5)-161122-S
Prep Type: Total/NA
Prep Batch: 195373

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diethyl phthalate	0.00394	U	0.716	0.5718		mg/Kg	☼	80	41 - 101	10	20
Dimethyl phthalate	0.00393	U	0.716	0.5798		mg/Kg	☼	81	44 - 100	11	23
Fluoranthene	0.0179		0.716	0.5794		mg/Kg	☼	78	41 - 104	9	20
Fluorene	0.000950	U	0.716	0.5305		mg/Kg	☼	74	41 - 100	9	21
Hexachlorobenzene	0.000768	U	0.716	0.5173		mg/Kg	☼	72	43 - 100	7	21
Hexachlorobutadiene	0.000807	U	0.716	0.4141		mg/Kg	☼	58	35 - 100	9	20
Hexachlorocyclopentadiene	0.00389	U F1	0.716	0.1470	F1	mg/Kg	☼	21	32 - 102	17	30
Hexachloroethane	0.00259	U	0.716	0.3547		mg/Kg	☼	50	35 - 100	9	20
Indeno[1,2,3-cd]pyrene	0.0118		0.716	0.5814		mg/Kg	☼	80	41 - 104	9	25
Isophorone	0.00272	U	0.716	0.4732		mg/Kg	☼	66	36 - 102	9	20
Naphthalene	0.000621	U	0.716	0.4518		mg/Kg	☼	63	38 - 100	8	20
Nitrobenzene	0.00300	U	0.716	0.4481		mg/Kg	☼	63	34 - 100	10	20
N-Nitrosodiphenylamine	0.00334	U	0.716	0.5084		mg/Kg	☼	71	41 - 100	8	20
N-Nitrosodi-n-propylamine	0.000845	U	0.716	0.5289		mg/Kg	☼	74	37 - 100	7	20
Pentachlorophenol	0.00322	U	1.43	1.023		mg/Kg	☼	71	34 - 102	13	20
Phenanthrene	0.00554	J	0.716	0.5003		mg/Kg	☼	69	41 - 100	9	20
Phenol	0.000852	U	0.716	0.4412		mg/Kg	☼	62	36 - 100	8	20
Pyrene	0.0168		0.716	0.4467		mg/Kg	☼	60	42 - 100	8	21
3,3'-Dichlorobenzidine	0.00381	U F1	0.716	0.1628	F1	mg/Kg	☼	23	30 - 103	12	21

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl	*67*		*42 - 100*
2-Fluorophenol (Surr)	*56*		*21 - 107*
2,4,6-Tribromophenol (Surr)	*88*		*20 - 134*
Nitrobenzene-d5 (Surr)	*65*		*35 - 109*
Phenol-d5 (Surr)	*66*		*29 - 105*
Terphenyl-d14 (Surr)	*67*		*36 - 113*

Method: 8081B_LL - Organochlorine Pesticides (GC)

Lab Sample ID: MB 180-195769/1-A
Matrix: Solid
Analysis Batch: 195949

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195769

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.00000880	U	0.0000833	0.00000880	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
alpha-BHC	0.0000245	U	0.0000833	0.0000245	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
beta-BHC	0.0000187	U	0.0000833	0.0000187	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
delta-BHC	0.0000297	U	0.0000833	0.0000297	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
gamma-BHC (Lindane)	0.0000172	U	0.0000833	0.0000172	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
cis-Chlordane	0.0000134	U	0.0000833	0.0000134	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
trans-Chlordane	0.00000650	U	0.0000833	0.00000650	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
4,4'-DDD	0.00000850	U	0.0000833	0.00000850	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
4,4'-DDE	0.0000265	U	0.0000833	0.0000265	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
4,4'-DDT	0.00000850	U	0.0000833	0.00000850	mg/Kg		11/30/16 04:24	12/01/16 13:44	1

Method: 8081B_LL - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 180-195769/1-A
Matrix: Solid
Analysis Batch: 195949

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195769

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dieldrin	0.00000790	U	0.0000833	0.00000790	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
Endosulfan I	0.00000530	U	0.0000833	0.00000530	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
Endosulfan II	0.0000255	U	0.0000833	0.0000255	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
Endosulfan sulfate	0.0000106	U	0.0000833	0.0000106	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
Endrin	0.0000243	U	0.0000833	0.0000243	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
Endrin aldehyde	0.0000245	U	0.0000833	0.0000245	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
Endrin ketone	0.0000278	U	0.0000833	0.0000278	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
Heptachlor	0.00000720	U	0.0000833	0.00000720	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
Heptachlor epoxide	0.0000100	U	0.0000833	0.0000100	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
Methoxychlor	0.0000242	U	0.0000833	0.0000242	mg/Kg		11/30/16 04:24	12/01/16 13:44	1
Toxaphene	0.00274	U	0.00333	0.00274	mg/Kg		11/30/16 04:24	12/01/16 13:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*80*		*32 - 114*	*11/30/16 04:24*	*12/01/16 13:44*	*1*
Tetrachloro-m-xylene	*76*		*32 - 114*	*11/30/16 04:24*	*12/01/16 13:44*	*1*
DCB Decachlorobiphenyl (Surr)	*99*		*26 - 143*	*11/30/16 04:24*	*12/01/16 13:44*	*1*
DCB Decachlorobiphenyl (Surr)	*92*		*26 - 143*	*11/30/16 04:24*	*12/01/16 13:44*	*1*

Lab Sample ID: LCS 180-195769/2-A
Matrix: Solid
Analysis Batch: 195949

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195769

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aldrin	0.00167	0.001366		mg/Kg		82	42 - 114
alpha-BHC	0.00167	0.001256		mg/Kg		75	44 - 100
beta-BHC	0.00167	0.001220		mg/Kg		73	32 - 110
delta-BHC	0.00167	0.0007284		mg/Kg		44	20 - 106
gamma-BHC (Lindane)	0.00167	0.001300		mg/Kg		78	44 - 100
cis-Chlordane	0.00167	0.001356		mg/Kg		81	38 - 112
trans-Chlordane	0.00167	0.001394		mg/Kg		84	37 - 113
4,4'-DDD	0.00167	0.001751		mg/Kg		105	41 - 111
4,4'-DDE	0.00167	0.001434		mg/Kg		86	39 - 119
4,4'-DDT	0.00167	0.0007379		mg/Kg		44	25 - 112
Dieldrin	0.00167	0.001539		mg/Kg		92	38 - 116
Endosulfan I	0.00167	0.001329		mg/Kg		80	39 - 114
Endosulfan II	0.00167	0.001407		mg/Kg		84	37 - 108
Endosulfan sulfate	0.00167	0.001271		mg/Kg		76	29 - 100
Endrin	0.00167	0.001437		mg/Kg		86	38 - 114
Endrin aldehyde	0.00167	0.001316		mg/Kg		79	25 - 105
Endrin ketone	0.00167	0.001301		mg/Kg		78	31 - 113
Heptachlor	0.00167	0.001367		mg/Kg		82	47 - 114
Heptachlor epoxide	0.00167	0.001368		mg/Kg		82	40 - 115
Methoxychlor	0.00167	0.0008964		mg/Kg		54	26 - 119

Method: 8081B_LL - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 180-195769/2-A
Matrix: Solid
Analysis Batch: 195949

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195769

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*83*		*32 - 114*
Tetrachloro-m-xylene	*74*		*32 - 114*
DCB Decachlorobiphenyl (Surr)	*91*		*26 - 143*
DCB Decachlorobiphenyl (Surr)	*99*		*26 - 143*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 180-195524/1-A
Matrix: Solid
Analysis Batch: 195866

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195524

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	0.00251	U	0.0200	0.00251	mg/Kg		11/27/16 09:29	11/30/16 14:50	20
2,4-D	0.00547	U	0.0800	0.00547	mg/Kg		11/27/16 09:29	11/30/16 14:50	20
Silvex (2,4,5-TP)	0.00210	U	0.0200	0.00210	mg/Kg		11/27/16 09:29	11/30/16 14:50	20
Dalapon	0.00710	U	0.0900	0.00710	mg/Kg		11/27/16 09:29	11/30/16 14:50	20
2,4-DB	0.00612	U	0.0800	0.00612	mg/Kg		11/27/16 09:29	11/30/16 14:50	20
Dicamba	0.00479	U	0.0400	0.00479	mg/Kg		11/27/16 09:29	11/30/16 14:50	20
Dichlorprop	0.00948	U	0.0800	0.00948	mg/Kg		11/27/16 09:29	11/30/16 14:50	20
Dinoseb	0.00455	U	0.0120	0.00455	mg/Kg		11/27/16 09:29	11/30/16 14:50	20
MCPA	1.65	U	8.00	1.65	mg/Kg		11/27/16 09:29	11/30/16 14:50	20
MCPP	1.61	U	8.00	1.61	mg/Kg		11/27/16 09:29	11/30/16 14:50	20

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*43*		*19 - 122*	*11/27/16 09:29*	*11/30/16 14:50*	*20*
2,4-Dichlorophenylacetic acid	*46*		*19 - 122*	*11/27/16 09:29*	*11/30/16 14:50*	*20*

Lab Sample ID: LCS 180-195524/2-A
Matrix: Solid
Analysis Batch: 195866

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195524

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	0.100	0.1277	*	mg/Kg		128	15 - 114
2,4-D	0.400	0.4161	*	mg/Kg		104	10 - 103
Silvex (2,4,5-TP)	0.100	0.1363	*	mg/Kg		136	27 - 126
Dalapon	0.400	0.3055		mg/Kg		76	10 - 123
2,4-DB	0.400	0.5835	*	mg/Kg		146	15 - 123
Dicamba	0.200	0.1857		mg/Kg		93	24 - 130
Dichlorprop	0.400	0.4641		mg/Kg		116	30 - 120
Dinoseb	0.400	0.6901	*	mg/Kg		173	10 - 150
MCPA	40.0	53.07	*	mg/Kg		133	10 - 132
MCPP	40.0	67.02	*	mg/Kg		168	10 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*99*		*19 - 122*
2,4-Dichlorophenylacetic acid	*103*		*19 - 122*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 180-195582/1-A
Matrix: Solid
Analysis Batch: 196391

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195582

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.00820	U	0.100	0.00820	mg/Kg		11/28/16 07:42	12/05/16 18:07	1
Aluminum	0.577	U	3.00	0.577	mg/Kg		11/28/16 07:42	12/05/16 18:07	1
Arsenic	0.0144	U	0.100	0.0144	mg/Kg		11/28/16 07:42	12/05/16 18:07	1
Boron	0.319	U	2.00	0.319	mg/Kg		11/28/16 07:42	12/05/16 18:07	1
Barium	0.0148	U	1.00	0.0148	mg/Kg		11/28/16 07:42	12/05/16 18:07	1
Beryllium	0.00750	U	0.100	0.00750	mg/Kg		11/28/16 07:42	12/05/16 18:07	1
Cadmium	0.0130	U	0.100	0.0130	mg/Kg		11/28/16 07:42	12/05/16 18:07	1
Cobalt	0.00250	U	0.0500	0.00250	mg/Kg		11/28/16 07:42	12/05/16 18:07	1
Chromium	0.0522	U	0.200	0.0522	mg/Kg		11/28/16 07:42	12/05/16 18:07	1
Copper	0.0521	U	0.200	0.0521	mg/Kg		11/28/16 07:42	12/05/16 18:07	1
Manganese	0.0355	U	0.500	0.0355	mg/Kg		11/28/16 07:42	12/05/16 18:07	1
Nickel	0.0389	U	0.100	0.0389	mg/Kg		11/28/16 07:42	12/05/16 18:07	1
Lead	0.00910	U	0.100	0.00910	mg/Kg		11/28/16 07:42	12/05/16 18:07	1
Antimony	0.0287	U	0.200	0.0287	mg/Kg		11/28/16 07:42	12/05/16 18:07	1
Selenium	0.0442	U	0.500	0.0442	mg/Kg		11/28/16 07:42	12/05/16 18:07	1
Vanadium	0.0700	U	0.100	0.0700	mg/Kg		11/28/16 07:42	12/05/16 18:07	1
Zinc	0.194	U	0.500	0.194	mg/Kg		11/28/16 07:42	12/05/16 18:07	1
Thallium	0.00260	U	0.100	0.00260	mg/Kg		11/28/16 07:42	12/05/16 18:07	1

Lab Sample ID: LCS 180-195582/2-A
Matrix: Solid
Analysis Batch: 196391

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195582

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	5.00	4.962		mg/Kg		99	80 - 120
Aluminum	200	195.6		mg/Kg		98	80 - 120
Arsenic	4.00	3.849		mg/Kg		96	80 - 120
Boron	100	99.29		mg/Kg		99	80 - 120
Barium	200	194.3		mg/Kg		97	80 - 120
Beryllium	5.00	4.816		mg/Kg		96	80 - 120
Cadmium	5.00	4.980		mg/Kg		100	80 - 120
Cobalt	50.0	48.52		mg/Kg		97	80 - 120
Chromium	20.0	19.01		mg/Kg		95	80 - 120
Copper	25.0	25.10		mg/Kg		100	80 - 120
Manganese	50.0	51.11		mg/Kg		102	80 - 120
Nickel	50.0	49.30		mg/Kg		99	80 - 120
Lead	2.00	2.028		mg/Kg		101	80 - 120
Antimony	50.0	50.01		mg/Kg		100	80 - 120
Selenium	1.00	1.076		mg/Kg		108	80 - 120
Vanadium	50.0	46.53		mg/Kg		93	80 - 120
Zinc	50.0	46.93		mg/Kg		94	80 - 120
Thallium	5.00	5.077		mg/Kg		102	80 - 120

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-61122-1 MS
Matrix: Solid
Analysis Batch: 196391

Client Sample ID: BGSB22-(0.0-0.5)-161122-S
Prep Type: Total/NA
Prep Batch: 195582

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	0.0592	J	5.28	4.651		mg/Kg	☼	87	75 - 125
Aluminum	5750		211	11670	4	mg/Kg	☼	2804	75 - 125
Arsenic	3.01	F1	4.22	5.740	F1	mg/Kg	☼	65	75 - 125
Boron	3.01		106	101.1		mg/Kg	☼	93	75 - 125
Barium	140	F1	211	258.7	F1	mg/Kg	☼	56	75 - 125
Beryllium	0.430		5.28	5.212		mg/Kg	☼	91	75 - 125
Cadmium	0.294		5.28	5.003		mg/Kg	☼	89	75 - 125
Cobalt	7.81		52.8	47.51		mg/Kg	☼	75	75 - 125
Chromium	7.50		21.1	28.69		mg/Kg	☼	100	75 - 125
Copper	10.1		26.4	32.61		mg/Kg	☼	85	75 - 125
Manganese	404		52.8	141.8	4	mg/Kg	☼	-496	75 - 125
Nickel	6.57		52.8	51.45		mg/Kg	☼	85	75 - 125
Lead	67.5		2.11	63.93	4	mg/Kg	☼	-169	75 - 125
Antimony	0.379	F1	52.8	38.56	F1	mg/Kg	☼	72	75 - 125
Selenium	0.512	J	1.06	1.408		mg/Kg	☼	85	75 - 125
Vanadium	17.9		52.8	59.28		mg/Kg	☼	78	75 - 125
Zinc	110	F1	52.8	146.8	F1	mg/Kg	☼	69	75 - 125
Thallium	0.0623	J	5.28	4.793		mg/Kg	☼	90	75 - 125

Lab Sample ID: 180-61122-1 MSD
Matrix: Solid
Analysis Batch: 196391

Client Sample ID: BGSB22-(0.0-0.5)-161122-S
Prep Type: Total/NA
Prep Batch: 195582

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	0.0592	J	5.49	4.863		mg/Kg	☼	87	75 - 125	4	20
Aluminum	5750		220	12370	4	mg/Kg	☼	3014	75 - 125	6	20
Arsenic	3.01	F1	4.39	5.669	F1	mg/Kg	☼	61	75 - 125	1	20
Boron	3.01		110	103.7		mg/Kg	☼	92	75 - 125	3	20
Barium	140	F1	220	271.6	F1	mg/Kg	☼	60	75 - 125	5	20
Beryllium	0.430		5.49	5.400		mg/Kg	☼	90	75 - 125	4	20
Cadmium	0.294		5.49	5.253		mg/Kg	☼	90	75 - 125	5	20
Cobalt	7.81		54.9	49.37		mg/Kg	☼	76	75 - 125	4	20
Chromium	7.50		22.0	29.49		mg/Kg	☼	100	75 - 125	3	20
Copper	10.1		27.5	33.88		mg/Kg	☼	87	75 - 125	4	20
Manganese	404		54.9	146.5	4	mg/Kg	☼	-468	75 - 125	3	20
Nickel	6.57		54.9	53.25		mg/Kg	☼	85	75 - 125	3	20
Lead	67.5		2.20	62.97	4	mg/Kg	☼	-206	75 - 125	2	20
Antimony	0.379	F1	54.9	40.39	F1	mg/Kg	☼	73	75 - 125	5	20
Selenium	0.512	J	1.10	1.378		mg/Kg	☼	79	75 - 125	2	20
Vanadium	17.9		54.9	60.61		mg/Kg	☼	78	75 - 125	2	20
Zinc	110	F1	54.9	152.8		mg/Kg	☼	77	75 - 125	4	20
Thallium	0.0623	J	5.49	5.019		mg/Kg	☼	90	75 - 125	5	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 180-195631/1-A
Matrix: Solid
Analysis Batch: 196111

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195631

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00739	U	0.0330	0.00739	mg/Kg		11/28/16 12:49	12/02/16 08:03	1

Lab Sample ID: LCS 180-195631/2-A
Matrix: Solid
Analysis Batch: 196111

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195631

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.417	0.3331		mg/Kg		80	80 - 120		

Lab Sample ID: 180-61116-A-141-B MS ^100
Matrix: Solid
Analysis Batch: 196111

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 195631

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	54.3		0.176	43.20	4	mg/Kg	☼	-6335	80 - 120		

Lab Sample ID: 180-61116-A-141-C MSD ^100
Matrix: Solid
Analysis Batch: 196111

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 195631

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	54.3		0.190	48.64	4	mg/Kg	☼	-2995	80 - 120	12	20

Method: 2540G - SM 2540G

Lab Sample ID: 180-61142-A-1 DU
Matrix: Solid
Analysis Batch: 195434

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	44.8			46.0		%				3	20
Percent Solids	55.2			54.0		%				2	20

GC/MS Semi VOA

Prep Batch: 195373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-61122-1	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	3541	
180-61122-2	BGSB22-(1-2)-161122-S	Total/NA	Solid	3541	
180-61122-3	BGSB10-(0.0-0.5)-161122-S	Total/NA	Solid	3541	
180-61122-4	BGSB10-(1-2)-161122-S	Total/NA	Solid	3541	
MB 180-195373/1-A	Method Blank	Total/NA	Solid	3541	
LCS 180-195373/2-A	Lab Control Sample	Total/NA	Solid	3541	
180-61122-1 MS	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	3541	
180-61122-1 MSD	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	3541	

Analysis Batch: 195402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-61122-1	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	8270D LL	195373
180-61122-2	BGSB22-(1-2)-161122-S	Total/NA	Solid	8270D LL	195373
180-61122-3	BGSB10-(0.0-0.5)-161122-S	Total/NA	Solid	8270D LL	195373
180-61122-4	BGSB10-(1-2)-161122-S	Total/NA	Solid	8270D LL	195373
MB 180-195373/1-A	Method Blank	Total/NA	Solid	8270D LL	195373
LCS 180-195373/2-A	Lab Control Sample	Total/NA	Solid	8270D LL	195373
180-61122-1 MS	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	8270D LL	195373
180-61122-1 MSD	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	8270D LL	195373

GC Semi VOA

Prep Batch: 195524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-61122-1	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	8151A	
180-61122-2	BGSB22-(1-2)-161122-S	Total/NA	Solid	8151A	
180-61122-3	BGSB10-(0.0-0.5)-161122-S	Total/NA	Solid	8151A	
180-61122-4	BGSB10-(1-2)-161122-S	Total/NA	Solid	8151A	
MB 180-195524/1-A	Method Blank	Total/NA	Solid	8151A	
LCS 180-195524/2-A	Lab Control Sample	Total/NA	Solid	8151A	

Prep Batch: 195769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-61122-1	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	3541	
180-61122-2	BGSB22-(1-2)-161122-S	Total/NA	Solid	3541	
180-61122-3	BGSB10-(0.0-0.5)-161122-S	Total/NA	Solid	3541	
180-61122-4	BGSB10-(1-2)-161122-S	Total/NA	Solid	3541	
MB 180-195769/1-A	Method Blank	Total/NA	Solid	3541	
LCS 180-195769/2-A	Lab Control Sample	Total/NA	Solid	3541	

Analysis Batch: 195866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-61122-1	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	8151A	195524
180-61122-2	BGSB22-(1-2)-161122-S	Total/NA	Solid	8151A	195524
180-61122-3	BGSB10-(0.0-0.5)-161122-S	Total/NA	Solid	8151A	195524
180-61122-4	BGSB10-(1-2)-161122-S	Total/NA	Solid	8151A	195524
MB 180-195524/1-A	Method Blank	Total/NA	Solid	8151A	195524
LCS 180-195524/2-A	Lab Control Sample	Total/NA	Solid	8151A	195524

GC Semi VOA (Continued)

Analysis Batch: 195949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-61122-1	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	8081B_LL	195769
180-61122-2	BGSB22-(1-2)-161122-S	Total/NA	Solid	8081B_LL	195769
180-61122-3	BGSB10-(0.0-0.5)-161122-S	Total/NA	Solid	8081B_LL	195769
180-61122-4	BGSB10-(1-2)-161122-S	Total/NA	Solid	8081B_LL	195769
MB 180-195769/1-A	Method Blank	Total/NA	Solid	8081B_LL	195769
LCS 180-195769/2-A	Lab Control Sample	Total/NA	Solid	8081B_LL	195769

Metals

Prep Batch: 195582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-61122-1	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	3050B	
180-61122-2	BGSB22-(1-2)-161122-S	Total/NA	Solid	3050B	
180-61122-3	BGSB10-(0.0-0.5)-161122-S	Total/NA	Solid	3050B	
180-61122-4	BGSB10-(1-2)-161122-S	Total/NA	Solid	3050B	
MB 180-195582/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 180-195582/2-A	Lab Control Sample	Total/NA	Solid	3050B	
180-61122-1 MS	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	3050B	
180-61122-1 MSD	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	3050B	

Prep Batch: 195631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-61122-1	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	7471B	
180-61122-2	BGSB22-(1-2)-161122-S	Total/NA	Solid	7471B	
180-61122-3	BGSB10-(0.0-0.5)-161122-S	Total/NA	Solid	7471B	
180-61122-4	BGSB10-(1-2)-161122-S	Total/NA	Solid	7471B	
MB 180-195631/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 180-195631/2-A	Lab Control Sample	Total/NA	Solid	7471B	
180-61116-A-141-B MS ^10(	Matrix Spike	Total/NA	Solid	7471B	
180-61116-A-141-C MSD ^1(	Matrix Spike Duplicate	Total/NA	Solid	7471B	

Analysis Batch: 196111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-61122-1	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	7471B	195631
180-61122-2	BGSB22-(1-2)-161122-S	Total/NA	Solid	7471B	195631
180-61122-3	BGSB10-(0.0-0.5)-161122-S	Total/NA	Solid	7471B	195631
180-61122-4	BGSB10-(1-2)-161122-S	Total/NA	Solid	7471B	195631
MB 180-195631/1-A	Method Blank	Total/NA	Solid	7471B	195631
LCS 180-195631/2-A	Lab Control Sample	Total/NA	Solid	7471B	195631
180-61116-A-141-B MS ^10(	Matrix Spike	Total/NA	Solid	7471B	195631
180-61116-A-141-C MSD ^1(	Matrix Spike Duplicate	Total/NA	Solid	7471B	195631

Analysis Batch: 196391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-61122-1	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	6020A	195582
180-61122-2	BGSB22-(1-2)-161122-S	Total/NA	Solid	6020A	195582
180-61122-3	BGSB10-(0.0-0.5)-161122-S	Total/NA	Solid	6020A	195582
180-61122-4	BGSB10-(1-2)-161122-S	Total/NA	Solid	6020A	195582
MB 180-195582/1-A	Method Blank	Total/NA	Solid	6020A	195582
LCS 180-195582/2-A	Lab Control Sample	Total/NA	Solid	6020A	195582

Metals (Continued)

Analysis Batch: 196391 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-61122-1 MS	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	6020A	195582
180-61122-1 MSD	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	6020A	195582

Analysis Batch: 196495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-61122-2	BGSB22-(1-2)-161122-S	Total/NA	Solid	6020A	195582

General Chemistry

Analysis Batch: 195434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-61122-1	BGSB22-(0.0-0.5)-161122-S	Total/NA	Solid	2540G	
180-61122-2	BGSB22-(1-2)-161122-S	Total/NA	Solid	2540G	
180-61122-3	BGSB10-(0.0-0.5)-161122-S	Total/NA	Solid	2540G	
180-61122-4	BGSB10-(1-2)-161122-S	Total/NA	Solid	2540G	
180-61142-A-1 DU	Duplicate	Total/NA	Solid	2540G	

Client Sample ID: BGSB22-(0.0-0.5)-161122-S
Lab Sample ID: 180-61122-1
Date Collected: 11/22/16 09:35
Matrix: Solid
Date Received: 11/23/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			195434	11/25/16 11:02	RSR	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: BGSB22-(0.0-0.5)-161122-S
Lab Sample ID: 180-61122-1
Date Collected: 11/22/16 09:35
Matrix: Solid
Date Received: 11/23/16 09:30
Percent Solids: 91.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.1 g	0.5 mL	195373	11/25/16 02:15	KLG	TAL PIT
Total/NA	Analysis	8270D LL		1	1 mL	1 mL	195402	11/25/16 18:33	VVP	TAL PIT
	Instrument ID: CH733									
Total/NA	Prep	3541			15.1 g	1.0 mL	195769	11/30/16 04:24	KLG	TAL PIT
Total/NA	Analysis	8081B_LL		5			195949	12/01/16 15:17	DFE	TAL PIT
	Instrument ID: CHGC15									
Total/NA	Prep	8151A			50.0 g	10.0 mL	195524	11/27/16 09:29	MAL	TAL PIT
Total/NA	Analysis	8151A		20			195866	11/30/16 15:14	JMO	TAL PIT
	Instrument ID: CGC1									
Total/NA	Prep	3050B			1.03 g	100 mL	195582	11/28/16 07:42	RJR	TAL PIT
Total/NA	Analysis	6020A		1			196391	12/05/16 18:17	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Prep	7471B			0.60 g	100 mL	195631	11/28/16 12:49	EVR	TAL PIT
Total/NA	Analysis	7471B		1			196111	12/02/16 08:37	ANA	TAL PIT
	Instrument ID: K									

Client Sample ID: BGSB22-(1-2)-161122-S
Lab Sample ID: 180-61122-2
Date Collected: 11/22/16 09:40
Matrix: Solid
Date Received: 11/23/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			195434	11/25/16 11:02	RSR	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: BGSB22-(1-2)-161122-S
Lab Sample ID: 180-61122-2
Date Collected: 11/22/16 09:40
Matrix: Solid
Date Received: 11/23/16 09:30
Percent Solids: 80.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.2 g	0.5 mL	195373	11/25/16 02:15	KLG	TAL PIT
Total/NA	Analysis	8270D LL		1	1 mL	1 mL	195402	11/25/16 19:53	VVP	TAL PIT
	Instrument ID: CH733									
Total/NA	Prep	3541			15.2 g	1.0 mL	195769	11/30/16 04:24	KLG	TAL PIT
Total/NA	Analysis	8081B_LL		5			195949	12/01/16 15:32	DFE	TAL PIT
	Instrument ID: CHGC15									

Client Sample ID: BGSB22-(1-2)-161122-S

Lab Sample ID: 180-61122-2
Date Collected: 11/22/16 09:40
Matrix: Solid
Date Received: 11/23/16 09:30
Percent Solids: 80.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			50.1 g	10.0 mL	195524	11/27/16 09:29	MAL	TAL PIT
Total/NA	Analysis	8151A		20			195866	11/30/16 15:38	JMO	TAL PIT
	Instrument ID: CGC1									
Total/NA	Prep	3050B			1.17 g	100 mL	195582	11/28/16 07:42	RJR	TAL PIT
Total/NA	Analysis	6020A		1			196391	12/05/16 18:42	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Prep	3050B			1.17 g	100 mL	195582	11/28/16 07:42	RJR	TAL PIT
Total/NA	Analysis	6020A		10			196495	12/06/16 13:18	WTR	TAL PIT
	Instrument ID: X									
Total/NA	Prep	7471B			0.61 g	100 mL	195631	11/28/16 12:49	EVR	TAL PIT
Total/NA	Analysis	7471B		1			196111	12/02/16 08:39	ANA	TAL PIT
	Instrument ID: K									

Client Sample ID: BGSB10-(0.0-0.5)-161122-S

Lab Sample ID: 180-61122-3
Date Collected: 11/22/16 15:30
Matrix: Solid
Date Received: 11/23/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			195434	11/25/16 11:02	RSR	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: BGSB10-(0.0-0.5)-161122-S

Lab Sample ID: 180-61122-3
Date Collected: 11/22/16 15:30
Matrix: Solid
Date Received: 11/23/16 09:30
Percent Solids: 90.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.2 g	0.5 mL	195373	11/25/16 02:15	KLG	TAL PIT
Total/NA	Analysis	8270D LL		10	1 mL	1 mL	195402	11/25/16 20:19	VVP	TAL PIT
	Instrument ID: CH733									
Total/NA	Prep	3541			15.0 g	1.0 mL	195769	11/30/16 04:24	KLG	TAL PIT
Total/NA	Analysis	8081B_LL		5			195949	12/01/16 15:48	DFE	TAL PIT
	Instrument ID: CHGC15									
Total/NA	Prep	8151A			50.0 g	10.0 mL	195524	11/27/16 09:30	MAL	TAL PIT
Total/NA	Analysis	8151A		20			195866	11/30/16 16:02	JMO	TAL PIT
	Instrument ID: CGC1									
Total/NA	Prep	3050B			1.26 g	100 mL	195582	11/28/16 07:42	RJR	TAL PIT
Total/NA	Analysis	6020A		1			196391	12/05/16 18:48	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Prep	7471B			0.61 g	100 mL	195631	11/28/16 12:49	EVR	TAL PIT
Total/NA	Analysis	7471B		1			196111	12/02/16 08:59	ANA	TAL PIT
	Instrument ID: K									

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: U.S. Oil Recovery Superfund Site

TestAmerica Job ID: 180-61122-1

Client Sample ID: BGSB10-(1-2)-161122-S

Lab Sample ID: 180-61122-4
Date Collected: 11/22/16 15:35
Matrix: Solid
Date Received: 11/23/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			195434	11/25/16 11:02	RSR	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: BGSB10-(1-2)-161122-S

Lab Sample ID: 180-61122-4
Date Collected: 11/22/16 15:35
Matrix: Solid
Date Received: 11/23/16 09:30
Percent Solids: 90.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.0 g	0.5 mL	195373	11/25/16 02:15	KLG	TAL PIT
Total/NA	Analysis	8270D LL		5	1 mL	1 mL	195402	11/25/16 20:46	VVP	TAL PIT
	Instrument ID: CH733									
Total/NA	Prep	3541			15.0 g	1.0 mL	195769	11/30/16 04:24	KLG	TAL PIT
Total/NA	Analysis	8081B_LL		5			195949	12/01/16 16:03	DFE	TAL PIT
	Instrument ID: CHGC15									
Total/NA	Prep	8151A			50.0 g	10.0 mL	195524	11/27/16 09:30	MAL	TAL PIT
Total/NA	Analysis	8151A		20			195866	11/30/16 16:25	JMO	TAL PIT
	Instrument ID: CGC1									
Total/NA	Prep	3050B			1.01 g	100 mL	195582	11/28/16 07:42	RJR	TAL PIT
Total/NA	Analysis	6020A		1			196391	12/05/16 19:03	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Prep	7471B			0.71 g	100 mL	195631	11/28/16 12:49	EVR	TAL PIT
Total/NA	Analysis	7471B		1			196111	12/02/16 09:01	ANA	TAL PIT
	Instrument ID: K									

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

EVR = Emilie Reichenbach

KLG = Kevin Geehring

MAL = Michael Lonzo

RJR = Ron Rosenbaum

Batch Type: Analysis

ANA = Alexis Anderson

CNF = Caitlin Ferguson

DFE = David Eppinger

JMO = John Oravec

RSR = Roseann Ruyechan

VVP = Vincent Piccolino

WTR = Bill Reinheimer

Certification Summary

Client: EA Engineering, Science, and Technology
Project/Site: U.S. Oil Recovery Superfund Site

TestAmerica Job ID: 180-61122-1

Laboratory: TestAmerica Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Texas	NELAP	6	T104704528-15-2	03-31-17

The following analytes are included in this report, but are not certified under this certification:

Analysis Method	Prep Method	Matrix	Analyte
8151A	8151A	Solid	Dinoseb
8270D LL	3541	Solid	1,4-Dioxane
8270D LL	3541	Solid	1-Methylnaphthalene
8270D LL	3541	Solid	Benzaldehyde

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: U.S. Oil Recovery Superfund Site

TestAmerica Job ID: 180-61122-1

Method	Method Description	Protocol	Laboratory
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL PIT
8081B_LL	Organochlorine Pesticides (GC)	SW846	TAL PIT
8151A	Herbicides (GC)	SW846	TAL PIT
6020A	Metals (ICP/MS)	SW846	TAL PIT
7471B	Mercury (CVAA)	SW846	TAL PIT
2540G	SM 2540G	SM22	TAL PIT

Protocol References:

SM22 = SM22

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: U.S. Oil Recovery Superfund Site

TestAmerica Job ID: 180-61122-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-61122-1	BGSB22-(0.0-0.5)-161122-S	Solid	11/22/16 09:35	11/23/16 09:30
180-61122-2	BGSB22-(1-2)-161122-S	Solid	11/22/16 09:40	11/23/16 09:30
180-61122-3	BGSB10-(0.0-0.5)-161122-S	Solid	11/22/16 15:30	11/23/16 09:30
180-61122-4	BGSB10-(1-2)-161122-S	Solid	11/22/16 15:35	11/23/16 09:30

Quantitation Limit Exceptions Summary

Client: EA Engineering, Science, and Technology
Project/Site: U.S. Oil Recovery Superfund Site

TestAmerica Job ID: 180-61122-1

The requested project specific reporting limits listed below were less than laboratory standard quantitation limits (PQL) but greater than or equal to the laboratory method detection limits (MDL). It must be noted that results reported below lab standard quantitation limits may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedures do not indicate corrective action for detections below the laboratory's PQL.

Method	Matrix	Analyte	Units	Client RL	Lab PQL
8081B_LL	Solid	Toxaphene	mg/Kg	0.00333	0.003333

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CH733 Analysis Batch Number: 189702

Lab Sample ID: IC 180-189702/3 Client Sample ID:

Date Analyzed: 09/30/16 07:20 Lab File ID: N09300003.D GC Column: Rxi-5SilMS ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
N-Nitrosodimethylamine	2.07	Poor chromatography	piccolinov	09/30/16 08:23
Pyridine	2.20	Poor chromatography	piccolinov	09/30/16 08:23
Benzo[k]fluoranthene	16.29	Poor chromatography	piccolinov	09/30/16 08:23

Lab Sample ID: IC 180-189702/4 Client Sample ID:

Date Analyzed: 09/30/16 07:47 Lab File ID: N09300004.D GC Column: Rxi-5SilMS ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
N-Nitrosodimethylamine	2.05	Poor chromatography	piccolinov	09/30/16 08:25
Pyridine	2.14	Poor chromatography	piccolinov	09/30/16 08:25
Di-n-octyl phthalate	15.36	Poor chromatography	piccolinov	09/30/16 08:25
Benzo[k]fluoranthene	16.30	Poor chromatography	piccolinov	09/30/16 08:25
Benzo[a]pyrene	16.92	Poor chromatography	piccolinov	09/30/16 08:25

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CH733 Analysis Batch Number: 189702

Lab Sample ID: IC 180-189702/5 Client Sample ID:

Date Analyzed: 09/30/16 08:14 Lab File ID: N09300005.D GC Column: Rxi-5SilMS ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	7.21	Poor chromatography	piccolinov	09/30/16 09:07
Di-n-octyl phthalate	15.37	Poor chromatography	piccolinov	09/30/16 09:07
Benzo[k]fluoranthene	16.31	Poor chromatography	piccolinov	09/30/16 09:07
Indeno[1,2,3-cd]pyrene	19.29	Poor chromatography	piccolinov	09/30/16 09:09
Dibenz(a,h)anthracene	19.32	Poor chromatography	piccolinov	09/30/16 09:09
Benzo[g,h,i]perylene	19.89	Poor chromatography	piccolinov	09/30/16 09:09

Lab Sample ID: ICIS 180-189702/6 Client Sample ID:

Date Analyzed: 09/30/16 08:40 Lab File ID: N09300006.D GC Column: Rxi-5SilMS ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	7.21	Poor chromatography	piccolinov	09/30/16 09:08
Di-n-octyl phthalate	15.35	Poor chromatography	piccolinov	09/30/16 09:08

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CH733 Analysis Batch Number: 195402

Lab Sample ID: 180-61122-1 Client Sample ID: BGSB22-(0.0-0.5)-161122-S

Date Analyzed: 11/25/16 18:33 Lab File ID: N11250024.D GC Column: Rxi-5SilMS ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzo[k]fluoranthene	16.32	Missed Peak	piccolino v	11/26/16 08:12

Lab Sample ID: 180-61122-4 Client Sample ID: BGSB10-(1-2)-161122-S

Date Analyzed: 11/25/16 20:46 Lab File ID: N11250029.D GC Column: Rxi-5SilMS ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzo[k]fluoranthene	16.32	Missed Peak	piccolino v	11/26/16 08:16

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CHGC15 Analysis Batch Number: 189037

Lab Sample ID: IC 180-189037/2 Client Sample ID:

Date Analyzed: 09/24/16 09:17 Lab File ID: Q0924160000002.D GC Column: MR-1 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	7.17	Baseline Smoothing	eppinged	09/24/16 09:49
Toxaphene Peak 2	7.66	Baseline Smoothing	eppinged	09/24/16 09:49
Toxaphene Peak 3	7.83	Baseline Smoothing	eppinged	09/24/16 09:49
Dibutylchlorendate ISTD	8.15	Baseline Smoothing	eppinged	09/24/16 09:49
Toxaphene Peak 4	8.51	Baseline Smoothing	eppinged	09/24/16 09:49

Lab Sample ID: IC 180-189037/2 Client Sample ID:

Date Analyzed: 09/24/16 09:17 Lab File ID: Q0924160000002.D GC Column: MR-2 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	6.92	Baseline Smoothing	eppinged	09/24/16 09:49
Toxaphene Peak 2	7.49	Baseline Smoothing	eppinged	09/24/16 09:49
Dibutylchlorendate ISTD	7.93	Baseline Smoothing	eppinged	09/24/16 09:49
Toxaphene Peak 3	8.90	Baseline Smoothing	eppinged	09/24/16 09:49
Toxaphene Peak 4	8.90	Baseline Smoothing	eppinged	09/24/16 09:49

Lab Sample ID: IC 180-189037/3 Client Sample ID:

Date Analyzed: 09/24/16 09:32 Lab File ID: Q0924160000003.D GC Column: MR-1 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	7.18	Baseline Smoothing	eppinged	09/24/16 10:14
Toxaphene Peak 2	7.66	Baseline Smoothing	eppinged	09/24/16 10:14
Toxaphene Peak 3	7.83	Baseline Smoothing	eppinged	09/24/16 10:14
Dibutylchlorendate ISTD	8.15	Baseline Smoothing	eppinged	09/24/16 10:14
Toxaphene Peak 4	8.51	Baseline Smoothing	eppinged	09/24/16 10:14

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CHGC15 Analysis Batch Number: 189037

Lab Sample ID: IC 180-189037/3 Client Sample ID:

Date Analyzed: 09/24/16 09:32 Lab File ID: Q0924160000003.D GC Column: MR-2 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	6.92	Baseline Smoothing	eppinged	09/24/16 10:14
Toxaphene Peak 2	7.49	Baseline Smoothing	eppinged	09/24/16 10:14
Dibutylchlorendate ISTD	7.93	Baseline Smoothing	eppinged	09/24/16 10:14
Toxaphene Peak 3	8.27	Baseline Smoothing	eppinged	09/24/16 10:14
Toxaphene Peak 4	8.91	Baseline Smoothing	eppinged	09/24/16 10:14

Lab Sample ID: IC 180-189037/4 Client Sample ID:

Date Analyzed: 09/24/16 09:47 Lab File ID: Q0924160000004.D GC Column: MR-1 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	7.18	Baseline Smoothing	eppinged	09/24/16 10:25
Toxaphene Peak 2	7.66	Baseline Smoothing	eppinged	09/24/16 10:25
Toxaphene Peak 3	7.83	Baseline Smoothing	eppinged	09/24/16 10:25
Dibutylchlorendate ISTD	8.15	Baseline Smoothing	eppinged	09/24/16 10:25
Toxaphene Peak 4	8.51	Baseline Smoothing	eppinged	09/24/16 10:25

Lab Sample ID: IC 180-189037/4 Client Sample ID:

Date Analyzed: 09/24/16 09:47 Lab File ID: Q0924160000004.D GC Column: MR-2 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	6.92	Baseline Smoothing	eppinged	09/24/16 10:25
Toxaphene Peak 2	7.49	Baseline Smoothing	eppinged	09/24/16 10:25
Dibutylchlorendate ISTD	7.93	Baseline Smoothing	eppinged	09/24/16 10:25
Toxaphene Peak 3	8.28	Baseline Smoothing	eppinged	09/24/16 10:25
Toxaphene Peak 4	8.91	Baseline Smoothing	eppinged	09/24/16 10:25

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CHGC15 Analysis Batch Number: 189037

Lab Sample ID: IC 180-189037/5 Client Sample ID:

Date Analyzed: 09/24/16 10:03 Lab File ID: Q0924160000005.D GC Column: MR-1 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	7.18	Baseline Smoothing	eppinged	09/24/16 10:29
Toxaphene Peak 2	7.66	Baseline Smoothing	eppinged	09/24/16 10:29
Toxaphene Peak 3	7.83	Baseline Smoothing	eppinged	09/24/16 10:29
Dibutylchlorendate ISTD	8.15	Baseline Smoothing	eppinged	09/24/16 10:29
Toxaphene Peak 4	8.51	Baseline Smoothing	eppinged	09/24/16 10:29

Lab Sample ID: IC 180-189037/6 Client Sample ID:

Date Analyzed: 09/24/16 10:18 Lab File ID: Q0924160000006.D GC Column: MR-1 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	7.18	Baseline Smoothing	eppinged	09/24/16 10:51
Toxaphene Peak 2	7.66	Baseline Smoothing	eppinged	09/24/16 10:51
Toxaphene Peak 3	7.83	Baseline Smoothing	eppinged	09/24/16 10:51
Dibutylchlorendate ISTD	8.16	Baseline Smoothing	eppinged	09/24/16 10:51
Toxaphene Peak 4	8.51	Baseline Smoothing	eppinged	09/24/16 10:51

Lab Sample ID: IC 180-189037/6 Client Sample ID:

Date Analyzed: 09/24/16 10:18 Lab File ID: Q0924160000006.D GC Column: MR-2 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dibutylchlorendate ISTD	7.93	Baseline Smoothing	eppinged	09/24/16 10:51

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CHGC15 Analysis Batch Number: 190365

Lab Sample ID: IC 180-190365/7 Client Sample ID:

Date Analyzed: 10/06/16 13:08 Lab File ID: Q100616A0000007.D GC Column: MR-1 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
DCB Decachlorobiphenyl (Surr)	9.89	Baseline Smoothing	eppinged	10/06/16 13:45

Lab Sample ID: IC 180-190365/7 Client Sample ID:

Date Analyzed: 10/06/16 13:08 Lab File ID: Q100616A0000007.D GC Column: MR-2 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
DCB Decachlorobiphenyl (Surr)	9.82	Baseline Smoothing	eppinged	10/06/16 13:45

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CHGC15 Analysis Batch Number: 195949

Lab Sample ID: CCV 180-195949/2 Client Sample ID:

Date Analyzed: 12/01/16 10:08 Lab File ID: Q1201160000002.D GC Column: MR-1 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	7.21	Baseline Smoothing	eppinged	12/01/16 10:44
Toxaphene Peak 2	7.70	Baseline Smoothing	eppinged	12/01/16 10:44
Toxaphene Peak 3	7.86	Baseline Smoothing	eppinged	12/01/16 10:44
Toxaphene Peak 4	8.55	Baseline Smoothing	eppinged	12/01/16 10:44

Lab Sample ID: CCV 180-195949/2 Client Sample ID:

Date Analyzed: 12/01/16 10:08 Lab File ID: Q1201160000002.D GC Column: MR-2 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	6.95	Baseline Smoothing	eppinged	12/01/16 10:44
Toxaphene Peak 2	7.52	Baseline Smoothing	eppinged	12/01/16 10:44
Toxaphene Peak 3	8.31	Baseline Smoothing	eppinged	12/01/16 10:44
Toxaphene Peak 4	8.95	Baseline Smoothing	eppinged	12/01/16 10:44

Lab Sample ID: 180-61122-1 Client Sample ID: BGSB22-(0.0-0.5)-161122-S

Date Analyzed: 12/01/16 15:17 Lab File ID: Q1201160000022.D GC Column: MR-1 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4,4'-DDT	7.67	Baseline Smoothing	eppinged	12/02/16 07:27

Lab Sample ID: 180-61122-3 Client Sample ID: BGSB10-(0.0-0.5)-161122-S

Date Analyzed: 12/01/16 15:48 Lab File ID: Q1201160000024.D GC Column: MR-1 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
DCB Decachlorobiphenyl (Surr)	9.95	Split Peak	eppinged	12/02/16 07:29

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CHGC15 Analysis Batch Number: 195949

Lab Sample ID: 180-61122-4 Client Sample ID: BGSB10-(1-2)-161122-S

Date Analyzed: 12/01/16 16:03 Lab File ID: Q1201160000025.D GC Column: MR-2 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Aldrin	5.97	Split Peak	eppinged	12/02/16 07:30
Dieldrin	7.00	Baseline Smoothing	eppinged	12/02/16 07:30
DCB Decachlorobiphenyl (Surr)	9.87	Baseline Smoothing	eppinged	12/02/16 07:30

HERBICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CGC1 Analysis Batch Number: 189048

Lab Sample ID: IC 180-189048/1 Client Sample ID:

Date Analyzed: 09/24/16 11:16 Lab File ID: 0924160000001.D GC Column: RTX-50 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dalapon	2.25	Split Peak	oravecj	09/26/16 06:01
2,4-DB	11.26	Split Peak	oravecj	09/26/16 06:01

Lab Sample ID: IC 180-189048/1 Client Sample ID:

Date Analyzed: 09/24/16 11:16 Lab File ID: 0924160000001.D GC Column: RTX-1701 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4-DB	11.07	Split Peak	oravecj	09/26/16 06:01

Lab Sample ID: IC 180-189048/2 Client Sample ID:

Date Analyzed: 09/24/16 11:40 Lab File ID: 0924160000002.D GC Column: RTX-50 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4-DB	11.26	Split Peak	oravecj	09/26/16 06:03

Lab Sample ID: IC 180-189048/2 Client Sample ID:

Date Analyzed: 09/24/16 11:40 Lab File ID: 0924160000002.D GC Column: RTX-1701 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dalapon	2.33	Split Peak	oravecj	09/26/16 06:03

Lab Sample ID: IC 180-189048/3 Client Sample ID:

Date Analyzed: 09/24/16 12:04 Lab File ID: 0924160000003.D GC Column: RTX-1701 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dalapon	2.33	Split Peak	oravecj	09/26/16 06:03

HERBICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CGC1 Analysis Batch Number: 189048

Lab Sample ID: IC 180-189048/5 Client Sample ID:

Date Analyzed: 09/24/16 12:52 Lab File ID: 0924160000005.D GC Column: RTX-1701 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dalapon	2.33	Split Peak	oravecj	09/26/16 06:04

Lab Sample ID: IC 180-189048/6 Client Sample ID:

Date Analyzed: 09/24/16 13:16 Lab File ID: 0924160000006.D GC Column: RTX-1701 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dalapon	2.33	Split Peak	oravecj	09/26/16 06:05
Dicamba	8.18	Split Peak	oravecj	09/26/16 06:05
MCPP	8.34	Split Peak	oravecj	09/26/16 06:05

HERBICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CGC1 Analysis Batch Number: 195866

Lab Sample ID: CCVRT 180-195866/1 Client Sample ID:

Date Analyzed: 11/30/16 14:26 Lab File ID: 1130160000005.D GC Column: RTX-1701 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4,5-T	10.80	Split Peak	oravecj	12/01/16 10:23

Lab Sample ID: LCS 180-195524/2-A Client Sample ID:

Date Analyzed: 11/30/16 18:25 Lab File ID: 1130160000015.D GC Column: RTX-1701 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dalapon	2.46	Split Peak	oravecj	12/01/16 10:27

Lab Sample ID: CCV 180-195866/12 Client Sample ID:

Date Analyzed: 11/30/16 18:49 Lab File ID: 1130160000016.D GC Column: RTX-50 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dalapon	2.37	Split Peak	oravecj	12/01/16 10:28

Lab Sample ID: CCV 180-195866/23 Client Sample ID:

Date Analyzed: 11/30/16 23:10 Lab File ID: 1130160000027.D GC Column: RTX-50 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dalapon	2.37	Split Peak	oravecj	12/01/16 10:33

Lab Sample ID: CCV 180-195866/23 Client Sample ID:

Date Analyzed: 11/30/16 23:10 Lab File ID: 1130160000027.D GC Column: RTX-1701 ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dalapon	2.45	Split Peak	oravecj	12/01/16 10:33

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
GCHERBCALSL1_00020	03/31/17	09/24/16	Hexane, Lot 1932891	40 mL	GCHERBICALSTK_00018	0.125 mL	2,4-Dichlorophenylacetic acid	0.02 ug/mL
							2,4,5-T	0.005 ug/mL
							2,4-D	0.02 ug/mL
							2,4-DB	0.02 ug/mL
							Dalapon	0.02 ug/mL
							Dicamba	0.01 ug/mL
							Dichlorprop	0.02 ug/mL
							Dinoseb	0.02 ug/mL
							MCPA	2 ug/mL
							MCPP	2 ug/mL
							Pentachlorophenol	0.005 ug/mL
							Silvex (2,4,5-TP)	0.005 ug/mL
.GCHERBICALSTK_00018	03/31/17	09/24/16	Hexane, Lot 1932891	10 mL	GCDCAASSTD_00004	0.064 mL	2,4-Dichlorophenylacetic acid	6.4 ug/mL
					GCHERBICALMIX_00015	0.32 mL	2,4,5-T	1.6 ug/mL
							2,4-D	6.4 ug/mL
							2,4-DB	6.4 ug/mL
							Dalapon	6.4 ug/mL
							Dicamba	3.2 ug/mL
							Dichlorprop	6.4 ug/mL
							Dinoseb	6.4 ug/mL
							MCPA	640 ug/mL
							MCPP	640 ug/mL
							Pentachlorophenol	1.6 ug/mL
							Silvex (2,4,5-TP)	1.6 ug/mL
..GCDCAASSTD_00004	03/31/17		RESTEK, Lot A0113703		(Purchased Reagent)		2,4-Dichlorophenylacetic acid	1000 ug/mL
..GCHERBICALMIX_00015	01/31/18		restek, Lot A0120183		(Purchased Reagent)		2,4,5-T	50 ug/mL
							2,4-D	200 ug/mL
							2,4-DB	200 ug/mL
							Dalapon	200 ug/mL
							Dicamba	100 ug/mL
							Dichlorprop	200 ug/mL
							Dinoseb	200 ug/mL
							MCPA	20000 ug/mL
							MCPP	20000 ug/mL
							Pentachlorophenol	50 ug/mL
							Silvex (2,4,5-TP)	50 ug/mL
GCHERBCALSL2_00019	03/31/17	09/24/16	Hexane, Lot 1932891	40 mL	GCHERBICALSTK_00018	0.25 mL	2,4-Dichlorophenylacetic acid	0.04 ug/mL
							2,4,5-T	0.01 ug/mL
							2,4-D	0.04 ug/mL
							2,4-DB	0.04 ug/mL
							Dalapon	0.04 ug/mL
							Dicamba	0.02 ug/mL
							Dichlorprop	0.04 ug/mL
							Dinoseb	0.04 ug/mL
							MCPA	4 ug/mL
							MCPP	4 ug/mL
							Pentachlorophenol	0.01 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Silvex (2,4,5-TP)	0.01 ug/mL
.GCHERBICALSTK_00018	03/31/17	09/24/16	Hexane, Lot 1932891	10 mL	GCDCAASSTD_00004	0.064 mL	2,4-Dichlorophenylacetic acid	6.4 ug/mL
					GCHERBICALMIX_00015	0.32 mL	2,4,5-T	1.6 ug/mL
							2,4-D	6.4 ug/mL
							2,4-DB	6.4 ug/mL
							Dalapon	6.4 ug/mL
							Dicamba	3.2 ug/mL
							Dichlorprop	6.4 ug/mL
							Dinoseb	6.4 ug/mL
							MCPA	640 ug/mL
							MCPP	640 ug/mL
							Pentachlorophenol	1.6 ug/mL
							Silvex (2,4,5-TP)	1.6 ug/mL
..GCDCAASSTD_00004	03/31/17		RESTEK, Lot A0113703		(Purchased Reagent)		2,4-Dichlorophenylacetic acid	1000 ug/mL
..GCHERBICALMIX_00015	01/31/18		restek, Lot A0120183		(Purchased Reagent)		2,4,5-T	50 ug/mL
							2,4-D	200 ug/mL
							2,4-DB	200 ug/mL
							Dalapon	200 ug/mL
							Dicamba	100 ug/mL
							Dichlorprop	200 ug/mL
							Dinoseb	200 ug/mL
							MCPA	20000 ug/mL
							MCPP	20000 ug/mL
							Pentachlorophenol	50 ug/mL
							Silvex (2,4,5-TP)	50 ug/mL
GCHERBCALSL3_00021	03/31/17	09/24/16	Hexane, Lot 1932891	100 mL	GCHERBICALSTK_00018	1.25 mL	2,4-Dichlorophenylacetic acid	0.08 ug/mL
							2,4,5-T	0.02 ug/mL
							2,4-D	0.08 ug/mL
							2,4-DB	0.08 ug/mL
							Dalapon	0.08 ug/mL
							Dicamba	0.04 ug/mL
							Dichlorprop	0.08 ug/mL
							Dinoseb	0.08 ug/mL
							MCPA	8 ug/mL
							MCPP	8 ug/mL
							Pentachlorophenol	0.02 ug/mL
							Silvex (2,4,5-TP)	0.02 ug/mL
.GCHERBICALSTK_00018	03/31/17	09/24/16	Hexane, Lot 1932891	10 mL	GCDCAASSTD_00004	0.064 mL	2,4-Dichlorophenylacetic acid	6.4 ug/mL
					GCHERBICALMIX_00015	0.32 mL	2,4,5-T	1.6 ug/mL
							2,4-D	6.4 ug/mL
							2,4-DB	6.4 ug/mL
							Dalapon	6.4 ug/mL
							Dicamba	3.2 ug/mL
							Dichlorprop	6.4 ug/mL
							Dinoseb	6.4 ug/mL
							MCPA	640 ug/mL
							MCPP	640 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pentachlorophenol	1.6 ug/mL
							Silvex (2,4,5-TP)	1.6 ug/mL
..GCDCAASSTD_00004	03/31/17		RESTEK, Lot A0113703		(Purchased Reagent)		2,4-Dichlorophenylacetic acid	1000 ug/mL
..GCHERBICALMIX_00015	01/31/18		restek, Lot A0120183		(Purchased Reagent)		2,4,5-T	50 ug/mL
							2,4-D	200 ug/mL
							2,4-DB	200 ug/mL
							Dalapon	200 ug/mL
							Dicamba	100 ug/mL
							Dichlorprop	200 ug/mL
							Dinoseb	200 ug/mL
							MCPA	20000 ug/mL
							MCPP	20000 ug/mL
							Pentachlorophenol	50 ug/mL
							Silvex (2,4,5-TP)	50 ug/mL
GCHERBCALSL4_00019	03/31/17	09/24/16	Hexane, Lot 1932891	40 mL	GCHERBICALSTK_00018	1 mL	2,4-Dichlorophenylacetic acid	0.16 ug/mL
							2,4,5-T	0.04 ug/mL
							2,4-D	0.16 ug/mL
							2,4-DB	0.16 ug/mL
							Dalapon	0.16 ug/mL
							Dicamba	0.08 ug/mL
							Dichlorprop	0.16 ug/mL
							Dinoseb	0.16 ug/mL
							MCPA	16 ug/mL
							MCPP	16 ug/mL
							Pentachlorophenol	0.04 ug/mL
							Silvex (2,4,5-TP)	0.04 ug/mL
.GCHERBICALSTK_00018	03/31/17	09/24/16	Hexane, Lot 1932891	10 mL	GCDCAASSTD_00004	0.064 mL	2,4-Dichlorophenylacetic acid	6.4 ug/mL
					GCHERBICALMIX_00015	0.32 mL	2,4,5-T	1.6 ug/mL
							2,4-D	6.4 ug/mL
							2,4-DB	6.4 ug/mL
							Dalapon	6.4 ug/mL
							Dicamba	3.2 ug/mL
							Dichlorprop	6.4 ug/mL
							Dinoseb	6.4 ug/mL
							MCPA	640 ug/mL
							MCPP	640 ug/mL
							Pentachlorophenol	1.6 ug/mL
							Silvex (2,4,5-TP)	1.6 ug/mL
..GCDCAASSTD_00004	03/31/17		RESTEK, Lot A0113703		(Purchased Reagent)		2,4-Dichlorophenylacetic acid	1000 ug/mL
..GCHERBICALMIX_00015	01/31/18		restek, Lot A0120183		(Purchased Reagent)		2,4,5-T	50 ug/mL
							2,4-D	200 ug/mL
							2,4-DB	200 ug/mL
							Dalapon	200 ug/mL
							Dicamba	100 ug/mL
							Dichlorprop	200 ug/mL
							Dinoseb	200 ug/mL
							MCPA	20000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							MCPP	20000 ug/mL
							Pentachlorophenol	50 ug/mL
							Silvex (2,4,5-TP)	50 ug/mL
GCHERBCALSL5_00019	03/31/17	09/24/16	Hexane, Lot 1932891	40 mL	GCHERBICALSTK_00018	2 mL	2,4-Dichlorophenylacetic acid	0.32 ug/mL
							2,4,5-T	0.08 ug/mL
							2,4-D	0.32 ug/mL
							2,4-DB	0.32 ug/mL
							Dalapon	0.32 ug/mL
							Dicamba	0.16 ug/mL
							Dichlorprop	0.32 ug/mL
							Dinoseb	0.32 ug/mL
							MCPA	32 ug/mL
							MCPP	32 ug/mL
							Pentachlorophenol	0.08 ug/mL
							Silvex (2,4,5-TP)	0.08 ug/mL
.GCHERBICALSTK_00018	03/31/17	09/24/16	Hexane, Lot 1932891	10 mL	GCDCAASSTD_00004	0.064 mL	2,4-Dichlorophenylacetic acid	6.4 ug/mL
					GCHERBICALMIX_00015	0.32 mL	2,4,5-T	1.6 ug/mL
							2,4-D	6.4 ug/mL
							2,4-DB	6.4 ug/mL
							Dalapon	6.4 ug/mL
							Dicamba	3.2 ug/mL
							Dichlorprop	6.4 ug/mL
							Dinoseb	6.4 ug/mL
							MCPA	640 ug/mL
							MCPP	640 ug/mL
							Pentachlorophenol	1.6 ug/mL
							Silvex (2,4,5-TP)	1.6 ug/mL
..GCDCAASSTD_00004	03/31/17		RESTEK, Lot A0113703		(Purchased Reagent)		2,4-Dichlorophenylacetic acid	1000 ug/mL
..GCHERBICALMIX_00015	01/31/18		restek, Lot A0120183		(Purchased Reagent)		2,4,5-T	50 ug/mL
							2,4-D	200 ug/mL
							2,4-DB	200 ug/mL
							Dalapon	200 ug/mL
							Dicamba	100 ug/mL
							Dichlorprop	200 ug/mL
							Dinoseb	200 ug/mL
							MCPA	20000 ug/mL
							MCPP	20000 ug/mL
							Pentachlorophenol	50 ug/mL
							Silvex (2,4,5-TP)	50 ug/mL
GCHERBCALSL6_00006	03/31/17	09/24/16	Hexane, Lot 1932891	20 mL	GCHERBICALSTK_00018	2 mL	2,4-Dichlorophenylacetic acid	0.64 ug/mL
							2,4,5-T	0.16 ug/mL
							2,4-D	0.64 ug/mL
							2,4-DB	0.64 ug/mL
							Dalapon	0.64 ug/mL
							Dicamba	0.32 ug/mL
							Dichlorprop	0.64 ug/mL
							Dinoseb	0.64 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							MCPA	64 ug/mL
							MCPP	64 ug/mL
							Pentachlorophenol	0.16 ug/mL
							Silvex (2,4,5-TP)	0.16 ug/mL
.GCHERBICALSTK_00018	03/31/17	09/24/16	Hexane, Lot 1932891	10 mL	GCDCAASSTD_00004	0.064 mL	2,4-Dichlorophenylacetic acid	6.4 ug/mL
					GCHERBICALMIX_00015	0.32 mL	2,4,5-T	1.6 ug/mL
							2,4-D	6.4 ug/mL
							2,4-DB	6.4 ug/mL
							Dalapon	6.4 ug/mL
							Dicamba	3.2 ug/mL
							Dichlorprop	6.4 ug/mL
							Dinoseb	6.4 ug/mL
							MCPA	640 ug/mL
							MCPP	640 ug/mL
							Pentachlorophenol	1.6 ug/mL
							Silvex (2,4,5-TP)	1.6 ug/mL
..GCDCAASSTD_00004	03/31/17		RESTEK, Lot A0113703		(Purchased Reagent)		2,4-Dichlorophenylacetic acid	1000 ug/mL
..GCHERBICALMIX_00015	01/31/18		restek, Lot A0120183		(Purchased Reagent)		2,4,5-T	50 ug/mL
							2,4-D	200 ug/mL
							2,4-DB	200 ug/mL
							Dalapon	200 ug/mL
							Dicamba	100 ug/mL
							Dichlorprop	200 ug/mL
							Dinoseb	200 ug/mL
							MCPA	20000 ug/mL
							MCPP	20000 ug/mL
							Pentachlorophenol	50 ug/mL
							Silvex (2,4,5-TP)	50 ug/mL
GCHERBCALSL7_00003	03/31/17	09/24/16	Hexane, Lot 1932891	40 mL	GCHERBICALSTK_00018	0.0625 mL	2,4-Dichlorophenylacetic acid	0.01 ug/mL
							2,4,5-T	0.0025 ug/mL
							2,4-D	0.01 ug/mL
							2,4-DB	0.01 ug/mL
							Dalapon	0.01 ug/mL
							Dicamba	0.005 ug/mL
							Dichlorprop	0.01 ug/mL
							Dinoseb	0.01 ug/mL
							MCPA	1 ug/mL
							MCPP	1 ug/mL
							Pentachlorophenol	0.0025 ug/mL
							Silvex (2,4,5-TP)	0.0025 ug/mL
.GCHERBICALSTK_00018	03/31/17	09/24/16	Hexane, Lot 1932891	10 mL	GCDCAASSTD_00004	0.064 mL	2,4-Dichlorophenylacetic acid	6.4 ug/mL
					GCHERBICALMIX_00015	0.32 mL	2,4,5-T	1.6 ug/mL
							2,4-D	6.4 ug/mL
							2,4-DB	6.4 ug/mL
							Dalapon	6.4 ug/mL
							Dicamba	3.2 ug/mL
							Dichlorprop	6.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dinoseb	6.4 ug/mL
							MCPA	640 ug/mL
							MCPP	640 ug/mL
							Pentachlorophenol	1.6 ug/mL
							Silvex (2,4,5-TP)	1.6 ug/mL
..GCDCAASSTD_00004	03/31/17		RESTEK, Lot A0113703		(Purchased Reagent)		2,4-Dichlorophenylacetic acid	1000 ug/mL
..GCHERBICALMIX_00015	01/31/18		restek, Lot A0120183		(Purchased Reagent)		2,4,5-T	50 ug/mL
							2,4-D	200 ug/mL
							2,4-DB	200 ug/mL
							Dalapon	200 ug/mL
							Dicamba	100 ug/mL
							Dichlorprop	200 ug/mL
							Dinoseb	200 ug/mL
							MCPA	20000 ug/mL
							MCPP	20000 ug/mL
							Pentachlorophenol	50 ug/mL
							Silvex (2,4,5-TP)	50 ug/mL
GCPest L1_00017	01/30/17	09/07/16	Hexane, Lot 1273286	40 mL	GCPestCAL_00011	0.004 mL	DCB Decachlorobiphenyl (Surr)	0.001 ug/mL
							Tetrachloro-m-xylene	0.001 ug/mL
							4,4'-DDD	0.001 ug/mL
							4,4'-DDE	0.001 ug/mL
							4,4'-DDT	0.001 ug/mL
							Aldrin	0.001 ug/mL
							alpha-BHC	0.001 ug/mL
							beta-BHC	0.001 ug/mL
							cis-Chlordane	0.001 ug/mL
							delta-BHC	0.001 ug/mL
							Dieldrin	0.001 ug/mL
							Endosulfan I	0.001 ug/mL
							Endosulfan II	0.001 ug/mL
							Endosulfan sulfate	0.001 ug/mL
							Endrin	0.001 ug/mL
							Endrin aldehyde	0.001 ug/mL
							Endrin ketone	0.001 ug/mL
							gamma-BHC (Lindane)	0.001 ug/mL
							Heptachlor	0.001 ug/mL
							Heptachlor epoxide	0.001 ug/mL
							Methoxychlor	0.001 ug/mL
							trans-Chlordane	0.001 ug/mL
.GCPestCAL_00011	01/30/17	03/02/16	Hexane, Lot 1273286	20 mL	GCPEST(SURR)S_00006	1 mL	DCB Decachlorobiphenyl (Surr)	10 ug/mL
							Tetrachloro-m-xylene	10 ug/mL
					GCPESTAB3STD_00001	0.1 mL	4,4'-DDD	10 ug/mL
							4,4'-DDE	10 ug/mL
							4,4'-DDT	10 ug/mL
							Aldrin	10 ug/mL
							alpha-BHC	10 ug/mL
							beta-BHC	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							cis-Chlordane	10 ug/mL
							delta-BHC	10 ug/mL
							Dieldrin	10 ug/mL
							Endosulfan I	10 ug/mL
							Endosulfan II	10 ug/mL
							Endosulfan sulfate	10 ug/mL
							Endrin	10 ug/mL
							Endrin aldehyde	10 ug/mL
							Endrin ketone	10 ug/mL
							gamma-BHC (Lindane)	10 ug/mL
							Heptachlor	10 ug/mL
							Heptachlor epoxide	10 ug/mL
							Methoxychlor	10 ug/mL
							trans-Chlordane	10 ug/mL
..GCPEST(SURR)S_00006	01/30/17		RESTEK, Lot A069056		(Purchased Reagent)		DCB Decachlorobiphenyl (Surr)	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
..GCPESTAB3STD_00001	02/28/17		RESTEK, Lot A093456		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							beta-BHC	2000 ug/mL
							cis-Chlordane	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
							trans-Chlordane	2000 ug/mL
GCPESTISSPK2_00004	01/15/17	07/15/16	Hexane, Lot 1273286	40 mL	GCDBCINTSTD_00001	0.2 mL	Dibutylchlorendate ISTD	1 ug/mL
					GCpest/pcbINT_00001	0.04 mL	1-Bromo-2-nitrobenzene	1 ug/mL
.GCDBCINTSTD_00001	01/31/17		RESTEK, Lot A099571		(Purchased Reagent)		Dibutylchlorendate ISTD	200 ug/mL
.GCpest/pcbINT_00001	02/28/17		restek, Lot A099353		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
GCPestL2_00016	01/30/17	09/12/16	Hexane, Lot 1273286	40 mL	GCPestCAL_00011	0.02 mL	DCB Decachlorobiphenyl (Surr)	0.005 ug/mL
							Tetrachloro-m-xylene	0.005 ug/mL
							4,4'-DDD	0.005 ug/mL
							4,4'-DDE	0.005 ug/mL
							4,4'-DDT	0.005 ug/mL
							Aldrin	0.005 ug/mL
							alpha-BHC	0.005 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							beta-BHC	0.005 ug/mL
							cis-Chlordane	0.005 ug/mL
							delta-BHC	0.005 ug/mL
							Dieldrin	0.005 ug/mL
							Endosulfan I	0.005 ug/mL
							Endosulfan II	0.005 ug/mL
							Endosulfan sulfate	0.005 ug/mL
							Endrin	0.005 ug/mL
							Endrin aldehyde	0.005 ug/mL
							Endrin ketone	0.005 ug/mL
							gamma-BHC (Lindane)	0.005 ug/mL
							Heptachlor	0.005 ug/mL
							Heptachlor epoxide	0.005 ug/mL
							Methoxychlor	0.005 ug/mL
							trans-Chlordane	0.005 ug/mL
.GCPestCAL_00011	01/30/17	03/02/16	Hexane, Lot 1273286	20 mL	GCPEST(SURR)S_00006	1 mL	DCB Decachlorobiphenyl (Surr)	10 ug/mL
							Tetrachloro-m-xylene	10 ug/mL
					GCPESTAB3STD_00001	0.1 mL	4,4'-DDD	10 ug/mL
							4,4'-DDE	10 ug/mL
							4,4'-DDT	10 ug/mL
							Aldrin	10 ug/mL
							alpha-BHC	10 ug/mL
							beta-BHC	10 ug/mL
							cis-Chlordane	10 ug/mL
							delta-BHC	10 ug/mL
							Dieldrin	10 ug/mL
							Endosulfan I	10 ug/mL
							Endosulfan II	10 ug/mL
							Endosulfan sulfate	10 ug/mL
							Endrin	10 ug/mL
							Endrin aldehyde	10 ug/mL
							Endrin ketone	10 ug/mL
							gamma-BHC (Lindane)	10 ug/mL
							Heptachlor	10 ug/mL
							Heptachlor epoxide	10 ug/mL
							Methoxychlor	10 ug/mL
							trans-Chlordane	10 ug/mL
..GCPEST(SURR)S_00006	01/30/17		RESTEK, Lot A069056		(Purchased Reagent)		DCB Decachlorobiphenyl (Surr)	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
..GCPESTAB3STD_00001	02/28/17		RESTEK, Lot A093456		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							beta-BHC	2000 ug/mL
							cis-Chlordane	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
							trans-Chlordane	2000 ug/mL
GCPestL3_00017	01/30/17	09/05/16	Hexane, Lot 1273286	100 mL	GCPestCAL_00011	0.25 mL	DCB Decachlorobiphenyl (Surr)	0.025 ug/mL
							Tetrachloro-m-xylene	0.025 ug/mL
							4,4'-DDD	0.025 ug/mL
							4,4'-DDE	0.025 ug/mL
							4,4'-DDT	0.025 ug/mL
							Aldrin	0.025 ug/mL
							alpha-BHC	0.025 ug/mL
							beta-BHC	0.025 ug/mL
							cis-Chlordane	0.025 ug/mL
							delta-BHC	0.025 ug/mL
							Dieldrin	0.025 ug/mL
							Endosulfan I	0.025 ug/mL
							Endosulfan II	0.025 ug/mL
							Endosulfan sulfate	0.025 ug/mL
							Endrin	0.025 ug/mL
							Endrin aldehyde	0.025 ug/mL
							Endrin ketone	0.025 ug/mL
							gamma-BHC (Lindane)	0.025 ug/mL
							Heptachlor	0.025 ug/mL
							Heptachlor epoxide	0.025 ug/mL
							Methoxychlor	0.025 ug/mL
							trans-Chlordane	0.025 ug/mL
.GCPestCAL_00011	01/30/17	03/02/16	Hexane, Lot 1273286	20 mL	GCPEST(SURR)S_00006	1 mL	DCB Decachlorobiphenyl (Surr)	10 ug/mL
							Tetrachloro-m-xylene	10 ug/mL
					GCPESTAB3STD_00001	0.1 mL	4,4'-DDD	10 ug/mL
							4,4'-DDE	10 ug/mL
							4,4'-DDT	10 ug/mL
							Aldrin	10 ug/mL
							alpha-BHC	10 ug/mL
							beta-BHC	10 ug/mL
							cis-Chlordane	10 ug/mL
							delta-BHC	10 ug/mL
							Dieldrin	10 ug/mL
							Endosulfan I	10 ug/mL
							Endosulfan II	10 ug/mL
							Endosulfan sulfate	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Endrin	10 ug/mL
							Endrin aldehyde	10 ug/mL
							Endrin ketone	10 ug/mL
							gamma-BHC (Lindane)	10 ug/mL
							Heptachlor	10 ug/mL
							Heptachlor epoxide	10 ug/mL
							Methoxychlor	10 ug/mL
							trans-Chlordane	10 ug/mL
..GCPEST(SURR)S_00006	01/30/17		RESTEK, Lot A069056		(Purchased Reagent)		DCB Decachlorobiphenyl (Surr)	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
..GCPESTAB3STD_00001	02/28/17		RESTEK, Lot A093456		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							beta-BHC	2000 ug/mL
							cis-Chlordane	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
							trans-Chlordane	2000 ug/mL
GCPestL4_00016	01/30/17	09/12/16	Hexane, Lot 1273286	40 mL	GCPestCAL_00011	0.2 mL	DCB Decachlorobiphenyl (Surr)	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
							4,4'-DDD	0.05 ug/mL
							4,4'-DDE	0.05 ug/mL
							4,4'-DDT	0.05 ug/mL
							Aldrin	0.05 ug/mL
							alpha-BHC	0.05 ug/mL
							beta-BHC	0.05 ug/mL
							cis-Chlordane	0.05 ug/mL
							delta-BHC	0.05 ug/mL
							Dieldrin	0.05 ug/mL
							Endosulfan I	0.05 ug/mL
							Endosulfan II	0.05 ug/mL
							Endosulfan sulfate	0.05 ug/mL
							Endrin	0.05 ug/mL
							Endrin aldehyde	0.05 ug/mL
							Endrin ketone	0.05 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							gamma-BHC (Lindane)	0.05 ug/mL
							Heptachlor	0.05 ug/mL
							Heptachlor epoxide	0.05 ug/mL
							Methoxychlor	0.05 ug/mL
							trans-Chlordane	0.05 ug/mL
.GCPestCAL_00011	01/30/17	03/02/16	Hexane, Lot 1273286	20 mL	GCPEST(SURR)S_00006	1 mL	DCB Decachlorobiphenyl (Surr)	10 ug/mL
							Tetrachloro-m-xylene	10 ug/mL
					GCPESTAB3STD_00001	0.1 mL	4,4'-DDD	10 ug/mL
							4,4'-DDE	10 ug/mL
							4,4'-DDT	10 ug/mL
							Aldrin	10 ug/mL
							alpha-BHC	10 ug/mL
							beta-BHC	10 ug/mL
							cis-Chlordane	10 ug/mL
							delta-BHC	10 ug/mL
							Dieldrin	10 ug/mL
							Endosulfan I	10 ug/mL
							Endosulfan II	10 ug/mL
							Endosulfan sulfate	10 ug/mL
							Endrin	10 ug/mL
							Endrin aldehyde	10 ug/mL
							Endrin ketone	10 ug/mL
							gamma-BHC (Lindane)	10 ug/mL
							Heptachlor	10 ug/mL
							Heptachlor epoxide	10 ug/mL
							Methoxychlor	10 ug/mL
							trans-Chlordane	10 ug/mL
..GCPEST(SURR)S_00006	01/30/17		RESTEK, Lot A069056		(Purchased Reagent)		DCB Decachlorobiphenyl (Surr)	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
..GCPESTAB3STD_00001	02/28/17		RESTEK, Lot A093456		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							beta-BHC	2000 ug/mL
							cis-Chlordane	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							trans-Chlordane	2000 ug/mL
GCPestL5_00016	01/30/17	09/12/16	Hexane, Lot 1273286	40 mL	GCPestCAL_00011	0.4 mL	DCB Decachlorobiphenyl (Surr)	0.1 ug/mL
							Tetrachloro-m-xylene	0.1 ug/mL
							4,4'-DDD	0.1 ug/mL
							4,4'-DDE	0.1 ug/mL
							4,4'-DDT	0.1 ug/mL
							Aldrin	0.1 ug/mL
							alpha-BHC	0.1 ug/mL
							beta-BHC	0.1 ug/mL
							cis-Chlordane	0.1 ug/mL
							delta-BHC	0.1 ug/mL
							Dieldrin	0.1 ug/mL
							Endosulfan I	0.1 ug/mL
							Endosulfan II	0.1 ug/mL
							Endosulfan sulfate	0.1 ug/mL
							Endrin	0.1 ug/mL
							Endrin aldehyde	0.1 ug/mL
							Endrin ketone	0.1 ug/mL
							gamma-BHC (Lindane)	0.1 ug/mL
							Heptachlor	0.1 ug/mL
							Heptachlor epoxide	0.1 ug/mL
							Methoxychlor	0.1 ug/mL
							trans-Chlordane	0.1 ug/mL
.GCPestCAL_00011	01/30/17	03/02/16	Hexane, Lot 1273286	20 mL	GCPEST(SURR)S_00006	1 mL	DCB Decachlorobiphenyl (Surr)	10 ug/mL
							Tetrachloro-m-xylene	10 ug/mL
					GCPESTAB3STD_00001	0.1 mL	4,4'-DDD	10 ug/mL
							4,4'-DDE	10 ug/mL
							4,4'-DDT	10 ug/mL
							Aldrin	10 ug/mL
							alpha-BHC	10 ug/mL
							beta-BHC	10 ug/mL
							cis-Chlordane	10 ug/mL
							delta-BHC	10 ug/mL
							Dieldrin	10 ug/mL
							Endosulfan I	10 ug/mL
							Endosulfan II	10 ug/mL
							Endosulfan sulfate	10 ug/mL
							Endrin	10 ug/mL
							Endrin aldehyde	10 ug/mL
							Endrin ketone	10 ug/mL
							gamma-BHC (Lindane)	10 ug/mL
							Heptachlor	10 ug/mL
							Heptachlor epoxide	10 ug/mL
							Methoxychlor	10 ug/mL
							trans-Chlordane	10 ug/mL
..GCPEST(SURR)S_00006	01/30/17	RESTEK, Lot A069056			(Purchased Reagent)		DCB Decachlorobiphenyl (Surr)	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..GCPESTAB3STD_00001	02/28/17		RESTEK, Lot A093456		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							beta-BHC	2000 ug/mL
							cis-Chlordane	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
							trans-Chlordane	2000 ug/mL
GCPestL6_00016	01/30/17	09/12/16	Hexane, Lot 1273286	40 mL	GCPestCAL_00011	0.8 mL	DCB Decachlorobiphenyl (Surr)	0.2 ug/mL
							Tetrachloro-m-xylene	0.2 ug/mL
							4,4'-DDD	0.2 ug/mL
							4,4'-DDE	0.2 ug/mL
							4,4'-DDT	0.2 ug/mL
							Aldrin	0.2 ug/mL
							alpha-BHC	0.2 ug/mL
							beta-BHC	0.2 ug/mL
							cis-Chlordane	0.2 ug/mL
							delta-BHC	0.2 ug/mL
							Dieldrin	0.2 ug/mL
							Endosulfan I	0.2 ug/mL
							Endosulfan II	0.2 ug/mL
							Endosulfan sulfate	0.2 ug/mL
							Endrin	0.2 ug/mL
							Endrin aldehyde	0.2 ug/mL
							Endrin ketone	0.2 ug/mL
							gamma-BHC (Lindane)	0.2 ug/mL
							Heptachlor	0.2 ug/mL
							Heptachlor epoxide	0.2 ug/mL
							Methoxychlor	0.2 ug/mL
							trans-Chlordane	0.2 ug/mL
.GCPestCAL_00011	01/30/17	03/02/16	Hexane, Lot 1273286	20 mL	GCPEST(SURR)S_00006	1 mL	DCB Decachlorobiphenyl (Surr)	10 ug/mL
							Tetrachloro-m-xylene	10 ug/mL
					GCPESTAB3STD_00001	0.1 mL	4,4'-DDD	10 ug/mL
							4,4'-DDE	10 ug/mL
							4,4'-DDT	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Aldrin	10 ug/mL
							alpha-BHC	10 ug/mL
							beta-BHC	10 ug/mL
							cis-Chlordane	10 ug/mL
							delta-BHC	10 ug/mL
							Dieldrin	10 ug/mL
							Endosulfan I	10 ug/mL
							Endosulfan II	10 ug/mL
							Endosulfan sulfate	10 ug/mL
							Endrin	10 ug/mL
							Endrin aldehyde	10 ug/mL
							Endrin ketone	10 ug/mL
							gamma-BHC (Lindane)	10 ug/mL
							Heptachlor	10 ug/mL
							Heptachlor epoxide	10 ug/mL
							Methoxychlor	10 ug/mL
							trans-Chlordane	10 ug/mL
..GCPEST(SURR)S_00006	01/30/17		RESTEK, Lot A069056		(Purchased Reagent)		DCB Decachlorobiphenyl (Surr)	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
..GCPESTAB3STD_00001	02/28/17		RESTEK, Lot A093456		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							beta-BHC	2000 ug/mL
							cis-Chlordane	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
							trans-Chlordane	2000 ug/mL
GCPESTPEMSTD_00022	01/27/17	06/28/16	Hexane, Lot 1273286	200 mL	GCCLPSURRSTK_00007	1 mL	DCB Decachlorobiphenyl (Surr)	0.025 ug/mL
							Tetrachloro-m-xylene	0.025 ug/mL
					GCPEST(PEM)S_00006	0.05 mL	4,4'-DDT	0.05 ug/mL
							Endrin	0.025 ug/mL
.GCCLPSURRSTK_00007	01/27/17	01/27/16	Hexane, Lot 1273816	20 mL	GCPEST(SURR)S_00007	0.5 mL	DCB Decachlorobiphenyl (Surr)	5 ug/mL
							Tetrachloro-m-xylene	5 ug/mL
..GCPEST(SURR)S_00007	11/30/20		RESTEK, Lot A0105135		(Purchased Reagent)		DCB Decachlorobiphenyl (Surr)	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.GCPEST(PEM)S_00006	04/30/19		RESTEK, Lot A0113122		(Purchased Reagent)		4,4'-DDT	200 ug/mL
							Endrin	100 ug/mL
GCTOXLEVEL1_00005	11/30/16	09/12/16	Hexane, Lot 127386	40 mL	GCTOXINTERSTD_00003	0.016 mL	Toxaphene Peak 1	0.02 ug/mL
							Toxaphene Peak 2	0.02 ug/mL
							Toxaphene Peak 3	0.02 ug/mL
							Toxaphene Peak 4	0.02 ug/mL
.GCTOXINTERSTD_00003	11/30/16	09/12/16	Hexane, Lot 127386	40 mL	GCTOXSTDSTD_00001	0.4 mL	Toxaphene Peak 1	50 ug/mL
							Toxaphene Peak 2	50 ug/mL
							Toxaphene Peak 3	50 ug/mL
							Toxaphene Peak 4	50 ug/mL
..GCTOXSTDSTD_00001	11/30/16		RESTEK, Lot A090203		(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
GCTOXLEVEL2_00003	11/30/16	09/12/16	Hexane, Lot 1273286	40 mL	GCTOXINTERSTD_00003	0.16 mL	Toxaphene Peak 1	0.2 ug/mL
							Toxaphene Peak 2	0.2 ug/mL
							Toxaphene Peak 3	0.2 ug/mL
							Toxaphene Peak 4	0.2 ug/mL
.GCTOXINTERSTD_00003	11/30/16	09/12/16	Hexane, Lot 127386	40 mL	GCTOXSTDSTD_00001	0.4 mL	Toxaphene Peak 1	50 ug/mL
							Toxaphene Peak 2	50 ug/mL
							Toxaphene Peak 3	50 ug/mL
							Toxaphene Peak 4	50 ug/mL
..GCTOXSTDSTD_00001	11/30/16		RESTEK, Lot A090203		(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
GCTOXLEVEL3_00007	11/30/16	09/12/16	Hexane, Lot 127386	40 mL	GCTOXINTERSTD_00003	0.8 mL	Toxaphene Peak 1	1 ug/mL
							Toxaphene Peak 2	1 ug/mL
							Toxaphene Peak 3	1 ug/mL
							Toxaphene Peak 4	1 ug/mL
.GCTOXINTERSTD_00003	11/30/16	09/12/16	Hexane, Lot 127386	40 mL	GCTOXSTDSTD_00001	0.4 mL	Toxaphene Peak 1	50 ug/mL
							Toxaphene Peak 2	50 ug/mL
							Toxaphene Peak 3	50 ug/mL
							Toxaphene Peak 4	50 ug/mL
..GCTOXSTDSTD_00001	11/30/16		RESTEK, Lot A090203		(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
GCTOXLEVEL3_00008	12/14/16	09/12/16	Hexane, Lot 127386	40 mL	GCTOXINTERSTD_00003	0.8 mL	Toxaphene	1 ug/mL
.GCTOXINTERSTD_00003	11/30/16	09/12/16	Hexane, Lot 127386	40 mL	GCTOXSTDSTD_00001	0.4 mL	Toxaphene	50 ug/mL
..GCTOXSTDSTD_00001	11/30/16		RESTEK, Lot A090203		(Purchased Reagent)		Toxaphene	5000 ug/mL
GCTOXLEVEL4_00003	11/30/16	09/12/16	Hexane, Lot 1273286	20 mL	GCTOXINTERSTD_00003	1 mL	Toxaphene Peak 1	2.5 ug/mL
							Toxaphene Peak 2	2.5 ug/mL
							Toxaphene Peak 3	2.5 ug/mL
							Toxaphene Peak 4	2.5 ug/mL
.GCTOXINTERSTD_00003	11/30/16	09/12/16	Hexane, Lot 127386	40 mL	GCTOXSTDSTD_00001	0.4 mL	Toxaphene Peak 1	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Toxaphene Peak 2	50 ug/mL
							Toxaphene Peak 3	50 ug/mL
							Toxaphene Peak 4	50 ug/mL
..GCTOXSTDSTD_00001	11/30/16		RESTEK, Lot A090203		(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
GCTOXLEVEL5_00005	11/30/16	09/12/16	Hexane, Lot 127386	20 mL	GCTOXINTERSTD_00003	2 mL	Toxaphene Peak 1	5 ug/mL
							Toxaphene Peak 2	5 ug/mL
							Toxaphene Peak 3	5 ug/mL
							Toxaphene Peak 4	5 ug/mL
.GCTOXINTERSTD_00003	11/30/16	09/12/16	Hexane, Lot 127386	40 mL	GCTOXSTDSTD_00001	0.4 mL	Toxaphene Peak 1	50 ug/mL
							Toxaphene Peak 2	50 ug/mL
							Toxaphene Peak 3	50 ug/mL
							Toxaphene Peak 4	50 ug/mL
..GCTOXSTDSTD_00001	11/30/16		RESTEK, Lot A090203		(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
Herb(RTS)spk_00006	07/31/17		restek, Lot A0116679		(Purchased Reagent)		2,4,5-T	5 ug/mL
							2,4-D	20 ug/mL
							2,4-DB	20 ug/mL
							Dalapon	20 ug/mL
							Dicamba	10 ug/mL
							Dichlorprop	20 ug/mL
							Dinoseb	20 ug/mL
							MCPA	2000 ug/mL
							MCPP	2000 ug/mL
							Pentachlorophenol	5 ug/mL
							Silvex (2,4,5-TP)	5 ug/mL
MCCV1X_00093	02/07/17	11/07/16	2% Nitric Acid, Lot 1241747	500 mL	MCALSPECAREV_00007	10 mL	Aluminum	0.5 ppm
							Arsenic	0.1 ppm
							Barium	0.1 ppm
							Beryllium	0.1 ppm
							Cadmium	0.1 ppm
							Chromium	0.1 ppm
							Cobalt	0.1 ppm
							Copper	0.1 ppm
							Lead	0.1 ppm
							Manganese	0.5 ppm
							Nickel	0.1 ppm
							Selenium	0.1 ppm
							Silver	0.1 ppm
							Thallium	0.1 ppm
							Vanadium	0.1 ppm
							Zinc	0.1 ppm

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MCALSPECB_00009	10 mL	Antimony	0.1 ppm
							Boron	0.1 ppm
.MCALSPECAREV_00007	03/01/17	Inorganic Ventures, Lot J2-MEB575123			(Purchased Reagent)		Aluminum	25 ppm
							Arsenic	5 ppm
							Barium	5 ppm
							Beryllium	5 ppm
							Cadmium	5 ppm
							Chromium	5 ppm
							Cobalt	5 ppm
							Copper	5 ppm
							Lead	5 ppm
							Manganese	25 ppm
							Nickel	5 ppm
							Selenium	5 ppm
							Silver	5 ppm
							Thallium	5 ppm
							Vanadium	5 ppm
							Zinc	5 ppm
.MCALSPECB_00009	03/01/17	Inorganic Ventures, Lot J2-MEB575124			(Purchased Reagent)		Antimony	5 ppm
							Boron	5 ppm
MCRIX_00087	02/07/17	11/07/16	HNO3, Lot 1191081	250 mL	MMSCRI-1B_00006	1 mL	Aluminum	0.03 ppm
							Arsenic	0.001 ppm
							Barium	0.01 ppm
							Beryllium	0.001 ppm
							Cadmium	0.001 ppm
							Chromium	0.002 ppm
							Cobalt	0.0005 ppm
							Copper	0.002 ppm
							Lead	0.001 ppm
							Manganese	0.005 ppm
							Nickel	0.001 ppm
							Selenium	0.005 ppm
							Silver	0.001 ppm
							Thallium	0.001 ppm
							Vanadium	0.001 ppm
							Zinc	0.005 ppm
					MMSCRI-2_00008	1 mL	Antimony	0.002 ppm
							Boron	0.02 ppm
.MMSCRI-1B_00006	04/04/19	Inorganic Ventures, Lot J2-MEB628079			(Purchased Reagent)		Aluminum	7.5 ppm
							Arsenic	0.25 ppm
							Barium	2.5 ppm
							Beryllium	0.25 ppm
							Cadmium	0.25 ppm
							Chromium	0.5 ppm
							Cobalt	0.125 ppm
							Copper	0.5 ppm
							Lead	0.25 ppm

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Manganese	1.25 ppm
							Nickel	0.25 ppm
							Selenium	1.25 ppm
							Silver	0.25 ppm
							Thallium	0.25 ppm
							Vanadium	0.25 ppm
							Zinc	1.25 ppm
.MMSCRI-2_00008	04/04/19	Inorganic Ventures, Lot J2-MEB628080			(Purchased Reagent)		Antimony	0.5 ppm
							Boron	5 ppm
MHgworkingCal_01435	12/02/16	12/01/16	2% Nitric Acid, Lot 0000148204	100 mL	MHgIntcal_00504	1 mL	Mercury	100 ppb
.MHgIntcal_00504	12/02/16	12/01/16	2% Nitric Acid, Lot 0000148204	100 mL	MCGHG1-1_00011	1 mL	Mercury	10 ppm
..MCGHG1-1_00011	12/29/18	Inorganic Ventures, Lot J2-HG02140			(Purchased Reagent)		Mercury	1000 ppm
MHgWorkingicv_01402	12/02/16	12/01/16	2% Nitric Acid, Lot 0000148204	100 mL	MHgIntICV_00487	1 mL	Mercury	100 ppb
.MHgIntICV_00487	12/02/16	12/01/16	2% Nitric Acid, Lot 0000148204	100 mL	MHGICV-1_00007	1 mL	Mercury	10 ppm
..MHGICV-1_00007	06/30/21	ULTRA SCIENTIFIC, Lot T00602			(Purchased Reagent)		Mercury	1000 ppm
MICSABX_00089	02/07/17	11/07/16	2% Nitric Acid, Lot J38N82	100 mL	M6020ICS-0A_00006	10 mL	Aluminum	100 ppm
							Ca	100 ppm
							Fe	100 ppm
							K	100 ppm
							Mg	100 ppm
							Mo	2 ppm
							Na	100 ppm
							Ti	2 ppm
					M6020ICS-0B_00007	1 mL	Arsenic	0.02 ppm
							Cadmium	0.02 ppm
							Chromium	0.02 ppm
							Cobalt	0.02 ppm
							Copper	0.02 ppm
							Manganese	0.022 ppm
							Nickel	0.02 ppm
							Silver	0.02 ppm
							Zinc	0.025 ppm
					MMSICSAB-1_00009	0.2 mL	Barium	0.02 ppm
							Beryllium	0.02 ppm
							Lead	0.02 ppm
							Sr	0.025 ppm
							Thallium	0.02 ppm
							Vanadium	0.02 ppm
					MMSICSAB-2_00008	0.2 mL	Antimony	0.02 ppm
							Boron	0.05 ppm
							Selenium	0.05 ppm
							Si	0.5 ppm

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Sn	0.1 ppm
.M6020ICS-0A_00006	01/26/18	Inorganic Ventures, Lot J2-MEB533111			(Purchased Reagent)		Aluminum	1000 ppm
							Ca	1000 ppm
							Fe	1000 ppm
							K	1000 ppm
							Mg	1000 ppm
							Mo	20 ppm
							Na	1000 ppm
							Ti	20 ppm
.M6020ICS-0B_00007	01/26/18	Inorganic Ventures, Lot J2-MEB569107			(Purchased Reagent)		Arsenic	2 ppm
							Cadmium	2 ppm
							Chromium	2 ppm
							Cobalt	2 ppm
							Copper	2 ppm
							Manganese	2.2 ppm
							Nickel	2 ppm
							Silver	2 ppm
							Zinc	2.5 ppm
.MMSICSAB-1_00009	05/01/17	Inorganic Ventures, Lot J2-MEB575125			(Purchased Reagent)		Barium	10 ppm
							Beryllium	10 ppm
							Lead	10 ppm
							Sr	12.5 ppm
							Thallium	10 ppm
							Vanadium	10 ppm
.MMSICSAB-2_00008	05/01/17	Inorganic Ventures, Lot J2-MEB575126			(Purchased Reagent)		Antimony	10 ppm
							Boron	25 ppm
							Selenium	25 ppm
							Si	250 ppm
							Sn	50 ppm
MICSAX_00087	02/07/17	11/07/16	DI Water, Lot J38N82	100 mL	M6020ICS-0A_00006	10 mL	Aluminum	100 ppm
							Ca	100 ppm
							Fe	100 ppm
							K	100 ppm
							Mg	100 ppm
							Mo	2 ppm
							Na	100 ppm
							Ti	2 ppm
.M6020ICS-0A_00006	01/26/18	Inorganic Ventures, Lot J2-MEB533111			(Purchased Reagent)		Aluminum	1000 ppm
							Ca	1000 ppm
							Fe	1000 ppm
							K	1000 ppm
							Mg	1000 ppm
							Mo	20 ppm
							Na	1000 ppm
							Ti	20 ppm
MICVX_00050	12/31/16	11/07/16	2% Nitric Acid, Lot 25106	250 mg/L	MICPMSICV_00019	10 mg/L	Aluminum	0.4 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Antimony	0.08 mg/L
							Arsenic	0.08 mg/L
							Barium	0.08 mg/L
							Beryllium	0.08 mg/L
							Boron	0.08 mg/L
							Cadmium	0.08 mg/L
							Chromium	0.08 mg/L
							Cobalt	0.08 mg/L
							Copper	0.08 mg/L
							Lead	0.08 mg/L
							Manganese	0.4 mg/L
							Nickel	0.08 mg/L
							Selenium	0.08 mg/L
							Silver	0.08 mg/L
							Thallium	0.08 mg/L
							Vanadium	0.08 mg/L
							Zinc	0.08 mg/L
.MICPMSICV_00019	12/31/16	SPEX CertiPrep, Lot 10-166WL			(Purchased Reagent)		Aluminum	10 ppm
							Antimony	2 ppm
							Arsenic	2 ppm
							Barium	2 ppm
							Beryllium	2 ppm
							Boron	2 ppm
							Cadmium	2 ppm
							Chromium	2 ppm
							Cobalt	2 ppm
							Copper	2 ppm
							Lead	2 ppm
							Manganese	10 ppm
							Nickel	2 ppm
							Selenium	2 ppm
							Silver	2 ppm
							Thallium	2 ppm
							Vanadium	2 ppm
							Zinc	2 ppm
MSTD2X_00064	02/17/17	11/17/16	DI Water, Lot 1241717	250 mL	MCALSPECAREV_00007	10 mg/L	Aluminum	1 ppm
							Arsenic	0.2 ppm
							Barium	0.2 ppm
							Beryllium	0.2 ppm
							Cadmium	0.2 ppm
							Chromium	0.2 ppm
							Cobalt	0.2 ppm
							Copper	0.2 ppm
							Lead	0.2 ppm
							Manganese	1 ppm
							Nickel	0.2 ppm
							Selenium	0.2 ppm

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Silver	0.2 ppm
							Thallium	0.2 ppm
							Vanadium	0.2 ppm
							Zinc	0.2 ppm
.MCALSPECAREV_00007	03/01/17	Inorganic Ventures, Lot J2-MEB575123			(Purchased Reagent)		Aluminum	25 ppm
							Arsenic	5 ppm
							Barium	5 ppm
							Beryllium	5 ppm
							Cadmium	5 ppm
							Chromium	5 ppm
							Cobalt	5 ppm
							Copper	5 ppm
							Lead	5 ppm
							Manganese	25 ppm
							Nickel	5 ppm
							Selenium	5 ppm
							Silver	5 ppm
							Thallium	5 ppm
							Vanadium	5 ppm
							Zinc	5 ppm
MSTD3X_00064	02/17/17	11/17/16	2% Nitric Acid, Lot 1241747	250 mL	MCALSPECB_00009	10 mg/L	Antimony	0.2 ppm
							Boron	0.2 ppm
.MCALSPECB_00009	03/01/17	Inorganic Ventures, Lot J2-MEB575124			(Purchased Reagent)		Antimony	5 ppm
							Boron	5 ppm
MTAPITTICPMS_00023	01/01/17	INORGANIC VENTURES, Lot H2-MEB532047			(Purchased Reagent)		Aluminum	200 ug/mL
							Arsenic	4 ug/mL
							Barium	200 ug/mL
							Beryllium	5 ug/mL
							Boron	100 ug/mL
							Cadmium	5 ug/mL
							Chromium	20 ug/mL
							Cobalt	50 ug/mL
							Copper	25 ug/mL
							Lead	2 ug/mL
							Manganese	50 ug/mL
							Nickel	50 ug/mL
							Selenium	1 ug/mL
							Silver	5 ug/mL
							Thallium	5 ug/mL
							Vanadium	50 ug/mL
							Zinc	50 ug/mL
MTAPITTICPMS_00025	09/01/17	INORGANIC VENTURES, Lot H2-MEB532047			(Purchased Reagent)		Aluminum	200 ug/mL
							Arsenic	4 ug/mL
							Barium	200 ug/mL
							Beryllium	5 ug/mL
							Boron	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Cadmium	5 ug/mL
							Chromium	20 ug/mL
							Cobalt	50 ug/mL
							Copper	25 ug/mL
							Fe	100 ug/mL
							Lead	2 ug/mL
							Manganese	50 ug/mL
							Nickel	50 ug/mL
							Selenium	1 ug/mL
							Silver	5 ug/mL
							Sr	100 ug/mL
							Thallium	5 ug/mL
							Vanadium	50 ug/mL
							Zinc	50 ug/mL
MTAPITTMSA_00032	09/01/17	INORGANIC VENTURES, Lot J2-MEB608140			(Purchased Reagent)		Ca	5000 ug/mL
							K	5000 ug/mL
							Mg	5000 ug/mL
							Na	5000 ug/mL
MTAPITTMSC_00037	08/01/17	Inorganic Ventures, Lot J2-MEB608141			(Purchased Reagent)		Antimony	50 ug/mL
MTAPITTMSC_00038	08/01/17	Inorganic Ventures, Lot J2-MEB608141			(Purchased Reagent)		Antimony	50 ug/mL
							Mo	100 ug/mL
							Si	1000 ug/mL
							SiO2	2140 ug/mL
							Sn	200 ug/mL
							Ti	100 ug/mL
OP/PESTPCBRTS_00006	12/31/16	RESTEK, Lot A0100267			(Purchased Reagent)		DCB Decachlorobiphenyl	0.2 ug/mL
							DCB Decachlorobiphenyl (Surr)	0.2 ug/mL
							Tetrachloro-m-xylene	0.2 ug/mL
OPHERBRTSSURR_00006	05/31/17	RESTEK, Lot A0115101			(Purchased Reagent)		2,4-Dichlorophenylacetic acid	10 ug/mL
OPLVISPKMIX1i_00054	04/29/17	10/29/16	Methanol, Lot 0000082533	250 mL	SVLVstd1_00041	50 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	200 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,2'-oxybis[1-chloropropane]	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachloroethane	200 ug/mL
							Hexadecane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							Methyl Phenols,Total	400 ug/mL
							Methylphenol, 3 & 4	200 ug/mL
							n-Decane	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							n-Octadecane	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	200 ug/mL
							Total Cresols	400 ug/mL
					SVLVstd10_00006	25 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SVLVstd11_00006	25 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SVLVstd9_00006	25 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
.SVLVstd1_00041	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							Methyl Phenols,Total	2000 ug/mL
							Methylphenol, 3 & 4	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
							Total Cresols	2000 ug/mL
.SVLVstd10_00006	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.SVLVstd11_00006	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
.SVLVstd9_00006	09/30/17		Restek, Lot A0118008		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
OPPESTMATRIX_00019	02/26/17	08/26/16	ACETONE, Lot 1078945	200 mL	GCPESTAB3STD_00001	0.1 mL	4,4'-DDD	1 ug/mL
							4,4'-DDE	1 ug/mL
							4,4'-DDT	1 ug/mL
							Aldrin	1 ug/mL
							alpha-BHC	1 ug/mL
							beta-BHC	1 ug/mL
							cis-Chlordane	1 ug/mL
							delta-BHC	1 ug/mL
							Dieldrin	1 ug/mL
							Endosulfan I	1 ug/mL
							Endosulfan II	1 ug/mL
							Endosulfan sulfate	1 ug/mL
							Endrin	1 ug/mL
							Endrin aldehyde	1 ug/mL
							Endrin ketone	1 ug/mL
							gamma-BHC (Lindane)	1 ug/mL
							Heptachlor	1 ug/mL
							Heptachlor epoxide	1 ug/mL
							Methoxychlor	1 ug/mL
							trans-Chlordane	1 ug/mL
.GCPESTAB3STD_00001	02/28/17		RESTEK, Lot A093456		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							beta-BHC	2000 ug/mL
							cis-Chlordane	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
							trans-Chlordane	2000 ug/mL
OPQL8270SURi_00049	04/24/17	10/24/16	Methanol, Lot b#00000147462	500 mL	SVLVSURSPK_00002	20 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14 (Surr)	200 ug/mL
.SVLVSURSPK_00002	08/31/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SVTAPITINTRNi_00012	09/15/17	09/15/16	MeCl2, Lot 2022771	25 mL	SVLVIntstd_00004	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
.SVLVIntstd_00004	02/28/18		Restek, Lot A093676		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
SVTAPSTD0.38i_00001	03/14/17	09/24/16	MeCl2, Lot 2022771	1 mL	SVTAPITINTRNi_00012	10 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SVTAPITSTCKi_00015	4.75 uL	Benzo[e]pyrene	0.19 ug/mL
							2,3,5,6-Tetrachlorophenol	0.19 ug/mL
							2-Naphthylamine	0.19 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							7,12-Dimethylbenz(a)anthracene	0.19 ug/mL
							1,1'-Biphenyl	0.19 ug/mL
							1,2,4,5-Tetrachlorobenzene	0.19 ug/mL
							1,2,4-Trichlorobenzene	0.19 ug/mL
							1,2-Dichlorobenzene	0.19 ug/mL
							1,2-Diphenylhydrazine	0.19 ug/mL
							1,3-Dichlorobenzene	0.19 ug/mL
							1,3-Dinitrobenzene	0.19 ug/mL
							1,4-Dichlorobenzene	0.19 ug/mL
							1,4-Dioxane	0.19 ug/mL
							1-Methylnaphthalene	0.19 ug/mL
							2,2'-oxybis[1-chloropropane]	0.19 ug/mL
							2,3,4,6-Tetrachlorophenol	0.19 ug/mL
							2,4,5-Trichlorophenol	0.19 ug/mL
							2,4,6-Trichlorophenol	0.19 ug/mL
							2,4-Dichlorophenol	0.19 ug/mL
							2,4-Dimethylphenol	0.19 ug/mL
							2,4-Dinitrophenol	0.38 ug/mL
							2,4-Dinitrotoluene	0.19 ug/mL
							2,6-Dichlorophenol	0.19 ug/mL
							2,6-Dinitrotoluene	0.19 ug/mL
							2-Chloronaphthalene	0.19 ug/mL
							2-Chlorophenol	0.19 ug/mL
							2-Methylnaphthalene	0.19 ug/mL
							2-Methylphenol	0.19 ug/mL
							2-Nitroaniline	0.19 ug/mL
							2-Nitrophenol	0.19 ug/mL
							3-Nitroaniline	0.19 ug/mL
							4,6-Dinitro-2-methylphenol	0.38 ug/mL
							4-Bromophenyl phenyl ether	0.19 ug/mL
							4-Chloro-3-methylphenol	0.19 ug/mL
							4-Chloroaniline	0.19 ug/mL
							4-Chlorophenyl phenyl ether	0.19 ug/mL
							4-Nitroaniline	0.19 ug/mL
							4-Nitrophenol	0.38 ug/mL
							Acenaphthene	0.19 ug/mL
							Acenaphthylene	0.19 ug/mL
							Acetophenone	0.19 ug/mL
							Aniline	0.19 ug/mL
							Anthracene	0.19 ug/mL
							Benzo[a]anthracene	0.19 ug/mL
							Benzo[a]pyrene	0.19 ug/mL
							Benzo[b]fluoranthene	0.19 ug/mL
							Benzo[g,h,i]perylene	0.19 ug/mL
							Benzo[k]fluoranthene	0.19 ug/mL
							Benzyl alcohol	0.19 ug/mL
							Bis(2-chloroethoxy)methane	0.19 ug/mL
							Bis(2-chloroethyl)ether	0.19 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-ethylhexyl) phthalate	0.19 ug/mL
							Butyl benzyl phthalate	0.19 ug/mL
							Carbazole	0.19 ug/mL
							Chrysene	0.19 ug/mL
							Di-n-butyl phthalate	0.19 ug/mL
							Di-n-octyl phthalate	0.19 ug/mL
							Dibenz(a,h)anthracene	0.19 ug/mL
							Dibenzofuran	0.19 ug/mL
							Diethyl phthalate	0.19 ug/mL
							Dimethyl phthalate	0.19 ug/mL
							Fluoranthene	0.19 ug/mL
							Fluorene	0.19 ug/mL
							Hexachlorobenzene	0.19 ug/mL
							Hexachlorobutadiene	0.19 ug/mL
							Hexachlorocyclopentadiene	0.19 ug/mL
							Hexachloroethane	0.19 ug/mL
							Hexadecane	0.19 ug/mL
							Indeno[1,2,3-cd]pyrene	0.19 ug/mL
							Isophorone	0.19 ug/mL
							Methylphenol, 3 & 4	0.19 ug/mL
							n-Decane	0.19 ug/mL
							N-Nitrosodi-n-propylamine	0.19 ug/mL
							N-Nitrosodimethylamine	0.19 ug/mL
							N-Nitrosodiphenylamine	0.19 ug/mL
							n-Octadecane	0.19 ug/mL
							Naphthalene	0.19 ug/mL
							Nitrobenzene	0.19 ug/mL
							Pentachlorophenol	0.38 ug/mL
							Phenanthrene	0.19 ug/mL
							Phenol	0.19 ug/mL
							Pyrene	0.19 ug/mL
							Pyridine	0.19 ug/mL
							Benzoic acid	0.19 ug/mL
							Indene	0.19 ug/mL
							Atrazine	0.19 ug/mL
							Benzaldehyde	0.19 ug/mL
							Caprolactam	0.19 ug/mL
							3,3'-Dichlorobenzidine	0.19 ug/mL
							Benzidine	0.19 ug/mL
							2,4,6-Tribromophenol (Surr)	0.19 ug/mL
							2-Fluorobiphenyl	0.19 ug/mL
							2-Fluorophenol (Surr)	0.19 ug/mL
							Nitrobenzene-d5 (Surr)	0.19 ug/mL
							Phenol-d5 (Surr)	0.19 ug/mL
							Terphenyl-d14 (Surr)	0.19 ug/mL
							Methyl methanesulfonate	0.19 ug/mL
							N-Nitrosopyrrolidine	0.19 ug/mL
.SVTAPITINTRNi_00012	09/15/17	09/15/16	MeCl2, Lot 2022771	25 mL	SVLVIntstd_00004	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..SVLVIntstd_00004	02/28/18		Restek, Lot A093676		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SVTAPITSTCKi_00015	03/24/17	09/24/16	MeCl2, Lot 2022771	20 mL	sv benzoepyre_00003	800 uL	Benzo[e]pyrene	40 ug/mL
					SV2356TCPs_00003	800 uL	2,3,5,6-Tetrachlorophenol	40 ug/mL
					SV2NAPAMINEs_00004	800 uL	2-Naphthylamine	40 ug/mL
					sv712dimbenza_00011	800 uL	7,12-Dimethylbenz(a)anthracene	40 ug/mL
					SVLVstd1_00041	800 uL	1,1'-Biphenyl	40 ug/mL
							1,2,4,5-Tetrachlorobenzene	40 ug/mL
							1,2,4-Trichlorobenzene	40 ug/mL
							1,2-Dichlorobenzene	40 ug/mL
							1,2-Diphenylhydrazine	40 ug/mL
							1,3-Dichlorobenzene	40 ug/mL
							1,3-Dinitrobenzene	40 ug/mL
							1,4-Dichlorobenzene	40 ug/mL
							1,4-Dioxane	40 ug/mL
							1-Methylnaphthalene	40 ug/mL
							2,2'-oxybis[1-chloropropane]	40 ug/mL
							2,3,4,6-Tetrachlorophenol	40 ug/mL
							2,4,5-Trichlorophenol	40 ug/mL
							2,4,6-Trichlorophenol	40 ug/mL
							2,4-Dichlorophenol	40 ug/mL
							2,4-Dimethylphenol	40 ug/mL
							2,4-Dinitrophenol	80 ug/mL
							2,4-Dinitrotoluene	40 ug/mL
							2,6-Dichlorophenol	40 ug/mL
							2,6-Dinitrotoluene	40 ug/mL
							2-Chloronaphthalene	40 ug/mL
							2-Chlorophenol	40 ug/mL
							2-Methylnaphthalene	40 ug/mL
							2-Methylphenol	40 ug/mL
							2-Nitroaniline	40 ug/mL
							2-Nitrophenol	40 ug/mL
							3-Nitroaniline	40 ug/mL
							4,6-Dinitro-2-methylphenol	80 ug/mL
							4-Bromophenyl phenyl ether	40 ug/mL
							4-Chloro-3-methylphenol	40 ug/mL
							4-Chloroaniline	40 ug/mL
							4-Chlorophenyl phenyl ether	40 ug/mL
							4-Nitroaniline	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitrophenol	80 ug/mL
							Acenaphthene	40 ug/mL
							Acenaphthylene	40 ug/mL
							Acetophenone	40 ug/mL
							Aniline	40 ug/mL
							Anthracene	40 ug/mL
							Benzo[a]anthracene	40 ug/mL
							Benzo[a]pyrene	40 ug/mL
							Benzo[b]fluoranthene	40 ug/mL
							Benzo[g,h,i]perylene	40 ug/mL
							Benzo[k]fluoranthene	40 ug/mL
							Benzyl alcohol	40 ug/mL
							Bis(2-chloroethoxy)methane	40 ug/mL
							Bis(2-chloroethyl)ether	40 ug/mL
							Bis(2-ethylhexyl) phthalate	40 ug/mL
							Butyl benzyl phthalate	40 ug/mL
							Carbazole	40 ug/mL
							Chrysene	40 ug/mL
							Di-n-butyl phthalate	40 ug/mL
							Di-n-octyl phthalate	40 ug/mL
							Dibenz(a,h)anthracene	40 ug/mL
							Dibenzofuran	40 ug/mL
							Diethyl phthalate	40 ug/mL
							Dimethyl phthalate	40 ug/mL
							Fluoranthene	40 ug/mL
							Fluorene	40 ug/mL
							Hexachlorobenzene	40 ug/mL
							Hexachlorobutadiene	40 ug/mL
							Hexachlorocyclopentadiene	40 ug/mL
							Hexachloroethane	40 ug/mL
							Hexadecane	40 ug/mL
							Indeno[1,2,3-cd]pyrene	40 ug/mL
							Isophorone	40 ug/mL
							Methylphenol, 3 & 4	40 ug/mL
							n-Decane	40 ug/mL
							N-Nitrosodi-n-propylamine	40 ug/mL
							N-Nitrosodimethylamine	40 ug/mL
							N-Nitrosodiphenylamine	40 ug/mL
							n-Octadecane	40 ug/mL
							Naphthalene	40 ug/mL
							Nitrobenzene	40 ug/mL
							Pentachlorophenol	80 ug/mL
							Phenanthrene	40 ug/mL
							Phenol	40 ug/mL
							Pyrene	40 ug/mL
							Pyridine	40 ug/mL
					SVLVstd10_00006	400 uL	Benzoic acid	40 ug/mL
							Indene	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					SVLVstd11_00006	400 uL	Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL
					SVLVstd9_00006	400 uL	3,3'-Dichlorobenzidine	40 ug/mL
							Benzidine	40 ug/mL
					SVLVSURSPK_00002	160 uL	2,4,6-Tribromophenol (Surr)	40 ug/mL
							2-Fluorobiphenyl	40 ug/mL
							2-Fluorophenol (Surr)	40 ug/mL
							Nitrobenzene-d5 (Surr)	40 ug/mL
							Phenol-d5 (Surr)	40 ug/mL
							Terphenyl-d14 (Surr)	40 ug/mL
					svmethylmetha_00011	800 uL	Methyl methanesulfonate	40 ug/mL
					SVNNITROPYROs_00017	800 uL	N-Nitrosopyrrolidine	40 ug/mL
..sv benzoepyre_00003	03/17/20		Absolute, Lot 031715		(Purchased Reagent)		Benzo[e]pyrene	1000 ug/mL
..SV2356TCPs_00003	09/21/20		Absolute, Lot 092115		(Purchased Reagent)		2,3,5,6-Tetrachlorophenol	1000 ug/mL
..SV2NAPAMINEs_00004	06/30/17		Ultra Scientific, Lot Ck-1617		(Purchased Reagent)		2-Naphthylamine	1000 ug/mL
..sv712dimbenza_00011	04/09/20		Absolute, Lot 040915		(Purchased Reagent)		7,12-Dimethylbenz(a)anthracene	1000 ug/mL
..SVLVstd1_00041	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							Methylphenol, 3 & 4	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..SVLVstd10_00006	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SVLVstd11_00006	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SVLVstd9_00006	09/30/17		Restek, Lot A0118008		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SVLVSURSPK_00002	08/31/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..svmethylmetha_00011	02/13/20		Absolute, Lot 021315		(Purchased Reagent)		Methyl methanesulfonate	1000 ug/mL
..SVNNITROPYROs_00017	01/08/19		absolute, Lot 010816		(Purchased Reagent)		N-Nitrosopyrrolidine	1000 ug/mL
SVTAPSTD10i_00187	10/01/16	09/24/16	MeCl2, Lot 2022771	1 mL	SVTAPITINTRNi_00012	10 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SVTAPITSTCKi_00015	125 uL	Benzo[e]pyrene	5 ug/mL
							2,3,5,6-Tetrachlorophenol	5 ug/mL
							2-Naphthylamine	5 ug/mL
							7,12-Dimethylbenz(a)anthracene	5 ug/mL
							1,1'-Biphenyl	5 ug/mL
							1,2,4,5-Tetrachlorobenzene	5 ug/mL
							1,2,4-Trichlorobenzene	5 ug/mL
							1,2-Dichlorobenzene	5 ug/mL
							1,2-Diphenylhydrazine	5 ug/mL
							1,3-Dichlorobenzene	5 ug/mL
							1,3-Dinitrobenzene	5 ug/mL
							1,4-Dichlorobenzene	5 ug/mL
							1,4-Dioxane	5 ug/mL
							1-Methylnaphthalene	5 ug/mL
							2,2'-oxybis[1-chloropropane]	5 ug/mL
							2,3,4,6-Tetrachlorophenol	5 ug/mL
							2,4,5-Trichlorophenol	5 ug/mL
							2,4,6-Trichlorophenol	5 ug/mL
							2,4-Dichlorophenol	5 ug/mL
							2,4-Dimethylphenol	5 ug/mL
							2,4-Dinitrophenol	10 ug/mL
							2,4-Dinitrotoluene	5 ug/mL
							2,6-Dichlorophenol	5 ug/mL
							2,6-Dinitrotoluene	5 ug/mL
							2-Chloronaphthalene	5 ug/mL
							2-Chlorophenol	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methylnaphthalene	5 ug/mL
							2-Methylphenol	5 ug/mL
							2-Nitroaniline	5 ug/mL
							2-Nitrophenol	5 ug/mL
							3-Nitroaniline	5 ug/mL
							4,6-Dinitro-2-methylphenol	10 ug/mL
							4-Bromophenyl phenyl ether	5 ug/mL
							4-Chloro-3-methylphenol	5 ug/mL
							4-Chloroaniline	5 ug/mL
							4-Chlorophenyl phenyl ether	5 ug/mL
							4-Nitroaniline	5 ug/mL
							4-Nitrophenol	10 ug/mL
							Acenaphthene	5 ug/mL
							Acenaphthylene	5 ug/mL
							Acetophenone	5 ug/mL
							Aniline	5 ug/mL
							Anthracene	5 ug/mL
							Benzo[a]anthracene	5 ug/mL
							Benzo[a]pyrene	5 ug/mL
							Benzo[b]fluoranthene	5 ug/mL
							Benzo[g,h,i]perylene	5 ug/mL
							Benzo[k]fluoranthene	5 ug/mL
							Benzyl alcohol	5 ug/mL
							Bis(2-chloroethoxy)methane	5 ug/mL
							Bis(2-chloroethyl)ether	5 ug/mL
							Bis(2-ethylhexyl) phthalate	5 ug/mL
							Butyl benzyl phthalate	5 ug/mL
							Carbazole	5 ug/mL
							Chrysene	5 ug/mL
							Di-n-butyl phthalate	5 ug/mL
							Di-n-octyl phthalate	5 ug/mL
							Dibenz(a,h)anthracene	5 ug/mL
							Dibenzofuran	5 ug/mL
							Diethyl phthalate	5 ug/mL
							Dimethyl phthalate	5 ug/mL
							Fluoranthene	5 ug/mL
							Fluorene	5 ug/mL
							Hexachlorobenzene	5 ug/mL
							Hexachlorobutadiene	5 ug/mL
							Hexachlorocyclopentadiene	5 ug/mL
							Hexachloroethane	5 ug/mL
							Hexadecane	5 ug/mL
							Indeno[1,2,3-cd]pyrene	5 ug/mL
							Isophorone	5 ug/mL
							Methylphenol, 3 & 4	5 ug/mL
							n-Decane	5 ug/mL
							N-Nitrosodi-n-propylamine	5 ug/mL
							N-Nitrosodimethylamine	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodiphenylamine	5 ug/mL
							n-Octadecane	5 ug/mL
							Naphthalene	5 ug/mL
							Nitrobenzene	5 ug/mL
							Pentachlorophenol	10 ug/mL
							Phenanthrene	5 ug/mL
							Phenol	5 ug/mL
							Pyrene	5 ug/mL
							Pyridine	5 ug/mL
							Benzoic acid	5 ug/mL
							Indene	5 ug/mL
							Atrazine	5 ug/mL
							Benzaldehyde	5 ug/mL
							Caprolactam	5 ug/mL
							3,3'-Dichlorobenzidine	5 ug/mL
							Benzidine	5 ug/mL
							2,4,6-Tribromophenol (Surr)	5 ug/mL
							2-Fluorobiphenyl	5 ug/mL
							2-Fluorophenol (Surr)	5 ug/mL
							Nitrobenzene-d5 (Surr)	5 ug/mL
							Phenol-d5 (Surr)	5 ug/mL
							Terphenyl-d14 (Surr)	5 ug/mL
							Methyl methanesulfonate	5 ug/mL
							N-Nitrosopyrrolidine	5 ug/mL
.SVTAPITINTRNi_00012	09/15/17	09/15/16	MeCl2, Lot 2022771	25 mL	SVLVIntstd_00004	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..SVLVIntstd_00004	02/28/18	Restek, Lot A093676			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SVTAPITSTCKi_00015	03/24/17	09/24/16	MeCl2, Lot 2022771	20 mL	sv benzoepyre_00003	800 uL	Benzo[e]pyrene	40 ug/mL
					SV2356TCPs_00003	800 uL	2,3,5,6-Tetrachlorophenol	40 ug/mL
					SV2NAPAMINEs_00004	800 uL	2-Naphthylamine	40 ug/mL
					sv712dimbenza_00011	800 uL	7,12-Dimethylbenz(a)anthracene	40 ug/mL
					SVLVstd1_00041	800 uL	1,1'-Biphenyl	40 ug/mL
							1,2,4,5-Tetrachlorobenzene	40 ug/mL
							1,2,4-Trichlorobenzene	40 ug/mL
							1,2-Dichlorobenzene	40 ug/mL
							1,2-Diphenylhydrazine	40 ug/mL
							1,3-Dichlorobenzene	40 ug/mL
							1,3-Dinitrobenzene	40 ug/mL
							1,4-Dichlorobenzene	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dioxane	40 ug/mL
							1-Methylnaphthalene	40 ug/mL
							2,2'-oxybis[1-chloropropane]	40 ug/mL
							2,3,4,6-Tetrachlorophenol	40 ug/mL
							2,4,5-Trichlorophenol	40 ug/mL
							2,4,6-Trichlorophenol	40 ug/mL
							2,4-Dichlorophenol	40 ug/mL
							2,4-Dimethylphenol	40 ug/mL
							2,4-Dinitrophenol	80 ug/mL
							2,4-Dinitrotoluene	40 ug/mL
							2,6-Dichlorophenol	40 ug/mL
							2,6-Dinitrotoluene	40 ug/mL
							2-Chloronaphthalene	40 ug/mL
							2-Chlorophenol	40 ug/mL
							2-Methylnaphthalene	40 ug/mL
							2-Methylphenol	40 ug/mL
							2-Nitroaniline	40 ug/mL
							2-Nitrophenol	40 ug/mL
							3-Nitroaniline	40 ug/mL
							4,6-Dinitro-2-methylphenol	80 ug/mL
							4-Bromophenyl phenyl ether	40 ug/mL
							4-Chloro-3-methylphenol	40 ug/mL
							4-Chloroaniline	40 ug/mL
							4-Chlorophenyl phenyl ether	40 ug/mL
							4-Nitroaniline	40 ug/mL
							4-Nitrophenol	80 ug/mL
							Acenaphthene	40 ug/mL
							Acenaphthylene	40 ug/mL
							Acetophenone	40 ug/mL
							Aniline	40 ug/mL
							Anthracene	40 ug/mL
							Benzo[a]anthracene	40 ug/mL
							Benzo[a]pyrene	40 ug/mL
							Benzo[b]fluoranthene	40 ug/mL
							Benzo[g,h,i]perylene	40 ug/mL
							Benzo[k]fluoranthene	40 ug/mL
							Benzyl alcohol	40 ug/mL
							Bis(2-chloroethoxy)methane	40 ug/mL
							Bis(2-chloroethyl)ether	40 ug/mL
							Bis(2-ethylhexyl) phthalate	40 ug/mL
							Butyl benzyl phthalate	40 ug/mL
							Carbazole	40 ug/mL
							Chrysene	40 ug/mL
							Di-n-butyl phthalate	40 ug/mL
							Di-n-octyl phthalate	40 ug/mL
							Dibenz(a,h)anthracene	40 ug/mL
							Dibenzofuran	40 ug/mL
							Diethyl phthalate	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dimethyl phthalate	40 ug/mL
							Fluoranthene	40 ug/mL
							Fluorene	40 ug/mL
							Hexachlorobenzene	40 ug/mL
							Hexachlorobutadiene	40 ug/mL
							Hexachlorocyclopentadiene	40 ug/mL
							Hexachloroethane	40 ug/mL
							Hexadecane	40 ug/mL
							Indeno[1,2,3-cd]pyrene	40 ug/mL
							Isophorone	40 ug/mL
							Methylphenol, 3 & 4	40 ug/mL
							n-Decane	40 ug/mL
							N-Nitrosodi-n-propylamine	40 ug/mL
							N-Nitrosodimethylamine	40 ug/mL
							N-Nitrosodiphenylamine	40 ug/mL
							n-Octadecane	40 ug/mL
							Naphthalene	40 ug/mL
							Nitrobenzene	40 ug/mL
							Pentachlorophenol	80 ug/mL
							Phenanthrene	40 ug/mL
							Phenol	40 ug/mL
							Pyrene	40 ug/mL
							Pyridine	40 ug/mL
					SVLVstd10_00006	400 uL	Benzoic acid	40 ug/mL
							Indene	40 ug/mL
					SVLVstd11_00006	400 uL	Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL
					SVLVstd9_00006	400 uL	3,3'-Dichlorobenzidine	40 ug/mL
							Benzidine	40 ug/mL
					SVLVSURSPK_00002	160 uL	2,4,6-Tribromophenol (Surr)	40 ug/mL
							2-Fluorobiphenyl	40 ug/mL
							2-Fluorophenol (Surr)	40 ug/mL
							Nitrobenzene-d5 (Surr)	40 ug/mL
							Phenol-d5 (Surr)	40 ug/mL
							Terphenyl-d14 (Surr)	40 ug/mL
					svmethylmetha_00011	800 uL	Methyl methanesulfonate	40 ug/mL
					SVNNITROPYROs_00017	800 uL	N-Nitrosopyrrolidine	40 ug/mL
..sv benzoepyre_00003	03/17/20		Absolute, Lot 031715		(Purchased Reagent)		Benzo[e]pyrene	1000 ug/mL
..SV2356TCPs_00003	09/21/20		Absolute, Lot 092115		(Purchased Reagent)		2,3,5,6-Tetrachlorophenol	1000 ug/mL
..SV2NAPAMINEs_00004	06/30/17		Ultra Scientific, Lot Ck-1617		(Purchased Reagent)		2-Naphthylamine	1000 ug/mL
..sv712dimbenza_00011	04/09/20		Absolute, Lot 040915		(Purchased Reagent)		7,12-Dimethylbenz(a)anthracene	1000 ug/mL
..SVLVstd1_00041	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							Methylphenol, 3 & 4	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SVLVstd10_00006	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SVLVstd11_00006	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SVLVstd9_00006	09/30/17		Restek, Lot A0118008		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SVLVSURSPK_00002	08/31/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..svmethylmetha_00011	02/13/20		Absolute, Lot 021315		(Purchased Reagent)		Methyl methanesulfonate	1000 ug/mL
..SVNNITROPYROs_00017	01/08/19		absolute, Lot 010816		(Purchased Reagent)		N-Nitrosopyrrolidine	1000 ug/mL
SVTAPSTD10i_00197	11/25/16	11/18/16	MeCl2, Lot 2022771	1 mL	SVTAPITINTRNi_00012	10 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
.SVTAPITINTRNi_00012	09/15/17	09/15/16	MeCl2, Lot 2022771	25 mL	SVLVIntstd_00004	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..SVLVIntstd_00004	02/28/18		Restek, Lot A093676		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
SVTAPSTD10i_00197	11/25/16	11/18/16	MeCl2, Lot 2022771	1 mL	SVTAPITSTCKi_00015	125 uL	1,1'-Biphenyl	5 ug/mL
							1,2,4,5-Tetrachlorobenzene	5 ug/mL
							1,4-Dioxane	5 ug/mL
							1-Methylnaphthalene	5 ug/mL
							2,2'-oxybis[1-chloropropane]	5 ug/mL
							2,3,4,6-Tetrachlorophenol	5 ug/mL
							2,4,5-Trichlorophenol	5 ug/mL
							2,4,6-Trichlorophenol	5 ug/mL
							2,4-Dichlorophenol	5 ug/mL
							2,4-Dimethylphenol	5 ug/mL
							2,4-Dinitrophenol	10 ug/mL
							2,4-Dinitrotoluene	5 ug/mL
							2,6-Dinitrotoluene	5 ug/mL
							2-Chloronaphthalene	5 ug/mL
							2-Chlorophenol	5 ug/mL
							2-Methylnaphthalene	5 ug/mL
							2-Methylphenol	5 ug/mL
							2-Nitroaniline	5 ug/mL
							2-Nitrophenol	5 ug/mL
							3-Nitroaniline	5 ug/mL
							4,6-Dinitro-2-methylphenol	10 ug/mL
							4-Bromophenyl phenyl ether	5 ug/mL
							4-Chloro-3-methylphenol	5 ug/mL
							4-Chlorophenyl phenyl ether	5 ug/mL
							4-Nitroaniline	5 ug/mL
							4-Nitrophenol	10 ug/mL
							Acenaphthene	5 ug/mL
							Acenaphthylene	5 ug/mL
							Acetophenone	5 ug/mL
							Anthracene	5 ug/mL
							Benzo[a]anthracene	5 ug/mL
							Benzo[a]pyrene	5 ug/mL
							Benzo[b]fluoranthene	5 ug/mL
							Benzo[g,h,i]perylene	5 ug/mL
							Benzo[k]fluoranthene	5 ug/mL
							Bis(2-chloroethoxy)methane	5 ug/mL
							Bis(2-chloroethyl)ether	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-ethylhexyl) phthalate	5 ug/mL
							Butyl benzyl phthalate	5 ug/mL
							Carbazole	5 ug/mL
							Di-n-butyl phthalate	5 ug/mL
							Di-n-octyl phthalate	5 ug/mL
							Dibenz(a,h)anthracene	5 ug/mL
							Dibenzofuran	5 ug/mL
							Diethyl phthalate	5 ug/mL
							Dimethyl phthalate	5 ug/mL
							Fluoranthene	5 ug/mL
							Fluorene	5 ug/mL
							Hexachlorobenzene	5 ug/mL
							Hexachlorobutadiene	5 ug/mL
							Hexachlorocyclopentadiene	5 ug/mL
							Hexachloroethane	5 ug/mL
							Indeno[1,2,3-cd]pyrene	5 ug/mL
							Isophorone	5 ug/mL
							Methylphenol, 3 & 4	5 ug/mL
							N-Nitrosodi-n-propylamine	5 ug/mL
							N-Nitrosodiphenylamine	5 ug/mL
							Naphthalene	5 ug/mL
							Nitrobenzene	5 ug/mL
							Pentachlorophenol	10 ug/mL
							Phenanthrene	5 ug/mL
							Phenol	5 ug/mL
							Pyrene	5 ug/mL
							Atrazine	5 ug/mL
							Benzaldehyde	5 ug/mL
							Caprolactam	5 ug/mL
							3,3'-Dichlorobenzidine	5 ug/mL
							2,4,6-Tribromophenol (Surr)	5 ug/mL
							2-Fluorobiphenyl	5 ug/mL
							2-Fluorophenol (Surr)	5 ug/mL
							Nitrobenzene-d5 (Surr)	5 ug/mL
							Phenol-d5 (Surr)	5 ug/mL
							Terphenyl-d14 (Surr)	5 ug/mL
.SVTAPITSTCKi_00015	03/24/17	09/24/16	MeCl2, Lot 2022771	20 mL	SVLVstd1_00041	800 uL	1,1'-Biphenyl	40 ug/mL
							1,2,4,5-Tetrachlorobenzene	40 ug/mL
							1,4-Dioxane	40 ug/mL
							1-Methylnaphthalene	40 ug/mL
							2,2'-oxybis[1-chloropropane]	40 ug/mL
							2,3,4,6-Tetrachlorophenol	40 ug/mL
							2,4,5-Trichlorophenol	40 ug/mL
							2,4,6-Trichlorophenol	40 ug/mL
							2,4-Dichlorophenol	40 ug/mL
							2,4-Dimethylphenol	40 ug/mL
							2,4-Dinitrophenol	80 ug/mL
							2,4-Dinitrotoluene	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,6-Dinitrotoluene	40 ug/mL
							2-Chloronaphthalene	40 ug/mL
							2-Chlorophenol	40 ug/mL
							2-Methylnaphthalene	40 ug/mL
							2-Methylphenol	40 ug/mL
							2-Nitroaniline	40 ug/mL
							2-Nitrophenol	40 ug/mL
							3-Nitroaniline	40 ug/mL
							4,6-Dinitro-2-methylphenol	80 ug/mL
							4-Bromophenyl phenyl ether	40 ug/mL
							4-Chloro-3-methylphenol	40 ug/mL
							4-Chlorophenyl phenyl ether	40 ug/mL
							4-Nitroaniline	40 ug/mL
							4-Nitrophenol	80 ug/mL
							Acenaphthene	40 ug/mL
							Acenaphthylene	40 ug/mL
							Acetophenone	40 ug/mL
							Anthracene	40 ug/mL
							Benzo[a]anthracene	40 ug/mL
							Benzo[a]pyrene	40 ug/mL
							Benzo[b]fluoranthene	40 ug/mL
							Benzo[g,h,i]perylene	40 ug/mL
							Benzo[k]fluoranthene	40 ug/mL
							Bis(2-chloroethoxy)methane	40 ug/mL
							Bis(2-chloroethyl)ether	40 ug/mL
							Bis(2-ethylhexyl) phthalate	40 ug/mL
							Butyl benzyl phthalate	40 ug/mL
							Carbazole	40 ug/mL
							Di-n-butyl phthalate	40 ug/mL
							Di-n-octyl phthalate	40 ug/mL
							Dibenz(a,h)anthracene	40 ug/mL
							Dibenzofuran	40 ug/mL
							Diethyl phthalate	40 ug/mL
							Dimethyl phthalate	40 ug/mL
							Fluoranthene	40 ug/mL
							Fluorene	40 ug/mL
							Hexachlorobenzene	40 ug/mL
							Hexachlorobutadiene	40 ug/mL
							Hexachlorocyclopentadiene	40 ug/mL
							Hexachloroethane	40 ug/mL
							Indeno[1,2,3-cd]pyrene	40 ug/mL
							Isophorone	40 ug/mL
							Methylphenol, 3 & 4	40 ug/mL
							N-Nitrosodi-n-propylamine	40 ug/mL
							N-Nitrosodiphenylamine	40 ug/mL
							Naphthalene	40 ug/mL
							Nitrobenzene	40 ug/mL
							Pentachlorophenol	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene	40 ug/mL
							Phenol	40 ug/mL
							Pyrene	40 ug/mL
					SVLVstd11_00006	400 uL	Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL
					SVLVstd9_00006	400 uL	3,3'-Dichlorobenzidine	40 ug/mL
					SVLVSURSPK_00002	160 uL	2,4,6-Tribromophenol (Surr)	40 ug/mL
							2-Fluorobiphenyl	40 ug/mL
							2-Fluorophenol (Surr)	40 ug/mL
							Nitrobenzene-d5 (Surr)	40 ug/mL
							Phenol-d5 (Surr)	40 ug/mL
							Terphenyl-d14 (Surr)	40 ug/mL
..SVLVstd1_00041	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							Methylphenol, 3 & 4	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
..SVLVstd11_00006	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SVLVstd9_00006	09/30/17		Restek, Lot A0118008		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..SVLVSURSPK_00002	08/31/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SVTAPSTD2.0i_00011	03/24/17	09/14/16	MeCl2, Lot 2022771	1 mL	SVTAPITINTRNi_00012	10 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SVTAPITSTCKi_00015	25 uL	Benzo[e]pyrene	1 ug/mL
							2,3,5,6-Tetrachlorophenol	1 ug/mL
							2-Naphthylamine	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							7,12-Dimethylbenz(a)anthracene	1 ug/mL
							1,1'-Biphenyl	1 ug/mL
							1,2,4,5-Tetrachlorobenzene	1 ug/mL
							1,2,4-Trichlorobenzene	1 ug/mL
							1,2-Dichlorobenzene	1 ug/mL
							1,2-Diphenylhydrazine	1 ug/mL
							1,3-Dichlorobenzene	1 ug/mL
							1,3-Dinitrobenzene	1 ug/mL
							1,4-Dichlorobenzene	1 ug/mL
							1,4-Dioxane	1 ug/mL
							1-Methylnaphthalene	1 ug/mL
							2,2'-oxybis[1-chloropropane]	1 ug/mL
							2,3,4,6-Tetrachlorophenol	1 ug/mL
							2,4,5-Trichlorophenol	1 ug/mL
							2,4,6-Trichlorophenol	1 ug/mL
							2,4-Dichlorophenol	1 ug/mL
							2,4-Dimethylphenol	1 ug/mL
							2,4-Dinitrophenol	2 ug/mL
							2,4-Dinitrotoluene	1 ug/mL
							2,6-Dichlorophenol	1 ug/mL
							2,6-Dinitrotoluene	1 ug/mL
							2-Chloronaphthalene	1 ug/mL
							2-Chlorophenol	1 ug/mL
							2-Methylnaphthalene	1 ug/mL
							2-Methylphenol	1 ug/mL
							2-Nitroaniline	1 ug/mL
							2-Nitrophenol	1 ug/mL
							3-Nitroaniline	1 ug/mL
							4,6-Dinitro-2-methylphenol	2 ug/mL
							4-Bromophenyl phenyl ether	1 ug/mL
							4-Chloro-3-methylphenol	1 ug/mL
							4-Chloroaniline	1 ug/mL
							4-Chlorophenyl phenyl ether	1 ug/mL
							4-Nitroaniline	1 ug/mL
							4-Nitrophenol	2 ug/mL
							Acenaphthene	1 ug/mL
							Acenaphthylene	1 ug/mL
							Acetophenone	1 ug/mL
							Aniline	1 ug/mL
							Anthracene	1 ug/mL
							Benzo[a]anthracene	1 ug/mL
							Benzo[a]pyrene	1 ug/mL
							Benzo[b]fluoranthene	1 ug/mL
							Benzo[g,h,i]perylene	1 ug/mL
							Benzo[k]fluoranthene	1 ug/mL
							Benzyl alcohol	1 ug/mL
							Bis(2-chloroethoxy)methane	1 ug/mL
							Bis(2-chloroethyl)ether	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-ethylhexyl) phthalate	1 ug/mL
							Butyl benzyl phthalate	1 ug/mL
							Carbazole	1 ug/mL
							Chrysene	1 ug/mL
							Di-n-butyl phthalate	1 ug/mL
							Di-n-octyl phthalate	1 ug/mL
							Dibenz(a,h)anthracene	1 ug/mL
							Dibenzofuran	1 ug/mL
							Diethyl phthalate	1 ug/mL
							Dimethyl phthalate	1 ug/mL
							Fluoranthene	1 ug/mL
							Fluorene	1 ug/mL
							Hexachlorobenzene	1 ug/mL
							Hexachlorobutadiene	1 ug/mL
							Hexachlorocyclopentadiene	1 ug/mL
							Hexachloroethane	1 ug/mL
							Hexadecane	1 ug/mL
							Indeno[1,2,3-cd]pyrene	1 ug/mL
							Isophorone	1 ug/mL
							Methylphenol, 3 & 4	1 ug/mL
							n-Decane	1 ug/mL
							N-Nitrosodi-n-propylamine	1 ug/mL
							N-Nitrosodimethylamine	1 ug/mL
							N-Nitrosodiphenylamine	1 ug/mL
							n-Octadecane	1 ug/mL
							Naphthalene	1 ug/mL
							Nitrobenzene	1 ug/mL
							Pentachlorophenol	2 ug/mL
							Phenanthrene	1 ug/mL
							Phenol	1 ug/mL
							Pyrene	1 ug/mL
							Pyridine	1 ug/mL
							Benzoic acid	1 ug/mL
							Indene	1 ug/mL
							Atrazine	1 ug/mL
							Benzaldehyde	1 ug/mL
							Caprolactam	1 ug/mL
							3,3'-Dichlorobenzidine	1 ug/mL
							Benzidine	1 ug/mL
							2,4,6-Tribromophenol (Surr)	1 ug/mL
							2-Fluorobiphenyl	1 ug/mL
							2-Fluorophenol (Surr)	1 ug/mL
							Nitrobenzene-d5 (Surr)	1 ug/mL
							Phenol-d5 (Surr)	1 ug/mL
							Terphenyl-d14 (Surr)	1 ug/mL
							Methyl methanesulfonate	1 ug/mL
							N-Nitrosopyrrolidine	1 ug/mL
.SVTAPITINTRNi_00012	09/15/17	09/15/16	MeCl2, Lot 2022771	25 mL	SVLVIntstd_00004	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..SVLVIntstd_00004	02/28/18		Restek, Lot A093676		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SVTAPITSTCKi_00015	03/24/17	09/24/16	MeCl2, Lot 2022771	20 mL	sv benzoepyre_00003	800 uL	Benzo[e]pyrene	40 ug/mL
					SV2356TCPs_00003	800 uL	2,3,5,6-Tetrachlorophenol	40 ug/mL
					SV2NAPAMINEs_00004	800 uL	2-Naphthylamine	40 ug/mL
					sv712dimbenza_00011	800 uL	7,12-Dimethylbenz(a)anthracene	40 ug/mL
					SVLVstd1_00041	800 uL	1,1'-Biphenyl	40 ug/mL
							1,2,4,5-Tetrachlorobenzene	40 ug/mL
							1,2,4-Trichlorobenzene	40 ug/mL
							1,2-Dichlorobenzene	40 ug/mL
							1,2-Diphenylhydrazine	40 ug/mL
							1,3-Dichlorobenzene	40 ug/mL
							1,3-Dinitrobenzene	40 ug/mL
							1,4-Dichlorobenzene	40 ug/mL
							1,4-Dioxane	40 ug/mL
							1-Methylnaphthalene	40 ug/mL
							2,2'-oxybis[1-chloropropane]	40 ug/mL
							2,3,4,6-Tetrachlorophenol	40 ug/mL
							2,4,5-Trichlorophenol	40 ug/mL
							2,4,6-Trichlorophenol	40 ug/mL
							2,4-Dichlorophenol	40 ug/mL
							2,4-Dimethylphenol	40 ug/mL
							2,4-Dinitrophenol	80 ug/mL
							2,4-Dinitrotoluene	40 ug/mL
							2,6-Dichlorophenol	40 ug/mL
							2,6-Dinitrotoluene	40 ug/mL
							2-Chloronaphthalene	40 ug/mL
							2-Chlorophenol	40 ug/mL
							2-Methylnaphthalene	40 ug/mL
							2-Methylphenol	40 ug/mL
							2-Nitroaniline	40 ug/mL
							2-Nitrophenol	40 ug/mL
							3-Nitroaniline	40 ug/mL
							4,6-Dinitro-2-methylphenol	80 ug/mL
							4-Bromophenyl phenyl ether	40 ug/mL
							4-Chloro-3-methylphenol	40 ug/mL
							4-Chloroaniline	40 ug/mL
							4-Chlorophenyl phenyl ether	40 ug/mL
							4-Nitroaniline	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitrophenol	80 ug/mL
							Acenaphthene	40 ug/mL
							Acenaphthylene	40 ug/mL
							Acetophenone	40 ug/mL
							Aniline	40 ug/mL
							Anthracene	40 ug/mL
							Benzo[a]anthracene	40 ug/mL
							Benzo[a]pyrene	40 ug/mL
							Benzo[b]fluoranthene	40 ug/mL
							Benzo[g,h,i]perylene	40 ug/mL
							Benzo[k]fluoranthene	40 ug/mL
							Benzyl alcohol	40 ug/mL
							Bis(2-chloroethoxy)methane	40 ug/mL
							Bis(2-chloroethyl)ether	40 ug/mL
							Bis(2-ethylhexyl) phthalate	40 ug/mL
							Butyl benzyl phthalate	40 ug/mL
							Carbazole	40 ug/mL
							Chrysene	40 ug/mL
							Di-n-butyl phthalate	40 ug/mL
							Di-n-octyl phthalate	40 ug/mL
							Dibenz(a,h)anthracene	40 ug/mL
							Dibenzofuran	40 ug/mL
							Diethyl phthalate	40 ug/mL
							Dimethyl phthalate	40 ug/mL
							Fluoranthene	40 ug/mL
							Fluorene	40 ug/mL
							Hexachlorobenzene	40 ug/mL
							Hexachlorobutadiene	40 ug/mL
							Hexachlorocyclopentadiene	40 ug/mL
							Hexachloroethane	40 ug/mL
							Hexadecane	40 ug/mL
							Indeno[1,2,3-cd]pyrene	40 ug/mL
							Isophorone	40 ug/mL
							Methylphenol, 3 & 4	40 ug/mL
							n-Decane	40 ug/mL
							N-Nitrosodi-n-propylamine	40 ug/mL
							N-Nitrosodimethylamine	40 ug/mL
							N-Nitrosodiphenylamine	40 ug/mL
							n-Octadecane	40 ug/mL
							Naphthalene	40 ug/mL
							Nitrobenzene	40 ug/mL
							Pentachlorophenol	80 ug/mL
							Phenanthrene	40 ug/mL
							Phenol	40 ug/mL
							Pyrene	40 ug/mL
							Pyridine	40 ug/mL
					SVLVstd10_00006	400 uL	Benzoic acid	40 ug/mL
							Indene	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					SVLVstd11_00006	400 uL	Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL
					SVLVstd9_00006	400 uL	3,3'-Dichlorobenzidine	40 ug/mL
							Benzidine	40 ug/mL
					SVLVSURSPK_00002	160 uL	2,4,6-Tribromophenol (Surr)	40 ug/mL
							2-Fluorobiphenyl	40 ug/mL
							2-Fluorophenol (Surr)	40 ug/mL
							Nitrobenzene-d5 (Surr)	40 ug/mL
							Phenol-d5 (Surr)	40 ug/mL
							Terphenyl-d14 (Surr)	40 ug/mL
					svmethylmetha_00011	800 uL	Methyl methanesulfonate	40 ug/mL
					SVNNITROPYROs_00017	800 uL	N-Nitrosopyrrolidine	40 ug/mL
..sv benzoepyre_00003	03/17/20		Absolute, Lot 031715		(Purchased Reagent)		Benzo[e]pyrene	1000 ug/mL
..SV2356TCPs_00003	09/21/20		Absolute, Lot 092115		(Purchased Reagent)		2,3,5,6-Tetrachlorophenol	1000 ug/mL
..SV2NAPAMINEs_00004	06/30/17		Ultra Scientific, Lot Ck-1617		(Purchased Reagent)		2-Naphthylamine	1000 ug/mL
..sv712dimbenza_00011	04/09/20		Absolute, Lot 040915		(Purchased Reagent)		7,12-Dimethylbenz(a)anthracene	1000 ug/mL
..SVLVstd1_00041	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							Methylphenol, 3 & 4	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..SVLVstd10_00006	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SVLVstd11_00006	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SVLVstd9_00006	09/30/17		Restek, Lot A0118008		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SVLVSURSPK_00002	08/31/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..svmethylmetha_00011	02/13/20		Absolute, Lot 021315		(Purchased Reagent)		Methyl methanesulfonate	1000 ug/mL
..SVNNITROPYROs_00017	01/08/19		absolute, Lot 010816		(Purchased Reagent)		N-Nitrosopyrrolidine	1000 ug/mL
SVTAPSTD20i_00010	03/24/17	09/24/16	MeCl2, Lot 2022771	1 mL	SVTAPITINTRNi_00012	10 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SVTAPITSTCKi_00015	250 uL	Benzo[e]pyrene	10 ug/mL
							2,3,5,6-Tetrachlorophenol	10 ug/mL
							2-Naphthylamine	10 ug/mL
							7,12-Dimethylbenz(a)anthracene	10 ug/mL
							1,1'-Biphenyl	10 ug/mL
							1,2,4,5-Tetrachlorobenzene	10 ug/mL
							1,2,4-Trichlorobenzene	10 ug/mL
							1,2-Dichlorobenzene	10 ug/mL
							1,2-Diphenylhydrazine	10 ug/mL
							1,3-Dichlorobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							1,4-Dichlorobenzene	10 ug/mL
							1,4-Dioxane	10 ug/mL
							1-Methylnaphthalene	10 ug/mL
							2,2'-oxybis[1-chloropropane]	10 ug/mL
							2,3,4,6-Tetrachlorophenol	10 ug/mL
							2,4,5-Trichlorophenol	10 ug/mL
							2,4,6-Trichlorophenol	10 ug/mL
							2,4-Dichlorophenol	10 ug/mL
							2,4-Dimethylphenol	10 ug/mL
							2,4-Dinitrophenol	20 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							2,6-Dichlorophenol	10 ug/mL
							2,6-Dinitrotoluene	10 ug/mL
							2-Chloronaphthalene	10 ug/mL
							2-Chlorophenol	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methylnaphthalene	10 ug/mL
							2-Methylphenol	10 ug/mL
							2-Nitroaniline	10 ug/mL
							2-Nitrophenol	10 ug/mL
							3-Nitroaniline	10 ug/mL
							4,6-Dinitro-2-methylphenol	20 ug/mL
							4-Bromophenyl phenyl ether	10 ug/mL
							4-Chloro-3-methylphenol	10 ug/mL
							4-Chloroaniline	10 ug/mL
							4-Chlorophenyl phenyl ether	10 ug/mL
							4-Nitroaniline	10 ug/mL
							4-Nitrophenol	20 ug/mL
							Acenaphthene	10 ug/mL
							Acenaphthylene	10 ug/mL
							Acetophenone	10 ug/mL
							Aniline	10 ug/mL
							Anthracene	10 ug/mL
							Benzo[a]anthracene	10 ug/mL
							Benzo[a]pyrene	10 ug/mL
							Benzo[b]fluoranthene	10 ug/mL
							Benzo[g,h,i]perylene	10 ug/mL
							Benzo[k]fluoranthene	10 ug/mL
							Benzyl alcohol	10 ug/mL
							Bis(2-chloroethoxy)methane	10 ug/mL
							Bis(2-chloroethyl)ether	10 ug/mL
							Bis(2-ethylhexyl) phthalate	10 ug/mL
							Butyl benzyl phthalate	10 ug/mL
							Carbazole	10 ug/mL
							Chrysene	10 ug/mL
							Di-n-butyl phthalate	10 ug/mL
							Di-n-octyl phthalate	10 ug/mL
							Dibenz(a,h)anthracene	10 ug/mL
							Dibenzofuran	10 ug/mL
							Diethyl phthalate	10 ug/mL
							Dimethyl phthalate	10 ug/mL
							Fluoranthene	10 ug/mL
							Fluorene	10 ug/mL
							Hexachlorobenzene	10 ug/mL
							Hexachlorobutadiene	10 ug/mL
							Hexachlorocyclopentadiene	10 ug/mL
							Hexachloroethane	10 ug/mL
							Hexadecane	10 ug/mL
							Indeno[1,2,3-cd]pyrene	10 ug/mL
							Isophorone	10 ug/mL
							Methylphenol, 3 & 4	10 ug/mL
							n-Decane	10 ug/mL
							N-Nitrosodi-n-propylamine	10 ug/mL
							N-Nitrosodimethylamine	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodiphenylamine	10 ug/mL
							n-Octadecane	10 ug/mL
							Naphthalene	10 ug/mL
							Nitrobenzene	10 ug/mL
							Pentachlorophenol	20 ug/mL
							Phenanthrene	10 ug/mL
							Phenol	10 ug/mL
							Pyrene	10 ug/mL
							Pyridine	10 ug/mL
							Benzoic acid	10 ug/mL
							Indene	10 ug/mL
							Atrazine	10 ug/mL
							Benzaldehyde	10 ug/mL
							Caprolactam	10 ug/mL
							3,3'-Dichlorobenzidine	10 ug/mL
							Benzidine	10 ug/mL
							2,4,6-Tribromophenol (Surr)	10 ug/mL
							2-Fluorobiphenyl	10 ug/mL
							2-Fluorophenol (Surr)	10 ug/mL
							Nitrobenzene-d5 (Surr)	10 ug/mL
							Phenol-d5 (Surr)	10 ug/mL
							Terphenyl-d14 (Surr)	10 ug/mL
							Methyl methanesulfonate	10 ug/mL
							N-Nitrosopyrrolidine	10 ug/mL
.SVTAPITINTRNi_00012	09/15/17	09/15/16	MeCl2, Lot 2022771	25 mL	SVLVIntstd_00004	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..SVLVIntstd_00004	02/28/18		Restek, Lot A093676		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SVTAPITSTCKi_00015	03/24/17	09/24/16	MeCl2, Lot 2022771	20 mL	sv benzoepyre_00003	800 uL	Benzo[e]pyrene	40 ug/mL
					SV2356TCPs_00003	800 uL	2,3,5,6-Tetrachlorophenol	40 ug/mL
					SV2NAPAMINEs_00004	800 uL	2-Naphthylamine	40 ug/mL
					sv712dimbenza_00011	800 uL	7,12-Dimethylbenz(a)anthracene	40 ug/mL
					SVLVstd1_00041	800 uL	1,1'-Biphenyl	40 ug/mL
							1,2,4,5-Tetrachlorobenzene	40 ug/mL
							1,2,4-Trichlorobenzene	40 ug/mL
							1,2-Dichlorobenzene	40 ug/mL
							1,2-Diphenylhydrazine	40 ug/mL
							1,3-Dichlorobenzene	40 ug/mL
							1,3-Dinitrobenzene	40 ug/mL
							1,4-Dichlorobenzene	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dioxane	40 ug/mL
							1-Methylnaphthalene	40 ug/mL
							2,2'-oxybis[1-chloropropane]	40 ug/mL
							2,3,4,6-Tetrachlorophenol	40 ug/mL
							2,4,5-Trichlorophenol	40 ug/mL
							2,4,6-Trichlorophenol	40 ug/mL
							2,4-Dichlorophenol	40 ug/mL
							2,4-Dimethylphenol	40 ug/mL
							2,4-Dinitrophenol	80 ug/mL
							2,4-Dinitrotoluene	40 ug/mL
							2,6-Dichlorophenol	40 ug/mL
							2,6-Dinitrotoluene	40 ug/mL
							2-Chloronaphthalene	40 ug/mL
							2-Chlorophenol	40 ug/mL
							2-Methylnaphthalene	40 ug/mL
							2-Methylphenol	40 ug/mL
							2-Nitroaniline	40 ug/mL
							2-Nitrophenol	40 ug/mL
							3-Nitroaniline	40 ug/mL
							4,6-Dinitro-2-methylphenol	80 ug/mL
							4-Bromophenyl phenyl ether	40 ug/mL
							4-Chloro-3-methylphenol	40 ug/mL
							4-Chloroaniline	40 ug/mL
							4-Chlorophenyl phenyl ether	40 ug/mL
							4-Nitroaniline	40 ug/mL
							4-Nitrophenol	80 ug/mL
							Acenaphthene	40 ug/mL
							Acenaphthylene	40 ug/mL
							Acetophenone	40 ug/mL
							Aniline	40 ug/mL
							Anthracene	40 ug/mL
							Benzo[a]anthracene	40 ug/mL
							Benzo[a]pyrene	40 ug/mL
							Benzo[b]fluoranthene	40 ug/mL
							Benzo[g,h,i]perylene	40 ug/mL
							Benzo[k]fluoranthene	40 ug/mL
							Benzyl alcohol	40 ug/mL
							Bis(2-chloroethoxy)methane	40 ug/mL
							Bis(2-chloroethyl)ether	40 ug/mL
							Bis(2-ethylhexyl) phthalate	40 ug/mL
							Butyl benzyl phthalate	40 ug/mL
							Carbazole	40 ug/mL
							Chrysene	40 ug/mL
							Di-n-butyl phthalate	40 ug/mL
							Di-n-octyl phthalate	40 ug/mL
							Dibenz(a,h)anthracene	40 ug/mL
							Dibenzofuran	40 ug/mL
							Diethyl phthalate	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dimethyl phthalate	40 ug/mL
							Fluoranthene	40 ug/mL
							Fluorene	40 ug/mL
							Hexachlorobenzene	40 ug/mL
							Hexachlorobutadiene	40 ug/mL
							Hexachlorocyclopentadiene	40 ug/mL
							Hexachloroethane	40 ug/mL
							Hexadecane	40 ug/mL
							Indeno[1,2,3-cd]pyrene	40 ug/mL
							Isophorone	40 ug/mL
							Methylphenol, 3 & 4	40 ug/mL
							n-Decane	40 ug/mL
							N-Nitrosodi-n-propylamine	40 ug/mL
							N-Nitrosodimethylamine	40 ug/mL
							N-Nitrosodiphenylamine	40 ug/mL
							n-Octadecane	40 ug/mL
							Naphthalene	40 ug/mL
							Nitrobenzene	40 ug/mL
							Pentachlorophenol	80 ug/mL
							Phenanthrene	40 ug/mL
							Phenol	40 ug/mL
							Pyrene	40 ug/mL
							Pyridine	40 ug/mL
					SVLVstd10_00006	400 uL	Benzoic acid	40 ug/mL
							Indene	40 ug/mL
					SVLVstd11_00006	400 uL	Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL
					SVLVstd9_00006	400 uL	3,3'-Dichlorobenzidine	40 ug/mL
							Benzidine	40 ug/mL
					SVLVSURSPK_00002	160 uL	2,4,6-Tribromophenol (Surr)	40 ug/mL
							2-Fluorobiphenyl	40 ug/mL
							2-Fluorophenol (Surr)	40 ug/mL
							Nitrobenzene-d5 (Surr)	40 ug/mL
							Phenol-d5 (Surr)	40 ug/mL
							Terphenyl-d14 (Surr)	40 ug/mL
					svmethylmetha_00011	800 uL	Methyl methanesulfonate	40 ug/mL
					SVNNITROPYROs_00017	800 uL	N-Nitrosopyrrolidine	40 ug/mL
..sv benzoepyre_00003	03/17/20		Absolute, Lot 031715		(Purchased Reagent)		Benzo[e]pyrene	1000 ug/mL
..SV2356TCPs_00003	09/21/20		Absolute, Lot 092115		(Purchased Reagent)		2,3,5,6-Tetrachlorophenol	1000 ug/mL
..SV2NAPAMINEs_00004	06/30/17		Ultra Scientific, Lot Ck-1617		(Purchased Reagent)		2-Naphthylamine	1000 ug/mL
..sv712dimbenza_00011	04/09/20		Absolute, Lot 040915		(Purchased Reagent)		7,12-Dimethylbenz(a)anthracene	1000 ug/mL
..SVLVstd1_00041	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							Methylphenol, 3 & 4	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SVLVstd10_00006	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SVLVstd11_00006	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SVLVstd9_00006	09/30/17		Restek, Lot A0118008		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SVLVSURSPK_00002	08/31/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..svmethylmetha_00011	02/13/20		Absolute, Lot 021315		(Purchased Reagent)		Methyl methanesulfonate	1000 ug/mL
..SVNNITROPYROs_00017	01/08/19		absolute, Lot 010816		(Purchased Reagent)		N-Nitrosopyrrolidine	1000 ug/mL
SVTAPSTD4.0i_00011	03/24/17	09/24/16	MeCl2, Lot 2022771	1 mL	SVTAPITINTRNi_00012	10 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SVTAPITSTCKi_00015	50 uL	Benzo[e]pyrene	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,3,5,6-Tetrachlorophenol	2 ug/mL
							2-Naphthylamine	2 ug/mL
							7,12-Dimethylbenz(a)anthracene	2 ug/mL
							1,1'-Biphenyl	2 ug/mL
							1,2,4,5-Tetrachlorobenzene	2 ug/mL
							1,2,4-Trichlorobenzene	2 ug/mL
							1,2-Dichlorobenzene	2 ug/mL
							1,2-Diphenylhydrazine	2 ug/mL
							1,3-Dichlorobenzene	2 ug/mL
							1,3-Dinitrobenzene	2 ug/mL
							1,4-Dichlorobenzene	2 ug/mL
							1,4-Dioxane	2 ug/mL
							1-Methylnaphthalene	2 ug/mL
							2,2'-oxybis[1-chloropropane]	2 ug/mL
							2,3,4,6-Tetrachlorophenol	2 ug/mL
							2,4,5-Trichlorophenol	2 ug/mL
							2,4,6-Trichlorophenol	2 ug/mL
							2,4-Dichlorophenol	2 ug/mL
							2,4-Dimethylphenol	2 ug/mL
							2,4-Dinitrophenol	4 ug/mL
							2,4-Dinitrotoluene	2 ug/mL
							2,6-Dichlorophenol	2 ug/mL
							2,6-Dinitrotoluene	2 ug/mL
							2-Chloronaphthalene	2 ug/mL
							2-Chlorophenol	2 ug/mL
							2-Methylnaphthalene	2 ug/mL
							2-Methylphenol	2 ug/mL
							2-Nitroaniline	2 ug/mL
							2-Nitrophenol	2 ug/mL
							3-Nitroaniline	2 ug/mL
							4,6-Dinitro-2-methylphenol	4 ug/mL
							4-Bromophenyl phenyl ether	2 ug/mL
							4-Chloro-3-methylphenol	2 ug/mL
							4-Chloroaniline	2 ug/mL
							4-Chlorophenyl phenyl ether	2 ug/mL
							4-Nitroaniline	2 ug/mL
							4-Nitrophenol	4 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Acetophenone	2 ug/mL
							Aniline	2 ug/mL
							Anthracene	2 ug/mL
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Benzyl alcohol	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-chloroethoxy)methane	2 ug/mL
							Bis(2-chloroethyl)ether	2 ug/mL
							Bis(2-ethylhexyl) phthalate	2 ug/mL
							Butyl benzyl phthalate	2 ug/mL
							Carbazole	2 ug/mL
							Chrysene	2 ug/mL
							Di-n-butyl phthalate	2 ug/mL
							Di-n-octyl phthalate	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Dibenzofuran	2 ug/mL
							Diethyl phthalate	2 ug/mL
							Dimethyl phthalate	2 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Hexachlorobenzene	2 ug/mL
							Hexachlorobutadiene	2 ug/mL
							Hexachlorocyclopentadiene	2 ug/mL
							Hexachloroethane	2 ug/mL
							Hexadecane	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Isophorone	2 ug/mL
							Methylphenol, 3 & 4	2 ug/mL
							n-Decane	2 ug/mL
							N-Nitrosodi-n-propylamine	2 ug/mL
							N-Nitrosodimethylamine	2 ug/mL
							N-Nitrosodiphenylamine	2 ug/mL
							n-Octadecane	2 ug/mL
							Naphthalene	2 ug/mL
							Nitrobenzene	2 ug/mL
							Pentachlorophenol	4 ug/mL
							Phenanthrene	2 ug/mL
							Phenol	2 ug/mL
							Pyrene	2 ug/mL
							Pyridine	2 ug/mL
							Benzoic acid	2 ug/mL
							Indene	2 ug/mL
							Atrazine	2 ug/mL
							Benzaldehyde	2 ug/mL
							Caprolactam	2 ug/mL
							3,3'-Dichlorobenzidine	2 ug/mL
							Benzidine	2 ug/mL
							2,4,6-Tribromophenol (Surr)	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							2-Fluorophenol (Surr)	2 ug/mL
							Nitrobenzene-d5 (Surr)	2 ug/mL
							Phenol-d5 (Surr)	2 ug/mL
							Terphenyl-d14 (Surr)	2 ug/mL
							Methyl methanesulfonate	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosopyrrolidine	2 ug/mL
.SVTAPITINTRNi_00012	09/15/17	09/15/16	MeCl2, Lot 2022771	25 mL	SVLVIntstd_00004	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..SVLVIntstd_00004	02/28/18		Restek, Lot A093676		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SVTAPITSTCKi_00015	03/24/17	09/24/16	MeCl2, Lot 2022771	20 mL	sv benzoepyre_00003	800 uL	Benzo[e]pyrene	40 ug/mL
					SV2356TCPs_00003	800 uL	2,3,5,6-Tetrachlorophenol	40 ug/mL
					SV2NAPAMINEs_00004	800 uL	2-Naphthylamine	40 ug/mL
					sv712dimbenza_00011	800 uL	7,12-Dimethylbenz(a)anthracene	40 ug/mL
					SVLVstd1_00041	800 uL	1,1'-Biphenyl	40 ug/mL
							1,2,4,5-Tetrachlorobenzene	40 ug/mL
							1,2,4-Trichlorobenzene	40 ug/mL
							1,2-Dichlorobenzene	40 ug/mL
							1,2-Diphenylhydrazine	40 ug/mL
							1,3-Dichlorobenzene	40 ug/mL
							1,3-Dinitrobenzene	40 ug/mL
							1,4-Dichlorobenzene	40 ug/mL
							1,4-Dioxane	40 ug/mL
							1-Methylnaphthalene	40 ug/mL
							2,2'-oxybis[1-chloropropane]	40 ug/mL
							2,3,4,6-Tetrachlorophenol	40 ug/mL
							2,4,5-Trichlorophenol	40 ug/mL
							2,4,6-Trichlorophenol	40 ug/mL
							2,4-Dichlorophenol	40 ug/mL
							2,4-Dimethylphenol	40 ug/mL
							2,4-Dinitrophenol	80 ug/mL
							2,4-Dinitrotoluene	40 ug/mL
							2,6-Dichlorophenol	40 ug/mL
							2,6-Dinitrotoluene	40 ug/mL
							2-Chloronaphthalene	40 ug/mL
							2-Chlorophenol	40 ug/mL
							2-Methylnaphthalene	40 ug/mL
							2-Methylphenol	40 ug/mL
							2-Nitroaniline	40 ug/mL
							2-Nitrophenol	40 ug/mL
							3-Nitroaniline	40 ug/mL
							4,6-Dinitro-2-methylphenol	80 ug/mL
							4-Bromophenyl phenyl ether	40 ug/mL
							4-Chloro-3-methylphenol	40 ug/mL
							4-Chloroaniline	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chlorophenyl phenyl ether	40 ug/mL
							4-Nitroaniline	40 ug/mL
							4-Nitrophenol	80 ug/mL
							Acenaphthene	40 ug/mL
							Acenaphthylene	40 ug/mL
							Acetophenone	40 ug/mL
							Aniline	40 ug/mL
							Anthracene	40 ug/mL
							Benzo[a]anthracene	40 ug/mL
							Benzo[a]pyrene	40 ug/mL
							Benzo[b]fluoranthene	40 ug/mL
							Benzo[g,h,i]perylene	40 ug/mL
							Benzo[k]fluoranthene	40 ug/mL
							Benzyl alcohol	40 ug/mL
							Bis(2-chloroethoxy)methane	40 ug/mL
							Bis(2-chloroethyl)ether	40 ug/mL
							Bis(2-ethylhexyl) phthalate	40 ug/mL
							Butyl benzyl phthalate	40 ug/mL
							Carbazole	40 ug/mL
							Chrysene	40 ug/mL
							Di-n-butyl phthalate	40 ug/mL
							Di-n-octyl phthalate	40 ug/mL
							Dibenz(a,h)anthracene	40 ug/mL
							Dibenzofuran	40 ug/mL
							Diethyl phthalate	40 ug/mL
							Dimethyl phthalate	40 ug/mL
							Fluoranthene	40 ug/mL
							Fluorene	40 ug/mL
							Hexachlorobenzene	40 ug/mL
							Hexachlorobutadiene	40 ug/mL
							Hexachlorocyclopentadiene	40 ug/mL
							Hexachloroethane	40 ug/mL
							Hexadecane	40 ug/mL
							Indeno[1,2,3-cd]pyrene	40 ug/mL
							Isophorone	40 ug/mL
							Methylphenol, 3 & 4	40 ug/mL
							n-Decane	40 ug/mL
							N-Nitrosodi-n-propylamine	40 ug/mL
							N-Nitrosodimethylamine	40 ug/mL
							N-Nitrosodiphenylamine	40 ug/mL
							n-Octadecane	40 ug/mL
							Naphthalene	40 ug/mL
							Nitrobenzene	40 ug/mL
							Pentachlorophenol	80 ug/mL
							Phenanthrene	40 ug/mL
							Phenol	40 ug/mL
							Pyrene	40 ug/mL
							Pyridine	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					SVLVstd10_00006	400 uL	Benzoic acid	40 ug/mL
							Indene	40 ug/mL
					SVLVstd11_00006	400 uL	Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL
					SVLVstd9_00006	400 uL	3,3'-Dichlorobenzidine	40 ug/mL
							Benzidine	40 ug/mL
					SVLVSURSPK_00002	160 uL	2,4,6-Tribromophenol (Surr)	40 ug/mL
							2-Fluorobiphenyl	40 ug/mL
							2-Fluorophenol (Surr)	40 ug/mL
							Nitrobenzene-d5 (Surr)	40 ug/mL
							Phenol-d5 (Surr)	40 ug/mL
							Terphenyl-d14 (Surr)	40 ug/mL
					svmethylmetha_00011	800 uL	Methyl methanesulfonate	40 ug/mL
					SVNNITROPYROs_00017	800 uL	N-Nitrosopyrrolidine	40 ug/mL
..sv benzoepyre_00003	03/17/20		Absolute, Lot 031715		(Purchased Reagent)		Benzo[e]pyrene	1000 ug/mL
..SV2356TCPs_00003	09/21/20		Absolute, Lot 092115		(Purchased Reagent)		2,3,5,6-Tetrachlorophenol	1000 ug/mL
..SV2NAPAMINEs_00004	06/30/17		Ultra Scientific, Lot Ck-1617		(Purchased Reagent)		2-Naphthylamine	1000 ug/mL
..sv712dimbenza_00011	04/09/20		Absolute, Lot 040915		(Purchased Reagent)		7,12-Dimethylbenz(a)anthracene	1000 ug/mL
..SVLVstd1_00041	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							Methylphenol, 3 & 4	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SVLVstd10_00006	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SVLVstd11_00006	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SVLVstd9_00006	09/30/17		Restek, Lot A0118008		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SVLVSURSPK_00002	08/31/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..svmethylmetha_00011	02/13/20		Absolute, Lot 021315		(Purchased Reagent)		Methyl methanesulfonate	1000 ug/mL
..SVNNITROPYROs_00017	01/08/19		absolute, Lot 010816		(Purchased Reagent)		N-Nitrosopyrrolidine	1000 ug/mL
SVTAPSTD40i_00010	03/24/17	09/14/16	MeCl2, Lot 2022771	1 mL	SVTAPITINTRNi_00012	10 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SVTAPITSTCKi_00015	500 uL	Benzo[e]pyrene	20 ug/mL
							2,3,5,6-Tetrachlorophenol	20 ug/mL
							2-Naphthylamine	20 ug/mL
							7,12-Dimethylbenz(a)anthracene	20 ug/mL
							1,1'-Biphenyl	20 ug/mL
							1,2,4,5-Tetrachlorobenzene	20 ug/mL
							1,2,4-Trichlorobenzene	20 ug/mL
							1,2-Dichlorobenzene	20 ug/mL
							1,2-Diphenylhydrazine	20 ug/mL
							1,3-Dichlorobenzene	20 ug/mL
							1,3-Dinitrobenzene	20 ug/mL
							1,4-Dichlorobenzene	20 ug/mL
							1,4-Dioxane	20 ug/mL
							1-Methylnaphthalene	20 ug/mL
							2,2'-oxybis[1-chloropropane]	20 ug/mL
							2,3,4,6-Tetrachlorophenol	20 ug/mL
							2,4,5-Trichlorophenol	20 ug/mL
							2,4,6-Trichlorophenol	20 ug/mL
							2,4-Dichlorophenol	20 ug/mL
							2,4-Dimethylphenol	20 ug/mL
							2,4-Dinitrophenol	40 ug/mL
							2,4-Dinitrotoluene	20 ug/mL
							2,6-Dichlorophenol	20 ug/mL
							2,6-Dinitrotoluene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chloronaphthalene	20 ug/mL
							2-Chlorophenol	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							2-Methylphenol	20 ug/mL
							2-Nitroaniline	20 ug/mL
							2-Nitrophenol	20 ug/mL
							3-Nitroaniline	20 ug/mL
							4,6-Dinitro-2-methylphenol	40 ug/mL
							4-Bromophenyl phenyl ether	20 ug/mL
							4-Chloro-3-methylphenol	20 ug/mL
							4-Chloroaniline	20 ug/mL
							4-Chlorophenyl phenyl ether	20 ug/mL
							4-Nitroaniline	20 ug/mL
							4-Nitrophenol	40 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Acetophenone	20 ug/mL
							Aniline	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Benzyl alcohol	20 ug/mL
							Bis(2-chloroethoxy)methane	20 ug/mL
							Bis(2-chloroethyl)ether	20 ug/mL
							Bis(2-ethylhexyl) phthalate	20 ug/mL
							Butyl benzyl phthalate	20 ug/mL
							Carbazole	20 ug/mL
							Chrysene	20 ug/mL
							Di-n-butyl phthalate	20 ug/mL
							Di-n-octyl phthalate	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Dibenzofuran	20 ug/mL
							Diethyl phthalate	20 ug/mL
							Dimethyl phthalate	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Hexachlorobenzene	20 ug/mL
							Hexachlorobutadiene	20 ug/mL
							Hexachlorocyclopentadiene	20 ug/mL
							Hexachloroethane	20 ug/mL
							Hexadecane	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Isophorone	20 ug/mL
							Methylphenol, 3 & 4	20 ug/mL
							n-Decane	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodi-n-propylamine	20 ug/mL
							N-Nitrosodimethylamine	20 ug/mL
							N-Nitrosodiphenylamine	20 ug/mL
							n-Octadecane	20 ug/mL
							Naphthalene	20 ug/mL
							Nitrobenzene	20 ug/mL
							Pentachlorophenol	40 ug/mL
							Phenanthrene	20 ug/mL
							Phenol	20 ug/mL
							Pyrene	20 ug/mL
							Pyridine	20 ug/mL
							Benzoic acid	20 ug/mL
							Indene	20 ug/mL
							Atrazine	20 ug/mL
							Benzaldehyde	20 ug/mL
							Caprolactam	20 ug/mL
							3,3'-Dichlorobenzidine	20 ug/mL
							Benzidine	20 ug/mL
							2,4,6-Tribromophenol (Surr)	20 ug/mL
							2-Fluorobiphenyl	20 ug/mL
							2-Fluorophenol (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20 ug/mL
							Phenol-d5 (Surr)	20 ug/mL
							Terphenyl-d14 (Surr)	20 ug/mL
							Methyl methanesulfonate	20 ug/mL
							N-Nitrosopyrrolidine	20 ug/mL
.SVTAPITINTRNi_00012	09/15/17	09/15/16	MeCl2, Lot 2022771	25 mL	SVLVIntstd_00004	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..SVLVIntstd_00004	02/28/18		Restek, Lot A093676		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SVTAPITSTCKi_00015	03/24/17	09/24/16	MeCl2, Lot 2022771	20 mL	sv benzoepyre_00003	800 uL	Benzo[e]pyrene	40 ug/mL
					SV2356TCPs_00003	800 uL	2,3,5,6-Tetrachlorophenol	40 ug/mL
					SV2NAPAMINEs_00004	800 uL	2-Naphthylamine	40 ug/mL
					sv712dimbenza_00011	800 uL	7,12-Dimethylbenz(a)anthracene	40 ug/mL
					SVLVstd1_00041	800 uL	1,1'-Biphenyl	40 ug/mL
							1,2,4,5-Tetrachlorobenzene	40 ug/mL
							1,2,4-Trichlorobenzene	40 ug/mL
							1,2-Dichlorobenzene	40 ug/mL
							1,2-Diphenylhydrazine	40 ug/mL
							1,3-Dichlorobenzene	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dinitrobenzene	40 ug/mL
							1,4-Dichlorobenzene	40 ug/mL
							1,4-Dioxane	40 ug/mL
							1-Methylnaphthalene	40 ug/mL
							2,2'-oxybis[1-chloropropane]	40 ug/mL
							2,3,4,6-Tetrachlorophenol	40 ug/mL
							2,4,5-Trichlorophenol	40 ug/mL
							2,4,6-Trichlorophenol	40 ug/mL
							2,4-Dichlorophenol	40 ug/mL
							2,4-Dimethylphenol	40 ug/mL
							2,4-Dinitrophenol	80 ug/mL
							2,4-Dinitrotoluene	40 ug/mL
							2,6-Dichlorophenol	40 ug/mL
							2,6-Dinitrotoluene	40 ug/mL
							2-Chloronaphthalene	40 ug/mL
							2-Chlorophenol	40 ug/mL
							2-Methylnaphthalene	40 ug/mL
							2-Methylphenol	40 ug/mL
							2-Nitroaniline	40 ug/mL
							2-Nitrophenol	40 ug/mL
							3-Nitroaniline	40 ug/mL
							4,6-Dinitro-2-methylphenol	80 ug/mL
							4-Bromophenyl phenyl ether	40 ug/mL
							4-Chloro-3-methylphenol	40 ug/mL
							4-Chloroaniline	40 ug/mL
							4-Chlorophenyl phenyl ether	40 ug/mL
							4-Nitroaniline	40 ug/mL
							4-Nitrophenol	80 ug/mL
							Acenaphthene	40 ug/mL
							Acenaphthylene	40 ug/mL
							Acetophenone	40 ug/mL
							Aniline	40 ug/mL
							Anthracene	40 ug/mL
							Benzo[a]anthracene	40 ug/mL
							Benzo[a]pyrene	40 ug/mL
							Benzo[b]fluoranthene	40 ug/mL
							Benzo[g,h,i]perylene	40 ug/mL
							Benzo[k]fluoranthene	40 ug/mL
							Benzyl alcohol	40 ug/mL
							Bis(2-chloroethoxy)methane	40 ug/mL
							Bis(2-chloroethyl)ether	40 ug/mL
							Bis(2-ethylhexyl) phthalate	40 ug/mL
							Butyl benzyl phthalate	40 ug/mL
							Carbazole	40 ug/mL
							Chrysene	40 ug/mL
							Di-n-butyl phthalate	40 ug/mL
							Di-n-octyl phthalate	40 ug/mL
							Dibenz(a,h)anthracene	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenzofuran	40 ug/mL
							Diethyl phthalate	40 ug/mL
							Dimethyl phthalate	40 ug/mL
							Fluoranthene	40 ug/mL
							Fluorene	40 ug/mL
							Hexachlorobenzene	40 ug/mL
							Hexachlorobutadiene	40 ug/mL
							Hexachlorocyclopentadiene	40 ug/mL
							Hexachloroethane	40 ug/mL
							Hexadecane	40 ug/mL
							Indeno[1,2,3-cd]pyrene	40 ug/mL
							Isophorone	40 ug/mL
							Methylphenol, 3 & 4	40 ug/mL
							n-Decane	40 ug/mL
							N-Nitrosodi-n-propylamine	40 ug/mL
							N-Nitrosodimethylamine	40 ug/mL
							N-Nitrosodiphenylamine	40 ug/mL
							n-Octadecane	40 ug/mL
							Naphthalene	40 ug/mL
							Nitrobenzene	40 ug/mL
							Pentachlorophenol	80 ug/mL
							Phenanthrene	40 ug/mL
							Phenol	40 ug/mL
							Pyrene	40 ug/mL
							Pyridine	40 ug/mL
					SVLVstd10_00006	400 uL	Benzoic acid	40 ug/mL
							Indene	40 ug/mL
					SVLVstd11_00006	400 uL	Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL
					SVLVstd9_00006	400 uL	3,3'-Dichlorobenzidine	40 ug/mL
							Benzidine	40 ug/mL
					SVLVSURSPK_00002	160 uL	2,4,6-Tribromophenol (Surr)	40 ug/mL
							2-Fluorobiphenyl	40 ug/mL
							2-Fluorophenol (Surr)	40 ug/mL
							Nitrobenzene-d5 (Surr)	40 ug/mL
							Phenol-d5 (Surr)	40 ug/mL
							Terphenyl-d14 (Surr)	40 ug/mL
					svmethylmetha_00011	800 uL	Methyl methanesulfonate	40 ug/mL
					SVNNITROPYROs_00017	800 uL	N-Nitrosopyrrolidine	40 ug/mL
..sv benzoepyre_00003	03/17/20		Absolute, Lot 031715		(Purchased Reagent)		Benzo[e]pyrene	1000 ug/mL
..SV2356TCPs_00003	09/21/20		Absolute, Lot 092115		(Purchased Reagent)		2,3,5,6-Tetrachlorophenol	1000 ug/mL
..SV2NAPAMINEs_00004	06/30/17		Ultra Scientific, Lot Ck-1617		(Purchased Reagent)		2-Naphthylamine	1000 ug/mL
..sv712dimbenza_00011	04/09/20		Absolute, Lot 040915		(Purchased Reagent)		7,12-Dimethylbenz(a)anthracene	1000 ug/mL
..SVLVstd1_00041	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							Methylphenol, 3 & 4	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SVLVstd10_00006	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SVLVstd11_00006	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SVLVstd9_00006	09/30/17		Restek, Lot A0118008		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SVLVSURSPK_00002	08/31/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..svmethylmetha_00011	02/13/20		Absolute, Lot 021315		(Purchased Reagent)		Methyl methanesulfonate	1000 ug/mL
..SVNNITROPYROs_00017	01/08/19		absolute, Lot 010816		(Purchased Reagent)		N-Nitrosopyrrolidine	1000 ug/mL
SVTAPSTD60i_00010	03/24/17	09/24/16	MeCl2, Lot 2022771	1 mL	SVTAPITINTRNi_00012	10 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene-d10	4 ug/mL
					SVTAPITSTCKi_00015	750 uL	Benzo[e]pyrene	30 ug/mL
							2,3,5,6-Tetrachlorophenol	30 ug/mL
							2-Naphthylamine	30 ug/mL
							7,12-Dimethylbenz(a)anthracene	30 ug/mL
							1,1'-Biphenyl	30 ug/mL
							1,2,4,5-Tetrachlorobenzene	30 ug/mL
							1,2,4-Trichlorobenzene	30 ug/mL
							1,2-Dichlorobenzene	30 ug/mL
							1,2-Diphenylhydrazine	30 ug/mL
							1,3-Dichlorobenzene	30 ug/mL
							1,3-Dinitrobenzene	30 ug/mL
							1,4-Dichlorobenzene	30 ug/mL
							1,4-Dioxane	30 ug/mL
							1-Methylnaphthalene	30 ug/mL
							2,2'-oxybis[1-chloropropane]	30 ug/mL
							2,3,4,6-Tetrachlorophenol	30 ug/mL
							2,4,5-Trichlorophenol	30 ug/mL
							2,4,6-Trichlorophenol	30 ug/mL
							2,4-Dichlorophenol	30 ug/mL
							2,4-Dimethylphenol	30 ug/mL
							2,4-Dinitrophenol	60 ug/mL
							2,4-Dinitrotoluene	30 ug/mL
							2,6-Dichlorophenol	30 ug/mL
							2,6-Dinitrotoluene	30 ug/mL
							2-Chloronaphthalene	30 ug/mL
							2-Chlorophenol	30 ug/mL
							2-Methylnaphthalene	30 ug/mL
							2-Methylphenol	30 ug/mL
							2-Nitroaniline	30 ug/mL
							2-Nitrophenol	30 ug/mL
							3-Nitroaniline	30 ug/mL
							4,6-Dinitro-2-methylphenol	60 ug/mL
							4-Bromophenyl phenyl ether	30 ug/mL
							4-Chloro-3-methylphenol	30 ug/mL
							4-Chloroaniline	30 ug/mL
							4-Chlorophenyl phenyl ether	30 ug/mL
							4-Nitroaniline	30 ug/mL
							4-Nitrophenol	60 ug/mL
							Acenaphthene	30 ug/mL
							Acenaphthylene	30 ug/mL
							Acetophenone	30 ug/mL
							Aniline	30 ug/mL
							Anthracene	30 ug/mL
							Benzo[a]anthracene	30 ug/mL
							Benzo[a]pyrene	30 ug/mL
							Benzo[b]fluoranthene	30 ug/mL
							Benzo[g,h,i]perylene	30 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[k]fluoranthene	30 ug/mL
							Benzyl alcohol	30 ug/mL
							Bis(2-chloroethoxy)methane	30 ug/mL
							Bis(2-chloroethyl)ether	30 ug/mL
							Bis(2-ethylhexyl) phthalate	30 ug/mL
							Butyl benzyl phthalate	30 ug/mL
							Carbazole	30 ug/mL
							Chrysene	30 ug/mL
							Di-n-butyl phthalate	30 ug/mL
							Di-n-octyl phthalate	30 ug/mL
							Dibenz(a,h)anthracene	30 ug/mL
							Dibenzofuran	30 ug/mL
							Diethyl phthalate	30 ug/mL
							Dimethyl phthalate	30 ug/mL
							Fluoranthene	30 ug/mL
							Fluorene	30 ug/mL
							Hexachlorobenzene	30 ug/mL
							Hexachlorobutadiene	30 ug/mL
							Hexachlorocyclopentadiene	30 ug/mL
							Hexachloroethane	30 ug/mL
							Hexadecane	30 ug/mL
							Indeno[1,2,3-cd]pyrene	30 ug/mL
							Isophorone	30 ug/mL
							Methylphenol, 3 & 4	30 ug/mL
							n-Decane	30 ug/mL
							N-Nitrosodi-n-propylamine	30 ug/mL
							N-Nitrosodimethylamine	30 ug/mL
							N-Nitrosodiphenylamine	30 ug/mL
							n-Octadecane	30 ug/mL
							Naphthalene	30 ug/mL
							Nitrobenzene	30 ug/mL
							Pentachlorophenol	60 ug/mL
							Phenanthrene	30 ug/mL
							Phenol	30 ug/mL
							Pyrene	30 ug/mL
							Pyridine	30 ug/mL
							Benzoic acid	30 ug/mL
							Indene	30 ug/mL
							Atrazine	30 ug/mL
							Benzaldehyde	30 ug/mL
							Caprolactam	30 ug/mL
							3,3'-Dichlorobenzidine	30 ug/mL
							Benzidine	30 ug/mL
							2,4,6-Tribromophenol (Surr)	30 ug/mL
							2-Fluorobiphenyl	30 ug/mL
							2-Fluorophenol (Surr)	30 ug/mL
							Nitrobenzene-d5 (Surr)	30 ug/mL
							Phenol-d5 (Surr)	30 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Terphenyl-d14 (Surr)	30 ug/mL
							Methyl methanesulfonate	30 ug/mL
							N-Nitrosopyrrolidine	30 ug/mL
.SVTAPITINTRNi_00012	09/15/17	09/15/16	MeCl2, Lot 2022771	25 mL	SVLVIntstd_00004	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..SVLVIntstd_00004	02/28/18		Restek, Lot A093676		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SVTAPITSTCKi_00015	03/24/17	09/24/16	MeCl2, Lot 2022771	20 mL	sv benzoepyre_00003	800 uL	Benzo[e]pyrene	40 ug/mL
					SV2356TCPs_00003	800 uL	2,3,5,6-Tetrachlorophenol	40 ug/mL
					SV2NAPAMINEs_00004	800 uL	2-Naphthylamine	40 ug/mL
					sv712dimbenza_00011	800 uL	7,12-Dimethylbenz(a)anthracene	40 ug/mL
					SVLVstd1_00041	800 uL	1,1'-Biphenyl	40 ug/mL
							1,2,4,5-Tetrachlorobenzene	40 ug/mL
							1,2,4-Trichlorobenzene	40 ug/mL
							1,2-Dichlorobenzene	40 ug/mL
							1,2-Diphenylhydrazine	40 ug/mL
							1,3-Dichlorobenzene	40 ug/mL
							1,3-Dinitrobenzene	40 ug/mL
							1,4-Dichlorobenzene	40 ug/mL
							1,4-Dioxane	40 ug/mL
							1-Methylnaphthalene	40 ug/mL
							2,2'-oxybis[1-chloropropane]	40 ug/mL
							2,3,4,6-Tetrachlorophenol	40 ug/mL
							2,4,5-Trichlorophenol	40 ug/mL
							2,4,6-Trichlorophenol	40 ug/mL
							2,4-Dichlorophenol	40 ug/mL
							2,4-Dimethylphenol	40 ug/mL
							2,4-Dinitrophenol	80 ug/mL
							2,4-Dinitrotoluene	40 ug/mL
							2,6-Dichlorophenol	40 ug/mL
							2,6-Dinitrotoluene	40 ug/mL
							2-Chloronaphthalene	40 ug/mL
							2-Chlorophenol	40 ug/mL
							2-Methylnaphthalene	40 ug/mL
							2-Methylphenol	40 ug/mL
							2-Nitroaniline	40 ug/mL
							2-Nitrophenol	40 ug/mL
							3-Nitroaniline	40 ug/mL
							4,6-Dinitro-2-methylphenol	80 ug/mL
							4-Bromophenyl phenyl ether	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chloro-3-methylphenol	40 ug/mL
							4-Chloroaniline	40 ug/mL
							4-Chlorophenyl phenyl ether	40 ug/mL
							4-Nitroaniline	40 ug/mL
							4-Nitrophenol	80 ug/mL
							Acenaphthene	40 ug/mL
							Acenaphthylene	40 ug/mL
							Acetophenone	40 ug/mL
							Aniline	40 ug/mL
							Anthracene	40 ug/mL
							Benzo[a]anthracene	40 ug/mL
							Benzo[a]pyrene	40 ug/mL
							Benzo[b]fluoranthene	40 ug/mL
							Benzo[g,h,i]perylene	40 ug/mL
							Benzo[k]fluoranthene	40 ug/mL
							Benzyl alcohol	40 ug/mL
							Bis(2-chloroethoxy)methane	40 ug/mL
							Bis(2-chloroethyl)ether	40 ug/mL
							Bis(2-ethylhexyl) phthalate	40 ug/mL
							Butyl benzyl phthalate	40 ug/mL
							Carbazole	40 ug/mL
							Chrysene	40 ug/mL
							Di-n-butyl phthalate	40 ug/mL
							Di-n-octyl phthalate	40 ug/mL
							Dibenz(a,h)anthracene	40 ug/mL
							Dibenzofuran	40 ug/mL
							Diethyl phthalate	40 ug/mL
							Dimethyl phthalate	40 ug/mL
							Fluoranthene	40 ug/mL
							Fluorene	40 ug/mL
							Hexachlorobenzene	40 ug/mL
							Hexachlorobutadiene	40 ug/mL
							Hexachlorocyclopentadiene	40 ug/mL
							Hexachloroethane	40 ug/mL
							Hexadecane	40 ug/mL
							Indeno[1,2,3-cd]pyrene	40 ug/mL
							Isophorone	40 ug/mL
							Methylphenol, 3 & 4	40 ug/mL
							n-Decane	40 ug/mL
							N-Nitrosodi-n-propylamine	40 ug/mL
							N-Nitrosodimethylamine	40 ug/mL
							N-Nitrosodiphenylamine	40 ug/mL
							n-Octadecane	40 ug/mL
							Naphthalene	40 ug/mL
							Nitrobenzene	40 ug/mL
							Pentachlorophenol	80 ug/mL
							Phenanthrene	40 ug/mL
							Phenol	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyrene	40 ug/mL
							Pyridine	40 ug/mL
					SVLVstd10_00006	400 uL	Benzoic acid	40 ug/mL
							Indene	40 ug/mL
					SVLVstd11_00006	400 uL	Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL
					SVLVstd9_00006	400 uL	3,3'-Dichlorobenzidine	40 ug/mL
							Benzidine	40 ug/mL
					SVLVSURSPK_00002	160 uL	2,4,6-Tribromophenol (Surr)	40 ug/mL
							2-Fluorobiphenyl	40 ug/mL
							2-Fluorophenol (Surr)	40 ug/mL
							Nitrobenzene-d5 (Surr)	40 ug/mL
							Phenol-d5 (Surr)	40 ug/mL
							Terphenyl-d14 (Surr)	40 ug/mL
					svmethylmetha_00011	800 uL	Methyl methanesulfonate	40 ug/mL
					SVNNITROPYROs_00017	800 uL	N-Nitrosopyrrolidine	40 ug/mL
..sv benzoepyre_00003	03/17/20		Absolute, Lot 031715		(Purchased Reagent)		Benzo[e]pyrene	1000 ug/mL
..SV2356TCPs_00003	09/21/20		Absolute, Lot 092115		(Purchased Reagent)		2,3,5,6-Tetrachlorophenol	1000 ug/mL
..SV2NAPAMINEs_00004	06/30/17		Ultra Scientific, Lot Ck-1617		(Purchased Reagent)		2-Naphthylamine	1000 ug/mL
..sv712dimbenza_00011	04/09/20		Absolute, Lot 040915		(Purchased Reagent)		7,12-Dimethylbenz(a)anthracene	1000 ug/mL
..SVLVstd1_00041	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							Methylphenol, 3 & 4	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SVLVstd10_00006	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SVLVstd11_00006	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SVLVstd9_00006	09/30/17		Restek, Lot A0118008		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SVLVSURSPK_00002	08/31/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..svmethylmetha_00011	02/13/20		Absolute, Lot 021315		(Purchased Reagent)		Methyl methanesulfonate	1000 ug/mL
..SVNNITROPYROs_00017	01/08/19		absolute, Lot 010816		(Purchased Reagent)		N-Nitrosopyrrolidine	1000 ug/mL
SVTAPSTD80i_00010	03/24/17	09/24/16	MeCl2, Lot 2022771	1 mL	SVTAPITINTRNi_00012	10 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SVTAPITSTCKi_00015	1000 uL	Benzo[e]pyrene	40 ug/mL
							2,3,5,6-Tetrachlorophenol	40 ug/mL
							2-Naphthylamine	40 ug/mL
							7,12-Dimethylbenz(a)anthracene	40 ug/mL
							1,1'-Biphenyl	40 ug/mL
							1,2,4,5-Tetrachlorobenzene	40 ug/mL
							1,2,4-Trichlorobenzene	40 ug/mL
							1,2-Dichlorobenzene	40 ug/mL
							1,2-Diphenylhydrazine	40 ug/mL
							1,3-Dichlorobenzene	40 ug/mL
							1,3-Dinitrobenzene	40 ug/mL
							1,4-Dichlorobenzene	40 ug/mL
							1,4-Dioxane	40 ug/mL
							1-Methylnaphthalene	40 ug/mL
							2,2'-oxybis[1-chloropropane]	40 ug/mL
							2,3,4,6-Tetrachlorophenol	40 ug/mL
							2,4,5-Trichlorophenol	40 ug/mL
							2,4,6-Trichlorophenol	40 ug/mL
							2,4-Dichlorophenol	40 ug/mL
							2,4-Dimethylphenol	40 ug/mL
							2,4-Dinitrophenol	80 ug/mL
							2,4-Dinitrotoluene	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,6-Dichlorophenol	40 ug/mL
							2,6-Dinitrotoluene	40 ug/mL
							2-Chloronaphthalene	40 ug/mL
							2-Chlorophenol	40 ug/mL
							2-Methylnaphthalene	40 ug/mL
							2-Methylphenol	40 ug/mL
							2-Nitroaniline	40 ug/mL
							2-Nitrophenol	40 ug/mL
							3-Nitroaniline	40 ug/mL
							4,6-Dinitro-2-methylphenol	80 ug/mL
							4-Bromophenyl phenyl ether	40 ug/mL
							4-Chloro-3-methylphenol	40 ug/mL
							4-Chloroaniline	40 ug/mL
							4-Chlorophenyl phenyl ether	40 ug/mL
							4-Nitroaniline	40 ug/mL
							4-Nitrophenol	80 ug/mL
							Acenaphthene	40 ug/mL
							Acenaphthylene	40 ug/mL
							Acetophenone	40 ug/mL
							Aniline	40 ug/mL
							Anthracene	40 ug/mL
							Benzo[a]anthracene	40 ug/mL
							Benzo[a]pyrene	40 ug/mL
							Benzo[b]fluoranthene	40 ug/mL
							Benzo[g,h,i]perylene	40 ug/mL
							Benzo[k]fluoranthene	40 ug/mL
							Benzyl alcohol	40 ug/mL
							Bis(2-chloroethoxy)methane	40 ug/mL
							Bis(2-chloroethyl)ether	40 ug/mL
							Bis(2-ethylhexyl) phthalate	40 ug/mL
							Butyl benzyl phthalate	40 ug/mL
							Carbazole	40 ug/mL
							Chrysene	40 ug/mL
							Di-n-butyl phthalate	40 ug/mL
							Di-n-octyl phthalate	40 ug/mL
							Dibenz(a,h)anthracene	40 ug/mL
							Dibenzofuran	40 ug/mL
							Diethyl phthalate	40 ug/mL
							Dimethyl phthalate	40 ug/mL
							Fluoranthene	40 ug/mL
							Fluorene	40 ug/mL
							Hexachlorobenzene	40 ug/mL
							Hexachlorobutadiene	40 ug/mL
							Hexachlorocyclopentadiene	40 ug/mL
							Hexachloroethane	40 ug/mL
							Hexadecane	40 ug/mL
							Indeno[1,2,3-cd]pyrene	40 ug/mL
							Isophorone	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methylphenol, 3 & 4	40 ug/mL
							n-Decane	40 ug/mL
							N-Nitrosodi-n-propylamine	40 ug/mL
							N-Nitrosodimethylamine	40 ug/mL
							N-Nitrosodiphenylamine	40 ug/mL
							n-Octadecane	40 ug/mL
							Naphthalene	40 ug/mL
							Nitrobenzene	40 ug/mL
							Pentachlorophenol	80 ug/mL
							Phenanthrene	40 ug/mL
							Phenol	40 ug/mL
							Pyrene	40 ug/mL
							Pyridine	40 ug/mL
							Benzoic acid	40 ug/mL
							Indene	40 ug/mL
							Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL
							3,3'-Dichlorobenzidine	40 ug/mL
							Benzidine	40 ug/mL
							2,4,6-Tribromophenol (Surr)	40 ug/mL
							2-Fluorobiphenyl	40 ug/mL
							2-Fluorophenol (Surr)	40 ug/mL
							Nitrobenzene-d5 (Surr)	40 ug/mL
							Phenol-d5 (Surr)	40 ug/mL
							Terphenyl-d14 (Surr)	40 ug/mL
							Methyl methanesulfonate	40 ug/mL
							N-Nitrosopyrrolidine	40 ug/mL
.SVTAPITINTRNi_00012	09/15/17	09/15/16	MeCl2, Lot 2022771	25 mL	SVLVIntstd_00004	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..SVLVIntstd_00004	02/28/18		Restek, Lot A093676		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SVTAPITSTCKi_00015	03/24/17	09/24/16	MeCl2, Lot 2022771	20 mL	sv benzoepyre_00003	800 uL	Benzo[e]pyrene	40 ug/mL
					SV2356TCPs_00003	800 uL	2,3,5,6-Tetrachlorophenol	40 ug/mL
					SV2NAPAMINEs_00004	800 uL	2-Naphthylamine	40 ug/mL
					sv712dimbenza_00011	800 uL	7,12-Dimethylbenz(a)anthracene	40 ug/mL
					SVLVstd1_00041	800 uL	1,1'-Biphenyl	40 ug/mL
							1,2,4,5-Tetrachlorobenzene	40 ug/mL
							1,2,4-Trichlorobenzene	40 ug/mL
							1,2-Dichlorobenzene	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Diphenylhydrazine	40 ug/mL
							1,3-Dichlorobenzene	40 ug/mL
							1,3-Dinitrobenzene	40 ug/mL
							1,4-Dichlorobenzene	40 ug/mL
							1,4-Dioxane	40 ug/mL
							1-Methylnaphthalene	40 ug/mL
							2,2'-oxybis[1-chloropropane]	40 ug/mL
							2,3,4,6-Tetrachlorophenol	40 ug/mL
							2,4,5-Trichlorophenol	40 ug/mL
							2,4,6-Trichlorophenol	40 ug/mL
							2,4-Dichlorophenol	40 ug/mL
							2,4-Dimethylphenol	40 ug/mL
							2,4-Dinitrophenol	80 ug/mL
							2,4-Dinitrotoluene	40 ug/mL
							2,6-Dichlorophenol	40 ug/mL
							2,6-Dinitrotoluene	40 ug/mL
							2-Chloronaphthalene	40 ug/mL
							2-Chlorophenol	40 ug/mL
							2-Methylnaphthalene	40 ug/mL
							2-Methylphenol	40 ug/mL
							2-Nitroaniline	40 ug/mL
							2-Nitrophenol	40 ug/mL
							3-Nitroaniline	40 ug/mL
							4,6-Dinitro-2-methylphenol	80 ug/mL
							4-Bromophenyl phenyl ether	40 ug/mL
							4-Chloro-3-methylphenol	40 ug/mL
							4-Chloroaniline	40 ug/mL
							4-Chlorophenyl phenyl ether	40 ug/mL
							4-Nitroaniline	40 ug/mL
							4-Nitrophenol	80 ug/mL
							Acenaphthene	40 ug/mL
							Acenaphthylene	40 ug/mL
							Acetophenone	40 ug/mL
							Aniline	40 ug/mL
							Anthracene	40 ug/mL
							Benzo[a]anthracene	40 ug/mL
							Benzo[a]pyrene	40 ug/mL
							Benzo[b]fluoranthene	40 ug/mL
							Benzo[g,h,i]perylene	40 ug/mL
							Benzo[k]fluoranthene	40 ug/mL
							Benzyl alcohol	40 ug/mL
							Bis(2-chloroethoxy)methane	40 ug/mL
							Bis(2-chloroethyl)ether	40 ug/mL
							Bis(2-ethylhexyl) phthalate	40 ug/mL
							Butyl benzyl phthalate	40 ug/mL
							Carbazole	40 ug/mL
							Chrysene	40 ug/mL
							Di-n-butyl phthalate	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Di-n-octyl phthalate	40 ug/mL
							Dibenz(a,h)anthracene	40 ug/mL
							Dibenzofuran	40 ug/mL
							Diethyl phthalate	40 ug/mL
							Dimethyl phthalate	40 ug/mL
							Fluoranthene	40 ug/mL
							Fluorene	40 ug/mL
							Hexachlorobenzene	40 ug/mL
							Hexachlorobutadiene	40 ug/mL
							Hexachlorocyclopentadiene	40 ug/mL
							Hexachloroethane	40 ug/mL
							Hexadecane	40 ug/mL
							Indeno[1,2,3-cd]pyrene	40 ug/mL
							Isophorone	40 ug/mL
							Methylphenol, 3 & 4	40 ug/mL
							n-Decane	40 ug/mL
							N-Nitrosodi-n-propylamine	40 ug/mL
							N-Nitrosodimethylamine	40 ug/mL
							N-Nitrosodiphenylamine	40 ug/mL
							n-Octadecane	40 ug/mL
							Naphthalene	40 ug/mL
							Nitrobenzene	40 ug/mL
							Pentachlorophenol	80 ug/mL
							Phenanthrene	40 ug/mL
							Phenol	40 ug/mL
							Pyrene	40 ug/mL
							Pyridine	40 ug/mL
					SVLVstd10_00006	400 uL	Benzoic acid	40 ug/mL
							Indene	40 ug/mL
					SVLVstd11_00006	400 uL	Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL
					SVLVstd9_00006	400 uL	3,3'-Dichlorobenzidine	40 ug/mL
							Benzidine	40 ug/mL
					SVLVSURSPK_00002	160 uL	2,4,6-Tribromophenol (Surr)	40 ug/mL
							2-Fluorobiphenyl	40 ug/mL
							2-Fluorophenol (Surr)	40 ug/mL
							Nitrobenzene-d5 (Surr)	40 ug/mL
							Phenol-d5 (Surr)	40 ug/mL
							Terphenyl-d14 (Surr)	40 ug/mL
					svmethylmetha_00011	800 uL	Methyl methanesulfonate	40 ug/mL
					SVNNITROPYROs_00017	800 uL	N-Nitrosopyrrolidine	40 ug/mL
..sv benzoepyre_00003	03/17/20		Absolute, Lot 031715		(Purchased Reagent)		Benzo[e]pyrene	1000 ug/mL
..SV2356TCPs_00003	09/21/20		Absolute, Lot 092115		(Purchased Reagent)		2,3,5,6-Tetrachlorophenol	1000 ug/mL
..SV2NAPAMINEs_00004	06/30/17		Ultra Scientific, Lot Ck-1617		(Purchased Reagent)		2-Naphthylamine	1000 ug/mL
..sv712dimbenza_00011	04/09/20		Absolute, Lot 040915		(Purchased Reagent)		7,12-Dimethylbenz(a)anthracene	1000 ug/mL
..SVLVstd1_00041	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							Methylphenol, 3 & 4	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SVLVstd10_00006	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SVLVstd11_00006	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SVLVstd9_00006	09/30/17		Restek, Lot A0118008		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SVLVSURSPK_00002	08/31/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
..svmethylmetha_00011	02/13/20		Absolute, Lot 021315		(Purchased Reagent)		Methyl methanesulfonate	1000 ug/mL
..SVNNITROPYROs_00017	01/08/19		absolute, Lot 010816		(Purchased Reagent)		N-Nitrosopyrrolidine	1000 ug/mL

Reagent

GCDBCINTSTD_00001

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32025 **Lot No.:** A099571

Description : Dibutyl Chlorendate Mix

Dibutylchlorendate 200µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2017 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dibutyl chlorendate	202.0 µg/mL	+/- 1.4323 µg/mL	Gravimetric
	CAS # 1770-80-5 (Lot CAP-25493-47)		+/- 6.8753 µg/mL	Unstressed
	Purity 99%		+/- 7.1168 µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

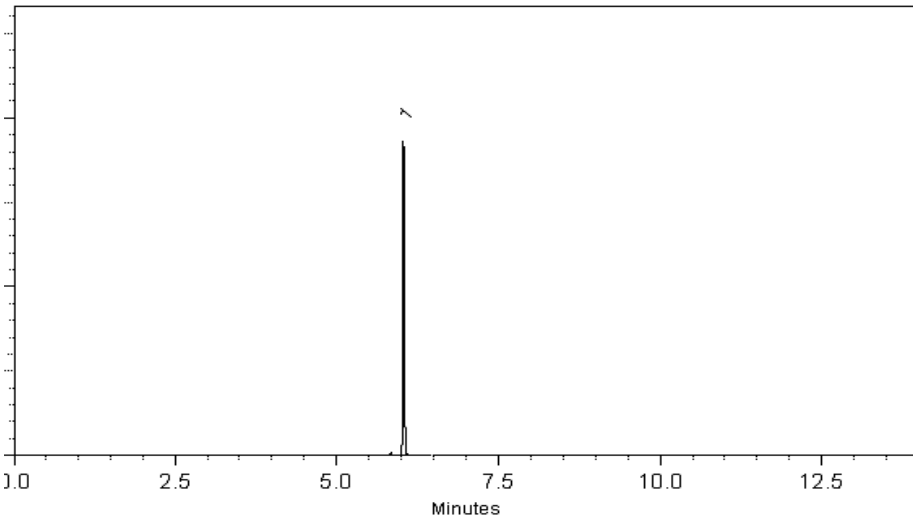
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen to guarantee product quality. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 18-Nov-2013 **Balance:** 1125113331

Diane Shaffer - QAAnalyst

Date Passed: 21-Nov-2013

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

GCDCAASSTD_00004

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567804 **Lot No.:** A0113703

Description : DCAA Standard

DCAA Standard 1,000 µg/ml, Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2017 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2,4-dichlorophenylacetic acid	1,010.0 µg/mL	+/- 5.9991	µg/mL	Gravimetric
	CAS # 19719-28-9 (Lot S30618V)		+/- 38.0771	µg/mL	Unstressed
	Purity 99%		+/- 38.1275	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

(2) Rec'd 11-5-15 DCAA

Reagent

GCHERBICALMIX_00015

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569749 **Lot No.:** A0120183

Description : Herbicide List #1 Standard (2015)

Herbicide List #1 Standard (2015) 50-20,000 µg/ml, Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2018 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dalapon	200.3 µg/mL	+/- 1.4203 µg/mL	Gravimetric
	CAS # 75-99-0 (Lot 4819200)		+/- 10.6847 µg/mL	Unstressed
	Purity 95%		+/- 10.7025 µg/mL	Stressed
2	Dicamba	100.2 µg/mL	+/- 0.7105 µg/mL	Gravimetric
	CAS # 1918-00-9 (Lot 3357300)		+/- 5.3451 µg/mL	Unstressed
	Purity 98%		+/- 5.3540 µg/mL	Stressed
3	MCPP (Mecoprop)	20,035.0 µg/mL	+/- 117.3093 µg/mL	Gravimetric
	CAS # 93-65-2 (Lot PB041700)		+/- 1,065.6864 µg/mL	Unstressed
	Purity 99%		+/- 1,067.4715 µg/mL	Stressed
4	MCPA	20,020.8 µg/mL	+/- 117.2262 µg/mL	Gravimetric
	CAS # 94-74-6 (Lot 4868000)		+/- 1,064.9311 µg/mL	Unstressed
	Purity 96%		+/- 1,066.7149 µg/mL	Stressed
5	Dichlorprop	200.0 µg/mL	+/- 1.4182 µg/mL	Gravimetric
	CAS # 120-36-5 (Lot 3684800)		+/- 10.6683 µg/mL	Unstressed
	Purity 99%		+/- 10.6860 µg/mL	Stressed
6	2,4-D	201.0 µg/mL	+/- 1.4253 µg/mL	Gravimetric
	CAS # 94-75-7 (Lot 4457200)		+/- 10.7216 µg/mL	Unstressed
	Purity 99%		+/- 10.7395 µg/mL	Stressed
7	Pentachlorophenol	50.5 µg/mL	+/- 0.3581 µg/mL	Gravimetric
	CAS # 87-86-5 (Lot 160412JLM)		+/- 2.6937 µg/mL	Unstressed
	Purity 99%		+/- 2.6982 µg/mL	Stressed

8	2,4,5-TP (silvex)		50.2 µg/mL	+/- 0.3556	µg/mL	Gravimetric
	CAS # 93-72-1	(Lot 4185600)		+/- 2.6751	µg/mL	Unstressed
	Purity 99%			+/- 2.6795	µg/mL	Stressed
9	2,4,5-T		50.5 µg/mL	+/- 0.3581	µg/mL	Gravimetric
	CAS # 93-76-5	(Lot 4236800)		+/- 2.6937	µg/mL	Unstressed
	Purity 99%			+/- 2.6982	µg/mL	Stressed
10	2,4-DB		201.5 µg/mL	+/- 1.4288	µg/mL	Gravimetric
	CAS # 94-82-6	(Lot 4174600)		+/- 10.7483	µg/mL	Unstressed
	Purity 99%			+/- 10.7662	µg/mL	Stressed
11	Dinoseb		202.0 µg/mL	+/- 1.4323	µg/mL	Gravimetric
	CAS # 88-85-7	(Lot 50001)		+/- 10.7750	µg/mL	Unstressed
	Purity 99%			+/- 10.7929	µg/mL	Stressed
12	Picloram		200.5 µg/mL	+/- 1.4217	µg/mL	Gravimetric
	CAS # 1918-02-1	(Lot 863400)		+/- 10.6949	µg/mL	Unstressed
	Purity 99%			+/- 10.7128	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Specific Reference Material Notes:
Failure to derivatize this standard will lead to incorrect quantitative results.

Reagent

GCPEST(PEM)S_00006

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32417 **Lot No.:** A0113122

Description : Degradation Calibration Mixture

Degradation Calibration Mixture 100-200 µg/mL, MTBE,1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2019 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Endrin		101.0 µg/mL	+/- 0.7162	µg/mL	Gravimetric
	CAS # 72-20-8	(Lot LC06045V)		+/- 3.9713	µg/mL	Unstressed
	Purity 99%			+/- 6.2826	µg/mL	Stressed
2	4,4'-DDT		201.0 µg/mL	+/- 1.4253	µg/mL	Gravimetric
	CAS # 50-29-3	(Lot S37912V)		+/- 7.9033	µg/mL	Unstressed
	Purity 99%			+/- 12.5029	µg/mL	Stressed

Solvent: MTBE
CAS # 1634-04-4
Purity 99%

Rec'd
9-9-15

Reagent

GCPEST(SURR)S_00006

Certificate of Analysis

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

Catalog No. : 32000 **Lot No.:** A069056
Description : Pesticide Surrogate Mix
Expiration Date[1]**:** January 2017 **Storage:** Refrigerate
Handling: Warm & Sonicate prior to use

Elution Order	Compound	CAS #	Percent Purity [2]	Concentration [3] (weight/volume)	% Uncertainty [4] (95% C.L.; K=2)
1	2,4,5,6-Tetrachloro-m-xylene	877-09-8	98%	199.920 ug/ml	+/-0.58 %
2	Decachlorobiphenyl	2051-24-3	99%	200.000 ug/ml	+/-0.58 %
Solvent:	Acetone	67-64-1	99%		

Column:
30m x .32mm x .25um
Rtx-CLPesticides II (cat.#11324)

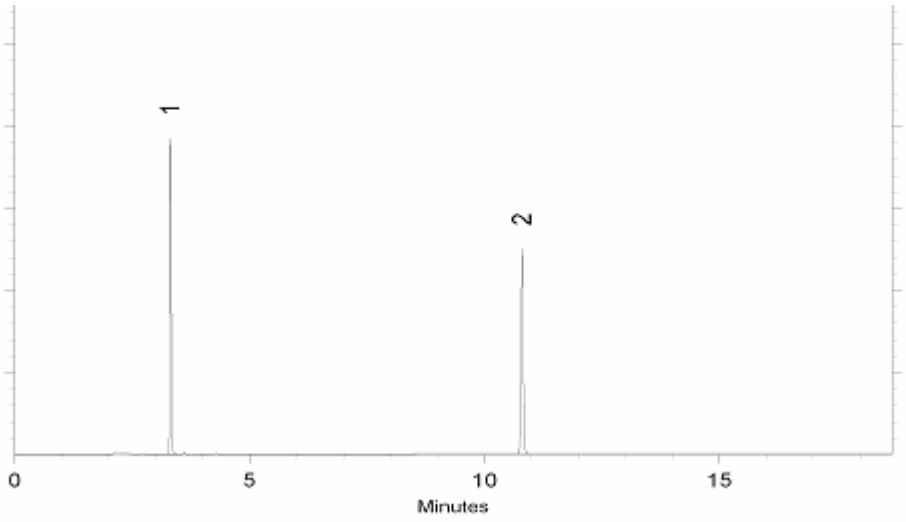
Carrier Gas:
helium @ 40cm/sec.

Temp. Program:
200°C to 300°C
@ 15°C/min. (hold 12 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



Diane Shaffer - QA Analyst **Date Passed:** 08/03/2009 **Balance:** 1128342314

Manufactured under Restek's ISO 9001-2000 Registered Quality System Certificate #FMB0397

1 Expiration date of the unopened ampule stored at recommended temperature.
2A Purity was determined by one or more of the following techniques: GC/FID, HPLC, GC/ECD, GC/MS. Value rounded to the nearest whole number. In addition to detectors listed above, chemical identity and purity are confirmed using one or more of the following: MS, DSC, solid probe MS, GC/FPD, GC/NPD, GC/TC, FTIR, melting point, refractive index, and Karl Fisher. See data pack or contact Restek for further details.
2B Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities.
2C Compounds with a listed purity of less than 99% may be salts, derivatives, or hydrates. The listed purity is actually a correction factor that was used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound.
2D Purity of isomeric compounds is reported as the sum of the isomers. Value is rounded to the nearest whole number after summation.
3 Based upon gravimetric preparation with balance calibration verified using NIST traceable weights (seven mass levels).
4 Uncertainties determined using repeatability and reproducibility data for balances and glassware from measurement systems analysis methodology, balance and glassware tolerances, raw material purity, and, where applicable, eccentricity and linearity values from an accredited calibration laboratory.

Tech Tip:

Decachlorobiphenyl has poor solubility in most organic solvents. The maximum concentration that can be prepared in acetone, hexane, or isooctane is 200µg/mL. Temperature will affect the solubility as well. Storing solutions at reduced temperatures will cause decachlorobiphenyl to precipitate.
Products containing decachlorobiphenyl must be sonicated for a minimum of 10 minutes prior to opening the ampul. Because each ultrasonic bath operates at a dif energy level, 10 minutes is a guideline only. Longer sonication time will not affect product quality.
These precautions apply to working solutions prepared in your laboratory as well. The amount of compound that precipitates depends on concentration AND temperature. If you store your your standards at a temperature lower than 4°C (even dilute solutions), allow extra sonication time.

Reagent

GCPEST(SURR)S_00007

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0105135

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2020 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2,4,5,6-Tetrachloro-m-xylene	200.1 µg/mL	+/- 1.1662	µg/mL	Gravimetric
	CAS # 877-09-8 (Lot 0052481)		+/- 6.2265	µg/mL	Unstressed
	Purity 98%		+/- 8.2835	µg/mL	Stressed
2	Decachlorobiphenyl (BZ# 209)	201.3 µg/mL	+/- 1.1731	µg/mL	Gravimetric
	CAS # 2051-24-3 (Lot ER071509-01)		+/- 6.2634	µg/mL	Unstressed
	Purity 99%		+/- 8.3325	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Rec'd 3/6/15

Reagent

GCpest/pcbINT_00001

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32279 **Lot No.:** A099353

Description : 1-Bromo-2-nitrobenzene Standard

Series 8141A NPD Internal Std 1-bromo-2-nitrobenzene 1000µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2017 **Storage:** 10°C or colder

Handling: This product is photosensitive

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)			
1	1-Bromo-2-nitrobenzene		1,004.0	µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 577-19-5	(Lot 643872/1)			+/- 10.6574	µg/mL	Unstressed
	Purity 99%				+/- 12.3931	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Reagent

GCPESTAB3STD_00001

RESTEK

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32415 **Lot No.:** A093456

Description : Organochlorine Pesticide Mix AB #3

Organochlorine Pesticide Mix AB#3 2000µg/mL, Hexane/Toluene (50:50), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 2017 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	alpha-BHC	2,000.0 µg/mL	+/- 11.7371 µg/mL	Gravimetric
	CAS # 319-84-6		+/- 70.5365 µg/mL	Unstressed
	Purity 99%		+/- 121.7212 µg/mL	Stressed
2	gamma-BHC (Lindane)	2,000.0 µg/mL	+/- 11.7371 µg/mL	Gravimetric
	CAS # 58-89-9		+/- 70.5365 µg/mL	Unstressed
	Purity 99%		+/- 121.7212 µg/mL	Stressed
3	beta-BHC	2,000.2 µg/mL	+/- 11.7382 µg/mL	Gravimetric
	CAS # 319-85-7		+/- 70.5429 µg/mL	Unstressed
	Purity 98%		+/- 121.7321 µg/mL	Stressed
4	delta-BHC	2,000.0 µg/mL	+/- 11.7371 µg/mL	Gravimetric
	CAS # 319-86-8		+/- 70.5365 µg/mL	Unstressed
	Purity 99%		+/- 121.7212 µg/mL	Stressed
5	Heptachlor	2,000.0 µg/mL	+/- 11.7371 µg/mL	Gravimetric
	CAS # 76-44-8		+/- 70.5365 µg/mL	Unstressed
	Purity 99%		+/- 121.7212 µg/mL	Stressed
6	Aldrin	2,000.0 µg/mL	+/- 11.7371 µg/mL	Gravimetric
	CAS # 309-00-2		+/- 70.5365 µg/mL	Unstressed
	Purity 99%		+/- 121.7212 µg/mL	Stressed
7	Heptachlor epoxide (isomer B)	2,000.0 µg/mL	+/- 11.7371 µg/mL	Gravimetric
	CAS # 1024-57-3		+/- 70.5365 µg/mL	Unstressed
	Purity 99%		+/- 121.7212 µg/mL	Stressed
8	trans-Chlordane	2,000.0 µg/mL	+/- 11.7371 µg/mL	Gravimetric
	CAS # 5103-74-2		+/- 70.5365 µg/mL	Unstressed
	Purity 99%		+/- 121.7212 µg/mL	Stressed
9	cis-Chlordane	2,000.0 µg/mL	+/- 11.7371 µg/mL	Gravimetric
	CAS # 5103-71-9		+/- 70.5365 µg/mL	Unstressed
	Purity 99%		+/- 121.7212 µg/mL	Stressed

10	4,4'-DDE	2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 72-55-9			+/-	70.5365	µg/mL	Unstressed
	Purity 99%			+/-	121.7212	µg/mL	Stressed
11	Endosulfan I	2,000.2	µg/mL	+/-	11.7382	µg/mL	Gravimetric
	CAS # 959-98-8			+/-	70.5429	µg/mL	Unstressed
	Purity 98%			+/-	121.7321	µg/mL	Stressed
12	Dieldrin	2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 60-57-1			+/-	70.5365	µg/mL	Unstressed
	Purity 99%			+/-	121.7212	µg/mL	Stressed
13	Endrin	2,000.2	µg/mL	+/-	11.7382	µg/mL	Gravimetric
	CAS # 72-20-8			+/-	70.5429	µg/mL	Unstressed
	Purity 98%			+/-	121.7321	µg/mL	Stressed
14	4,4'-DDD	1,999.2	µg/mL	+/-	11.7322	µg/mL	Gravimetric
	CAS # 72-54-8			+/-	70.5072	µg/mL	Unstressed
	Purity 97%			+/-	121.6706	µg/mL	Stressed
15	Endosulfan II	2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 33213-65-9			+/-	70.5365	µg/mL	Unstressed
	Purity 99%			+/-	121.7212	µg/mL	Stressed
16	4,4'-DDT	2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 50-29-3			+/-	70.5365	µg/mL	Unstressed
	Purity 99%			+/-	121.7212	µg/mL	Stressed
17	Endrin aldehyde	2,000.1	µg/mL	+/-	11.7379	µg/mL	Gravimetric
	CAS # 7421-93-4			+/-	70.5415	µg/mL	Unstressed
	Purity 97%			+/-	121.7297	µg/mL	Stressed
18	Methoxychlor	2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 72-43-5			+/-	70.5365	µg/mL	Unstressed
	Purity 99%			+/-	121.7212	µg/mL	Stressed
19	Endosulfan sulfate	2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 1031-07-8			+/-	70.5365	µg/mL	Unstressed
	Purity 99%			+/-	121.7212	µg/mL	Stressed
20	Endrin ketone	1,999.8	µg/mL	+/-	11.7357	µg/mL	Gravimetric
	CAS # 53494-70-5			+/-	70.5277	µg/mL	Unstressed
	Purity 95%			+/-	121.7059	µg/mL	Stressed

Solvent: Hexane/Toluene (50:50)
CAS # 110-54-3/108-88-3
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

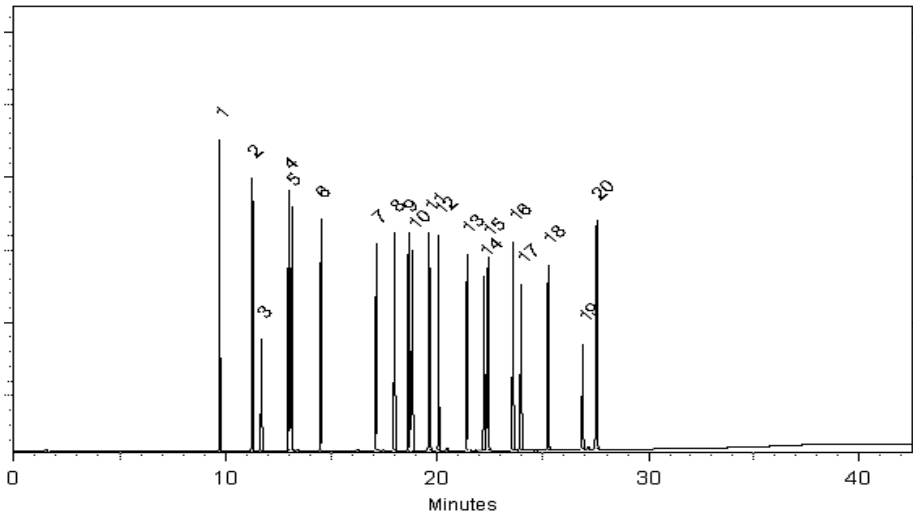
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
150°C to 300°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
300°C

Det. Type:
ECD



Jennifer L. Pollino - QC Analyst

Date Passed: 13-Feb-2013 **Balance:** B251644995

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date of the unopened ampul stored at the recommended storage condition is the last day of the month listed in the expiration date field.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

GCTOXSTDSTD_00001

RESTEK

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.Restek.com

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32071 **Lot No.:** A090203

Description : Toxaphene Standard

Toxaphene 5000ug/mL, Isooctane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 2016 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Toxaphene	5,000.0 µg/mL	+/- 29.3428	µg/mL	Gravimetric
	CAS # 8001-35-2		+/- 104.3791	µg/mL	Unstressed
	Purity ----%		+/- 171.8349	µg/mL	Stressed

Solvent: Isooctane
CAS # 540-84-1
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

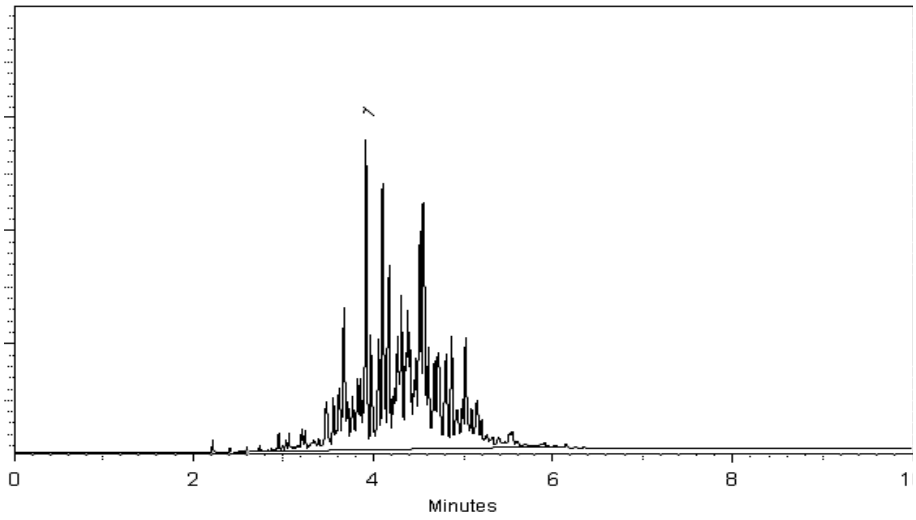
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



Jennifer L. Pollino - QC Analyst

Date Passed: 15-Aug-2012 **Balance:** 1121472889

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date of the unopened ampul stored at the recommended storage condition is the last day of the month listed in the expiration date field.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

Herb(RTS)spk_00006

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569750 **Lot No.:** A0116679

Description : Herbicide LCS RTS (2015)

Herbicide LCS RTS (2015) 5-2000 µg/ml, Methanol, 25 ml/bottle

Container Size : 25 mL **Pkg Amt:** > 25 mL

Expiration Date : July 31, 2017 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dalapon **CAS #** 75-99-0 (Lot 4141200) **Purity** 96%	20.0 µg/mL	+/- 0.1602 µg/mL +/- 1.0718 µg/mL +/- 1.0735 µg/mL	Gravimetric Unstressed Stressed
2	Picloram **CAS #** 1918-02-1 (Lot 34ATO) **Purity** 98%	20.0 µg/mL	+/- 0.1599 µg/mL +/- 1.0700 µg/mL +/- 1.0718 µg/mL	Gravimetric Unstressed Stressed
3	Dicamba **CAS #** 1918-00-9 (Lot 3719800) **Purity** 97%	10.0 µg/mL	+/- 0.0799 µg/mL +/- 0.5342 µg/mL +/- 0.5351 µg/mL	Gravimetric Unstressed Stressed
4	2,4-D **CAS #** 94-75-7 (Lot 4457200) **Purity** 99%	20.0 µg/mL	+/- 0.1602 µg/mL +/- 1.0715 µg/mL +/- 1.0733 µg/mL	Gravimetric Unstressed Stressed
5	MCPA **CAS #** 94-74-6 (Lot 4006300) **Purity** 96%	2,000.3 µg/mL	+/- 11.6297 µg/mL +/- 106.3871 µg/mL +/- 106.5653 µg/mL	Gravimetric Unstressed Stressed
6	MCPP (Mecoprop) **CAS #** 93-65-2 (Lot PB041700) **Purity** 99%	2,000.2 µg/mL	+/- 11.6293 µg/mL +/- 106.3841 µg/mL +/- 106.5623 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorprop **CAS #** 120-36-5 (Lot 3204400) **Purity** 99%	20.1 µg/mL	+/- 0.1608 µg/mL +/- 1.0758 µg/mL +/- 1.0776 µg/mL	Gravimetric Unstressed Stressed

8	2,4-DB		20.1	µg/mL	+/-	0.1605	µg/mL	Gravimetric
	CAS # 94-82-6	(Lot 1327400)			+/-	1.0737	µg/mL	Unstressed
	Purity 99%				+/-	1.0754	µg/mL	Stressed
9	2,4,5-T		5.0	µg/mL	+/-	0.0446	µg/mL	Gravimetric
	CAS # 93-76-5	(Lot 2219100)			+/-	0.2691	µg/mL	Unstressed
	Purity 99%				+/-	0.2696	µg/mL	Stressed
10	2,4,5-TP (silvex)		5.0	µg/mL	+/-	0.0444	µg/mL	Gravimetric
	CAS # 93-72-1	(Lot 4185600)			+/-	0.2680	µg/mL	Unstressed
	Purity 99%				+/-	0.2685	µg/mL	Stressed
11	Dinoseb		20.1	µg/mL	+/-	0.1608	µg/mL	Gravimetric
	CAS # 88-85-7	(Lot 50001)			+/-	1.0758	µg/mL	Unstressed
	Purity 99%				+/-	1.0776	µg/mL	Stressed
12	Pentachlorophenol		5.0	µg/mL	+/-	0.0446	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 150902JLM)			+/-	0.2690	µg/mL	Unstressed
	Purity 98%				+/-	0.2694	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Specific Reference Material Notes:
Failure to derivatize this standard will lead to incorrect quantitative results.

Reagent

M6020ICS-0A_00006

INORGANIC VENTURES™
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-0A
Lot Number:	J2-MEB533111
Matrix:	1.4% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cl-, 2 000 µg/mL ea: C, 1 000 µg/mL ea: Al, Ca, Fe, K, Mg, Na, P, S, 20 µg/mL ea: Mo, Ti

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**1 001 ± 5 µg/mL**	**Calcium, Ca**	**1 001 ± 6 µg/mL**
Carbon, C	**2 002 ± 10 µg/mL**	**Chloride, Chloride**	**10 010.0 ± 50.0 µg/mL**
Iron, Fe	**1 001 ± 5 µg/mL**	**Magnesium, Mg**	**1 001 ± 5 µg/mL**
Molybdenum, Mo	**20.02 ± 0.09 µg/mL**	**Phosphorus, P**	**1 001 ± 8 µg/mL**
Potassium, K	**1 001 ± 4 µg/mL**	**Sodium, Na**	**1 001 ± 4 µg/mL**
Sulfur, S	**1 001 ± 7 µg/mL**	**Titanium, Ti**	**20.03 ± 0.13 µg/mL**

Certified Density: 1.033 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Chloride	Acidimetric	84L	84L
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	ICP Assay	3154	892205
S	Acidimetric	84L	84L
Ti	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	060808

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\Sigma x_i}{n}$$

$$\text{Uncertainty } (\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$$

$(\bar{x})$ = mean
x_i = individual results
n = number of measurements
2 = the coverage factor.
$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-FIlter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000410	M	Eu	<	0.000102	s	Na	<		M	Se	<	0.001333	M	Zn		0.005643
s	Al	<		s	Fe	<		M	Nb	<	0.000102	n	Si	<		M	Zr	<	0.000410
M	As	<	0.015390	M	Ga	<	0.000102	M	Nd	<	0.000205	M	Sm	<	0.000102				
M	Au	<	0.001026	M	Gd	<	0.000102	M	Ni	<	0.002770	M	Sn	<	0.000615				
O	B	<	0.010330	O	Ge	<	0.020660	M	Os	<	0.000102	O	Sr		0.003543				
M	Ba	<	0.001846	M	Hf	<	0.000102	s	P	<		M	Ta	<	0.000102				
O	Be	<	0.000103	M	Hg	<	0.000307	M	Pb		0.003796	M	Tb	<	0.000102				
M	Bi	<	0.000205	M	Ho	<	0.000102	M	Pd	<	0.000102	M	Te	<	0.000205				
s	Ca	<		M	In	<	0.000102	M	Pr	<	0.000102	M	Th	<	0.000102				
O	Cd		0.001549	M	Ir	<	0.000102	M	Pt	<	0.000102	s	Ti	<					
M	Ce	<	0.000410	s	K	<		M	Rb		0.012927	M	Tl	<	0.000102				
M	Co	<	0.004309	M	La	<	0.000205	M	Re	<	0.000102	M	Tm	<	0.000102				
M	Cr		0.012619	O	Li		0.000999	M	Rh	<	0.000102	M	U	<	0.000102				
M	Cs	<	0.000205	M	Lu	<	0.000102	M	Ru	<	0.000102	M	V	<	0.001436				
O	Cu	<	0.015495	s	Mg	<		s	S	<		M	W		0.001128				
M	Dy	<	0.000102	O	Mn		0.001169	M	Sb	<	0.000615	M	Y	<	0.000102				
M	Er	<	0.000102	s	Mo	<		M	Sc	<	0.000102	M	Yb	<	0.000102				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 26, 2015

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 26, 2018**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Zach Saunders
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

M6020ICS-0B_00007

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-0B
Lot Number:	J2-MEB569107
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	2 µg/mL ea:

Ag,	As,	Cd,
Co,	Cr3,	Cu,
Mn,	Ni,	Zn

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**2.000 ± 0.013 µg/mL**	**Cadmium, Cd**	**2.000 ± 0.013 µg/mL**
Chromium+3, Cr3	**2.000 ± 0.011 µg/mL**	**Cobalt, Co**	**2.000 ± 0.010 µg/mL**
Copper, Cu	**2.000 ± 0.013 µg/mL**	**Manganese, Mn**	**2.000 ± 0.011 µg/mL**
Nickel, Ni	**2.000 ± 0.011 µg/mL**	**Silver, Ag**	**2.000 ± 0.014 µg/mL**
Zinc, Zn	**2.000 ± 0.013 µg/mL**		

Certified Density: 1.013 g/mL (measured at 20 ± 1 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
As	EDTA		See Sec. 4.2
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean

x_i = individual results

n = number of measurements

Uncertainty $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$ 2 = the coverage factor.

$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains “LOW” levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 26, 2015

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 26, 2018**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

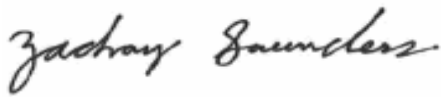
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Zach Saunders
Product Documentation Technician



Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MCALSPECAREV_00007

INORGANIC VENTURES™
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TAPITT-CAL-SPECA-REV
Lot Number:	J2-MEB575123
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	2 500 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 1 250 µg/mL ea: Iron, 25 µg/mL ea: Aluminum, Manganese, 5 µg/mL ea: Silver, Arsenic, Barium, Beryllium, Cadmium, Cobalt, Chromium+3, Copper, Nickel, Lead, Selenium, Strontium, Thallium, Vanadium, Zinc

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	25.01 ± 0.13 µg/mL	Arsenic, As	5.000 ± 0.032 µg/mL
Barium, Ba	4.997 ± 0.028 µg/mL	Beryllium, Be	5.003 ± 0.032 µg/mL
Cadmium, Cd	4.998 ± 0.032 µg/mL	Calcium, Ca	2 500 ± 11 µg/mL
Chromium+3, Cr3	4.999 ± 0.028 µg/mL	Cobalt, Co	4.999 ± 0.025 µg/mL
Copper, Cu	4.998 ± 0.032 µg/mL	Iron, Fe	1 250 ± 6 µg/mL
Lead, Pb	4.999 ± 0.025 µg/mL	Magnesium, Mg	2 500 ± 12 µg/mL
Manganese, Mn	24.99 ± 0.12 µg/mL	Nickel, Ni	4.998 ± 0.028 µg/mL
Potassium, K	2 500 ± 11 µg/mL	Selenium, Se	4.998 ± 0.028 µg/mL
Silver, Ag	4.998 ± 0.036 µg/mL	Sodium, Na	2 500 ± 11 µg/mL
Strontium, Sr	5.002 ± 0.032 µg/mL	Thallium, Tl	4.999 ± 0.040 µg/mL
Vanadium, V	5.002 ± 0.032 µg/mL	Zinc, Zn	5.001 ± 0.028 µg/mL

Certified Density: 1.048 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	060502
Al	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
As	EDTA		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	ICP Assay	3112a	030730
Cr3	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	ICP Assay	3141a	051220
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	000612
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Tl	ICP Assay	3158	993012
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean

x_i = individual results

n = number of measurements

Uncertainty (±) = 2 [$\Sigma(s_i)^2$]$^{1/2}$ 2 = the coverage factor.

[$\Sigma(s_i)^2$]$^{1/2}$ = The square root of the sum of the squares of the most common errors (where's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799, 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 27, 2015

11.2 Expiration Date

EXPIRES
1 MAR 2017

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Donna Senn

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Brian Alexander

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Paul R Gaines

Reagent

MCALSPECB_00009

INORGANIC VENTURES™
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TAPITT-CAL-SPECB
Lot Number:	J2-MEB575124
Matrix:	3% (v/v) HNO3 tr. HF
Value / Analyte(s):	250 µg/mL ea: Si, 5 µg/mL ea: B, Mo, Sb, Sn, Ti

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	4.998 ± 0.043 µg/mL	Boron, B	5.002 ± 0.032 µg/mL
Molybdenum, Mo	4.998 ± 0.034 µg/mL	Silicon, Si	249.9 ± 1.9 µg/mL
Tin, Sn	4.998 ± 0.030 µg/mL	Titanium, Ti	4.998 ± 0.039 µg/mL

Certified Density: 1.013 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	Calculated		See Sec. 4.2
B	ICP Assay	3107	070514
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Sb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Si	Calculated		See Sec. 4.2
Si	ICP Assay	3150	071204
Sn	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Ti	ICP Assay	3162a	060808

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\sum x_i}{n}$ ($\bar{x}$) = mean
x_i = individual results
n = number of measurements

Uncertainty (±) = $2\ [\ \Sigma(s_i)^2\ ]^{1/2}$ 2 = the coverage factor.
$[\ \Sigma(s_i)^2\ ]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 27, 2015

11.2 Expiration Date

EXPIRES
1 MAR 2017

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MCGHG1-1_00011

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 - 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

#1994446
1994447
Rec'd 7/12/16 RJR

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGHG1
Lot Number:	J2-HG02140
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Mercury
Starting Material:	Hg Metal
Starting Material Lot#:	1780
Starting Material Purity:	99.9997%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1 000 ± 3 µg/mL

Certified Density: 1.029 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **1004 ± 5 µg/mL**
ICP Assay NIST SRM 3133 Lot Number: 061204

Assay Method #2 **998 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-FIlter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.003050	M	Eu	<	0.000203	O	Na		0.000779	M	Se	<	0.014233	O	Zn		0.000145
O	Al	<	0.000753	O	Fe	<	0.001614	M	Nb	<	0.000610	O	Si		0.000890	O	Zr	<	0.001614
M	As	<	0.001017	M	Ga	<	0.000203	M	Nd	<	0.000203	M	Sm	<	0.000203				
M	Au	<	0.002033	M	Gd	<	0.000203	O	Ni	<	0.001614	M	Sn	<	0.000203				
M	B	<	0.004067	M	Ge	<	0.001627	n	Os	<		O	Sr	<	0.000215				
M	Ba	<	0.000610	M	Hf	<	0.000610	O	P	<	0.010760	M	Ta	<	0.000610				
O	Be	<	0.000108	s	Hg	<		M	Pb	<	0.000610	M	Tb	<	0.000203				
M	Bi	<	0.002033	M	Ho	<	0.000203	M	Pd	<	0.003050	M	Te	<	0.004067				
O	Ca		0.001057	M	In	<	0.000407	M	Pr	<	0.000203	M	Th	<	0.000407				
M	Cd	<	0.000203	M	Ir	<	0.000203	M	Pt	<	0.000203	O	Ti	<	0.000646				
M	Ce	<	0.000203	O	K		0.000556	M	Rb	<	0.000203	O	Tl	<	0.005380				
M	Co	<	0.000407	M	La	<	0.000203	M	Re	<	0.000203	M	Tm	<	0.000203				
O	Cr	<	0.000538	O	Li	<	0.000215	M	Rh	<	0.000203	M	U	<	0.004067				
M	Cs	<	0.004067	M	Lu	<	0.000203	M	Ru	<	0.000203	O	V	<	0.000538				
O	Cu	<	0.002152	O	Mg		0.000167	O	S	<	0.005380	M	W	<	0.001017				
M	Dy	<	0.000203	O	Mn	<	0.000161	M	Sb	<	0.002033	M	Y	<	0.000203				
M	Er	<	0.000203	M	Mo	<	0.002033	O	Sc	<	0.000430	M	Yb	<	0.000203				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+
Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.
Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.
Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 29, 2015

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- December 29, 2018

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Maurice Harris
Product Documentation Technician

Certificate Approved By:

Michael Booth
QC Supervisor

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MHGICV-1_00007

1878953
1878954

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

ULTRAgrade™ Solution
Mercury ICP / ICP-MS Standard
1000 µg/mL

Catalog Number: ICP-080
Lot Number: T00602
Job Number: J00018291
Lot Issue Date: 05/23/2014
Expiration Date: 06/30/2021

Starting Material:	*mercuric nitrate ***(light sensitive)***
Starting Material Purity:	99.999%
Starting Material Lot #:	NT00079
Matrix:	2% nitric acid in low TOC water (< 50 ppb)
Atomic Weight Hg:	200.61

Certified Value: 1001 ± 2 µg/mL

This Certified Reference Material (CRM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system. The analyte concentration(s) were prepared and verified by an ISO Guide 34 / ISO 17025 accredited laboratory, and compared to calibration standards independently prepared using NIST SRM(s). The certified value and uncertainty value at the 95% confidence level for each analyte is determined gravimetrically.

Classical Wet Assay Method: Theoretical, based on gravimetric measurements

Confirmation by Inductively Coupled Plasma Spectroscopy (ICP / ICP/MS) vs. NIST SRM 3133

ULTRA uses purified acids, 18 megohm double deionized water, calibrated Class A glassware & meticulously cleaned bottles in the manufacturing of ULTRAgrade standards. Balances used in the manufacturing of this standard are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001.

Trace Metallic Impurities in Solution Standard in µg/mL:

*	Al	<0.005	ND	*	Ga	<0.005	ND	n	Nb			n	S	
*	Sb	<0.005	ND	n	Ge			n	Os			n	Ta	
*	As	<0.005	ND	n	Au			*	Pd	<0.005	ND	n	Te	
*	Ba	<0.005	ND	n	Hf			*	P	<0.005	ND	n	Tb	
*	Be	<0.005	ND	n	Ho			*	Pt	<0.005	ND	*	Tl	<0.005 ND
*	Bi	<0.005	ND	*	In	<0.005	ND	*	K	<0.005	ND	n	Th	
*	B	<0.005	ND	n	Ir			n	Pr			n	Tm	
*	Cd	<0.005	ND	*	Fe	<0.005	ND	n	Re			*	Sn	<0.005 ND
*	Ca	<0.005	ND	*	La	<0.005	ND	n	Rh			*	Ti	<0.005 ND
n	Ce			*	Pb	<0.005	ND	n	Rb			n	W	
n	Cs			*	Li	<0.005	ND	n	Ru			n	U	
*	Cr	<0.005	ND	n	Lu			n	Sm			*	V	<0.005 ND
*	Co	<0.005	ND	*	Mg	<0.005	ND	n	Sc			n	Yb	
*	Cu	<0.005	ND	*	Mn	<0.005	ND	*	Se	<0.005	ND	n	Y	
n	Dy			s	Hg			*	Si	<0.005	ND	*	Zn	<0.005 ND
*	Er	<0.005	ND	*	Mo	<0.005	ND	*	Ag	<0.005	ND	n	Zr	
*	Eu	<0.005	ND	n	Nd			*	Na	<0.005	ND			
*	Gd	<0.005	ND	*	Ni	<0.005	D	*	Sr	<0.005	ND			

* - element checked for
ND – not detected
I – spectral interference
D – detected
n – not checked for
s – solution standard element

Density of Solution (measured at 20.00°C ± 0.05°C): 1.0100 g/mL

ACCREDITED
ISO 17025:2005
Accredited
A2LA
Cert. No. 0881.01

ISO 9001:2000
Registered
TUV USA, Inc.
Cert. No. 05-1004

William J. Leary
Quality Assurance Manager

Reagent

MICPMSICV_00019

Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

Chemical Testing
Cert #2495.02

Catalog Number: ZCAL-60-250 **Lot No.** 10-166WL

Description: Custom Claritas Standard

Matrix: 5% HNO_3 / Tr. Tart. Acid / Tr. HF

This **CLARITAS PPT®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for inorganic spectroscopic instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

The CRM is prepared from high purity single element concentrates of individual elements using Class A laboratory ware to give precise concentrations.

Instrumental Analysis by ICP Spectrometer:

Analyte	Labeled	Uncertainty	SRM	Analyte	Labeled	Uncertainty	SRM
Ca	1000 µg/mL	±5 µg/mL	3109a*	Co	2 µg/mL	±0.01 µg/mL	3113*
K	1000 µg/mL	±5 µg/mL	3141a*	Cr	2 µg/mL	±0.01 µg/mL	3112a*
Mg	1000 µg/mL	±5 µg/mL	3131a*	Cu	2 µg/mL	±0.01 µg/mL	3114*
Na	1000 µg/mL	±5 µg/mL	3152a*	Mo	2 µg/mL	±0.01 µg/mL	3134*
Fe	500 µg/mL	±3 µg/mL	3126a*	Ni	2 µg/mL	±0.01 µg/mL	3136*
Si	100 µg/mL	±0.5 µg/mL	3150*	Pb	2 µg/mL	±0.01 µg/mL	3128*
Al	10 µg/mL	±0.05 µg/mL	3101a*	Sb	2 µg/mL	±0.01 µg/mL	3102a*
Mn	10 µg/mL	±0.05 µg/mL	3132*	Se	2 µg/mL	±0.01 µg/mL	3149*
Ag	2 µg/mL	±0.01 µg/mL	3151*	Sn	2 µg/mL	±0.01 µg/mL	3161a*
As	2 µg/mL	±0.01 µg/mL	3103a*	Sr	2 µg/mL	±0.01 µg/mL	3153a*
B	2 µg/mL	±0.01 µg/mL	3107*	Ti	2 µg/mL	±0.01 µg/mL	3162a*
Ba	2 µg/mL	±0.01 µg/mL	3104a*	Tl	2 µg/mL	±0.01 µg/mL	3158*
Be	2 µg/mL	±0.01 µg/mL	3105a*	V	2 µg/mL	±0.01 µg/mL	3165*
Cd	2 µg/mL	±0.01 µg/mL	3108*	Zn	2 µg/mL	±0.01 µg/mL	3168a*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available)

SPEX CertiPrep Reference Multi: Lot# ALL8

Trace Metallic Impurities in the Actual Solution via ICP-MS Analysis:

Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L
Au	<0.5	Ga	<1	Ir	<0.7	Pd	<1	Sc	30	Tm	<0.04
Bi	<0.3	Gd	<0.3	La	<6	Pr	<0.06	Sm	<0.4	U	0.05
Ce	2	Ge	<5	Li	<5	Pt	<0.4	Ta	<10	W	<0.2
Cs	<0.1	Hf	<0.5	Lu	<0.04	Rb	<5	Tb	0.03	Y	<0.9
Dy	<0.01	Hg	<1	Nb	<1	Re	<0.3	Te	<4	Yb	<0.01
Er	<0.01	Ho	<0.01	Nd	<0.3	Rh	<0.5	Th	<0.9	Zr	<3
Eu	<0.1	In	<0.5	P	<500	Ru	<2				

1812698

ID: MICPMSICV_00019
Exp: 12/31/16 Prpd: WTR
TAPITT ICP-MS ICV

Balances are calibrated regularly with weight sets traceable to NIST#s 32856, 32867 and others. This CRM is guaranteed stable and accurate to ±0.5% of the labeled value. This includes uncertainty components due to preparation, measurement, homogeneity, and short-term and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is unopened and stored under ambient laboratory conditions.

Date of Certification: DEC -- 2015 Certifying Officer:

©2015 SPEX CertiPrep, LLC

Reagent

MMSCRI-1B_00006

INORGANIC VENTURES™
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TAPITT-MSCRI-1B-REV1
Lot Number:	K2-MEB628079
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	125 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 12.5 µg/mL ea: Iron, 7.5 µg/mL ea: Aluminum, 2.5 µg/mL ea: Barium, 1.25 µg/mL ea: Manganese, Selenium, Strontium, Zinc, 0.5 µg/mL ea: Chromium+3, Copper, 0.25 µg/mL ea: Silver, Arsenic, Beryllium, Cadmium, Nickel, Lead, Thallium, Vanadium, 0.125 µg/mL ea: Cobalt

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	7.50 ± 0.04 µg/mL	Arsenic, As	0.2501 ± 0.0019 µg/mL
Barium, Ba	2.500 ± 0.014 µg/mL	Beryllium, Be	0.2502 ± 0.0015 µg/mL
Cadmium, Cd	0.2502 ± 0.0017 µg/mL	Calcium, Ca	125.3 ± 0.5 µg/mL
Chromium+3, Cr3	0.6003 ± 0.0029 µg/mL	Cobalt, Co	0.1250 ± 0.0010 µg/mL
Copper, Cu	0.5000 ± 0.0021 µg/mL	Iron, Fe	12.52 ± 0.06 µg/mL
Lead, Pb	0.2501 ± 0.0016 µg/mL	Magnesium, Mg	125.1 ± 0.5 µg/mL
Manganese, Mn	1.253 ± 0.006 µg/mL	Nickel, Ni	0.2501 ± 0.0019 µg/mL
Potassium, K	125.1 ± 0.5 µg/mL	Selenium, Se	1.252 ± 0.009 µg/mL
Silver, Ag	0.2502 ± 0.0022 µg/mL	Sodium, Na	125.0 ± 0.5 µg/mL
Strontium, Sr	1.253 ± 0.008 µg/mL	Thallium, Tl	0.2501 ± 0.0021 µg/mL
Vanadium, V	0.2503 ± 0.0017 µg/mL	Zinc, Zn	1.252 ± 0.007 µg/mL

Certified Density: 1.018 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	00630
Co	EDTA	928	928
Cr3	ICP Assay	3112a	030730
Cr3	Calculated		See Sec. 4.2
Cu	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	000612
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Tl	ICP Assay	3158	993012
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods

Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030; Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 04, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- April 04, 2019

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Michael Booth
QC Supervisor

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MMSCRI-2_00008

INORGANIC VENTURES™
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 283.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TAPITT-MSCRI-2-REV1
Lot Number:	K2-MEB628080
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	125 µg/mL ea: Silicon, 5 µg/mL ea: Boron, 1.25 µg/mL ea: Molybdenum, Tin, Titanium, 0.5 µg/mL ea: Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	0.5003 ± 0.0041 µg/mL	Boron, B	5.002 ± 0.034 µg/mL
Molybdenum, Mo	1.250 ± 0.008 µg/mL	Silicon, Si	125.0 ± 0.8 µg/mL
Tin, Sn	1.250 ± 0.008 µg/mL	Titanium, Ti	1.250 ± 0.009 µg/mL

Certified Density: 1.025 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
B	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Sb	Calculated		See Sec. 4.2
Si	ICP Assay	3150	071204
Si	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Ti	ICP Assay	3162a	060808
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods | **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 04, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 04, 2019**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

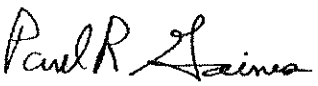
Donna Senn
Product Documentation Technician

Certificate Approved By:

Michael Booth
QC Supervisor

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director



Reagent

MMSICSAB-1_00009

INORGANIC™ VENTURES

300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

CERTIFICATE OF A

1917589
ID: MMSICSAB-1_00009
Exp: 05/01/17 Prpd: RJR
TAPITT-MSICSAB-1

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Rec'd 4-18-16 RJR

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TAPITT-MSICSAB-1
Lot Number:	J2-MEB575125
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 µg/mL ea:
	Ba, Be, Pb,
	Sr, Tl, V

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Barium, Ba	10.00 ± 0.06 µg/mL	Beryllium, Be	10.00 ± 0.06 µg/mL
Lead, Pb	10.00 ± 0.05 µg/mL	Strontium, Sr	10.00 ± 0.06 µg/mL
Thallium, Tl	10.00 ± 0.08 µg/mL	Vanadium, V	10.00 ± 0.06 µg/mL

Certified Density: 1.013 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	ICP Assay	3105a	090514
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$

Uncertainty $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$

($\bar{x}$) = mean
x_i = individual results
n = number of measurements
2 = the coverage factor.
$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 27, 2015

11.2 Expiration Date EXPIRES 1 MAY 2017

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MMSICSAB-2_00008

INORGANIC VENTURES™
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

1917590
ID: MMSICSAB-2_00008
Exp: 05/01/17 Prpd: RJR
TAPITT-MSICSAB-2

CERTIFICATE OF A

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 853.01
ACCREDITED Reference Material Producer Certificate 853.02

2.0 PRODUCT DESCRIPTION

Rec'd 4-18-16
RJR

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TAPITT-MSICSAB-2
Lot Number:	J2-MEB575126
Matrix:	3% (v/v) HNO3 tr. HF
Value / Analyte(s):	250 µg/mL ea: Si, 50 µg/mL ea: Sn, 25 µg/mL ea: B, Se, 10 µg/mL ea: Sb

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	10.00 ± 0.07 µg/mL	Boron, B	25.01 ± 0.17 µg/mL
Selenium, Se	25.00 ± 0.17 µg/mL	Silicon, Si	250.0 ± 1.9 µg/mL
Tin, Sn	50.01 ± 0.23 µg/mL		

Certified Density: 1.016 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	070514
Sb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Si	Calculated		See Sec. 4.2
Si	ICP Assay	3150	071204
Sn	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean
x_i = individual results
n = number of measurements

Uncertainty (±) = 2 [$\Sigma(s_i)^2$]$^{1/2}$ 2 = the coverage factor.
[$\Sigma(s_i)^2$]$^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'In-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 27, 2015

11.2 Expiration Date EXPIRES 1 MAY 2017

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTAPITTICPMS_00023

INORGANIC VENTURES™
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TAPITT-MS-ICPMS
Lot Number:	H2-MEB532047
Matrix:	0.7% (v/v) HNO3
Value / Analyte(s):	200 µg/mL ea: Aluminum, Barium, 100 µg/mL ea: Boron, Iron, Strontium, 50 µg/mL ea: Cobalt, Manganese, Nickel, Vanadium, Zinc, 25 µg/mL ea: Copper, 20 µg/mL ea: Chromium+3, 5 µg/mL ea: Silver, Beryllium, Cadmium, Thallium, 4 µg/mL ea: Arsenic, 2 µg/mL ea: Lead, 1 µg/mL ea: Selenium

1833476
ID: MTAPITTICPMS_00023
Exp: 01/01/17 Prpd: RJR
TAPITT-MS-ICPMS SPIKE

1833475
ID: MTAPITTICPMS_00023
Exp: 01/01/17 Prpd: RJR
TAPITT-MS-ICPMS SPIKE

1833474
ID: MTAPITTICPMS_00023
Exp: 01/01/17 Prpd: RJR
TAPITT-MS-ICPMS SPIKE

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.0 ± 1.0 µg/mL	Arsenic, As	4.002 ± 0.028 µg/mL
Barium, Ba	200.0 ± 1.0 µg/mL	Beryllium, Be	5.000 ± 0.029 µg/mL
Boron, B	100.0 ± 0.7 µg/mL	Cadmium, Cd	5.000 ± 0.024 µg/mL
Chromium+3, Cr3	20.00 ± 0.10 µg/mL	Cobalt, Co	50.02 ± 0.25 µg/mL
Copper, Cu	25.00 ± 0.17 µg/mL	Iron, Fe	100.0 ± 0.5 µg/mL
Lead, Pb	2.000 ± 0.010 µg/mL	Manganese, Mn	49.99 ± 0.22 µg/mL
Nickel, Ni	50.02 ± 0.24 µg/mL	Selenium, Se	1.001 ± 0.006 µg/mL
Silver, Ag	5.002 ± 0.032 µg/mL	Strontium, Sr	100.0 ± 0.6 µg/mL
Thallium, Tl	5.002 ± 0.033 µg/mL	Vanadium, V	50.00 ± 0.24 µg/mL
Zinc, Zn	50.02 ± 0.28 µg/mL		

Certified Density: 1.003 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
B	ICP Assay	3107	070514
Ba	ICP Assay	3104a	070222
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	ICP Assay	3112a	030730
Cr3	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Tl	ICP Assay	3158	993012
Tl	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean

x_i = individual results

n = number of measurements

Uncertainty $(\pm) = 2 [\Sigma(s_i)^2]^{1/2}$ 2 = the coverage factor.

$[\Sigma(s_i)^2]^{1/2}$ = The square root of the sum of the squares of the most common errors (where's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2014

11.2 Expiration Date

EXPIRES
1 JAN 2017

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTAPITTMSC_00037

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TAPITT-MS-C
Lot Number:	J2-MEB608141
Matrix:	3% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Silicon, 200 µg/mL ea: Tin, 100 µg/mL ea: Molybdenum, Titanium, 50 µg/mL ea: Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**49.99 ± 0.35 µg/mL**	**Molybdenum, Mo**	**100.0 ± 0.5 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**200.0 ± 0.7 µg/mL**
Titanium, Ti	**100.0 ± 0.5 µg/mL**		

Certified Density: 1.017 g/mL (measured at 20 ± 1 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	891307
Sb	ICP Assay	3102A	061229
Sb	Calculated		See Sec. 4.2
Si	ICP Assay	3150	071204
Si	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Sn	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	060808
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 14, 2015

11.2 Expiration Date

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Michael Booth
QC Supervisor

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTAPITTMSC_00038

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TAPITT-MS-C
Lot Number:	J2-MEB608141
Matrix:	3% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Silicon, 200 µg/mL ea: Tin, 100 µg/mL ea: Molybdenum, Titanium, 50 µg/mL ea: Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**49.99 ± 0.35 µg/mL**	**Molybdenum, Mo**	**100.0 ± 0.5 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**200.0 ± 0.7 µg/mL**
Titanium, Ti	**100.0 ± 0.5 µg/mL**		

Certified Density: 1.017 g/mL (measured at 20 ± 1 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	891307
Sb	ICP Assay	3102A	061229
Sb	Calculated		See Sec. 4.2
Si	ICP Assay	3150	071204
Si	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Sn	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	060808
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 14, 2015

11.2 Expiration Date

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Michael Booth
QC Supervisor

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

OP/PESTPCBRTS_00006

RESTEK® CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568719 **Lot No.:** A0100267

Description : OCP/PCB Surrogate Mix RTS

OCP/PCB Surrogate Mix RTS 0.2 µg/ml, Methanol, 100 ml/bottle

Container Size : 100 mL **Pkg Amt:** > 100 mL

Expiration Date : December 31, 2016 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2,4,5,6-Tetrachloro-m-xylene **CAS #** 877-09-8 (Lot 0052481) **Purity** 98%	0.2 µg/mL	+/- 0.0025 +/- 0.0066 +/- 0.0086	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Decachlorobiphenyl (BZ# 209) **CAS #** 2051-24-3 (Lot ER071509-01) **Purity** 99%	0.2 µg/mL	+/- 0.0025 +/- 0.0067 +/- 0.0086	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

OPHERBRTSSURR_00006

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568751 **Lot No.:** A0115101

Description : Herbicide Surrogate RTS

Herbicide Surrogate RTS 10 µg/ml, Methanol, 100 ml/bottle

Container Size : 100 mL **Pkg Amt:** > 100 mL

Expiration Date : May 31, 2017 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2,4-dichlorophenylacetic acid	10.0 µg/mL	+/- 0.0708	µg/mL	Gravimetric
	CAS # 19719-28-9 (Lot S30618V)		+/- 0.5351	µg/mL	Unstressed
	Purity 99%		+/- 0.5360	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

sv benzoepyre_00003

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part Number: 71016
Lot Number: 031715
Description: Benzo(e)pyrene

Solvent(s): **Lot#**
Methylene chloride 72062

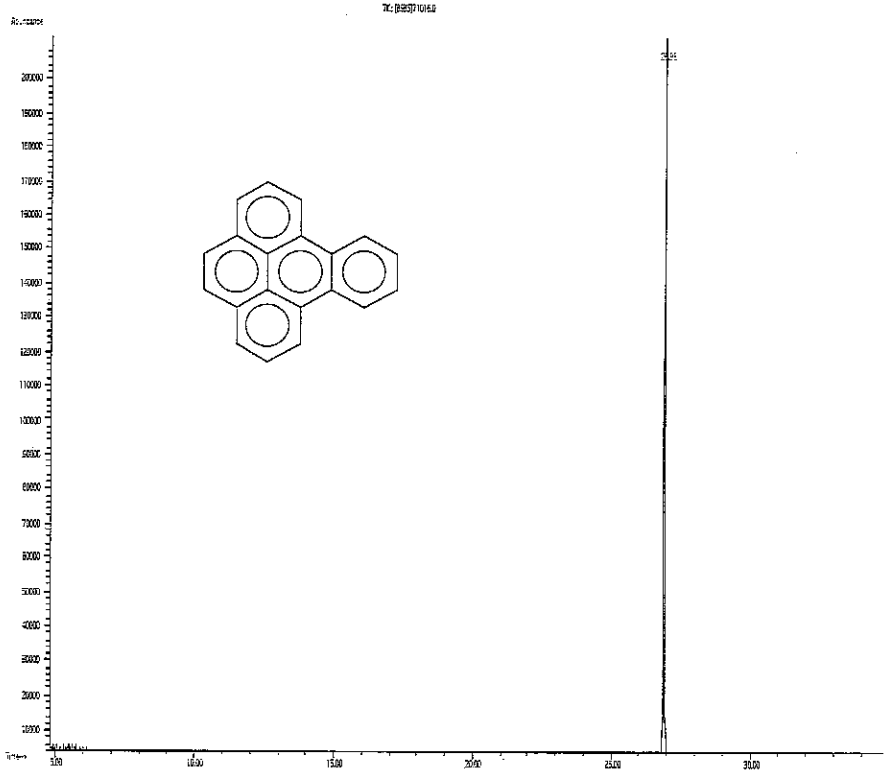
Expiration Date: 031720
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 1000

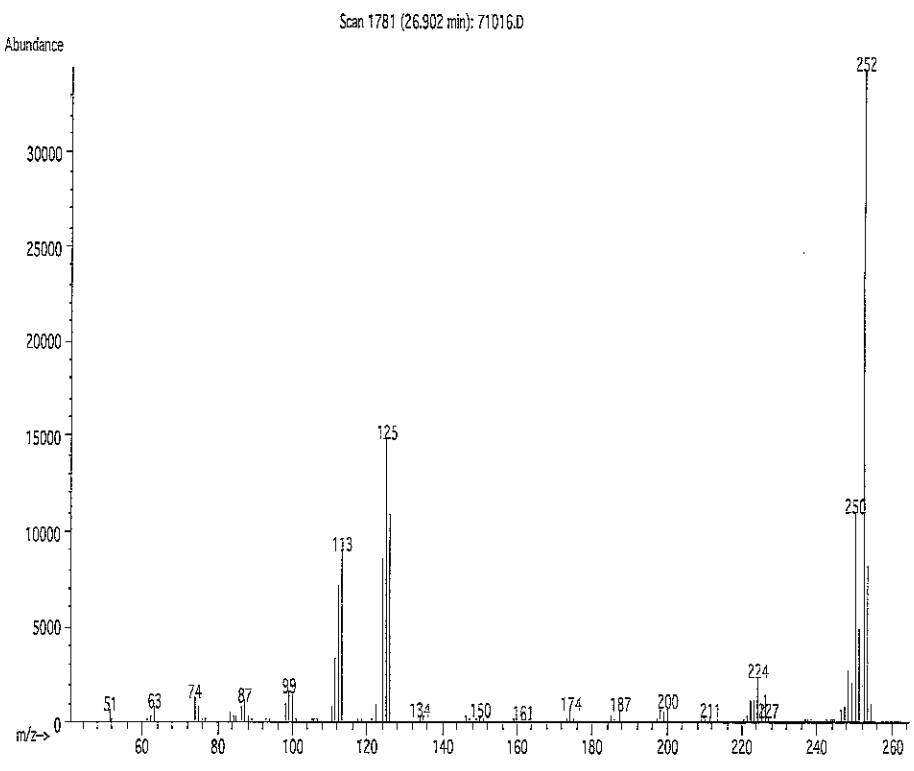
Formulated By:	Paul Barron	031715	DATE
Reviewed By:	Pedro L. Rentas	031715	DATE

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 100.0 0.003 Flask Uncertainty

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty	MSDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Benzo(e)pyrene	1016	012013	1000	99.5	0.2	0.10051	0.10082	1003.1	0.0041	00192-97-2	N/A	N/A

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 250°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Candice Warren.





Reagent

SV2356TCPs_00003

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part Number:	70315	**Solvent(s):**	**Lot#**
Lot Number:	092115	Methylene chloride	72062
Description:	2,3,5,6-Tetrachlorophenol		
Expiration Date:	092120		
Recommended Storage:	Refrigerate (4 °C)		
Nominal Concentration (µg/mL):	1000		

Formulated By: Paul Barron — 092115 DATE

Reviewed By: Pedro L. Rentas — 092115 DATE

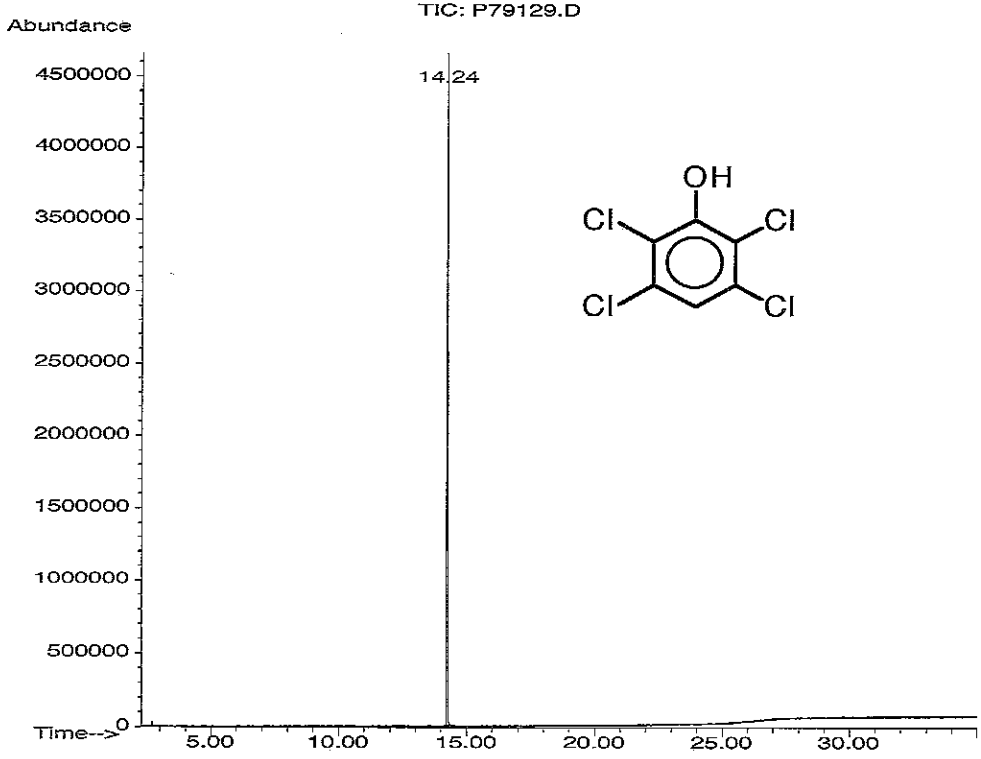
5E-05 Balance Uncertainty

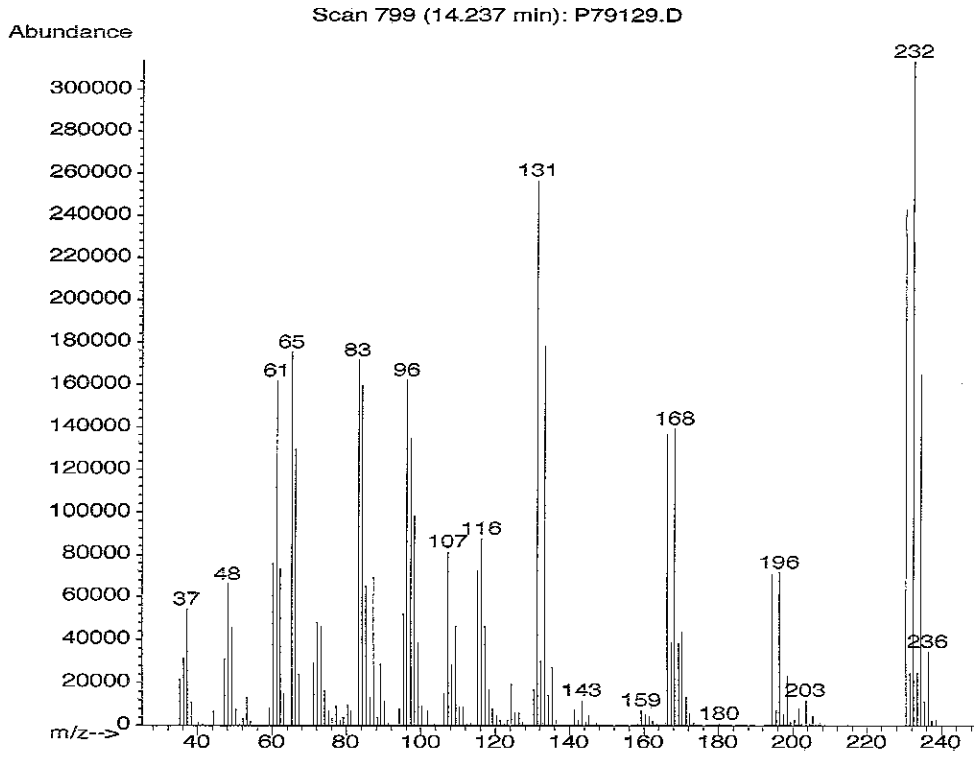
Weight(s) shown below were combined and diluted to (mL): 25.0 0.001 Flask Uncertainty

MSDS Information
(Solvent Safety Info. On Attached pg.)

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty	CAS#	OSHA PEL (TWA)	LD50
1. 2,3,5,6-Tetrachlorophenol	315	060697	1000	98	0.2	0.02551	0.02555	1001.7	0.0057	00935-95-5	N/A	N/A

Method GC8MSD-3.M: Column: SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9 min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 300°C. Scan Rate = 2, Split Ratio = 100:1. Analysis performed by Lance R. Boynton.





Reagent

SV2NAPAMINEs_00004

Certificate of Analysis

2-Naphthylamine Solution

Product Number: EPA-1135 **Page:** 1 of 1

Lot Number: CK-1617 **Lot Issue Date:** 20-May-2013 **Expiration Date:** 30-Jun-2017

This certified Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
2-naphthylamine	000091-59-8	RM06488	1001 ± 5 µg/mL

Matrix: methanol (methyl alcohol)

Storage: Store at Room Temperature (15-30°C)

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

ACCREDITED
ISO 17025:2005
Accredited
A2LA
Cert. No. 0851-01

ISO 9001:2008
Registered
TUV USA, Inc.
Cert. No. 09-1009

250 Smith Street, North Kingstown, RI 02852 USA
401-294-9400 Fax: 295-2330
wwww.ultrasci.com

William J. Leary
Quality Assurance Manager

Reagent

sv712dimbenza_00011

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part Number: 70411
Lot Number: 040915
Description: 7,12-Dimethylbenz(a)anthracene

Solvent(s): Methylene chloride **Lot#** 72062

Expiration Date: 040920
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 1000

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 25.0 0.001 Flask Uncertainty

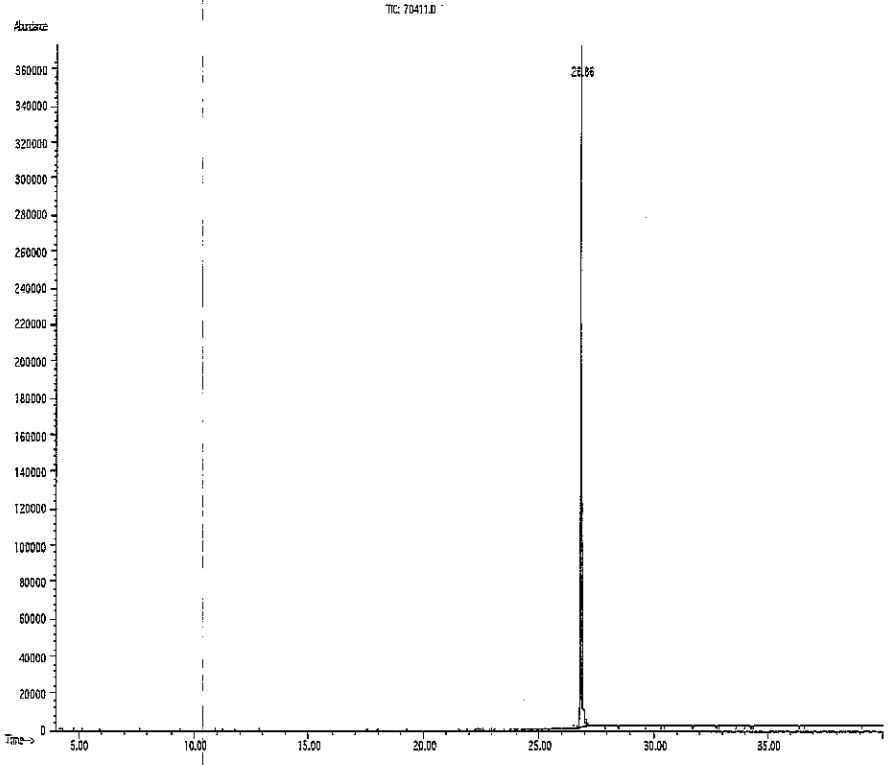
Paul Barron 040915
Formulated By: Paul Barron DATE

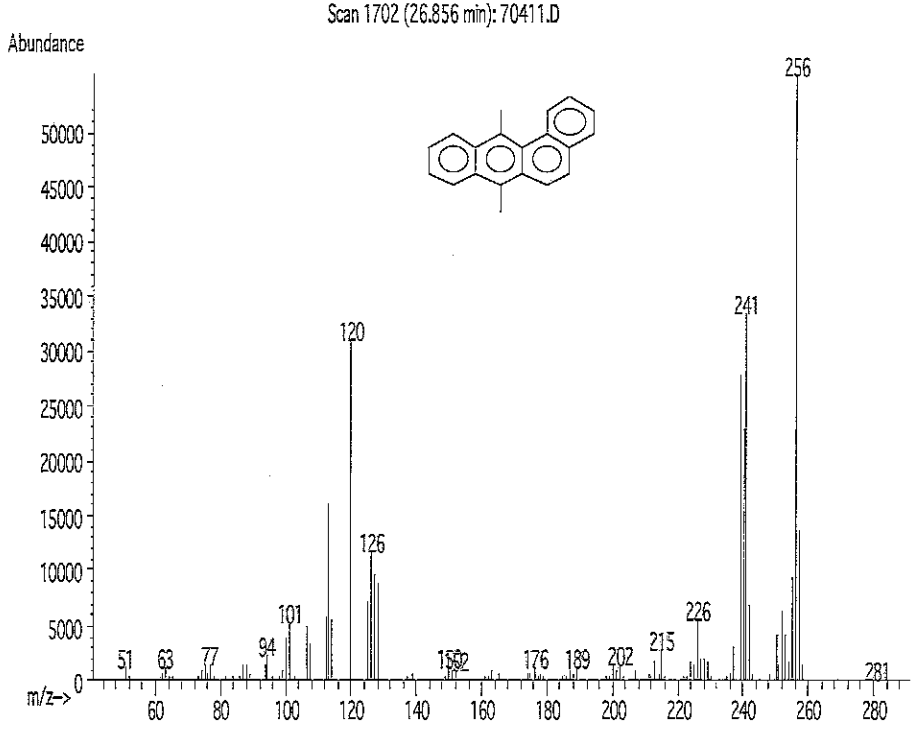
Pedro Rentas 040915
Reviewed By: Pedro L. Rentas DATE

MSDS Information
(Solvent Safety Info. On Attached pg.)

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty	CAS#	OSHA PEL (TWA)	LD50
1. 7,12-Dimethylbenz(a)anthracene	411	GGR4E-DC	1000	98	0.2	0.02551	0.02553	1000.9	0.00566	00057-97-6	N/A	orl-rat 327mg/kg

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness), Temp 1 = 50°C (1min.), Temp 2 = 300°C (9 min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 300°C, Scan Rate = 2, Analysis performed by Candice Warren.





Reagent

SVLVIntstd_00004

RESTEK

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567684 **Lot No.:** A093676

Description : 8270 Internal Standard

8270 Internal Standard 2,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : February 2018 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dichlorobenzene-d4	2,000.0 µg/mL	+/- 11.6282	µg/mL	Gravimetric
	CAS # 3855-82-1		+/- 92.7158	µg/mL	Unstressed
	Purity 99%		+/- 101.3766	µg/mL	Stressed
2	Naphthalene-d8	2,000.0 µg/mL	+/- 11.6282	µg/mL	Gravimetric
	CAS # 1146-65-2		+/- 92.7158	µg/mL	Unstressed
	Purity 99%		+/- 101.3766	µg/mL	Stressed
3	Acenaphthene-d10	2,000.0 µg/mL	+/- 11.6282	µg/mL	Gravimetric
	CAS # 15067-26-2		+/- 92.7163	µg/mL	Unstressed
	Purity 97%		+/- 101.3771	µg/mL	Stressed
4	Phenanthrene-d10	2,000.0 µg/mL	+/- 11.6282	µg/mL	Gravimetric
	CAS # 1517-22-2		+/- 92.7158	µg/mL	Unstressed
	Purity 99%		+/- 101.3766	µg/mL	Stressed
5	Chrysene-d12	2,000.0 µg/mL	+/- 11.6281	µg/mL	Gravimetric
	CAS # 1719-03-5		+/- 92.7150	µg/mL	Unstressed
	Purity 98%		+/- 101.3758	µg/mL	Stressed
6	Perylene-d12	2,000.0 µg/mL	+/- 11.6282	µg/mL	Gravimetric
	CAS # 1520-96-3		+/- 92.7158	µg/mL	Unstressed
	Purity 99%		+/- 101.3766	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x .25mm x .25um
Rtx-5 (cat.#10223)

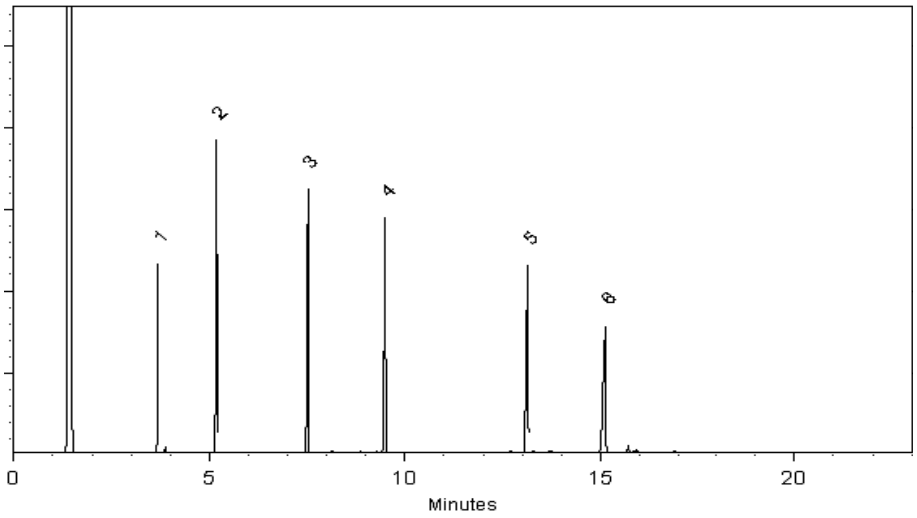
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



Jodi E. Breon - QA Analyst

Date Passed: 27-Feb-2013 **Balance:** 1128342313

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date of the unopened ampul stored at the recommended storage condition is the last day of the month listed in the expiration date field.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

SVLVstd1_00041

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570666 **Lot No.:** A0114832

Description : 8270 List 1 / Std #1 MegaMix (2016)

8270 List 1 / Std #1 MegaMix (2016) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : April 30, 2017 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane **CAS #** 123-91-1 (Lot SHBG1461V) **Purity** 99%	1,000.9 µg/mL	+/- 5.8193 µg/mL +/- 11.9648 µg/mL +/- 19.0418 µg/mL	Gravimetric Unstressed Stressed
2	Pyridine **CAS #** 110-86-1 (Lot SHBC7174V) **Purity** 99%	1,004.7 µg/mL	+/- 5.8416 µg/mL +/- 12.0106 µg/mL +/- 19.1148 µg/mL	Gravimetric Unstressed Stressed
3	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 4370100) **Purity** 99%	1,002.6 µg/mL	+/- 5.8294 µg/mL +/- 11.9855 µg/mL +/- 19.0748 µg/mL	Gravimetric Unstressed Stressed
4	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,001.8 µg/mL	+/- 5.8246 µg/mL +/- 11.9756 µg/mL +/- 19.0590 µg/mL	Gravimetric Unstressed Stressed
5	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBD4430V) **Purity** 99%	1,000.2 µg/mL	+/- 5.8152 µg/mL +/- 11.9565 µg/mL +/- 19.0285 µg/mL	Gravimetric Unstressed Stressed
6	2-Chlorophenol **CAS #** 95-57-8 (Lot STBF2690V) **Purity** 99%	1,001.6 µg/mL	+/- 5.8236 µg/mL +/- 11.9736 µg/mL +/- 19.0558 µg/mL	Gravimetric Unstressed Stressed
7	Phenol **CAS #** 108-95-2 (Lot SHBF1351V) **Purity** 99%	1,000.6 µg/mL	+/- 5.8176 µg/mL +/- 11.9612 µg/mL +/- 19.0361 µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 3299900)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
25	2,4-Dichlorophenol		1,002.2	µg/mL	+/-	5.8271	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBH1617V)			+/-	11.9808	µg/mL	Unstressed
	Purity 99%				+/-	19.0672	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,000.1	µg/mL	+/-	5.8144	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBC5541V)			+/-	11.9547	µg/mL	Unstressed
	Purity 98%				+/-	19.0258	µg/mL	Stressed
27	Naphthalene		1,000.4	µg/mL	+/-	5.8164	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBH4351V)			+/-	11.9588	µg/mL	Unstressed
	Purity 99%				+/-	19.0323	µg/mL	Stressed
28	2,6-Dichlorophenol		1,001.1	µg/mL	+/-	5.8205	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBN2776V)			+/-	11.9672	µg/mL	Unstressed
	Purity 99%				+/-	19.0456	µg/mL	Stressed
29	4-Chloroaniline		1,000.7	µg/mL	+/-	5.8182	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot 12528PH)			+/-	11.9624	µg/mL	Unstressed
	Purity 99%				+/-	19.0380	µg/mL	Stressed
30	Hexachlorobutadiene		1,000.7	µg/mL	+/-	5.8182	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	11.9626	µg/mL	Unstressed
	Purity 98%				+/-	19.0382	µg/mL	Stressed
31	2-Methylnaphthalene		1,001.3	µg/mL	+/-	5.8216	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot 19399MJV)			+/-	11.9696	µg/mL	Unstressed
	Purity 99%				+/-	19.0494	µg/mL	Stressed
32	4-Chloro-3-methylphenol		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC0769V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
33	1-Methylnaphthalene		1,001.1	µg/mL	+/-	5.8203	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 525000-10)			+/-	11.9668	µg/mL	Unstressed
	Purity 99%				+/-	19.0450	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,000.1	µg/mL	+/-	5.8145	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot 06024AIV)			+/-	11.9549	µg/mL	Unstressed
	Purity 99%				+/-	19.0260	µg/mL	Stressed
35	Hexachlorocyclopentadiene		999.7	µg/mL	+/-	5.8126	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 150909)			+/-	11.9510	µg/mL	Unstressed
	Purity 97%				+/-	19.0199	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,001.4	µg/mL	+/-	5.8220	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot MKBH7393V)			+/-	11.9704	µg/mL	Unstressed
	Purity 99%				+/-	19.0507	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,000.1	µg/mL	+/-	5.8145	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot 150806JLM)			+/-	11.9549	µg/mL	Unstressed
	Purity 99%				+/-	19.0260	µg/mL	Stressed
38	2-Chloronaphthalene		1,000.9	µg/mL	+/-	5.8193	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI-TE)			+/-	11.9648	µg/mL	Unstressed
	Purity 99%				+/-	19.0418	µg/mL	Stressed
39	Biphenyl		1,000.6	µg/mL	+/-	5.8178	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot 1277976)			+/-	11.9616	µg/mL	Unstressed
	Purity 99%				+/-	19.0368	µg/mL	Stressed

56	Azobenzene		1,001.2	µg/mL	+/-	5.8213	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot MKBS2559V)			+/-	11.9688	µg/mL	Unstressed
	Purity 99%				+/-	19.0482	µg/mL	Stressed
57	Diphenylamine		850.7	µg/mL	+/-	4.9460	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.1693	µg/mL	Unstressed
	Purity 99%				+/-	16.1843	µg/mL	Stressed
58	2-Nitroaniline		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,000.9	µg/mL	+/-	11.6336	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC12394V)			+/-	23.9193	µg/mL	Unstressed
	Purity 99%				+/-	38.0672	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		999.8	µg/mL	+/-	5.8131	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	11.9520	µg/mL	Unstressed
	Purity 98%				+/-	19.0215	µg/mL	Stressed
61	Hexachlorobenzene		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LC10604V)			+/-	11.9732	µg/mL	Unstressed
	Purity 99%				+/-	19.0551	µg/mL	Stressed
62	Pentachlorophenol		2,000.5	µg/mL	+/-	11.6311	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 150902JLM)			+/-	23.9142	µg/mL	Unstressed
	Purity 98%				+/-	38.0591	µg/mL	Stressed
63	Phenanthrene		1,001.9	µg/mL	+/-	5.8249	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKBT8628V)			+/-	11.9764	µg/mL	Unstressed
	Purity 99%				+/-	19.0602	µg/mL	Stressed
64	n-Octadecane (C18)		1,000.8	µg/mL	+/-	5.8187	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot 27SOF)			+/-	11.9636	µg/mL	Unstressed
	Purity 99%				+/-	19.0399	µg/mL	Stressed
65	Anthracene		1,001.4	µg/mL	+/-	5.8224	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBK5208V)			+/-	11.9712	µg/mL	Unstressed
	Purity 99%				+/-	19.0520	µg/mL	Stressed
66	Carbazole		1,000.4	µg/mL	+/-	5.8161	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 4017900)			+/-	11.9583	µg/mL	Unstressed
	Purity 98%				+/-	19.0314	µg/mL	Stressed
67	Di-n-butylphthalate		1,003.6	µg/mL	+/-	5.8348	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBL8501V)			+/-	11.9967	µg/mL	Unstressed
	Purity 99%				+/-	19.0926	µg/mL	Stressed
68	Fluoranthene		1,000.7	µg/mL	+/-	5.8184	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9629	µg/mL	Unstressed
	Purity 98%				+/-	19.0389	µg/mL	Stressed
69	Pyrene		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBL6786V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.3	µg/mL	+/-	5.8158	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot 03027HV)			+/-	11.9576	µg/mL	Unstressed
	Purity 99%				+/-	19.0304	µg/mL	Stressed
71	Benz(a)anthracene		1,000.1	µg/mL	+/-	5.8147	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot ER031412-01)			+/-	11.9553	µg/mL	Unstressed
	Purity 99%				+/-	19.0266	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

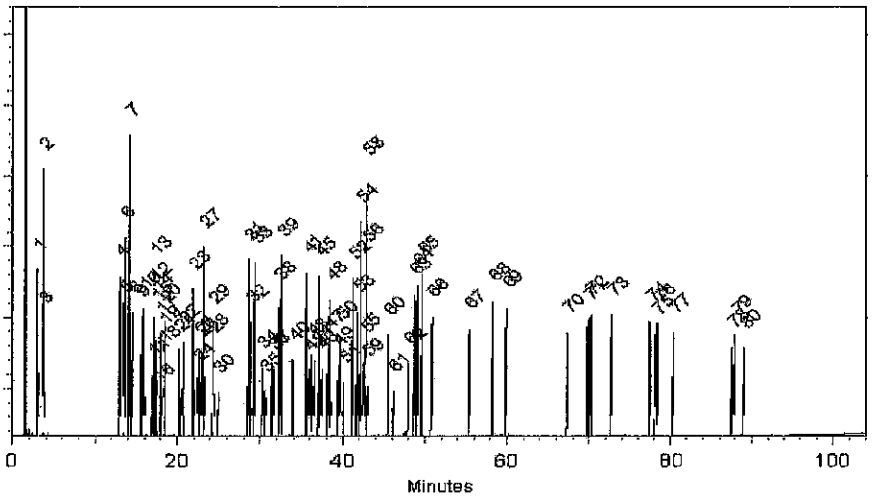
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 3°C/min. (hold 3 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 20-Oct-2015 **Balance:** B442140311

Jodi E. Breon - QA Analyst

Date Passed: 04-Nov-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

SVLVstd10_00006

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569731 **Lot No.:** A0115596

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2017 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Indene	2,009.8 µg/mL	+/- 11.6852	µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBP3098V)		+/- 112.6875	µg/mL	Unstressed
	Purity 99%		+/- 115.3242	µg/mL	Stressed
2	Benzoic acid	2,011.6 µg/mL	+/- 11.6953	µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBL6689V)		+/- 112.7856	µg/mL	Unstressed
	Purity 99%		+/- 115.4247	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Reagent

SVLVstd11_00006

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569732 **Lot No.:** A0115387

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2017 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	Benzaldehyde		2,017.4	µg/mL	+/- 11.7290	µg/mL	Gravimetric
	CAS # 100-52-7	(Lot SHBD3510V)			+/- 64.6675	µg/mL	Unstressed
	Purity 99%				+/- 75.1734	µg/mL	Stressed
2	epsilon-Caprolactam		2,012.4	µg/mL	+/- 11.7003	µg/mL	Gravimetric
	CAS # 105-60-2	(Lot I16X016)			+/- 64.5088	µg/mL	Unstressed
	Purity 99%				+/- 74.9890	µg/mL	Stressed
3	Atrazine		2,003.5	µg/mL	+/- 11.6483	µg/mL	Gravimetric
	CAS # 1912-24-9	(Lot TZ8ED)			+/- 64.2223	µg/mL	Unstressed
	Purity 98%				+/- 74.6560	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Reagent

SVLVstd9_00006

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569730 **Lot No.:** A0118008

Description : 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2017 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Benzidine		2,007.6 µg/mL	+/- 11.7817	µg/mL	Gravimetric
	CAS # 92-87-5	(Lot 160309JLM)		+/- 24.0524	µg/mL	Unstressed
	Purity 99%			+/- 38.2276	µg/mL	Stressed
2	3,3'-Dichlorobenzidine		2,006.0 µg/mL	+/- 11.7723	µg/mL	Gravimetric
	CAS # 91-94-1	(Lot 160311JLM)		+/- 24.0332	µg/mL	Unstressed
	Purity 99%			+/- 38.1971	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Reagent

SVLVSURSPK_00002

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0103960

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2019 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol		5,006.1 µg/mL		+/- 29.1044	µg/mL	Gravimetric
	CAS # 367-12-4	(Lot STBC5591V)			+/- 124.7363	µg/mL	Unstressed
	Purity 99%				+/- 156.8636	µg/mL	Stressed
2	Phenol-d5		5,002.5 µg/mL		+/- 29.0834	µg/mL	Gravimetric
	CAS # 4165-62-2	(Lot X479P6)			+/- 124.6466	µg/mL	Unstressed
	Purity 99%				+/- 156.7508	µg/mL	Stressed
3	Nitrobenzene-d5		5,003.7 µg/mL		+/- 29.0901	µg/mL	Gravimetric
	CAS # 4165-60-0	(Lot PR-20474)			+/- 124.6753	µg/mL	Unstressed
	Purity 99%				+/- 156.7868	µg/mL	Stressed
4	2-Fluorobiphenyl		5,002.4 µg/mL		+/- 29.0826	µg/mL	Gravimetric
	CAS # 321-60-8	(Lot B19Z016)			+/- 124.6429	µg/mL	Unstressed
	Purity 99%				+/- 156.7461	µg/mL	Stressed
5	2,4,6-Tribromophenol		5,024.2 µg/mL		+/- 29.2093	µg/mL	Gravimetric
	CAS # 118-79-6	(Lot 29699MJV)			+/- 125.1861	µg/mL	Unstressed
	Purity 99%				+/- 157.4292	µg/mL	Stressed
6	p-Terphenyl-d14		5,010.4 µg/mL		+/- 29.1291	µg/mL	Gravimetric
	CAS # 1718-51-0	(Lot PR-20577)			+/- 124.8422	µg/mL	Unstressed
	Purity 99%				+/- 156.9968	µg/mL	Stressed

Reagent

svmethylmetha_00011

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Analytical Reference Material ARM

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part Number: 70443
Lot Number: 021315
Description: Methyl methane sulfonate

Solvent(s): Methylene chloride **Lot#** 72062

Expiration Date: 021320
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 1000

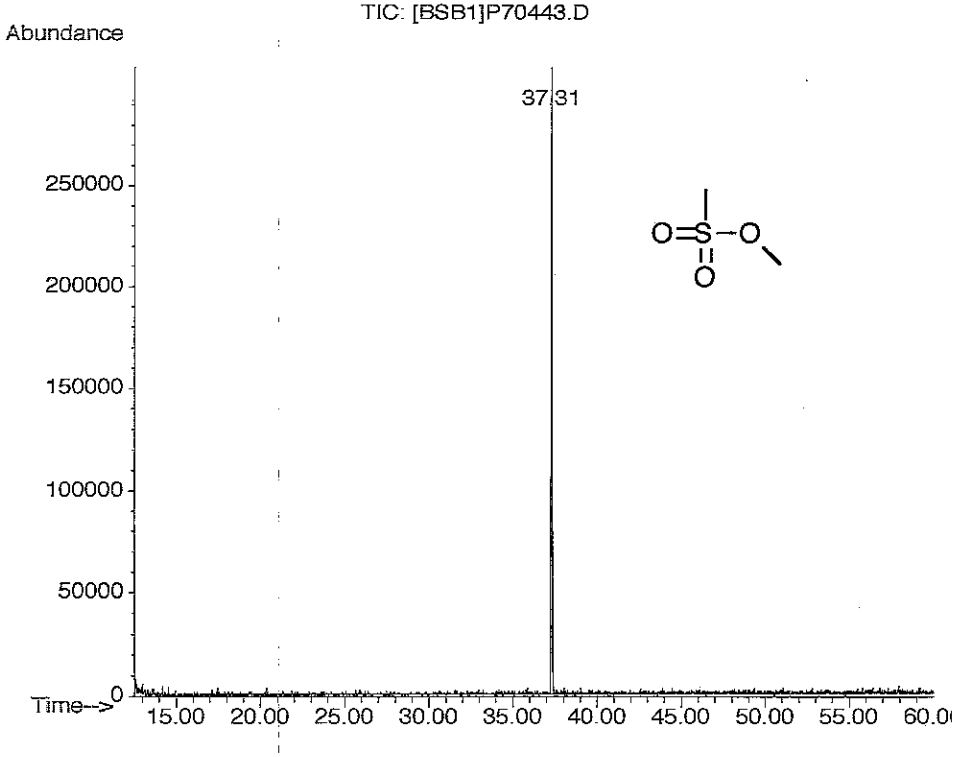
Weight(s) shown below were combined and diluted to: 25.0 5E-05 Balance Uncertainty 0.001 Flask Uncertainty

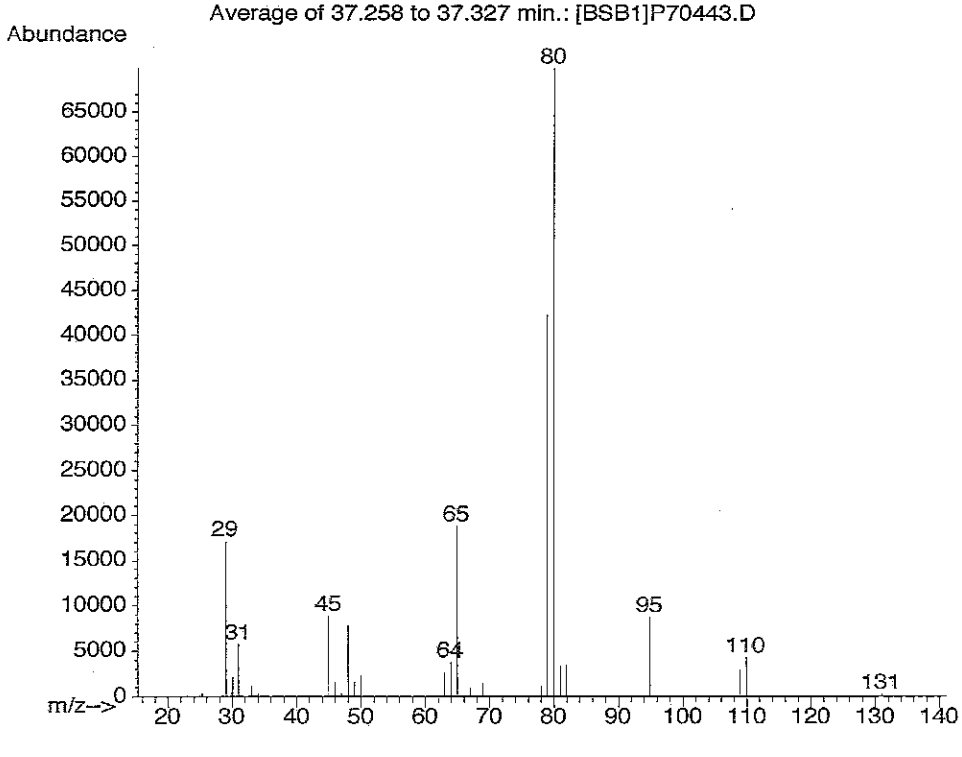
Paul Barron	021315
Formulated By: Paul Barron	DATE
Pedro Rentas	021315
Reviewed By: Pedro L. Rentas	DATE

MSDS Information
(Solvent Safety Info. On Attached pg.)

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty	CAS#	OSHA PEL (TWA)	LD50
1. Methyl methane sulfonate	443	07322PW	1000	99	0.2	0.02524	0.02530	1002.2	0.00565	00066-27-3	N/A	orl-rat 225mg/kg

Method GC6MSD-1: Column: Vocol (60m X 0.25mm ID X 1.5µm film thickness). Temp. 1=35°C (10min.), Temp. 2=200°C (8.75 min.), Rate=4°C/min., Injector Temp.=200°C, Detector Temp.=220°C. Analysis performed by Pedro Rentas.





Reagent

SVNNITROPYROs_00017

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

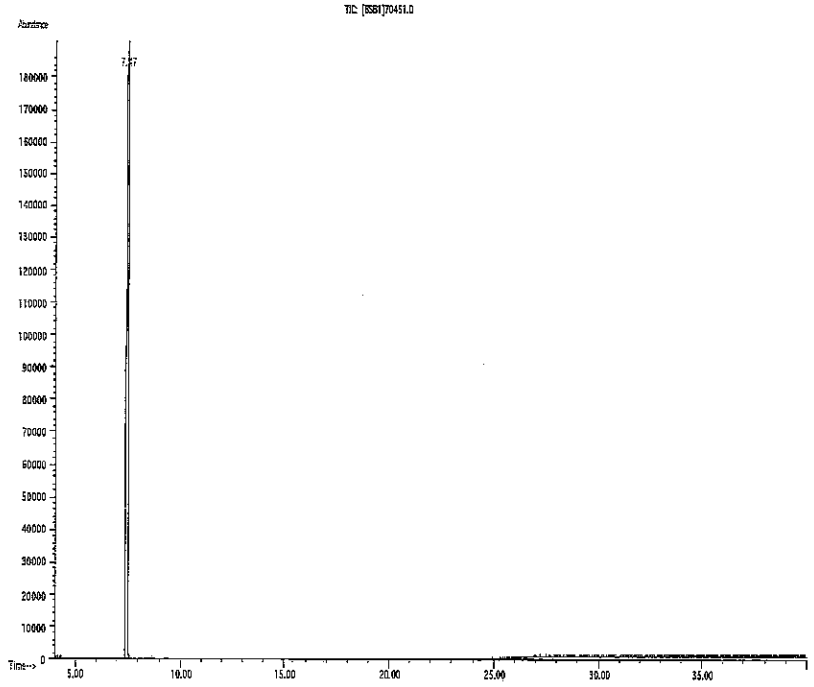
CERTIFIED WEIGHT REPORT

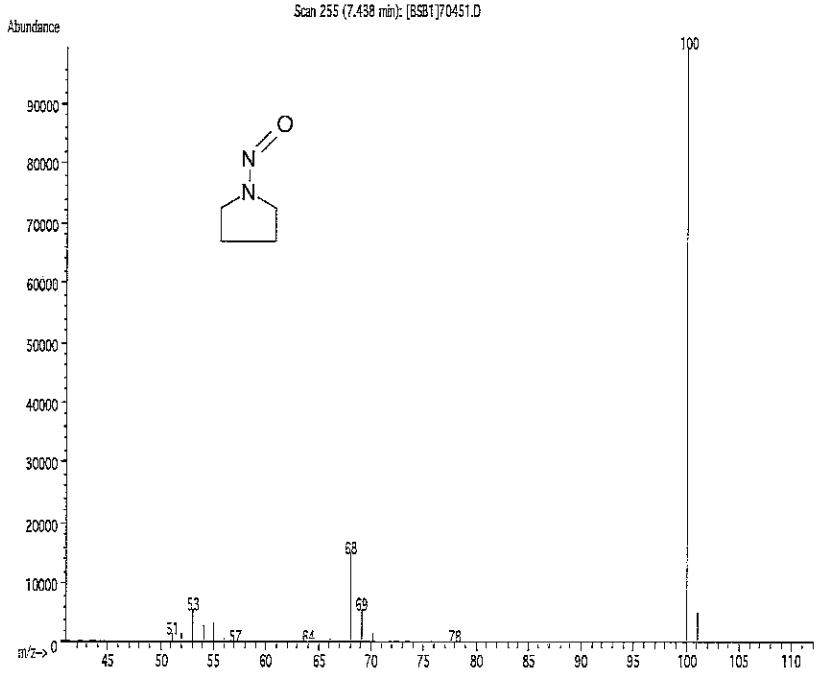
			Solvent(s):	Lot#
Part Number:	70451		Methylene chloride	72062
Lot Number:	010816			
Description:	N-Nitrosopyrrolidine			
Expiration Date:	010819			
Recommended Storage:	Freezer (0 °C)			
Nominal Concentration (µg/mL):	1000			
NIST Test ID#:	822-275872-11	5E-05 Balance Uncertainty		
Weight(s) shown below were combined and diluted to (mL):	25.0	0.001 Flask Uncertainty		

Giovanni Esposito		010816
Formulated By:	Giovanni Esposito	DATE
Pedro Rentas		010816
Reviewed By:	Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	MSDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. N-Nitrosopyrrolidine	451	04025BM	1000	99	0.2	0.02525	0.02529	1001.6	5.7	930-55-2	N/A	orl-rat 900mg/kg

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Candice Warren.





- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Method 8270D Low Level

Semivolatile Organic Compounds (GC/MS) Low Level by Method 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): Rxi-5SilMS ID: 0.32(mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPHL #
BGSB22-(0.0-0.5) -161122-S	180-61122-1	57	61	61	62	75	64
BGSB22-(1-2) -161122-S	180-61122-2	61	63	63	60	76	62
BGSB10-(0.0-0.5) -161122-S	180-61122-3	53	69	65	73	94	83
BGSB10-(1-2) -161122-S	180-61122-4	59	66	69	68	84	71
	MB 180-195373/1-A	60	61	61	62	76	76
	LCS 180-195373/2-A	71	70	74	68	87	74
BGSB22-(0.0-0.5) -161122-S MS	180-61122-1 MS	52	60	59	61	79	62
BGSB22-(0.0-0.5) -161122-S MSD	180-61122-1 MSD	56	66	65	67	88	67

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	21-107
PHL = Phenol-d5 (Surr)	29-105
NBZ = Nitrobenzene-d5 (Surr)	35-109
FBP = 2-Fluorobiphenyl	42-100
TBP = 2,4,6-Tribromophenol (Surr)	20-134
TPHL = Terphenyl-d14 (Surr)	36-113

Column to be used to flag recovery values

FORM II 8270D LL

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: N11250006.D

Lab ID: LCS 180-195373/2-A Client ID:

COMPOUND	SPIKE ADDED (mg/Kg)	LCS CONCENTRATION (mg/Kg)	LCS % REC	QC LIMITS REC	#
1,1'-Biphenyl	0.667	0.4610	69	40-100	
1,4-Dioxane	0.667	0.4336	65	19-107	
1-Methylnaphthalene	0.667	0.4603	69	41-100	
1,2,4,5-Tetrachlorobenzene	0.667	0.4730	71	38-100	
2-Chloronaphthalene	0.667	0.4498	67	39-100	
2-Chlorophenol	0.667	0.4554	68	38-100	
2,4-Dichlorophenol	0.667	0.4734	71	40-100	
2,4-Dimethylphenol	0.667	0.4951	74	38-100	
2,4-Dinitrophenol	1.33	1.065	80	36-103	
2,4-Dinitrotoluene	0.667	0.5605	84	42-110	
2,6-Dinitrotoluene	0.667	0.5449	82	43-105	
2-Methylnaphthalene	0.667	0.4627	69	39-100	
2-Methylphenol	0.667	0.4692	70	38-100	
Methylphenol, 3 & 4	0.667	0.4885	73	40-100	
2-Nitroaniline	0.667	0.5541	83	33-118	
3-Nitroaniline	0.667	0.5101	77	42-105	
4-Nitroaniline	0.667	0.5364	80	33-115	
2-Nitrophenol	0.667	0.5300	79	40-103	
4-Nitrophenol	1.33	1.194	90	26-133	
2,2'-oxybis[1-chloropropane]	0.667	0.4627	69	23-104	
2,3,4,6-Tetrachlorophenol	0.667	0.5129	77	41-100	
2,4,5-Trichlorophenol	0.667	0.5017	75	42-100	
2,4,6-Trichlorophenol	0.667	0.5025	75	41-103	
4-Chloro-3-methylphenol	0.667	0.5495	82	40-104	
4-Chlorophenyl phenyl ether	0.667	0.4971	75	43-100	
4,6-Dinitro-2-methylphenol	1.33	1.161	87	45-102	
Acenaphthene	0.667	0.4620	69	39-100	
Acenaphthylene	0.667	0.4546	68	42-100	
Acetophenone	0.667	0.4340	65	31-100	
Anthracene	0.667	0.4803	72	43-100	
Atrazine	0.667	0.4651	70	21-108	
Benzaldehyde	0.667	0.3684	55	10-133	
Benzo[a]anthracene	0.667	0.4936	74	43-100	
Benzo[b]fluoranthene	0.667	0.4528	68	40-100	
Benzo[k]fluoranthene	0.667	0.4431	66	44-100	
Benzo[g,h,i]perylene	0.667	0.4664	70	41-102	
Benzo[a]pyrene	0.667	0.4694	70	43-100	
Bis(2-chloroethoxy)methane	0.667	0.4339	65	39-100	
Bis(2-chloroethyl)ether	0.667	0.4214	63	36-100	
Bis(2-ethylhexyl) phthalate	0.667	0.5206	78	43-106	
4-Bromophenyl phenyl ether	0.667	0.5155	77	44-100	
Butyl benzyl phthalate	0.667	0.5038	76	42-108	

Column to be used to flag recovery and RPD values

FORM III 8270D LL

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: N11250006.D

Lab ID: LCS 180-195373/2-A Client ID:

COMPOUND	SPIKE ADDED (mg/Kg)	LCS CONCENTRATION (mg/Kg)	LCS % REC	QC LIMITS REC	#
Caprolactam	0.667	0.5944	89	37-112	
Carbazole	0.667	0.4813	72	42-100	
Dibenz(a,h)anthracene	0.667	0.5138	77	40-104	
Dibenzofuran	0.667	0.4488	67	42-100	
Di-n-butyl phthalate	0.667	0.5176	78	44-105	
Di-n-octyl phthalate	0.667	0.5428	81	41-103	
Diethyl phthalate	0.667	0.4924	74	41-101	
Dimethyl phthalate	0.667	0.4985	75	44-100	
Fluoranthene	0.667	0.5142	77	41-104	
Fluorene	0.667	0.4728	71	41-100	
Hexachlorobenzene	0.667	0.4908	74	43-100	
Hexachlorobutadiene	0.667	0.4307	65	35-100	
Hexachlorocyclopentadiene	0.667	0.4544	68	32-102	
Hexachloroethane	0.667	0.3899	58	35-100	
Indeno[1,2,3-cd]pyrene	0.667	0.4848	73	41-104	
Isophorone	0.667	0.4575	69	36-102	
Naphthalene	0.667	0.4452	67	38-100	
Nitrobenzene	0.667	0.4631	69	34-100	
N-Nitrosodiphenylamine	0.667	0.4964	74	41-100	
N-Nitrosodi-n-propylamine	0.667	0.4815	72	37-100	
Pentachlorophenol	1.33	0.9957	75	34-102	
Phenanthrene	0.667	0.4445	67	41-100	
Phenol	0.667	0.4512	68	36-100	
Pyrene	0.667	0.4162	62	42-100	
3,3'-Dichlorobenzidine	0.667	0.4304	65	30-103	

Column to be used to flag recovery and RPD values

FORM III 8270D LL

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: N11250025.D

Lab ID: 180-61122-1 MS Client ID: BGSB22-(0.0-0.5)-161122-S MS

COMPOUND	SPIKE ADDED (mg/Kg)	SAMPLE CONCENTRATION (mg/Kg)	MS CONCENTRATION (mg/Kg)	MS % REC	QC LIMITS REC	#
1,1'-Biphenyl	0.720	0.00322 U	0.4629	64	40-100	
1,4-Dioxane	0.720	0.00413 U	0.2815	39	19-107	
1-Methylnaphthalene	0.720	0.000769 U	0.4384	61	41-100	
1,2,4,5-Tetrachlorobenzene	0.720	0.00273 U	0.4481	62	38-100	
2-Chloronaphthalene	0.720	0.000752 U	0.4540	63	39-100	
2-Chlorophenol	0.720	0.00295 U	0.4333	60	38-100	
2,4-Dichlorophenol	0.720	0.000723 U	0.4608	64	40-100	
2,4-Dimethylphenol	0.720	0.00564 U	0.4074	57	38-100	
2,4-Dinitrophenol	1.44	0.0429 U	0.5790	40	36-103	
2,4-Dinitrotoluene	0.720	0.00291 U	0.5892	82	42-110	
2,6-Dinitrotoluene	0.720	0.00372 U	0.5662	79	43-105	
2-Methylnaphthalene	0.720	0.00137 J	0.4409	61	39-100	
2-Methylphenol	0.720	0.00252 U	0.4623	64	38-100	
Methylphenol, 3 & 4	0.720	0.00353 U	0.4938	69	40-100	
2-Nitroaniline	0.720	0.0161 U	0.5845	81	33-118	
3-Nitroaniline	0.720	0.0148 U	0.4917	68	42-105	
4-Nitroaniline	0.720	0.0146 U	0.5175	72	33-115	
2-Nitrophenol	0.720	0.00397 U	0.4789	66	40-103	
4-Nitrophenol	1.44	0.0131 U	1.024	71	26-133	
2,2'-oxybis[1-chloropropane]	0.720	0.000778 U	0.4441	62	23-104	
2,3,4,6-Tetrachlorophenol	0.720	0.00232 U	0.5199	72	41-100	
2,4,5-Trichlorophenol	0.720	0.00385 U	0.5317	74	42-100	
2,4,6-Trichlorophenol	0.720	0.00540 U	0.5191	72	41-103	
4-Chloro-3-methylphenol	0.720	0.00332 U	0.5486	76	40-104	
4-Chlorophenyl phenyl ether	0.720	0.00401 U	0.5065	70	43-100	
4,6-Dinitro-2-methylphenol	1.44	0.0145 U	0.9143	63	45-102	
Acenaphthene	0.720	0.000692 U	0.4682	65	39-100	
Acenaphthylene	0.720	0.00396 J	0.4619	64	42-100	
Acetophenone	0.720	0.0169 J	0.4677	63	31-100	
Anthracene	0.720	0.00362 J	0.4840	67	43-100	
Atrazine	0.720	0.00351 U	0.3695	51	21-108	
Benzaldehyde	0.720	0.00751 J	0.4077	56	10-133	
Benzo[a]anthracene	0.720	0.0140	0.5363	73	43-100	
Benzo[b]fluoranthene	0.720	0.0202	0.4487	59	40-100	
Benzo[k]fluoranthene	0.720	0.00857	0.4090	56	44-100	
Benzo[g,h,i]perylene	0.720	0.0165	0.5336	72	41-102	
Benzo[a]pyrene	0.720	0.0132	0.4528	61	43-100	
Bis(2-chloroethoxy)methane	0.720	0.00237 U	0.4118	57	39-100	
Bis(2-chloroethyl)ether	0.720	0.000967 U	0.3864	54	36-100	
Bis(2-ethylhexyl) phthalate	0.720	0.0310 J	0.6488	86	43-106	
4-Bromophenyl phenyl ether	0.720	0.00314 U	0.5054	70	44-100	
Butyl benzyl phthalate	0.720	0.00591 J	0.5228	72	42-108	

Column to be used to flag recovery and RPD values

FORM III 8270D LL

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: N11250025.D

Lab ID: 180-61122-1 MS Client ID: BGSB22-(0.0-0.5)-161122-S MS

COMPOUND	SPIKE ADDED (mg/Kg)	SAMPLE CONCENTRATION (mg/Kg)	MS CONCENTRATION (mg/Kg)	MS % REC	QC LIMITS REC	#
Caprolactam	0.720	0.0272 U	0.05352 J	7	37-112	F1
Carbazole	0.720	0.00176 J	0.4961	69	42-100	
Dibenz(a,h)anthracene	0.720	0.00336 J	0.5640	78	40-104	
Dibenzofuran	0.720	0.00355 U	0.4559	63	42-100	
Di-n-butyl phthalate	0.720	0.00485 J	0.5481	75	44-105	
Di-n-octyl phthalate	0.720	0.00380 U	0.5079	71	41-103	
Diethyl phthalate	0.720	0.00394 U	0.5179	72	41-101	
Dimethyl phthalate	0.720	0.00393 U	0.5192	72	44-100	
Fluoranthene	0.720	0.0179	0.5278	71	41-104	
Fluorene	0.720	0.000950 U	0.4841	67	41-100	
Hexachlorobenzene	0.720	0.000768 U	0.4817	67	43-100	
Hexachlorobutadiene	0.720	0.000807 U	0.3781	52	35-100	
Hexachlorocyclopentadiene	0.720	0.00389 U	0.1241	17	32-102	F1
Hexachloroethane	0.720	0.00259 U	0.3251	45	35-100	
Indeno[1,2,3-cd]pyrene	0.720	0.0118	0.5310	72	41-104	
Isophorone	0.720	0.00272 U	0.4313	60	36-102	
Naphthalene	0.720	0.000621 U	0.4173	58	38-100	
Nitrobenzene	0.720	0.00300 U	0.4035	56	34-100	
N-Nitrosodiphenylamine	0.720	0.00334 U	0.4680	65	41-100	
N-Nitrosodi-n-propylamine	0.720	0.000845 U	0.4940	69	37-100	
Pentachlorophenol	1.44	0.00322 U	0.8971	62	34-102	
Phenanthrene	0.720	0.00554 J	0.4587	63	41-100	
Phenol	0.720	0.000852 U	0.4057	56	36-100	
Pyrene	0.720	0.0168	0.4130	55	42-100	
3,3'-Dichlorobenzidine	0.720	0.00381 U	0.1450	20	30-103	F1

Column to be used to flag recovery and RPD values

FORM III 8270D LL

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: N11250026.D

Lab ID: 180-61122-1 MSD Client ID: BGSB22-(0.0-0.5)-161122-S MSD

COMPOUND	SPIKE ADDED (mg/Kg)	MSD CONCENTRATION (mg/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1'-Biphenyl	0.716	0.5114	71	10	20	40-100	
1,4-Dioxane	0.716	0.3058	43	8	20	19-107	
1-Methylnaphthalene	0.716	0.4835	68	10	20	41-100	
1,2,4,5-Tetrachlorobenzene	0.716	0.5022	70	11	20	38-100	
2-Chloronaphthalene	0.716	0.5017	70	10	20	39-100	
2-Chlorophenol	0.716	0.4669	65	7	20	38-100	
2,4-Dichlorophenol	0.716	0.4978	70	8	20	40-100	
2,4-Dimethylphenol	0.716	0.4546	64	11	20	38-100	
2,4-Dinitrophenol	1.43	0.6500	45	12	23	36-103	
2,4-Dinitrotoluene	0.716	0.6584	92	11	21	42-110	
2,6-Dinitrotoluene	0.716	0.6175	86	9	20	43-105	
2-Methylnaphthalene	0.716	0.4866	68	10	21	39-100	
2-Methylphenol	0.716	0.5014	70	8	20	38-100	
Methylphenol, 3 & 4	0.716	0.5340	75	8	20	40-100	
2-Nitroaniline	0.716	0.6513	91	11	23	33-118	
3-Nitroaniline	0.716	0.5564	78	12	20	42-105	
4-Nitroaniline	0.716	0.5669	79	9	20	33-115	
2-Nitrophenol	0.716	0.5280	74	10	22	40-103	
4-Nitrophenol	1.43	1.154	81	12	20	26-133	
2,2'-oxybis[1-chloropropane]	0.716	0.4758	66	7	20	23-104	
2,3,4,6-Tetrachlorophenol	0.716	0.5856	82	12	25	41-100	
2,4,5-Trichlorophenol	0.716	0.5850	82	10	22	42-100	
2,4,6-Trichlorophenol	0.716	0.5742	80	10	25	41-103	
4-Chloro-3-methylphenol	0.716	0.6064	85	10	20	40-104	
4-Chlorophenyl phenyl ether	0.716	0.5537	77	9	22	43-100	
4,6-Dinitro-2-methylphenol	1.43	1.012	71	10	20	45-102	
Acenaphthene	0.716	0.5187	72	10	20	39-100	
Acenaphthylene	0.716	0.5150	71	11	20	42-100	
Acetophenone	0.716	0.5056	68	8	20	31-100	
Anthracene	0.716	0.5344	74	10	20	43-100	
Atrazine	0.716	0.3956	55	7	20	21-108	
Benzaldehyde	0.716	0.4511	62	10	20	10-133	
Benzo[a]anthracene	0.716	0.5818	79	8	20	43-100	
Benzo[b]fluoranthene	0.716	0.4814	64	7	20	40-100	
Benzo[k]fluoranthene	0.716	0.4538	62	10	20	44-100	
Benzo[g,h,i]perylene	0.716	0.5850	79	9	20	41-102	
Benzo[a]pyrene	0.716	0.4914	67	8	20	43-100	
Bis(2-chloroethoxy)methane	0.716	0.4518	63	9	20	39-100	
Bis(2-chloroethyl)ether	0.716	0.4156	58	7	20	36-100	
Bis(2-ethylhexyl) phthalate	0.716	0.6854	91	5	20	43-106	
4-Bromophenyl phenyl ether	0.716	0.5498	77	8	20	44-100	
Butyl benzyl phthalate	0.716	0.5625	78	7	20	42-108	

Column to be used to flag recovery and RPD values

FORM III 8270D LL

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: N11250026.D

Lab ID: 180-61122-1 MSD Client ID: BGSB22-(0.0-0.5)-161122-S MSD

COMPOUND	SPIKE ADDED (mg/Kg)	MSD CONCENTRATION (mg/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Caprolactam	0.716	0.06227 J	9	15	20	37-112	F1
Carbazole	0.716	0.5358	75	8	20	42-100	
Dibenz(a,h)anthracene	0.716	0.6075	84	7	26	40-104	
Dibenzofuran	0.716	0.5018	70	10	23	42-100	
Di-n-butyl phthalate	0.716	0.6024	84	9	20	44-105	
Di-n-octyl phthalate	0.716	0.5547	78	9	20	41-103	
Diethyl phthalate	0.716	0.5718	80	10	20	41-101	
Dimethyl phthalate	0.716	0.5798	81	11	23	44-100	
Fluoranthene	0.716	0.5794	78	9	20	41-104	
Fluorene	0.716	0.5305	74	9	21	41-100	
Hexachlorobenzene	0.716	0.5173	72	7	21	43-100	
Hexachlorobutadiene	0.716	0.4141	58	9	20	35-100	
Hexachlorocyclopentadiene	0.716	0.1470	21	17	30	32-102	F1
Hexachloroethane	0.716	0.3547	50	9	20	35-100	
Indeno[1,2,3-cd]pyrene	0.716	0.5814	80	9	25	41-104	
Isophorone	0.716	0.4732	66	9	20	36-102	
Naphthalene	0.716	0.4518	63	8	20	38-100	
Nitrobenzene	0.716	0.4481	63	10	20	34-100	
N-Nitrosodiphenylamine	0.716	0.5084	71	8	20	41-100	
N-Nitrosodi-n-propylamine	0.716	0.5289	74	7	20	37-100	
Pentachlorophenol	1.43	1.023	71	13	20	34-102	
Phenanthrene	0.716	0.5003	69	9	20	41-100	
Phenol	0.716	0.4412	62	8	20	36-100	
Pyrene	0.716	0.4467	60	8	21	42-100	
3,3'-Dichlorobenzidine	0.716	0.1628	23	12	21	30-103	F1

Column to be used to flag recovery and RPD values

FORM III 8270D LL

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab File ID: N11250005.D Lab Sample ID: MB 180-195373/1-A

Matrix: Solid Date Extracted: 11/25/2016 02:15

Instrument ID: CH733 Date Analyzed: 11/25/2016 10:08

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 180-195373/2-A	N11250006.D	11/25/2016 10:35
BGSB22-(0.0-0.5)-161122-S	180-61122-1	N11250024.D	11/25/2016 18:33
BGSB22-(0.0-0.5)-161122-S MS	180-61122-1 MS	N11250025.D	11/25/2016 18:59
BGSB22-(0.0-0.5)-161122-S MSD	180-61122-1 MSD	N11250026.D	11/25/2016 19:26
BGSB22-(1-2)-161122-S	180-61122-2	N11250027.D	11/25/2016 19:53
BGSB10-(0.0-0.5)-161122-S	180-61122-3	N11250028.D	11/25/2016 20:19
BGSB10-(1-2)-161122-S	180-61122-4	N11250029.D	11/25/2016 20:46

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab File ID: N09300002.D DFTPP Injection Date: 09/30/2016

Instrument ID: CH733 DFTPP Injection Time: 07:04

Analysis Batch No.: 189702

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	33.5	
68	Less than 2.0 % of mass 69	0.7	(1.6) 1
69	Mass 69 relative abundance	42.1	
70	Less than 2.0 % of mass 69	0.2	(0.6) 1
127	40.0 - 60.0 % of mass 198	48.6	
197	Less than 1.0 % of mass 198	0.5	
198	Base Peak, 100 % relative abundance	100.0	
199	5.0- 9.0 % of mass 198	6.8	
275	10.0 - 30.0 % of mass 198	27.8	
365	Greater than 1.0 % of mass 198	4.4	
441	Present but less than mass 443	7.7	(75.1) 3
442	Greater than 40.0 % of mass 198	52.8	
443	17.0 - 23.0 % of mass 442	10.3	(19.5) 2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 180-189702/3	N09300003.D	09/30/2016	07:20
	IC 180-189702/4	N09300004.D	09/30/2016	07:47
	IC 180-189702/5	N09300005.D	09/30/2016	08:14
	ICIS 180-189702/6	N09300006.D	09/30/2016	08:40
	IC 180-189702/7	N09300007.D	09/30/2016	09:07
	IC 180-189702/8	N09300008.D	09/30/2016	09:34
	IC 180-189702/9	N09300009.D	09/30/2016	10:28
	IC 180-189702/10	N09300010.D	09/30/2016	11:22

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab File ID: N11250002.D DFTPP Injection Date: 11/25/2016

Instrument ID: CH733 DFTPP Injection Time: 09:00

Analysis Batch No.: 195402

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	34.6	
68	Less than 2.0 % of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	41.6	
70	Less than 2.0 % of mass 69	0.2	(0.5) 1
127	40.0 - 60.0 % of mass 198	43.2	
197	Less than 1.0 % of mass 198	0.0	
198	Base Peak, 100 % relative abundance	100.0	
199	5.0- 9.0 % of mass 198	6.8	
275	10.0 - 30.0 % of mass 198	27.9	
365	Greater than 1.0 % of mass 198	2.9	
441	Present but less than mass 443	10.3	(87.4) 3
442	Greater than 40.0 % of mass 198	60.3	
443	17.0 - 23.0 % of mass 442	11.8	(19.6) 2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 180-195402/3	N11250003.D	11/25/2016	09:15
	MB 180-195373/1-A	N11250005.D	11/25/2016	10:08
	LCS 180-195373/2-A	N11250006.D	11/25/2016	10:35
BGSB22-(0.0-0.5)-161122-S	180-61122-1	N11250024.D	11/25/2016	18:33
BGSB22-(0.0-0.5)-161122-S MS	180-61122-1 MS	N11250025.D	11/25/2016	18:59
BGSB22-(0.0-0.5)-161122-S MSD	180-61122-1 MSD	N11250026.D	11/25/2016	19:26
BGSB22-(1-2)-161122-S	180-61122-2	N11250027.D	11/25/2016	19:53
BGSB10-(0.0-0.5)-161122-S	180-61122-3	N11250028.D	11/25/2016	20:19
BGSB10-(1-2)-161122-S	180-61122-4	N11250029.D	11/25/2016	20:46

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Sample No.: CCVIS 180-195402/3 Date Analyzed: 11/25/2016 09:15

Instrument ID: CH733 GC Column: Rxi-5SilMS ID: 0.32(mm)

Lab File ID (Standard): N11250003.D Heated Purge: (Y/N) N

Calibration ID: 33041

		DCBd4		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		108565	6.31	389041	7.55	232300	9.18
UPPER LIMIT		217130	6.81	778082	8.05	464600	9.68
LOWER LIMIT		54283	5.81	194521	7.05	116150	8.68
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-195373/1-A		114688	6.30	423185	7.54	254638	9.18
LCS 180-195373/2-A		107610	6.30	356604	7.54	217380	9.18
180-61122-1	BGSB22-(0.0-0.5) -161122-S	100651	6.30	392388	7.55	234517	9.18
180-61122-1 MS	BGSB22-(0.0-0.5) -161122-S MS	102926	6.31	380361	7.55	223787	9.19
180-61122-1 MSD	BGSB22-(0.0-0.5) -161122-S MSD	98439	6.31	356688	7.55	208996	9.19
180-61122-2	BGSB22-(1-2)-161122-S	105406	6.31	396013	7.55	244919	9.19
180-61122-3	BGSB10-(0.0-0.5) -161122-S	108700	6.30	407042	7.54	253941	9.18
180-61122-4	BGSB10-(1-2)-161122-S	103580	6.31	392694	7.55	243490	9.19

DCBd4 = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D LL

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Sample No.: CCVIS 180-195402/3 Date Analyzed: 11/25/2016 09:15

Instrument ID: CH733 GC Column: Rxi-5SilMS ID: 0.32(mm)

Lab File ID (Standard): N11250003.D Heated Purge: (Y/N) N

Calibration ID: 33041

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		389565	10.56	453148	14.12	383387	17.07
UPPER LIMIT		779130	11.06	906296	14.62	766774	17.57
LOWER LIMIT		194783	10.06	226574	13.62	191694	16.57
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-195373/1-A		447278	10.55	504280	14.12	441320	17.07
LCS 180-195373/2-A		370317	10.55	451229	14.12	394727	17.07
180-61122-1	BGSB22-(0.0-0.5) -161122-S	404105	10.56	487691	14.14	506459	17.10
180-61122-1 MS	BGSB22-(0.0-0.5) -161122-S MS	384681	10.57	489073	14.14	507240	17.10
180-61122-1 MSD	BGSB22-(0.0-0.5) -161122-S MSD	365004	10.57	471815	14.14	488068	17.10
180-61122-2	BGSB22-(1-2)-161122-S	417915	10.57	531727	14.14	528986	17.10
180-61122-3	BGSB10-(0.0-0.5) -161122-S	445996	10.56	541756	14.13	548193	17.09
180-61122-4	BGSB10-(1-2)-161122-S	433697	10.57	521107	14.14	547826	17.10

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D LL

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(0.0-0.5)-161122-S | Lab Sample ID: 180-61122-1

Matrix: Solid | Lab File ID: N11250024.D

Analysis Method: 8270D LL | Date Collected: 11/22/2016 09:35

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.1(g) | Date Analyzed: 11/25/2016 18:33

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 8.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
92-52-4	1,1'-Biphenyl	0.00322	U	0.0357	0.00322
123-91-1	1,4-Dioxane	0.00413	U	0.0721	0.00413
90-12-0	1-Methylnaphthalene	0.000769	U	0.00724	0.000769
95-94-3	1,2,4,5-Tetrachlorobenzene	0.00273	U	0.0357	0.00273
91-58-7	2-Chloronaphthalene	0.000752	U	0.00724	0.000752
95-57-8	2-Chlorophenol	0.00295	U	0.0357	0.00295
120-83-2	2,4-Dichlorophenol	0.000723	U	0.00724	0.000723
105-67-9	2,4-Dimethylphenol	0.00564	U	0.0357	0.00564
51-28-5	2,4-Dinitrophenol	0.0429	U	0.184	0.0429
121-14-2	2,4-Dinitrotoluene	0.00291	U	0.0357	0.00291
606-20-2	2,6-Dinitrotoluene	0.00372	U	0.0357	0.00372
91-57-6	2-Methylnaphthalene	0.00137	J	0.00724	0.000648
95-48-7	2-Methylphenol	0.00252	U	0.0357	0.00252
106-44-5	Methylphenol, 3 & 4	0.00353	U	0.0357	0.00353
88-74-4	2-Nitroaniline	0.0161	U	0.184	0.0161
99-09-2	3-Nitroaniline	0.0148	U	0.184	0.0148
100-01-6	4-Nitroaniline	0.0146	U	0.184	0.0146
88-75-5	2-Nitrophenol	0.00397	U	0.0357	0.00397
100-02-7	4-Nitrophenol	0.0131	U	0.184	0.0131
108-60-1	2,2'-oxybis[1-chloropropane]	0.000778	U	0.00724	0.000778
58-90-2	2,3,4,6-Tetrachlorophenol	0.00232	U	0.0357	0.00232
95-95-4	2,4,5-Trichlorophenol	0.00385	U	0.0357	0.00385
88-06-2	2,4,6-Trichlorophenol	0.00540	U	0.0357	0.00540
59-50-7	4-Chloro-3-methylphenol	0.00332	U	0.0357	0.00332
7005-72-3	4-Chlorophenyl phenyl ether	0.00401	U	0.0357	0.00401
534-52-1	4,6-Dinitro-2-methylphenol	0.0145	U	0.184	0.0145
83-32-9	Acenaphthene	0.000692	U	0.00724	0.000692
208-96-8	Acenaphthylene	0.00396	J	0.00724	0.000826
98-86-2	Acetophenone	0.0169	J	0.0357	0.00296
120-12-7	Anthracene	0.00362	J	0.00724	0.000705
1912-24-9	Atrazine	0.00351	U	0.0357	0.00351
100-52-7	Benzaldehyde	0.00751	J	0.0357	0.00540
56-55-3	Benzo[a]anthracene	0.0140		0.00724	0.000903
205-99-2	Benzo[b]fluoranthene	0.0202		0.00724	0.00113

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(0.0-0.5)-161122-S | Lab Sample ID: 180-61122-1

Matrix: Solid | Lab File ID: N11250024.D

Analysis Method: 8270D LL | Date Collected: 11/22/2016 09:35

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.1(g) | Date Analyzed: 11/25/2016 18:33

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 8.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
207-08-9	Benzo[k]fluoranthene	0.00857		0.00724	0.00146
191-24-2	Benzo[g,h,i]perylene	0.0165		0.00724	0.000717
50-32-8	Benzo[a]pyrene	0.0132		0.00724	0.000721
111-91-1	Bis(2-chloroethoxy)methane	0.00237	U	0.0357	0.00237
111-44-4	Bis(2-chloroethyl)ether	0.000967	U	0.00724	0.000967
117-81-7	Bis(2-ethylhexyl) phthalate	0.0310	J	0.0721	0.00582
101-55-3	4-Bromophenyl phenyl ether	0.00314	U	0.0357	0.00314
85-68-7	Butyl benzyl phthalate	0.00591	J	0.0357	0.00493
105-60-2	Caprolactam	0.0272	U F1	0.184	0.0272
86-74-8	Carbazole	0.00176	J	0.00724	0.000664
53-70-3	Dibenz(a,h)anthracene	0.00336	J	0.00724	0.000802
132-64-9	Dibenzofuran	0.00355	U	0.0357	0.00355
84-74-2	Di-n-butyl phthalate	0.00485	J	0.0357	0.00452
117-84-0	Di-n-octyl phthalate	0.00380	U	0.0357	0.00380
84-66-2	Diethyl phthalate	0.00394	U	0.0357	0.00394
131-11-3	Dimethyl phthalate	0.00393	U	0.0357	0.00393
206-44-0	Fluoranthene	0.0179		0.00724	0.000771
86-73-7	Fluorene	0.000950	U	0.00724	0.000950
118-74-1	Hexachlorobenzene	0.000768	U	0.00724	0.000768
87-68-3	Hexachlorobutadiene	0.000807	U	0.00724	0.000807
77-47-4	Hexachlorocyclopentadiene	0.00389	U F1	0.0357	0.00389
67-72-1	Hexachloroethane	0.00259	U	0.0357	0.00259
193-39-5	Indeno[1,2,3-cd]pyrene	0.0118		0.00724	0.000743
78-59-1	Isophorone	0.00272	U	0.0357	0.00272
91-20-3	Naphthalene	0.000621	U	0.00724	0.000621
98-95-3	Nitrobenzene	0.00300	U	0.0721	0.00300
86-30-6	N-Nitrosodiphenylamine	0.00334	U	0.0357	0.00334
621-64-7	N-Nitrosodi-n-propylamine	0.000845	U	0.00724	0.000845
87-86-5	Pentachlorophenol	0.00322	U	0.0357	0.00322
85-01-8	Phenanthrene	0.00554	J	0.00724	0.00115
108-95-2	Phenol	0.000852	U	0.0357	0.000852
129-00-0	Pyrene	0.0168		0.00724	0.000729
91-94-1	3,3'-Dichlorobenzidine	0.00381	U F1	0.0357	0.00381

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(0.0-0.5)-161122-S | Lab Sample ID: 180-61122-1

Matrix: Solid | Lab File ID: N11250024.D

Analysis Method: 8270D LL | Date Collected: 11/22/2016 09:35

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.1(g) | Date Analyzed: 11/25/2016 18:33

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 8.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	62		42-100
367-12-4	2-Fluorophenol (Surr)	57		21-107
118-79-6	2,4,6-Tribromophenol (Surr)	75		20-134
4165-60-0	Nitrobenzene-d5 (Surr)	61		35-109
4165-62-2	Phenol-d5 (Surr)	61		29-105
1718-51-0	Terphenyl-d14 (Surr)	64		36-113

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D
Lims ID: 180-61122-A-1-C
Client ID: BGSB22-(0.0-0.5)-161122-S
Sample Type: Client
Inject. Date: 25-Nov-2016 18:33:30 ALS Bottle#: 23 Worklist Smp#: 24
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014496-024
Operator ID: 03200 Instrument ID: CH733

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 26-Nov-2016 08:21:37 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK023

First Level Reviewer: piccolinov Date: 26-Nov-2016 08:12:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.301	6.307	-0.006	97	100651	8.00	
* 2 Naphthalene-d8	136	7.548	7.548	0.000	99	392388	8.00	
* 3 Acenaphthene-d10	164	9.183	9.183	0.000	92	234517	8.00	
* 4 Phenanthrene-d10	188	10.560	10.560	0.000	97	404105	8.00	
* 5 Chrysene-d12	240	14.136	14.124	0.012	96	487691	8.00	
* 6 Perylene-d12	264	17.095	17.071	0.024	98	506459	8.00	
$ 7 2-Fluorophenol	112	4.872	4.872	0.000	93	330790	22.8	
$ 8 Phenol-d5	99	5.937	5.936	0.001	95	439752	24.5	
$ 9 Nitrobenzene-d5	82	6.848	6.848	0.000	90	440338	24.3	
$ 10 2-Fluorobiphenyl	172	8.542	8.542	0.000	100	1007685	25.0	
$ 11 2,4,6-Tribromophenol	330	9.913	9.907	0.006	93	135109	29.8	
$ 12 Terphenyl-d14	244	12.354	12.348	0.006	99	1240318	25.5	
13 1,4-Dioxane	88		1.401				ND	
25 Benzaldehyde	77	5.843	5.842	0.001	92	4590	0.4170	
26 Phenol	94		5.948				ND	
29 Bis(2-chloroethyl)ether	93		6.031				ND	
30 2-Chlorophenol	128		6.089				ND	
36 2-Methylphenol	108		6.554				ND	
38 2,2'-oxybis[1-chloropropan	45		6.578				ND	
40 Acetophenone	105	6.701	6.701	0.000	95	19698	0.9386	
42 4-Methylphenol	108		6.701				ND	
41 N-Nitrosodi-n-propylamine	70		6.701				ND	
45 Hexachloroethane	117		6.819				ND	
46 Nitrobenzene	77		6.866				ND	
48 Isophorone	82		7.095				ND	
49 2-Nitrophenol	139		7.178				ND	
50 2,4-Dimethylphenol	107		7.207				ND	
53 Bis(2-chloroethoxy)methane	93		7.295				ND	
54 2,4-Dichlorophenol	162		7.407				ND	
58 Naphthalene	128		7.572				ND	
62 Hexachlorobutadiene	225		7.689				ND	
64 Caprolactam	113		7.901				ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
67 4-Chloro-3-methylphenol	107		8.042				ND	
69 2-Methylnaphthalene	142	8.219	8.213	0.006	89	2534	0.0762	
71 1-Methylnaphthalene	142	8.313	8.307	0.006	1	807	0.0259	
72 Hexachlorocyclopentadiene	237		8.366				ND	
73 1,2,4,5-Tetrachlorobenzene	216		8.372				ND	
74 2,4,6-Trichlorophenol	196		8.472				ND	
75 2,4,5-Trichlorophenol	196		8.501				ND	
76 1,1'-Biphenyl	154		8.642				ND	
77 2-Chloronaphthalene	162		8.672				ND	
79 2-Nitroaniline	65		8.748				ND	
82 Dimethyl phthalate	163		8.895				ND	
84 2,6-Dinitrotoluene	165		8.954				ND	
85 Acenaphthylene	152	9.060	9.060	0.000	82	9937	0.2201	
86 3-Nitroaniline	138		9.119				ND	
87 2,4-Dinitrophenol	184		9.213				ND	
88 Acenaphthene	153		9.213				ND	
89 4-Nitrophenol	109		9.242				ND	
91 2,4-Dinitrotoluene	165		9.330				ND	
93 Dibenzofuran	168		9.372				ND	
96 2,3,4,6-Tetrachlorophenol	232		9.477				ND	
98 Diethyl phthalate	149	9.531	9.530	0.001	95	5404	0.1525	
100 4-Chlorophenyl phenyl ethe	204		9.666				ND	
101 4-Nitroaniline	138		9.677				ND	
103 Fluorene	166		9.689				ND	
104 4,6-Dinitro-2-methylphenol	198		9.707				ND	
105 N-Nitrosodiphenylamine	169		9.766				ND	
110 4-Bromophenyl phenyl ether	248		10.119				ND	
112 Hexachlorobenzene	284		10.201				ND	
113 Atrazine	200		10.224				ND	
116 Pentachlorophenol	266		10.371				ND	
121 Phenanthrene	178	10.583	10.583	0.000	95	17246	0.3078	
122 Anthracene	178	10.630	10.630	0.000	96	10876	0.2011	
124 Carbazole	167	10.777	10.771	0.006	90	4542	0.0976	
126 Di-n-butyl phthalate	149	11.066	11.066	0.000	97	14419	0.2694	
131 Fluoranthene	202	11.895	11.889	0.006	96	59589	0.99	
133 Pyrene	202	12.201	12.195	0.006	98	68686	0.9309	
138 Butyl benzyl phthalate	149	13.054	13.048	0.006	92	7977	0.3282	
144 3,3'-Dichlorobenzidine	252		14.024				ND	
145 Bis(2-ethylhexyl) phthalat	149	14.066	14.054	0.012	92	56690	1.72	
146 Benzo[a]anthracene	228	14.118	14.101	0.017	97	48861	0.7762	
150 Di-n-octyl phthalate	149		15.371				ND	
152 Benzo[b]fluoranthene	252	16.283	16.265	0.018	93	88054	1.12	
153 Benzo[k]fluoranthene	252	16.324	16.318	0.006	88	38930	0.4759	M
154 Benzo[a]pyrene	252	16.977	16.953	0.024	75	52774	0.7347	
157 Indeno[1,2,3-cd]pyrene	276	19.342	19.306	0.036	70	50729	0.6542	
158 Dibenz(a,h)anthracene	278	19.371	19.341	0.030	84	11492	0.1866	
159 Benzo[g,h,i]perylene	276	19.959	19.924	0.035	96	60577	0.9149	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

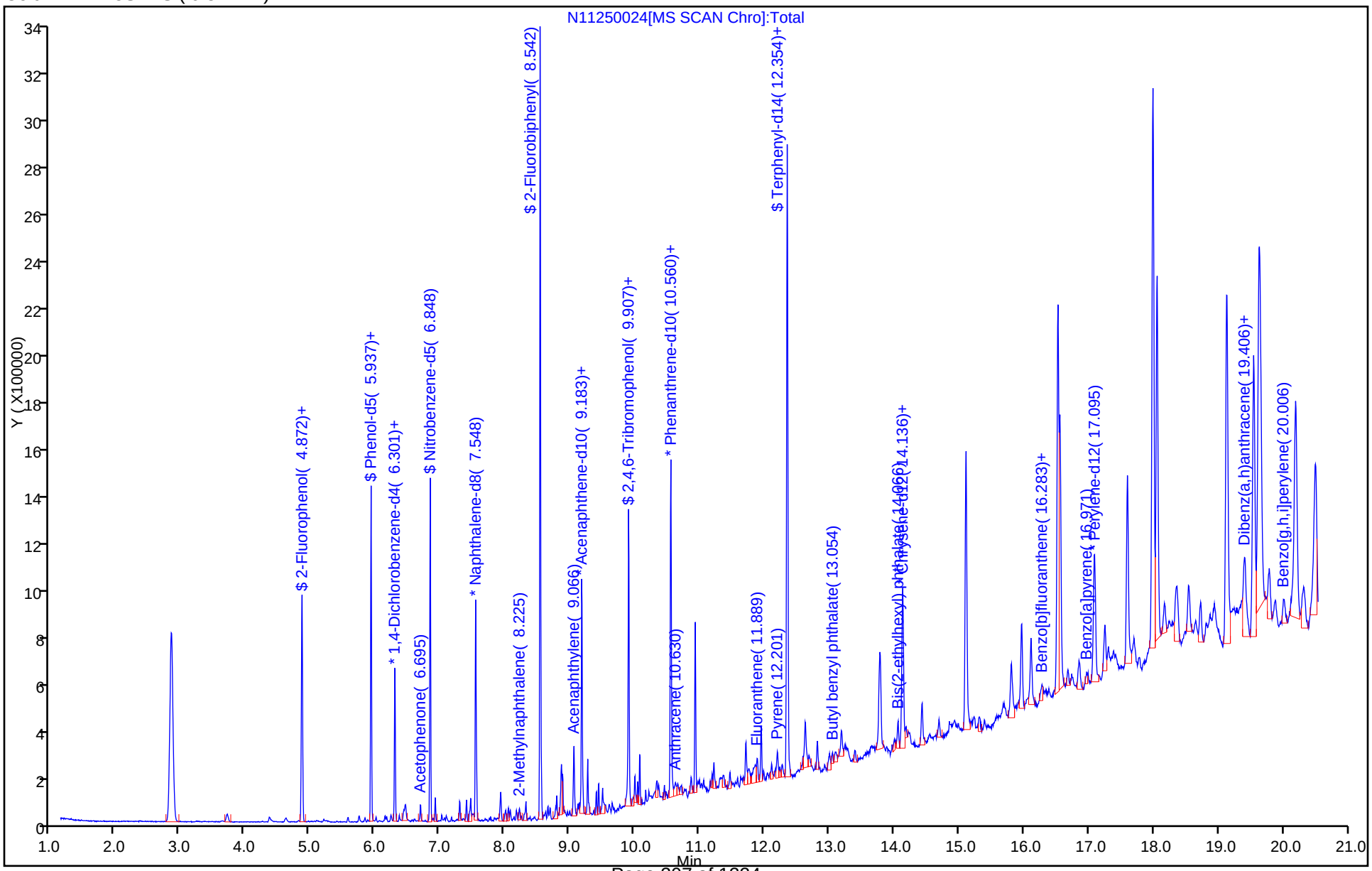
SVTAPITINTRNi_00012	Amount Added:	1.00	Units: uL	Run Reagent

Report Date: 26-Nov-2016 08:23:05 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1	Worklist Smp#:	24
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Injection Vol:	2.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)



TestAmerica Pittsburgh
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D
Lims ID: 180-61122-A-1-C
Client ID: BGSB22-(0.0-0.5)-161122-S
Sample Type: Client
Inject. Date: 25-Nov-2016 18:33:30 ALS Bottle#: 23 Worklist Smp#: 24
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014496-024
Operator ID: 03200 Instrument ID: CH733

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 26-Nov-2016 08:21:37 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK023

First Level Reviewer: piccolinov Date: 26-Nov-2016 08:12:26

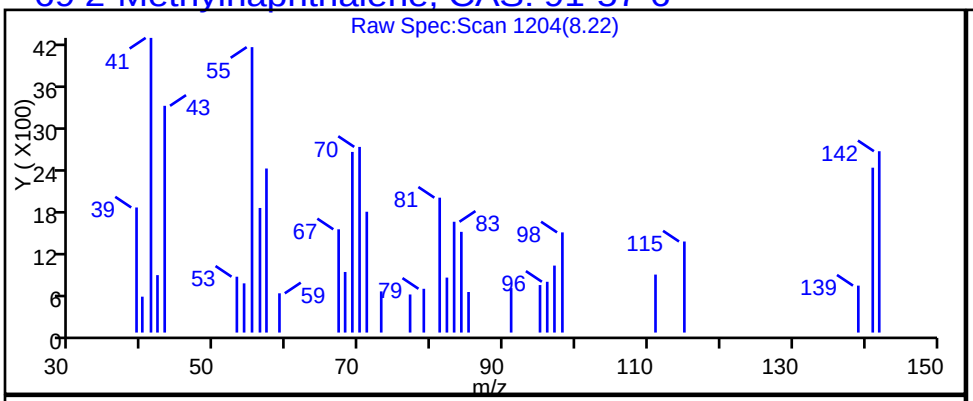
Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	40.0	22.8	56.98
$ 8 Phenol-d5	40.0	24.5	61.23
$ 9 Nitrobenzene-d5	40.0	24.3	60.81
$ 10 2-Fluorobiphenyl	40.0	25.0	62.40
$ 11 2,4,6-Tribromophenol	40.0	29.8	74.50
$ 12 Terphenyl-d14	40.0	25.5	63.79

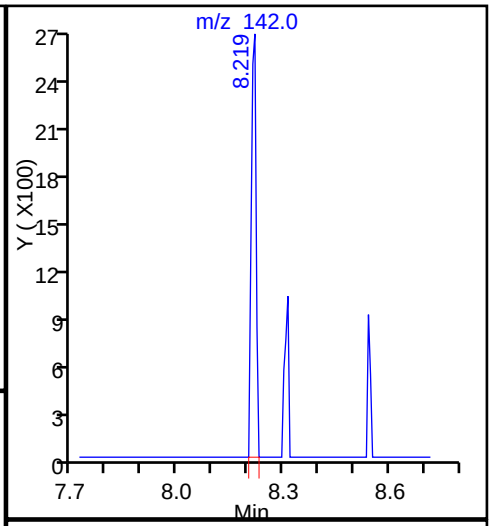
Report Date: 26-Nov-2016 08:23:06 Chrom Revision: 2.2 14-Nov-2016 08:15:18

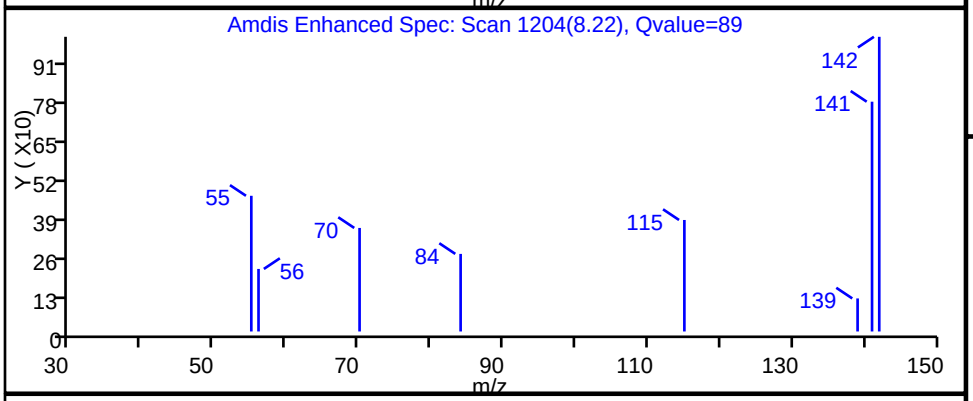
TestAmerica Pittsburgh

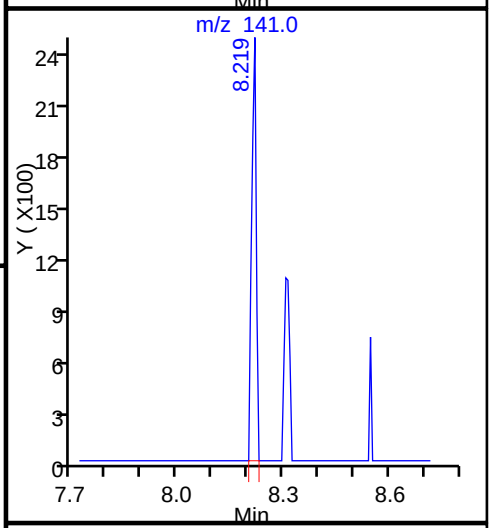
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

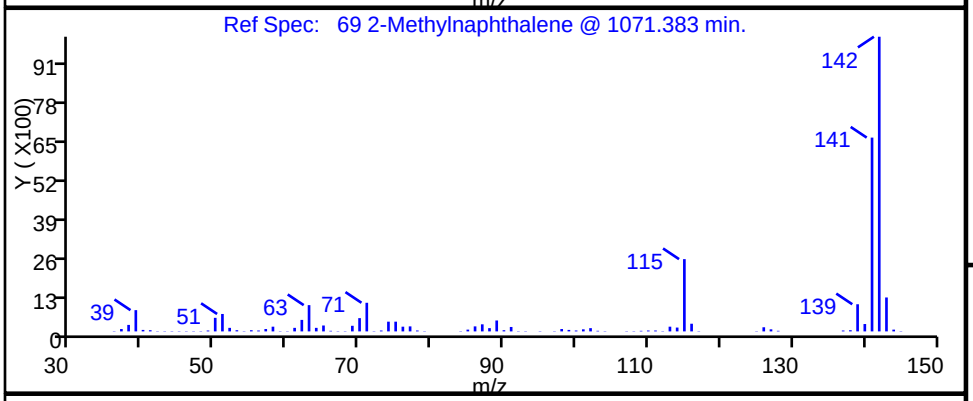
69 2-Methylnaphthalene, CAS: 91-57-6

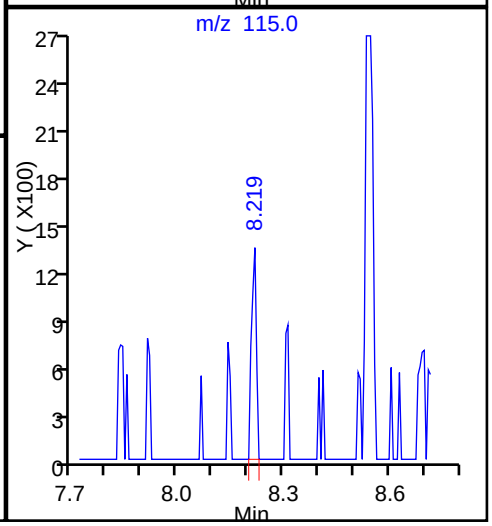


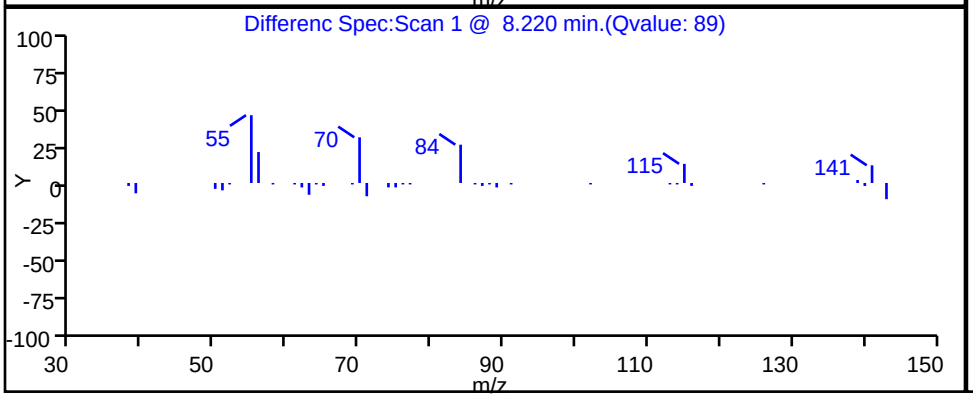










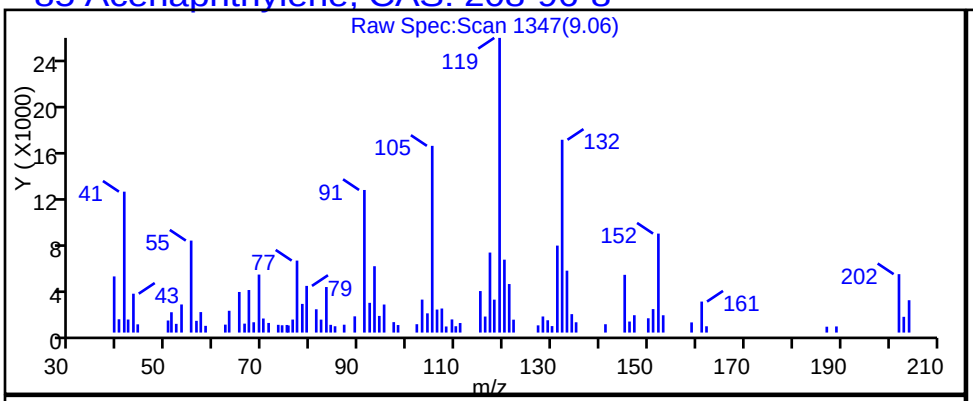


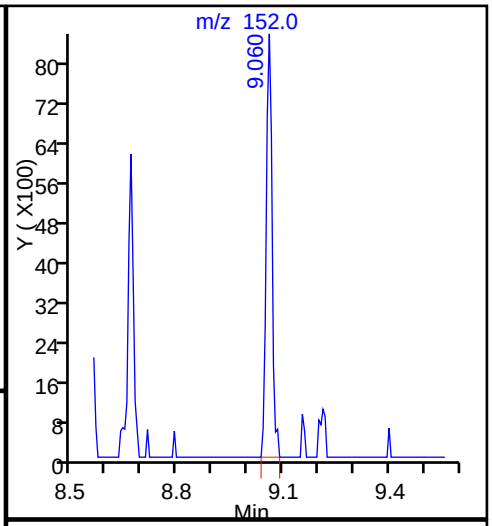
Report Date: 26-Nov-2016 08:23:06 Chrom Revision: 2.2 14-Nov-2016 08:15:18

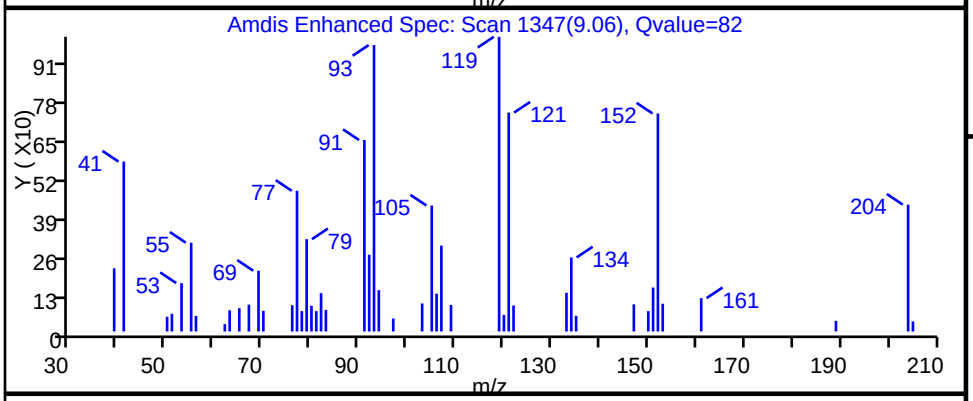
TestAmerica Pittsburgh

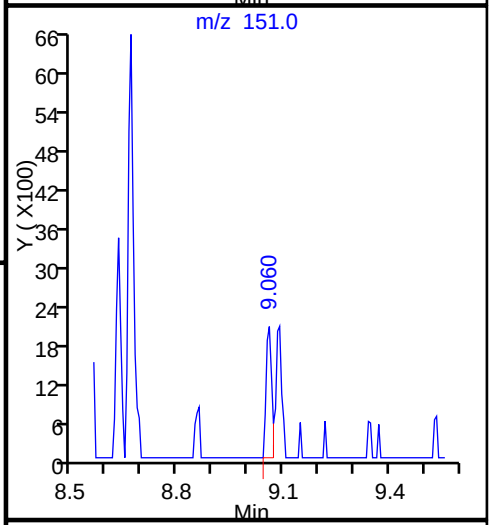
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

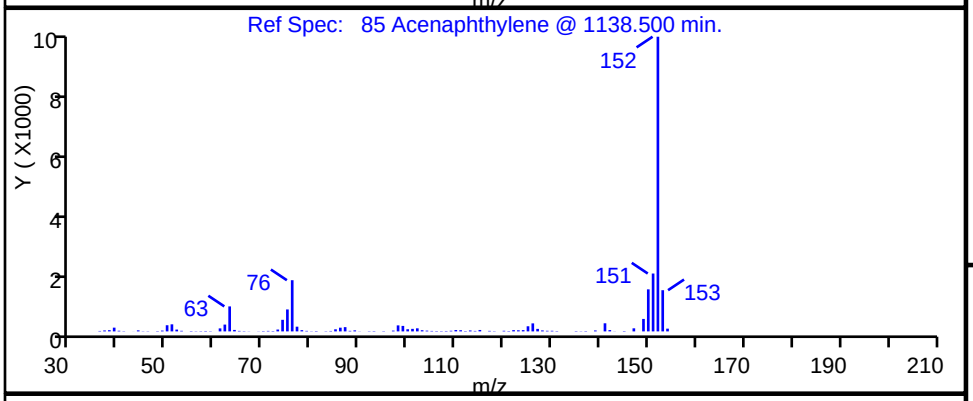
85 Acenaphthylene, CAS: 208-96-8

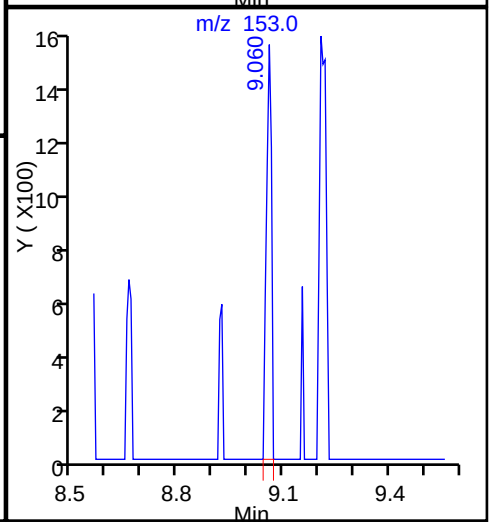


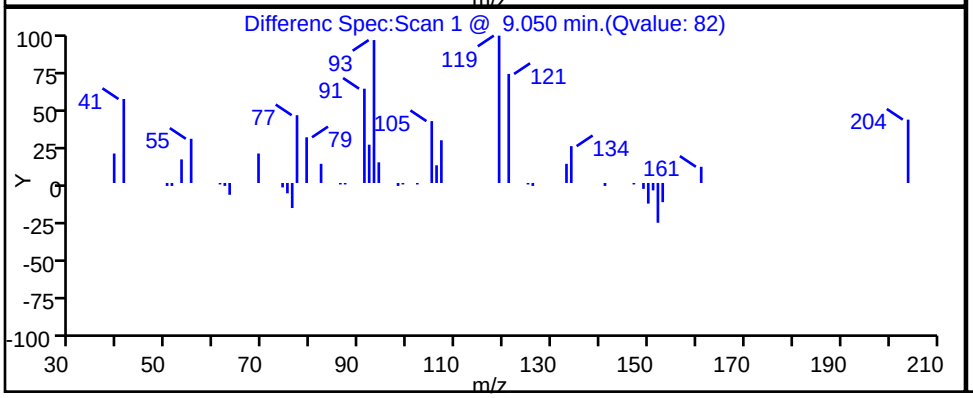










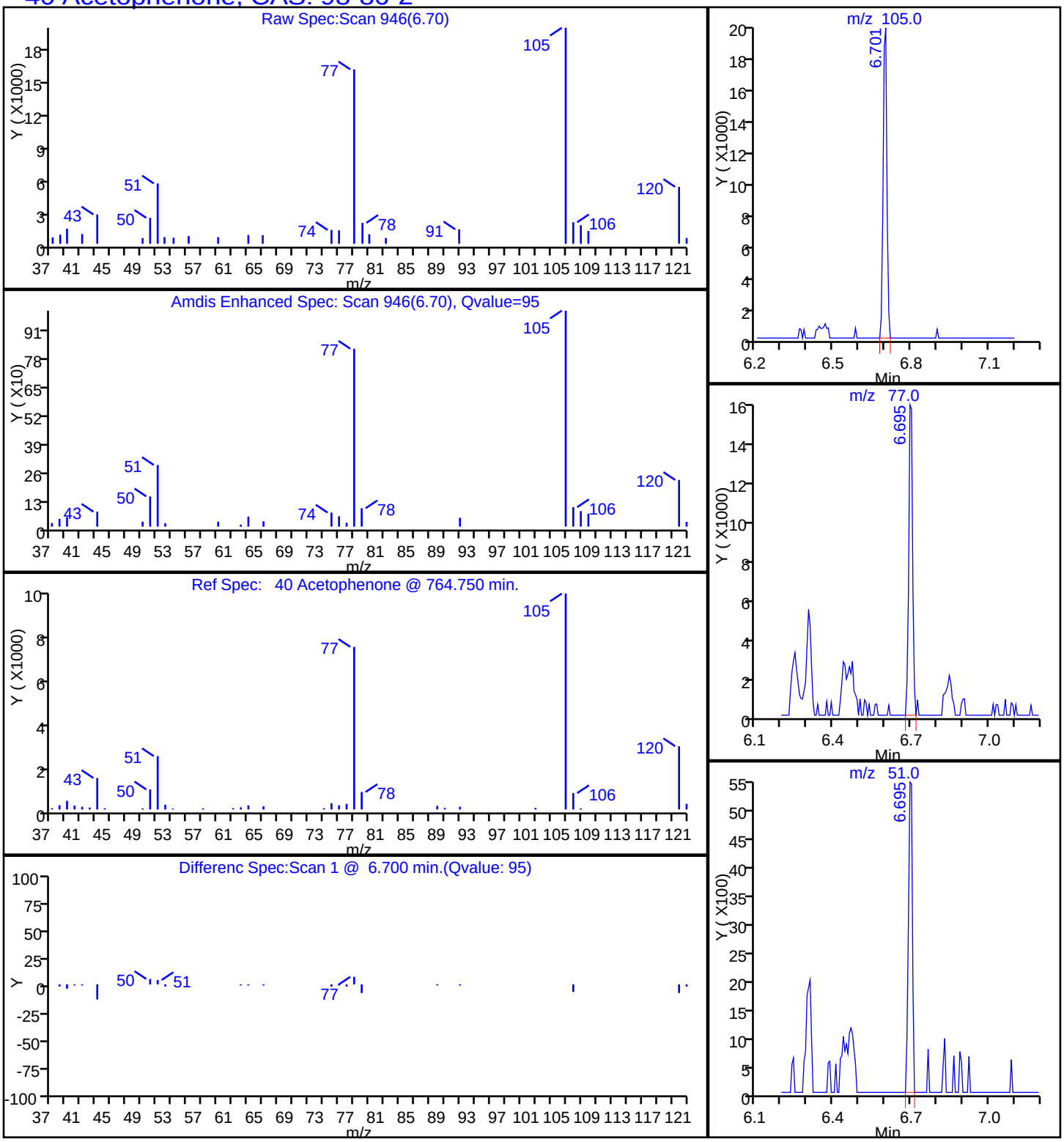


Report Date: 26-Nov-2016 08:23:06 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

40 Acetophenone, CAS: 98-86-2

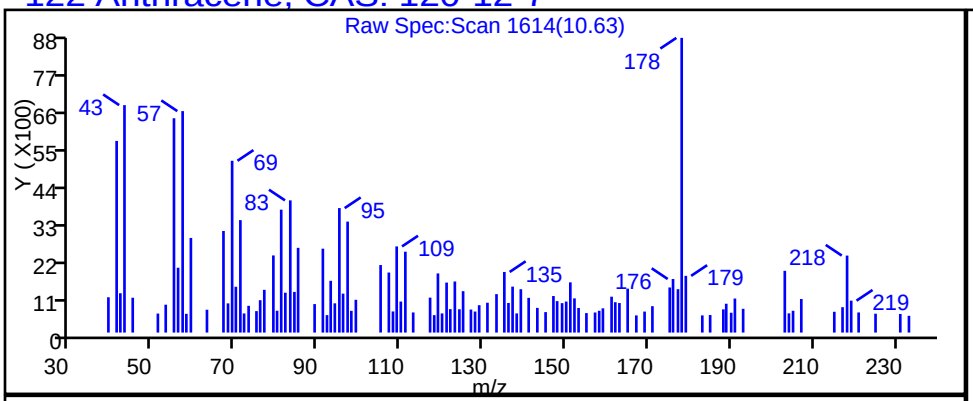


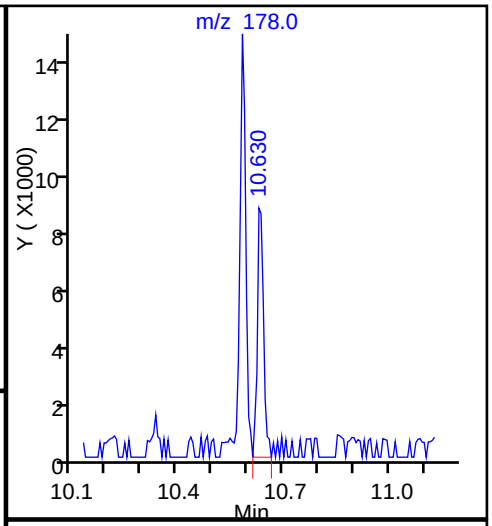
Report Date: 26-Nov-2016 08:23:06 Chrom Revision: 2.2 14-Nov-2016 08:15:18

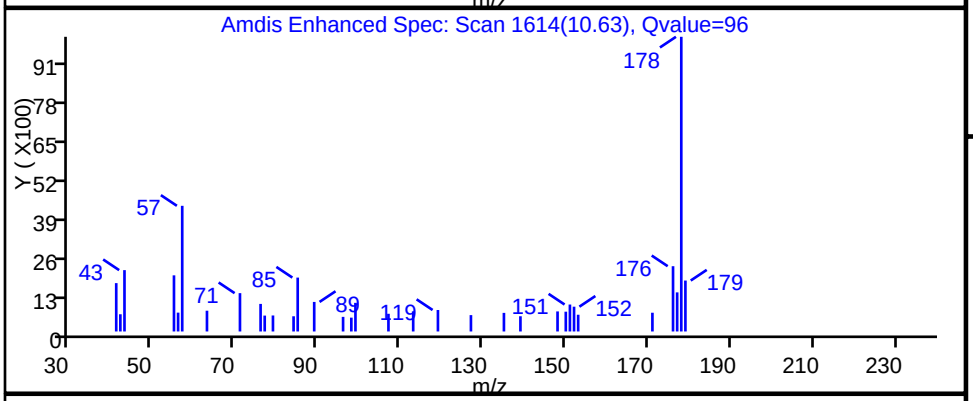
TestAmerica Pittsburgh

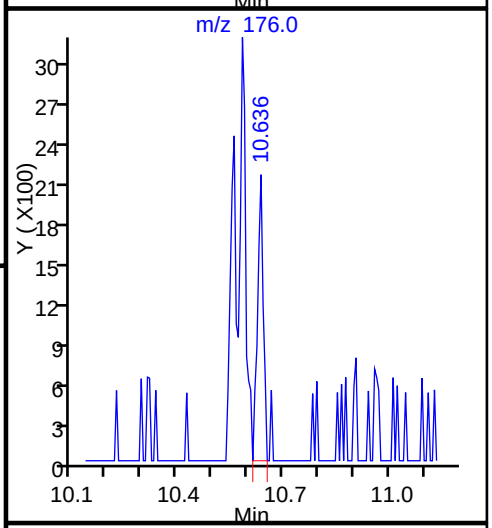
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

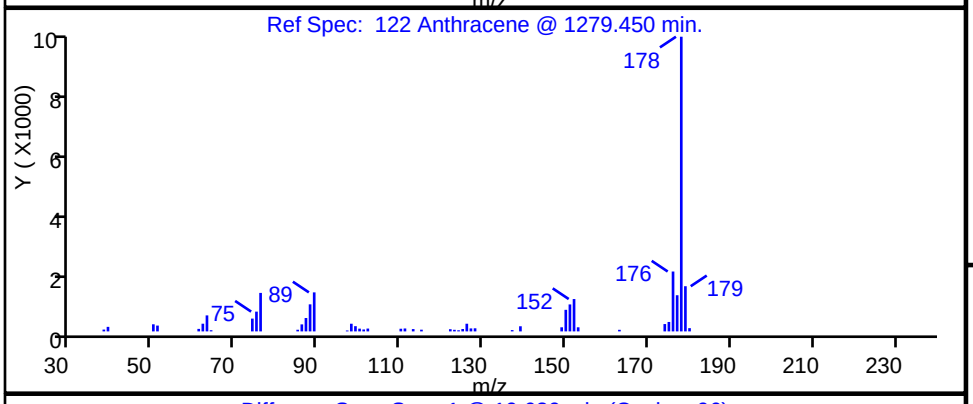
122 Anthracene, CAS: 120-12-7

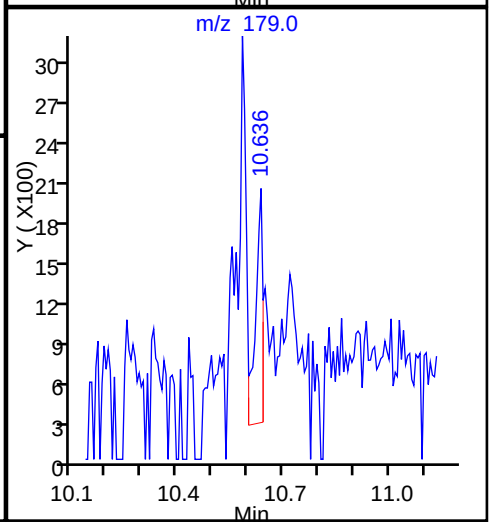


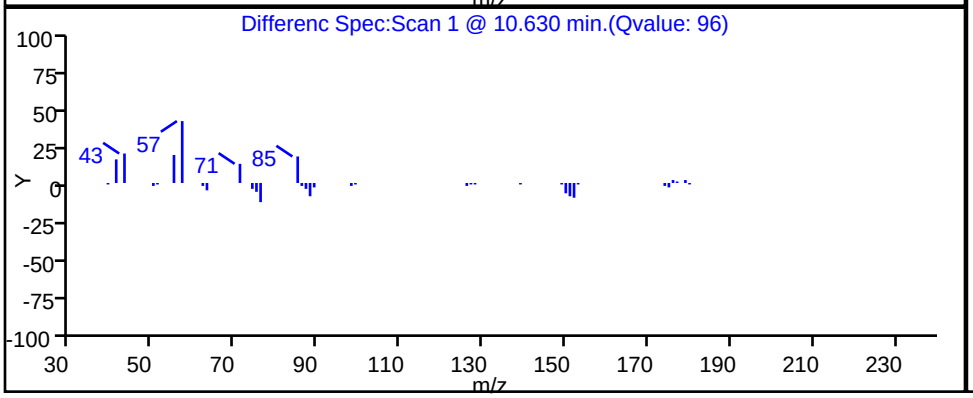










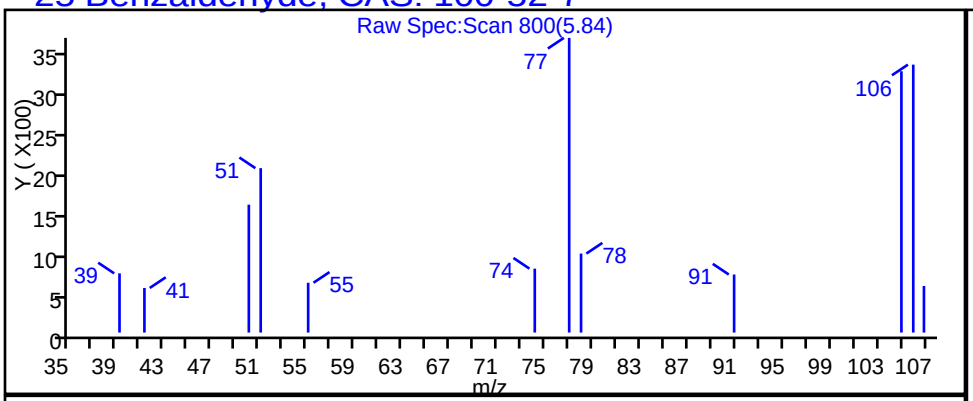


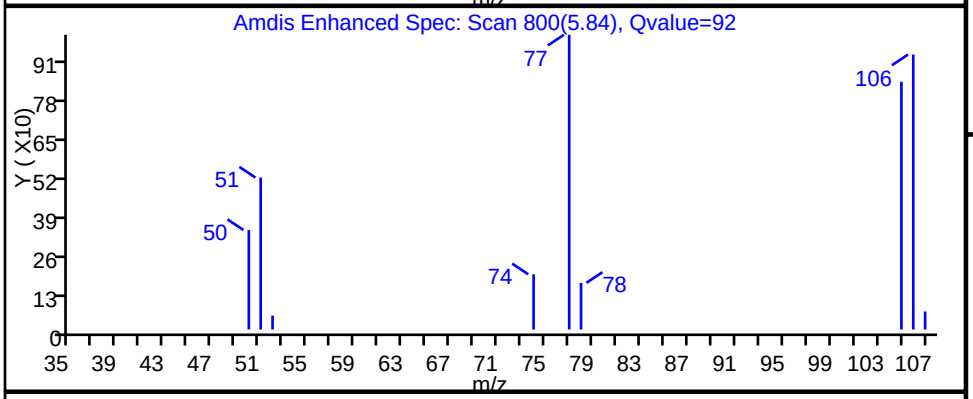
Report Date: 26-Nov-2016 08:23:05 Chrom Revision: 2.2 14-Nov-2016 08:15:18

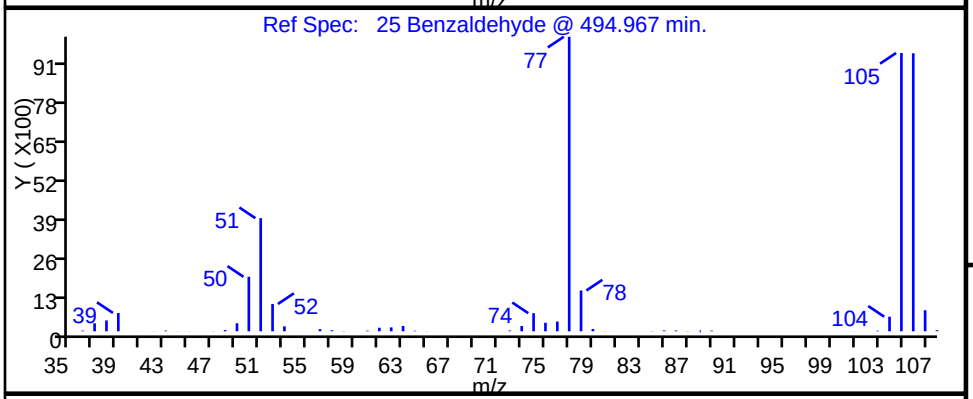
TestAmerica Pittsburgh

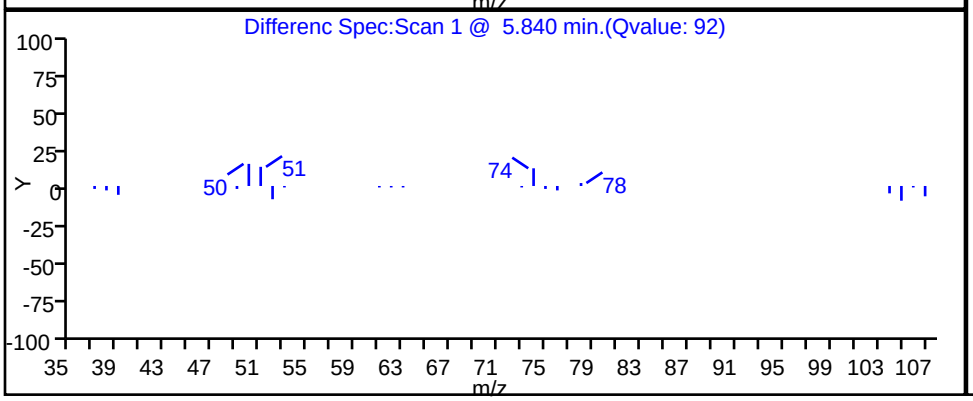
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

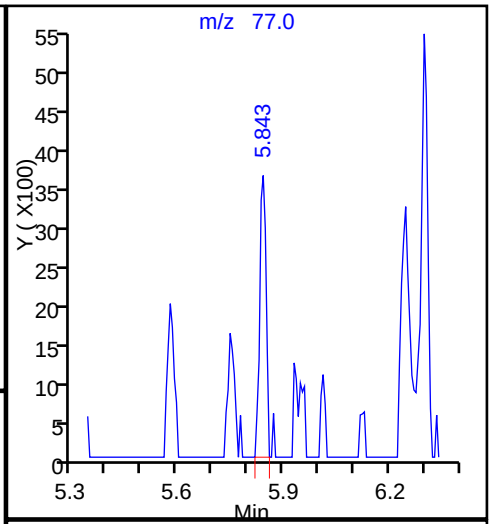
25 Benzaldehyde, CAS: 100-52-7

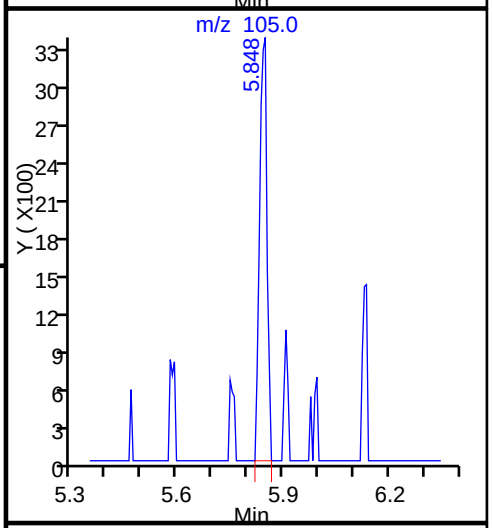


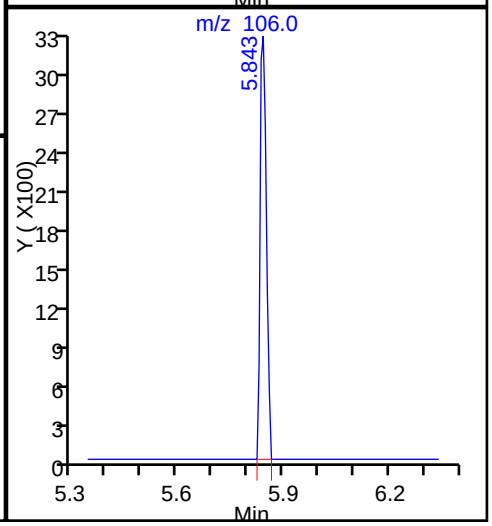










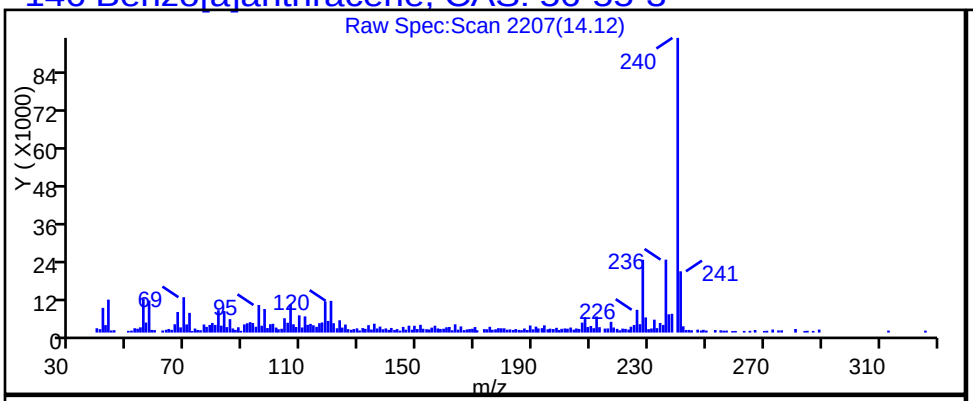


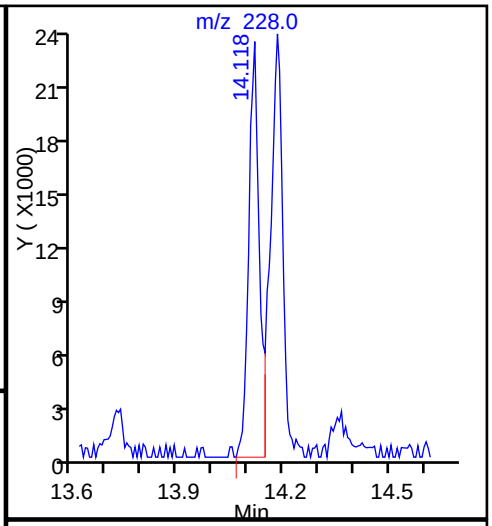
Report Date: 26-Nov-2016 08:23:06 Chrom Revision: 2.2 14-Nov-2016 08:15:18

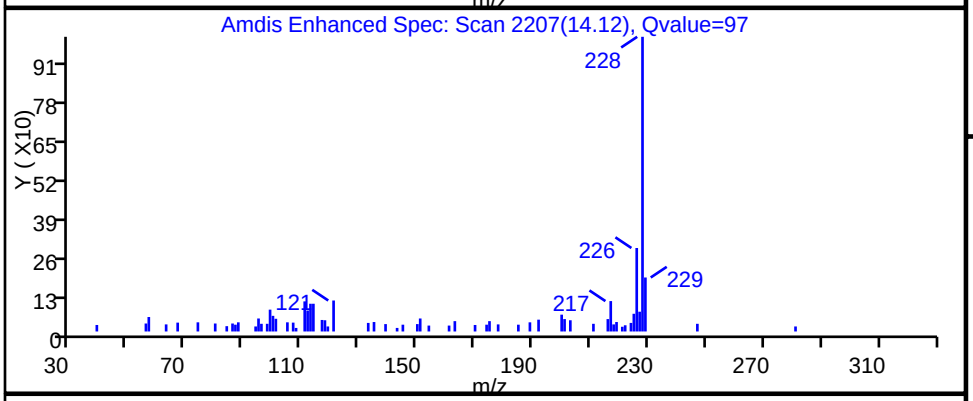
TestAmerica Pittsburgh

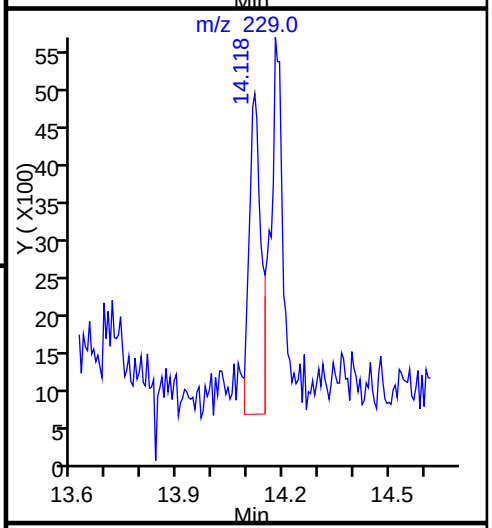
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

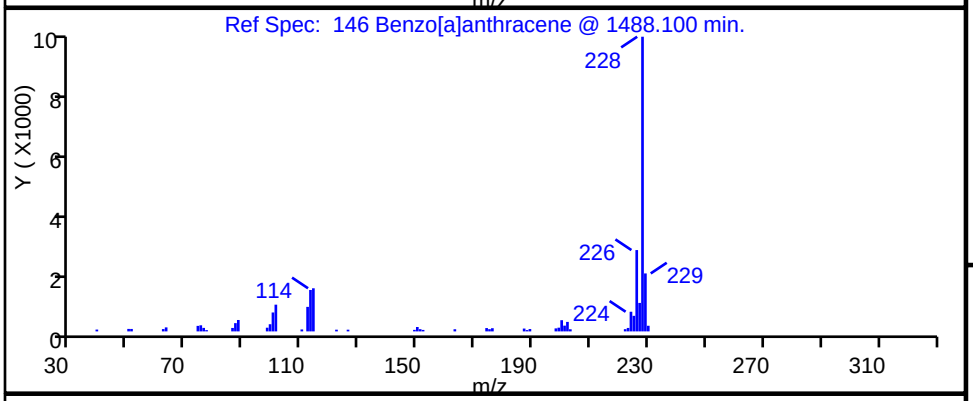
146 Benzo[a]anthracene, CAS: 56-55-3

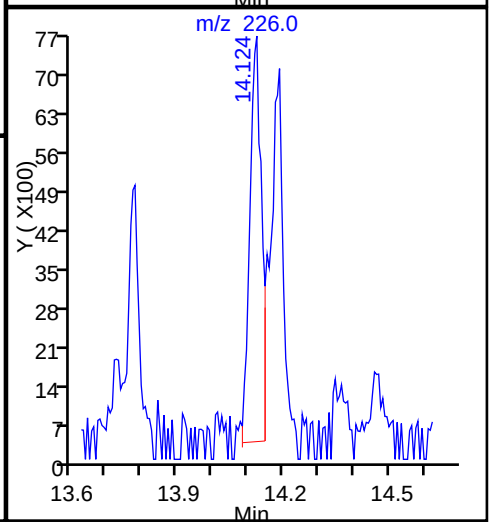


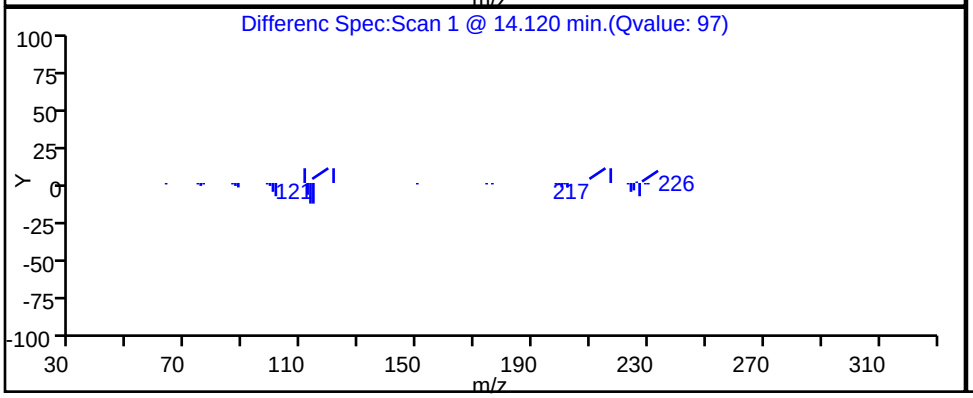










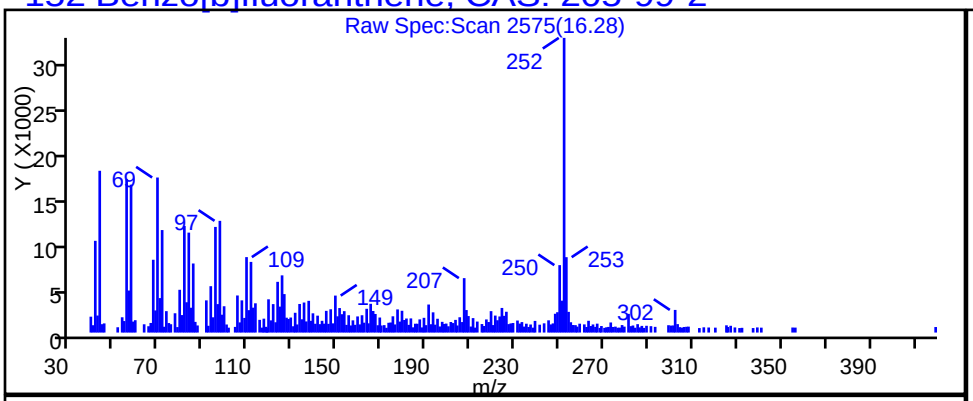


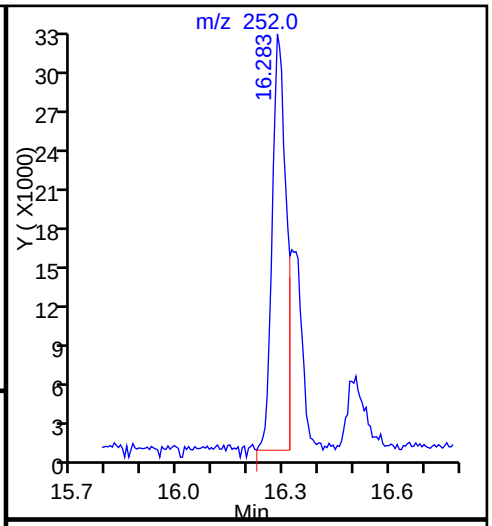
Report Date: 26-Nov-2016 08:23:06 Chrom Revision: 2.2 14-Nov-2016 08:15:18

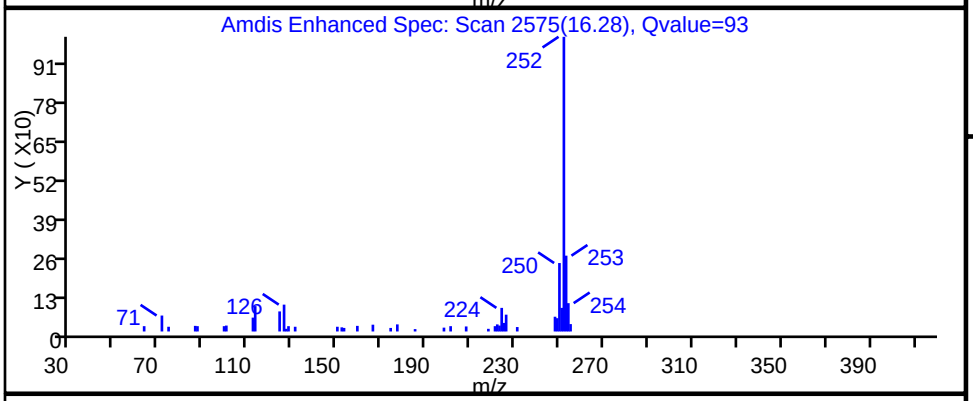
TestAmerica Pittsburgh

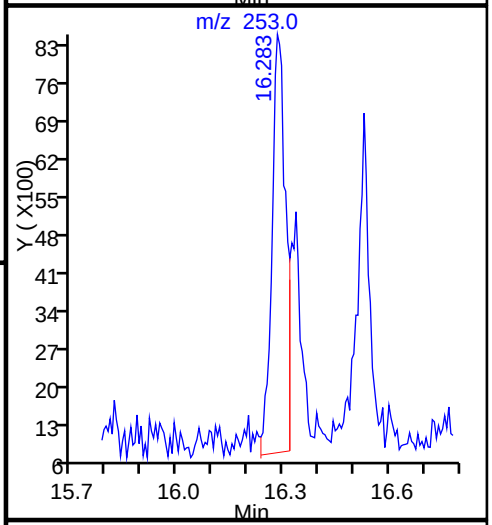
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

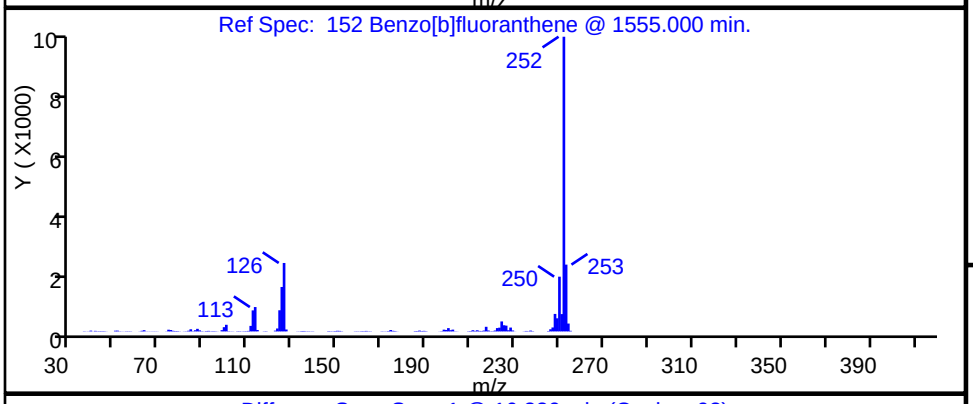
152 Benzo[b]fluoranthene, CAS: 205-99-2

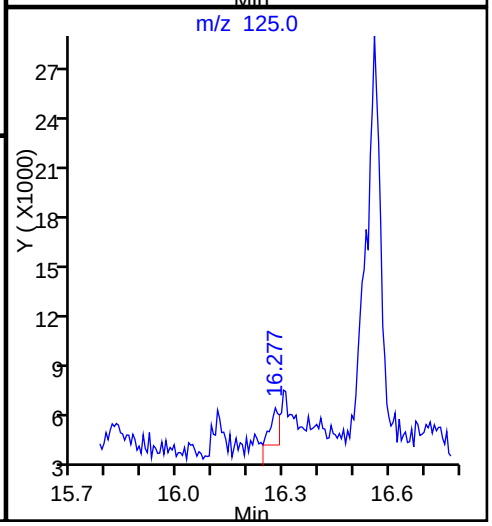


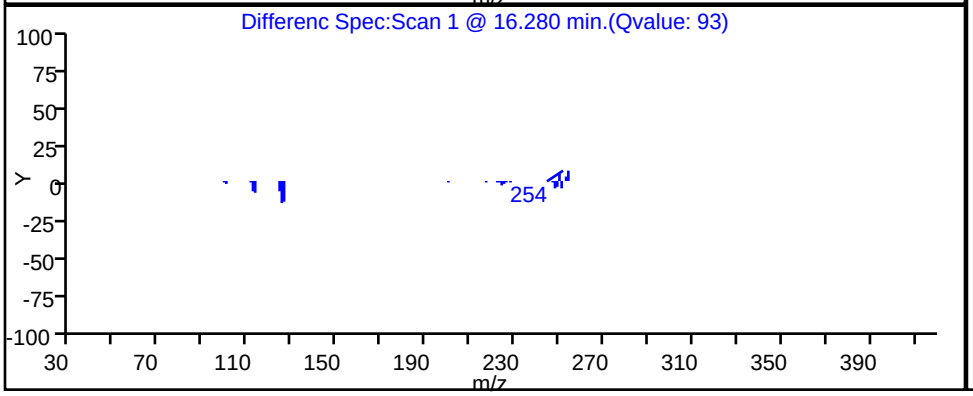












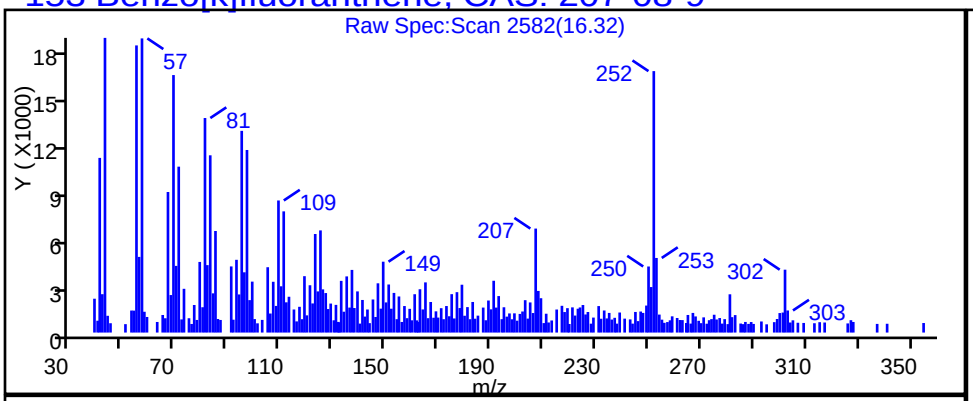
Report Date: 26-Nov-2016 08:23:06 Chrom Revision: 2.2 14-Nov-2016 08:15:18

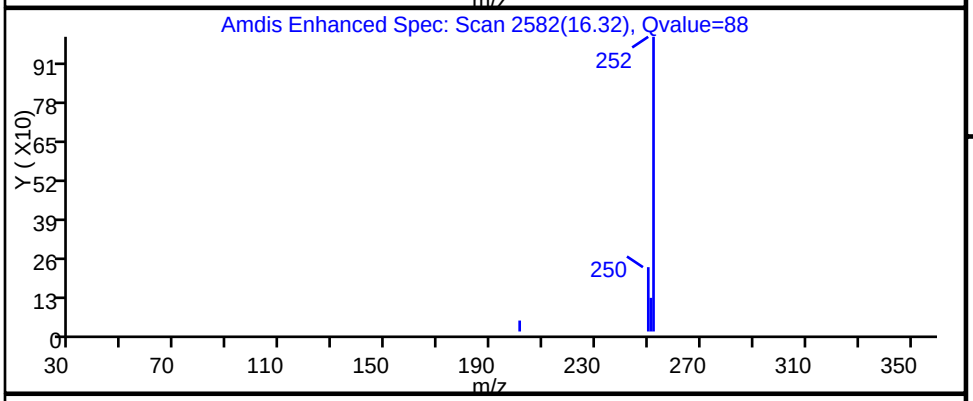
TestAmerica Pittsburgh

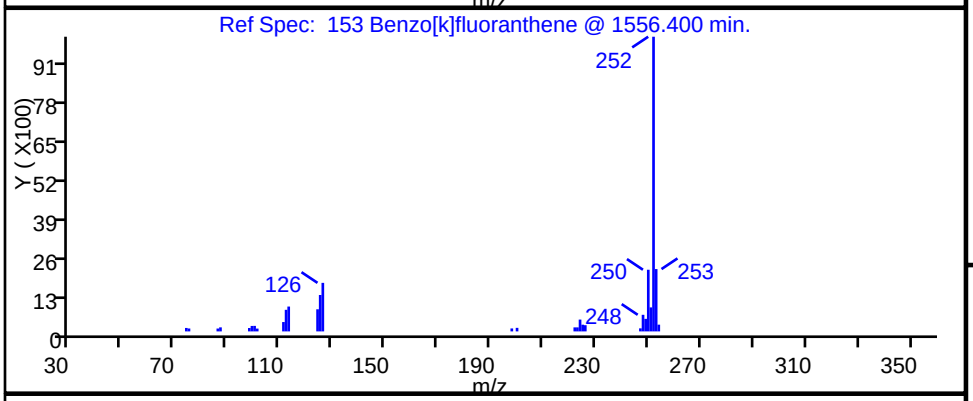
Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D

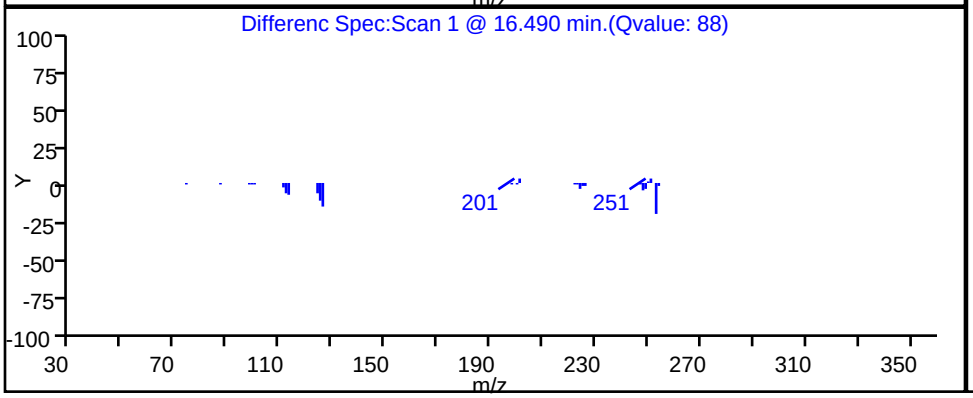
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

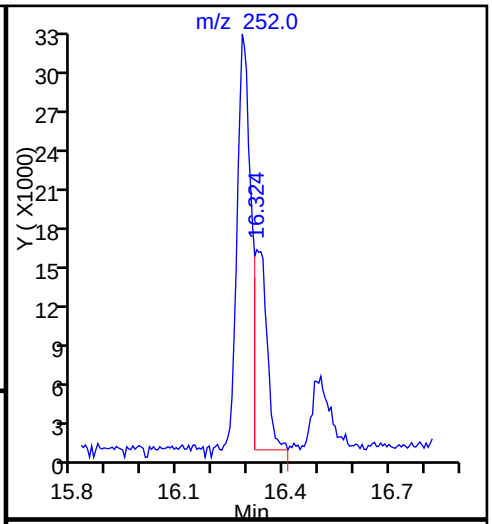
153 Benzo[k]fluoranthene, CAS: 207-08-9

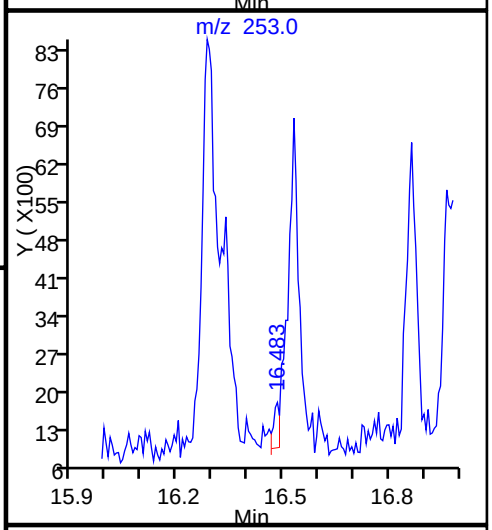


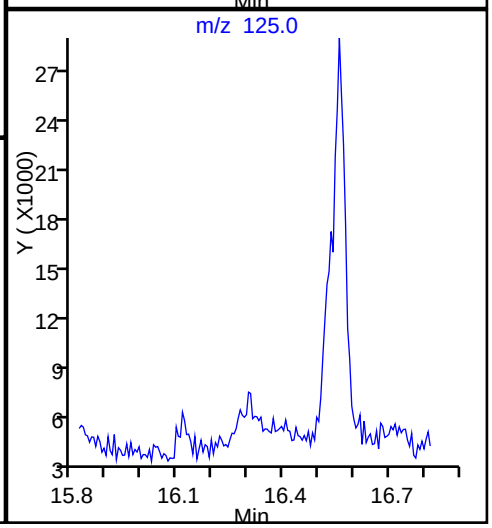










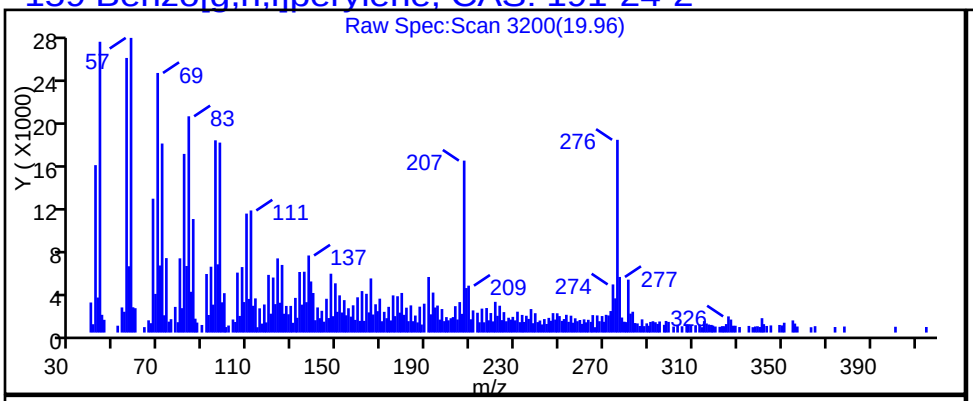


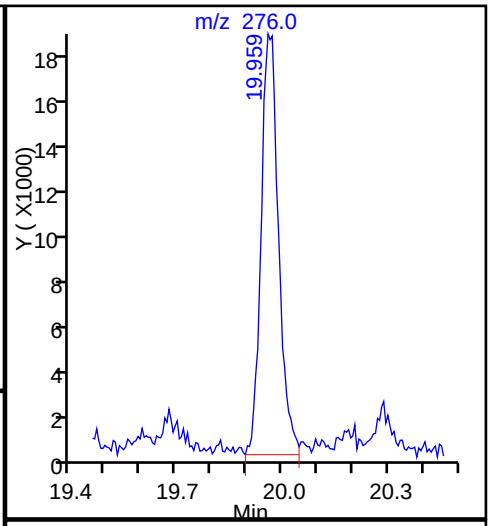
Report Date: 26-Nov-2016 08:23:07 Chrom Revision: 2.2 14-Nov-2016 08:15:18

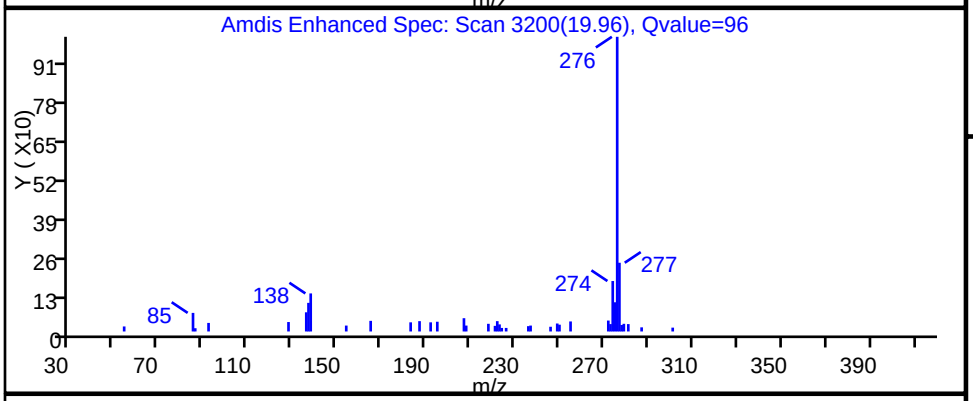
TestAmerica Pittsburgh

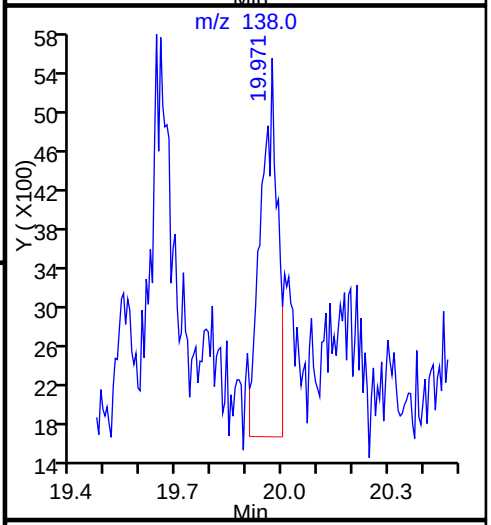
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

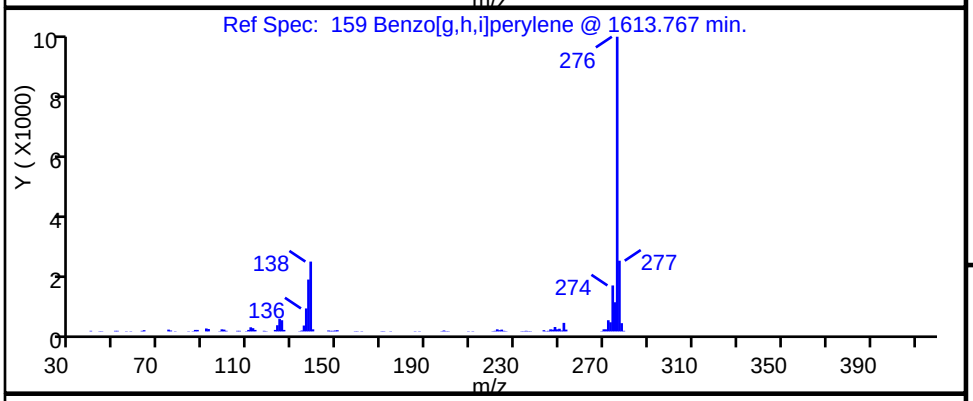
159 Benzo[g,h,i]perylene, CAS: 191-24-2

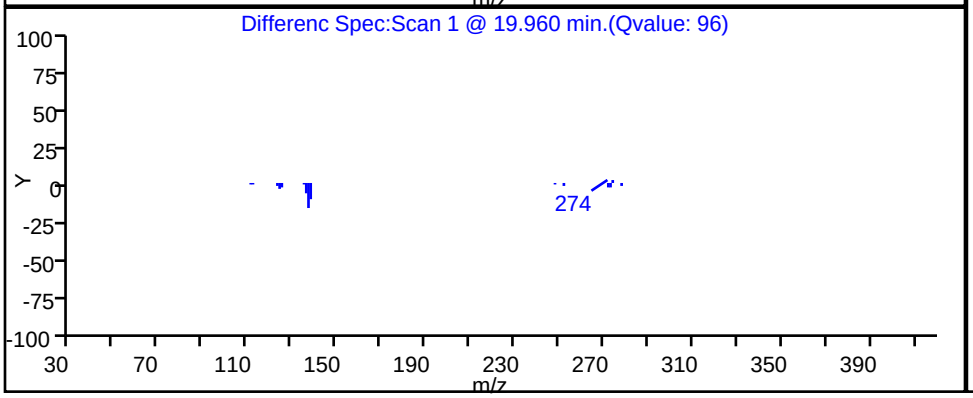


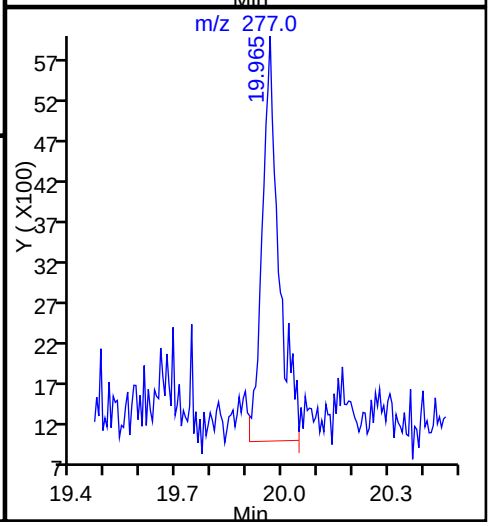










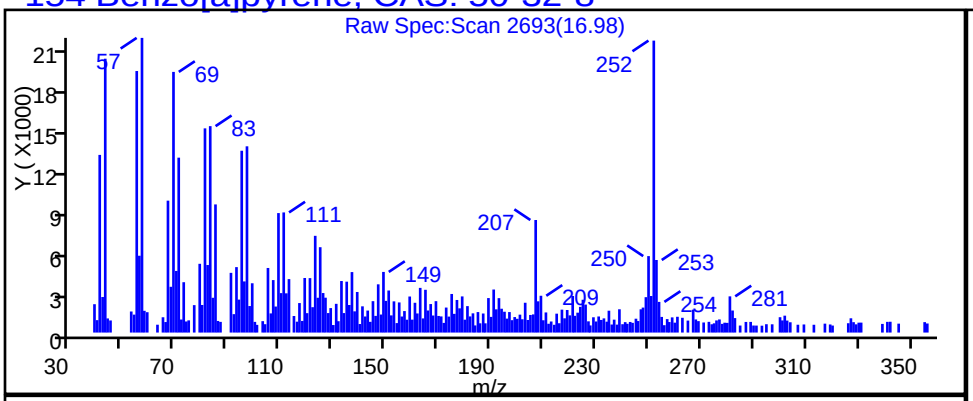


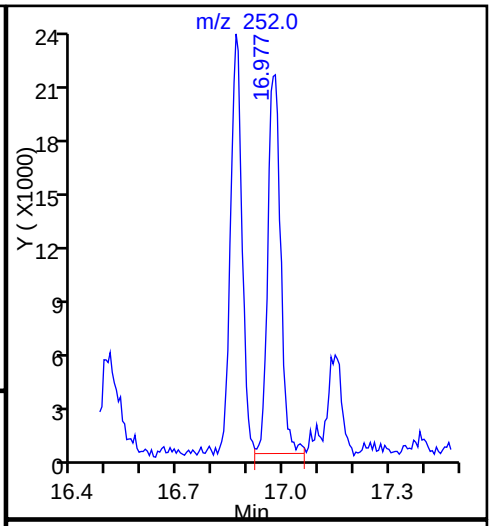
Report Date: 26-Nov-2016 08:23:06 Chrom Revision: 2.2 14-Nov-2016 08:15:18

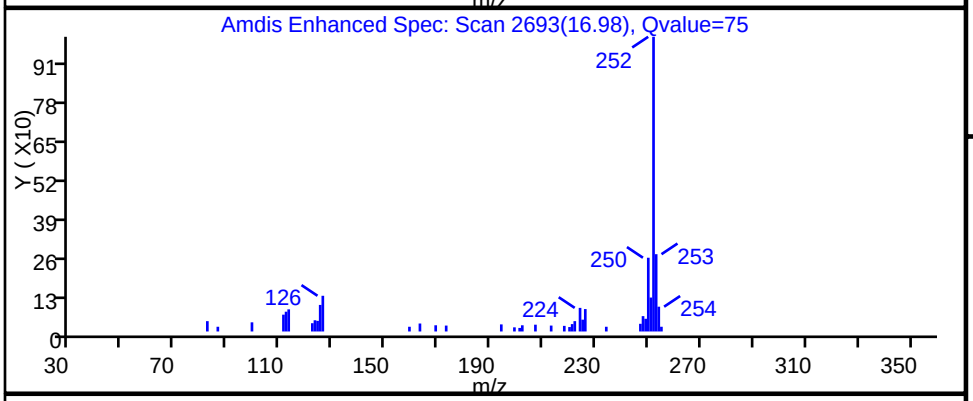
TestAmerica Pittsburgh

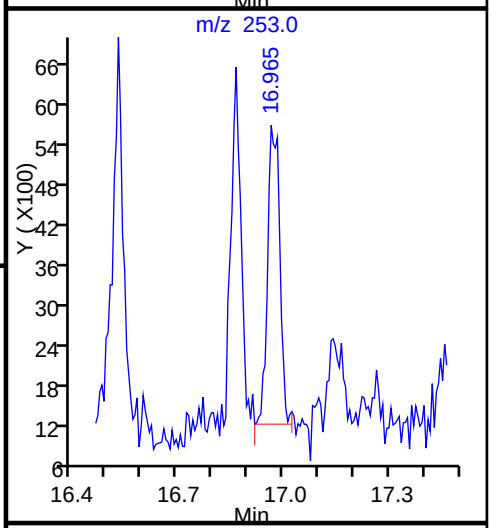
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

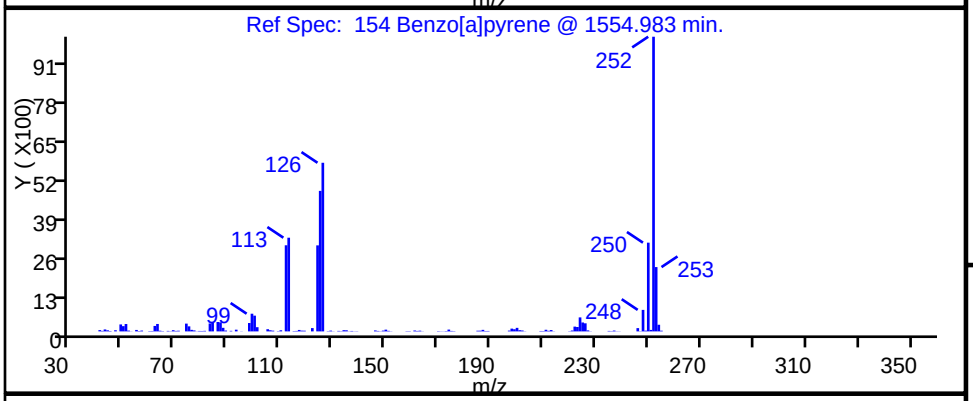
154 Benzo[a]pyrene, CAS: 50-32-8

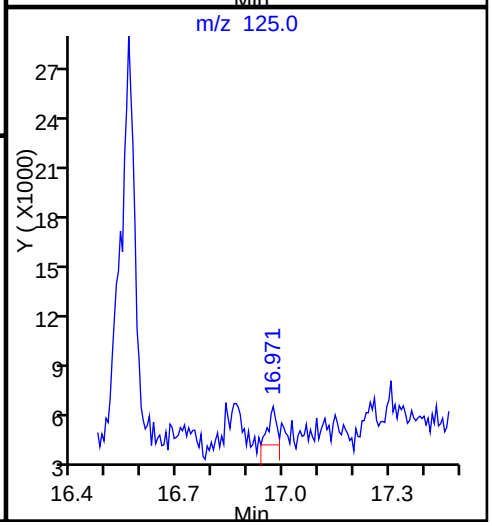


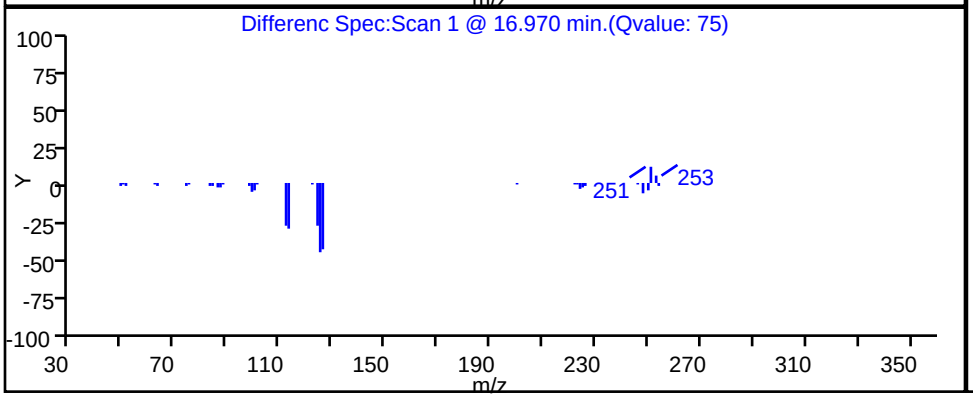










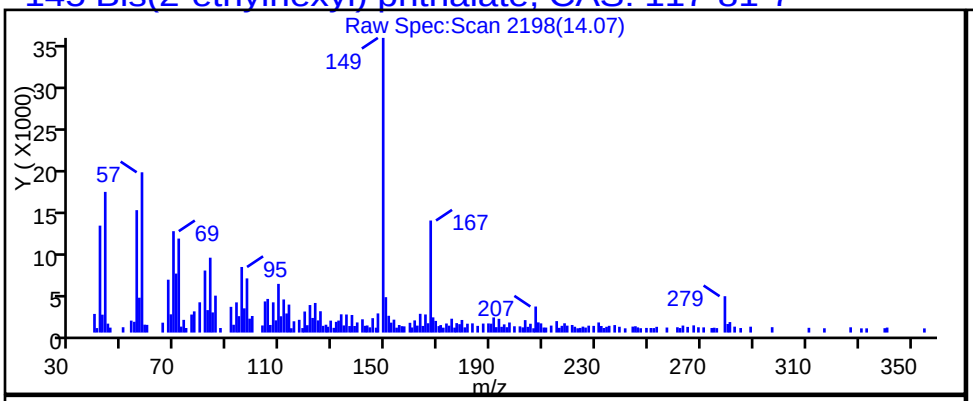


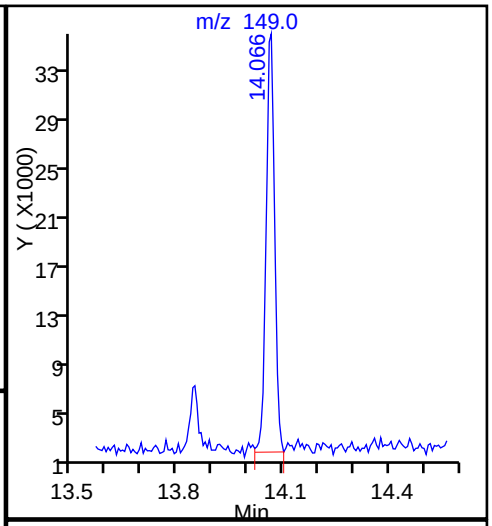
Report Date: 26-Nov-2016 08:23:06 Chrom Revision: 2.2 14-Nov-2016 08:15:18

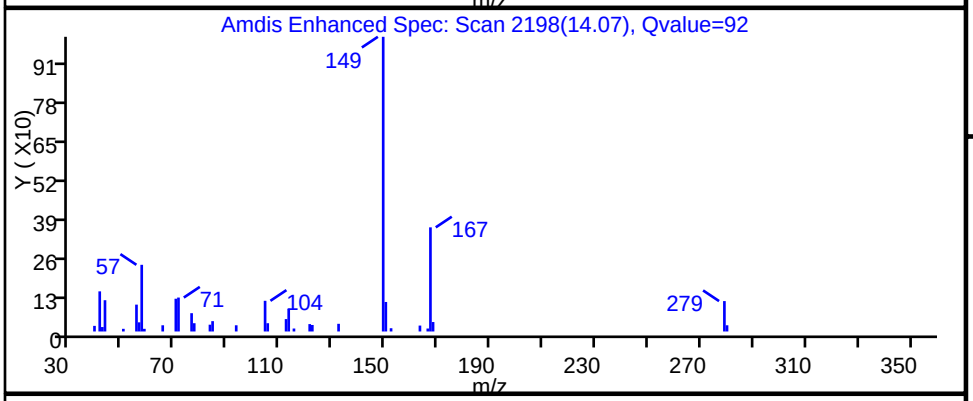
TestAmerica Pittsburgh

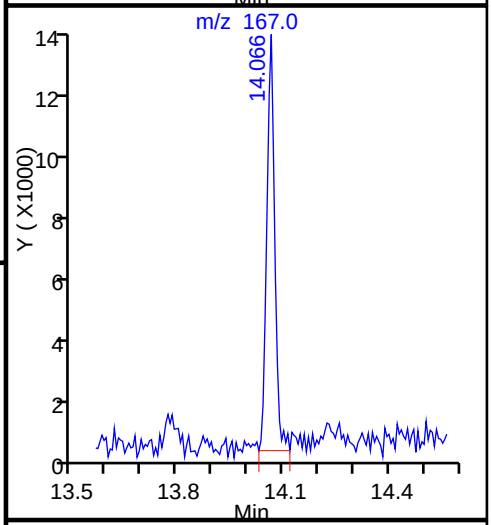
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

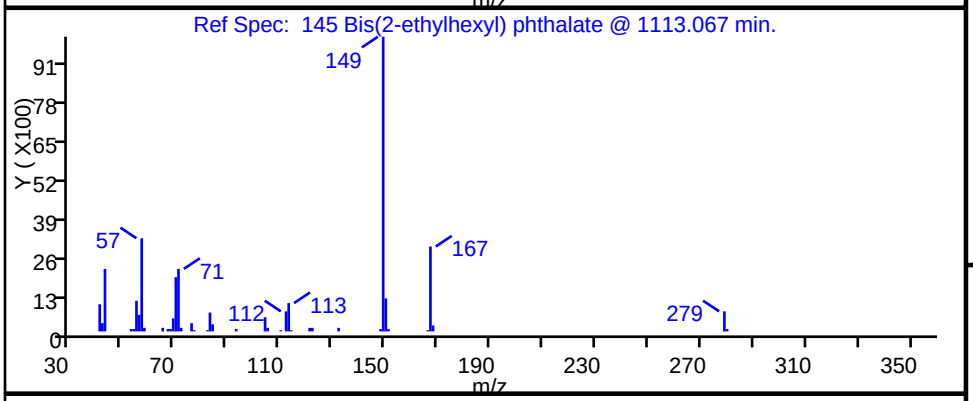
145 Bis(2-ethylhexyl) phthalate, CAS: 117-81-7

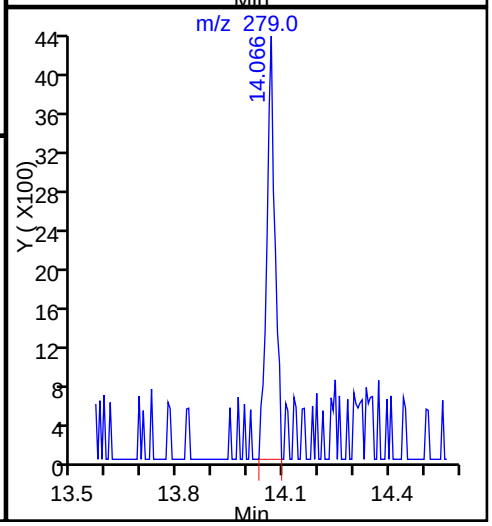


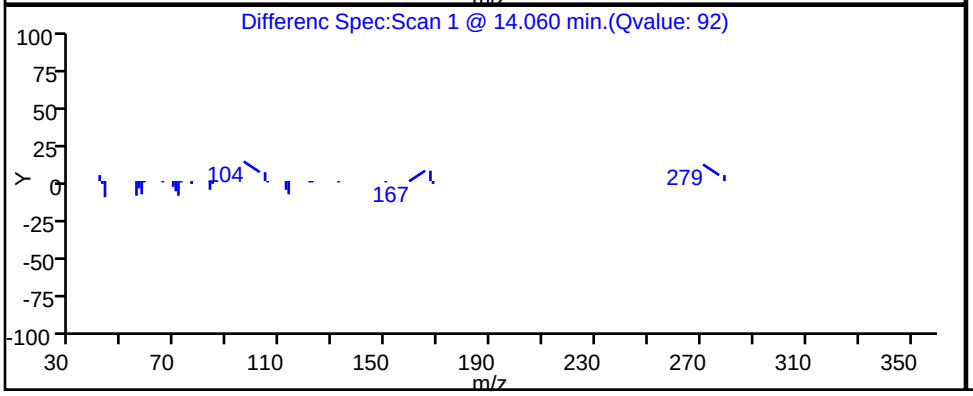










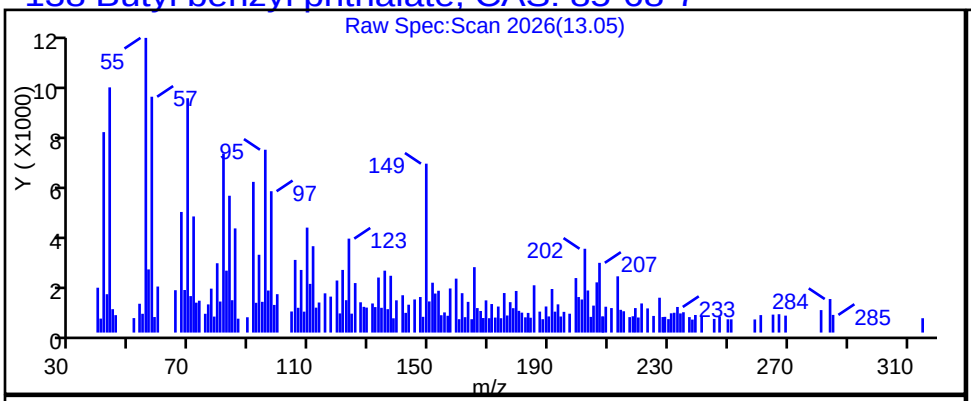


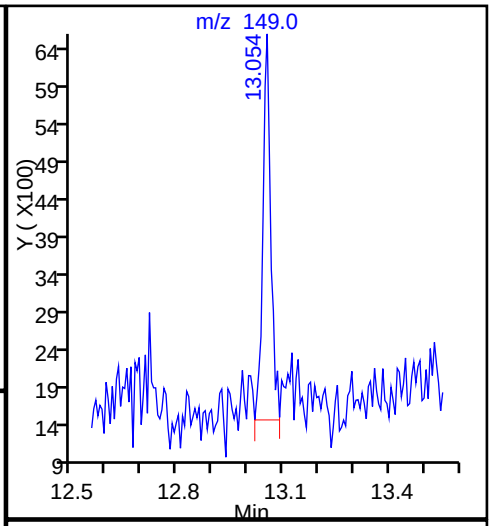
Report Date: 26-Nov-2016 08:23:06 Chrom Revision: 2.2 14-Nov-2016 08:15:18

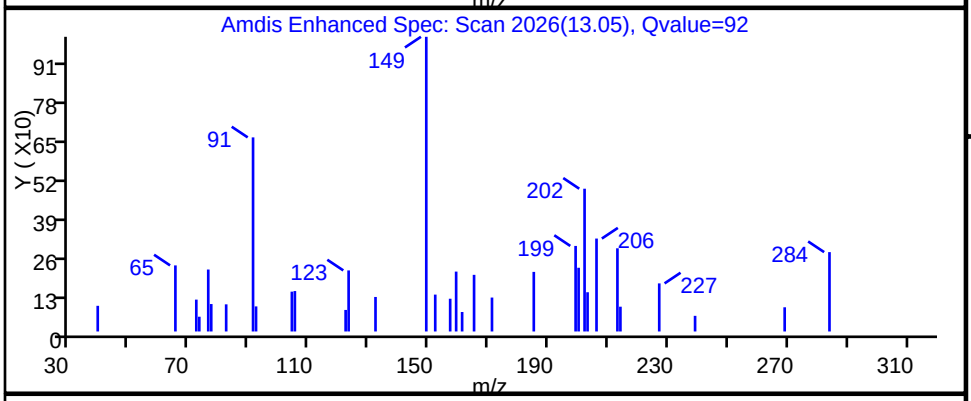
TestAmerica Pittsburgh

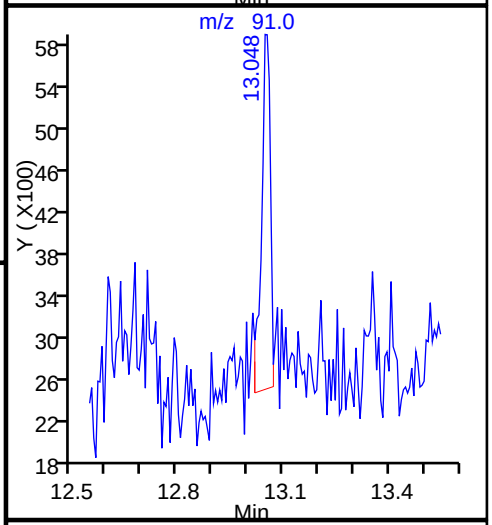
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

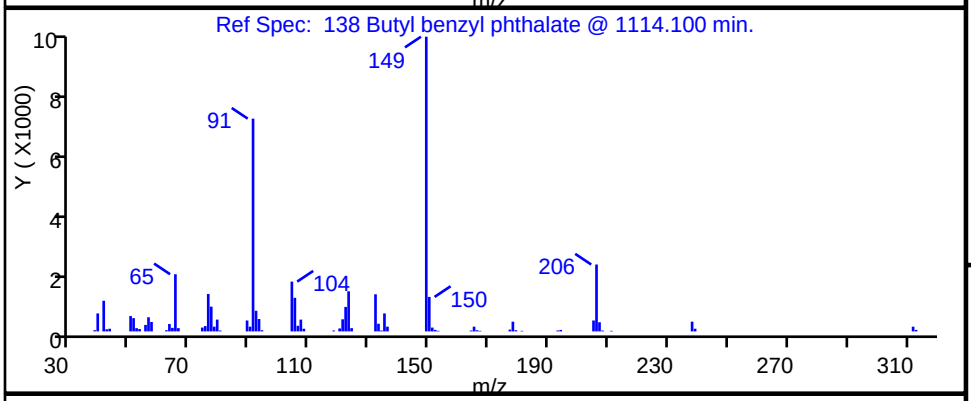
138 Butyl benzyl phthalate, CAS: 85-68-7

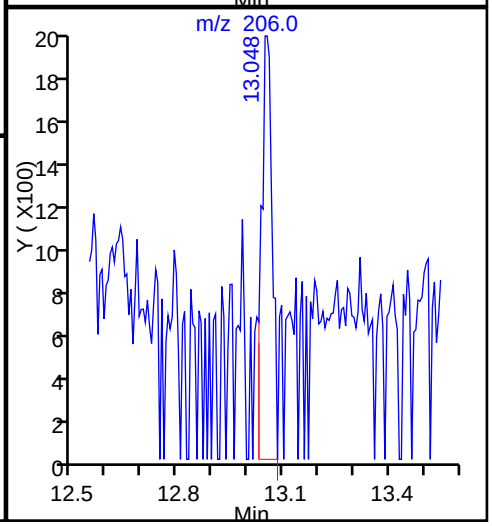


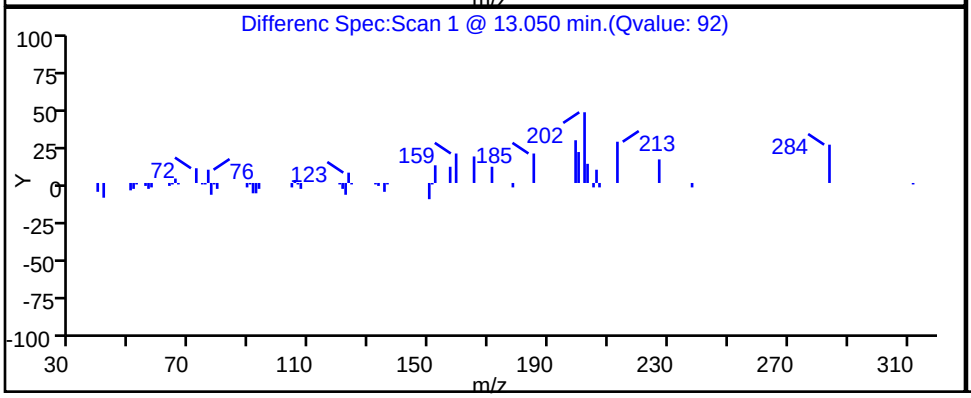










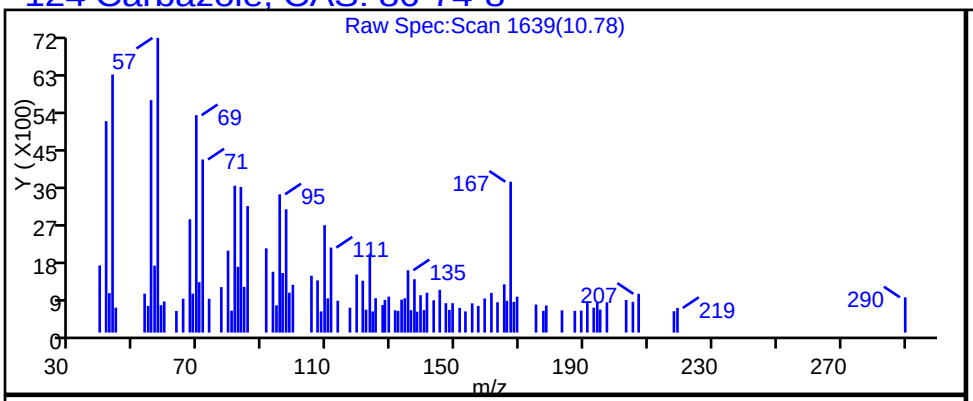


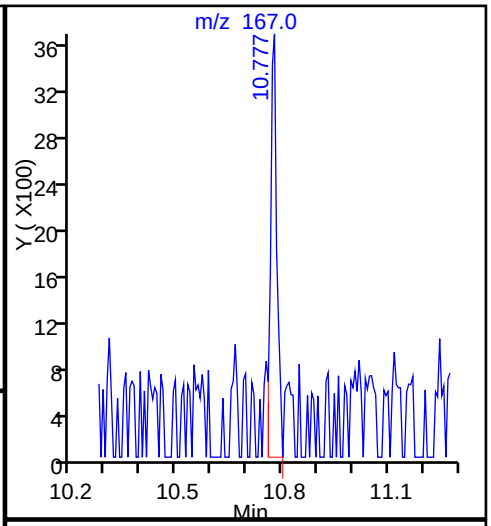
Report Date: 26-Nov-2016 08:23:06 Chrom Revision: 2.2 14-Nov-2016 08:15:18

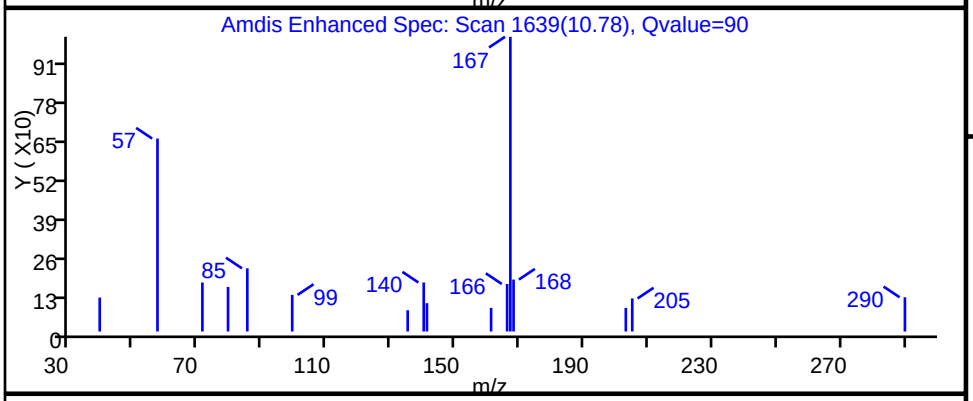
TestAmerica Pittsburgh

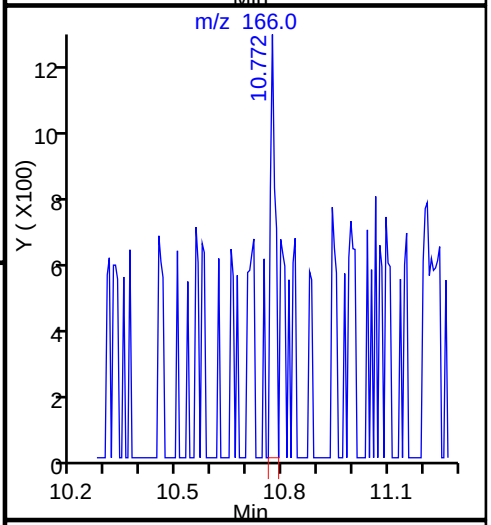
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

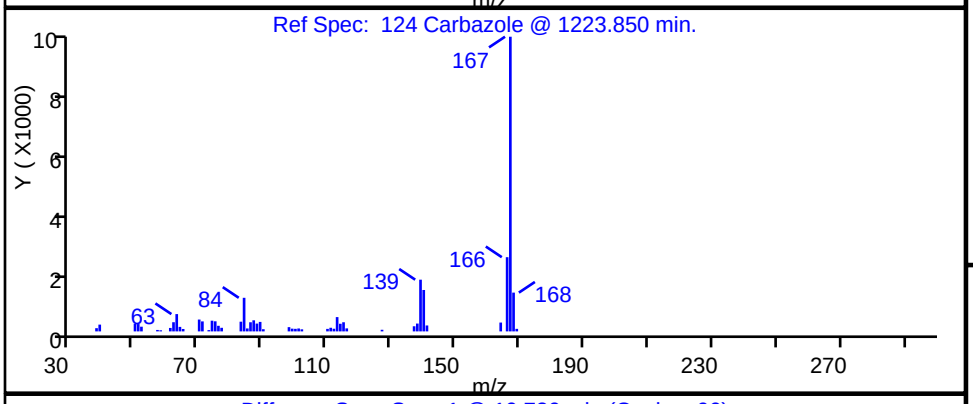
124 Carbazole, CAS: 86-74-8

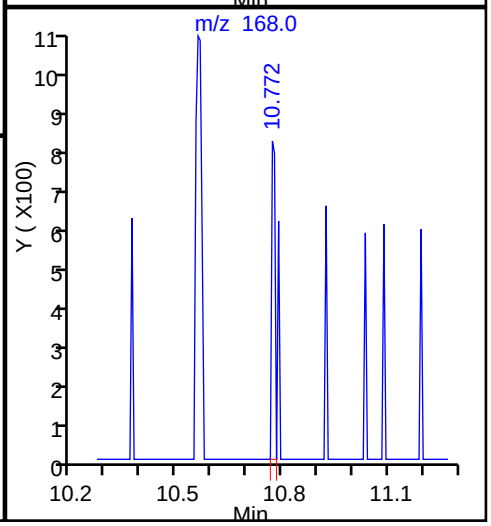


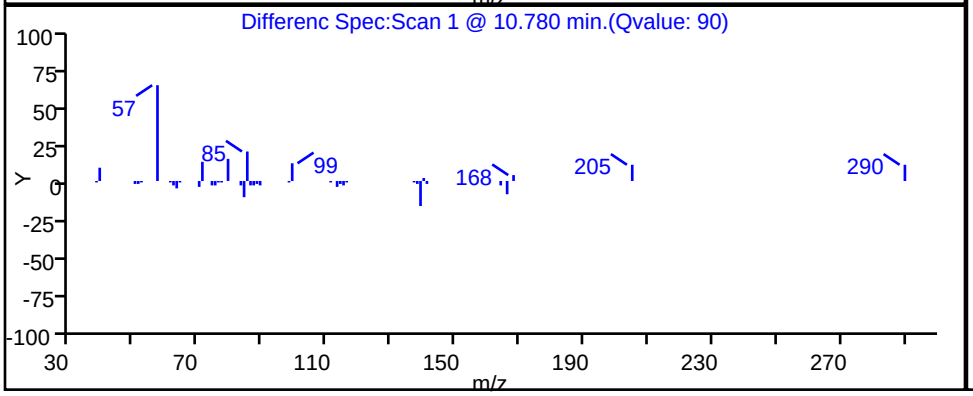










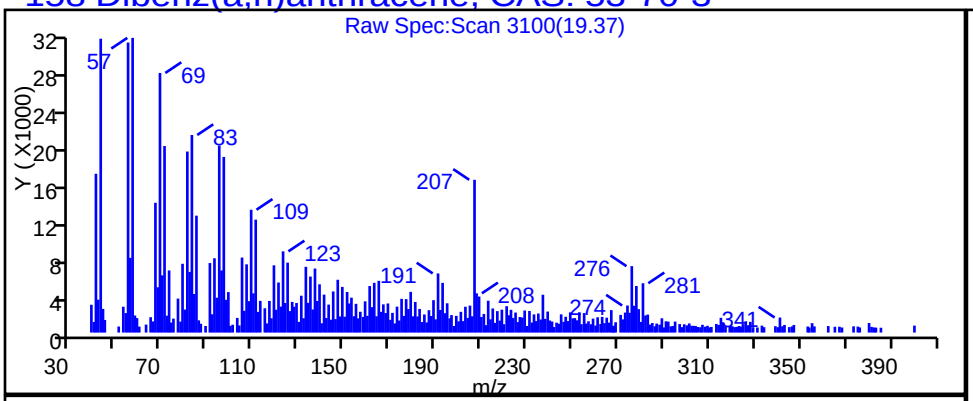


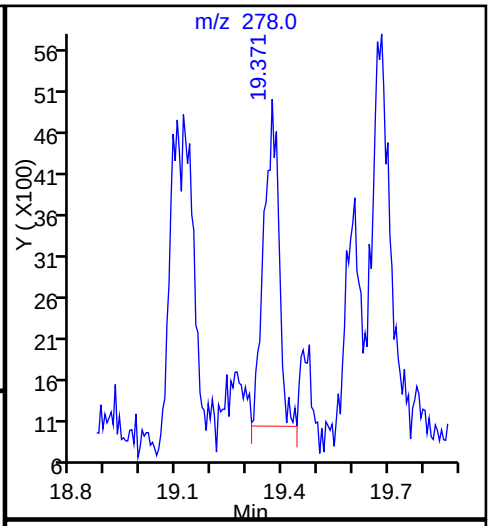
Report Date: 26-Nov-2016 08:23:06 Chrom Revision: 2.2 14-Nov-2016 08:15:18

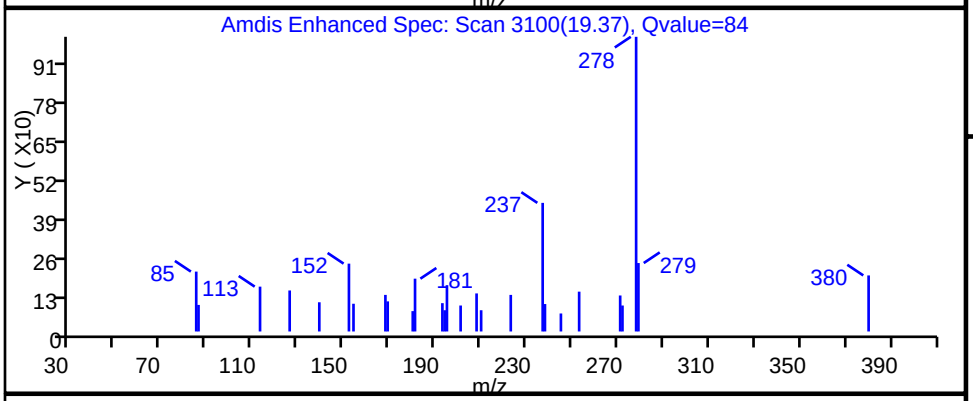
TestAmerica Pittsburgh

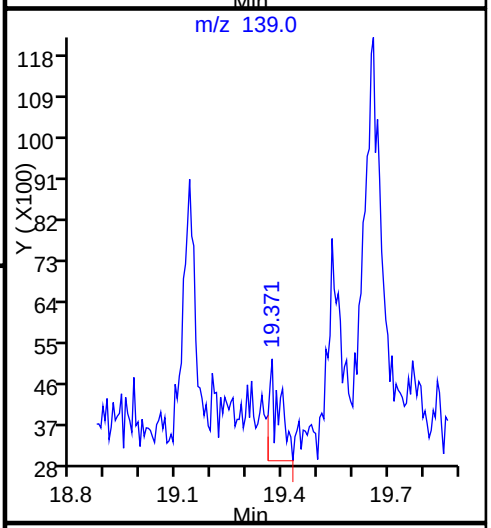
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

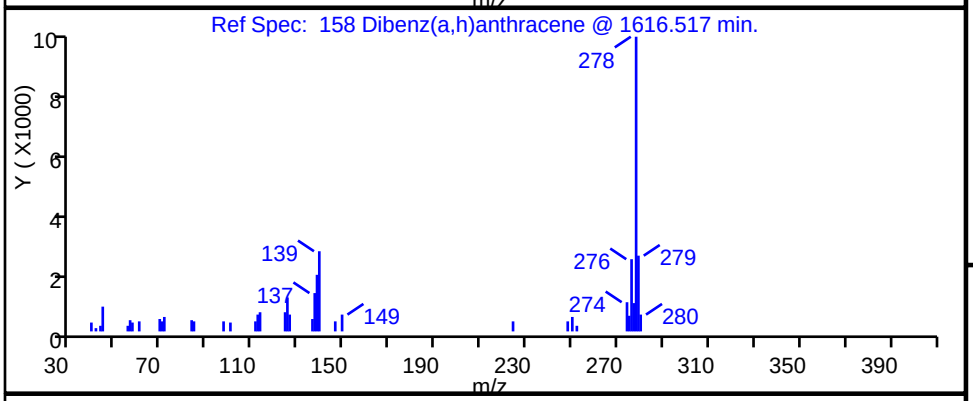
158 Dibenz(a,h)anthracene, CAS: 53-70-3

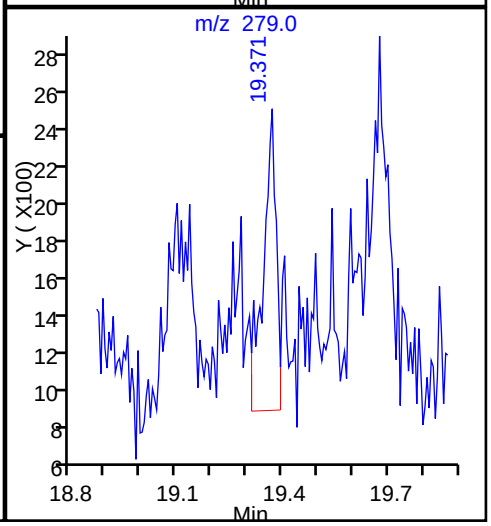


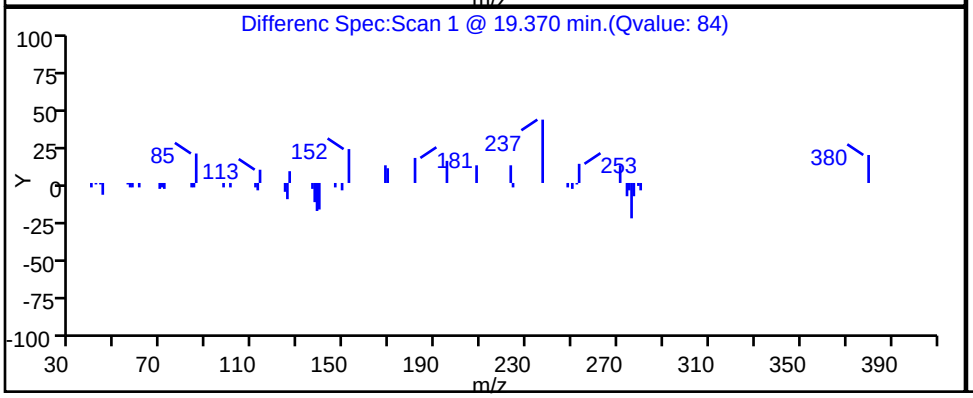










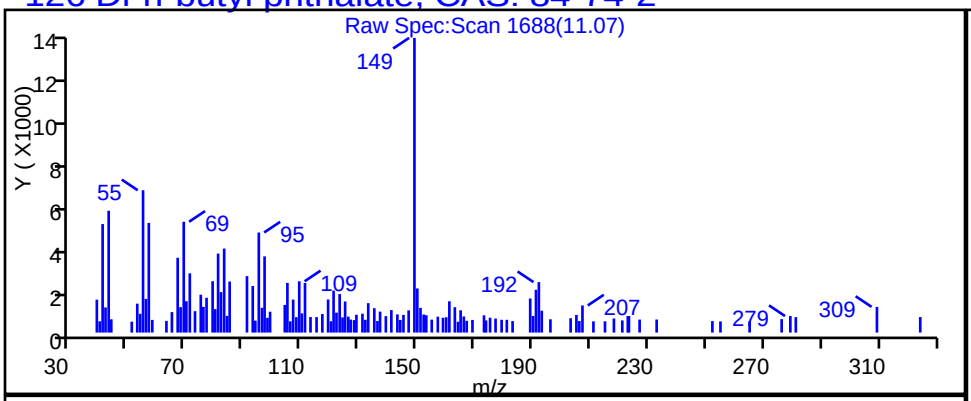


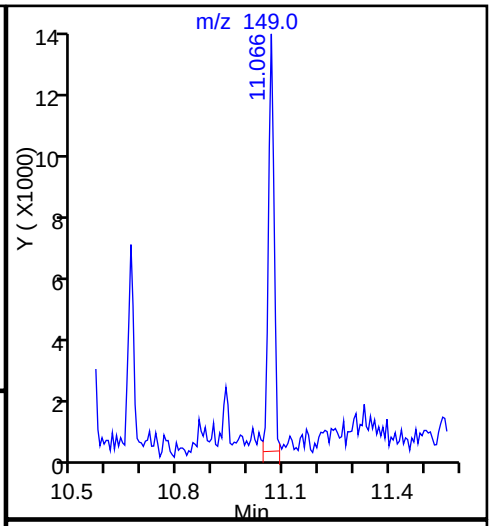
Report Date: 26-Nov-2016 08:23:06 Chrom Revision: 2.2 14-Nov-2016 08:15:18

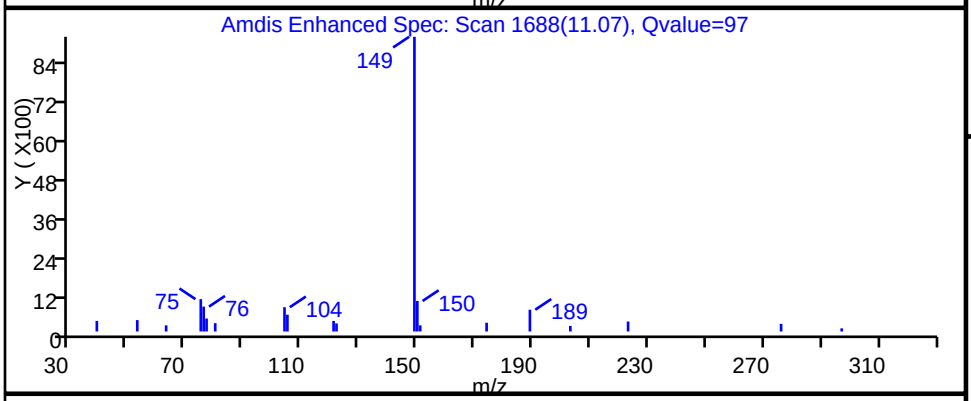
TestAmerica Pittsburgh

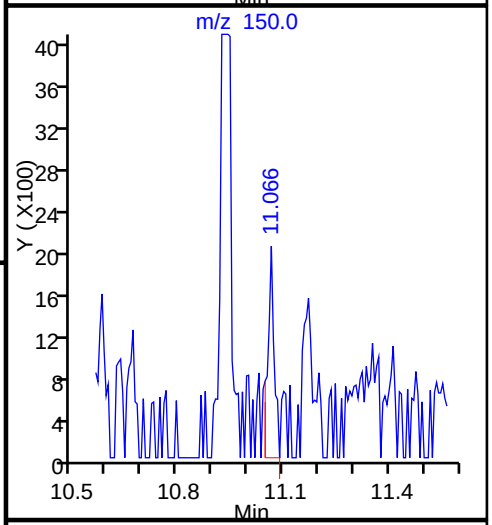
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

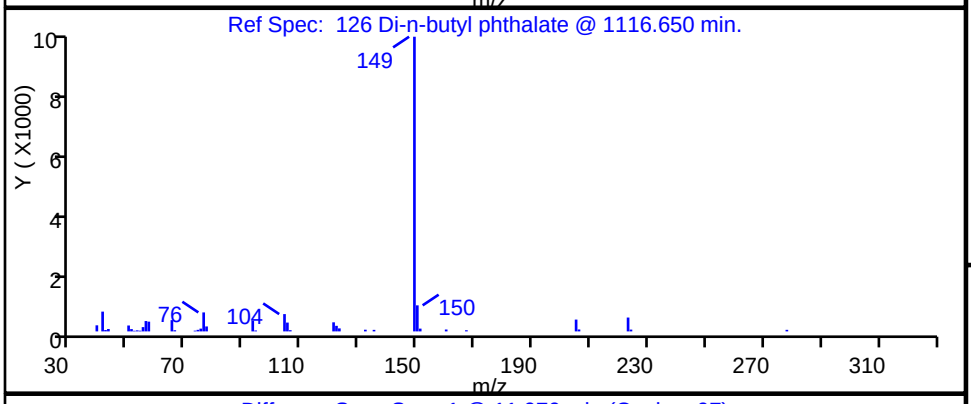
126 Di-n-butyl phthalate, CAS: 84-74-2

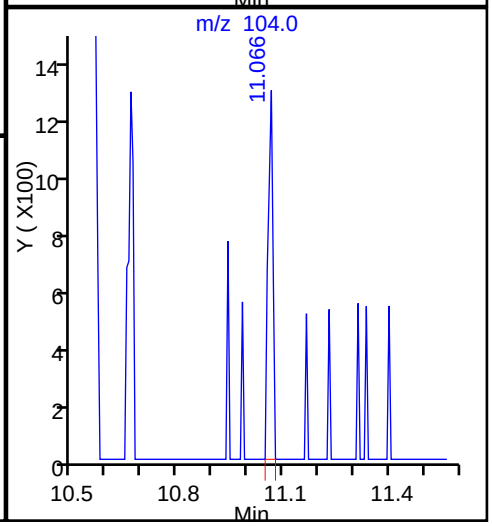


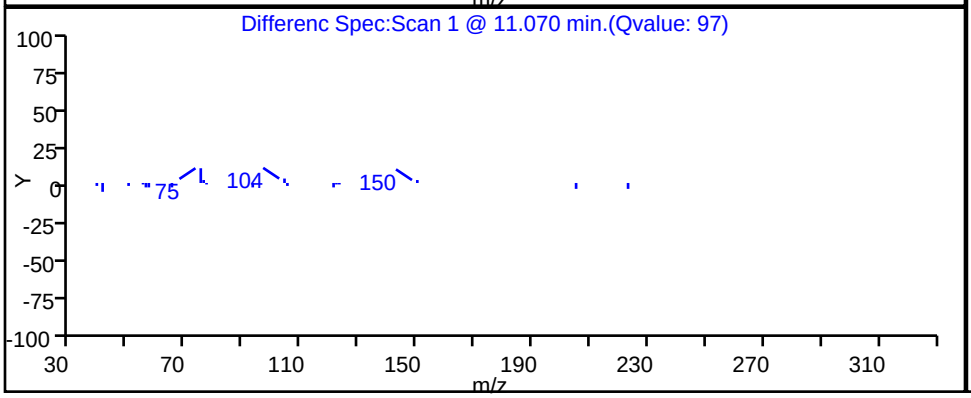










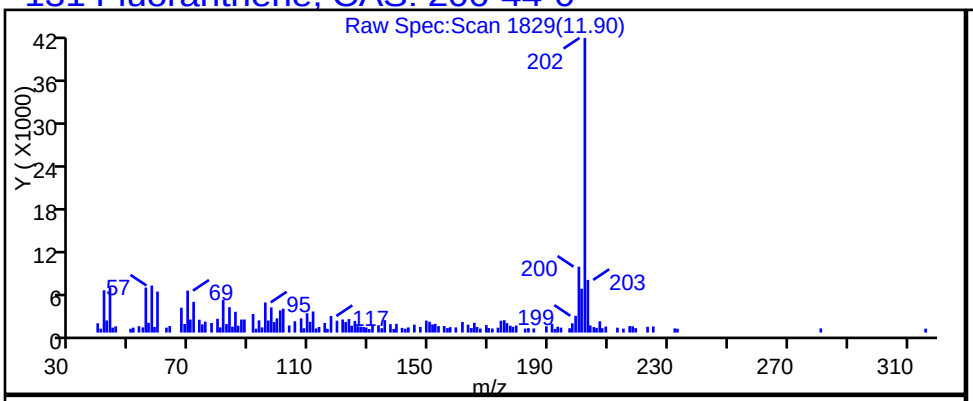


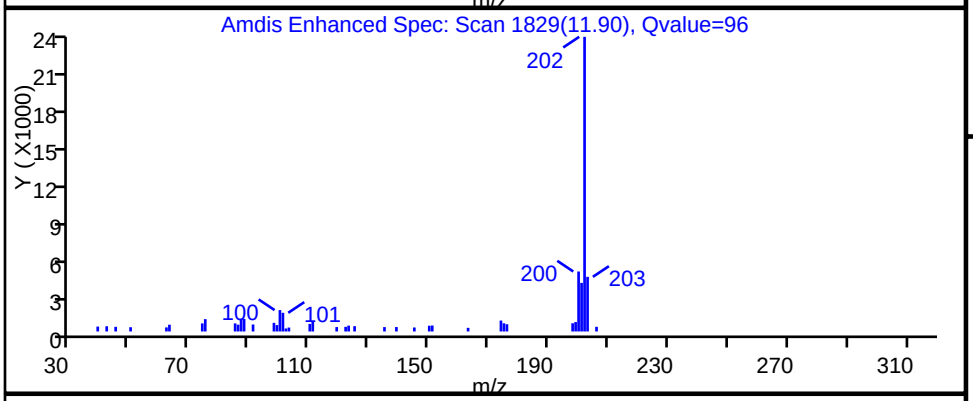
Report Date: 26-Nov-2016 08:23:06 Chrom Revision: 2.2 14-Nov-2016 08:15:18

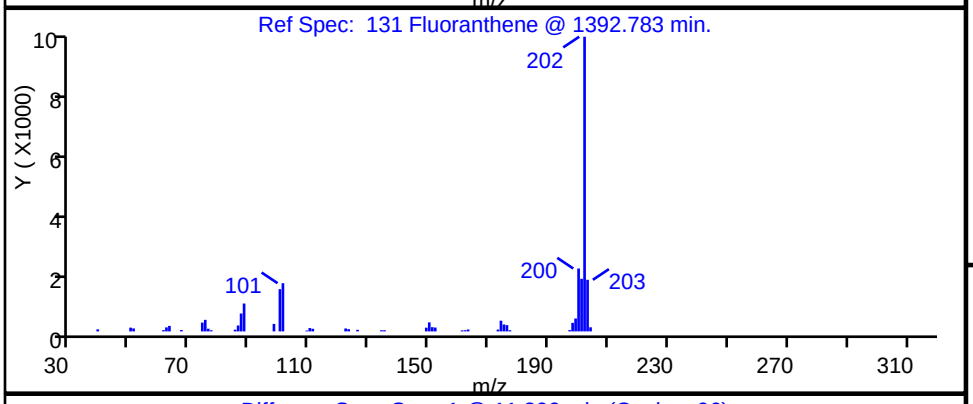
TestAmerica Pittsburgh

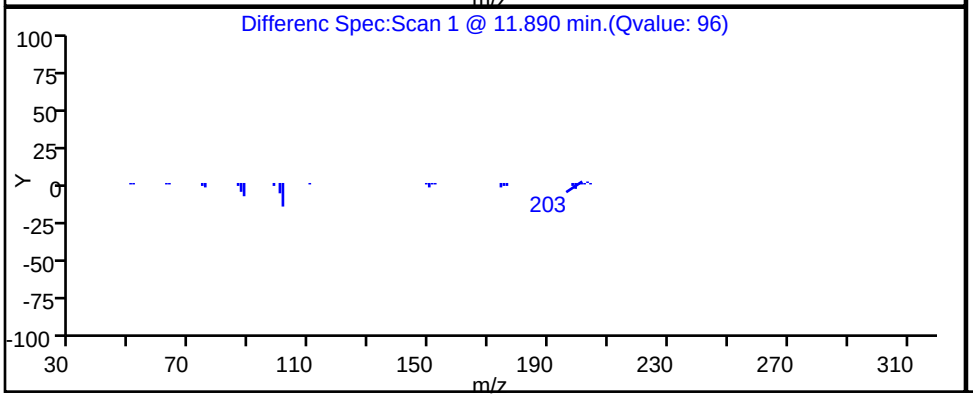
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

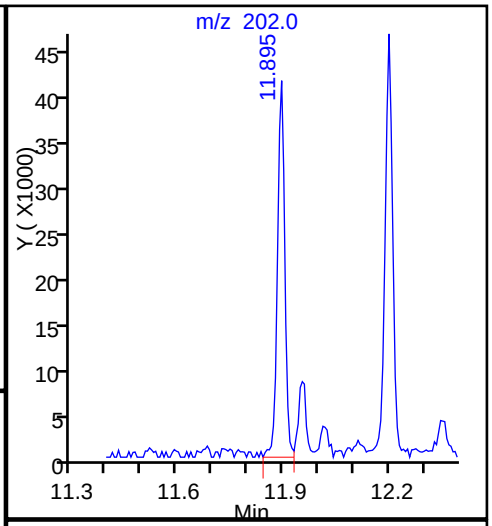
131 Fluoranthene, CAS: 206-44-0

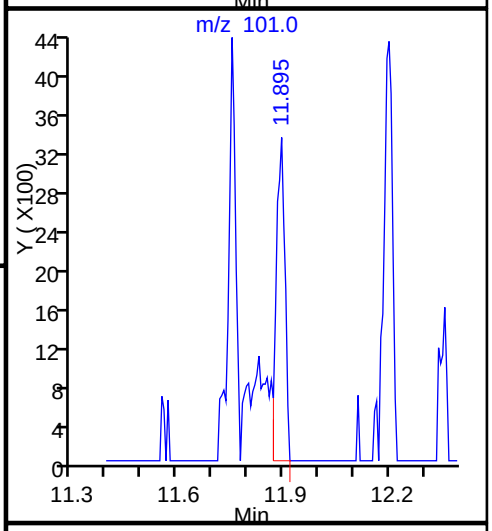


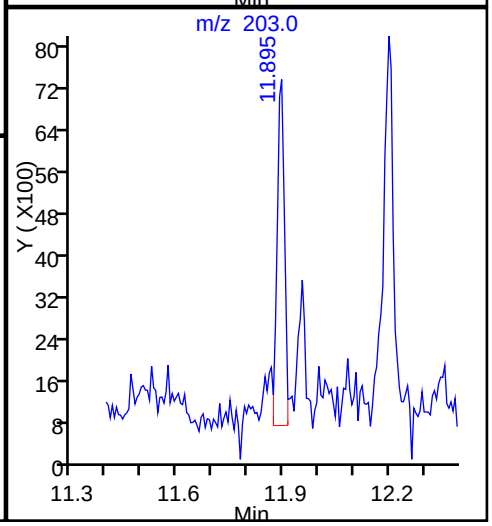










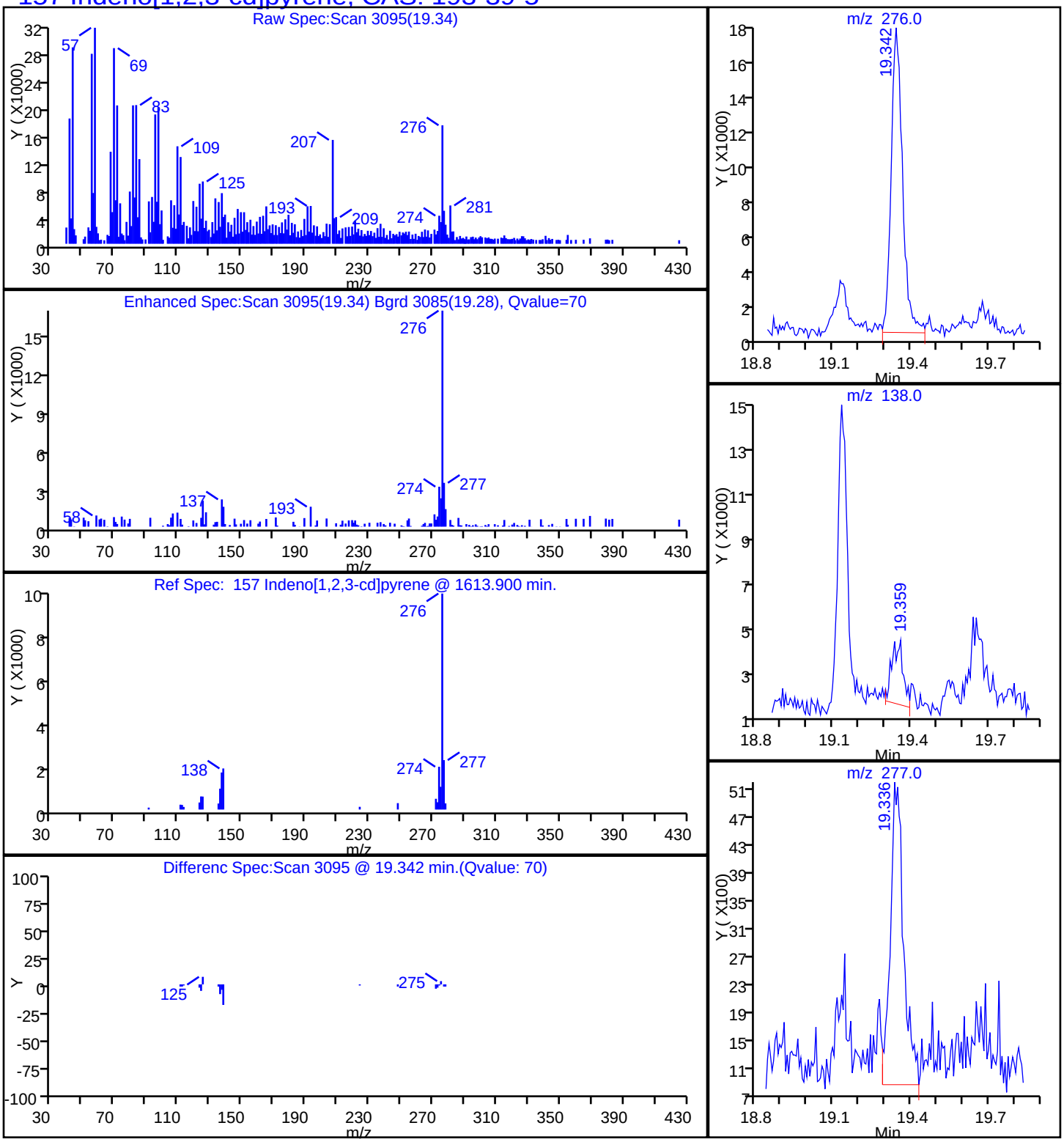


Report Date: 26-Nov-2016 08:23:06 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

157 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

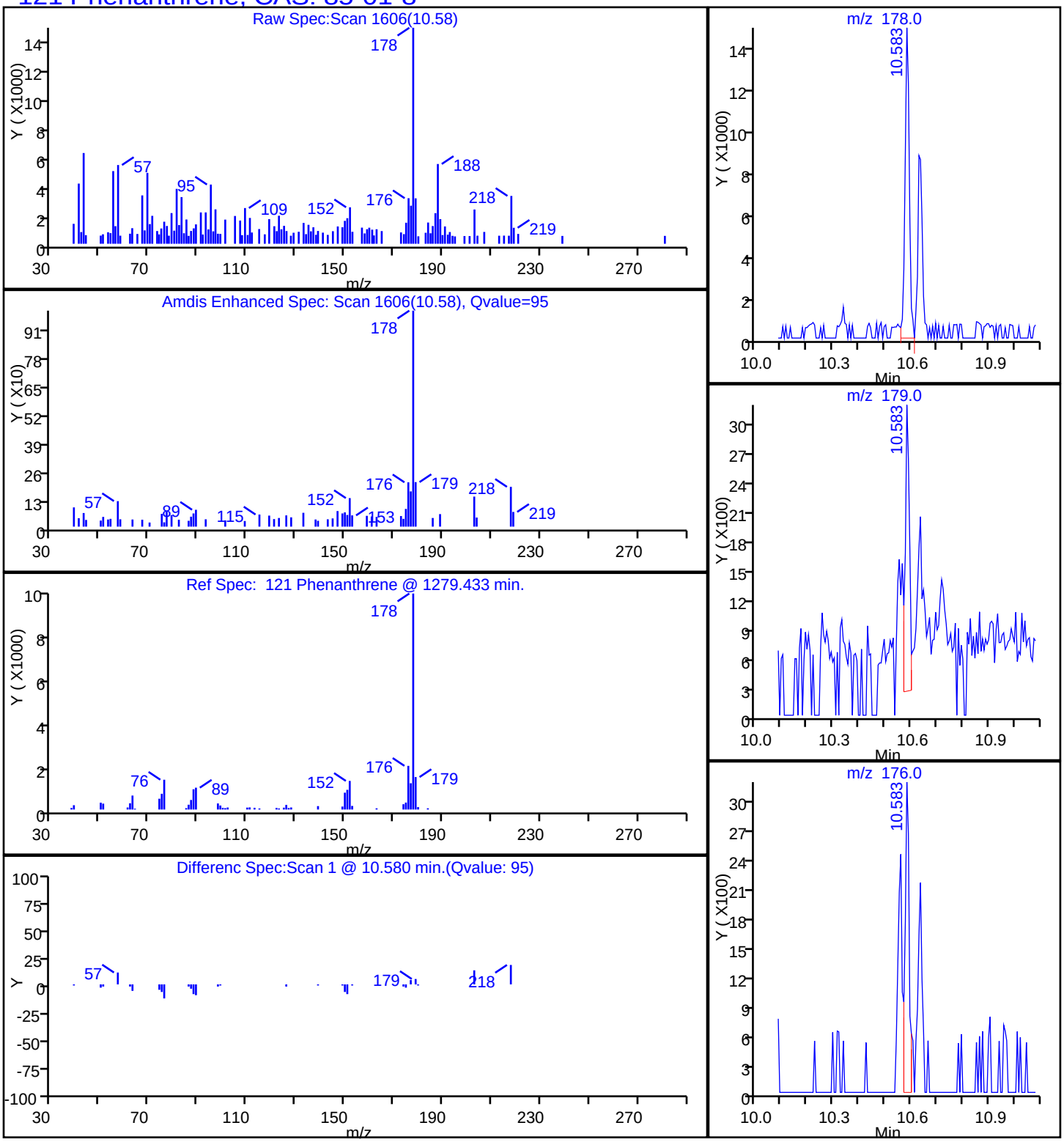


Report Date: 26-Nov-2016 08:23:06 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

121 Phenanthrene, CAS: 85-01-8

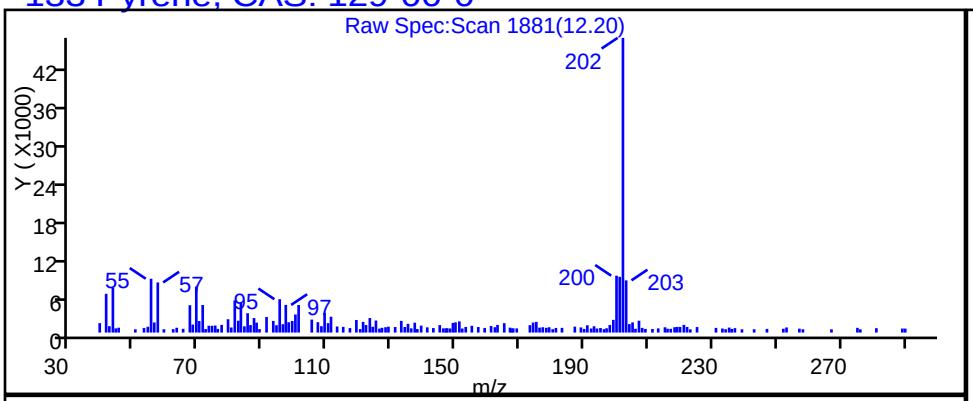


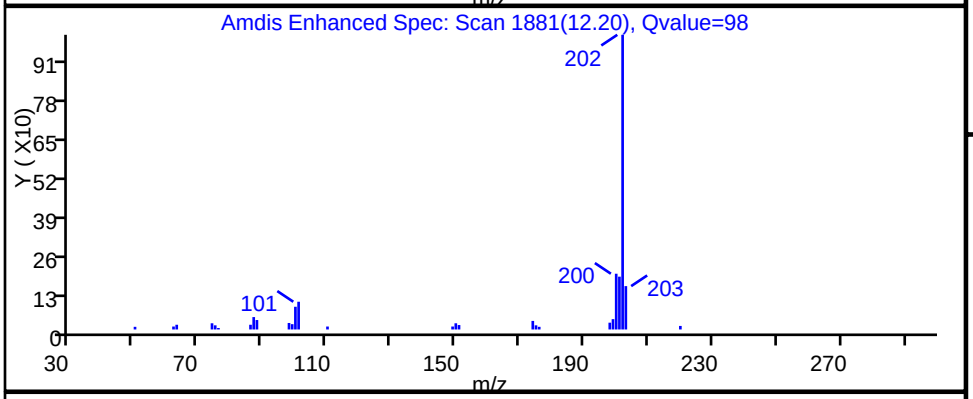
Report Date: 26-Nov-2016 08:23:06 Chrom Revision: 2.2 14-Nov-2016 08:15:18

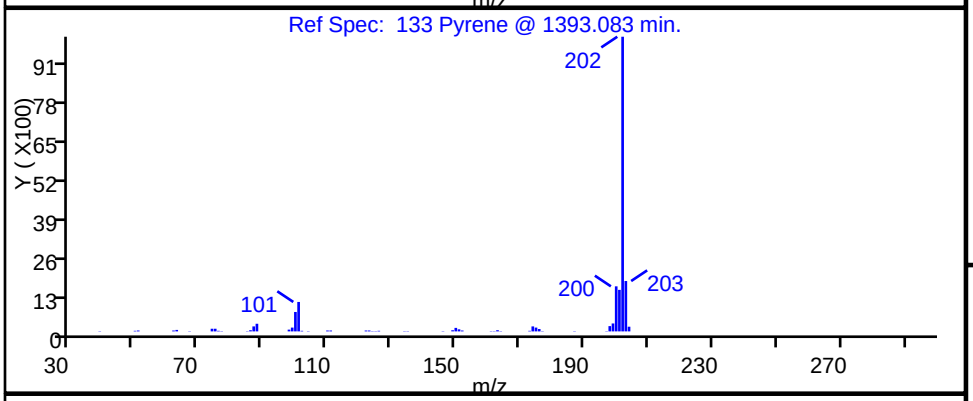
TestAmerica Pittsburgh

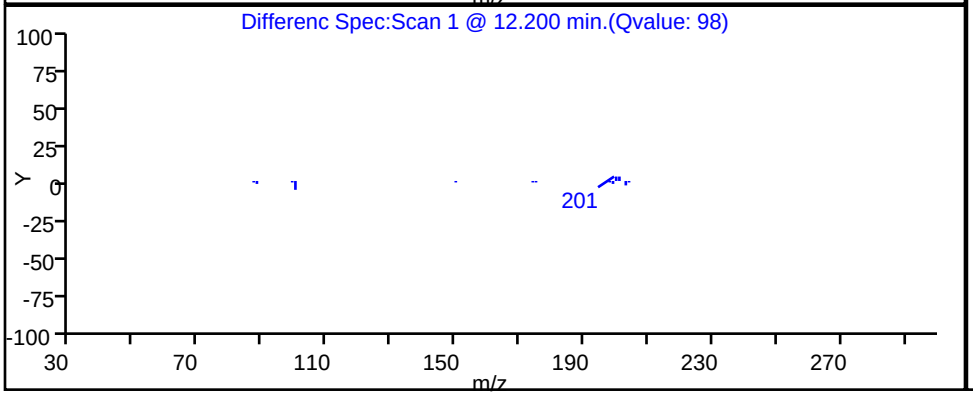
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

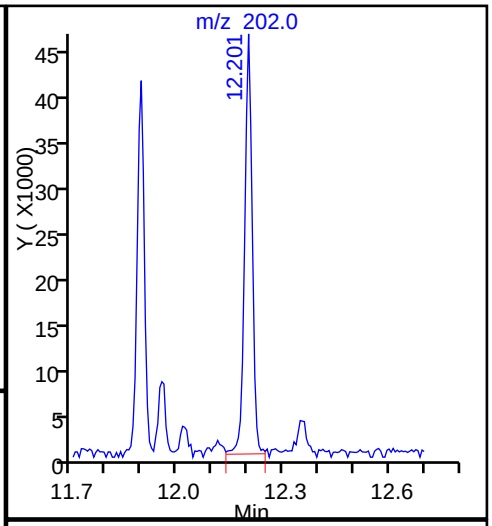
133 Pyrene, CAS: 129-00-0

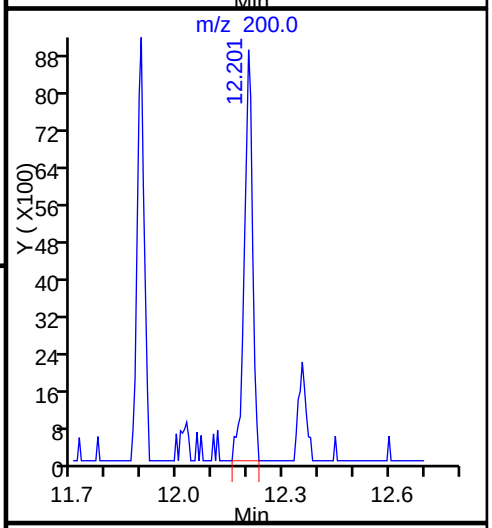


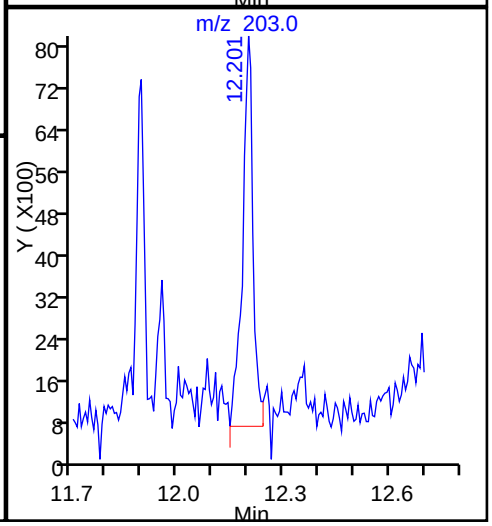












Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

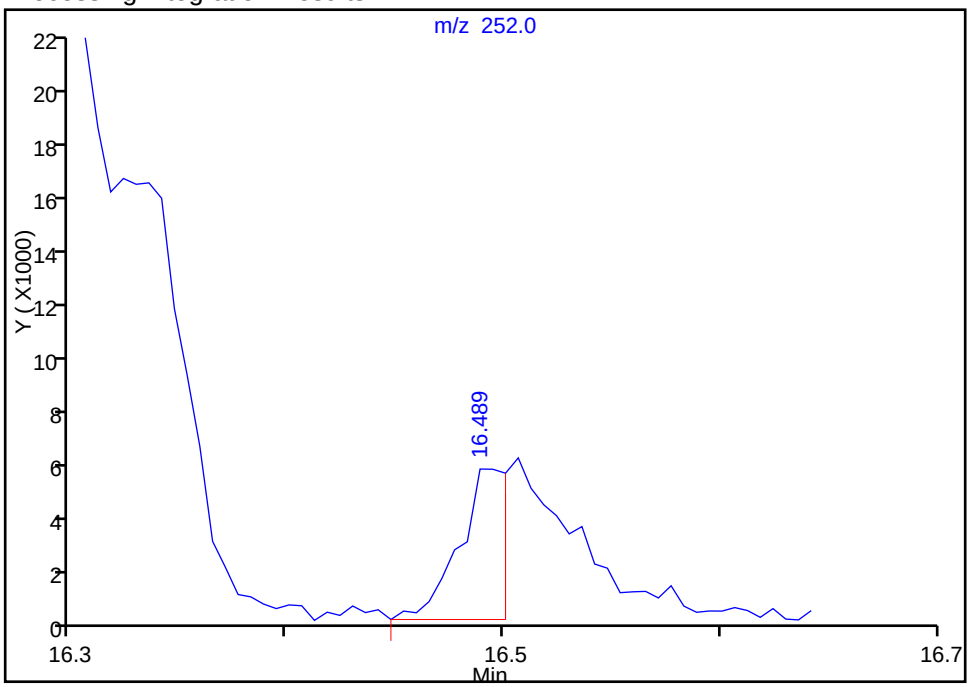
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

153 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

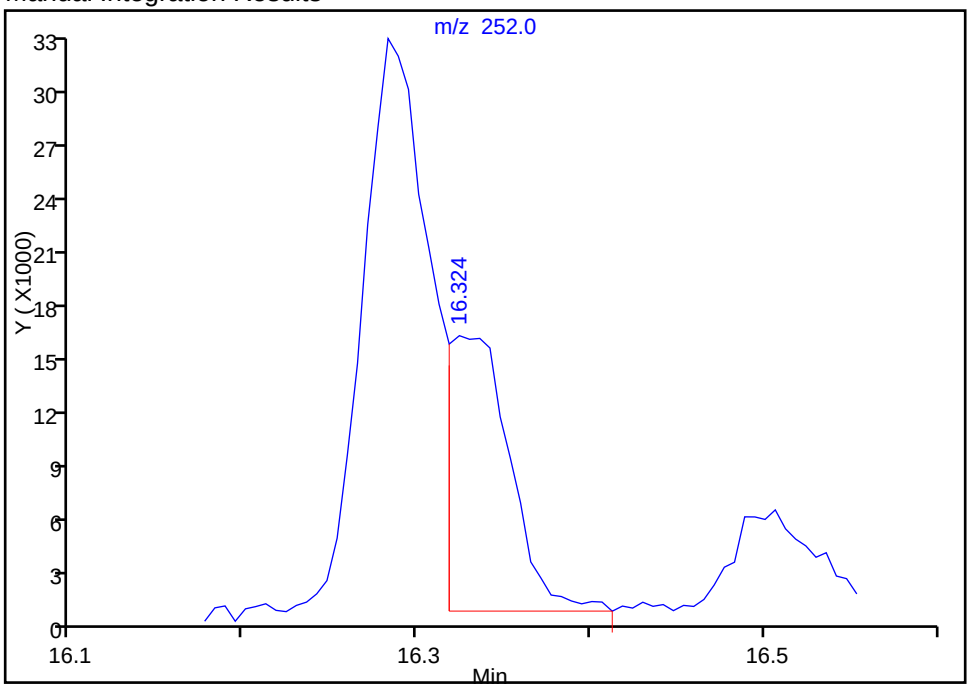
Processing Integration Results

RT: 16.49
Area: 8304
Amount: 0.101519
Amount Units: ng



Manual Integration Results

RT: 16.32
Area: 38930
Amount: 0.475933
Amount Units: ng



Reviewer: piccolinov, 26-Nov-2016 08:12:26

Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

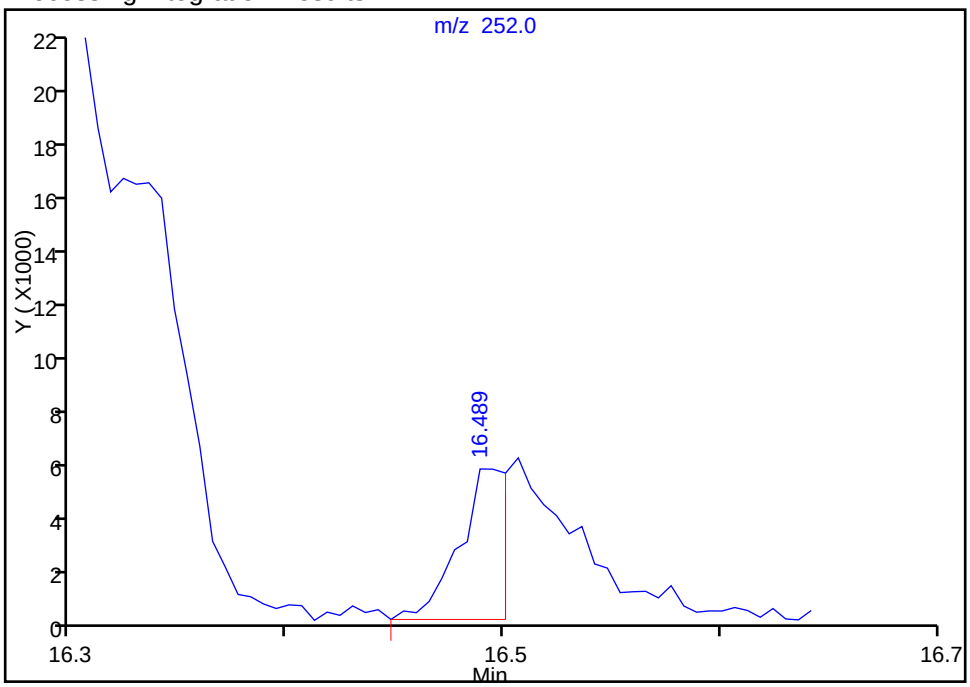
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250024.D				
Injection Date:	25-Nov-2016 18:33:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-1-C	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

153 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

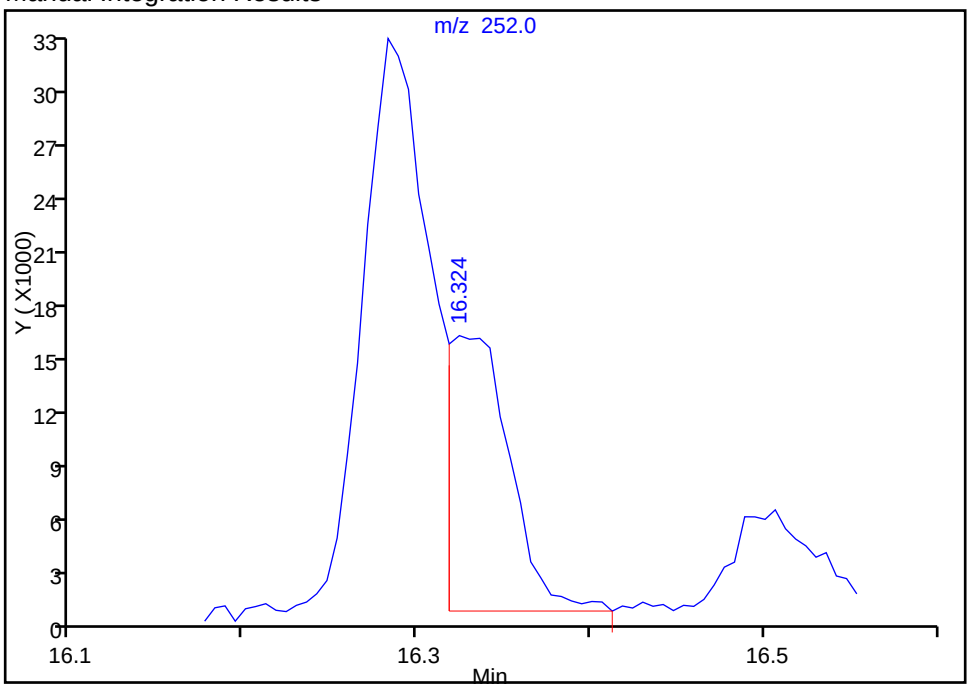
Processing Integration Results

RT: 16.49
Area: 8304
Amount: 0.101519
Amount Units: ng



Manual Integration Results

RT: 16.32
Area: 38930
Amount: 0.475933
Amount Units: ng



Reviewer: piccolinov, 26-Nov-2016 08:12:26

Audit Action: Manually Integrated Audit Reason: Missed Peak

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(1-2)-161122-S | Lab Sample ID: 180-61122-2

Matrix: Solid | Lab File ID: N11250027.D

Analysis Method: 8270D LL | Date Collected: 11/22/2016 09:40

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.2(g) | Date Analyzed: 11/25/2016 19:53

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 19.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
92-52-4	1,1'-Biphenyl	0.00366	U	0.0406	0.00366
123-91-1	1,4-Dioxane	0.00470	U	0.0820	0.00470
90-12-0	1-Methylnaphthalene	0.000875	U	0.00824	0.000875
95-94-3	1,2,4,5-Tetrachlorobenzene	0.00311	U	0.0406	0.00311
91-58-7	2-Chloronaphthalene	0.000856	U	0.00824	0.000856
95-57-8	2-Chlorophenol	0.00335	U	0.0406	0.00335
120-83-2	2,4-Dichlorophenol	0.000823	U	0.00824	0.000823
105-67-9	2,4-Dimethylphenol	0.00641	U	0.0406	0.00641
51-28-5	2,4-Dinitrophenol	0.0488	U	0.209	0.0488
121-14-2	2,4-Dinitrotoluene	0.00331	U	0.0406	0.00331
606-20-2	2,6-Dinitrotoluene	0.00423	U	0.0406	0.00423
91-57-6	2-Methylnaphthalene	0.000737	U	0.00824	0.000737
95-48-7	2-Methylphenol	0.00287	U	0.0406	0.00287
106-44-5	Methylphenol, 3 & 4	0.00401	U	0.0406	0.00401
88-74-4	2-Nitroaniline	0.0184	U	0.209	0.0184
99-09-2	3-Nitroaniline	0.0169	U	0.209	0.0169
100-01-6	4-Nitroaniline	0.0166	U	0.209	0.0166
88-75-5	2-Nitrophenol	0.00452	U	0.0406	0.00452
100-02-7	4-Nitrophenol	0.0150	U	0.209	0.0150
108-60-1	2,2'-oxybis[1-chloropropane]	0.000885	U	0.00824	0.000885
58-90-2	2,3,4,6-Tetrachlorophenol	0.00264	U	0.0406	0.00264
95-95-4	2,4,5-Trichlorophenol	0.00438	U	0.0406	0.00438
88-06-2	2,4,6-Trichlorophenol	0.00614	U	0.0406	0.00614
59-50-7	4-Chloro-3-methylphenol	0.00378	U	0.0406	0.00378
7005-72-3	4-Chlorophenyl phenyl ether	0.00456	U	0.0406	0.00456
534-52-1	4,6-Dinitro-2-methylphenol	0.0165	U	0.209	0.0165
83-32-9	Acenaphthene	0.000788	U	0.00824	0.000788
208-96-8	Acenaphthylene	0.000939	U	0.00824	0.000939
98-86-2	Acetophenone	0.00337	U	0.0406	0.00337
120-12-7	Anthracene	0.000802	U	0.00824	0.000802
1912-24-9	Atrazine	0.00399	U	0.0406	0.00399
100-52-7	Benzaldehyde	0.00615	U	0.0406	0.00615
56-55-3	Benzo[a]anthracene	0.00103	U	0.00824	0.00103
205-99-2	Benzo[b]fluoranthene	0.00129	U	0.00824	0.00129

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(1-2)-161122-S | Lab Sample ID: 180-61122-2

Matrix: Solid | Lab File ID: N11250027.D

Analysis Method: 8270D LL | Date Collected: 11/22/2016 09:40

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.2(g) | Date Analyzed: 11/25/2016 19:53

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 19.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
207-08-9	Benzo[k]fluoranthene	0.00166	U	0.00824	0.00166
191-24-2	Benzo[g,h,i]perylene	0.000816	U	0.00824	0.000816
50-32-8	Benzo[a]pyrene	0.000821	U	0.00824	0.000821
111-91-1	Bis(2-chloroethoxy)methane	0.00270	U	0.0406	0.00270
111-44-4	Bis(2-chloroethyl)ether	0.00110	U	0.00824	0.00110
117-81-7	Bis(2-ethylhexyl) phthalate	0.00663	U	0.0820	0.00663
101-55-3	4-Bromophenyl phenyl ether	0.00357	U	0.0406	0.00357
85-68-7	Butyl benzyl phthalate	0.00560	U	0.0406	0.00560
105-60-2	Caprolactam	0.0310	U	0.209	0.0310
86-74-8	Carbazole	0.000756	U	0.00824	0.000756
53-70-3	Dibenz(a,h)anthracene	0.000912	U	0.00824	0.000912
132-64-9	Dibenzofuran	0.00403	U	0.0406	0.00403
84-74-2	Di-n-butyl phthalate	0.00514	U	0.0406	0.00514
117-84-0	Di-n-octyl phthalate	0.00432	U	0.0406	0.00432
84-66-2	Diethyl phthalate	0.00448	U	0.0406	0.00448
131-11-3	Dimethyl phthalate	0.00447	U	0.0406	0.00447
206-44-0	Fluoranthene	0.000877	U	0.00824	0.000877
86-73-7	Fluorene	0.00108	U	0.00824	0.00108
118-74-1	Hexachlorobenzene	0.000874	U	0.00824	0.000874
87-68-3	Hexachlorobutadiene	0.000918	U	0.00824	0.000918
77-47-4	Hexachlorocyclopentadiene	0.00442	U	0.0406	0.00442
67-72-1	Hexachloroethane	0.00295	U	0.0406	0.00295
193-39-5	Indeno[1,2,3-cd]pyrene	0.000845	U	0.00824	0.000845
78-59-1	Isophorone	0.00309	U	0.0406	0.00309
91-20-3	Naphthalene	0.000707	U	0.00824	0.000707
98-95-3	Nitrobenzene	0.00341	U	0.0820	0.00341
86-30-6	N-Nitrosodiphenylamine	0.00380	U	0.0406	0.00380
621-64-7	N-Nitrosodi-n-propylamine	0.000962	U	0.00824	0.000962
87-86-5	Pentachlorophenol	0.00367	U	0.0406	0.00367
85-01-8	Phenanthrene	0.00130	U	0.00824	0.00130
108-95-2	Phenol	0.000969	U	0.0406	0.000969
129-00-0	Pyrene	0.000829	U	0.00824	0.000829
91-94-1	3,3'-Dichlorobenzidine	0.00434	U	0.0406	0.00434

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(1-2)-161122-S | Lab Sample ID: 180-61122-2

Matrix: Solid | Lab File ID: N11250027.D

Analysis Method: 8270D LL | Date Collected: 11/22/2016 09:40

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.2(g) | Date Analyzed: 11/25/2016 19:53

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 19.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	60		42-100
367-12-4	2-Fluorophenol (Surr)	61		21-107
118-79-6	2,4,6-Tribromophenol (Surr)	76		20-134
4165-60-0	Nitrobenzene-d5 (Surr)	63		35-109
4165-62-2	Phenol-d5 (Surr)	63		29-105
1718-51-0	Terphenyl-d14 (Surr)	62		36-113

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250027.D
Lims ID: 180-61122-A-2-A
Client ID: BGSB22-(1-2)-161122-S
Sample Type: Client
Inject. Date: 25-Nov-2016 19:53:30 ALS Bottle#: 26 Worklist Smp#: 27
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014496-027
Operator ID: 03200 Instrument ID: CH733

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 26-Nov-2016 08:21:37 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK023

First Level Reviewer: piccolinov Date: 26-Nov-2016 08:14:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.307	6.307	0.000	98	105406	8.00	
* 2 Naphthalene-d8	136	7.548	7.548	0.000	99	396013	8.00	
* 3 Acenaphthene-d10	164	9.189	9.183	0.006	92	244919	8.00	
* 4 Phenanthrene-d10	188	10.566	10.560	0.006	97	417915	8.00	
* 5 Chrysene-d12	240	14.142	14.124	0.018	97	531727	8.00	
* 6 Perylene-d12	264	17.100	17.071	0.029	98	528986	8.00	
$ 7 2-Fluorophenol	112	4.872	4.872	0.000	94	368894	24.3	
$ 8 Phenol-d5	99	5.936	5.936	0.000	94	476089	25.3	
$ 9 Nitrobenzene-d5	82	6.848	6.848	0.000	90	463243	25.4	
$ 10 2-Fluorobiphenyl	172	8.548	8.542	0.006	100	1009920	24.0	
$ 11 2,4,6-Tribromophenol	330	9.913	9.907	0.006	93	142535	30.4	
$ 12 Terphenyl-d14	244	12.360	12.348	0.012	99	1318409	24.9	
13 1,4-Dioxane	88		1.401				ND	
25 Benzaldehyde	77	5.842	5.842	0.000	90	1291	0.1120	
26 Phenol	94		5.948				ND	
29 Bis(2-chloroethyl)ether	93		6.031				ND	
30 2-Chlorophenol	128		6.089				ND	
36 2-Methylphenol	108		6.554				ND	
38 2,2'-oxybis[1-chloropropan	45		6.578				ND	
40 Acetophenone	105	6.701	6.701	0.000	93	2015	0.0917	
42 4-Methylphenol	108		6.701				ND	
41 N-Nitrosodi-n-propylamine	70		6.701				ND	
45 Hexachloroethane	117		6.819				ND	
46 Nitrobenzene	77		6.866				ND	
48 Isophorone	82		7.095				ND	
49 2-Nitrophenol	139		7.178				ND	
50 2,4-Dimethylphenol	107		7.207				ND	
53 Bis(2-chloroethoxy)methane	93		7.295				ND	
54 2,4-Dichlorophenol	162		7.407				ND	
58 Naphthalene	128		7.572				ND	
62 Hexachlorobutadiene	225		7.689				ND	
64 Caprolactam	113		7.901				ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
67 4-Chloro-3-methylphenol	107		8.042				ND	
69 2-Methylnaphthalene	142		8.213				ND	
71 1-Methylnaphthalene	142		8.307				ND	
72 Hexachlorocyclopentadiene	237		8.366				ND	
73 1,2,4,5-Tetrachlorobenzene	216		8.372				ND	
74 2,4,6-Trichlorophenol	196		8.472				ND	
75 2,4,5-Trichlorophenol	196		8.501				ND	
76 1,1'-Biphenyl	154		8.642				ND	
77 2-Chloronaphthalene	162		8.672				ND	
79 2-Nitroaniline	65		8.748				ND	
82 Dimethyl phthalate	163		8.895				ND	
84 2,6-Dinitrotoluene	165		8.954				ND	
85 Acenaphthylene	152		9.060				ND	
86 3-Nitroaniline	138		9.119				ND	
87 2,4-Dinitrophenol	184		9.213				ND	
88 Acenaphthene	153		9.213				ND	
89 4-Nitrophenol	109		9.242				ND	
91 2,4-Dinitrotoluene	165		9.330				ND	
93 Dibenzofuran	168		9.372				ND	
96 2,3,4,6-Tetrachlorophenol	232		9.477				ND	
98 Diethyl phthalate	149		9.530				ND	
100 4-Chlorophenyl phenyl ethe	204		9.666				ND	
101 4-Nitroaniline	138		9.677				ND	
103 Fluorene	166		9.689				ND	
104 4,6-Dinitro-2-methylphenol	198		9.707				ND	
105 N-Nitrosodiphenylamine	169		9.766				ND	
110 4-Bromophenyl phenyl ether	248		10.119				ND	
112 Hexachlorobenzene	284		10.201				ND	
113 Atrazine	200		10.224				ND	
116 Pentachlorophenol	266		10.371				ND	
121 Phenanthrene	178		10.583				ND	
122 Anthracene	178		10.630				ND	
124 Carbazole	167		10.771				ND	
126 Di-n-butyl phthalate	149		11.066				ND	
131 Fluoranthene	202		11.889				ND	
133 Pyrene	202		12.195				ND	
138 Butyl benzyl phthalate	149		13.048				ND	
144 3,3'-Dichlorobenzidine	252		14.024				ND	
145 Bis(2-ethylhexyl) phthalat	149		14.054				ND	
146 Benzo[a]anthracene	228		14.101				ND	
150 Di-n-octyl phthalate	149		15.371				ND	
152 Benzo[b]fluoranthene	252		16.265				ND	
153 Benzo[k]fluoranthene	252		16.318				ND	
154 Benzo[a]pyrene	252		16.953				ND	
157 Indeno[1,2,3-cd]pyrene	276		19.306				ND	
158 Dibenz(a,h)anthracene	278		19.341				ND	
159 Benzo[g,h,i]perylene	276		19.924				ND	

Reagents:

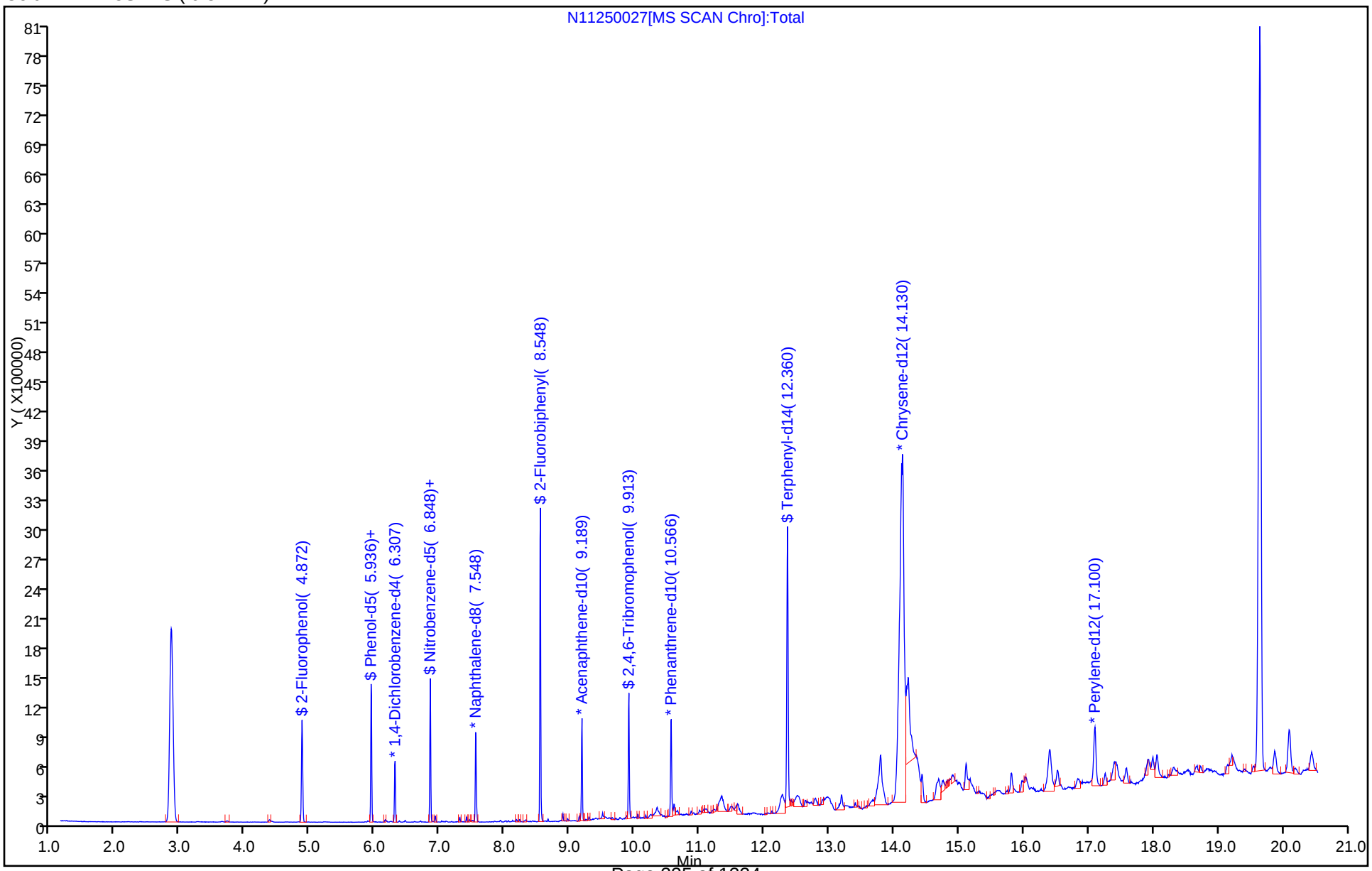
SVTAPITINTRNi_00012 Amount Added: 1.00 Units: uL Run Reagent

Report Date: 26-Nov-2016 08:23:13 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250027.D				
Injection Date:	25-Nov-2016 19:53:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	180-61122-A-2-A	Lab Sample ID:	180-61122-2	Worklist Smp#:	27
Client ID:	BGSB22-(1-2)-161122-S				
Injection Vol:	2.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)



TestAmerica Pittsburgh
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250027.D
Lims ID: 180-61122-A-2-A
Client ID: BGSB22-(1-2)-161122-S
Sample Type: Client
Inject. Date: 25-Nov-2016 19:53:30 ALS Bottle#: 26 Worklist Smp#: 27
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014496-027
Operator ID: 03200 Instrument ID: CH733

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 26-Nov-2016 08:21:37 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK023

First Level Reviewer: piccolinov Date: 26-Nov-2016 08:14:37

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	40.0	24.3	60.68
$ 8 Phenol-d5	40.0	25.3	63.30
$ 9 Nitrobenzene-d5	40.0	25.4	63.38
$ 10 2-Fluorobiphenyl	40.0	24.0	59.88
$ 11 2,4,6-Tribromophenol	40.0	30.4	76.00
$ 12 Terphenyl-d14	40.0	24.9	62.19

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB10-(0.0-0.5)-161122-S | Lab Sample ID: 180-61122-3

Matrix: Solid | Lab File ID: N11250028.D

Analysis Method: 8270D LL | Date Collected: 11/22/2016 15:30

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.2(g) | Date Analyzed: 11/25/2016 20:19

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 10

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 9.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
92-52-4	1,1'-Biphenyl	0.0324	U	0.359	0.0324
123-91-1	1,4-Dioxane	0.0416	U	0.725	0.0416
90-12-0	1-Methylnaphthalene	0.00774	U	0.0728	0.00774
95-94-3	1,2,4,5-Tetrachlorobenzene	0.0275	U	0.359	0.0275
91-58-7	2-Chloronaphthalene	0.00757	U	0.0728	0.00757
95-57-8	2-Chlorophenol	0.0297	U	0.359	0.0297
120-83-2	2,4-Dichlorophenol	0.00728	U	0.0728	0.00728
105-67-9	2,4-Dimethylphenol	0.0567	U	0.359	0.0567
51-28-5	2,4-Dinitrophenol	0.432	U	1.85	0.432
121-14-2	2,4-Dinitrotoluene	0.0293	U	0.359	0.0293
606-20-2	2,6-Dinitrotoluene	0.0374	U	0.359	0.0374
91-57-6	2-Methylnaphthalene	0.00652	U	0.0728	0.00652
95-48-7	2-Methylphenol	0.0253	U	0.359	0.0253
106-44-5	Methylphenol, 3 & 4	0.0355	U	0.359	0.0355
88-74-4	2-Nitroaniline	0.162	U	1.85	0.162
99-09-2	3-Nitroaniline	0.149	U	1.85	0.149
100-01-6	4-Nitroaniline	0.147	U	1.85	0.147
88-75-5	2-Nitrophenol	0.0400	U	0.359	0.0400
100-02-7	4-Nitrophenol	0.132	U	1.85	0.132
108-60-1	2,2'-oxybis[1-chloropropane]	0.00783	U	0.0728	0.00783
58-90-2	2,3,4,6-Tetrachlorophenol	0.0233	U	0.359	0.0233
95-95-4	2,4,5-Trichlorophenol	0.0387	U	0.359	0.0387
88-06-2	2,4,6-Trichlorophenol	0.0543	U	0.359	0.0543
59-50-7	4-Chloro-3-methylphenol	0.0334	U	0.359	0.0334
7005-72-3	4-Chlorophenyl phenyl ether	0.0403	U	0.359	0.0403
534-52-1	4,6-Dinitro-2-methylphenol	0.146	U	1.85	0.146
83-32-9	Acenaphthene	0.0170	J	0.0728	0.00697
208-96-8	Acenaphthylene	0.0222	J	0.0728	0.00831
98-86-2	Acetophenone	0.0298	U	0.359	0.0298
120-12-7	Anthracene	0.0631	J	0.0728	0.00710
1912-24-9	Atrazine	0.0353	U	0.359	0.0353
100-52-7	Benzaldehyde	0.0544	U	0.359	0.0544
56-55-3	Benzo[a]anthracene	0.712		0.0728	0.00909
205-99-2	Benzo[b]fluoranthene	1.22		0.0728	0.0114

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB10-(0.0-0.5)-161122-S | Lab Sample ID: 180-61122-3

Matrix: Solid | Lab File ID: N11250028.D

Analysis Method: 8270D LL | Date Collected: 11/22/2016 15:30

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.2(g) | Date Analyzed: 11/25/2016 20:19

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 10

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 9.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
207-08-9	Benzo[k]fluoranthene	0.424		0.0728	0.0147
191-24-2	Benzo[g,h,i]perylene	0.851		0.0728	0.00722
50-32-8	Benzo[a]pyrene	0.811		0.0728	0.00726
111-91-1	Bis(2-chloroethoxy)methane	0.0239	U	0.359	0.0239
111-44-4	Bis(2-chloroethyl)ether	0.00974	U	0.0728	0.00974
117-81-7	Bis(2-ethylhexyl) phthalate	0.134	J	0.725	0.0586
101-55-3	4-Bromophenyl phenyl ether	0.0316	U	0.359	0.0316
85-68-7	Butyl benzyl phthalate	0.0496	U	0.359	0.0496
105-60-2	Caprolactam	0.274	U	1.85	0.274
86-74-8	Carbazole	0.0664	J	0.0728	0.00668
53-70-3	Dibenz(a,h)anthracene	0.206		0.0728	0.00807
132-64-9	Dibenzofuran	0.0357	U	0.359	0.0357
84-74-2	Di-n-butyl phthalate	0.0454	U	0.359	0.0454
117-84-0	Di-n-octyl phthalate	0.0382	U	0.359	0.0382
84-66-2	Diethyl phthalate	0.0396	U	0.359	0.0396
131-11-3	Dimethyl phthalate	0.0395	U	0.359	0.0395
206-44-0	Fluoranthene	1.54		0.0728	0.00776
86-73-7	Fluorene	0.00956	U	0.0728	0.00956
118-74-1	Hexachlorobenzene	0.00773	U	0.0728	0.00773
87-68-3	Hexachlorobutadiene	0.00812	U	0.0728	0.00812
77-47-4	Hexachlorocyclopentadiene	0.0391	U	0.359	0.0391
67-72-1	Hexachloroethane	0.0261	U	0.359	0.0261
193-39-5	Indeno[1,2,3-cd]pyrene	0.710		0.0728	0.00747
78-59-1	Isophorone	0.0273	U	0.359	0.0273
91-20-3	Naphthalene	0.00625	U	0.0728	0.00625
98-95-3	Nitrobenzene	0.0302	U	0.725	0.0302
86-30-6	N-Nitrosodiphenylamine	0.0336	U	0.359	0.0336
621-64-7	N-Nitrosodi-n-propylamine	0.00851	U	0.0728	0.00851
87-86-5	Pentachlorophenol	0.0324	U	0.359	0.0324
85-01-8	Phenanthrene	0.375		0.0728	0.0115
108-95-2	Phenol	0.00857	U	0.359	0.00857
129-00-0	Pyrene	1.09		0.0728	0.00733
91-94-1	3,3'-Dichlorobenzidine	0.0383	U	0.359	0.0383

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB10-(0.0-0.5)-161122-S | Lab Sample ID: 180-61122-3

Matrix: Solid | Lab File ID: N11250028.D

Analysis Method: 8270D LL | Date Collected: 11/22/2016 15:30

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.2(g) | Date Analyzed: 11/25/2016 20:19

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 10

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 9.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	73		42-100
367-12-4	2-Fluorophenol (Surr)	53		21-107
118-79-6	2,4,6-Tribromophenol (Surr)	94		20-134
4165-60-0	Nitrobenzene-d5 (Surr)	65		35-109
4165-62-2	Phenol-d5 (Surr)	69		29-105
1718-51-0	Terphenyl-d14 (Surr)	83		36-113

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250028.D
Lims ID: 180-61122-A-3-A
Client ID: BGSB10-(0.0-0.5)-161122-S
Sample Type: Client
Inject. Date: 25-Nov-2016 20:19:30 ALS Bottle#: 27 Worklist Smp#: 28
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 180-0014496-028
Operator ID: 03200 Instrument ID: CH733

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 26-Nov-2016 08:21:37 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK023

First Level Reviewer: piccolinov Date: 26-Nov-2016 08:15:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.301	6.307	-0.006	98	108700	8.00	
* 2 Naphthalene-d8	136	7.542	7.548	-0.006	100	407042	8.00	
* 3 Acenaphthene-d10	164	9.183	9.183	0.000	92	253941	8.00	
* 4 Phenanthrene-d10	188	10.560	10.560	0.000	97	445996	8.00	
* 5 Chrysene-d12	240	14.130	14.124	0.006	96	541756	8.00	
* 6 Perylene-d12	264	17.089	17.071	0.018	98	548193	8.00	
$ 7 2-Fluorophenol	112	4.872	4.872	0.000	92	33404	2.13	
$ 8 Phenol-d5	99	5.931	5.936	-0.005	93	53712	2.77	
$ 9 Nitrobenzene-d5	82	6.842	6.848	-0.006	91	48966	2.61	
$ 10 2-Fluorobiphenyl	172	8.542	8.542	0.000	99	127624	2.92	
$ 11 2,4,6-Tribromophenol	330	9.907	9.907	0.000	92	18717	3.74	
$ 12 Terphenyl-d14	244	12.348	12.348	0.000	99	178521	3.31	
13 1,4-Dioxane	88		1.401				ND	
25 Benzaldehyde	77		5.842				ND	
26 Phenol	94		5.948				ND	
29 Bis(2-chloroethyl)ether	93		6.031				ND	
30 2-Chlorophenol	128		6.089				ND	
36 2-Methylphenol	108		6.554				ND	
38 2,2'-oxybis[1-chloropropan	45		6.578				ND	
40 Acetophenone	105		6.701				ND	
42 4-Methylphenol	108		6.701				ND	
41 N-Nitrosodi-n-propylamine	70		6.701				ND	
45 Hexachloroethane	117		6.819				ND	
46 Nitrobenzene	77		6.866				ND	
48 Isophorone	82		7.095				ND	
49 2-Nitrophenol	139		7.178				ND	
50 2,4-Dimethylphenol	107		7.207				ND	
53 Bis(2-chloroethoxy)methane	93		7.295				ND	
54 2,4-Dichlorophenol	162		7.407				ND	
58 Naphthalene	128		7.572				ND	
62 Hexachlorobutadiene	225		7.689				ND	
64 Caprolactam	113		7.901				ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
67 4-Chloro-3-methylphenol	107		8.042				ND	
69 2-Methylnaphthalene	142		8.213				ND	
71 1-Methylnaphthalene	142		8.307				ND	
72 Hexachlorocyclopentadiene	237		8.366				ND	
73 1,2,4,5-Tetrachlorobenzene	216		8.372				ND	
74 2,4,6-Trichlorophenol	196		8.472				ND	
75 2,4,5-Trichlorophenol	196		8.501				ND	
76 1,1'-Biphenyl	154		8.642				ND	
77 2-Chloronaphthalene	162		8.672				ND	
79 2-Nitroaniline	65		8.748				ND	
82 Dimethyl phthalate	163		8.895				ND	
84 2,6-Dinitrotoluene	165		8.954				ND	
85 Acenaphthylene	152	9.054	9.060	-0.006	95	5984	0.1224	
86 3-Nitroaniline	138		9.119				ND	
87 2,4-Dinitrophenol	184		9.213				ND	
88 Acenaphthene	153	9.213	9.213	0.000	86	3223	0.0936	
89 4-Nitrophenol	109		9.242				ND	
91 2,4-Dinitrotoluene	165		9.330				ND	
93 Dibenzofuran	168	9.372	9.372	0.000	93	2221	0.0436	
96 2,3,4,6-Tetrachlorophenol	232		9.477				ND	
98 Diethyl phthalate	149		9.530				ND	
100 4-Chlorophenyl phenyl ethe	204		9.666				ND	
101 4-Nitroaniline	138		9.677				ND	
103 Fluorene	166		9.689				ND	
104 4,6-Dinitro-2-methylphenol	198		9.707				ND	
105 N-Nitrosodiphenylamine	169		9.766				ND	
110 4-Bromophenyl phenyl ether	248		10.119				ND	
112 Hexachlorobenzene	284		10.201				ND	
113 Atrazine	200		10.224				ND	
116 Pentachlorophenol	266		10.371				ND	
121 Phenanthrene	178	10.583	10.583	0.000	96	128062	2.07	
122 Anthracene	178	10.630	10.630	0.000	97	20793	0.3483	
124 Carbazole	167	10.771	10.771	0.000	96	18802	0.3662	
126 Di-n-butyl phthalate	149		11.066				ND	
131 Fluoranthene	202	11.889	11.889	0.000	97	560934	8.48	
133 Pyrene	202	12.195	12.195	0.000	99	491747	6.00	
138 Butyl benzyl phthalate	149		13.048				ND	
144 3,3'-Dichlorobenzidine	252		14.024				ND	
145 Bis(2-ethylhexyl) phthalat	149	14.059	14.054	0.005	92	27127	0.7420	
146 Benzo[a]anthracene	228	14.106	14.101	0.005	97	274602	3.93	
150 Di-n-octyl phthalate	149		15.371				ND	
152 Benzo[b]fluoranthene	252	16.283	16.265	0.018	95	572259	6.74	
153 Benzo[k]fluoranthene	252	16.330	16.318	0.012	1	207265	2.34	
154 Benzo[a]pyrene	252	16.965	16.953	0.012	74	347810	4.47	
157 Indeno[1,2,3-cd]pyrene	276	19.336	19.306	0.030	97	328740	3.92	
158 Dibenz(a,h)anthracene	278	19.365	19.341	0.024	86	75787	1.14	
159 Benzo[g,h,i]perylene	276	19.959	19.924	0.035	97	336463	4.69	

Reagents:

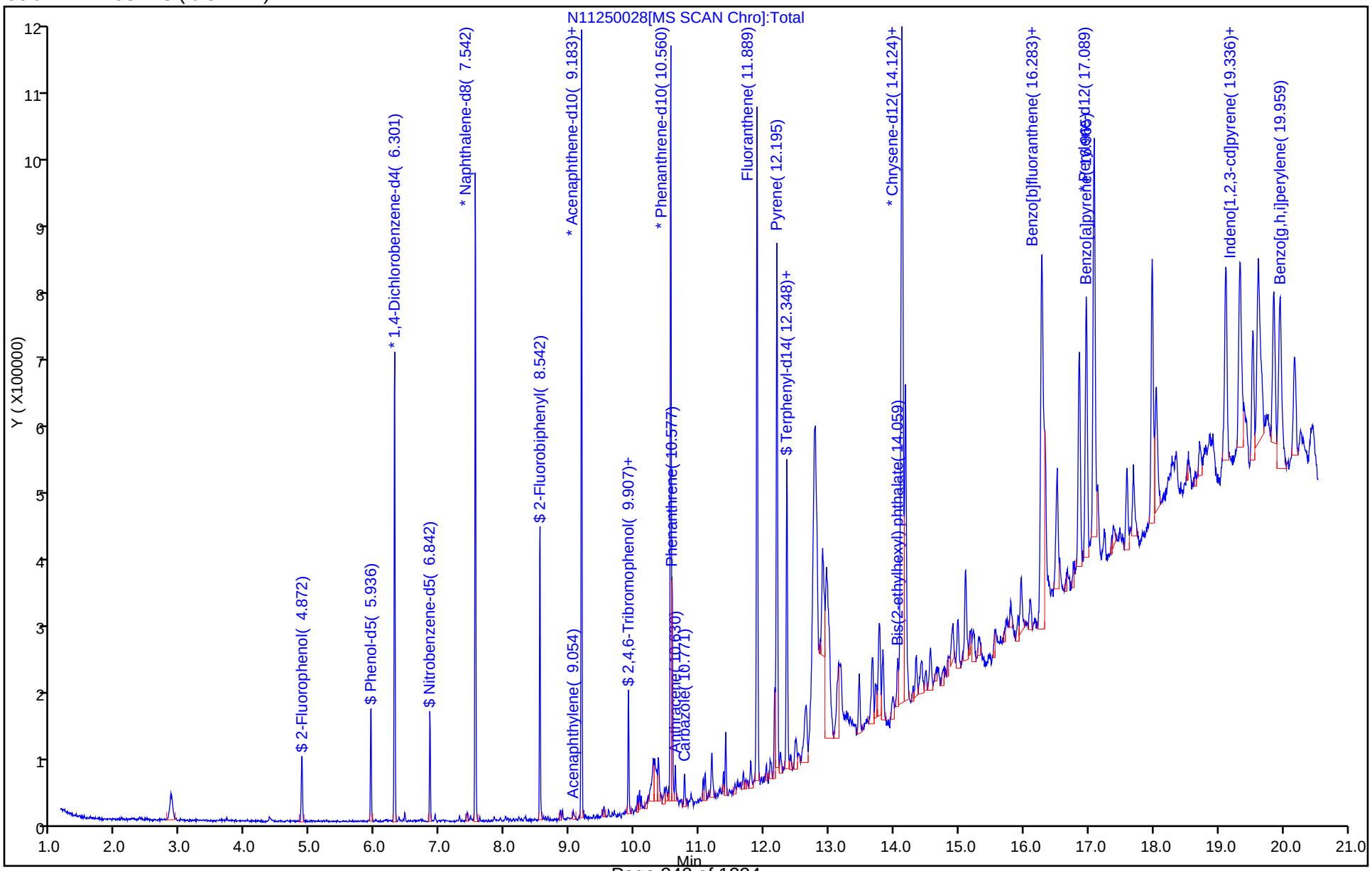
SVTAPITINTRNi_00012 Amount Added: 1.00 Units: uL Run Reagent

Report Date: 26-Nov-2016 08:23:15 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250028.D				
Injection Date:	25-Nov-2016 20:19:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	180-61122-A-3-A	Lab Sample ID:	180-61122-3	Worklist Smp#:	28
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Injection Vol:	2.0 ul	Dil. Factor:	10.0000	ALS Bottle#:	27
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)



TestAmerica Pittsburgh
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250028.D
Lims ID: 180-61122-A-3-A
Client ID: BGSB10-(0.0-0.5)-161122-S
Sample Type: Client
Inject. Date: 25-Nov-2016 20:19:30 ALS Bottle#: 27 Worklist Smp#: 28
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 180-0014496-028
Operator ID: 03200 Instrument ID: CH733

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 26-Nov-2016 08:21:37 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK023

First Level Reviewer: piccolinov Date: 26-Nov-2016 08:15:15

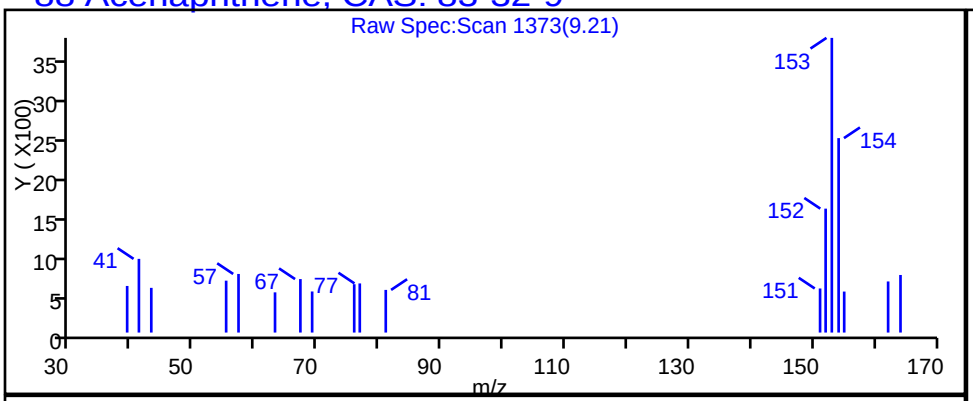
Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	40.0	2.13	53.28
$ 8 Phenol-d5	40.0	2.77	69.25
$ 9 Nitrobenzene-d5	40.0	2.61	65.18
$ 10 2-Fluorobiphenyl	40.0	2.92	72.98
$ 11 2,4,6-Tribromophenol	40.0	3.74	93.52
$ 12 Terphenyl-d14	40.0	3.31	82.65

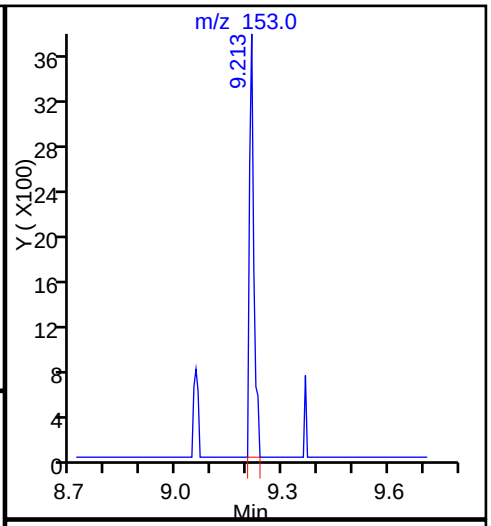
Report Date: 26-Nov-2016 08:23:16 Chrom Revision: 2.2 14-Nov-2016 08:15:18

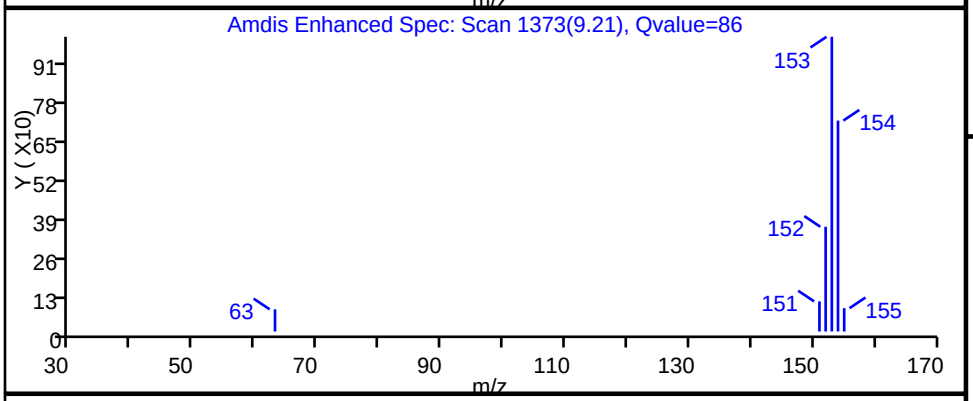
TestAmerica Pittsburgh

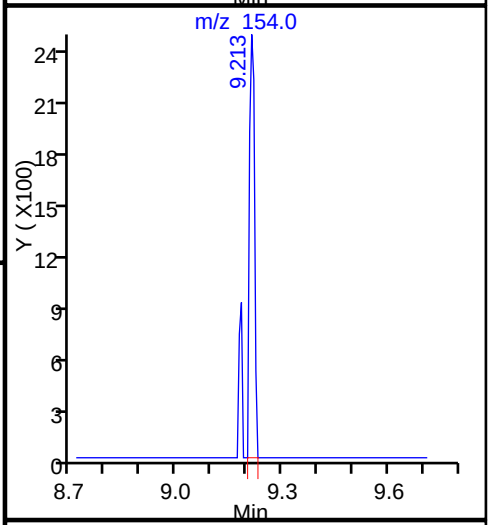
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250028.D				
Injection Date:	25-Nov-2016 20:19:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-3-A	Lab Sample ID:	180-61122-3		
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	27	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

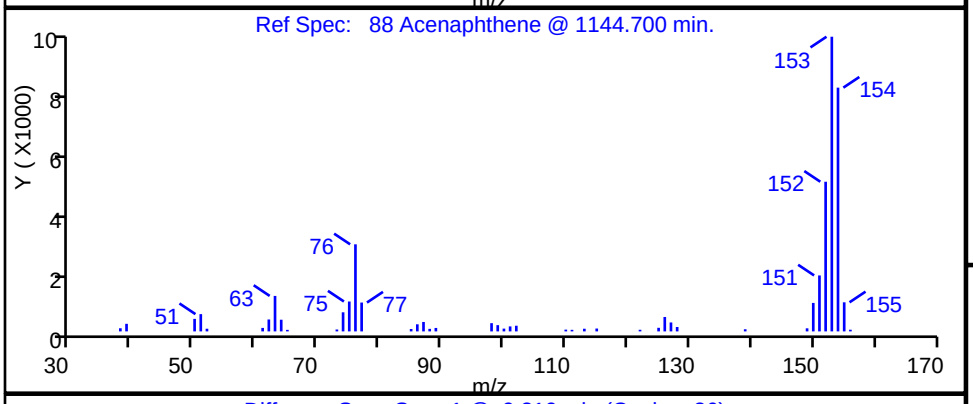
88 Acenaphthene, CAS: 83-32-9

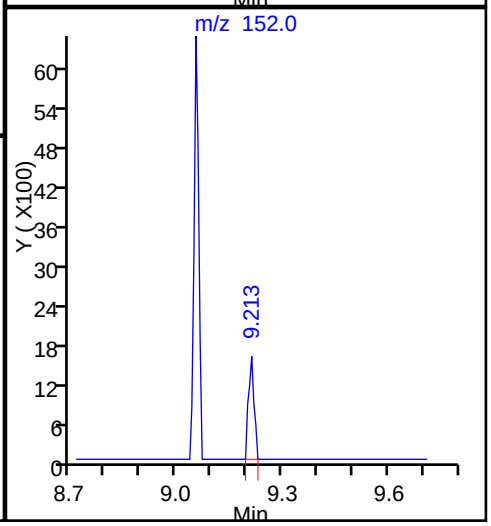


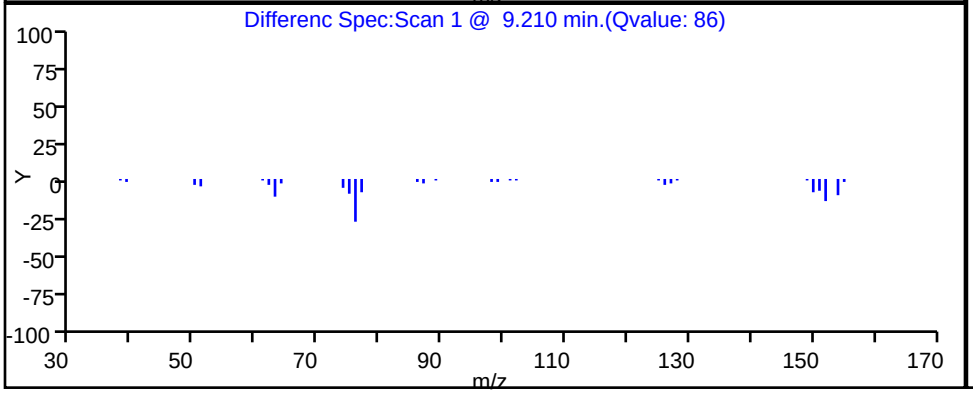










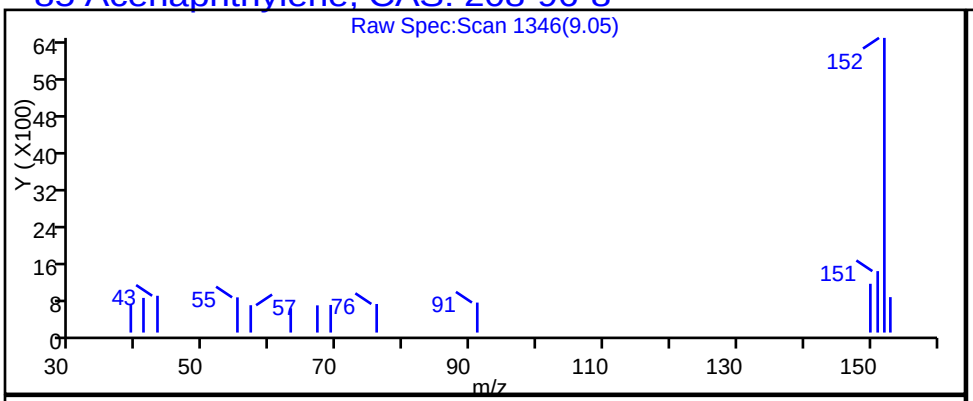


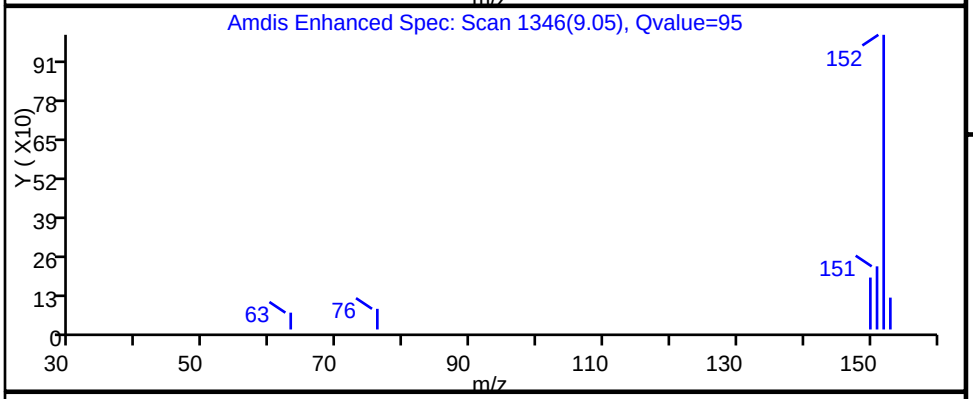
Report Date: 26-Nov-2016 08:23:16 Chrom Revision: 2.2 14-Nov-2016 08:15:18

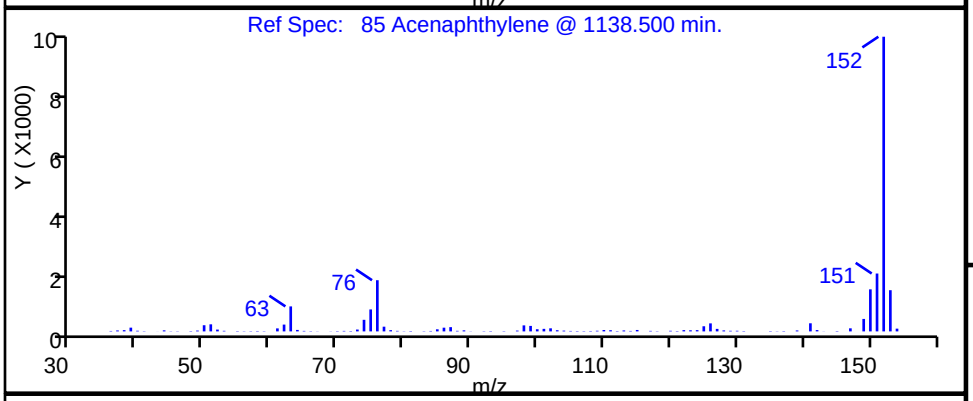
TestAmerica Pittsburgh

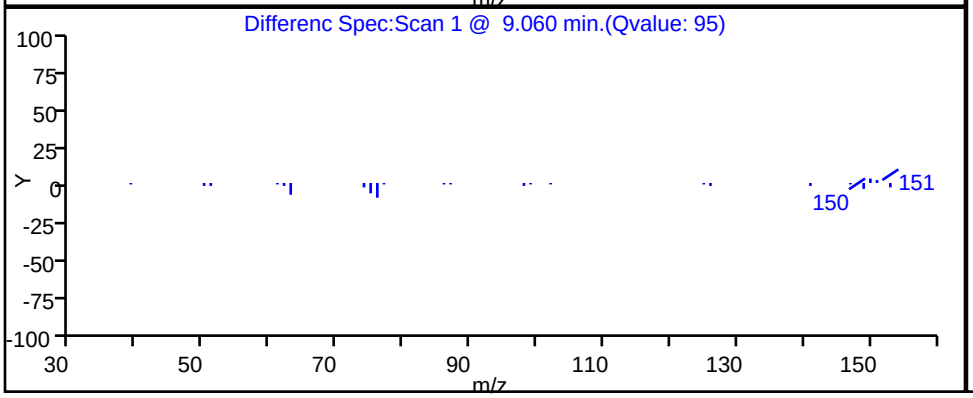
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250028.D				
Injection Date:	25-Nov-2016 20:19:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-3-A	Lab Sample ID:	180-61122-3		
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	27	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

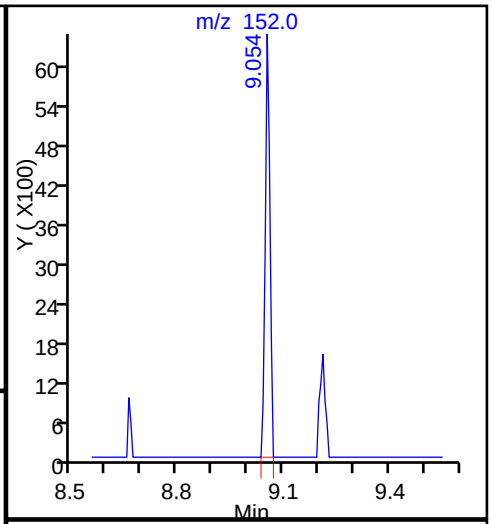
85 Acenaphthylene, CAS: 208-96-8

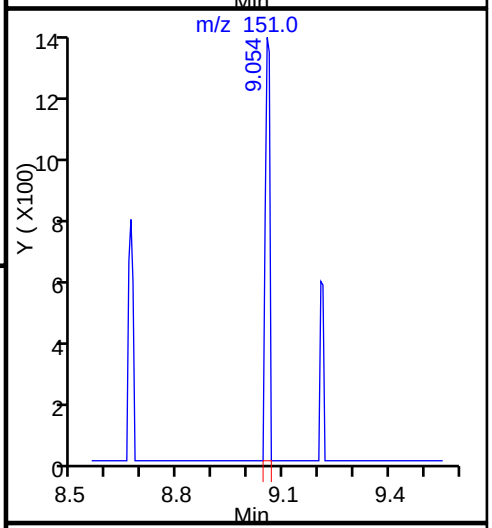


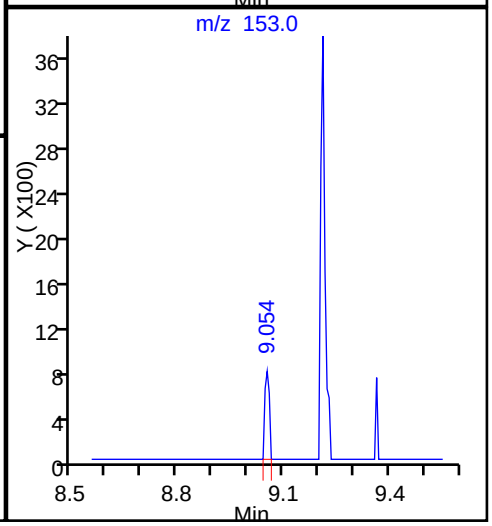










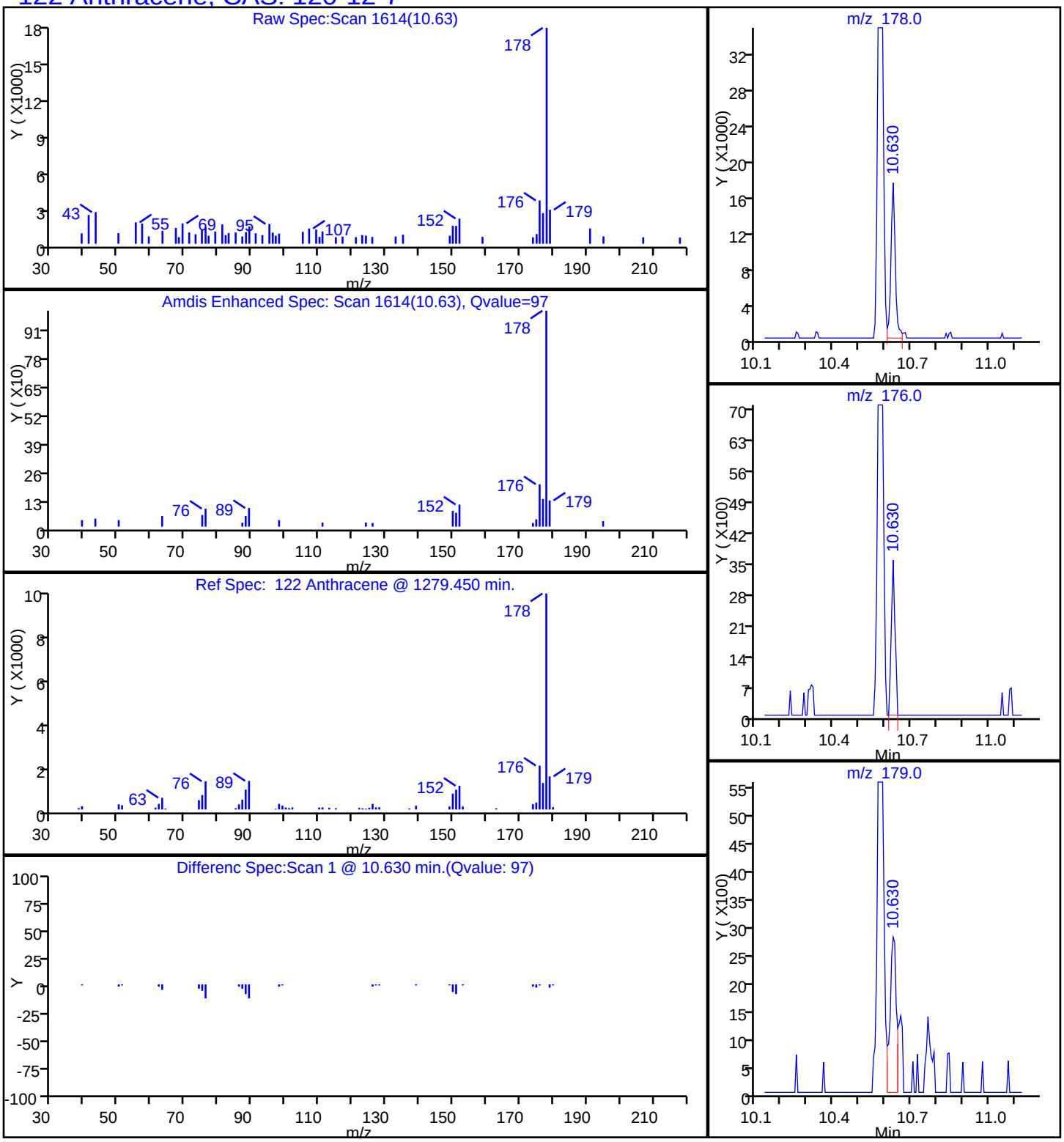


Report Date: 26-Nov-2016 08:23:16 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250028.D		
Injection Date:	25-Nov-2016 20:19:30	Instrument ID:	CH733
Lims ID:	180-61122-A-3-A	Lab Sample ID:	180-61122-3
Client ID:	BGSB10-(0.0-0.5)-161122-S		
Operator ID:	03200	ALS Bottle#:	27 Worklist Smp#: 28
Injection Vol:	2.0 ul	Dil. Factor:	10.0000
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN

122 Anthracene, CAS: 120-12-7

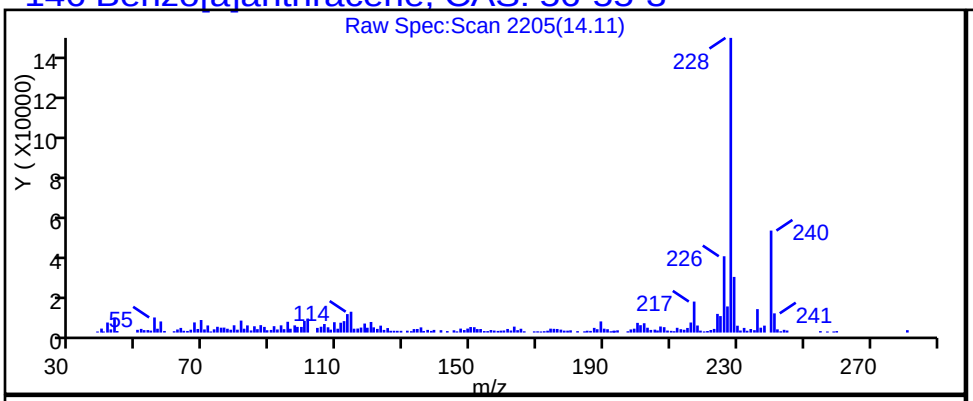


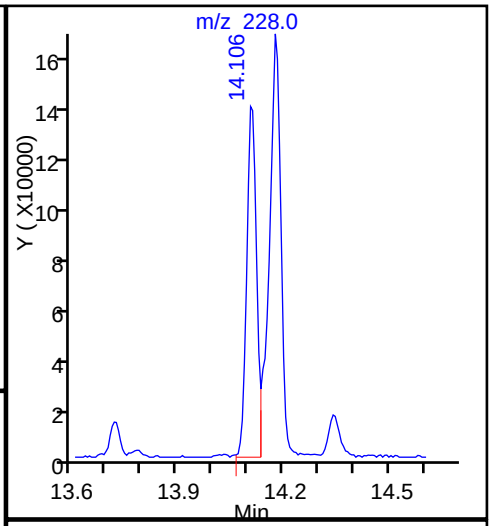
Report Date: 26-Nov-2016 08:23:16 Chrom Revision: 2.2 14-Nov-2016 08:15:18

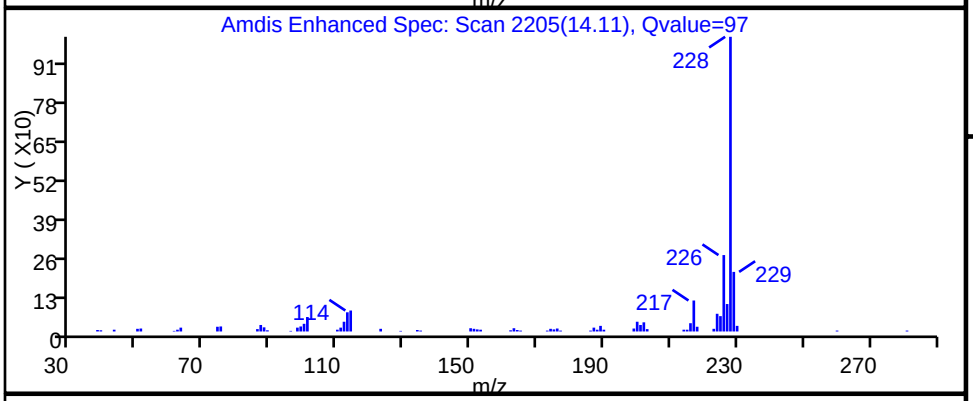
TestAmerica Pittsburgh

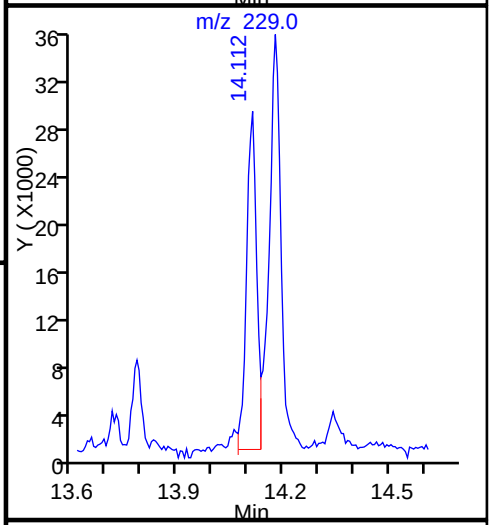
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250028.D				
Injection Date:	25-Nov-2016 20:19:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-3-A	Lab Sample ID:	180-61122-3		
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	27	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

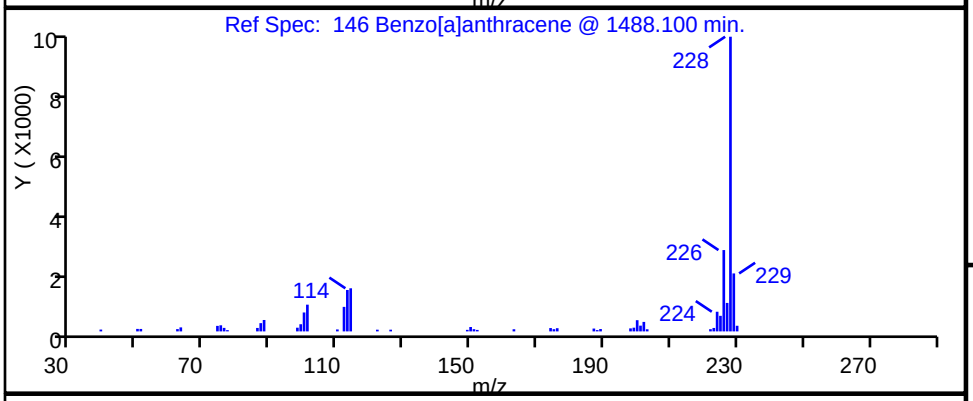
146 Benzo[a]anthracene, CAS: 56-55-3

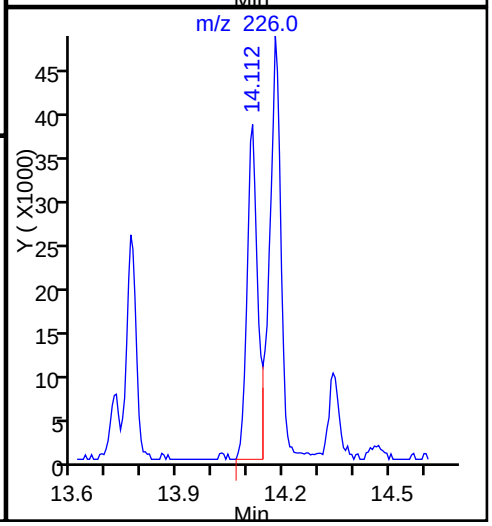


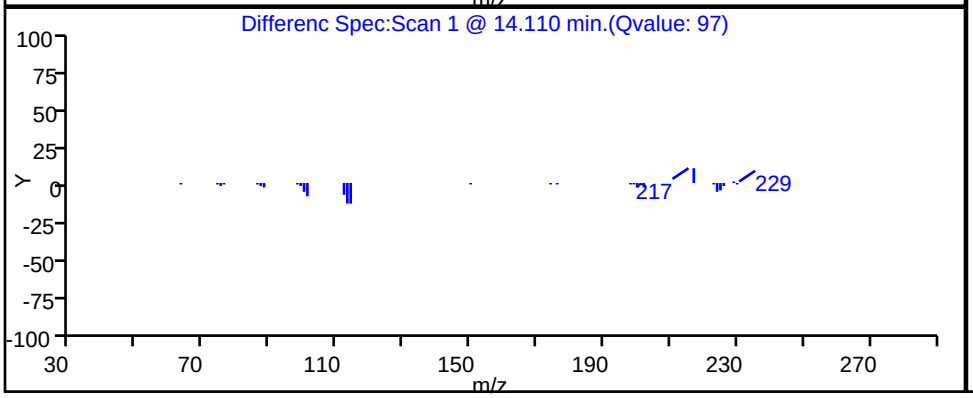










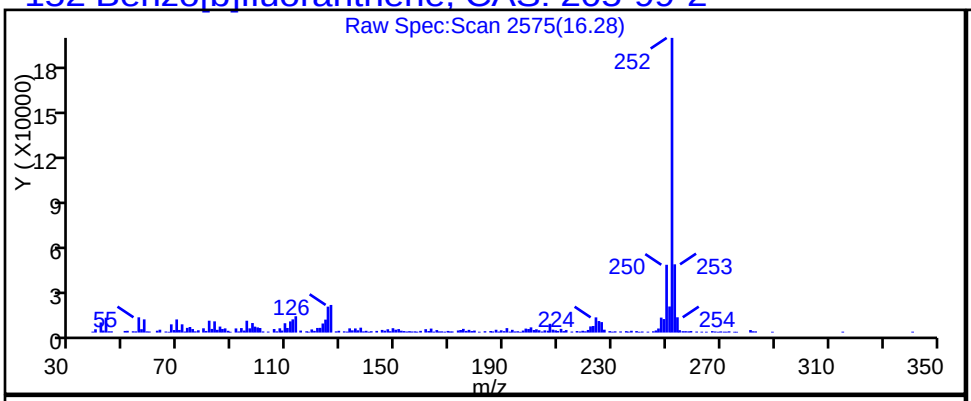


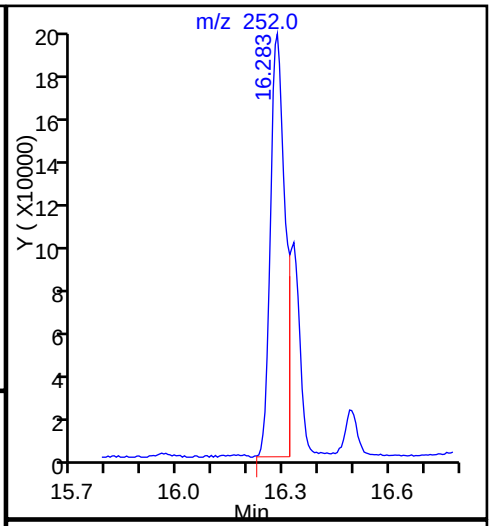
Report Date: 26-Nov-2016 08:23:16 Chrom Revision: 2.2 14-Nov-2016 08:15:18

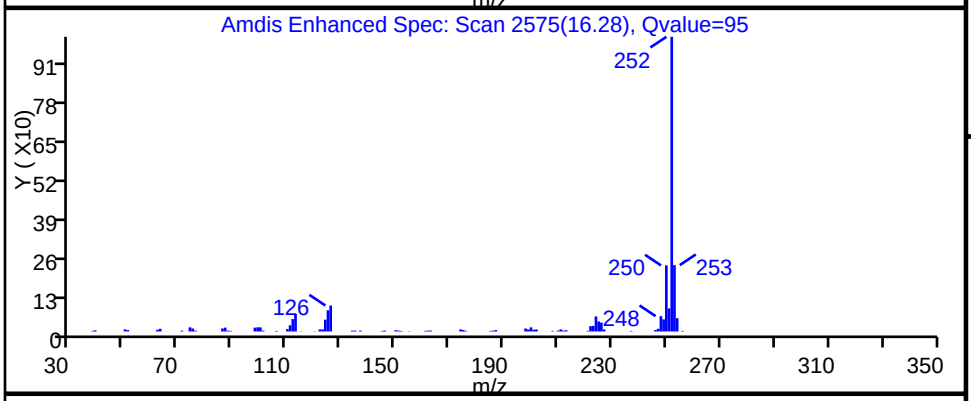
TestAmerica Pittsburgh

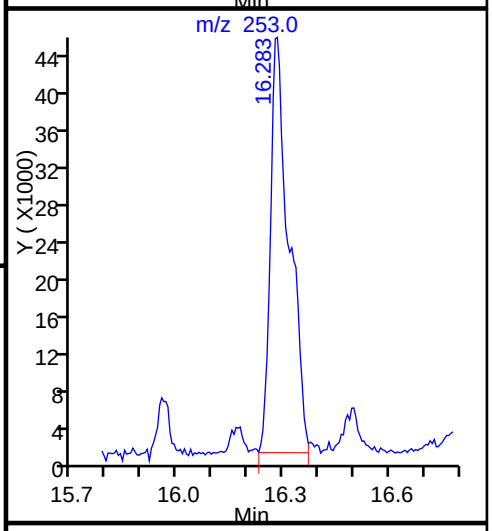
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250028.D				
Injection Date:	25-Nov-2016 20:19:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-3-A	Lab Sample ID:	180-61122-3		
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	27	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

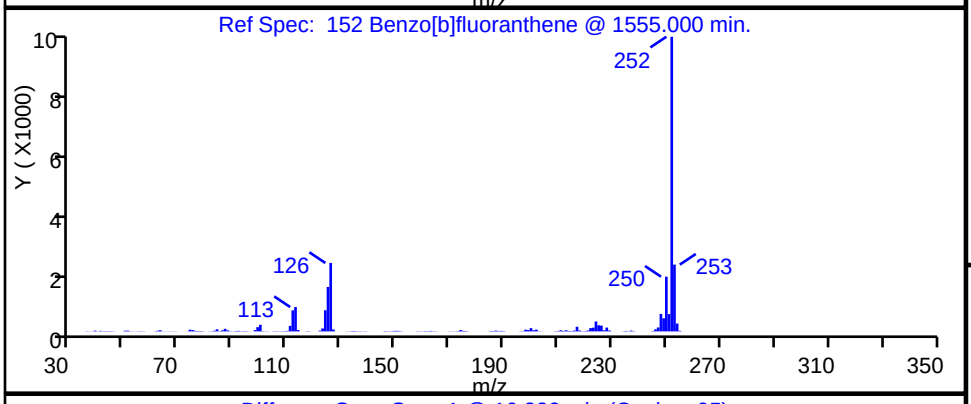
152 Benzo[b]fluoranthene, CAS: 205-99-2

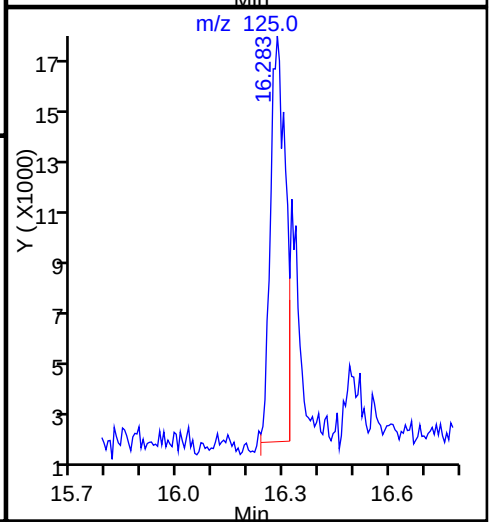


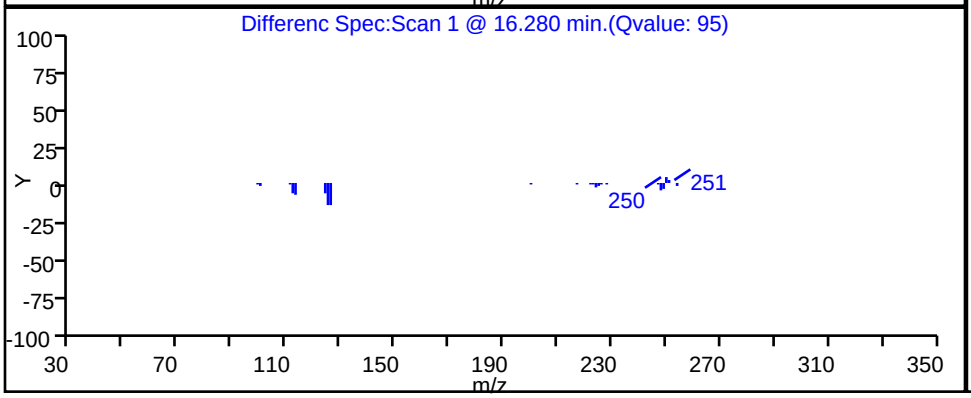












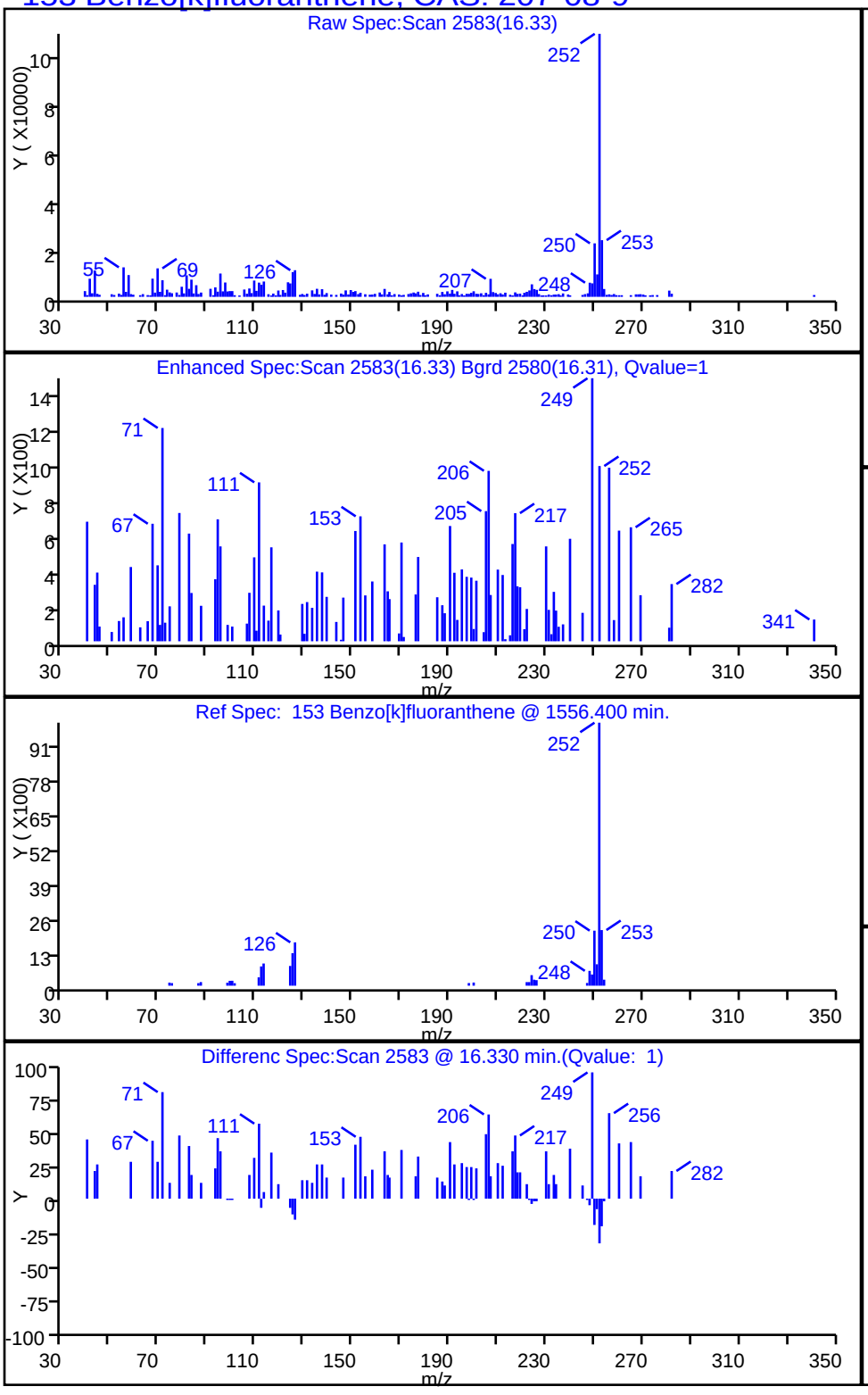
Report Date: 26-Nov-2016 08:23:16 Chrom Revision: 2.2 14-Nov-2016 08:15:18

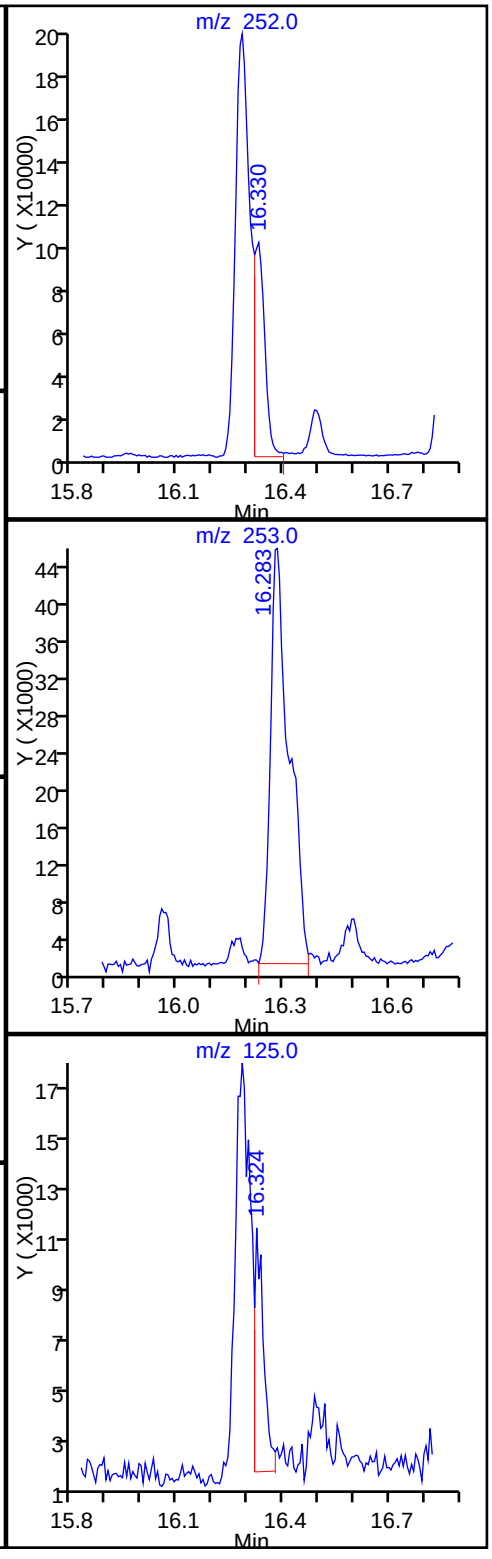
TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250028.D

Injection Date:	25-Nov-2016 20:19:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-3-A	Lab Sample ID:	180-61122-3		
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	27	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

153 Benzo[k]fluoranthene, CAS: 207-08-9



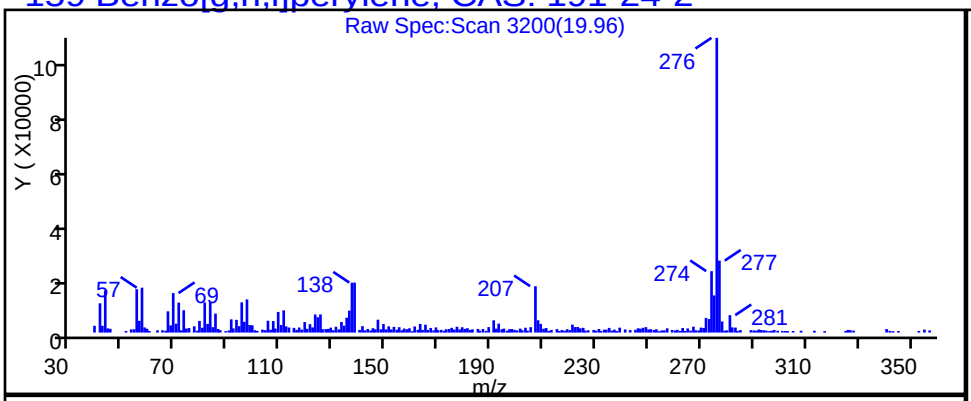


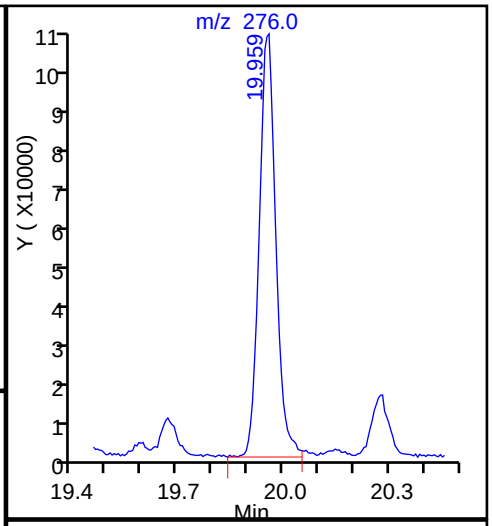
Report Date: 26-Nov-2016 08:23:16 Chrom Revision: 2.2 14-Nov-2016 08:15:18

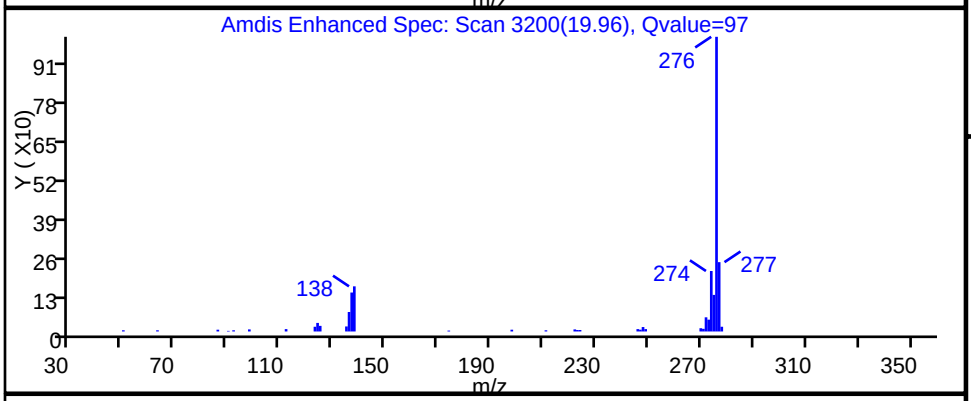
TestAmerica Pittsburgh

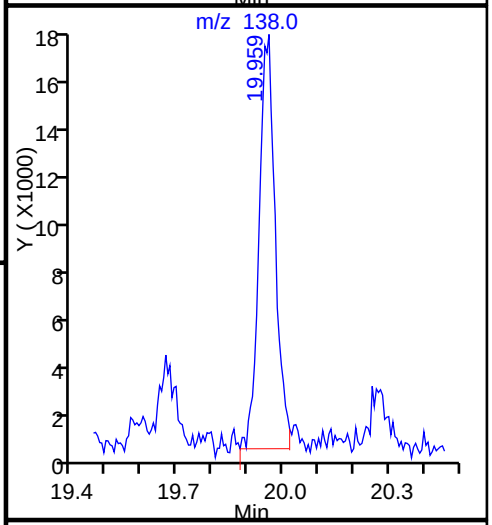
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250028.D				
Injection Date:	25-Nov-2016 20:19:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-3-A	Lab Sample ID:	180-61122-3		
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	27	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

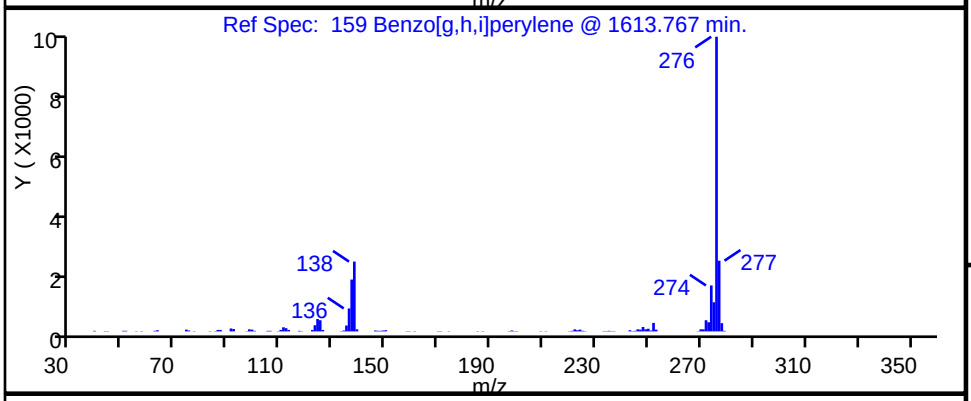
159 Benzo[g,h,i]perylene, CAS: 191-24-2

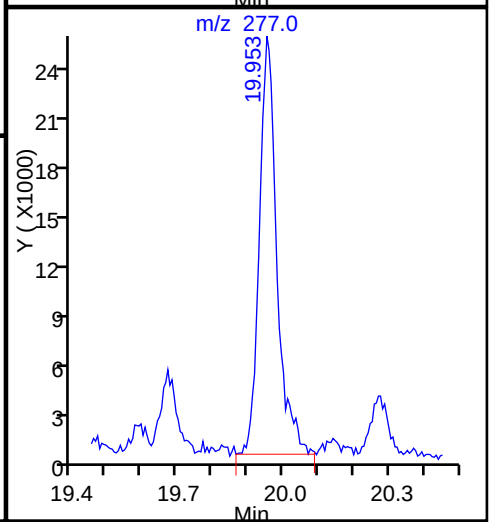


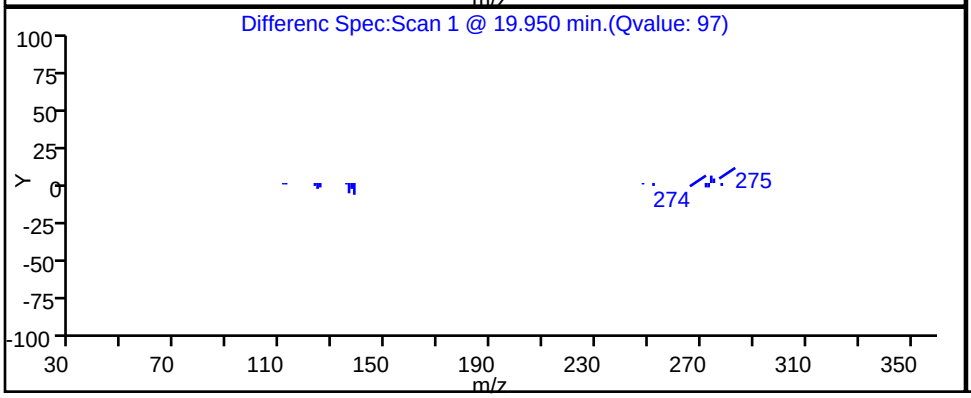










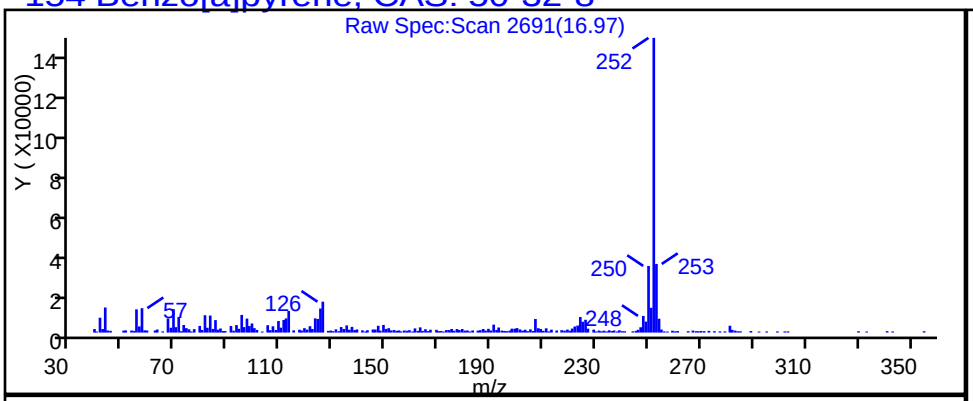


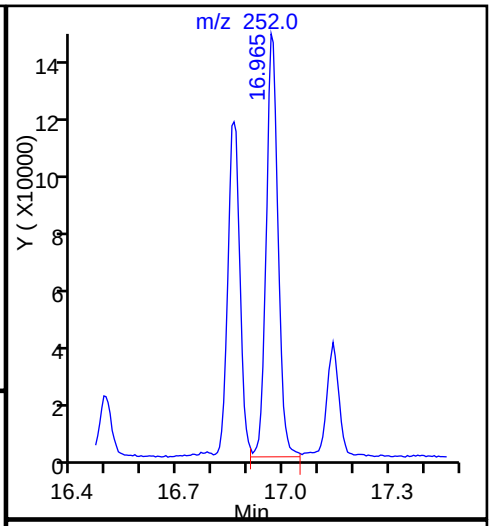
Report Date: 26-Nov-2016 08:23:16 Chrom Revision: 2.2 14-Nov-2016 08:15:18

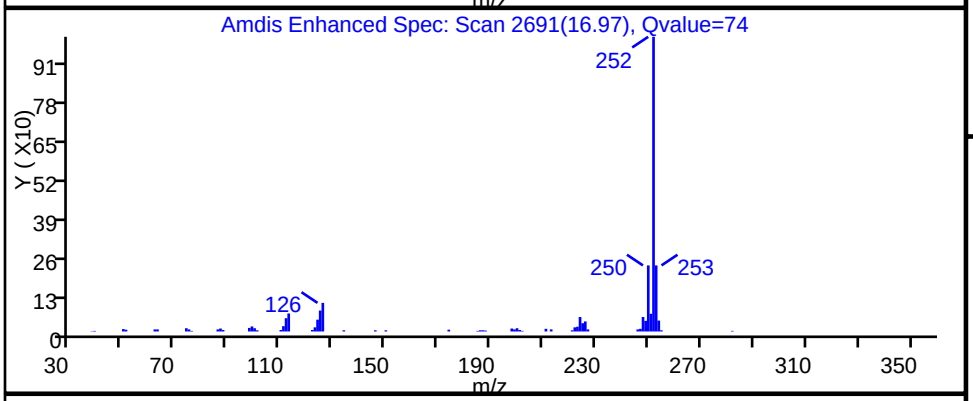
TestAmerica Pittsburgh

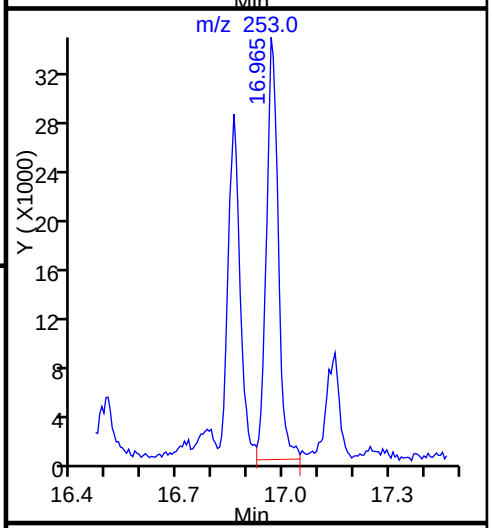
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250028.D				
Injection Date:	25-Nov-2016 20:19:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-3-A	Lab Sample ID:	180-61122-3		
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	27	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

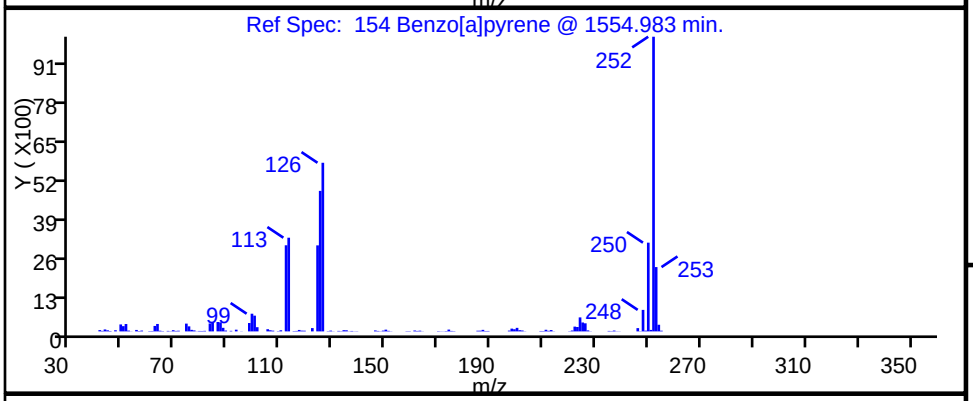
154 Benzo[a]pyrene, CAS: 50-32-8

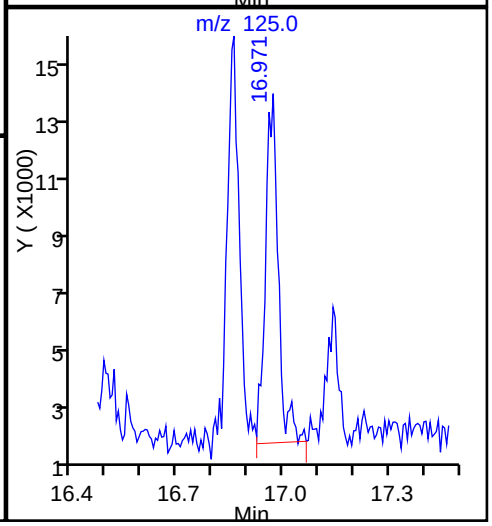


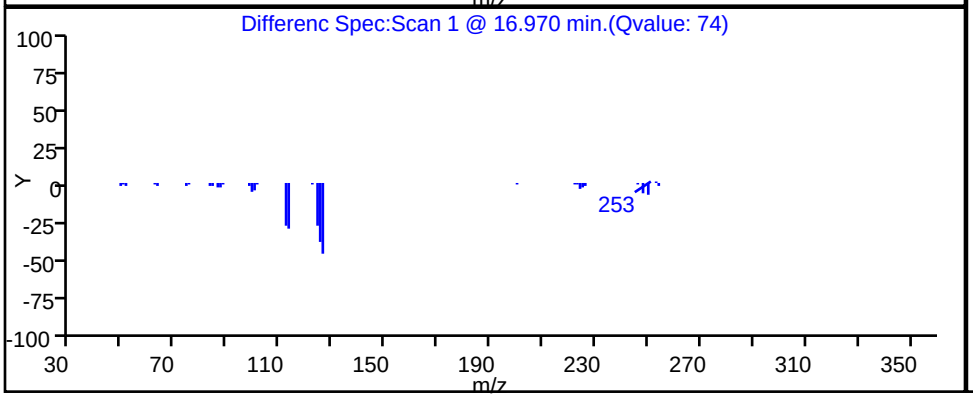










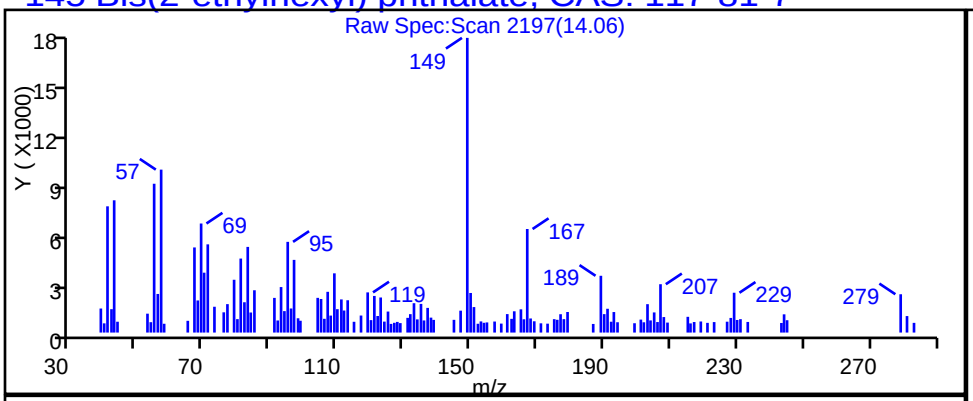


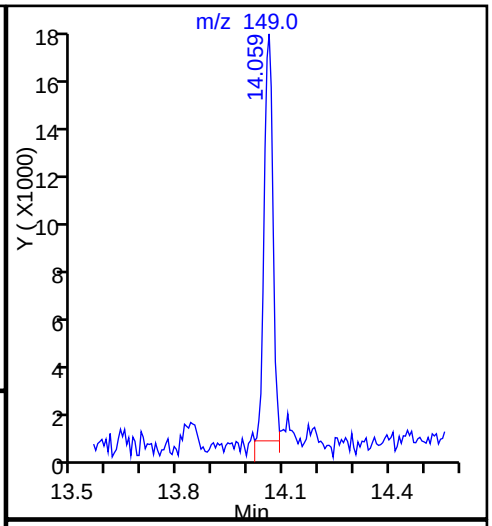
Report Date: 26-Nov-2016 08:23:16 Chrom Revision: 2.2 14-Nov-2016 08:15:18

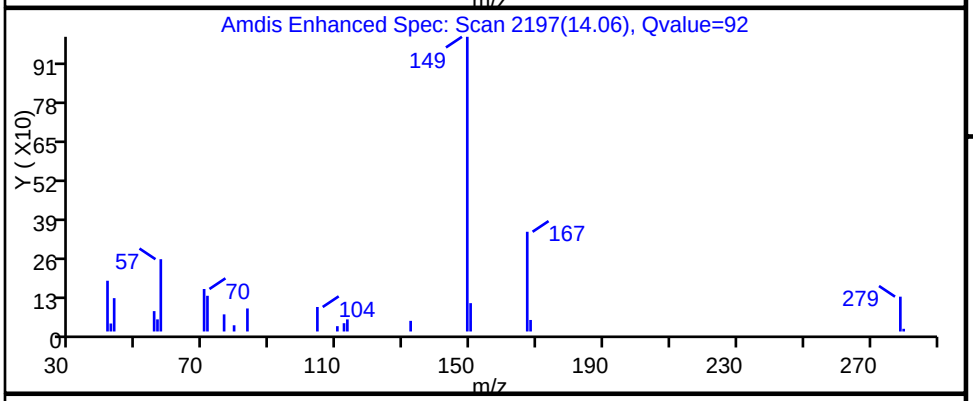
TestAmerica Pittsburgh

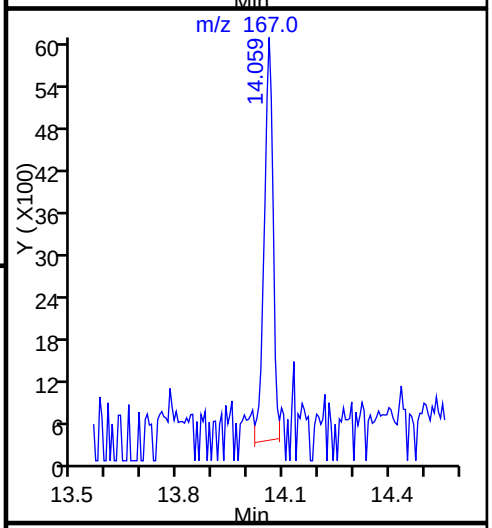
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250028.D				
Injection Date:	25-Nov-2016 20:19:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-3-A	Lab Sample ID:	180-61122-3		
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	27	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

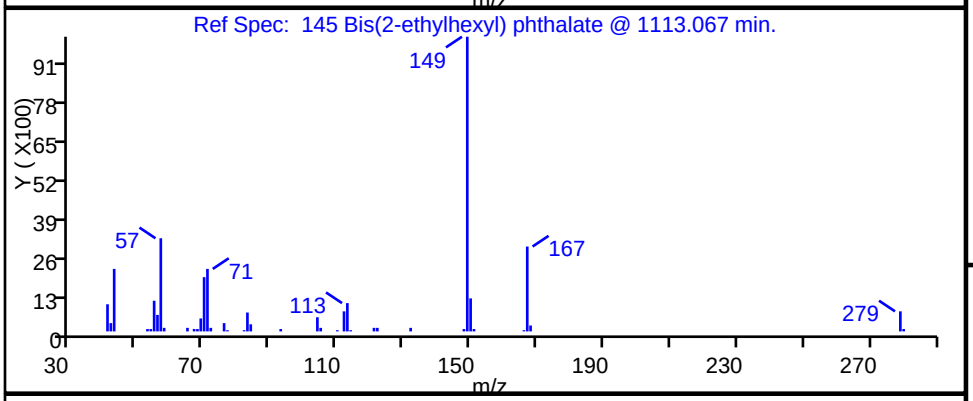
145 Bis(2-ethylhexyl) phthalate, CAS: 117-81-7

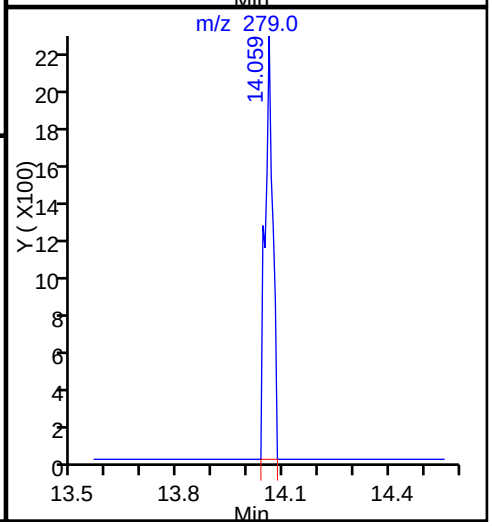


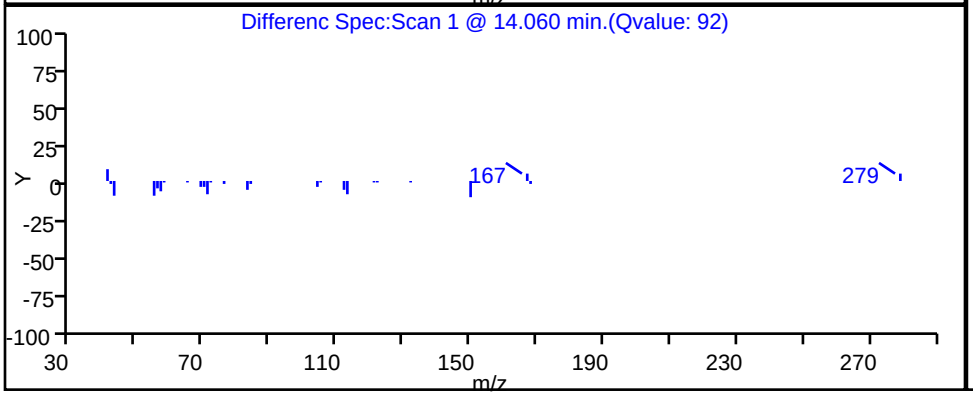










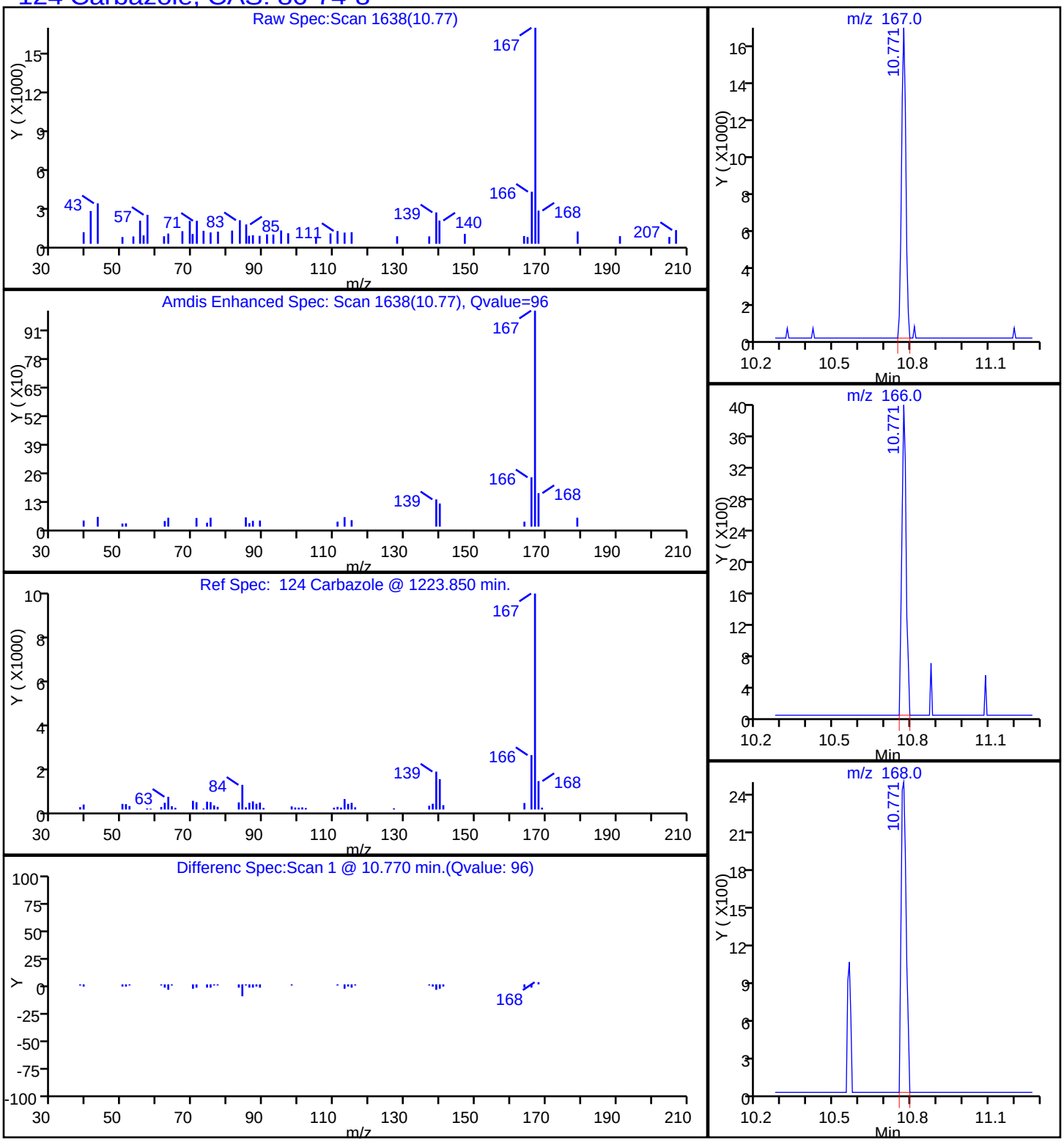


Report Date: 26-Nov-2016 08:23:16 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250028.D				
Injection Date:	25-Nov-2016 20:19:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-3-A	Lab Sample ID:	180-61122-3		
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	27	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

124 Carbazole, CAS: 86-74-8

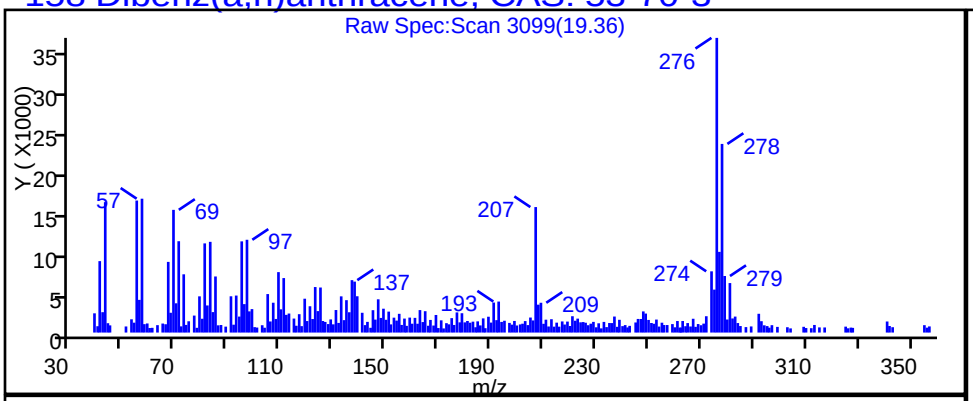


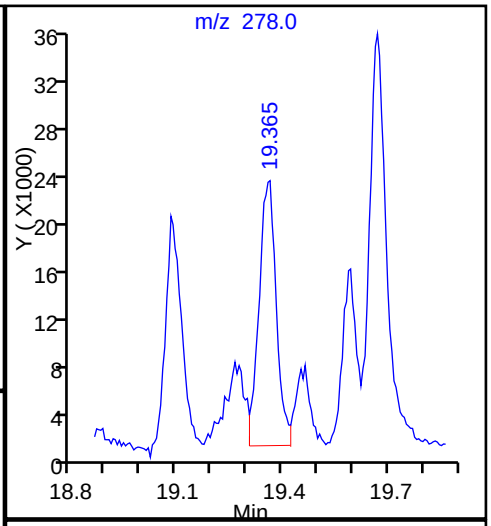
Report Date: 26-Nov-2016 08:23:16 Chrom Revision: 2.2 14-Nov-2016 08:15:18

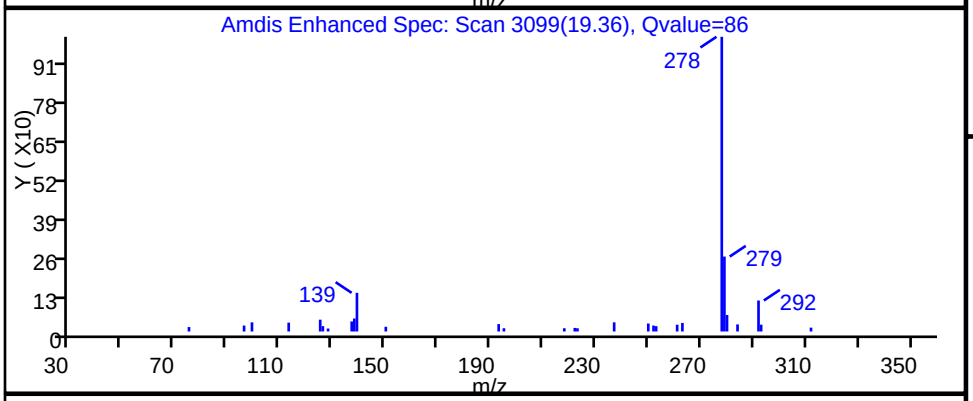
TestAmerica Pittsburgh

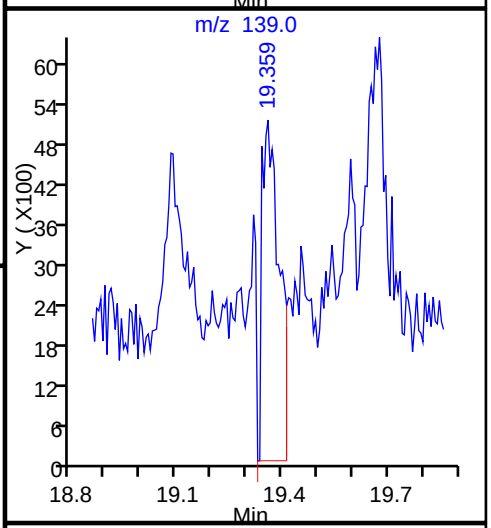
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250028.D				
Injection Date:	25-Nov-2016 20:19:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-3-A	Lab Sample ID:	180-61122-3		
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	27	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

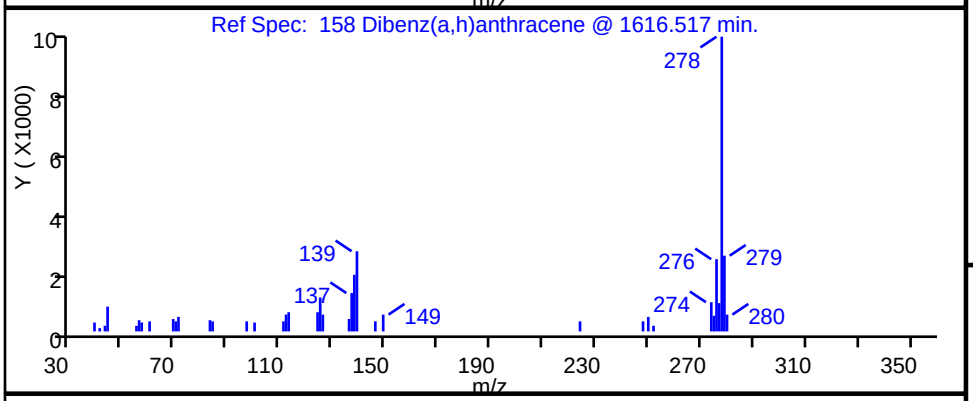
158 Dibenz(a,h)anthracene, CAS: 53-70-3

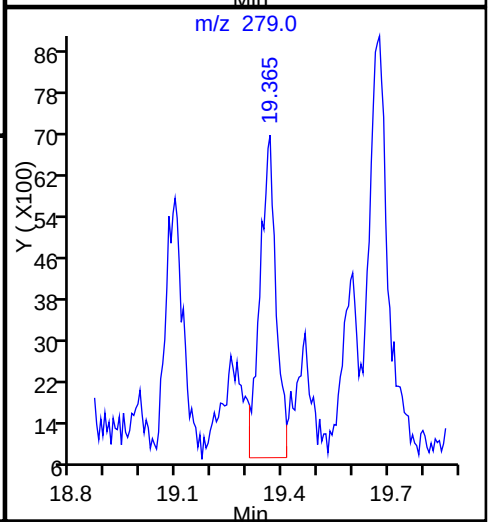


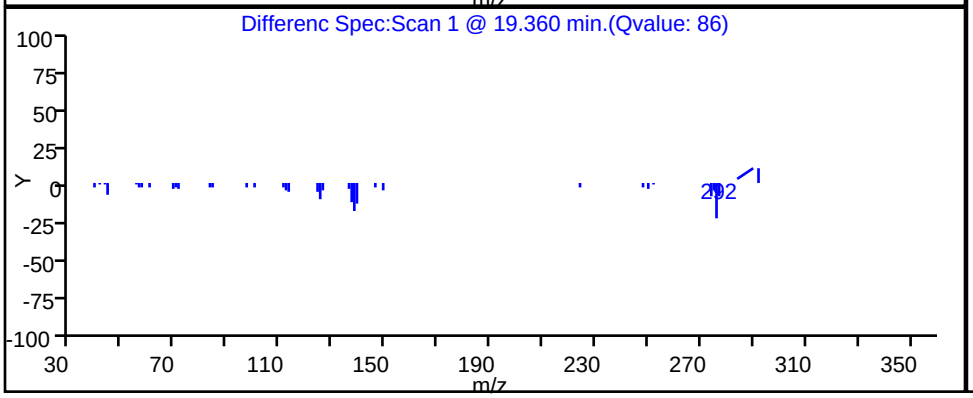










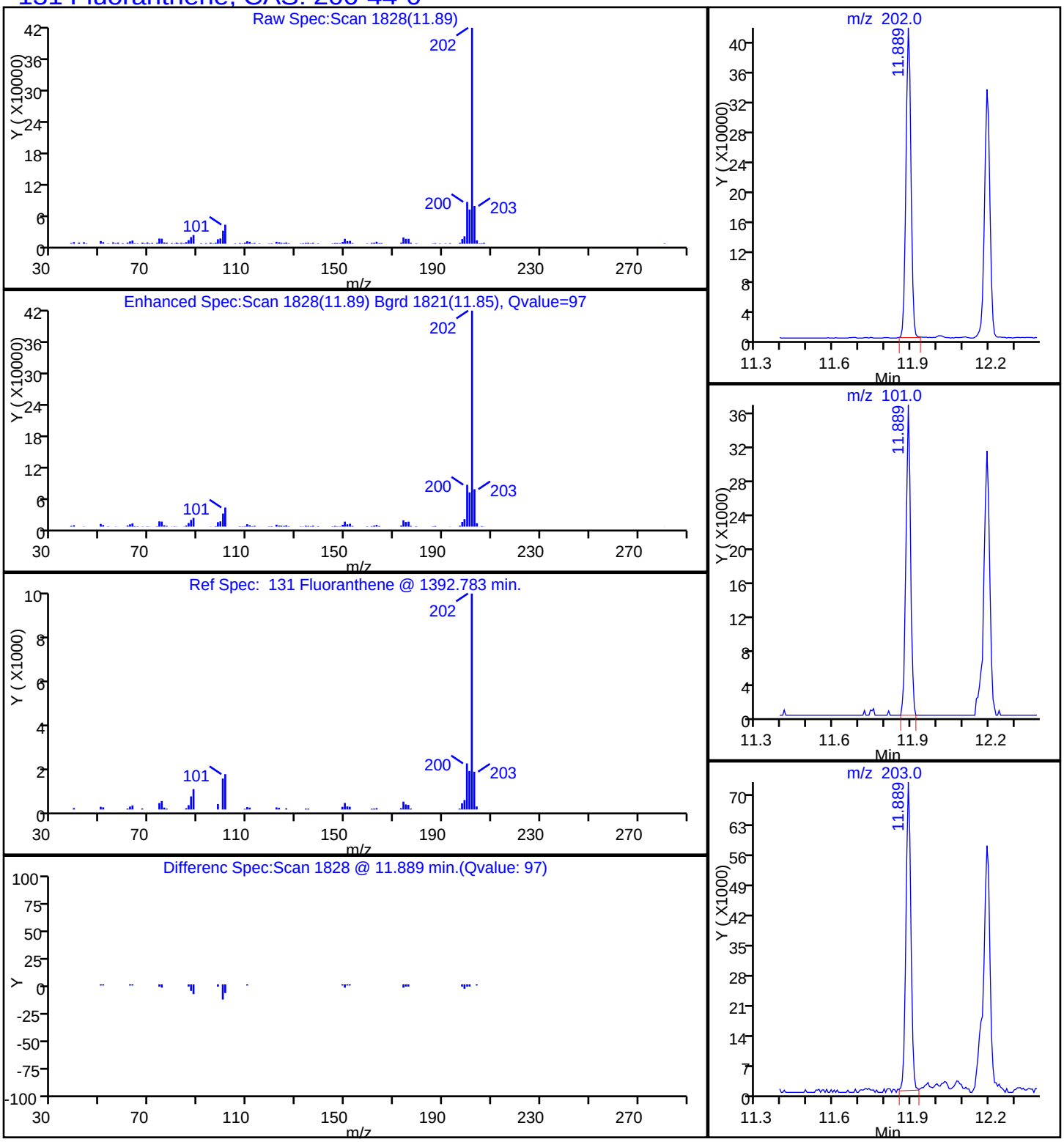


Report Date: 26-Nov-2016 08:23:16 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250028.D		
Injection Date:	25-Nov-2016 20:19:30	Instrument ID:	CH733
Lims ID:	180-61122-A-3-A	Lab Sample ID:	180-61122-3
Client ID:	BGSB10-(0.0-0.5)-161122-S		
Operator ID:	03200	ALS Bottle#:	27 Worklist Smp#: 28
Injection Vol:	2.0 ul	Dil. Factor:	10.0000
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN

131 Fluoranthene, CAS: 206-44-0

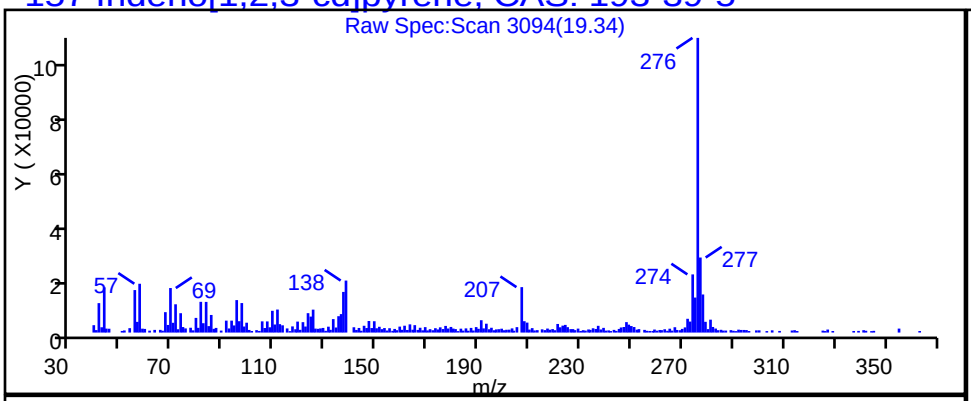


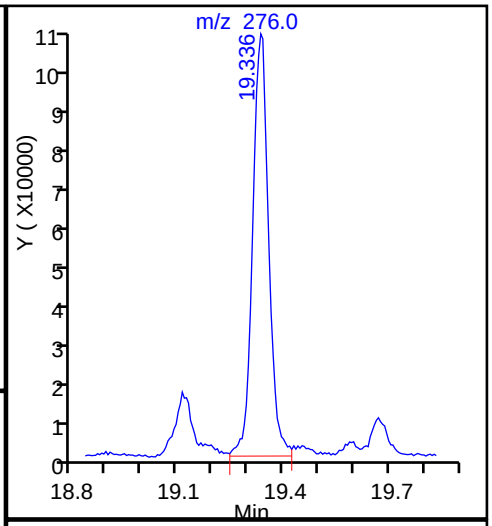
Report Date: 26-Nov-2016 08:23:16 Chrom Revision: 2.2 14-Nov-2016 08:15:18

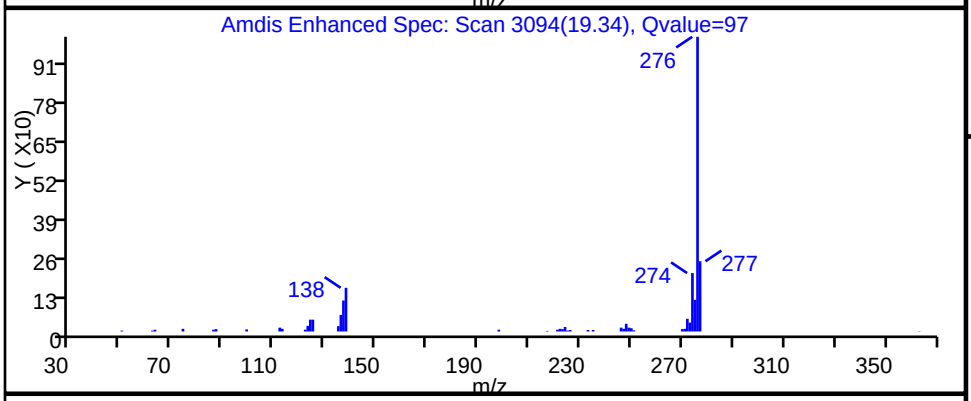
TestAmerica Pittsburgh

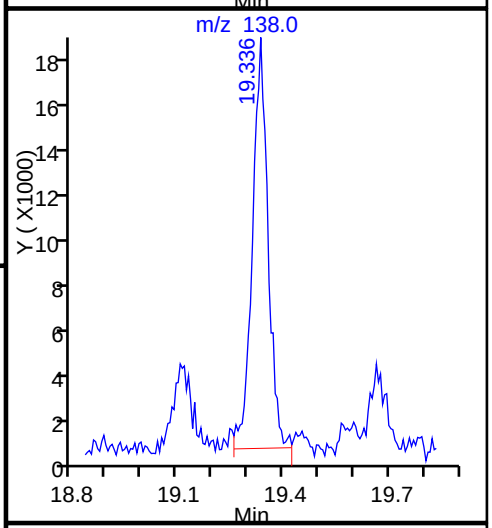
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250028.D				
Injection Date:	25-Nov-2016 20:19:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-3-A	Lab Sample ID:	180-61122-3		
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	27	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

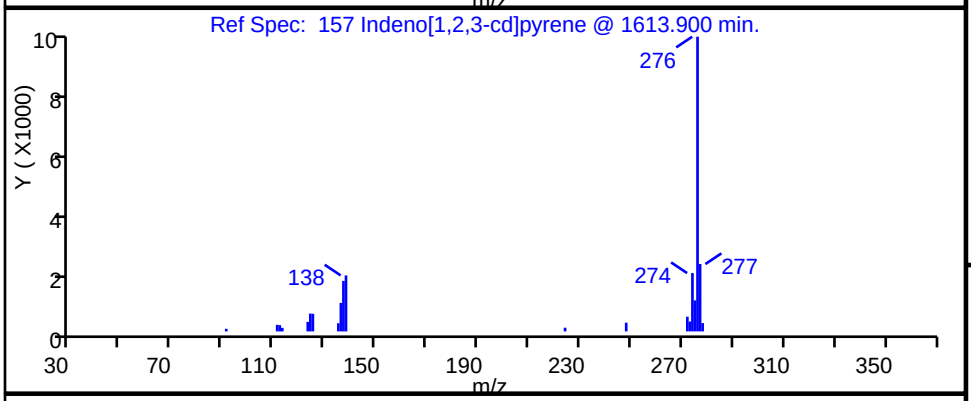
157 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

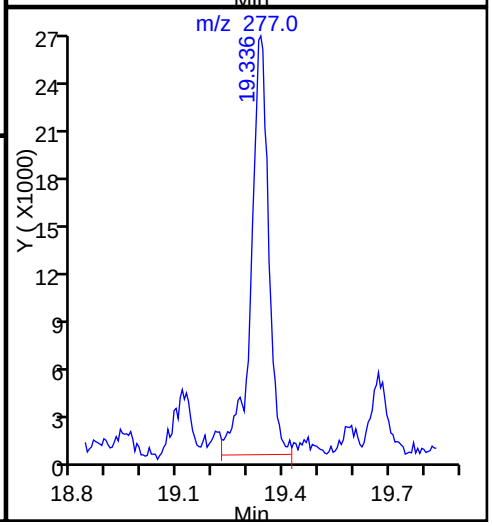


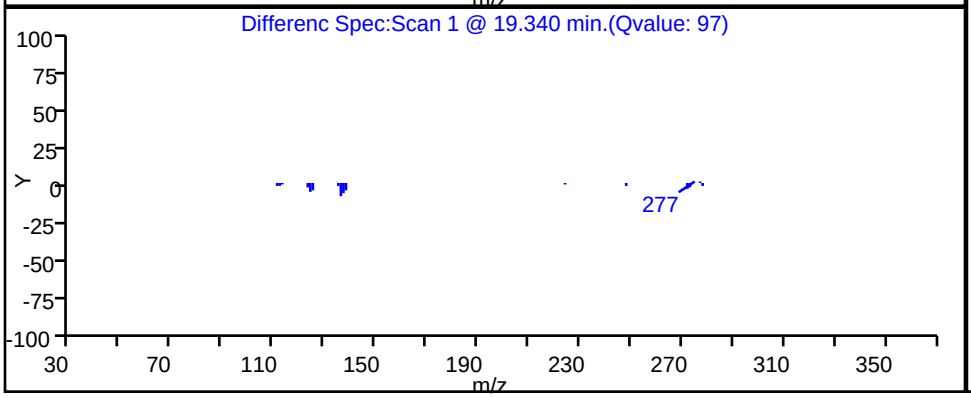










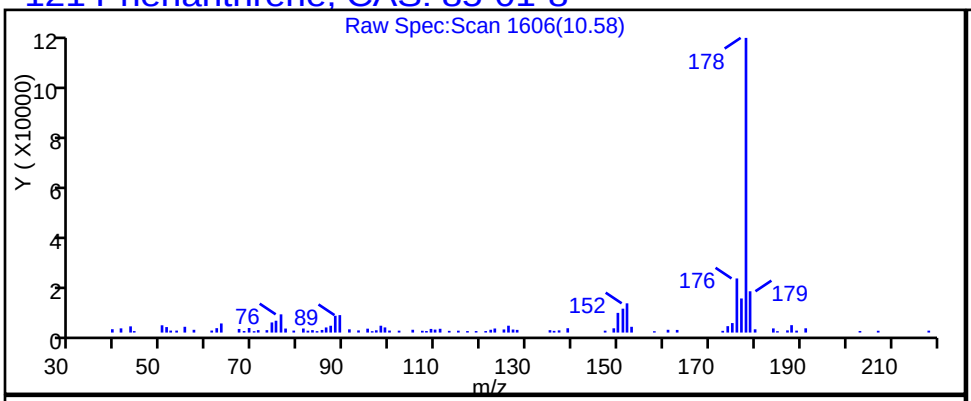


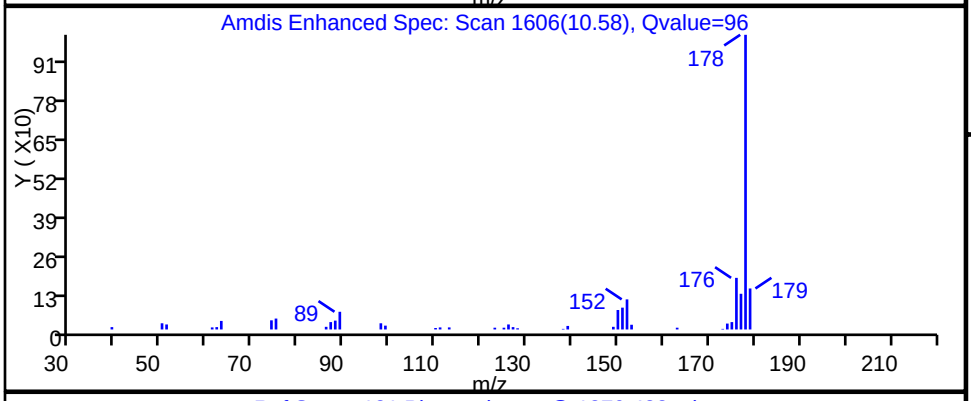
Report Date: 26-Nov-2016 08:23:16 Chrom Revision: 2.2 14-Nov-2016 08:15:18

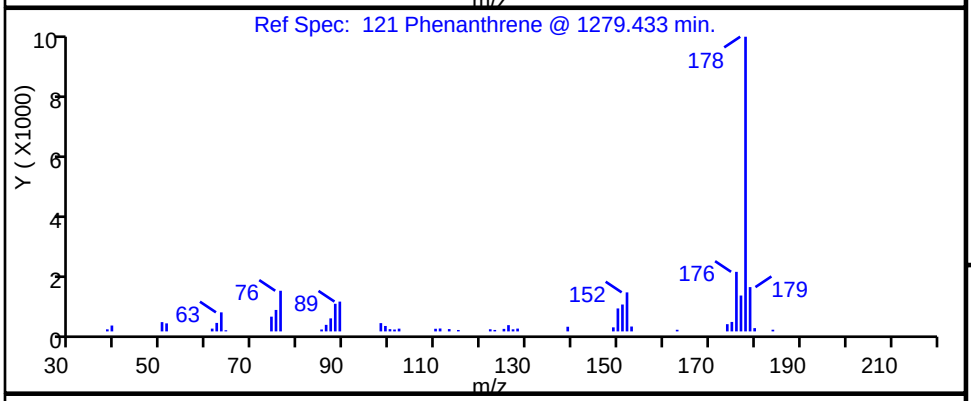
TestAmerica Pittsburgh

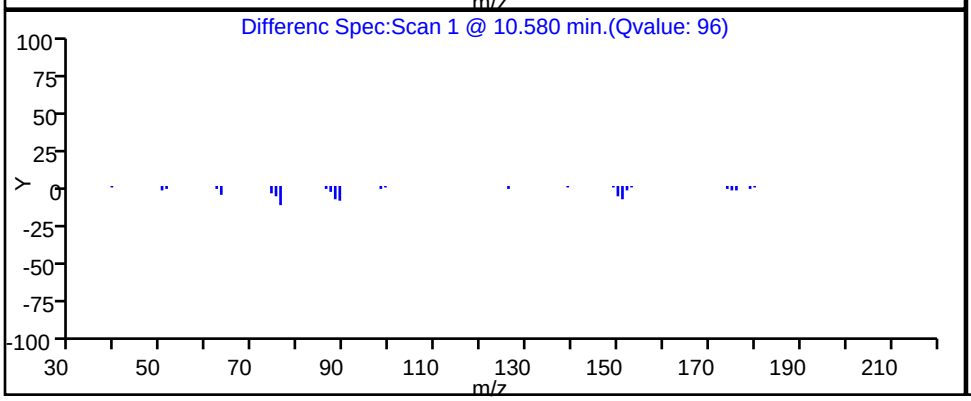
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250028.D				
Injection Date:	25-Nov-2016 20:19:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-3-A	Lab Sample ID:	180-61122-3		
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	27	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

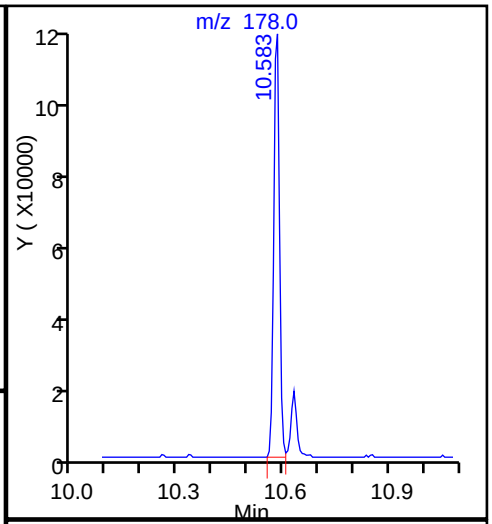
121 Phenanthrene, CAS: 85-01-8

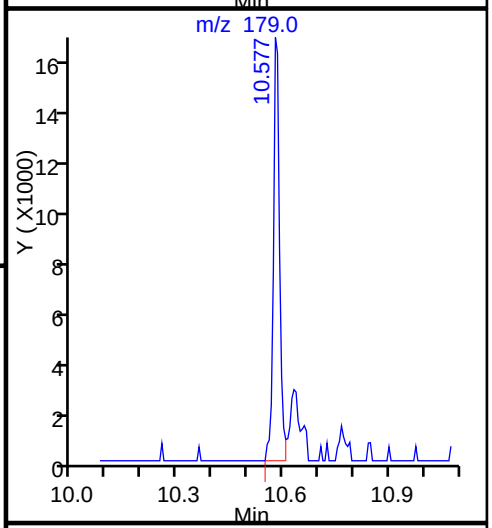


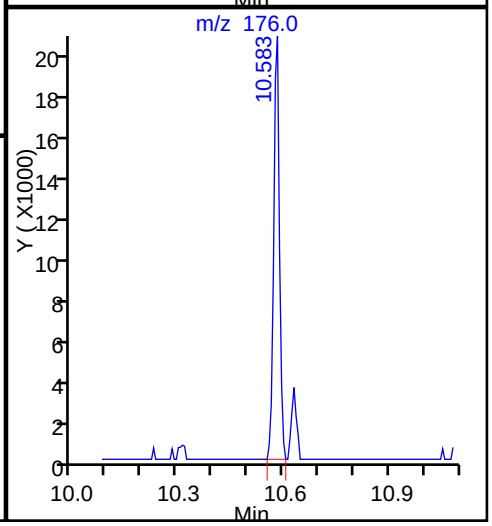










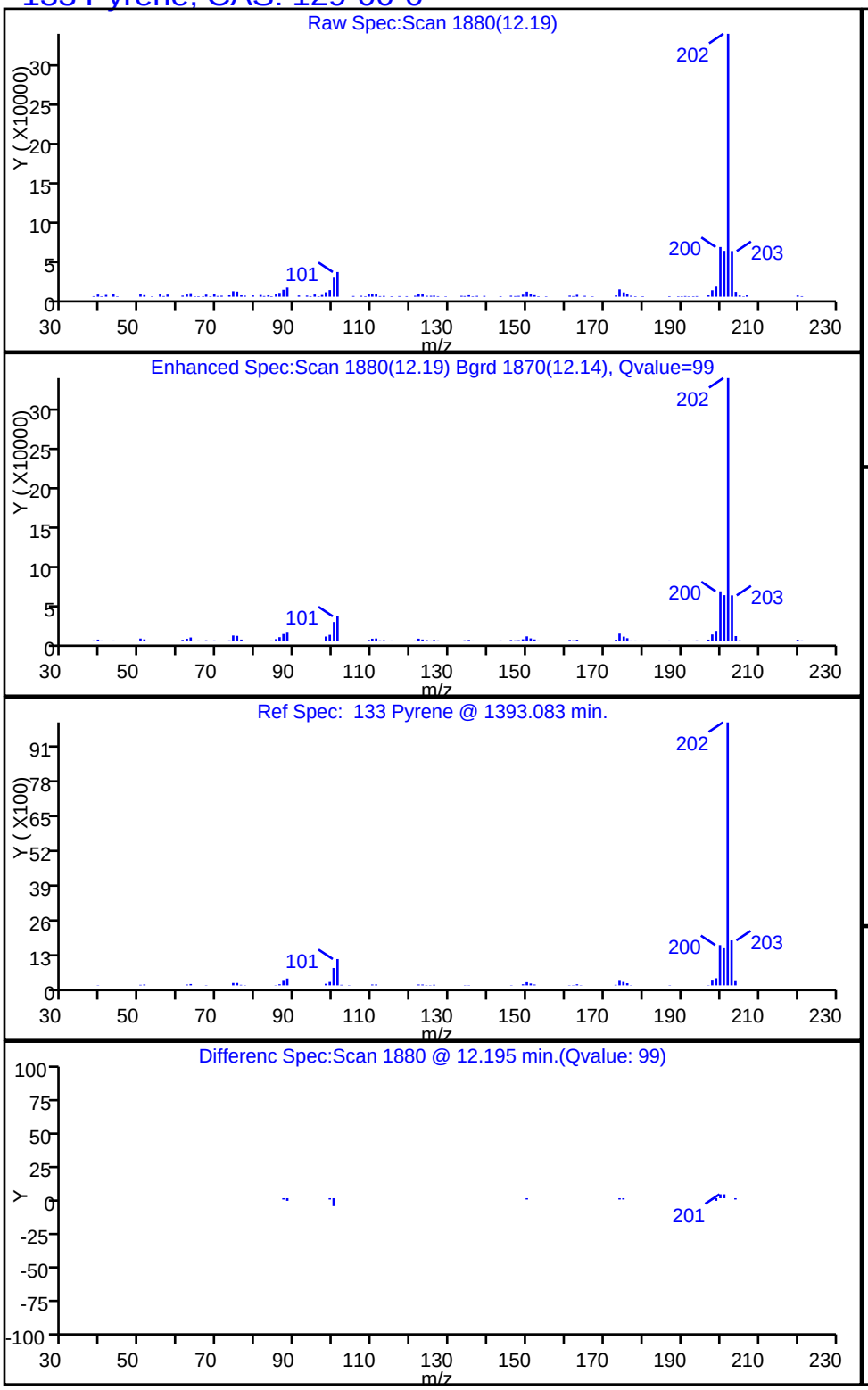


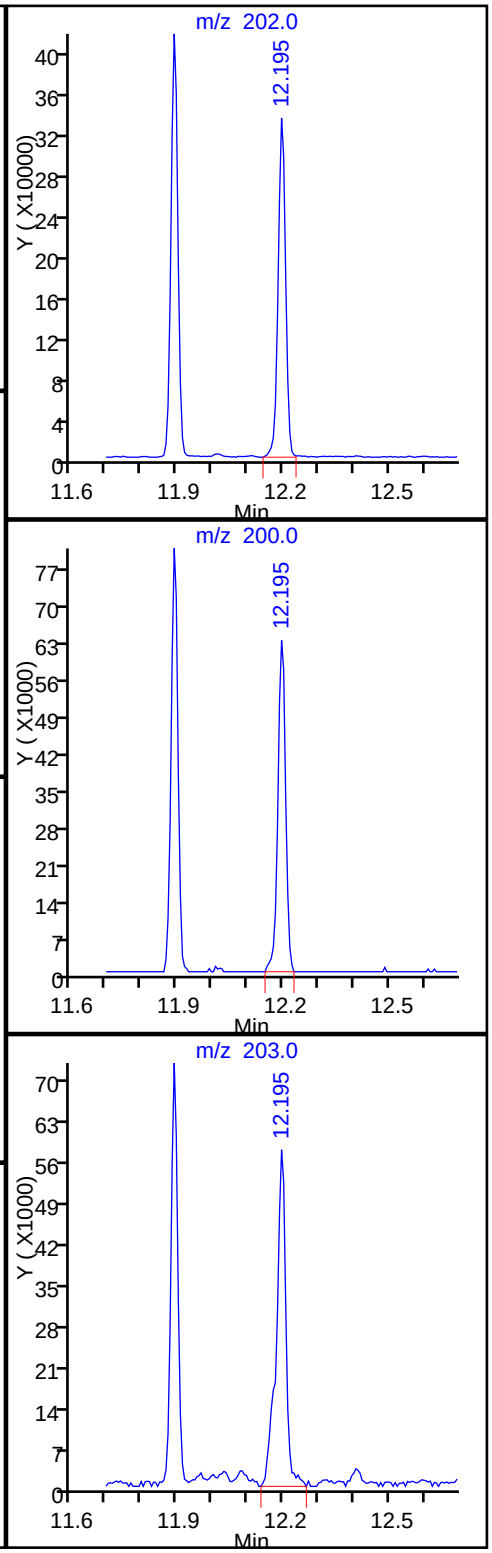
Report Date: 26-Nov-2016 08:23:16 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250028.D				
Injection Date:	25-Nov-2016 20:19:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-3-A	Lab Sample ID:	180-61122-3		
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Operator ID:	03200	ALS Bottle#:	27	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

133 Pyrene, CAS: 129-00-0





FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB10-(1-2)-161122-S | Lab Sample ID: 180-61122-4

Matrix: Solid | Lab File ID: N11250029.D

Analysis Method: 8270D LL | Date Collected: 11/22/2016 15:35

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.0(g) | Date Analyzed: 11/25/2016 20:46

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 5

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 9.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
92-52-4	1,1'-Biphenyl	0.0164	U	0.182	0.0164
123-91-1	1,4-Dioxane	0.0211	U	0.367	0.0211
90-12-0	1-Methylnaphthalene	0.00392	U	0.0369	0.00392
95-94-3	1,2,4,5-Tetrachlorobenzene	0.0139	U	0.182	0.0139
91-58-7	2-Chloronaphthalene	0.00383	U	0.0369	0.00383
95-57-8	2-Chlorophenol	0.0150	U	0.182	0.0150
120-83-2	2,4-Dichlorophenol	0.00368	U	0.0369	0.00368
105-67-9	2,4-Dimethylphenol	0.0287	U	0.182	0.0287
51-28-5	2,4-Dinitrophenol	0.219	U	0.936	0.219
121-14-2	2,4-Dinitrotoluene	0.0148	U	0.182	0.0148
606-20-2	2,6-Dinitrotoluene	0.0189	U	0.182	0.0189
91-57-6	2-Methylnaphthalene	0.00638	J	0.0369	0.00330
95-48-7	2-Methylphenol	0.0128	U	0.182	0.0128
106-44-5	Methylphenol, 3 & 4	0.0180	U	0.182	0.0180
88-74-4	2-Nitroaniline	0.0822	U	0.936	0.0822
99-09-2	3-Nitroaniline	0.0756	U	0.936	0.0756
100-01-6	4-Nitroaniline	0.0744	U	0.936	0.0744
88-75-5	2-Nitrophenol	0.0202	U	0.182	0.0202
100-02-7	4-Nitrophenol	0.0670	U	0.936	0.0670
108-60-1	2,2'-oxybis[1-chloropropane]	0.00396	U	0.0369	0.00396
58-90-2	2,3,4,6-Tetrachlorophenol	0.0118	U	0.182	0.0118
95-95-4	2,4,5-Trichlorophenol	0.0196	U	0.182	0.0196
88-06-2	2,4,6-Trichlorophenol	0.0275	U	0.182	0.0275
59-50-7	4-Chloro-3-methylphenol	0.0169	U	0.182	0.0169
7005-72-3	4-Chlorophenyl phenyl ether	0.0204	U	0.182	0.0204
534-52-1	4,6-Dinitro-2-methylphenol	0.0738	U	0.936	0.0738
83-32-9	Acenaphthene	0.00775	J	0.0369	0.00353
208-96-8	Acenaphthylene	0.0147	J	0.0369	0.00421
98-86-2	Acetophenone	0.0151	U	0.182	0.0151
120-12-7	Anthracene	0.0383		0.0369	0.00359
1912-24-9	Atrazine	0.0179	U	0.182	0.0179
100-52-7	Benzaldehyde	0.0275	U	0.182	0.0275
56-55-3	Benzo[a]anthracene	0.299		0.0369	0.00460
205-99-2	Benzo[b]fluoranthene	0.449		0.0369	0.00577

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB10-(1-2)-161122-S | Lab Sample ID: 180-61122-4

Matrix: Solid | Lab File ID: N11250029.D

Analysis Method: 8270D LL | Date Collected: 11/22/2016 15:35

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.0(g) | Date Analyzed: 11/25/2016 20:46

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 5

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 9.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
207-08-9	Benzo[k]fluoranthene	0.195		0.0369	0.00742
191-24-2	Benzo[g,h,i]perylene	0.312		0.0369	0.00365
50-32-8	Benzo[a]pyrene	0.319		0.0369	0.00367
111-91-1	Bis(2-chloroethoxy)methane	0.0121	U	0.182	0.0121
111-44-4	Bis(2-chloroethyl)ether	0.00493	U	0.0369	0.00493
117-81-7	Bis(2-ethylhexyl) phthalate	0.118	J	0.367	0.0297
101-55-3	4-Bromophenyl phenyl ether	0.0160	U	0.182	0.0160
85-68-7	Butyl benzyl phthalate	0.0473	J	0.182	0.0251
105-60-2	Caprolactam	0.139	U	0.936	0.139
86-74-8	Carbazole	0.0244	J	0.0369	0.00338
53-70-3	Dibenz(a,h)anthracene	0.0783		0.0369	0.00408
132-64-9	Dibenzofuran	0.0181	U	0.182	0.0181
84-74-2	Di-n-butyl phthalate	0.0230	U	0.182	0.0230
117-84-0	Di-n-octyl phthalate	0.0193	U	0.182	0.0193
84-66-2	Diethyl phthalate	0.0201	U	0.182	0.0201
131-11-3	Dimethyl phthalate	0.0200	U	0.182	0.0200
206-44-0	Fluoranthene	0.600		0.0369	0.00393
86-73-7	Fluorene	0.00484	U	0.0369	0.00484
118-74-1	Hexachlorobenzene	0.00391	U	0.0369	0.00391
87-68-3	Hexachlorobutadiene	0.00411	U	0.0369	0.00411
77-47-4	Hexachlorocyclopentadiene	0.0198	U	0.182	0.0198
67-72-1	Hexachloroethane	0.0132	U	0.182	0.0132
193-39-5	Indeno[1,2,3-cd]pyrene	0.268		0.0369	0.00378
78-59-1	Isophorone	0.0138	U	0.182	0.0138
91-20-3	Naphthalene	0.00317	U	0.0369	0.00317
98-95-3	Nitrobenzene	0.0153	U	0.367	0.0153
86-30-6	N-Nitrosodiphenylamine	0.0170	U	0.182	0.0170
621-64-7	N-Nitrosodi-n-propylamine	0.00431	U	0.0369	0.00431
87-86-5	Pentachlorophenol	0.0164	U	0.182	0.0164
85-01-8	Phenanthrene	0.173		0.0369	0.00584
108-95-2	Phenol	0.00434	U	0.182	0.00434
129-00-0	Pyrene	0.417		0.0369	0.00371
91-94-1	3,3'-Dichlorobenzidine	0.0194	U	0.182	0.0194

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB10-(1-2)-161122-S | Lab Sample ID: 180-61122-4

Matrix: Solid | Lab File ID: N11250029.D

Analysis Method: 8270D LL | Date Collected: 11/22/2016 15:35

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.0(g) | Date Analyzed: 11/25/2016 20:46

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 5

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 9.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	68		42-100
367-12-4	2-Fluorophenol (Surr)	59		21-107
118-79-6	2,4,6-Tribromophenol (Surr)	84		20-134
4165-60-0	Nitrobenzene-d5 (Surr)	69		35-109
4165-62-2	Phenol-d5 (Surr)	66		29-105
1718-51-0	Terphenyl-d14 (Surr)	71		36-113

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D
Lims ID: 180-61122-A-4-A
Client ID: BGSB10-(1-2)-161122-S
Sample Type: Client
Inject. Date: 25-Nov-2016 20:46:30 ALS Bottle#: 28 Worklist Smp#: 29
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 180-0014496-029
Operator ID: 03200 Instrument ID: CH733

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 26-Nov-2016 08:21:37 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK023

First Level Reviewer: piccolinov Date: 26-Nov-2016 08:16:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.307	6.307	0.000	98	103580	8.00	
* 2 Naphthalene-d8	136	7.548	7.548	0.000	100	392694	8.00	
* 3 Acenaphthene-d10	164	9.189	9.183	0.006	93	243490	8.00	
* 4 Phenanthrene-d10	188	10.566	10.560	0.006	97	433697	8.00	
* 5 Chrysene-d12	240	14.142	14.124	0.018	96	521107	8.00	
* 6 Perylene-d12	264	17.101	17.071	0.030	98	547826	8.00	
$ 7 2-Fluorophenol	112	4.872	4.872	0.000	93	70868	4.75	
$ 8 Phenol-d5	99	5.937	5.936	0.001	94	97728	5.29	
$ 9 Nitrobenzene-d5	82	6.848	6.848	0.000	90	99480	5.49	
$ 10 2-Fluorobiphenyl	172	8.548	8.542	0.006	100	226540	5.40	
$ 11 2,4,6-Tribromophenol	330	9.913	9.907	0.006	93	32874	6.76	
$ 12 Terphenyl-d14	244	12.360	12.348	0.012	99	295970	5.70	
13 1,4-Dioxane	88		1.401				ND	
25 Benzaldehyde	77		5.842				ND	
26 Phenol	94		5.948				ND	
29 Bis(2-chloroethyl)ether	93		6.031				ND	
30 2-Chlorophenol	128		6.089				ND	
36 2-Methylphenol	108		6.554				ND	
38 2,2'-oxybis[1-chloropropan	45		6.578				ND	
40 Acetophenone	105		6.701				ND	
42 4-Methylphenol	108		6.701				ND	
41 N-Nitrosodi-n-propylamine	70		6.701				ND	
45 Hexachloroethane	117		6.819				ND	
46 Nitrobenzene	77		6.866				ND	
48 Isophorone	82		7.095				ND	
49 2-Nitrophenol	139		7.178				ND	
50 2,4-Dimethylphenol	107		7.207				ND	
53 Bis(2-chloroethoxy)methane	93		7.295				ND	
54 2,4-Dichlorophenol	162		7.407				ND	
58 Naphthalene	128		7.572				ND	
62 Hexachlorobutadiene	225		7.689				ND	
64 Caprolactam	113		7.901				ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
67 4-Chloro-3-methylphenol	107		8.042				ND	
69 2-Methylnaphthalene	142	8.213	8.213	0.000	1	2312	0.0695	
71 1-Methylnaphthalene	142		8.307				ND	
72 Hexachlorocyclopentadiene	237		8.366				ND	
73 1,2,4,5-Tetrachlorobenzene	216		8.372				ND	
74 2,4,6-Trichlorophenol	196		8.472				ND	
75 2,4,5-Trichlorophenol	196		8.501				ND	
76 1,1'-Biphenyl	154		8.642				ND	
77 2-Chloronaphthalene	162		8.672				ND	
79 2-Nitroaniline	65		8.748				ND	
82 Dimethyl phthalate	163		8.895				ND	
84 2,6-Dinitrotoluene	165		8.954				ND	
85 Acenaphthylene	152	9.060	9.060	0.000	96	7513	0.1603	
86 3-Nitroaniline	138		9.119				ND	
87 2,4-Dinitrophenol	184		9.213				ND	
88 Acenaphthene	153	9.219	9.213	0.006	7	2792	0.0845	
89 4-Nitrophenol	109		9.242				ND	
91 2,4-Dinitrotoluene	165		9.330				ND	
93 Dibenzofuran	168	9.372	9.372	0.000	94	1549	0.0317	
96 2,3,4,6-Tetrachlorophenol	232		9.477				ND	
98 Diethyl phthalate	149		9.530				ND	
100 4-Chlorophenyl phenyl ethe	204		9.666				ND	
101 4-Nitroaniline	138		9.677				ND	
103 Fluorene	166		9.689				ND	
104 4,6-Dinitro-2-methylphenol	198		9.707				ND	
105 N-Nitrosodiphenylamine	169		9.766				ND	
110 4-Bromophenyl phenyl ether	248		10.119				ND	
112 Hexachlorobenzene	284		10.201				ND	
113 Atrazine	200		10.224				ND	
116 Pentachlorophenol	266		10.371				ND	
121 Phenanthrene	178	10.583	10.583	0.000	95	113112	1.88	
122 Anthracene	178	10.636	10.630	0.006	97	24219	0.4172	
124 Carbazole	167	10.777	10.771	0.006	96	13295	0.2663	
126 Di-n-butyl phthalate	149		11.066				ND	
131 Fluoranthene	202	11.895	11.889	0.006	96	420627	6.54	
133 Pyrene	202	12.201	12.195	0.006	99	358337	4.55	
138 Butyl benzyl phthalate	149	13.060	13.048	0.012	96	13384	0.5153	
144 3,3'-Dichlorobenzidine	252		14.024				ND	
145 Bis(2-ethylhexyl) phthalat	149	14.066	14.054	0.012	95	45082	1.28	
146 Benzo[a]anthracene	228	14.118	14.101	0.017	97	219040	3.26	
150 Di-n-octyl phthalate	149		15.371				ND	
152 Benzo[b]fluoranthene	252	16.295	16.265	0.030	95	415688	4.90	
153 Benzo[k]fluoranthene	252	16.324	16.318	0.006	95	187714	2.12	M
154 Benzo[a]pyrene	252	16.983	16.953	0.030	74	270275	3.48	
157 Indeno[1,2,3-cd]pyrene	276	19.348	19.306	0.042	97	244678	2.92	
158 Dibenz(a,h)anthracene	278	19.383	19.341	0.042	88	56866	0.8538	
159 Benzo[g,h,i]perylene	276	19.977	19.924	0.053	97	243216	3.40	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

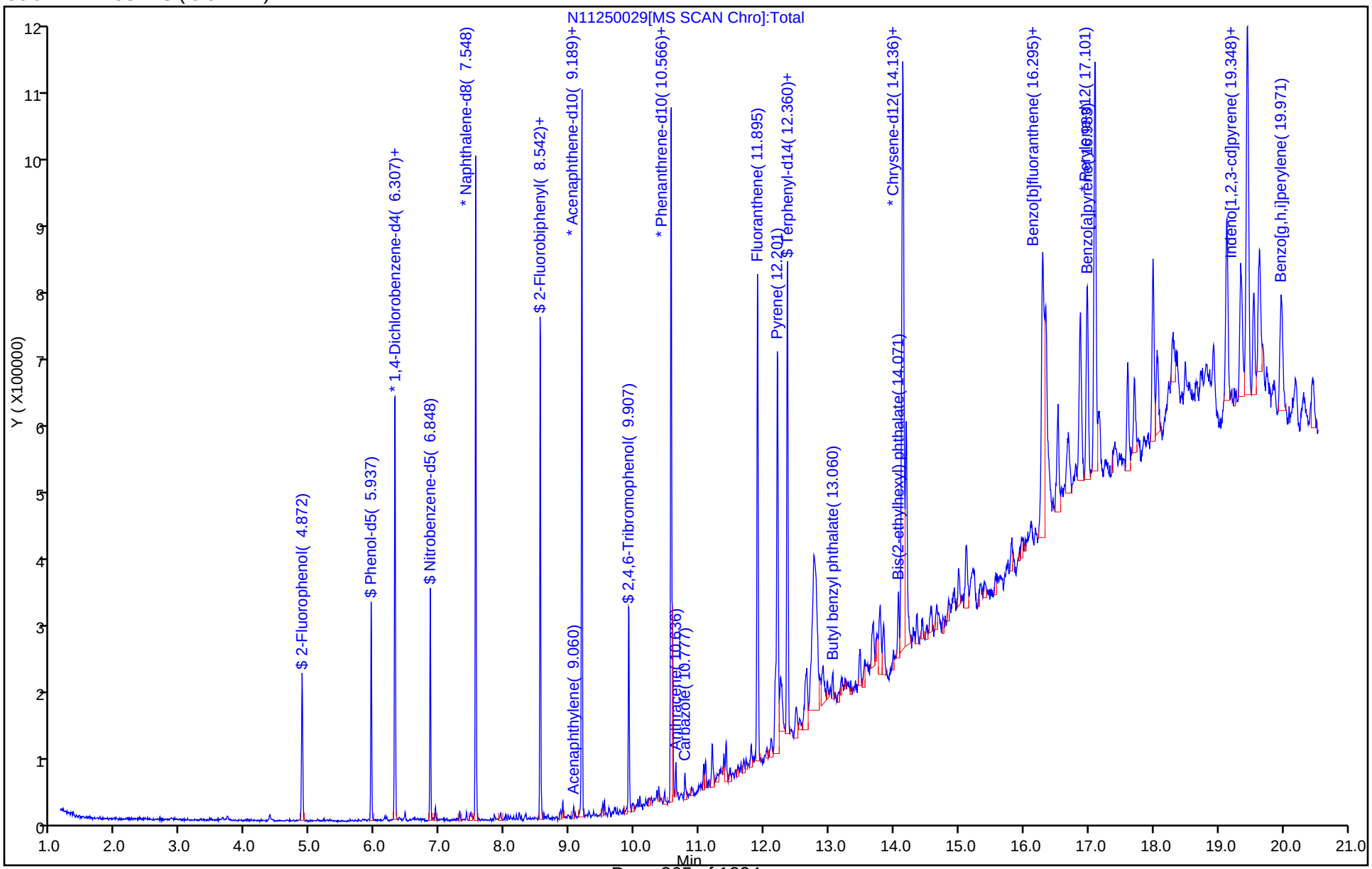
SVTAPITINTRNi_00012	Amount Added:	1.00	Units: uL	Run Reagent

Report Date: 26-Nov-2016 08:23:18 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4	Worklist Smp#:	29
Client ID:	BGSB10-(1-2)-161122-S				
Injection Vol:	2.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	28
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)



TestAmerica Pittsburgh
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D
Lims ID: 180-61122-A-4-A
Client ID: BGSB10-(1-2)-161122-S
Sample Type: Client
Inject. Date: 25-Nov-2016 20:46:30 ALS Bottle#: 28 Worklist Smp#: 29
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 180-0014496-029
Operator ID: 03200 Instrument ID: CH733

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 26-Nov-2016 08:21:37 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK023

First Level Reviewer: piccolinov Date: 26-Nov-2016 08:16:37

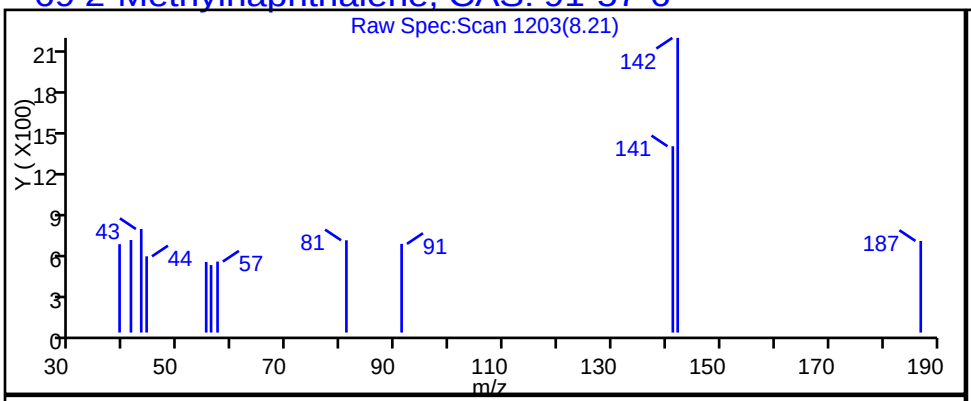
Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	40.0	4.75	59.31
$ 8 Phenol-d5	40.0	5.29	66.11
$ 9 Nitrobenzene-d5	40.0	5.49	68.63
$ 10 2-Fluorobiphenyl	40.0	5.40	67.56
$ 11 2,4,6-Tribromophenol	40.0	6.76	84.45
$ 12 Terphenyl-d14	40.0	5.70	71.22

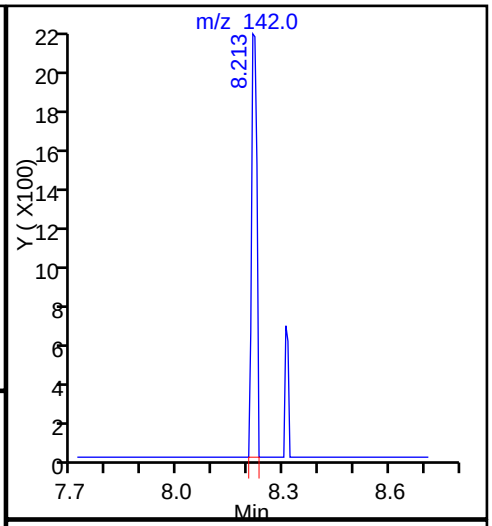
Report Date: 26-Nov-2016 08:23:18 Chrom Revision: 2.2 14-Nov-2016 08:15:18

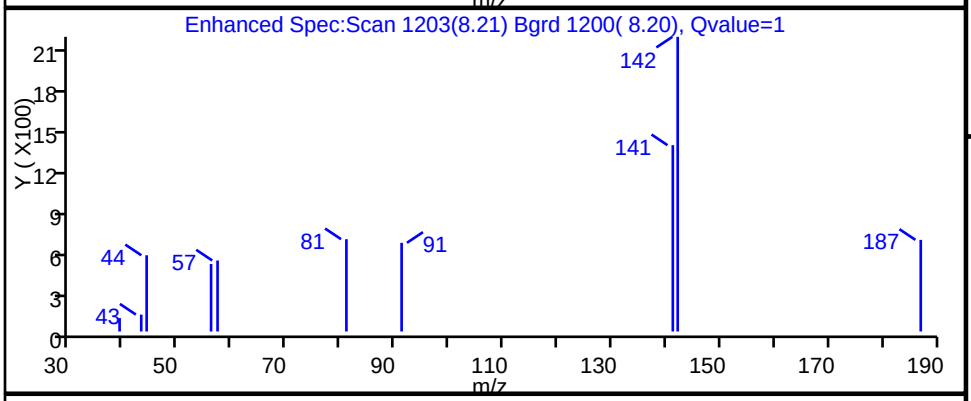
TestAmerica Pittsburgh

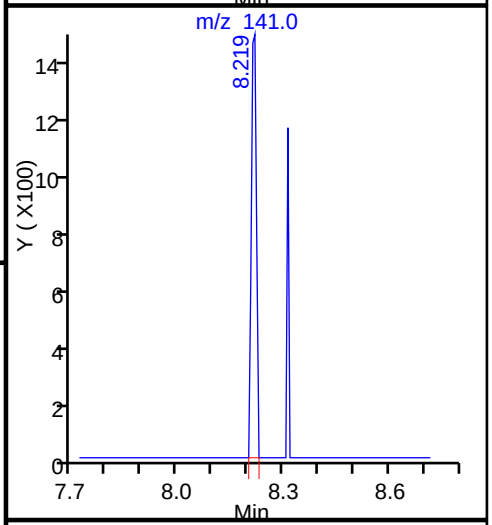
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

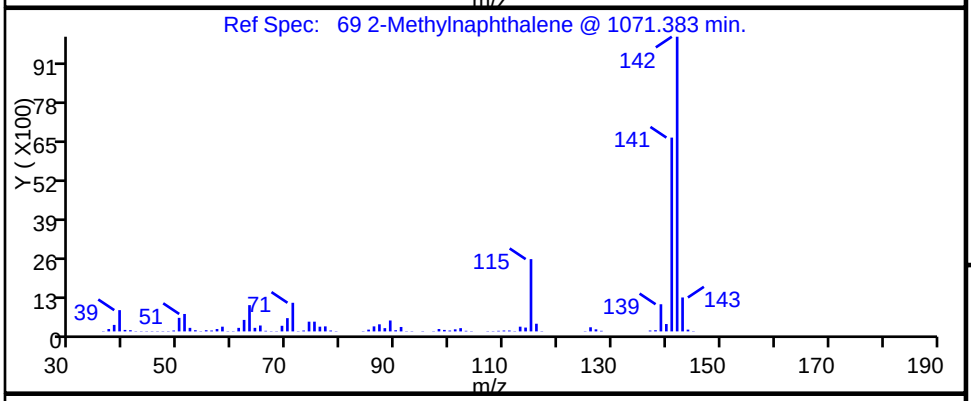
69 2-Methylnaphthalene, CAS: 91-57-6

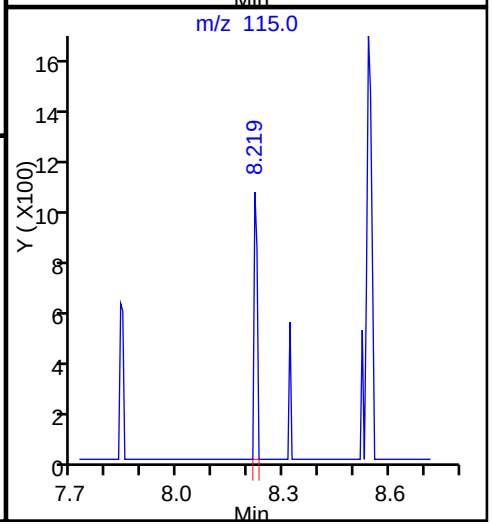


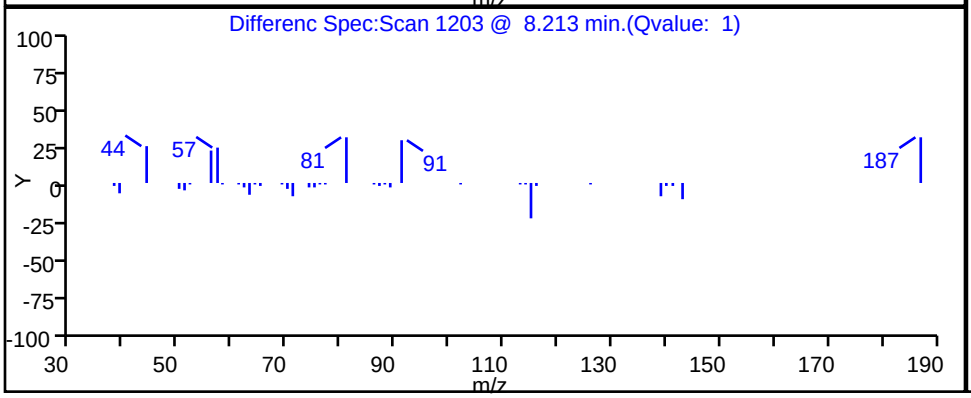










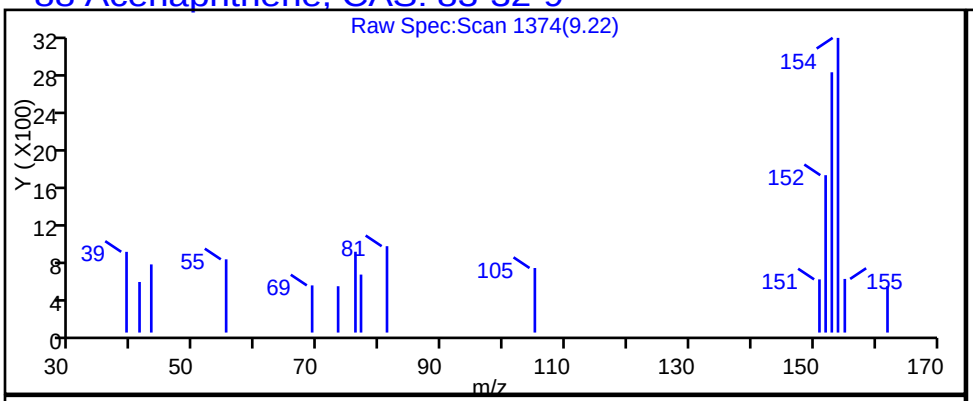


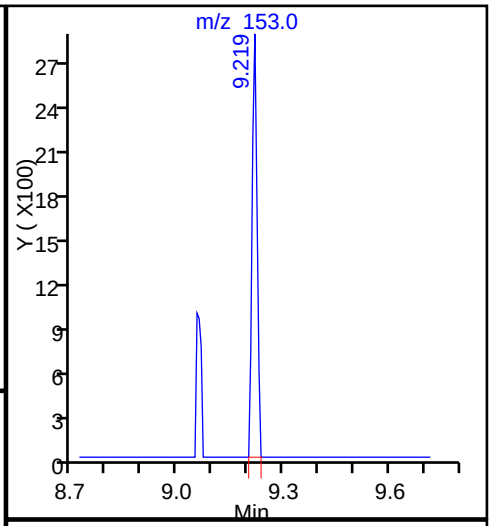
Report Date: 26-Nov-2016 08:23:18 Chrom Revision: 2.2 14-Nov-2016 08:15:18

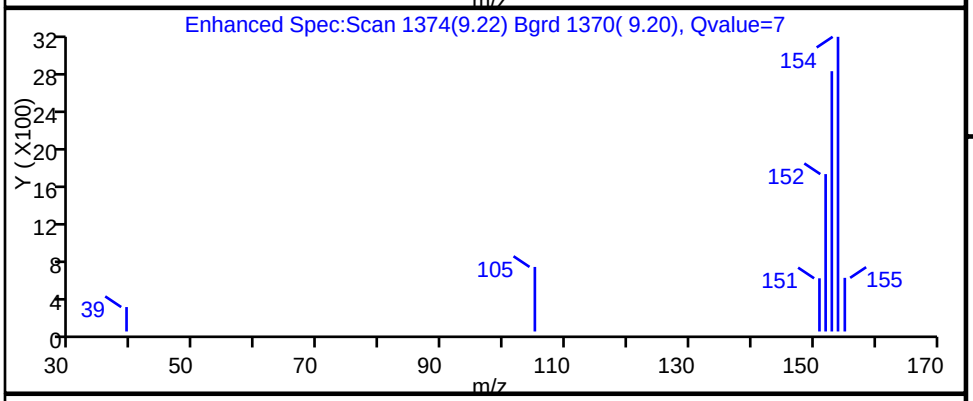
TestAmerica Pittsburgh

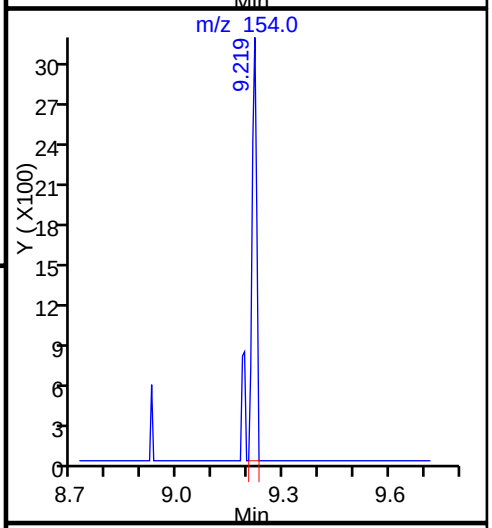
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

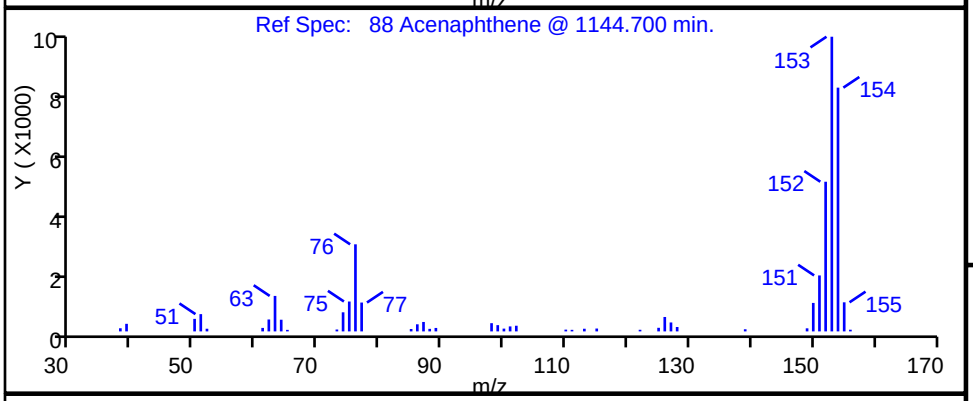
88 Acenaphthene, CAS: 83-32-9

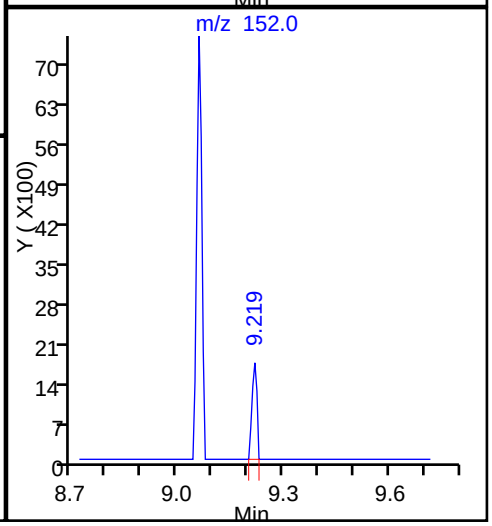


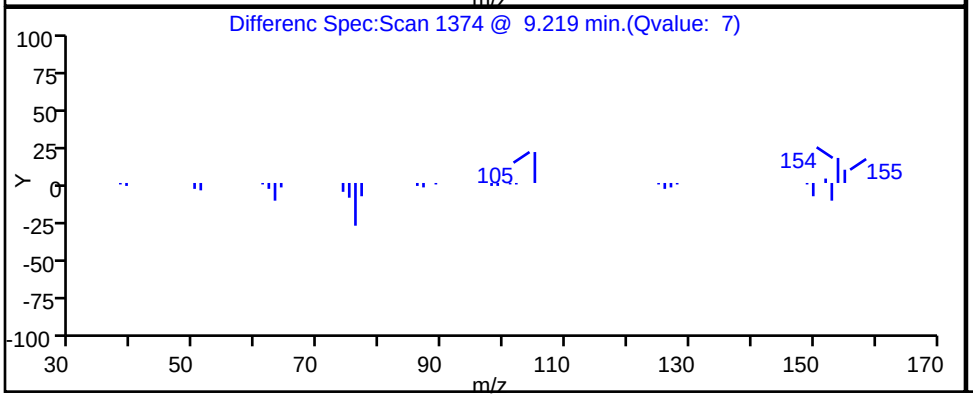










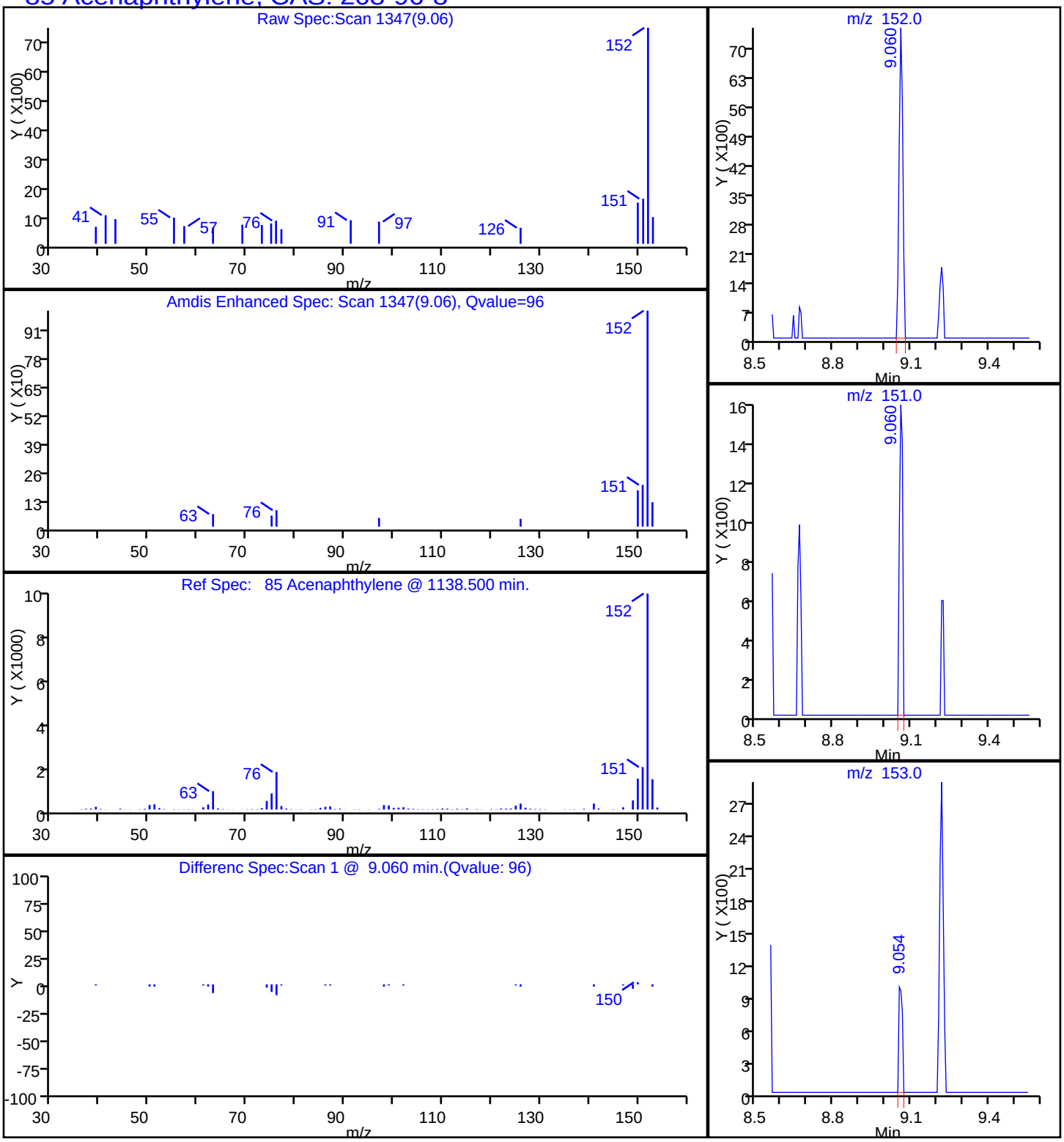


Report Date: 26-Nov-2016 08:23:18 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

85 Acenaphthylene, CAS: 208-96-8

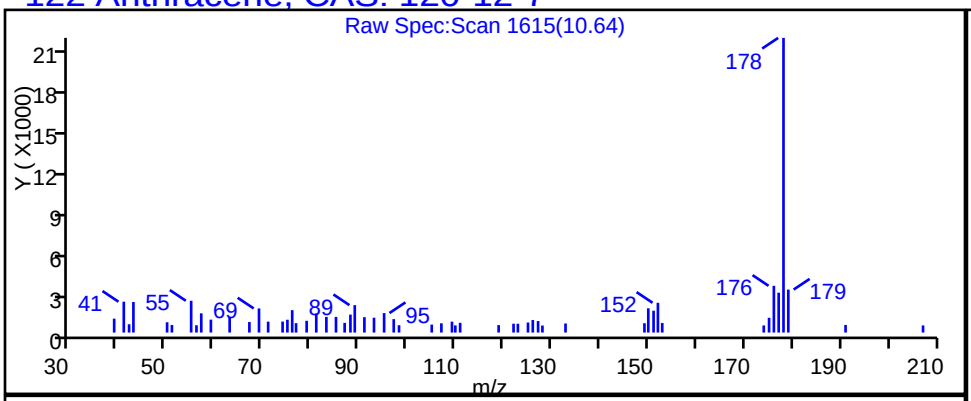


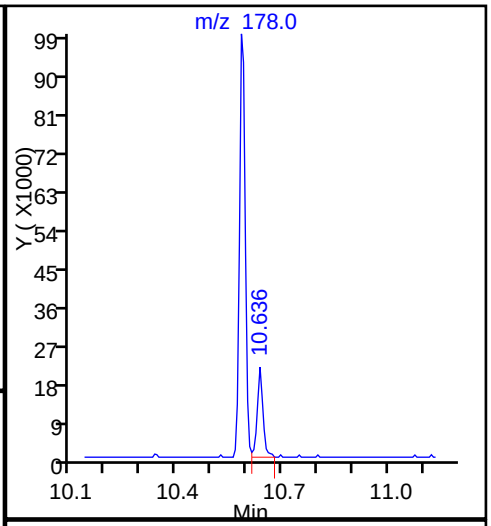
Report Date: 26-Nov-2016 08:23:18 Chrom Revision: 2.2 14-Nov-2016 08:15:18

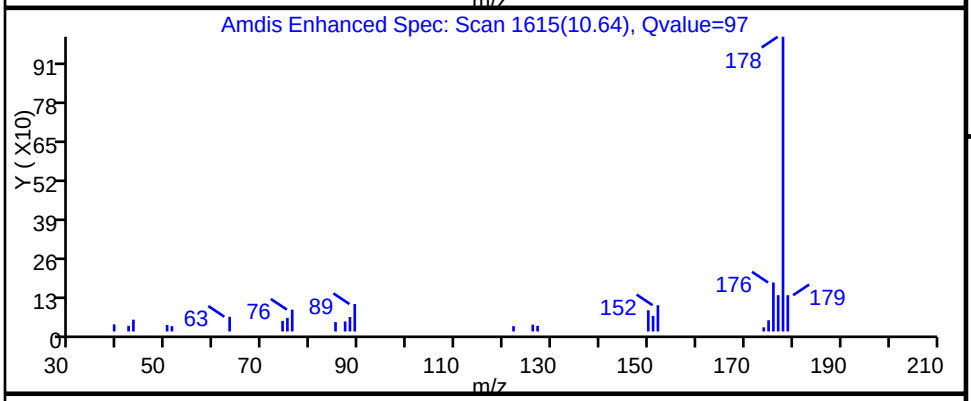
TestAmerica Pittsburgh

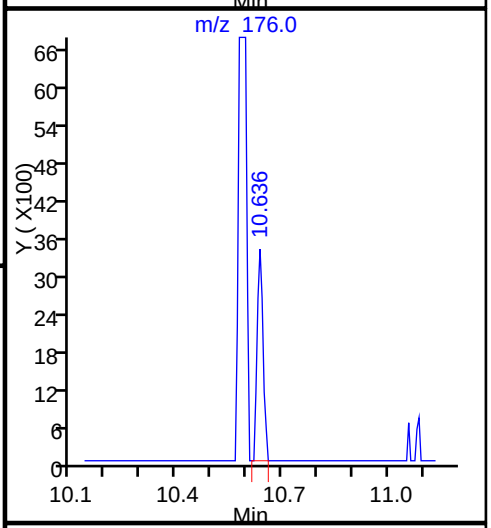
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

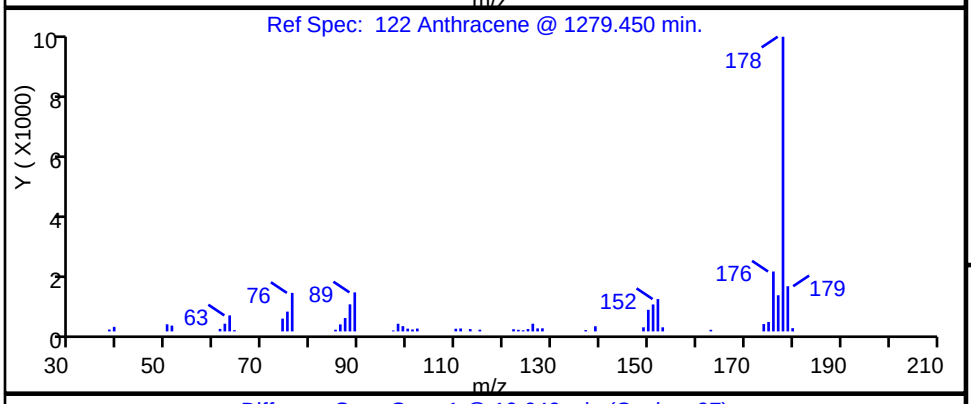
122 Anthracene, CAS: 120-12-7

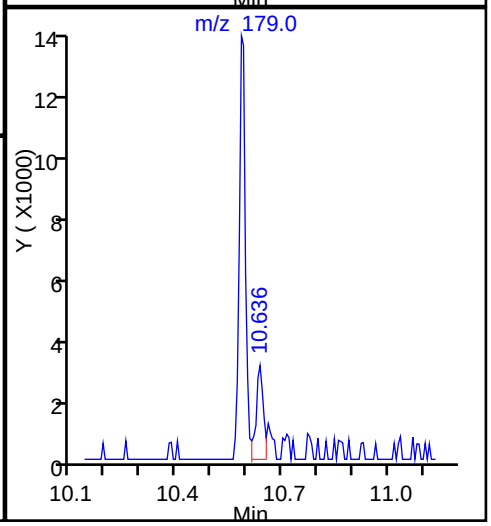


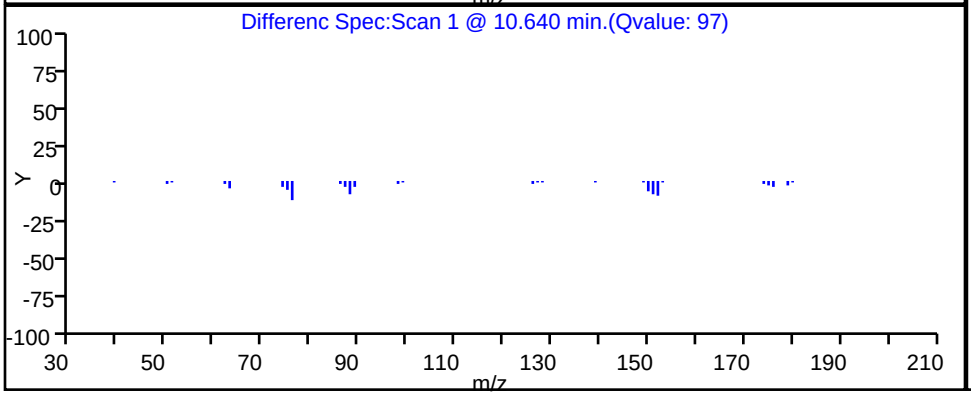












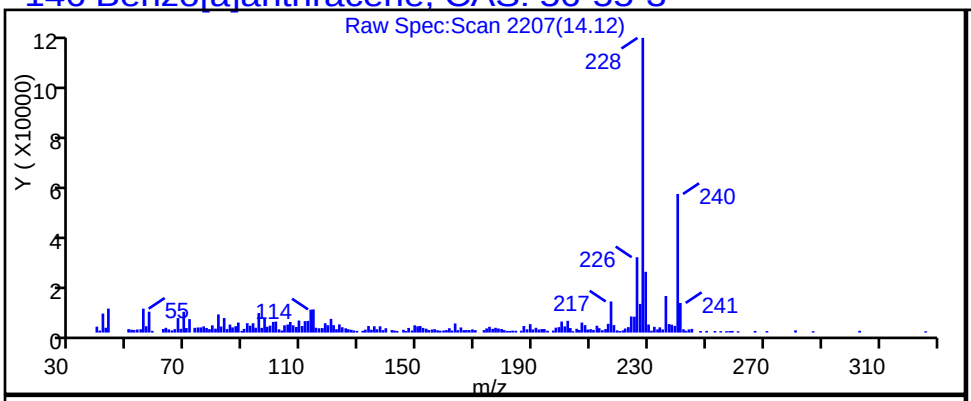
Report Date: 26-Nov-2016 08:23:19 Chrom Revision: 2.2 14-Nov-2016 08:15:18

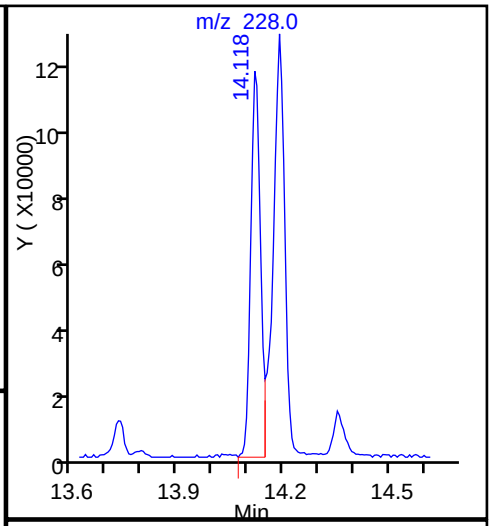
TestAmerica Pittsburgh

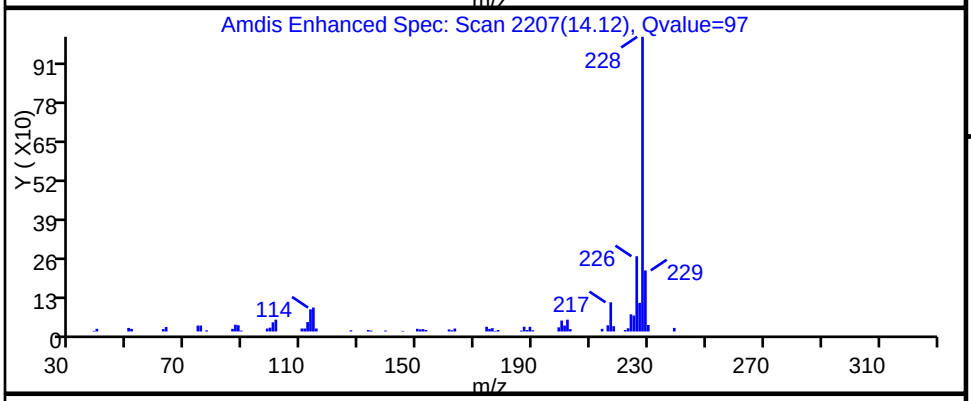
Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D

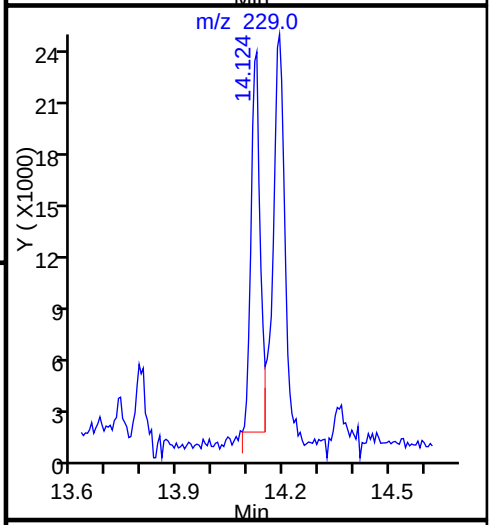
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

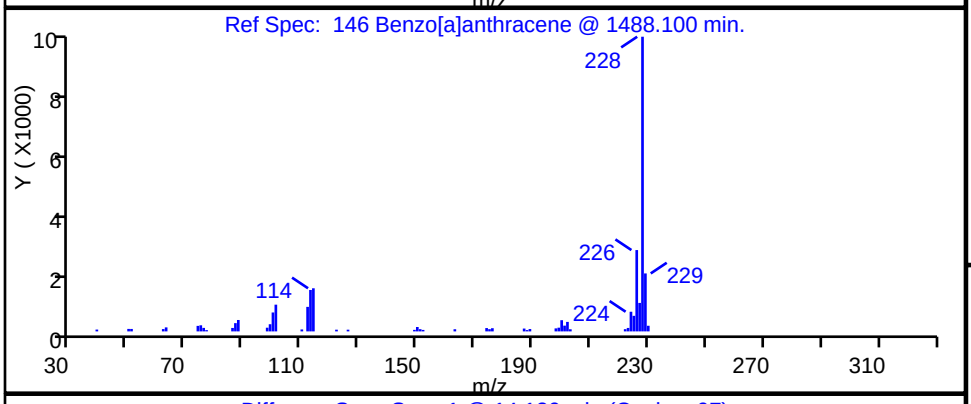
146 Benzo[a]anthracene, CAS: 56-55-3

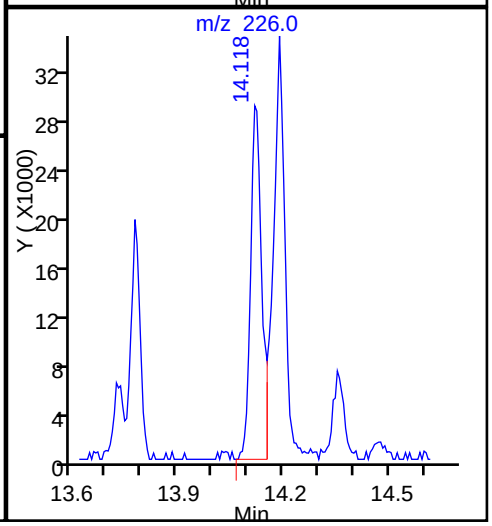


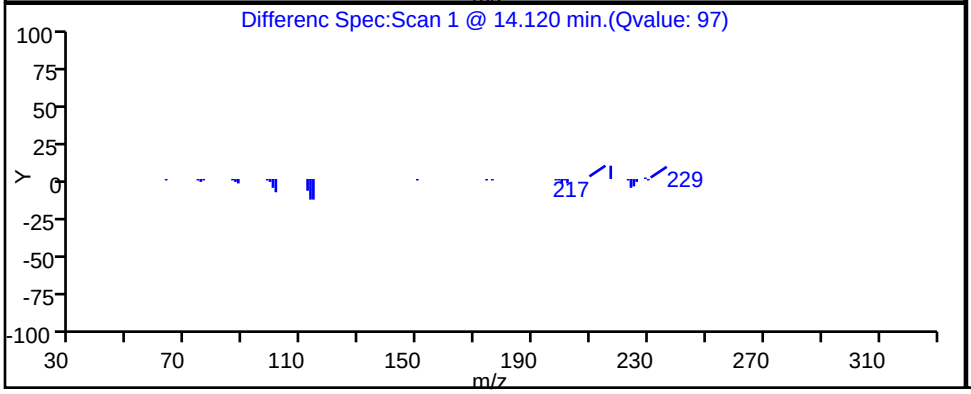










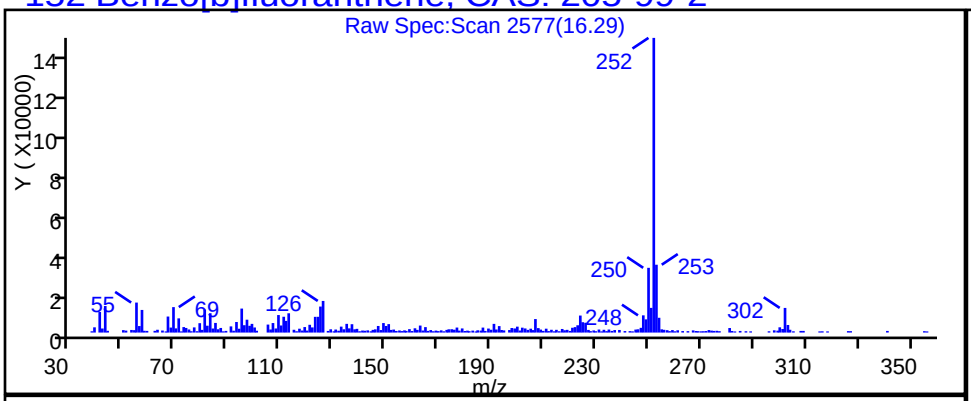


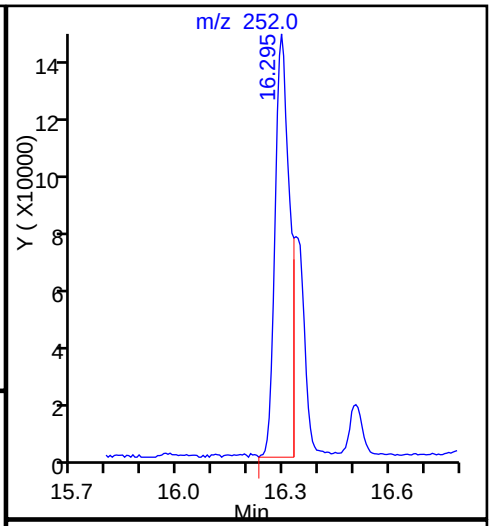
Report Date: 26-Nov-2016 08:23:19 Chrom Revision: 2.2 14-Nov-2016 08:15:18

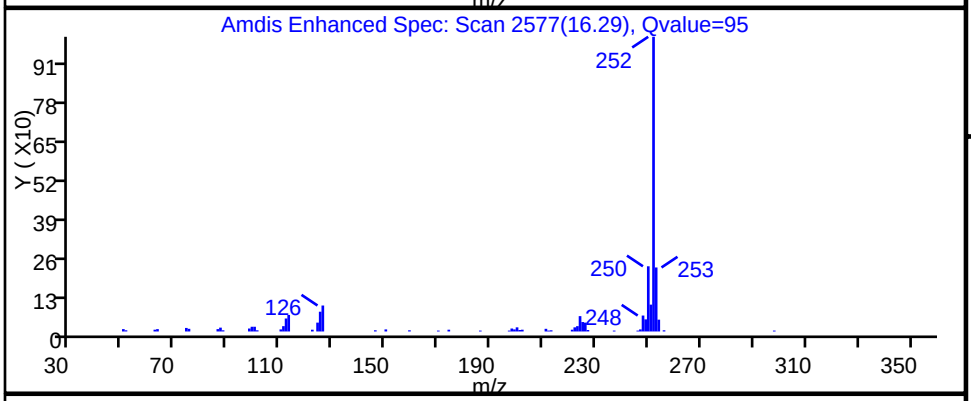
TestAmerica Pittsburgh

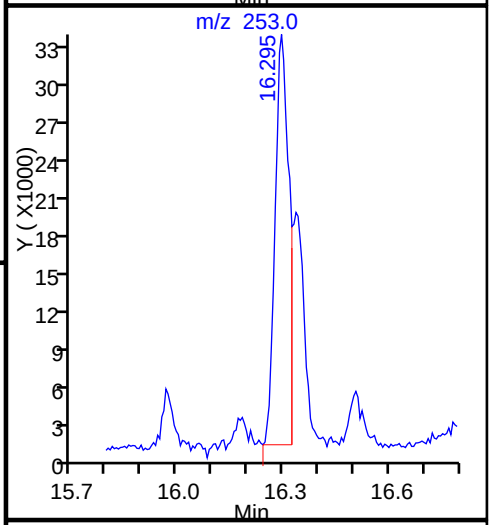
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

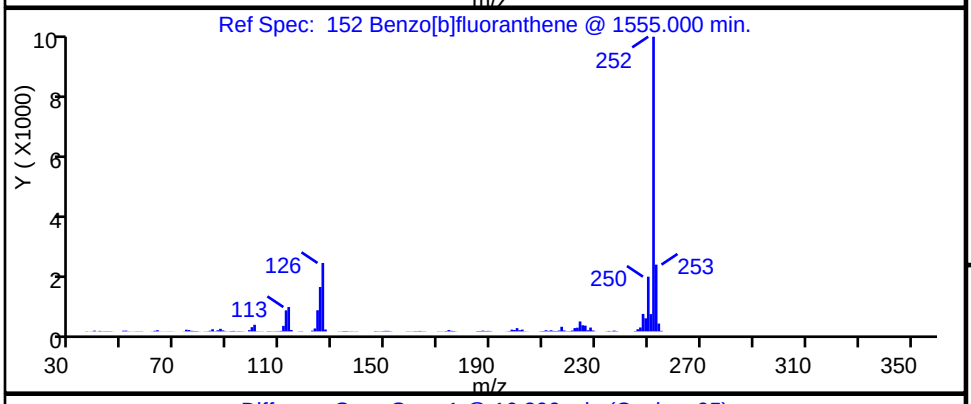
152 Benzo[b]fluoranthene, CAS: 205-99-2

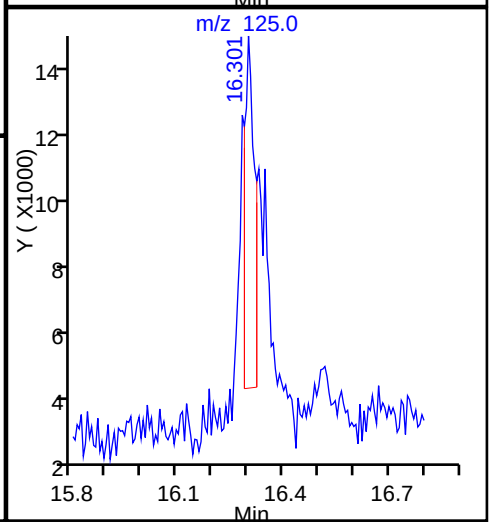


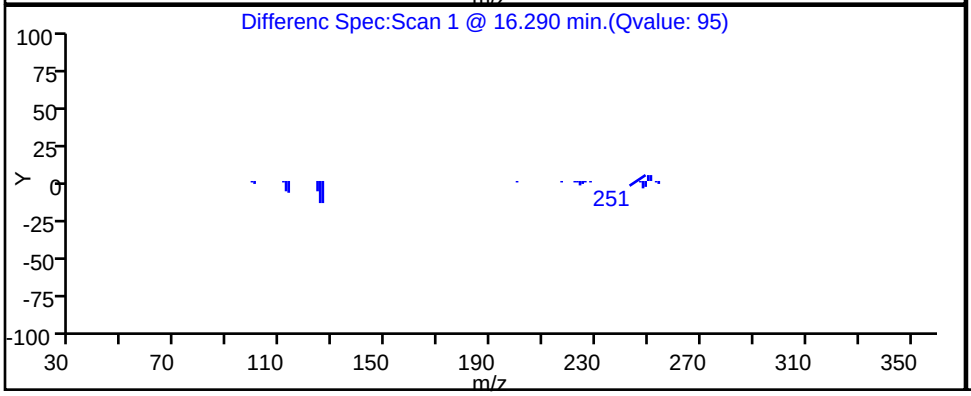










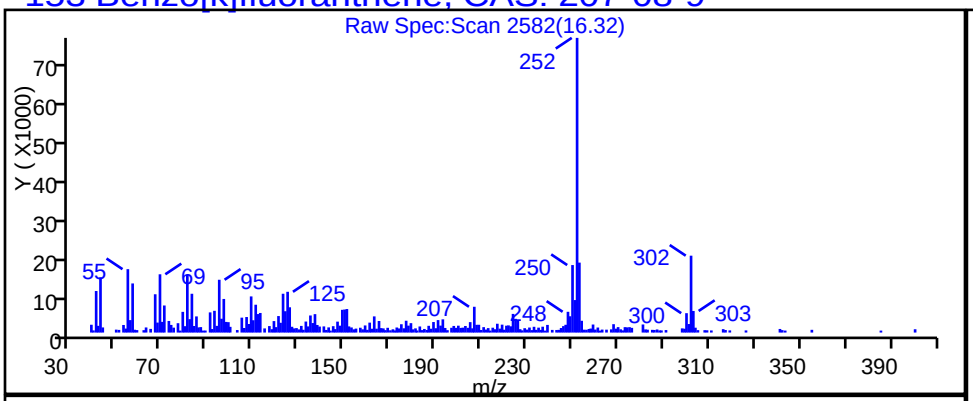


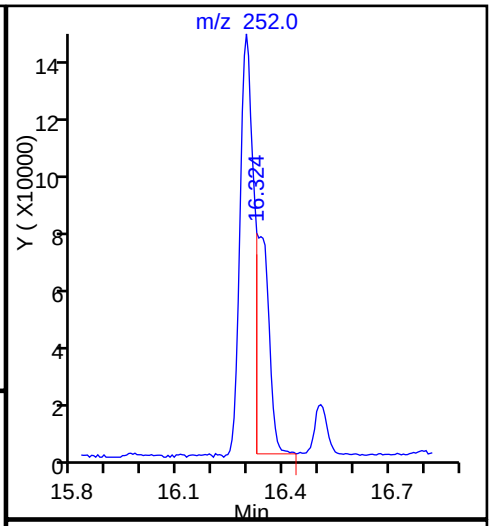
Report Date: 26-Nov-2016 08:23:19 Chrom Revision: 2.2 14-Nov-2016 08:15:18

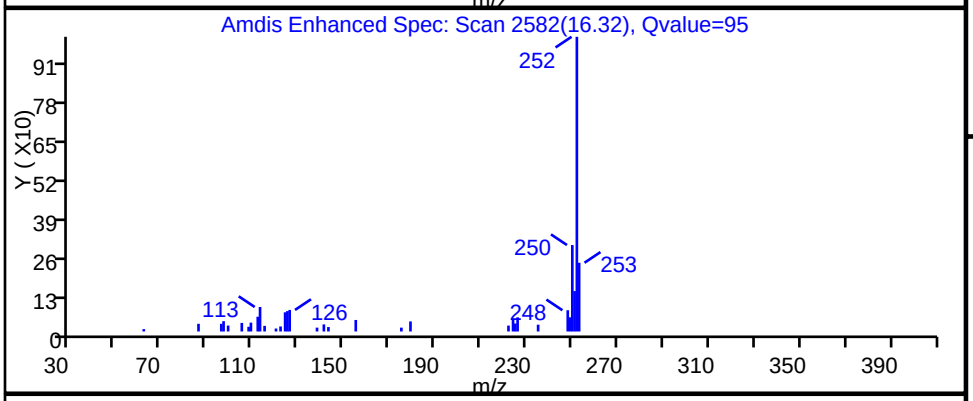
TestAmerica Pittsburgh

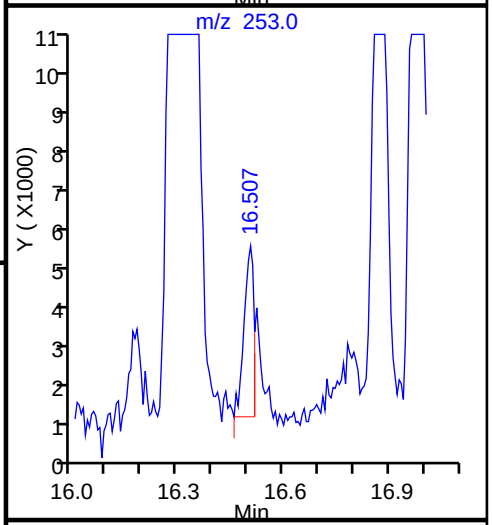
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

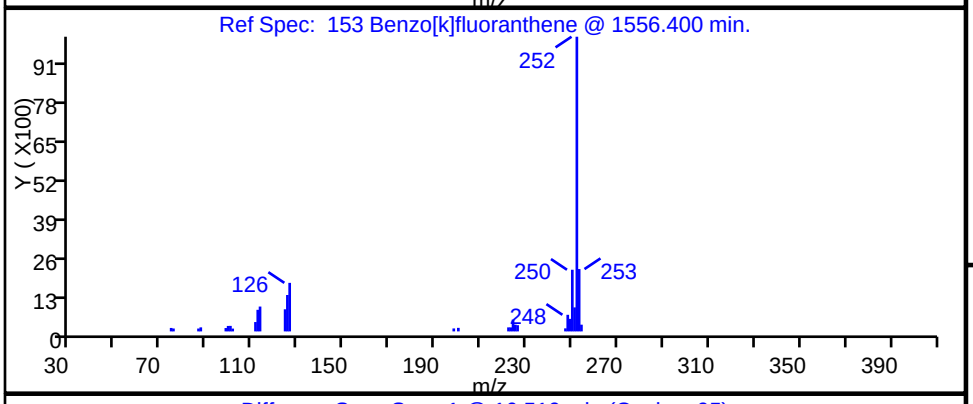
153 Benzo[k]fluoranthene, CAS: 207-08-9

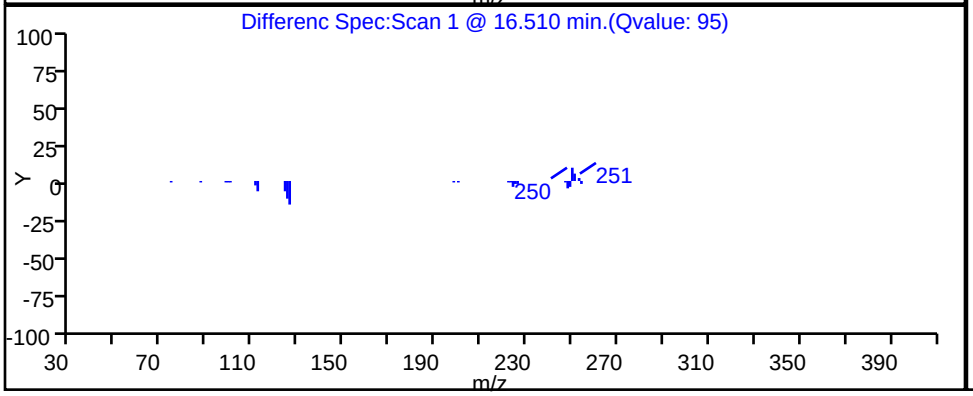


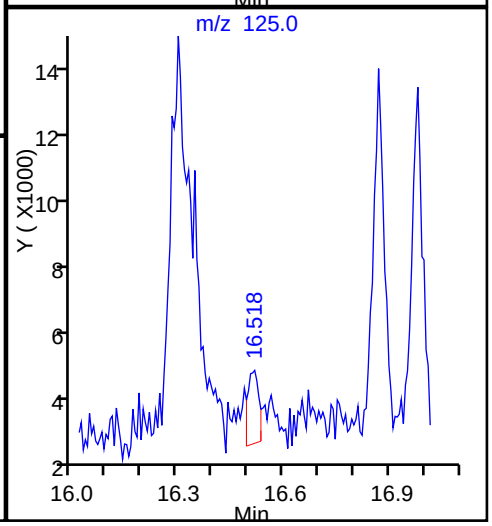










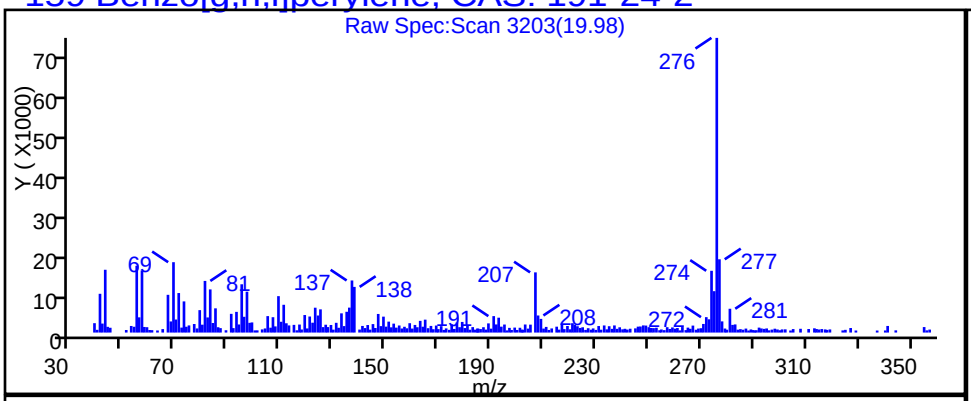


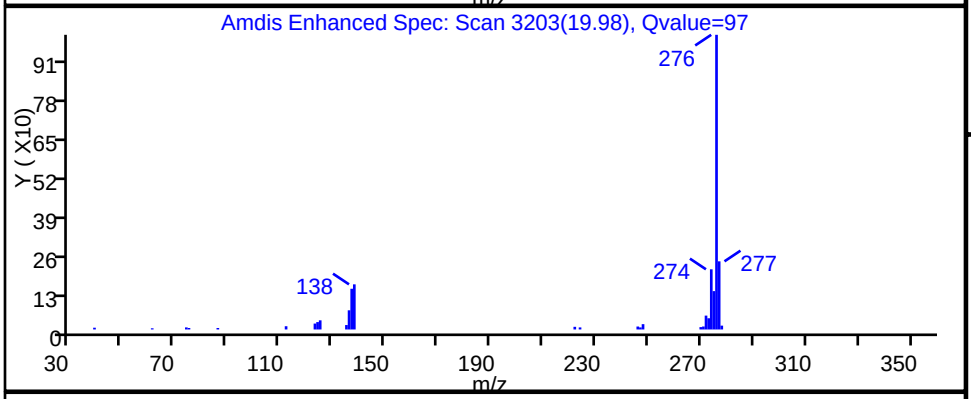
Report Date: 26-Nov-2016 08:23:19 Chrom Revision: 2.2 14-Nov-2016 08:15:18

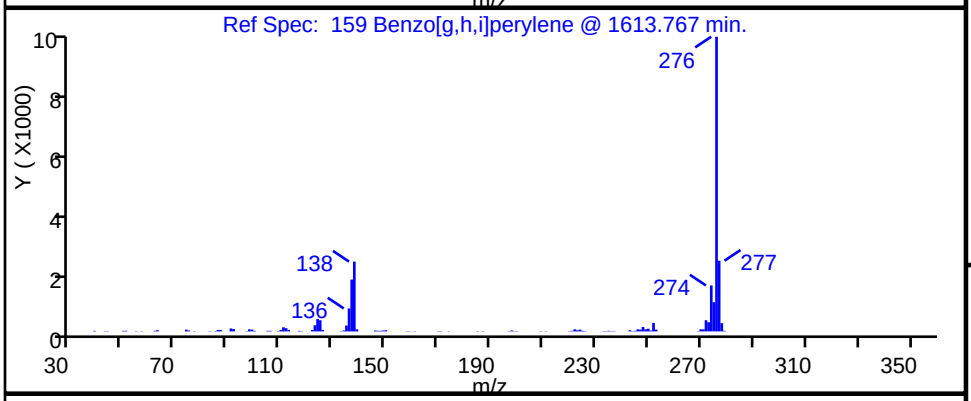
TestAmerica Pittsburgh

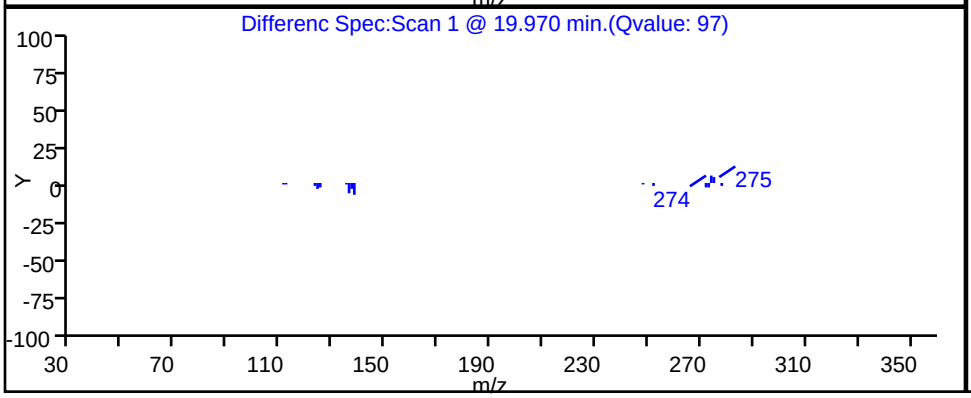
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

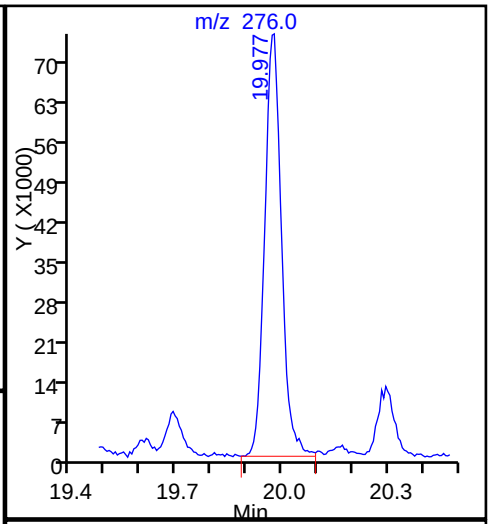
159 Benzo[g,h,i]perylene, CAS: 191-24-2

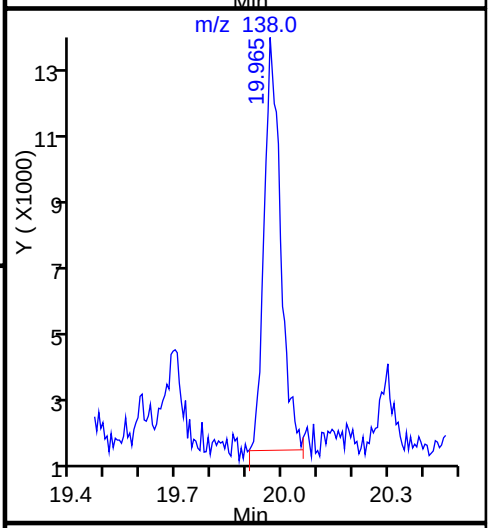


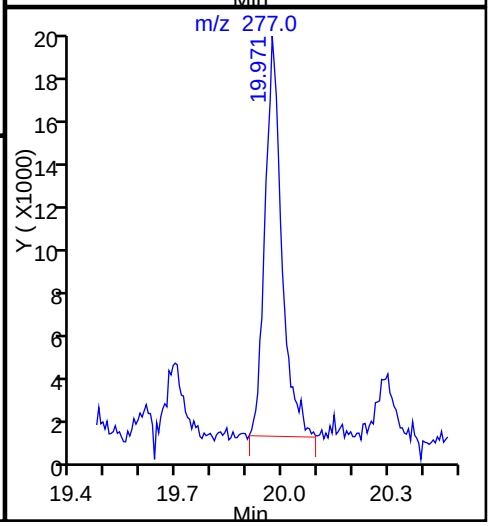










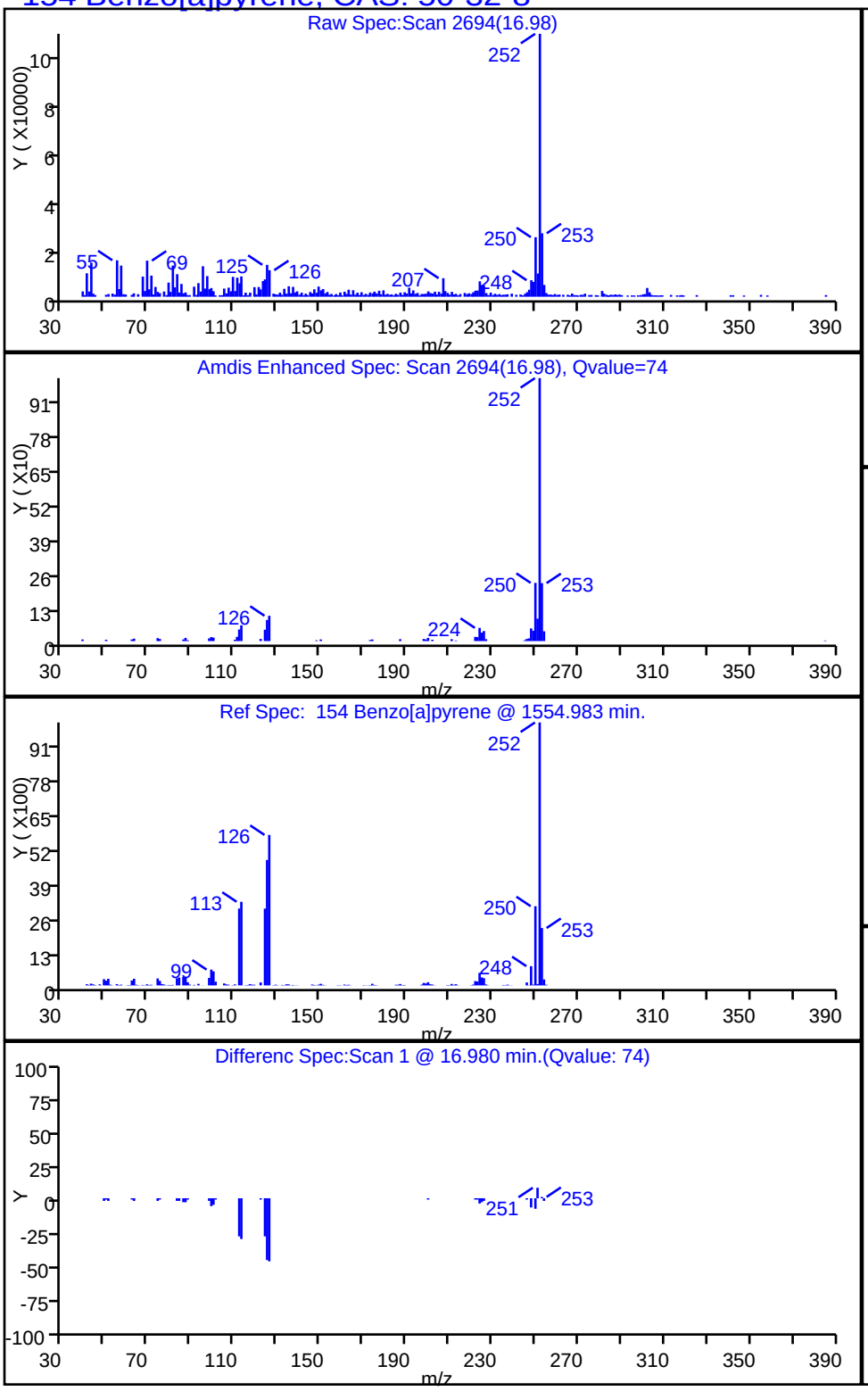


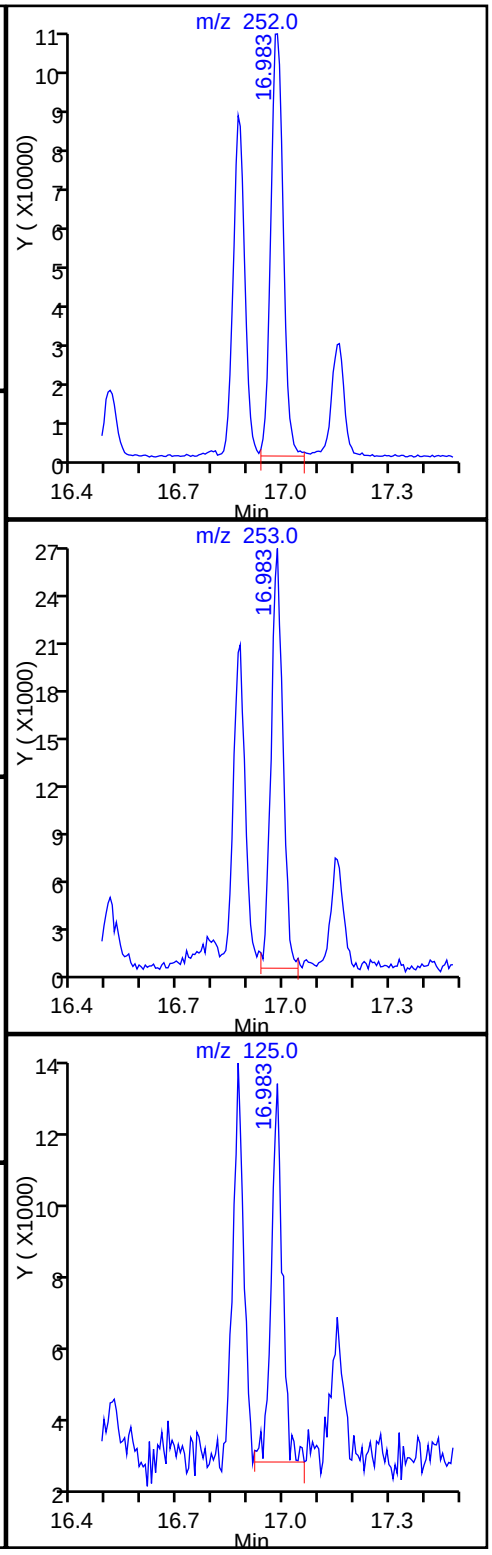
Report Date: 26-Nov-2016 08:23:19 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

154 Benzo[a]pyrene, CAS: 50-32-8



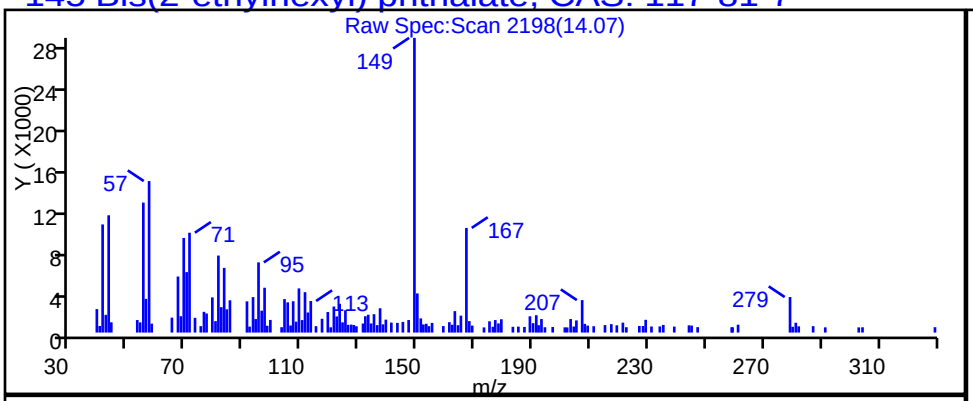


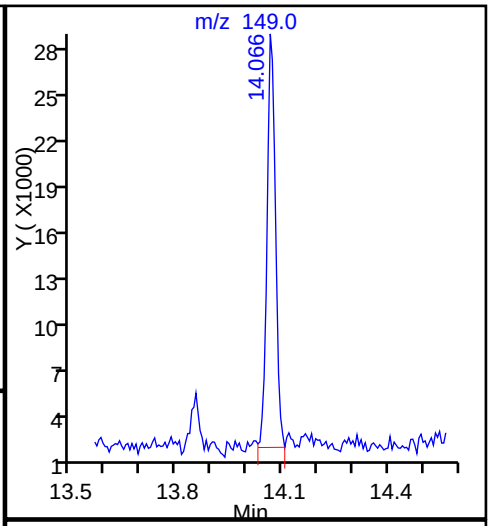
Report Date: 26-Nov-2016 08:23:19 Chrom Revision: 2.2 14-Nov-2016 08:15:18

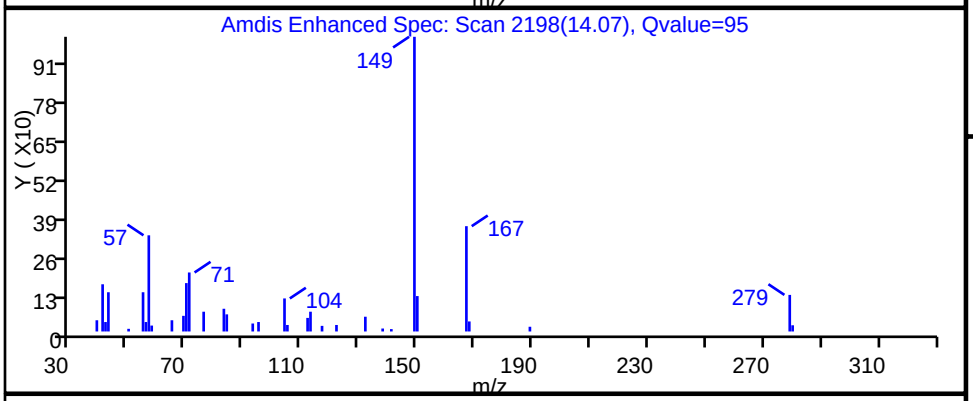
TestAmerica Pittsburgh

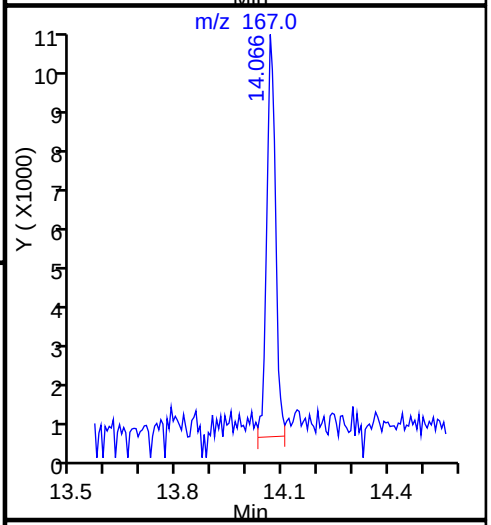
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

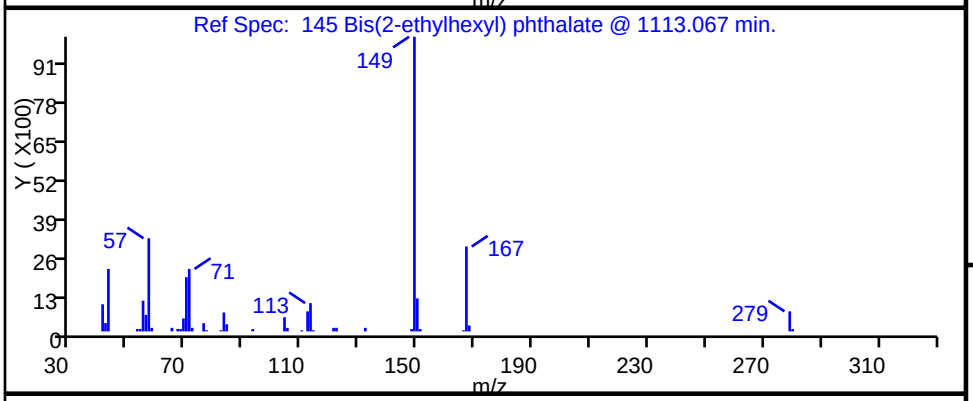
145 Bis(2-ethylhexyl) phthalate, CAS: 117-81-7

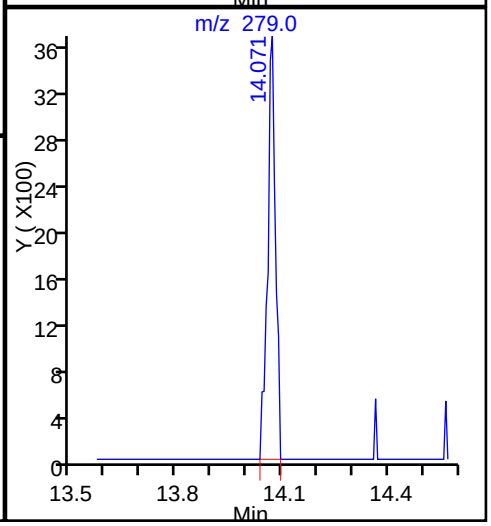


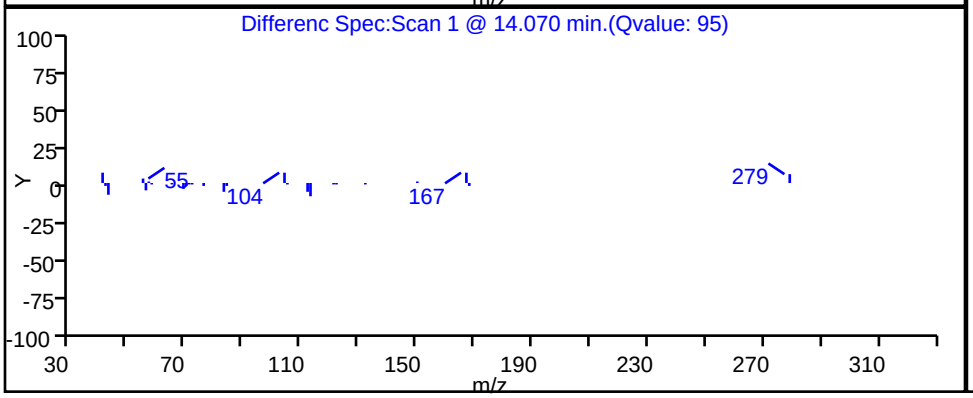










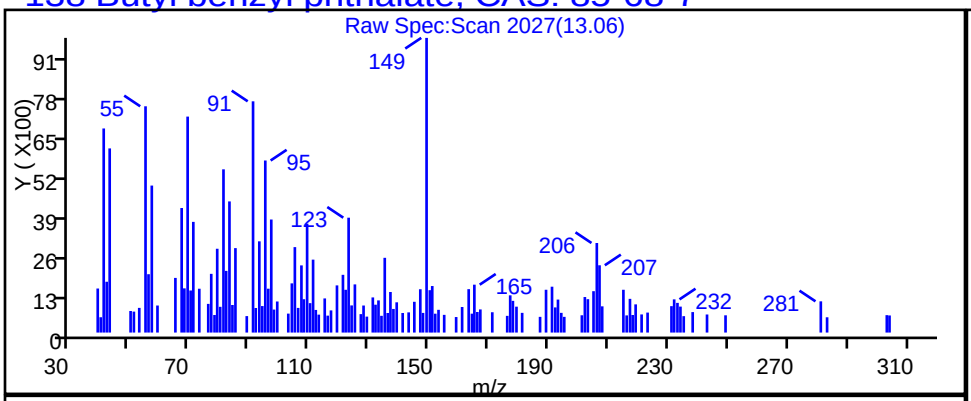


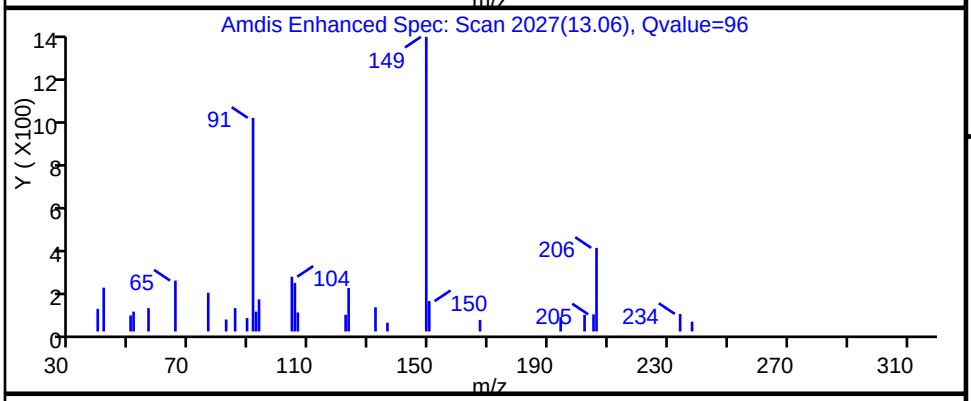
Report Date: 26-Nov-2016 08:23:19 Chrom Revision: 2.2 14-Nov-2016 08:15:18

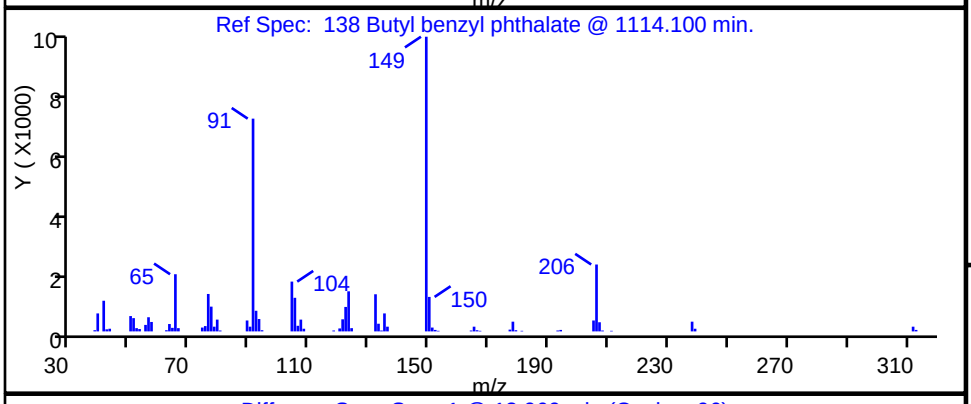
TestAmerica Pittsburgh

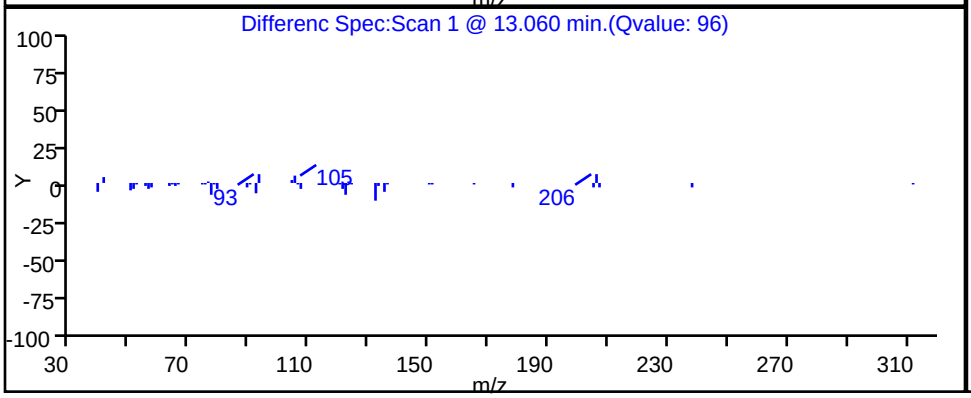
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

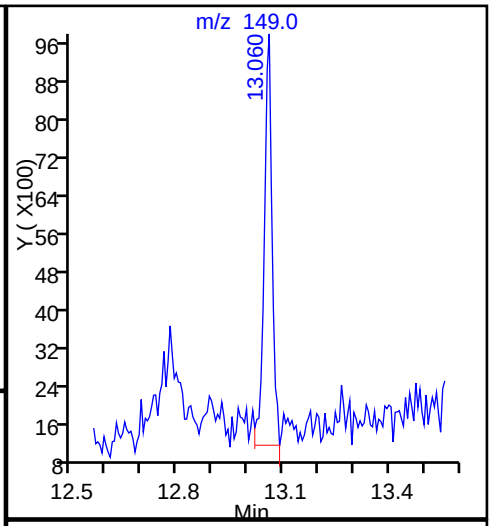
138 Butyl benzyl phthalate, CAS: 85-68-7

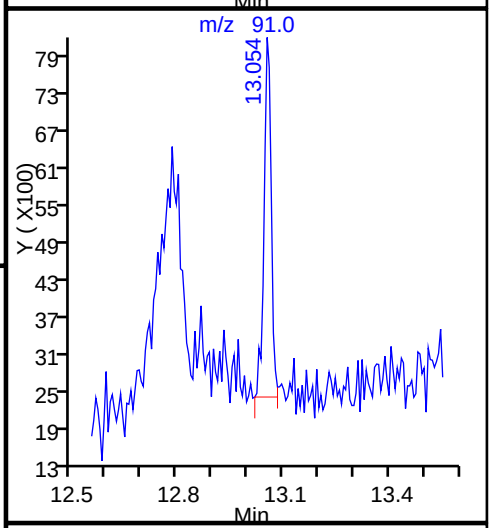


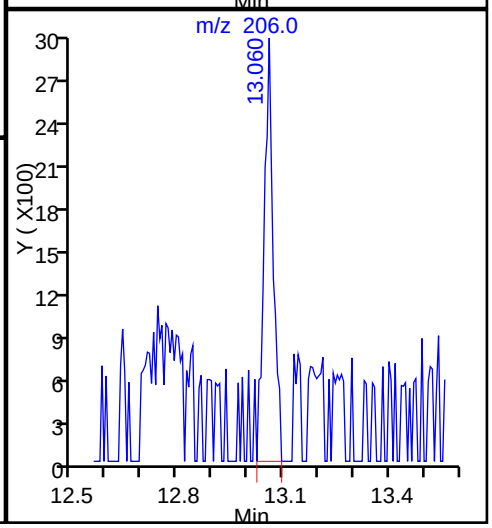










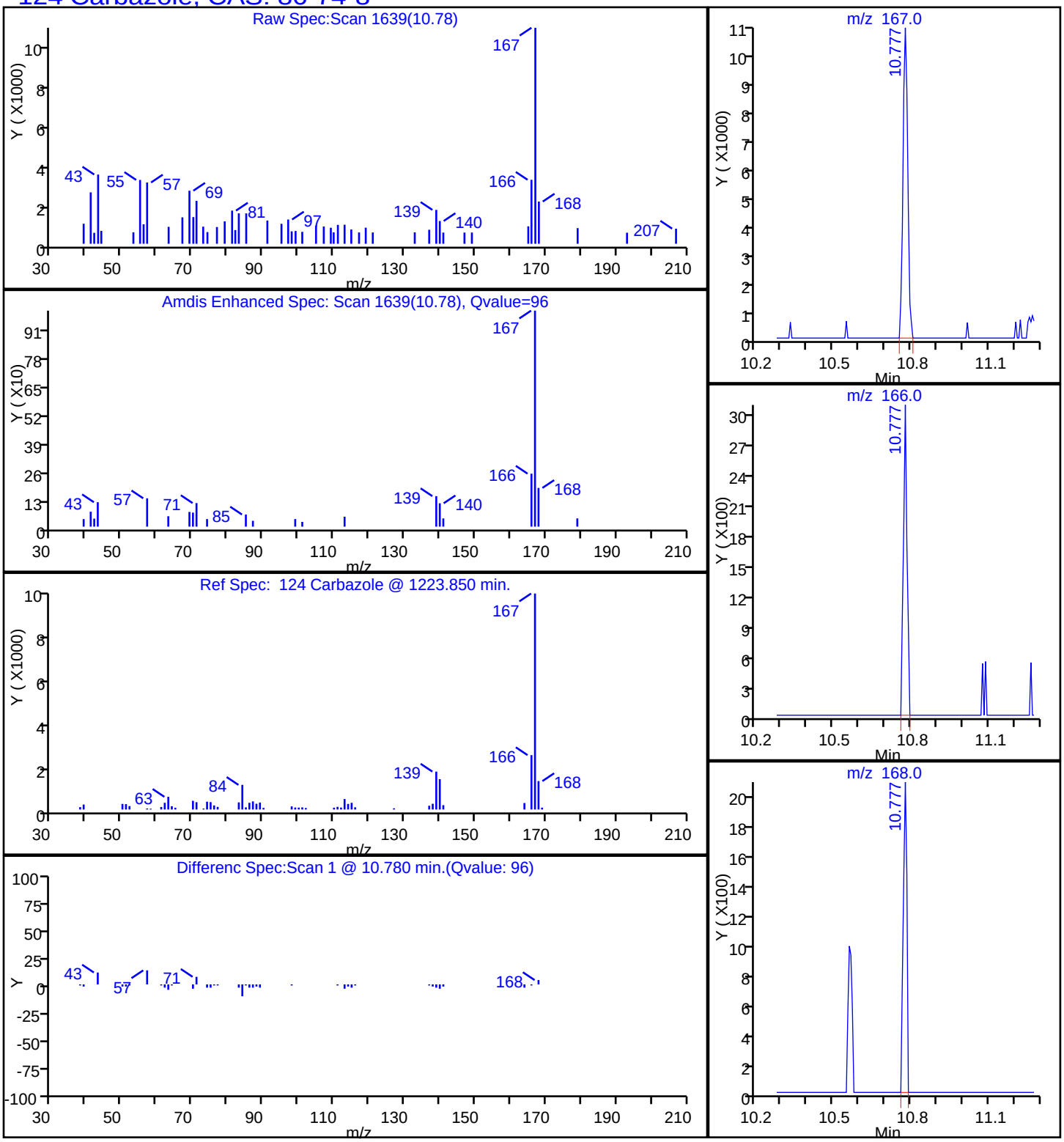


Report Date: 26-Nov-2016 08:23:18 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

124 Carbazole, CAS: 86-74-8

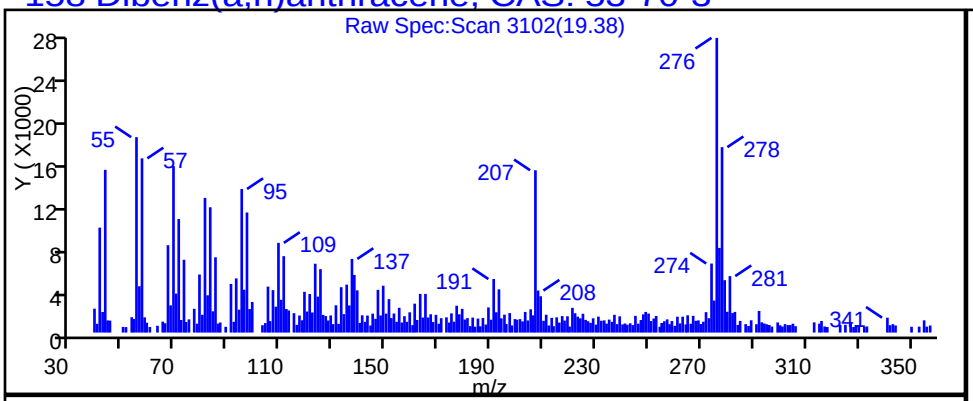


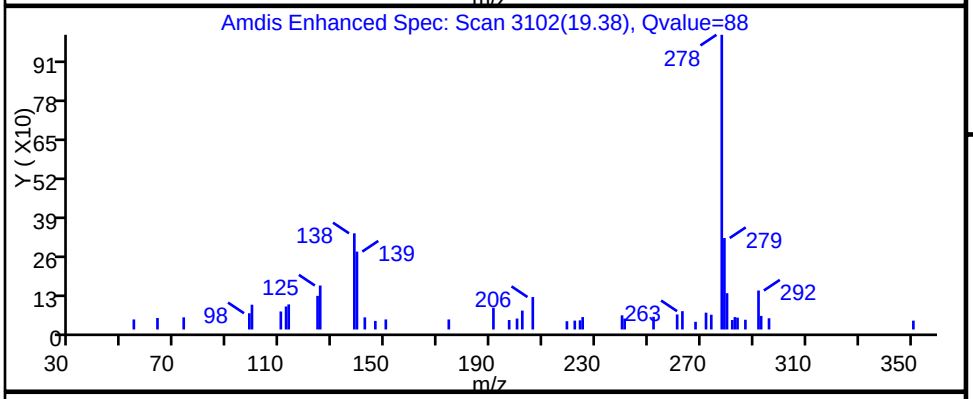
Report Date: 26-Nov-2016 08:23:19 Chrom Revision: 2.2 14-Nov-2016 08:15:18

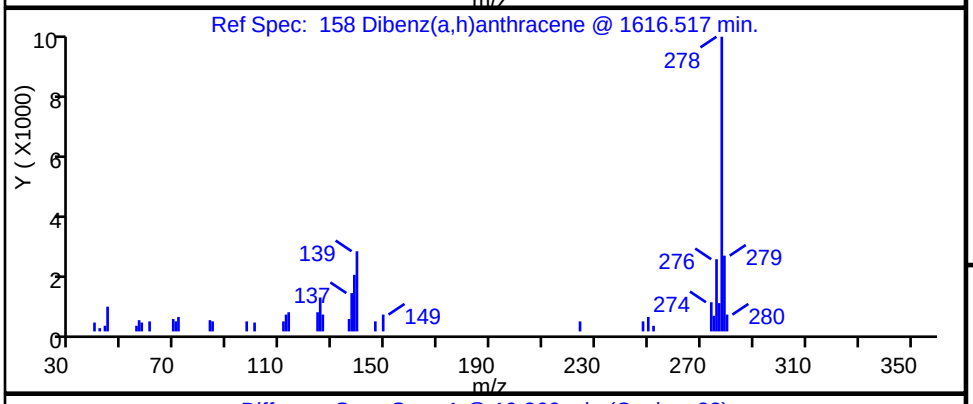
TestAmerica Pittsburgh

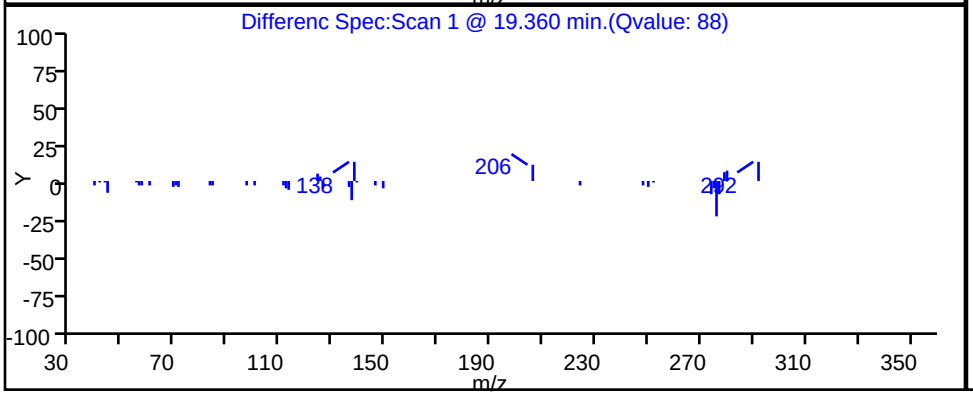
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

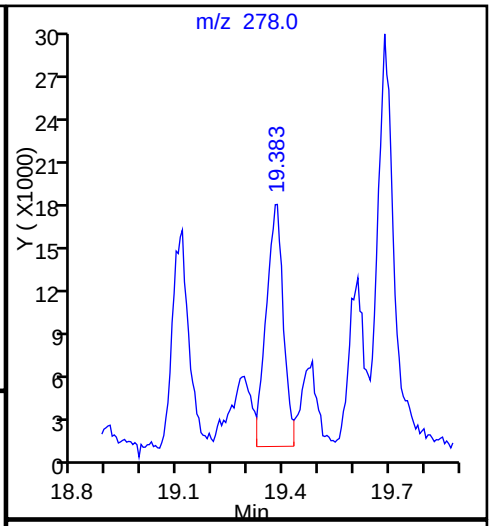
158 Dibenz(a,h)anthracene, CAS: 53-70-3

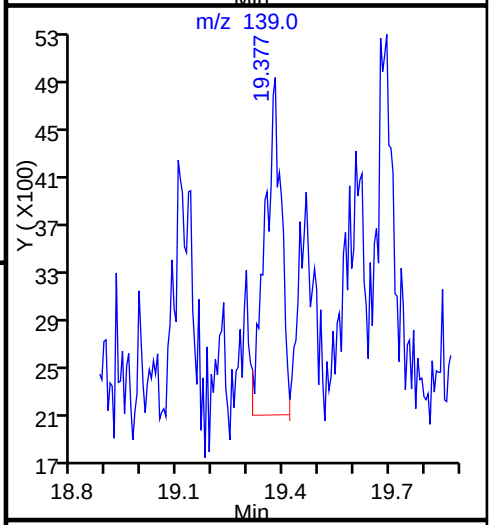


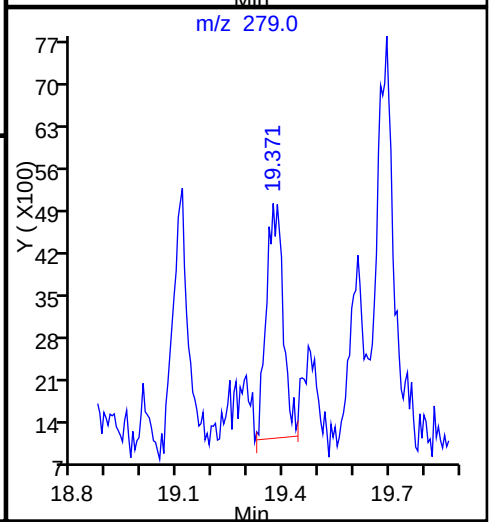










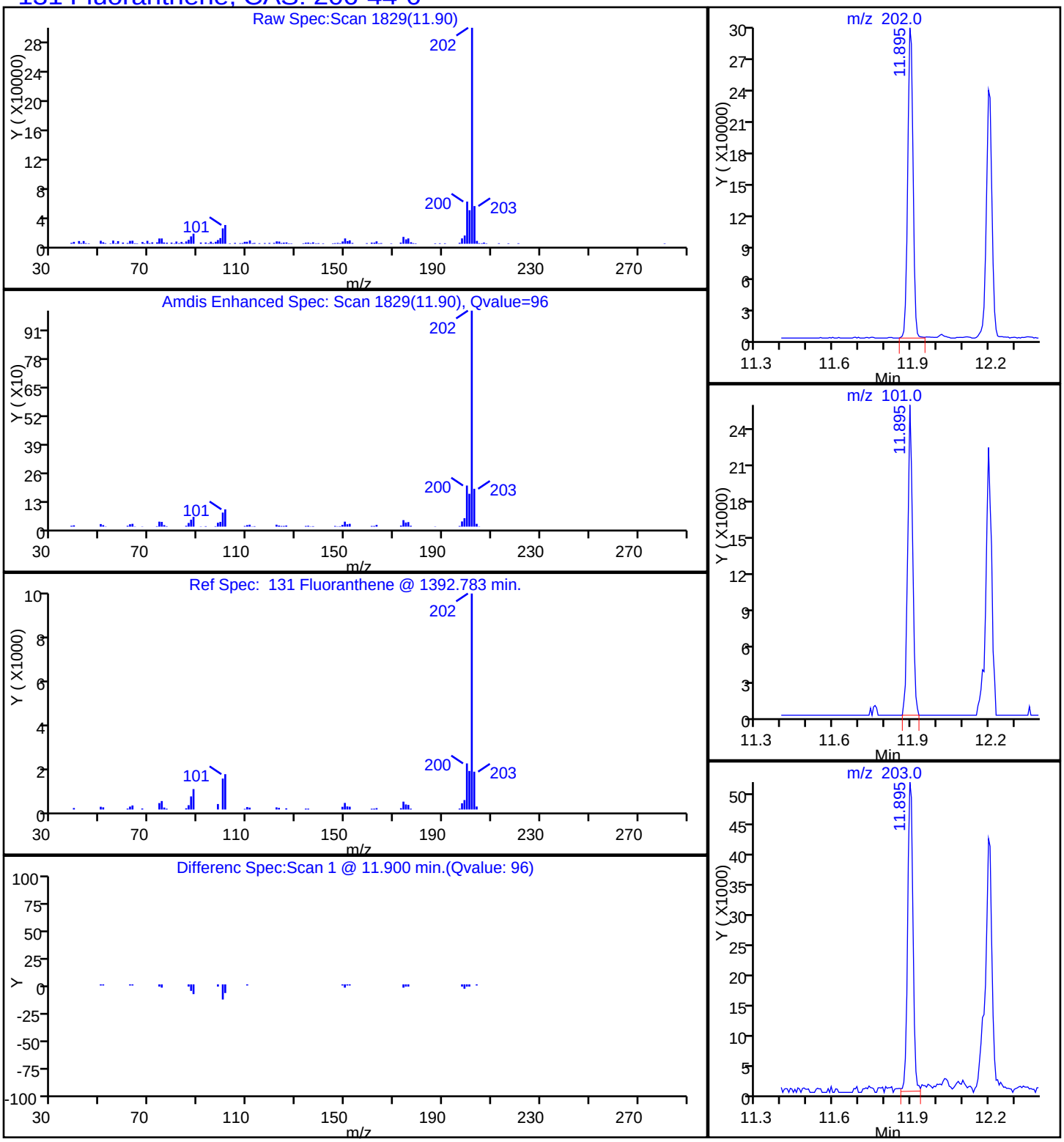


Report Date: 26-Nov-2016 08:23:19 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

131 Fluoranthene, CAS: 206-44-0

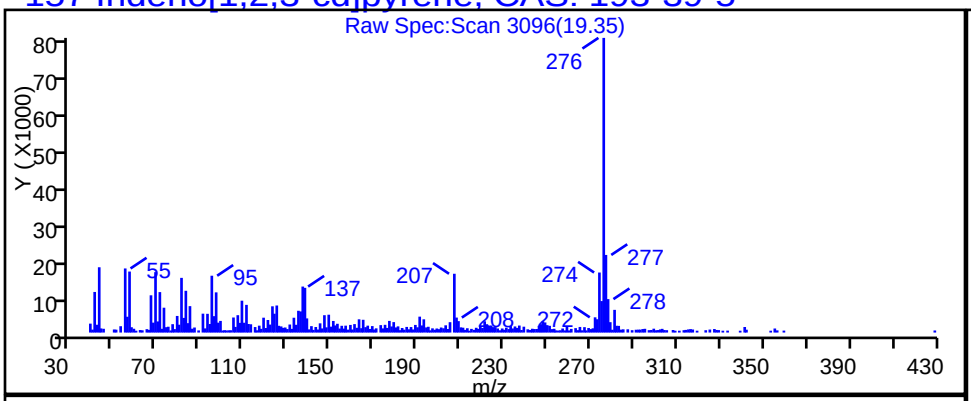


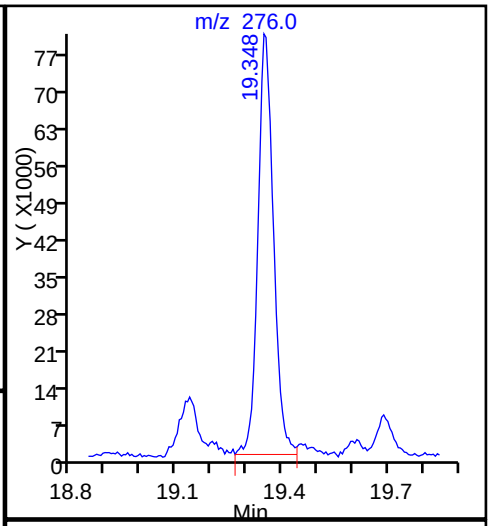
Report Date: 26-Nov-2016 08:23:19 Chrom Revision: 2.2 14-Nov-2016 08:15:18

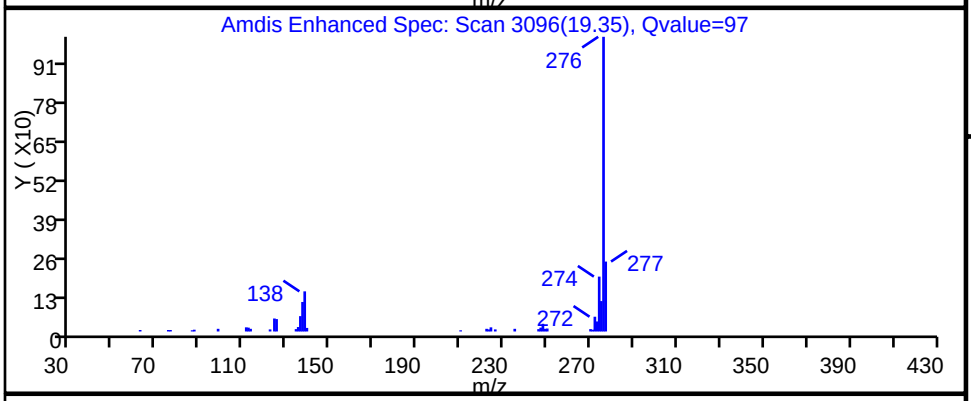
TestAmerica Pittsburgh

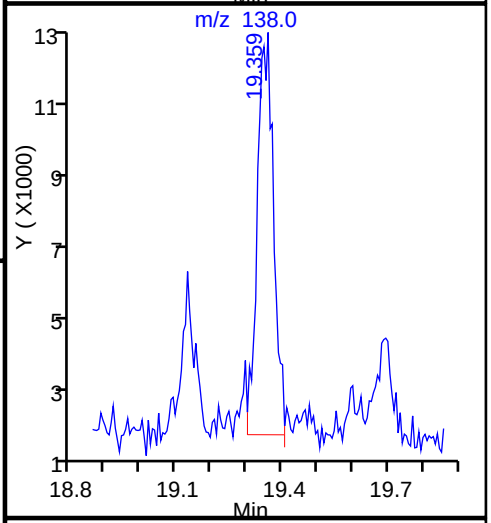
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

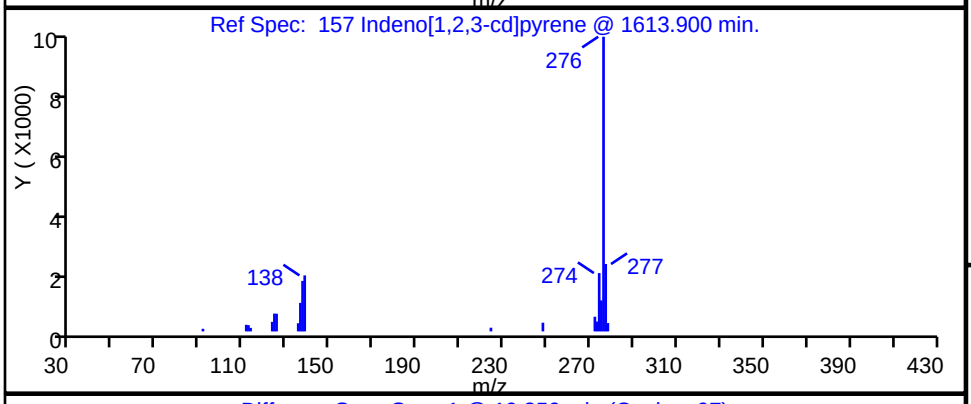
157 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

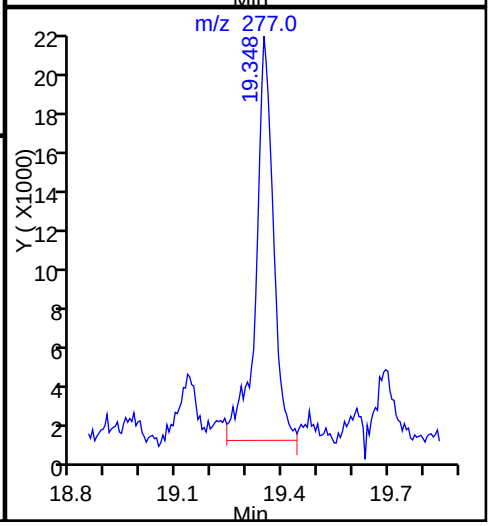


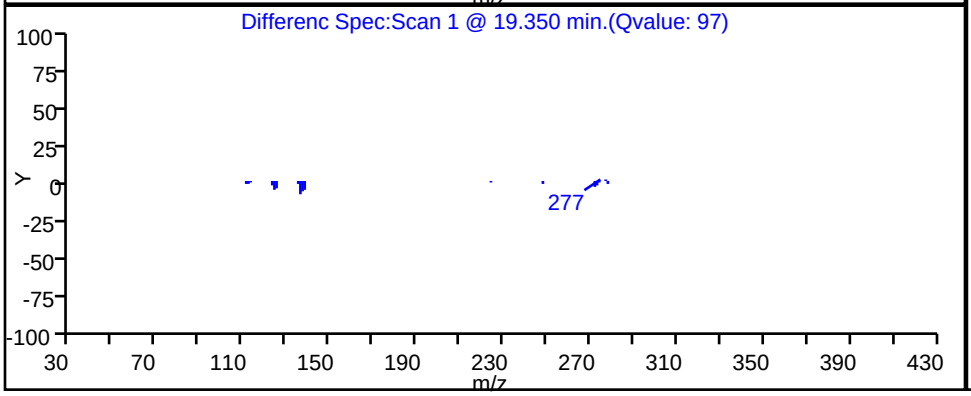










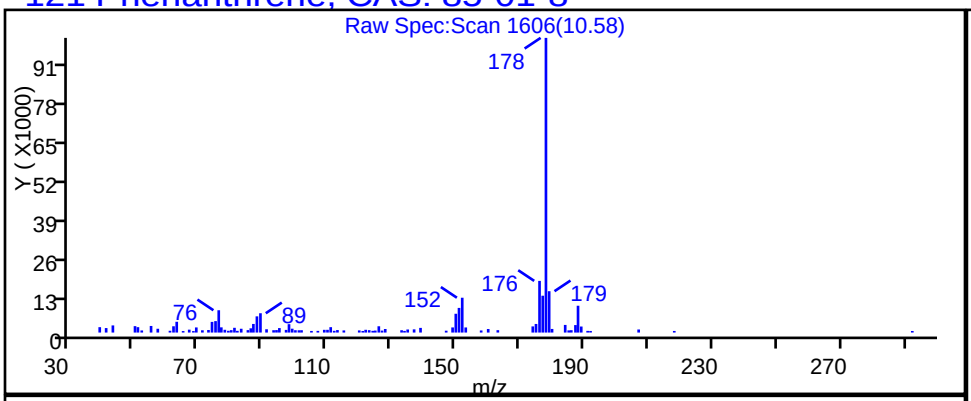


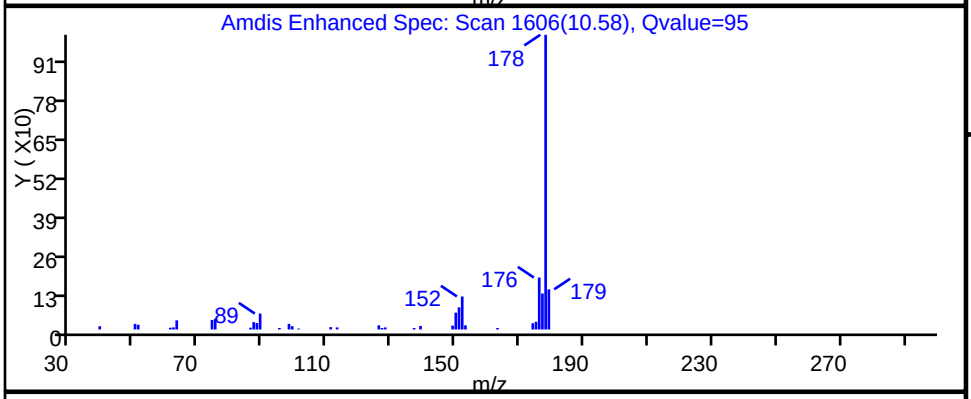
Report Date: 26-Nov-2016 08:23:18 Chrom Revision: 2.2 14-Nov-2016 08:15:18

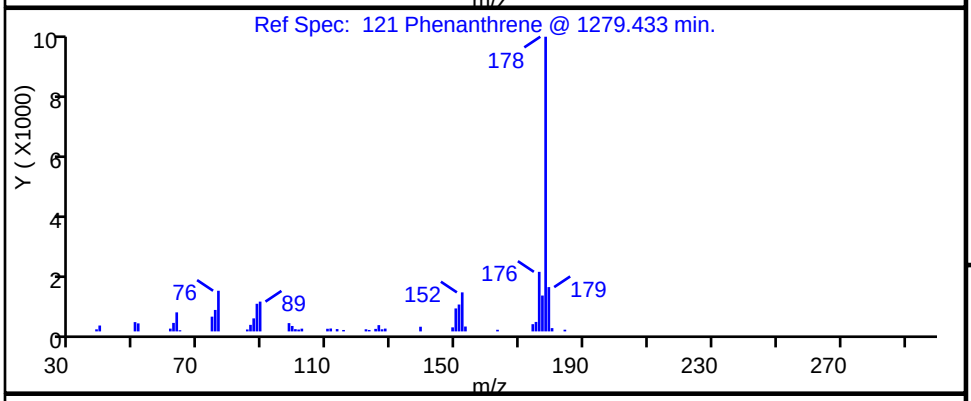
TestAmerica Pittsburgh

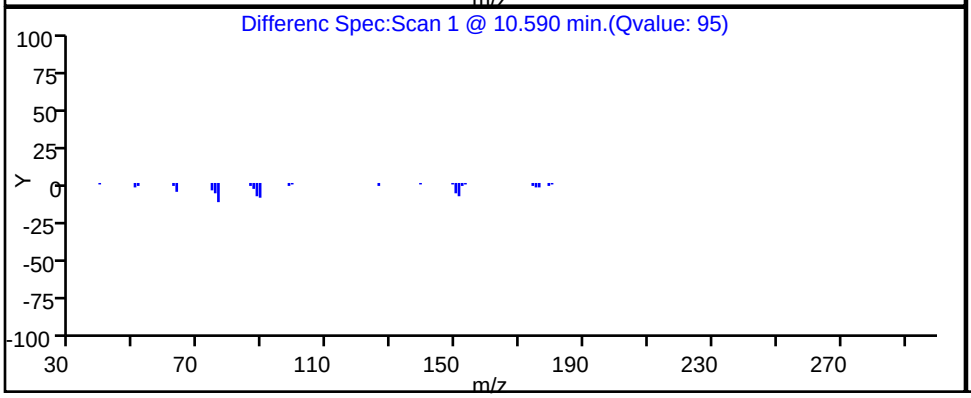
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

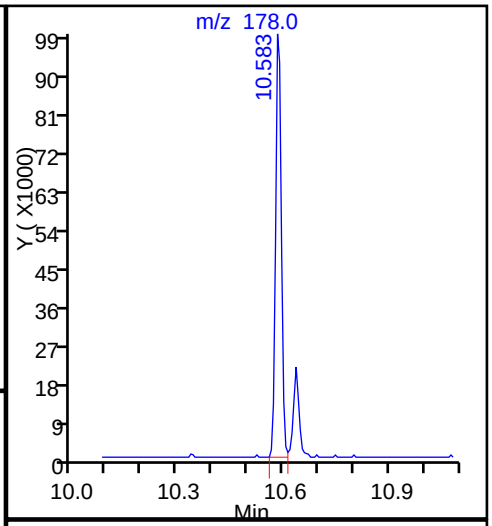
121 Phenanthrene, CAS: 85-01-8

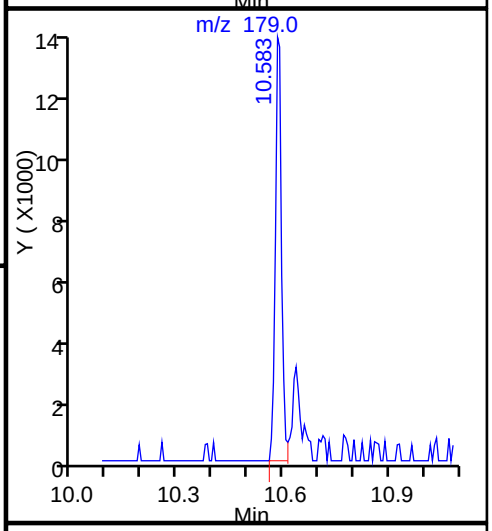


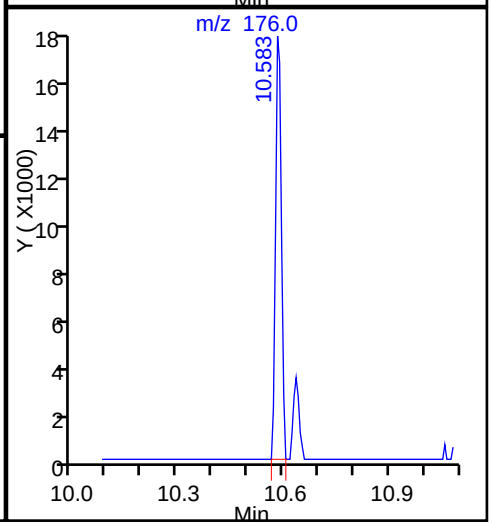










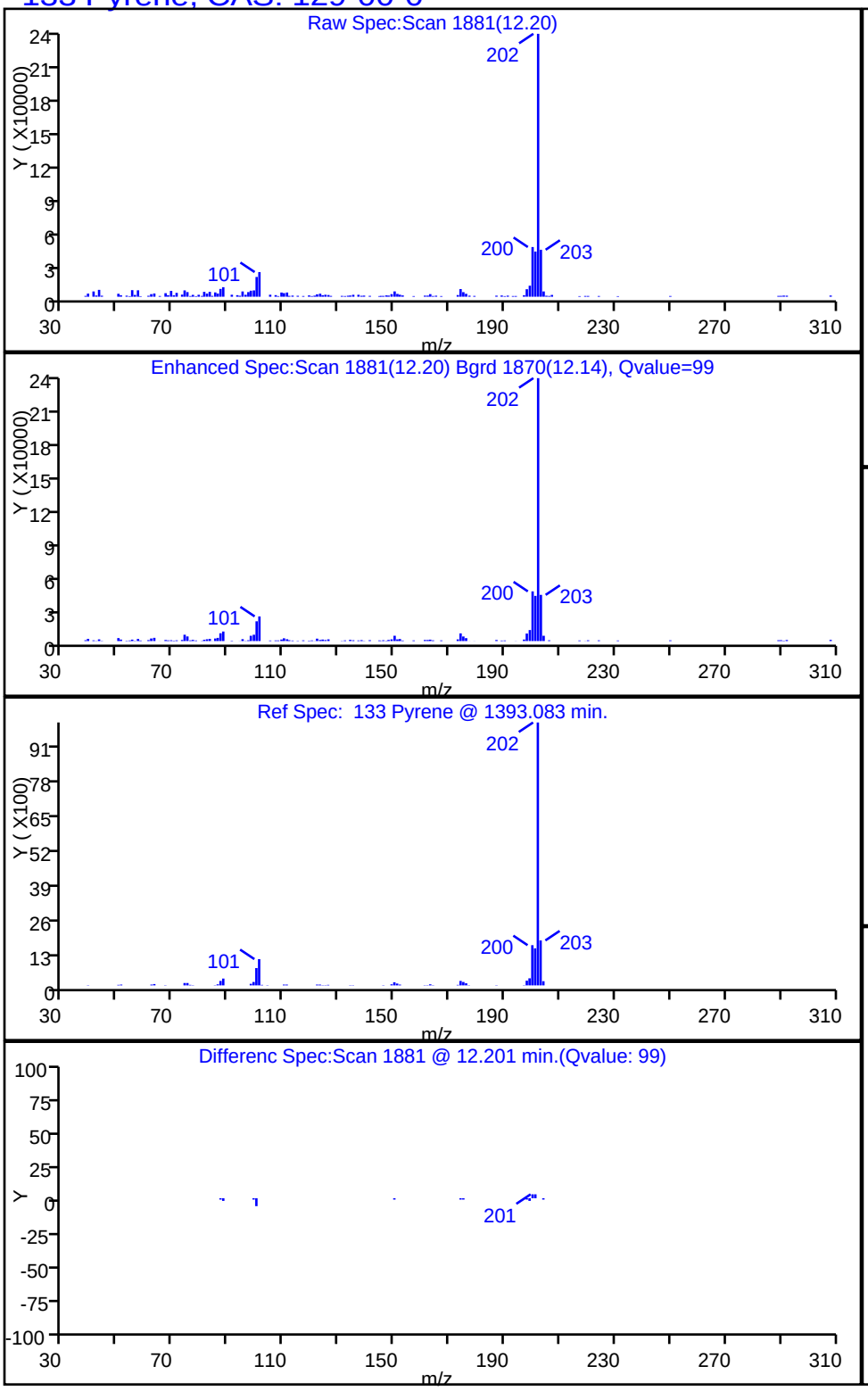


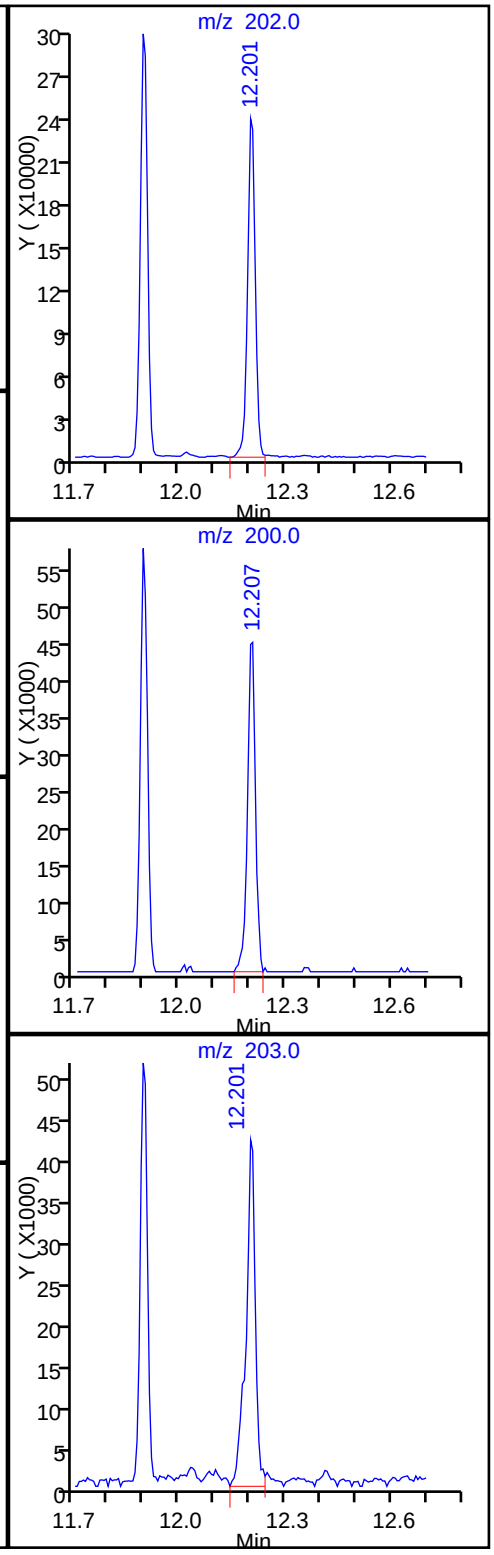
Report Date: 26-Nov-2016 08:23:19 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

133 Pyrene, CAS: 129-00-0





Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

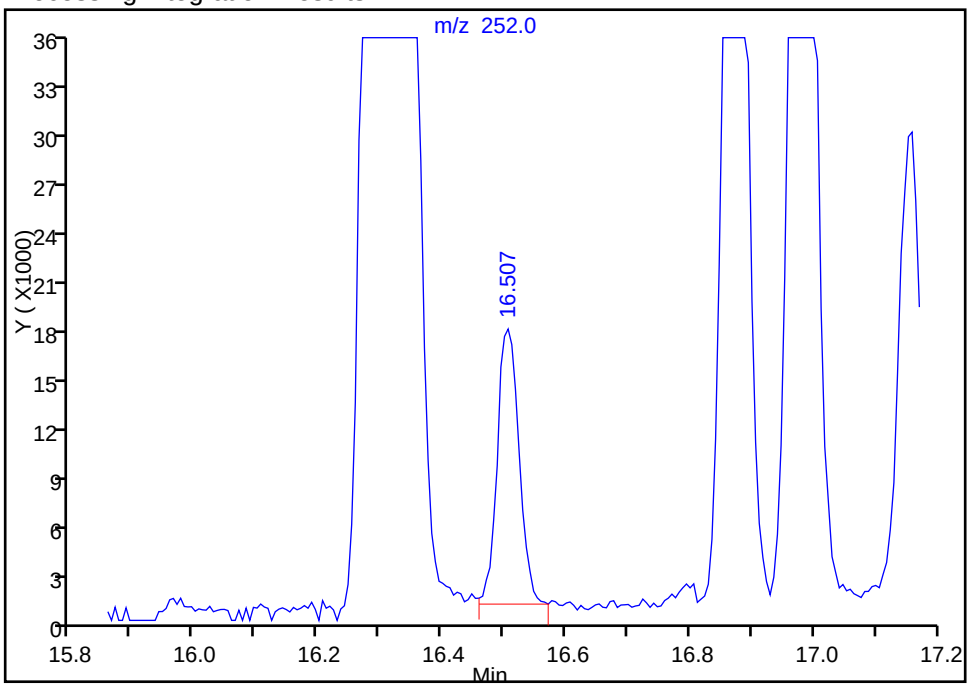
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

153 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

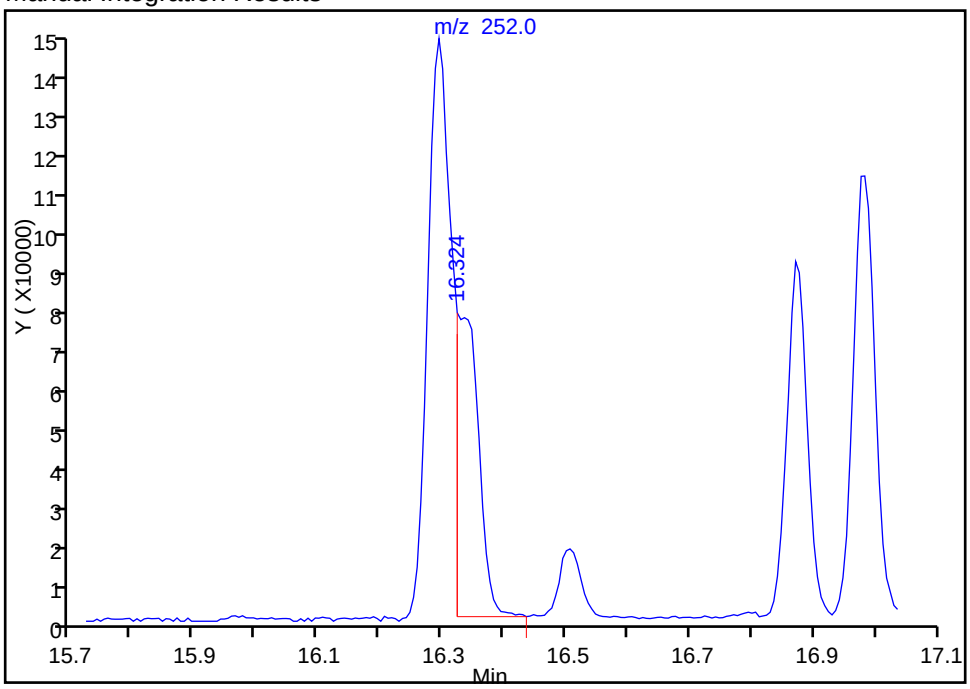
Processing Integration Results

RT: 16.51
Area: 41330
Amount: 0.467120
Amount Units: ng



Manual Integration Results

RT: 16.32
Area: 187714
Amount: 2.121580
Amount Units: ng



Reviewer: piccolinov, 26-Nov-2016 08:16:37

Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

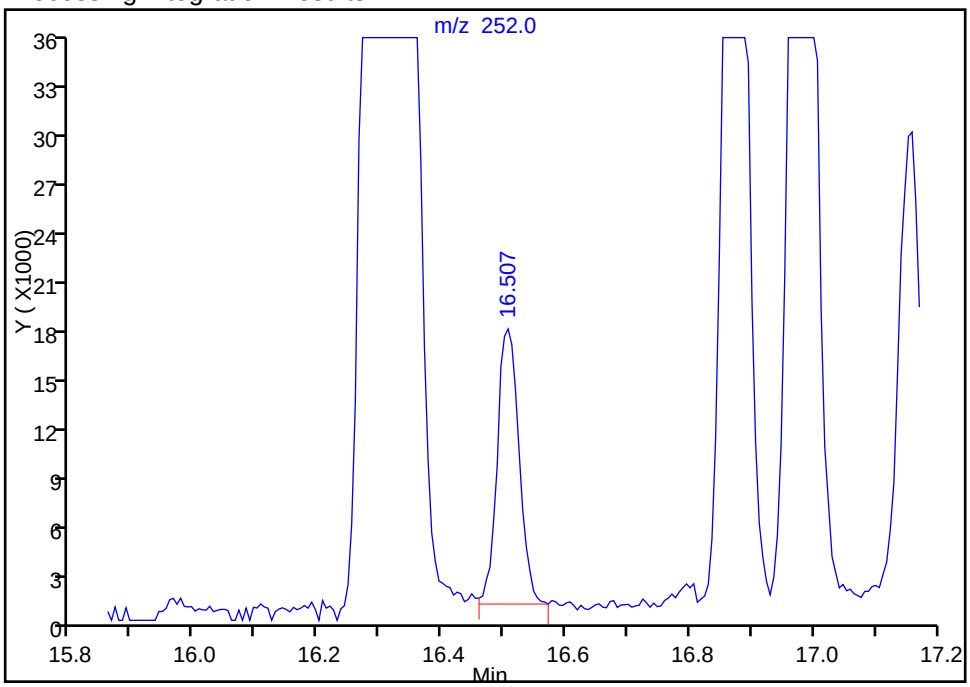
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250029.D				
Injection Date:	25-Nov-2016 20:46:30	Instrument ID:	CH733		
Lims ID:	180-61122-A-4-A	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	03200	ALS Bottle#:	28	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

153 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

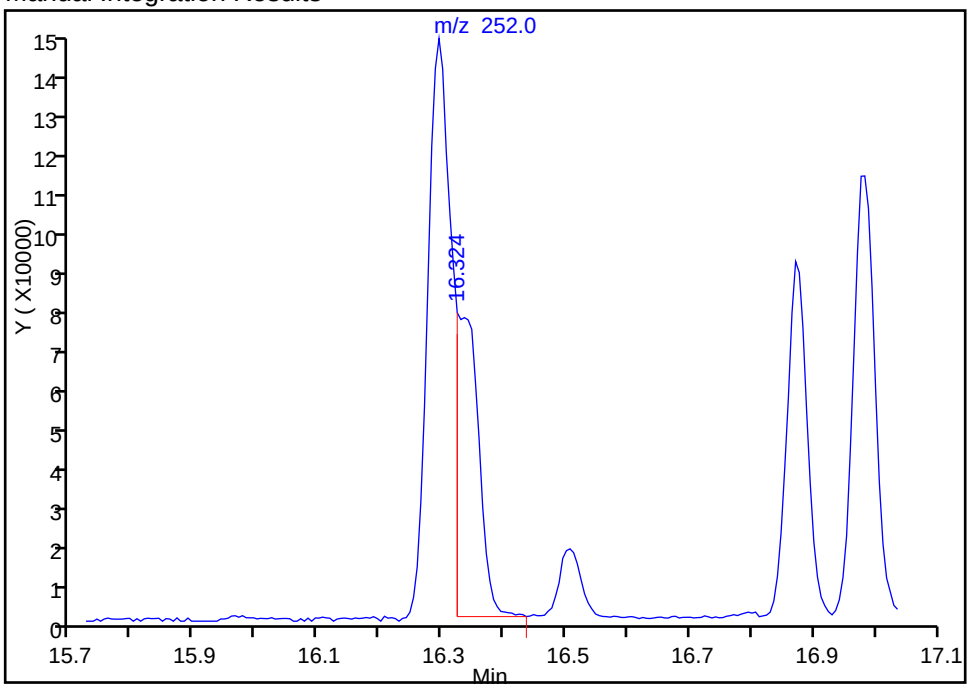
Processing Integration Results

RT: 16.51
Area: 41330
Amount: 0.467120
Amount Units: ng



Manual Integration Results

RT: 16.32
Area: 187714
Amount: 2.121580
Amount Units: ng



Reviewer: piccolinov, 26-Nov-2016 08:16:37

Audit Action: Manually Integrated Audit Reason: Missed Peak

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189702

SDG No.:

Instrument ID: CH733 GC Column: Rxi-5SilMS ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/30/2016 07:20 Calibration End Date: 09/30/2016 11:22 Calibration ID: 33041

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-189702/3	N09300003.D
Level 2	IC 180-189702/4	N09300004.D
Level 3	IC 180-189702/5	N09300005.D
Level 4	ICIS 180-189702/6	N09300006.D
Level 5	IC 180-189702/7	N09300007.D
Level 6	IC 180-189702/8	N09300008.D
Level 7	IC 180-189702/9	N09300009.D
Level 8	IC 180-189702/10	N09300010.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,4-Dioxane	0.4630 0.4197	0.4722 0.4409	0.4643 0.4447	0.4602	0.4505	Ave		0.4519			0.0100	3.7		20.0			
N-Nitrosodimethylamine	0.4440 0.5989	0.5562 0.6312	0.5800 0.6339	0.6174	0.6414	Ave		0.5879			0.0100	11.1		20.0			
Pyridine	+++++ 1.1069	1.0589 1.1442	1.0957 1.1357	1.1700	1.2040	Ave		1.1308			0.0100	4.3		20.0			
Methyl methanesulfonate	0.7442 0.7722	0.8365 0.7998	0.8477 0.7769	0.8278	0.8511	Ave		0.8070			0.0100	4.9		20.0			
Benzaldehyde	0.8823 0.9017	0.8529 0.7696	0.9022 0.6755	0.9116	1.1034	Ave		0.8749			0.0100	14.1		20.0			
Phenol	1.6391 1.5218	1.6701 1.5179	1.7093 1.4773	1.6730	1.6821	Ave		1.6113			0.8000	5.6		20.0			
Aniline	1.6796 1.7372	1.7752 1.6992	1.8443 1.6575	1.8692	1.9032	Ave		1.7707			0.0100	5.2		20.0			
Bis(2-chloroethyl)ether	1.2250 1.1222	1.2803 1.0837	1.2855 1.0639	1.2257	1.2443	Ave		1.1913			0.7000	7.4		20.0			
2-Chlorophenol	1.1932 1.1794	1.2653 1.1587	1.2718 1.1547	1.2638	1.2895	Ave		1.2221			0.8000	4.6		20.0			
n-Decane	1.0462 0.8967	1.0104 0.8821	0.9949 0.8774	0.9857	0.9846	Ave		0.9598				6.7		20.0			
1,3-Dichlorobenzene	1.6096 1.3858	1.6439 1.3722	1.5883 1.3639	1.5575	1.5387	Ave		1.5075			0.0100	7.6		20.0			
1,4-Dichlorobenzene	1.6957 1.4023	1.6059 1.3859	1.6032 1.3598	1.5642	1.5644	Ave		1.5227			0.0100	8.1		20.0			
Benzyl alcohol	0.5999 0.6813	0.6644 0.6639	0.7063 0.6592	0.7161	0.7547	Ave		0.6807			0.0100	6.8		20.0			
1,2-Dichlorobenzene	1.5658 1.2905	1.5352 1.2554	1.5044 1.2321	1.4654	1.4417	Ave		1.4113			0.0100	9.4		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189702

SDG No.:

Instrument ID: CH733 GC Column: Rxi-5SilMS ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/30/2016 07:20 Calibration End Date: 09/30/2016 11:22 Calibration ID: 33041

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
2-Methylphenol	1.0377 0.9945	1.0989 0.9525	1.1109 0.9272	1.0932	1.1100	Ave		1.0406			0.7000	7.1		20.0			
Indene	2.2414 1.9110	2.1657 1.8899	2.1818 1.8345	2.1179	2.1305	Ave		2.0591			0.0100	7.6		20.0			
2,2'-oxybis[1-chloropropane]	1.1794 0.8949	1.1013 0.8366	1.0569 0.8195	1.0252	1.0239	Ave		0.9922			0.0100	13.0		20.0			
N-Nitrosopyrrolidine	+++++ 0.4346	0.3433 0.4202	0.4091 0.4087	0.4419	0.4806	Ave		0.4198			0.0100	10.0		20.0			
Acetophenone	1.8767 1.5071	1.8298 1.4304	1.8354 1.3782	1.7433	1.7430	Ave		1.6680			0.0100	11.9		20.0			
N-Nitrosodi-n-propylamine	0.7412 0.7826	0.8914 0.7414	0.9275 0.7000	0.9055	0.9207	Ave		0.8263			0.5000	11.4		20.0			
Methylphenol, 3 & 4	1.0909 0.9842	1.1393 0.9359	1.1608 0.9094	1.1161	1.1256	Ave		1.0578			0.6000	9.4		20.0			
Hexachloroethane	0.5745 0.5632	0.6345 0.5491	0.6469 0.5384	0.6342	0.6318	Ave		0.5966			0.3000	7.5		20.0			
Nitrobenzene	0.2909 0.3687	0.3845 0.3718	0.4072 0.3727	0.4271	0.4262	Ave		0.3811			0.2000	11.4		20.0			
Isophorone	0.5642 0.6059	0.6301 0.6095	0.6625 0.6086	0.6724	0.7024	Ave		0.6320			0.4000	7.0		20.0			
2-Nitrophenol	+++++ 0.1714	0.1323 0.1724	0.1555 0.1732	0.1755	0.1896	Ave		0.1671			0.1000	10.9		20.0			
2,4-Dimethylphenol	0.3189 0.3371	0.3581 0.3335	0.3683 0.3326	0.3756	0.3827	Ave		0.3508			0.2000	6.7		20.0			
Benzoic acid	+++++ 0.1516	0.1012 0.1558	0.0871 0.1588	0.1140	0.1530	Lin1	-0.197	0.1585			0.0100				0.9970		0.9900
Bis(2-chloroethoxy)methane	0.4143 0.3615	0.4043 0.3583	0.4107 0.3574	0.4036	0.4118	Ave		0.3902			0.3000	6.7		20.0			
2,4-Dichlorophenol	0.2554 0.2826	0.2997 0.2864	0.3150 0.2825	0.3204	0.3239	Ave		0.2957			0.2000	7.9		20.0			
1,2,4-Trichlorobenzene	0.4052 0.3494	0.3954 0.3576	0.4071 0.3606	0.3987	0.3997	Ave		0.3842			0.0100	6.2		20.0			
Naphthalene	1.0806 0.9019	1.0401 0.9061	1.0465 0.9145	1.0319	1.0305	Ave		0.9940			0.7000	7.4		20.0			
4-Chloroaniline	0.3672 0.3721	0.3886 0.3678	0.4080 0.3722	0.4183	0.4226	Ave		0.3896			0.0100	6.0		20.0			
2,6-Dichlorophenol	0.2808 0.2732	0.2996 0.2744	0.3099 0.2770	0.3171	0.3171	Ave		0.2936			0.0100	6.6		20.0			
Hexachlorobutadiene	0.2669 0.2336	0.2559 0.2432	0.2621 0.2471	0.2674	0.2670	Ave		0.2554			0.0100	5.0		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189702

SDG No.:

Instrument ID: CH733 GC Column: Rxi-5SilMS ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/30/2016 07:20 Calibration End Date: 09/30/2016 11:22 Calibration ID: 33041

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Caprolactam	+++++ 0.0814	0.0517 0.0798	0.0673 0.0819	0.0792	0.0890	Ave		0.0758			0.0100	16.4		20.0			
4-Chloro-3-methylphenol	0.2174 0.2698	0.2722 0.2664	0.2805 0.2711	0.2919	0.3038	Ave		0.2716			0.2000	9.3		20.0			
2-Methylnaphthalene	0.6735 0.6258	0.7010 0.6383	0.7202 0.6440	0.7049	0.7148	Ave		0.6778			0.4000	5.5		20.0			
1-Methylnaphthalene	0.6690 0.5813	0.6660 0.5796	0.6738 0.5850	0.6675	0.6549	Ave		0.6346			0.0100	6.9		20.0			
Hexachlorocyclopentadiene	+++++ 0.4190	0.3069 0.4598	0.3268 0.4778	0.3975	0.4336	Ave		0.4030			0.0500	16.0		20.0			
1,2,4,5-Tetrachlorobenzene	0.6723 0.6048	0.6520 0.6243	0.6444 0.6384	0.6614	0.6635	Ave		0.6451			0.0100	3.5		20.0			
2,4,6-Trichlorophenol	0.3018 0.3574	0.3395 0.3687	0.3696 0.3772	0.3835	0.4024	Ave		0.3625			0.2000	8.5		20.0			
2,4,5-Trichlorophenol	0.2769 0.3694	0.3767 0.3711	0.3861 0.3695	0.3975	0.4084	Ave		0.3695			0.2000	10.8		20.0			
1,1'-Biphenyl	1.5098 1.2722	1.4691 1.2967	1.4445 1.2853	1.4359	1.4489	Ave		1.3953			0.0100	6.8		20.0			
2-Chloronaphthalene	1.1644 1.0002	1.1741 1.0224	1.1417 1.0162	1.1547	1.1489	Ave		1.1028			0.8000	6.8		20.0			
2-Nitroaniline	0.1131 0.2797	0.1768 0.2810	0.2284 0.2859	0.2730	0.3057	Lin1	-0.096	0.2858			0.0100				0.9980		0.9900
Dimethyl phthalate	1.1313 1.1056	1.2283 1.1257	1.2452 1.1162	1.2631	1.2897	Ave		1.1881			0.0100	6.4		20.0			
1,3-Dinitrobenzene	+++++ 0.1784	0.0938 0.1831	0.1349 0.1835	0.1677	0.1972	Lin2	-0.195	0.1892			0.0100				0.9970		0.9900
2,6-Dinitrotoluene	+++++ 0.2540	0.1963 0.2556	0.2454 0.2519	0.2702	0.2929	Ave		0.2523			0.2000	11.6		20.0			
Acenaphthylene	1.3580 1.4595	1.5570 1.4920	1.6255 1.4861	1.6512	1.6927	Ave		1.5402			0.9000	7.3		20.0			
3-Nitroaniline	+++++ 0.2586	0.1963 0.2553	0.2398 0.2579	0.2734	0.2933	Ave		0.2535			0.0100	11.9		20.0			
2,4-Dinitrophenol	+++++ 0.1742	0.0806 0.1846	0.0948 0.1906	0.1331	0.1756	Lin1	-0.605	0.1889			0.0100				0.9970		0.9900
Acenaphthene	1.1766 0.9831	1.1288 1.0093	1.1106 1.0165	1.1159	1.1409	Ave		1.0852			0.9000	6.6		20.0			
4-Nitrophenol	+++++ 0.1834	0.1392 0.1894	0.1594 0.1862	0.1818	0.2006	Ave		0.1771			0.0100	11.8		20.0			
2,4-Dinitrotoluene	+++++ 0.3330	0.2536 0.3377	0.3131 0.3323	0.3508	0.3792	Ave		0.3285			0.2000	11.8		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189702

SDG No.:

Instrument ID: CH733 GC Column: Rxi-5SilMS ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/30/2016 07:20 Calibration End Date: 09/30/2016 11:22 Calibration ID: 33041

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Dibenzofuran	1.6984 1.4508	1.6856 1.4774	1.6759 1.4854	1.6675	1.6934	Ave		1.6043			0.8000	6.9		20.0			
2,3,5,6-Tetrachlorophenol	0.2300 0.3284	0.3045 0.3366	0.3247 0.3363	0.3447	0.3694	Ave		0.3218			0.0100	12.9		20.0			
2,3,4,6-Tetrachlorophenol	0.2357 0.3229	0.3359 0.3250	0.3473 0.3309	0.3447	0.3647	Ave		0.3259			0.0100	11.9		20.0			
2-Naphthylamine	0.8031 0.9413	0.9896 0.9181	1.0638 0.9147	1.1030	1.1423	Ave		0.9845			0.0100	11.5		20.0			
Diethyl phthalate	1.3201 1.1095	1.2301 1.1224	1.2485 1.1328	1.2224	1.2822	Ave		1.2085			0.0100	6.5		20.0			
Hexadecane	0.3131 0.3351	0.3630 0.3409	0.3805 0.3350	0.3815	0.3899	Ave		0.3549				7.8		20.0			
4-Chlorophenyl phenyl ether	0.6660 0.5898	0.6781 0.6054	0.6731 0.6008	0.6674	0.6771	Ave		0.6447			0.4000	6.0		20.0			
4-Nitroaniline	+++++ 0.2685	0.1935 0.2744	0.2375 0.2793	0.2711	0.2936	Ave		0.2597			0.0100	13.0		20.0			
Fluorene	1.3002 1.1173	1.2982 1.1416	1.2919 1.1404	1.2680	1.3003	Ave		1.2322			0.9000	6.7		20.0			
4,6-Dinitro-2-methylphenol	+++++ 0.1239	0.0673 0.1296	0.0915 0.1312	0.1179	0.1308	Lin2	-0.268	0.1314			0.0100				0.9990		0.9900
N-Nitrosodiphenylamine	0.4898 0.4749	0.5220 0.4744	0.5449 0.4740	0.5386	0.5368	Ave		0.5069			0.0100	6.2		20.0			
1,2-Diphenylhydrazine(as Azobenzene)	0.6227 0.7220	0.7735 0.7294	0.7973 0.7175	0.8191	0.8120	Ave		0.7492			0.0100	8.7		20.0			
4-Bromophenyl phenyl ether	0.2260 0.2213	0.2333 0.2223	0.2379 0.2299	0.2430	0.2442	Ave		0.2322			0.1000	3.8		20.0			
Hexachlorobenzene	0.2467 0.2207	0.2308 0.2253	0.2503 0.2278	0.2446	0.2449	Ave		0.2364			0.1000	4.8		20.0			
Atrazine	+++++ 0.2013	0.1770 0.2005	0.2034 0.1991	0.2196	0.2274	Ave		0.2040			0.0100	7.9		20.0			
Pentachlorophenol	0.1171 0.1593	0.1380 0.1723	0.1296 0.1816	0.1516	0.1650	Ave		0.1518			0.0500	14.6		20.0			
n-Octadecane	1.0565 1.2192	1.2355 1.1816	1.3446 1.0984	1.3380	1.4078	Ave		1.2352				10.0		20.0			
Phenanthrene	1.2923 1.0175	1.1213 1.0092	1.1283 1.0426	1.1384	1.1254	Ave		1.1094			0.7000	8.2		20.0			
Anthracene	1.0411 1.0133	1.0776 1.0195	1.1142 1.0217	1.1331	1.1468	Ave		1.0709			0.7000	5.1		20.0			
Carbazole	0.8716 0.8719	0.9076 0.8757	0.9719 0.9018	0.9757	0.9908	Ave		0.9209			0.0100	5.5		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189702

SDG No.:

Instrument ID: CH733 GC Column: Rxi-5SilMS ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/30/2016 07:20 Calibration End Date: 09/30/2016 11:22 Calibration ID: 33041

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Di-n-butyl phthalate	+++++ 1.0650	0.8837 1.1085	0.9988 1.1182	1.0836	1.1583	Ave		1.0595			0.0100	8.7		20.0			
Fluoranthene	1.1065 1.1715	1.0951 1.2131	1.1600 1.2522	1.2343	1.2637	Ave		1.1871			0.6000	5.4		20.0			
Benzidine	+++++ 0.4637	0.2073 0.4248	0.2613 0.3987	0.3587	0.5188	Qua	-1.050	0.5684	-0.001986		0.0100				0.9980		0.9900
Pyrene	1.2759 1.1492	1.2377 1.1122	1.2365 1.0979	1.2617	1.3117	Ave		1.2104			0.6000	6.6		20.0			
Butyl benzyl phthalate	+++++ 0.4353	0.2902 0.4464	0.3247 0.4498	0.3882	0.4566	Ave		0.3987			0.0100	16.8		20.0			
3,3'-Dichlorobenzidine	+++++ 0.3874	0.2108 0.4046	0.2387 0.4137	0.3170	0.3991	Lin2	-0.433	0.3978			0.0100				0.9910		0.9900
Bis(2-ethylhexyl) phthalate	+++++ 0.5869	0.3809 0.6099	0.4351 0.6190	0.5330	0.6140	Ave		0.5398			0.0100	17.8		20.0			
Benzo[a]anthracene	1.0932 0.9597	1.0451 0.9689	1.0636 0.9656	1.0773	1.0874	Ave		1.0326			0.8000	5.6		20.0			
Chrysene	1.1530 0.8940	1.0695 0.9035	1.0328 0.9070	1.0254	1.0378	Ave		1.0029			0.7000	9.3		20.0			
Di-n-octyl phthalate	1.1153 1.0083	0.8719 1.0983	0.6547 1.1197	0.8230	0.9963	Ave		0.9610			0.0100	17.2		20.0			
7,12-Dimethylbenz(a)anthracene	0.4852 0.6340	0.5455 0.6866	0.5600 0.6953	0.6196	0.6816	Ave		0.6135			0.0100	12.5		20.0			
Benzo[b]fluoranthene	1.1188 1.2311	1.0757 1.3748	1.1702 1.3659	1.2414	1.3366	Ave		1.2393			0.7000	9.1		20.0			
Benzo[k]fluoranthene	1.2759 1.1757	1.3874 1.1814	1.3514 1.1958	1.4218	1.3473	Ave		1.2921			0.7000	7.6		20.0			
Benzo[e]pyrene	1.1021 1.1091	1.0702 1.1842	1.1087 1.1769	1.1927	1.2281	Ave		1.1465			0.0100	4.9		20.0			
Benzo[a]pyrene	1.0612 1.0760	1.2034 1.1295	1.0599 1.1268	1.1923	1.2284	Ave		1.1347			0.7000	5.9		20.0			
Indeno[1,2,3-cd]pyrene	0.8637 1.3145	0.9412 1.4687	1.1136 1.5100	1.2505	1.3365	Ave		1.2248			0.5000	19.2		20.0			
Dibenz(a,h)anthracene	0.6593 1.0208	0.7848 1.1484	0.9234 1.1786	0.9882	1.0774	Ave		0.9726			0.4000	18.3		20.0			
Benzo[g,h,i]perylene	0.8510 1.0448	0.9361 1.1548	1.0177 1.1615	1.0729	1.1285	Ave		1.0459			0.5000	10.4		20.0			
2-Fluorophenol (Surr)	1.0211 1.1394	1.1452 1.1661	1.1762 1.1588	1.1896	1.2313	Ave		1.1535				5.3		20.0			
Phenol-d5 (Surr)	1.3034 1.4078	1.4427 1.4002	1.4591 1.3842	1.4837	1.5359	Ave		1.4271				4.9		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189702

SDG No.:

Instrument ID: CH733 GC Column: Rxi-5SilMS ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/30/2016 07:20 Calibration End Date: 09/30/2016 11:22 Calibration ID: 33041

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Nitrobenzene-d5 (Surr)	0.2662 0.3772	0.3417 0.3784	0.3795 0.3833	0.4022	0.4243	Ave		0.3691				12.9		20.0			
2-Fluorobiphenyl	1.4425 1.2619	1.4568 1.2870	1.4227 1.2816	1.4173	1.4477	Ave		1.3772				6.1		20.0			
2,4,6-Tribromophenol (Surr)	+++++ 0.0888	0.0806 0.0899	0.0885 0.0912	0.0922	0.0972	Ave		0.0898			0.0100	5.6		20.0			
Terphenyl-d14 (Surr)	0.7580 0.7695	0.8199 0.7573	0.8189 0.7466	0.8310	0.8781	Ave		0.7974				5.8		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189702

SDG No.:

Instrument ID: CH733 GC Column: Rxi-5SilMS ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/30/2016 07:20 Calibration End Date: 09/30/2016 11:22 Calibration ID: 33041

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-189702/3	N09300003.D
Level 2	IC 180-189702/4	N09300004.D
Level 3	IC 180-189702/5	N09300005.D
Level 4	ICIS 180-189702/6	N09300006.D
Level 5	IC 180-189702/7	N09300007.D
Level 6	IC 180-189702/8	N09300008.D
Level 7	IC 180-189702/9	N09300009.D
Level 8	IC 180-189702/10	N09300010.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
1,4-Dioxane	DCBd 4	Ave	3492 259244	16556 379976	31857 495296	71727	135094	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
N-Nitrosodimethylamine	DCBd 4	Ave	3349 369955	19499 544050	39799 705958	96244	192364	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Pyridine	DCBd 4	Ave	+++++ 683777	37125 986157	75183 1264810	182377	361081	+++++ 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Methyl methanesulfonate	DCBd 4	Ave	5613 477050	29325 689364	58166 865208	129041	255248	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Benzaldehyde	DCBd 4	Ave	6655 557013	29901 663313	61906 752306	142094	330893	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Phenol	DCBd 4	Ave	12363 940057	58550 1308273	117282 1645234	260776	504450	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Aniline	DCBd 4	Ave	12669 1073131	62238 1464577	126542 1845966	291361	570743	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Bis(2-chloroethyl)ether	DCBd 4	Ave	9240 693242	44886 934064	88203 1184842	191064	373145	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
2-Chlorophenol	DCBd 4	Ave	9000 728541	44359 998689	87266 1286034	197000	386701	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
n-Decane	DCBd 4	Ave	7891 553913	35425 760315	68262 977209	153643	295272	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
1,3-Dichlorobenzene	DCBd 4	Ave	12141 856098	57632 1182671	108982 1518998	242783	461456	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
1,4-Dichlorobenzene	DCBd 4	Ave	12790 866278	56300 1194541	110004 1514436	243817	469155	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Benzyl alcohol	DCBd 4	Ave	4525 420877	23293 572246	48461 734125	111618	226338	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
1,2-Dichlorobenzene	DCBd 4	Ave	11810 797217	53821 1082016	103222 1372199	228421	432357	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
2-Methylphenol	DCBd 4	Ave	7827 614339	38525 820947	76226 1032579	170407	332880	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189702

SDG No.:

Instrument ID: CH733 GC Column: Rxi-5SilMS ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/30/2016 07:20 Calibration End Date: 09/30/2016 11:22 Calibration ID: 33041

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Indene	DCBd 4	Ave	16906 1180497	75926 1628902	149704 2043138	330133	638917	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
2,2'-oxybis[1-chloropropane]	DCBd 4	Ave	8896 552821	38611 721035	72516 912657	159810	307046	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
N-Nitrosopyrrolidine	DCBd 4	Ave	+++++ 268451	12037 362157	28072 455211	68885	144134	+++++ 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Acetophenone	DCBd 4	Ave	14155 931030	64152 1232879	125934 1534933	271746	522707	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
N-Nitrosodi-n-propylamine	DCBd 4	Ave	5591 483470	31252 638996	63637 779560	141139	276108	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Methylphenol, 3 & 4	DCBd 4	Ave	8228 607998	39943 806673	79646 1012819	173966	337567	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Hexachloroethane	DCBd 4	Ave	4333 347929	22244 473315	44383 599628	98857	189477	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Nitrobenzene	NPT	Ave	8063 780722	49190 1046201	99969 1305632	228929	433239	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Isophorone	NPT	Ave	15638 1283121	80610 1715135	162634 2131891	360391	714011	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
2-Nitrophenol	NPT	Ave	+++++ 362914	16924 485199	38169 606795	94089	192726	+++++ 40.0	2.00 60.0	4.00 80.0	10.0	20.0
2,4-Dimethylphenol	NPT	Ave	8838 713832	45812 938383	90419 1165032	201310	389000	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Benzoic acid	NPT	Lin1	+++++ 321055	12954 438327	21386 556121	61128	155508	+++++ 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Bis(2-chloroethoxy)methane	NPT	Ave	11482 765443	51730 1008114	100822 1251900	216312	418609	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
2,4-Dichlorophenol	NPT	Ave	7079 598468	38349 805780	77326 989494	171711	329210	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
1,2,4-Trichlorobenzene	NPT	Ave	11231 739839	50586 1006252	99940 1263130	213684	406242	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Naphthalene	NPT	Ave	29952 1909879	133066 2549548	256917 3203278	553092	1047514	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
4-Chloroaniline	NPT	Ave	10179 788060	49712 1035072	100152 1303646	224219	429559	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
2,6-Dichlorophenol	NPT	Ave	7784 578525	38332 772032	76076 970162	169966	322345	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Hexachlorobutadiene	NPT	Ave	7398 494782	32735 684382	64336 865690	143304	271378	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Caprolactam	NPT	Ave	+++++ 172427	6619 224545	16532 286988	42444	90515	+++++ 40.0	2.00 60.0	4.00 80.0	10.0	20.0
4-Chloro-3-methylphenol	NPT	Ave	6026 571250	34828 749521	68851 949650	156437	308810	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189702

SDG No.:

Instrument ID: CH733 GC Column: Rxi-5SilMS ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/30/2016 07:20 Calibration End Date: 09/30/2016 11:22 Calibration ID: 33041

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
2-Methylnaphthalene	NPT	Ave	18668 1325155	89693 1796088	176808 2255849	377840	726557	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
1-Methylnaphthalene	NPT	Ave	18542 1230976	85206 1630907	165408 2049187	357747	665689	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Hexachlorocyclopentadiene	ANT	Ave	+++++ 533035	24168 766880	50753 995890	130781	269155	+++++ 40.0	2.00 60.0	4.00 80.0	10.0	20.0
1,2,4,5-Tetrachlorobenzene	ANT	Ave	11343 769463	51349 1041137	100100 1330683	217577	411842	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
2,4,6-Trichlorophenol	ANT	Ave	5092 454637	26740 614932	57409 786369	126163	249779	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
2,4,5-Trichlorophenol	ANT	Ave	4672 469991	29667 618924	59969 770321	130785	253513	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
1,1'-Biphenyl	ANT	Ave	25472 1618453	115706 2162490	224372 2679153	472402	899336	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
2-Chloronaphthalene	ANT	Ave	19645 1272491	92469 1705029	177334 2118319	379892	713112	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
2-Nitroaniline	ANT	Lin1	1909 355885	13928 468647	35470 595917	89815	189751	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Dimethyl phthalate	ANT	Ave	19087 1406502	96740 1877302	193416 2326683	415527	800539	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
1,3-Dinitrobenzene	ANT	Lin2	+++++ 226921	7386 305433	20950 382590	55164	122374	+++++ 40.0	2.00 60.0	4.00 80.0	10.0	20.0
2,6-Dinitrotoluene	ANT	Ave	+++++ 323139	15457 426246	38110 525103	88885	181816	+++++ 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Acenaphthylene	ANT	Ave	22911 1856750	122626 2488305	252477 3097719	543228	1050634	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
3-Nitroaniline	ANT	Ave	+++++ 328949	15458 425737	37254 537689	89960	182050	+++++ 40.0	2.00 60.0	4.00 80.0	10.0	20.0
2,4-Dinitrophenol	ANT	Lin1	+++++ 443230	12694 615833	29452 794537	87565	218022	+++++ 80.0	4.00 120	8.00 160	20.0	40.0
Acenaphthene	ANT	Ave	19851 1250654	88907 1683304	172510 2118972	367099	708171	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
4-Nitrophenol	ANT	Ave	+++++ 466564	21921 631823	49510 776098	119601	249003	+++++ 80.0	4.00 120	8.00 160	20.0	40.0
2,4-Dinitrotoluene	ANT	Ave	+++++ 423594	19976 563149	48636 692767	115398	235388	+++++ 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Dibenzofuran	ANT	Ave	28654 1845731	132758 2463880	260308 3096393	548579	1051098	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
2,3,5,6-Tetrachlorophenol	ANT	Ave	3880 417780	23983 561398	50437 701021	113414	229289	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
2,3,4,6-Tetrachlorophenol	ANT	Ave	3976 410810	26453 541937	53948 689837	113402	226356	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189702

SDG No.:

Instrument ID: CH733 GC Column: Rxi-5SilMS ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/30/2016 07:20 Calibration End Date: 09/30/2016 11:22 Calibration ID: 33041

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
2-Naphthylamine	ANT	Ave	13550 1197500	77942 1531075	165230 1906672	362883	708997	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Diethyl phthalate	ANT	Ave	22272 1411488	96883 1871857	193920 2361332	402146	795878	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Hexadecane	NPT	Ave	8679 709686	46440 959273	93410 1173365	204456	396352	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
4-Chlorophenyl phenyl ether	ANT	Ave	11236 750351	53410 1009595	104544 1252427	219560	420252	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
4-Nitroaniline	ANT	Ave	+++++ 341647	15243 457691	36896 582229	89187	182265	+++++ 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Fluorene	ANT	Ave	21936 1421434	102243 1903871	200673 2377225	417145	807107	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
4,6-Dinitro-2-methylphenol	PHN	Lin2	+++++ 517442	18000 712710	47642 898854	128423	274408	+++++ 80.0	4.00 120	8.00 160	20.0	40.0
N-Nitrosodiphenylamine	PHN	Ave	14053 991345	69848 1304330	141890 1623322	293327	563167	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
1,2-Diphenylhydrazine(as Azobenzene)	PHN	Ave	17867 1507127	103505 2005338	207600 2456815	446097	851855	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
4-Bromophenyl phenyl ether	PHN	Ave	6485 461877	31213 611201	61944 787099	132320	256223	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Hexachlorobenzene	PHN	Ave	7079 460670	30888 619320	65172 780105	133188	256956	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Atrazine	PHN	Ave	+++++ 420163	23681 551327	52954 681784	119600	238537	+++++ 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Pentachlorophenol	PHN	Ave	6720 665010	36942 947190	67511 1243748	165085	346247	0.760 80.0	4.00 120	8.00 160	20.0	40.0
n-Octadecane	DCBd 4	Ave	7969 753142	43316 1018396	92260 1223258	208561	422190	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Phenanthrene	PHN	Ave	37076 2124003	150049 2774762	293794 3570297	619983	1180586	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Anthracene	PHN	Ave	29870 2115212	144197 2803204	290128 3498850	617109	1203043	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Carbazole	PHN	Ave	25006 1820054	121451 2407703	253073 3087986	531350	1039434	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Di-n-butyl phthalate	PHN	Ave	+++++ 2223194	118252 3047666	260078 3829235	590158	1215107	+++++ 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Fluoranthene	PHN	Ave	31747 2445536	146541 3335442	302071 4287835	672203	1325653	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Benzidine	CRY	Qua	+++++ 964085	25737 1239445	67702 1516376	195339	526403	+++++ 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Pyrene	CRY	Ave	33103 2389556	153679 3244755	320357 4175533	686996	1330896	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189702

SDG No.:

Instrument ID: CH733 GC Column: Rxi-5SilMS ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/30/2016 07:20 Calibration End Date: 09/30/2016 11:22 Calibration ID: 33041

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Butyl benzyl phthalate	CRY	Ave	+++++ 905072	36036 1302455	84111 1710836	211359	463283	+++++ 40.0	2.00 60.0	4.00 80.0	10.0	20.0
3,3'-Dichlorobenzidine	CRY	Lin2	+++++ 805430	26180 1180377	61850 1573544	172613	404883	+++++ 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Bis(2-ethylhexyl) phthalate	CRY	Ave	+++++ 1220275	47301 1779328	112726 2354350	290236	622992	+++++ 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Benzo[a]anthracene	CRY	Ave	28361 1995501	129765 2826610	275554 3672470	586591	1103241	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Chrysene	CRY	Ave	29914 1858874	132803 2635876	267567 3449679	558351	1052916	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Di-n-octyl phthalate	PRY	Ave	23552 1785637	87925 2672547	133635 3608159	359325	836590	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
7,12-Dimethylbenz(a)anthracene	PRY	Ave	10245 1122812	55011 1670691	114289 2240431	270514	572313	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Benzo[b]fluoranthene	PRY	Ave	23626 2180124	108475 3345152	238833 4401553	541995	1122311	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Benzo[k]fluoranthene	PRY	Ave	26942 2081994	139904 2874559	275825 3853347	620767	1131299	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Benzo[e]pyrene	PRY	Ave	23272 1964113	107921 2881544	226294 3792402	520745	1031186	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Benzo[a]pyrene	PRY	Ave	22409 1905460	121351 2748388	216328 3630999	520584	1031475	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Indeno[1,2,3-cd]pyrene	PRY	Ave	18239 2327956	94909 3573790	227286 4865816	545988	1122235	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Dibenz(a,h)anthracene	PRY	Ave	13922 1807790	79141 2794400	188475 3797938	431445	904691	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Benzo[g,h,i]perylene	PRY	Ave	17970 1850245	94401 2809902	207721 3742786	468418	947603	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
2-Fluorophenol (Surr)	DCBd 4	Ave	7702 703872	40150 1005088	80706 1290615	185434	369264	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Phenol-d5 (Surr)	DCBd 4	Ave	9831 869688	50578 1206883	100116 1541568	231271	460606	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Nitrobenzene-d5 (Surr)	NPT	Ave	7379 798753	43713 1064904	93167 1342754	215598	431261	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
2-Fluorobiphenyl	ANT	Ave	24337 1605462	114738 2146462	220981 2671556	466268	898606	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0
2,4,6-Tribromophenol (Surr)	PHN	Ave	+++++ 185399	10780 247051	23037 312269	50190	101990	+++++ 40.0	2.00 60.0	4.00 80.0	10.0	20.0
Terphenyl-d14 (Surr)	CRY	Ave	19666 1600003	101807 2209456	212158 2839483	452494	890921	0.380 40.0	2.00 60.0	4.00 80.0	10.0	20.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189702

SDG No.:

Instrument ID: CH733 GC Column: Rxi-5SilMS ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/30/2016 07:20 Calibration End Date: 09/30/2016 11:22 Calibration ID: 33041

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua = Quadratic ISTD

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189702

SDG No.:

Instrument ID: CH733 GC Column: Rxi-5SilMS ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/30/2016 07:20 Calibration End Date: 09/30/2016 11:22 Calibration ID: 33041

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-189702/3	N09300003.D
Level 2	IC 180-189702/4	N09300004.D
Level 3	IC 180-189702/5	N09300005.D
Level 4	ICIS 180-189702/6	N09300006.D
Level 5	IC 180-189702/7	N09300007.D
Level 6	IC 180-189702/8	N09300008.D
Level 7	IC 180-189702/9	N09300009.D
Level 8	IC 180-189702/10	N09300010.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3	LVL 4	LVL 5	LVL 6
Benzoic acid	+++++ 0.3	26.1 1.7	-13.9	-15.6	2.7	-1.3	40	40 40	40	40	40	40
2-Nitroaniline	27.6 -1.1	-21.4 0.4	-11.7	-1.1	8.6	-1.3	40 40	40 40	40	40	40	40
1,3-Dinitrobenzene	+++++ -1.5	1.0 -1.7	-3.0	-1.1	9.4	-3.1	40	40 40	40	40	40	40
2,4-Dinitrophenol	+++++ 0.4	22.7 2.9	-9.8	-13.5	1.0	-3.8	40	40 40	40	40	40	40
4,6-Dinitro-2-methylphenol	+++++ 0.3	2.1 1.1	-4.9	-0.1	4.6	-3.2	40	40 40	40	40	40	40
Benzidine	+++++ -2.1	30.0 0.9	-6.6	-15.9	8.8	0.2	70	70 70	70	70	70	70
3,3'-Dichlorobenzidine	+++++ 3.5	7.4 5.4	-12.8	-9.4	5.8	0.1	30	30 30	30	30	30	30

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300003.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 30-Sep-2016 07:20:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013670-003
Operator ID: 03200 Instrument ID: CH733
Sublist: chrom-BNA_CH733*sub2

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 30-Sep-2016 12:19:10 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: piccolinov Date: 30-Sep-2016 08:21:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.272	6.260	0.012	97	158793	8.00	8.00	
* 2 Naphthalene-d8	136	7.519	7.513	0.006	99	583523	8.00	8.00	
* 3 Acenaphthene-d10	164	9.166	9.154	0.012	92	355188	8.00	8.00	
* 4 Phenanthrene-d10	188	10.536	10.530	0.006	97	604011	8.00	8.00	
* 5 Chrysene-d12	240	14.095	14.089	0.006	97	546191	8.00	8.00	
* 6 Perylene-d12	264	17.036	17.030	0.006	98	444559	8.00	8.00	
$ 7 2-Fluorophenol	112	4.837	4.831	0.005	90	7702	0.3800	0.3364	
$ 8 Phenol-d5	99	5.901	5.889	0.012	93	9831	0.3800	0.3471	
$ 9 Nitrobenzene-d5	82	6.819	6.807	0.012	89	7379	0.3800	0.2741	
$ 10 2-Fluorobiphenyl	172	8.519	8.513	0.006	99	24337	0.3800	0.3980	
$ 11 2,4,6-Tribromophenol	330	9.889	9.883	0.006	86	1554	0.3800	0.2293	
$ 12 Terphenyl-d14	244	12.324	12.324	0.000	98	19666	0.3800	0.3612	
13 1,4-Dioxane	88	1.413	1.396	0.017	34	3492	0.3800	0.3893	
14 N-Nitrosodimethylamine	74	2.072	2.043	0.029	65	3349	0.3800	0.2870	M
15 Pyridine	79	2.195	2.113	0.082	93	4151	0.3800	0.1849	M
21 Methyl methanesulfonate	80	4.607	4.578	0.029	83	5613	0.3800	0.3504	
25 Benzaldehyde	77	5.813	5.801	0.012	95	6655	0.3800	0.3832	
26 Phenol	94	5.913	5.901	0.012	95	12363	0.3800	0.3866	
27 Aniline	93	5.931	5.919	0.012	12	12669	0.3800	0.3605	
29 Bis(2-chloroethyl)ether	93	6.001	5.989	0.012	95	9240	0.3800	0.3907	
30 2-Chlorophenol	128	6.054	6.042	0.012	94	9000	0.3800	0.3710	
31 n-Decane	43	6.125	6.113	0.012	80	7891	0.3800	0.4142	
32 1,3-Dichlorobenzene	146	6.213	6.207	0.006	94	12141	0.3800	0.4057	
33 1,4-Dichlorobenzene	146	6.289	6.278	0.011	91	12790	0.3800	0.4232	
34 Benzyl alcohol	108	6.413	6.395	0.018	85	4525	0.3800	0.3349	
35 1,2-Dichlorobenzene	146	6.442	6.436	0.006	93	11810	0.3800	0.4216	
36 2-Methylphenol	108	6.519	6.513	0.006	95	7827	0.3800	0.3789	
37 Indene	116	6.531	6.525	0.005	90	16906	0.3800	0.4136	
38 2,2'-oxybis[1-chloropropan	45	6.548	6.542	0.006	82	8896	0.3800	0.4517	
39 N-Nitrosopyrrolidine	100	6.642	6.625	0.017	91	1867	0.3800	0.2241	
42 4-Methylphenol	108	6.672	6.660	0.012	60	8228	0.3800	0.3919	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
40 Acetophenone	105	6.666	6.660	0.006	86	14155	0.3800	0.4275	
41 N-Nitrosodi-n-propylamine	70	6.672	6.660	0.012	44	5591	0.3800	0.3409	
45 Hexachloroethane	117	6.783	6.778	0.005	80	4333	0.3800	0.3659	
46 Nitrobenzene	77	6.836	6.825	0.011	87	8063	0.3800	0.2900	
48 Isophorone	82	7.072	7.054	0.018	98	15638	0.3800	0.3393	
49 2-Nitrophenol	139	7.148	7.142	0.006	94	2363	0.3800	0.1938	
50 2,4-Dimethylphenol	107	7.178	7.172	0.006	97	8838	0.3800	0.3454	
52 Benzoic acid	122	7.207	7.213	-0.006	1	2540	0.3800	1.46	
53 Bis(2-chloroethoxy)methane	93	7.266	7.260	0.006	98	11482	0.3800	0.4034	
54 2,4-Dichlorophenol	162	7.378	7.366	0.012	92	7079	0.3800	0.3282	
56 1,2,4-Trichlorobenzene	180	7.460	7.454	0.006	92	11231	0.3800	0.4008	
58 Naphthalene	128	7.536	7.530	0.006	95	29952	0.3800	0.4131	
59 4-Chloroaniline	127	7.578	7.572	0.006	95	10179	0.3800	0.3582	
60 2,6-Dichlorophenol	162	7.589	7.583	0.006	94	7784	0.3800	0.3634	
62 Hexachlorobutadiene	225	7.660	7.654	0.006	96	7398	0.3800	0.3971	
64 Caprolactam	113		7.866				ND	ND	M
67 4-Chloro-3-methylphenol	107	8.019	8.013	0.006	91	6026	0.3800	0.3042	
69 2-Methylnaphthalene	142	8.189	8.183	0.006	92	18668	0.3800	0.3776	
71 1-Methylnaphthalene	142	8.283	8.277	0.006	92	18542	0.3800	0.4006	
72 Hexachlorocyclopentadiene	237	8.342	8.336	0.006	89	4385	0.3800	0.2450	
73 1,2,4,5-Tetrachlorobenzene	216	8.348	8.342	0.006	97	11343	0.3800	0.3960	
74 2,4,6-Trichlorophenol	196	8.448	8.436	0.012	89	5092	0.3800	0.3164	
75 2,4,5-Trichlorophenol	196	8.477	8.472	0.005	91	4672	0.3800	0.2848	
76 1,1'-Biphenyl	154	8.619	8.607	0.012	95	25472	0.3800	0.4112	
77 2-Chloronaphthalene	162	8.648	8.636	0.012	96	19645	0.3800	0.4012	
79 2-Nitroaniline	65	8.724	8.713	0.011	77	1909	0.3800	0.4848	
82 Dimethyl phthalate	163	8.877	8.866	0.011	98	19087	0.3800	0.3618	
83 1,3-Dinitrobenzene	168	8.907	8.901	0.006	76	694	0.3800	1.11	
84 2,6-Dinitrotoluene	165	8.936	8.930	0.006	76	1279	0.3800	0.1142	
85 Acenaphthylene	152	9.036	9.024	0.012	97	22911	0.3800	0.3350	
86 3-Nitroaniline	138	9.095	9.089	0.006	17	1724	0.3800	0.1532	
87 2,4-Dinitrophenol	184	9.195	9.183	0.012	58	1426	0.7600	3.37	
88 Acenaphthene	153	9.195	9.189	0.006	94	19851	0.3800	0.4120	
89 4-Nitrophenol	109	9.224	9.219	0.005	87	2259	0.7600	0.2873	
91 2,4-Dinitrotoluene	165	9.313	9.301	0.012	81	2119	0.3800	0.1453	
93 Dibenzofuran	168	9.348	9.342	0.006	96	28654	0.3800	0.4023	
95 2,3,5,6-Tetrachlorophenol	232	9.419	9.413	0.006	84	3880	0.3800	0.2715	
96 2,3,4,6-Tetrachlorophenol	232	9.460	9.448	0.012	67	3976	0.3800	0.2748	
97 2-Naphthylamine	143	9.489	9.477	0.012	97	13550	0.3800	0.3100	
98 Diethyl phthalate	149	9.513	9.507	0.006	97	22272	0.3800	0.4151	
99 Hexadecane	57	9.519	9.513	0.006	92	8679	0.3800	0.3353	
100 4-Chlorophenyl phenyl ethe	204	9.648	9.642	0.006	89	11236	0.3800	0.3925	
101 4-Nitroaniline	138	9.654	9.648	0.006	76	1776	0.3800	0.1540	
103 Fluorene	166	9.666	9.660	0.006	96	21936	0.3800	0.4010	
104 4,6-Dinitro-2-methylphenol	198	9.683	9.683	0.000	1	1207	0.7600	2.16	
105 N-Nitrosodiphenylamine	169	9.748	9.742	0.006	59	14053	0.3800	0.3672	
90 1,2-Diphenylhydrazine	77	9.795	9.783	0.012	96	17867	0.3800	0.3159	
57 Azobenzene	77	9.795	9.783	0.012	96	17867	0.3800	0.3159	
110 4-Bromophenyl phenyl ether	248	10.101	10.095	0.006	64	6485	0.3800	0.3699	
112 Hexachlorobenzene	284	10.183	10.177	0.006	90	7079	0.3800	0.3966	
113 Atrazine	200	10.213	10.201	0.012	88	3605	0.3800	0.2340	
116 Pentachlorophenol	266	10.354	10.342	0.012	89	6720	0.7600	0.5863	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
115 n-Octadecane	57	10.354	10.348	0.006	91	7969	0.3800	0.3250	
121 Phenanthrene	178	10.560	10.554	0.006	95	37076	0.3800	0.4426	
122 Anthracene	178	10.613	10.607	0.006	97	29870	0.3800	0.3694	
124 Carbazole	167	10.754	10.742	0.012	95	25006	0.3800	0.3597	
126 Di-n-butyl phthalate	149	11.048	11.042	0.006	99	19646	0.3800	0.2456	
131 Fluoranthene	202	11.865	11.860	0.005	97	31747	0.3800	0.3542	
132 Benzidine	184	11.989	11.983	0.006	1	3881	0.3800	1.96	
133 Pyrene	202	12.171	12.165	0.006	97	33103	0.3800	0.4006	
138 Butyl benzyl phthalate	149	13.024	13.024	0.000	89	5579	0.3800	0.2049	
144 3,3'-Dichlorobenzidine	252	13.989	13.995	-0.006	1	3721	0.3800	1.23	
145 Bis(2-ethylhexyl) phthalat	149	14.036	14.036	0.000	32	8826	0.3800	0.2395	
146 Benzo[a]anthracene	228	14.077	14.071	0.006	97	28361	0.3800	0.4023	
147 Chrysene	228	14.142	14.142	0.000	96	29914	0.3800	0.4369	
150 Di-n-octyl phthalate	149	15.348	15.348	0.000	45	23552	0.3800	0.4410	
151 7,12-Dimethylbenz(a)anthra	256	16.218	16.212	0.006	89	10245	0.3800	0.3005	
152 Benzo[b]fluoranthene	252	16.236	16.230	0.006	96	23626	0.3800	0.3431	
153 Benzo[k]fluoranthene	252	16.289	16.283	0.006	96	26942	0.3800	0.3752	M
219 Benzo[e]pyrene	252	16.812	16.806	0.006	0	23272	0.3800	0.3653	
154 Benzo[a]pyrene	252	16.924	16.912	0.012	75	22409	0.3800	0.3554	
157 Indeno[1,2,3-cd]pyrene	276	19.271	19.265	0.006	94	18239	0.3800	0.2680	
158 Dibenz(a,h)anthracene	278	19.312	19.288	0.024	88	13922	0.3800	0.2576	
159 Benzo[g,h,i]perylene	276	19.883	19.865	0.018	95	17970	0.3800	0.3092	
S 197 Methyl Phenols,Total	108				0		0.7600	0.7708	
S 199 Total Cresols	108				0		0.7600	0.7708	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

SVTAPSTD0.38i_00001 Amount Added: 1.00 Units: mL

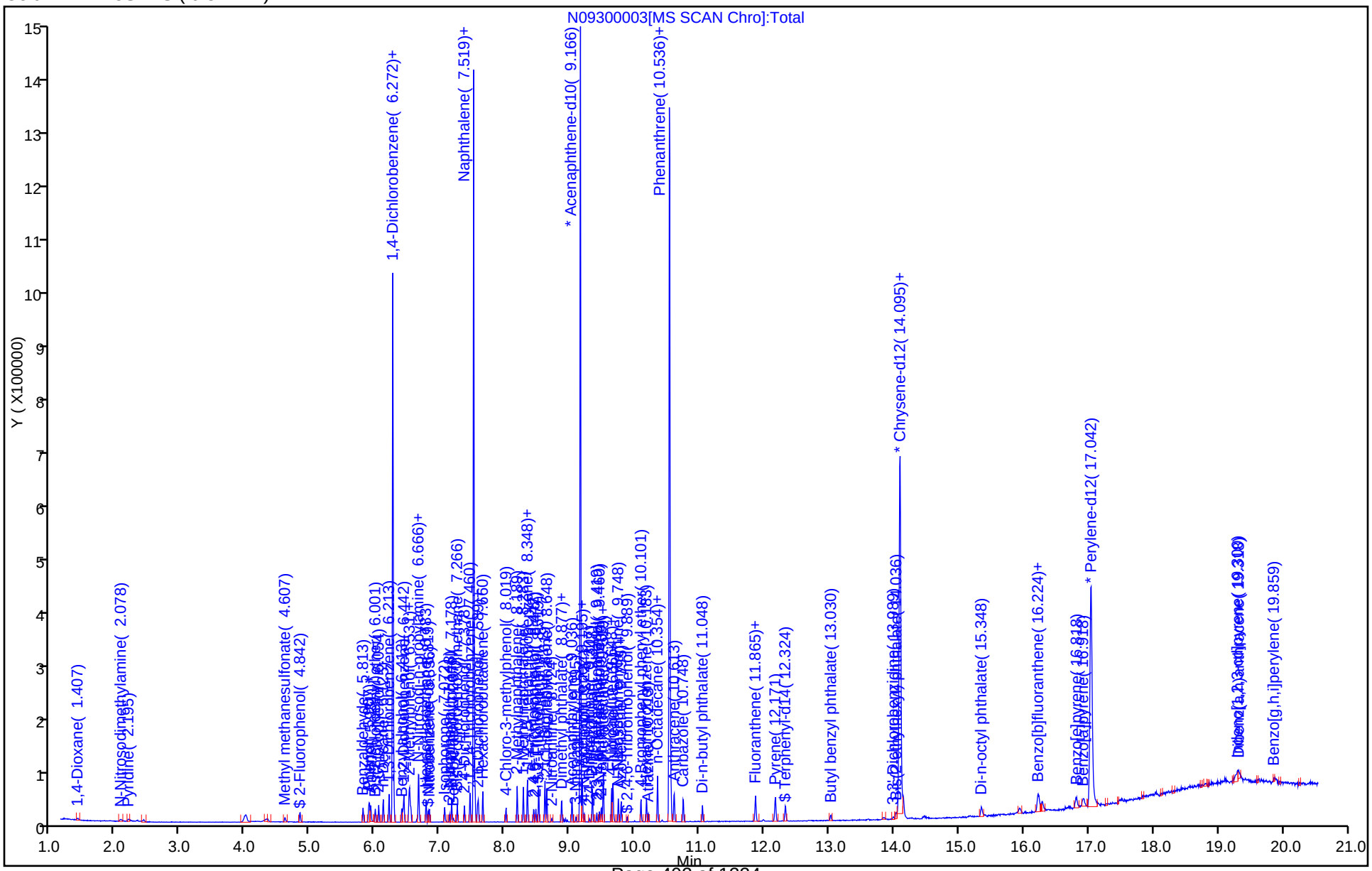
Report Date: 30-Sep-2016 12:19:12 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300003.D

Injection Date:	30-Sep-2016 07:20:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	IC			Worklist Smp#:	3
Client ID:					
Injection Vol:	2.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)



Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

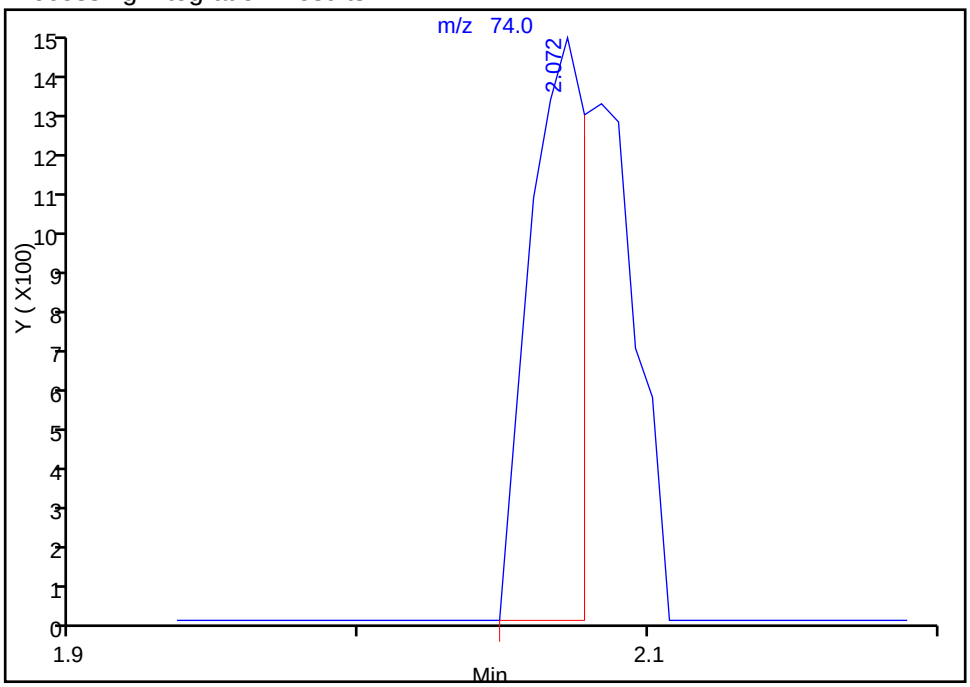
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300003.D				
Injection Date:	30-Sep-2016 07:20:30	Instrument ID:	CH733		
Lims ID:	IC				
Client ID:					
Operator ID:	03200	ALS Bottle#:	2	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

14 N-Nitrosodimethylamine, CAS: 62-75-9

Signal: 1

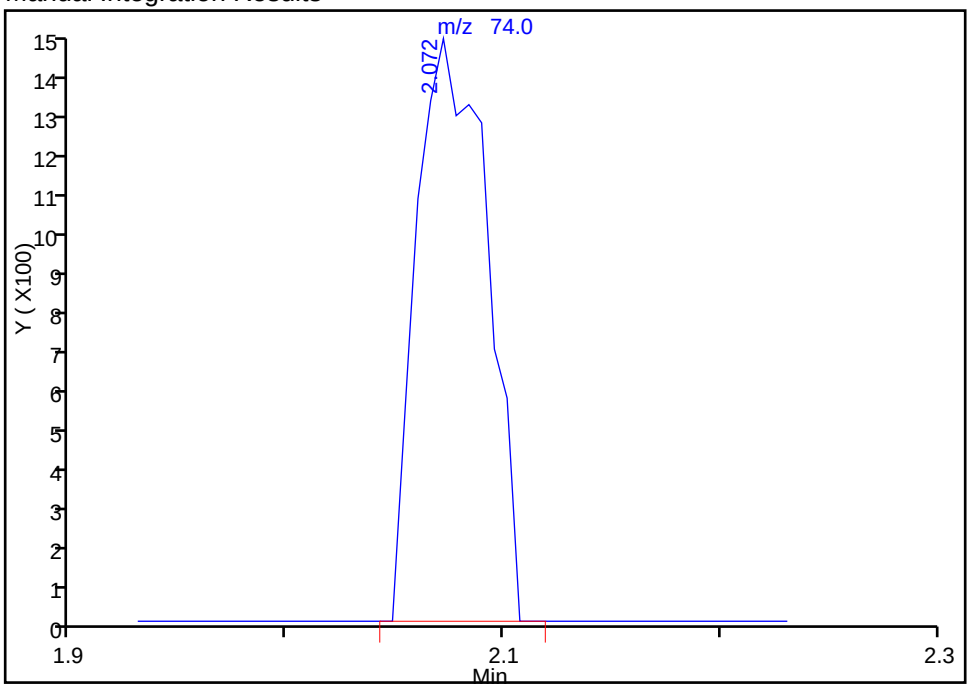
Processing Integration Results

RT: 2.07
Area: 2003
Amount: 0.247555
Amount Units: ng



Manual Integration Results

RT: 2.07
Area: 3349
Amount: 0.286999
Amount Units: ng



Reviewer: piccolinov, 30-Sep-2016 08:23:08

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

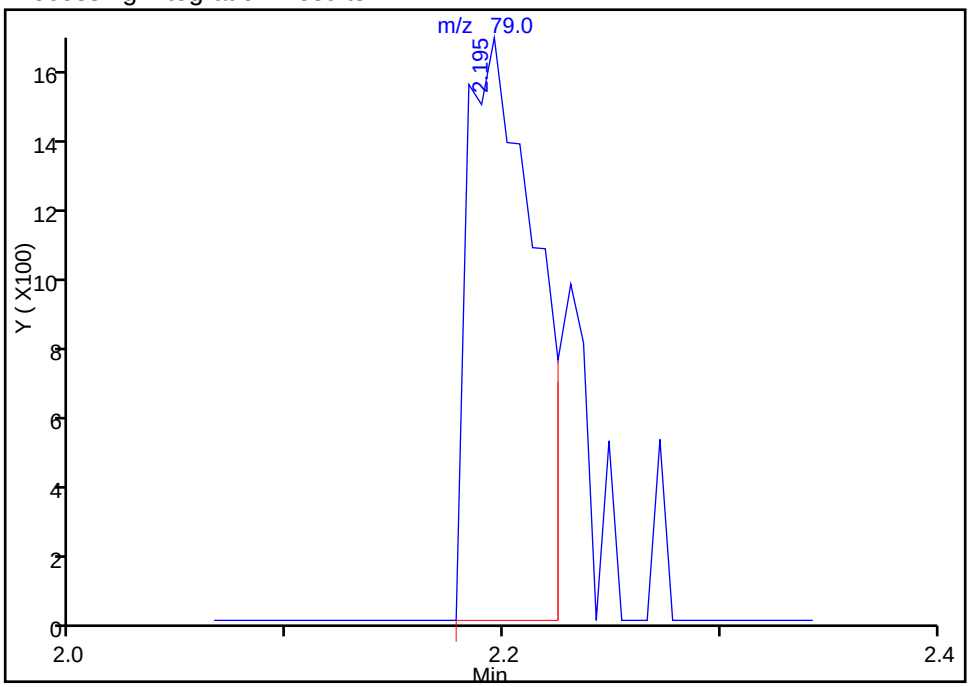
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300003.D				
Injection Date:	30-Sep-2016 07:20:30	Instrument ID:	CH733		
Lims ID:	IC				
Client ID:					
Operator ID:	03200	ALS Bottle#:	2	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

15 Pyridine, CAS: 110-86-1

Signal: 1

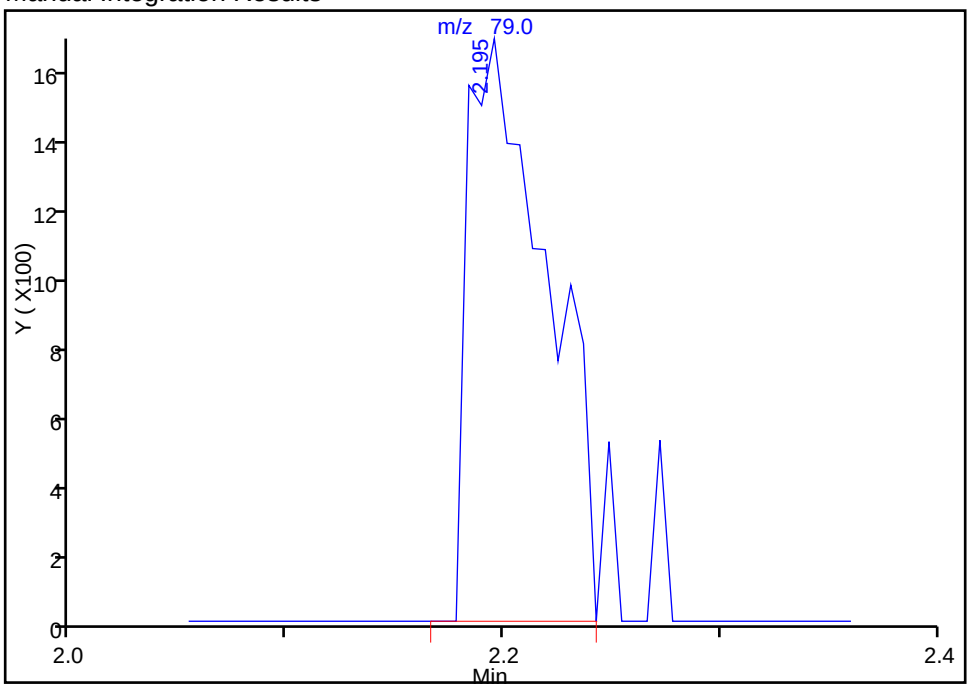
Processing Integration Results

RT: 2.20
Area: 3545
Amount: 0.174121
Amount Units: ng



Manual Integration Results

RT: 2.20
Area: 4151
Amount: 0.184941
Amount Units: ng



Reviewer: piccolinov, 30-Sep-2016 08:23:08

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

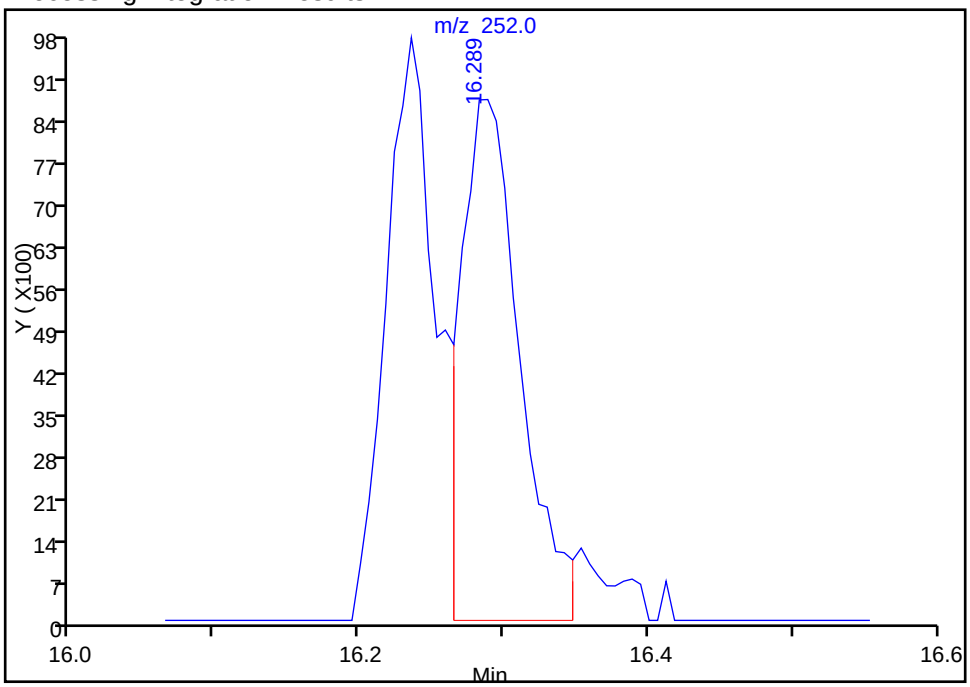
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300003.D				
Injection Date:	30-Sep-2016 07:20:30	Instrument ID:	CH733		
Lims ID:	IC				
Client ID:					
Operator ID:	03200	ALS Bottle#:	2	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

153 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

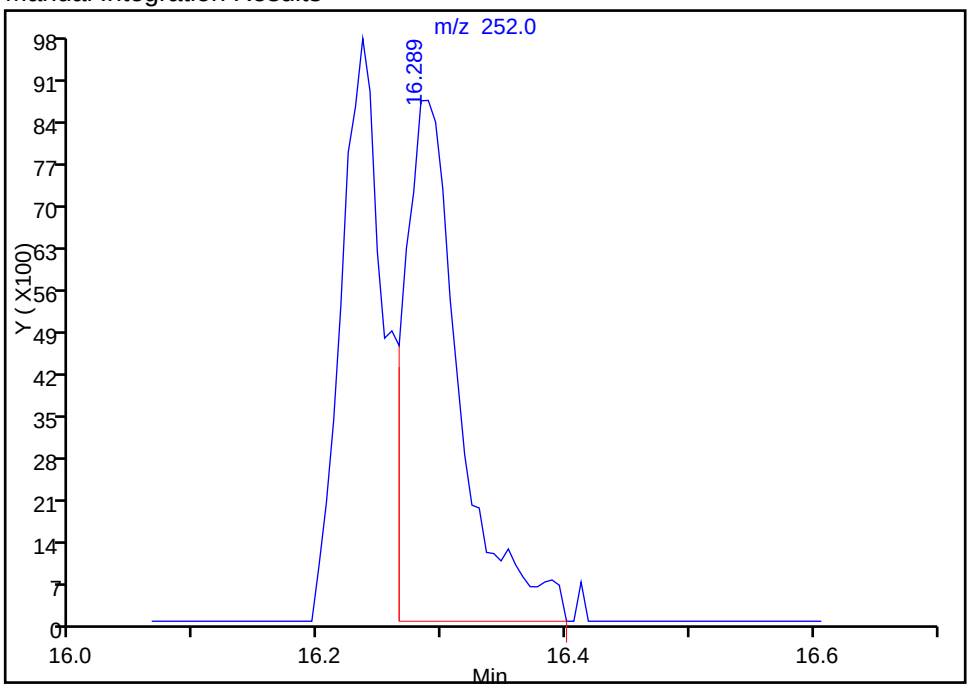
Processing Integration Results

RT: 16.29
Area: 24828
Amount: 0.375499
Amount Units: ng



Manual Integration Results

RT: 16.29
Area: 26942
Amount: 0.375237
Amount Units: ng



Reviewer: piccolinov, 30-Sep-2016 08:23:08

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300004.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 30-Sep-2016 07:47:30 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013670-004
Operator ID: 03200 Instrument ID: CH733
Sublist: chrom-BNA_CH733*sub2

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 30-Sep-2016 12:19:16 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: piccolinov Date: 30-Sep-2016 08:25:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.272	6.260	0.012	96	140235	8.00	8.00	
* 2 Naphthalene-d8	136	7.519	7.513	0.006	99	511767	8.00	8.00	
* 3 Acenaphthene-d10	164	9.166	9.154	0.012	92	315040	8.00	8.00	
* 4 Phenanthrene-d10	188	10.536	10.530	0.006	97	535252	8.00	8.00	
* 5 Chrysene-d12	240	14.106	14.089	0.017	97	496677	8.00	8.00	
* 6 Perylene-d12	264	17.047	17.030	0.017	98	403369	8.00	8.00	
$ 7 2-Fluorophenol	112	4.836	4.831	0.005	92	40150	2.00	1.99	
$ 8 Phenol-d5	99	5.895	5.889	0.006	94	50578	2.00	2.02	
$ 9 Nitrobenzene-d5	82	6.813	6.807	0.006	88	43713	2.00	1.85	
$ 10 2-Fluorobiphenyl	172	8.519	8.513	0.006	99	114738	2.00	2.12	
$ 11 2,4,6-Tribromophenol	330	9.889	9.883	0.006	89	10780	2.00	1.80	
$ 12 Terphenyl-d14	244	12.330	12.324	0.006	99	101807	2.00	2.06	
13 1,4-Dioxane	88	1.396	1.396	0.000	92	16556	2.00	2.09	
14 N-Nitrosodimethylamine	74	2.048	2.043	0.005	88	19499	2.00	1.89	M
15 Pyridine	79	2.137	2.113	0.024	94	37125	2.00	1.87	M
21 Methyl methanesulfonate	80	4.589	4.578	0.011	89	29325	2.00	2.07	
25 Benzaldehyde	77	5.807	5.801	0.006	95	29901	2.00	1.95	
26 Phenol	94	5.907	5.901	0.006	98	58550	2.00	2.07	
27 Aniline	93	5.925	5.919	0.006	88	62238	2.00	2.01	
29 Bis(2-chloroethyl)ether	93	5.995	5.989	0.006	98	44886	2.00	2.15	
30 2-Chlorophenol	128	6.054	6.042	0.012	95	44359	2.00	2.07	
31 n-Decane	43	6.119	6.113	0.006	82	35425	2.00	2.11	
32 1,3-Dichlorobenzene	146	6.213	6.207	0.006	95	57632	2.00	2.18	
33 1,4-Dichlorobenzene	146	6.289	6.278	0.011	93	56300	2.00	2.11	
34 Benzyl alcohol	108	6.407	6.395	0.012	89	23293	2.00	1.95	
35 1,2-Dichlorobenzene	146	6.442	6.436	0.006	93	53821	2.00	2.18	
36 2-Methylphenol	108	6.519	6.513	0.006	95	38525	2.00	2.11	
37 Indene	116	6.530	6.525	0.005	90	75926	2.00	2.10	
38 2,2'-oxybis[1-chloropropan	45	6.548	6.542	0.006	85	38611	2.00	2.22	
39 N-Nitrosopyrrolidine	100	6.636	6.625	0.011	87	12037	2.00	1.64	
42 4-Methylphenol	108	6.666	6.660	0.006	63	39943	2.00	2.15	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
40 Acetophenone	105	6.666	6.660	0.006	86	64152	2.00	2.19	
41 N-Nitrosodi-n-propylamine	70	6.666	6.660	0.006	81	31252	2.00	2.16	
45 Hexachloroethane	117	6.783	6.778	0.005	87	22244	2.00	2.13	
46 Nitrobenzene	77	6.836	6.825	0.011	85	49190	2.00	2.02	
48 Isophorone	82	7.066	7.054	0.012	99	80610	2.00	1.99	
49 2-Nitrophenol	139	7.148	7.142	0.006	97	16924	2.00	1.58	
50 2,4-Dimethylphenol	107	7.178	7.172	0.006	98	45812	2.00	2.04	
52 Benzoic acid	122	7.207	7.213	-0.006	85	12954	2.00	2.52	
53 Bis(2-chloroethoxy)methane	93	7.266	7.260	0.006	99	51730	2.00	2.07	
54 2,4-Dichlorophenol	162	7.378	7.366	0.012	94	38349	2.00	2.03	
56 1,2,4-Trichlorobenzene	180	7.460	7.454	0.006	93	50586	2.00	2.06	
58 Naphthalene	128	7.536	7.530	0.006	97	133066	2.00	2.09	
59 4-Chloroaniline	127	7.577	7.572	0.005	95	49712	2.00	1.99	
60 2,6-Dichlorophenol	162	7.589	7.583	0.006	95	38332	2.00	2.04	
62 Hexachlorobutadiene	225	7.660	7.654	0.006	97	32735	2.00	2.00	
64 Caprolactam	113	7.872	7.866	0.006	83	6619	2.00	1.37	
67 4-Chloro-3-methylphenol	107	8.019	8.013	0.006	94	34828	2.00	2.00	
69 2-Methylnaphthalene	142	8.189	8.183	0.006	91	89693	2.00	2.07	
71 1-Methylnaphthalene	142	8.283	8.277	0.006	92	85206	2.00	2.10	
72 Hexachlorocyclopentadiene	237	8.342	8.336	0.006	94	24168	2.00	1.52	
73 1,2,4,5-Tetrachlorobenzene	216	8.348	8.342	0.006	99	51349	2.00	2.02	
74 2,4,6-Trichlorophenol	196	8.442	8.436	0.006	93	26740	2.00	1.87	
75 2,4,5-Trichlorophenol	196	8.477	8.472	0.005	95	29667	2.00	2.04	
76 1,1'-Biphenyl	154	8.619	8.607	0.012	94	115706	2.00	2.11	
77 2-Chloronaphthalene	162	8.642	8.636	0.006	97	92469	2.00	2.13	
79 2-Nitroaniline	65	8.724	8.713	0.011	82	13928	2.00	1.57	
82 Dimethyl phthalate	163	8.872	8.866	0.006	98	96740	2.00	2.07	
83 1,3-Dinitrobenzene	168	8.907	8.901	0.006	86	7386	2.00	2.02	
84 2,6-Dinitrotoluene	165	8.936	8.930	0.006	94	15457	2.00	1.56	
85 Acenaphthylene	152	9.036	9.024	0.012	98	122626	2.00	2.02	
86 3-Nitroaniline	138	9.095	9.089	0.006	93	15458	2.00	1.55	
87 2,4-Dinitrophenol	184	9.189	9.183	0.006	76	12694	4.00	4.91	
88 Acenaphthene	153	9.195	9.189	0.006	93	88907	2.00	2.08	
89 4-Nitrophenol	109	9.224	9.219	0.005	89	21921	4.00	3.14	
91 2,4-Dinitrotoluene	165	9.307	9.301	0.006	91	19976	2.00	1.54	
93 Dibenzofuran	168	9.348	9.342	0.006	96	132758	2.00	2.10	
95 2,3,5,6-Tetrachlorophenol	232	9.419	9.413	0.006	93	23983	2.00	1.89	
96 2,3,4,6-Tetrachlorophenol	232	9.454	9.448	0.006	73	26453	2.00	2.06	
97 2-Naphthylamine	143	9.483	9.477	0.006	96	77942	2.00	2.01	
98 Diethyl phthalate	149	9.513	9.507	0.006	98	96883	2.00	2.04	
99 Hexadecane	57	9.519	9.513	0.006	93	46440	2.00	2.05	
100 4-Chlorophenyl phenyl ethe	204	9.648	9.642	0.006	89	53410	2.00	2.10	
101 4-Nitroaniline	138	9.654	9.648	0.006	82	15243	2.00	1.49	
103 Fluorene	166	9.666	9.660	0.006	95	102243	2.00	2.11	
104 4,6-Dinitro-2-methylphenol	198	9.689	9.683	0.006	91	18000	4.00	4.09	
105 N-Nitrosodiphenylamine	169	9.748	9.742	0.006	62	69848	2.00	2.06	
90 1,2-Diphenylhydrazine	77	9.789	9.783	0.006	97	103505	2.00	2.06	
57 Azobenzene	77	9.789	9.783	0.006	97	103505	2.00	2.06	
110 4-Bromophenyl phenyl ether	248	10.101	10.095	0.006	64	31213	2.00	2.01	
112 Hexachlorobenzene	284	10.183	10.177	0.006	92	30888	2.00	1.95	
113 Atrazine	200	10.213	10.201	0.012	94	23681	2.00	1.73	
116 Pentachlorophenol	266	10.354	10.342	0.012	90	36942	4.00	3.64	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
115 n-Octadecane	57	10.354	10.348	0.006	97	43316	2.00	2.00	
121 Phenanthrene	178	10.560	10.554	0.006	96	150049	2.00	2.02	
122 Anthracene	178	10.613	10.607	0.006	97	144197	2.00	2.01	
124 Carbazole	167	10.754	10.742	0.012	95	121451	2.00	1.97	
126 Di-n-butyl phthalate	149	11.048	11.042	0.006	100	118252	2.00	1.67	
131 Fluoranthene	202	11.865	11.860	0.005	97	146541	2.00	1.85	
132 Benzidine	184	11.995	11.983	0.012	98	25737	2.00	2.60	
133 Pyrene	202	12.171	12.165	0.006	98	153679	2.00	2.05	
138 Butyl benzyl phthalate	149	13.036	13.024	0.012	98	36036	2.00	1.46	
144 3,3'-Dichlorobenzidine	252	14.001	13.995	0.006	71	26180	2.00	2.15	
145 Bis(2-ethylhexyl) phthalat	149	14.048	14.036	0.012	95	47301	2.00	1.41	
146 Benzo[a]anthracene	228	14.083	14.071	0.012	97	129765	2.00	2.02	
147 Chrysene	228	14.154	14.142	0.012	96	132803	2.00	2.13	
150 Di-n-octyl phthalate	149	15.359	15.348	0.011	99	87925	2.00	1.81	M
151 7,12-Dimethylbenz(a)anthra	256	16.224	16.212	0.012	93	55011	2.00	1.78	
152 Benzo[b]fluoranthene	252	16.242	16.230	0.012	97	108475	2.00	1.74	
153 Benzo[k]fluoranthene	252	16.295	16.283	0.012	99	139904	2.00	2.15	M
219 Benzo[e]pyrene	252	16.818	16.806	0.012	0	107921	2.00	1.87	
154 Benzo[a]pyrene	252	16.924	16.912	0.012	76	121351	2.00	2.12	M
157 Indeno[1,2,3-cd]pyrene	276	19.277	19.265	0.012	98	94909	2.00	1.54	
158 Dibenz(a,h)anthracene	278	19.312	19.288	0.024	88	79141	2.00	1.61	
159 Benzo[g,h,i]perylene	276	19.883	19.865	0.018	98	94401	2.00	1.79	
S 197 Methyl Phenols,Total	108				0		4.00	4.27	
S 199 Total Cresols	108				0		4.00	4.27	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SVTAPSTD2.0i_00011 Amount Added: 1.00 Units: mL

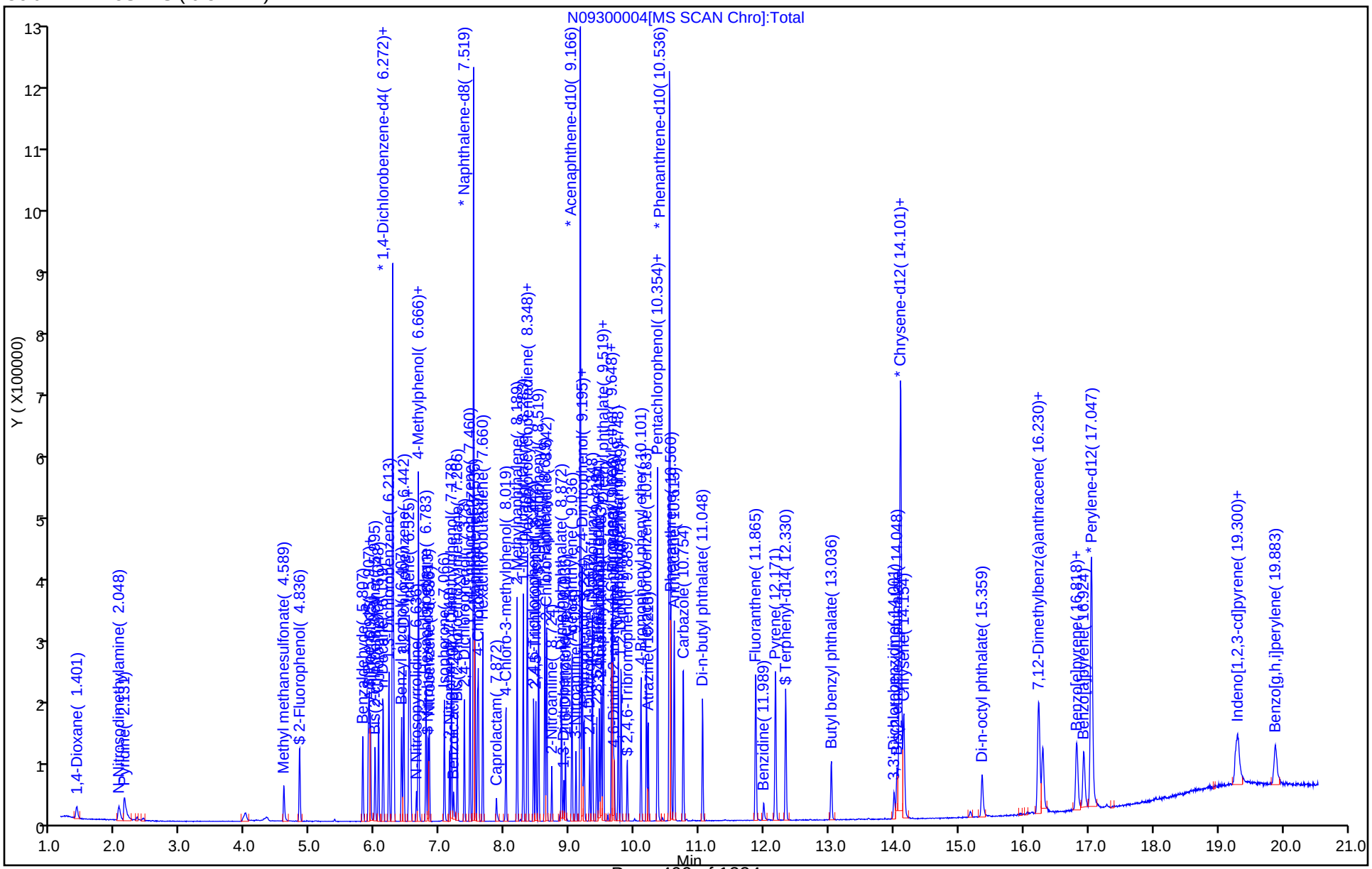
Report Date: 30-Sep-2016 12:19:19 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300004.D

Injection Date:	30-Sep-2016 07:47:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	IC			Worklist Smp#:	4
Client ID:					
Injection Vol:	2.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)



Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

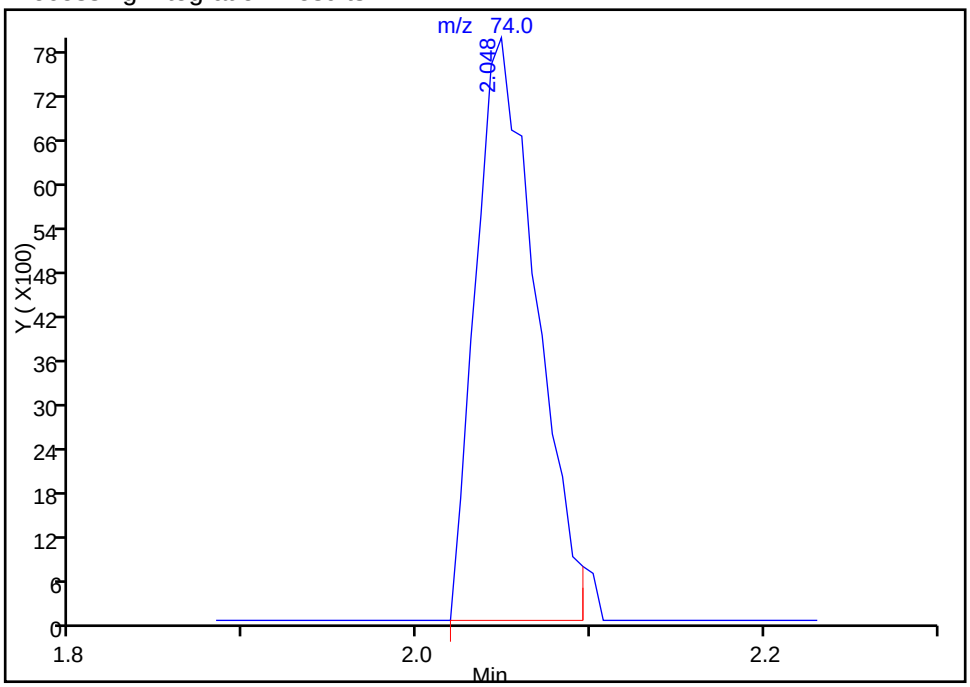
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300004.D				
Injection Date:	30-Sep-2016 07:47:30	Instrument ID:	CH733		
Lims ID:	IC				
Client ID:					
Operator ID:	03200	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

14 N-Nitrosodimethylamine, CAS: 62-75-9

Signal: 1

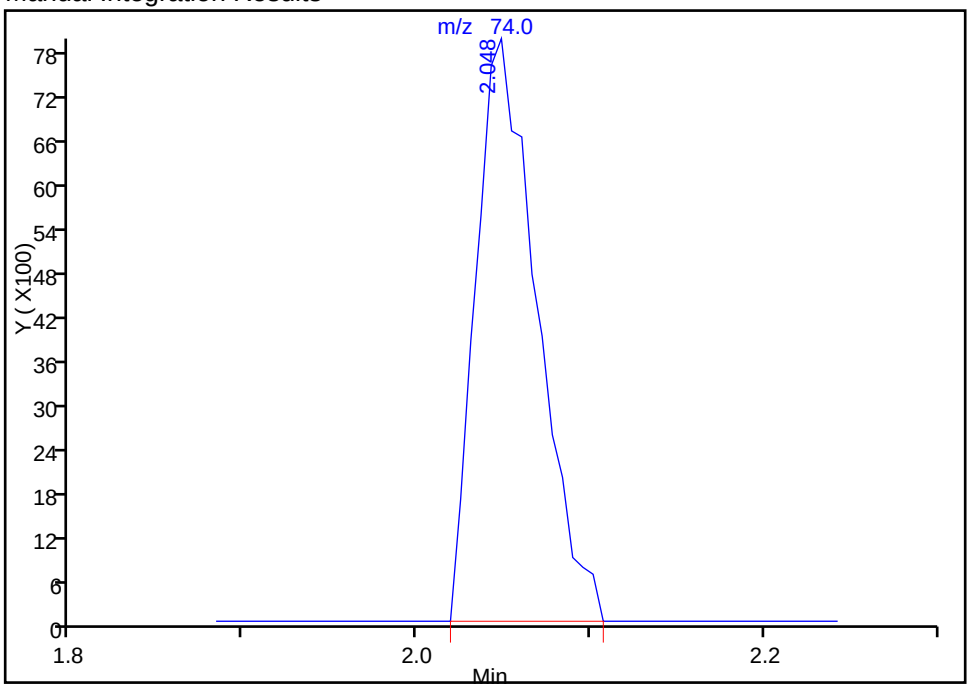
Processing Integration Results

RT: 2.05
Area: 19272
Amount: 2.212734
Amount Units: ng



Manual Integration Results

RT: 2.05
Area: 19499
Amount: 1.892136
Amount Units: ng



Reviewer: piccolinov, 30-Sep-2016 08:25:25

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

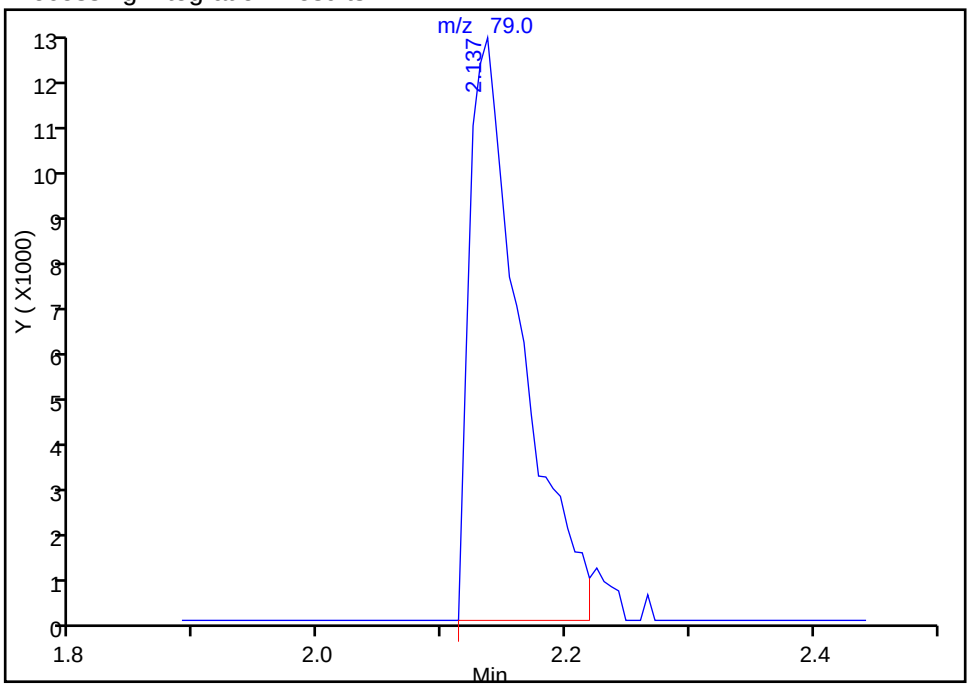
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300004.D				
Injection Date:	30-Sep-2016 07:47:30	Instrument ID:	CH733		
Lims ID:	IC				
Client ID:					
Operator ID:	03200	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

15 Pyridine, CAS: 110-86-1

Signal: 1

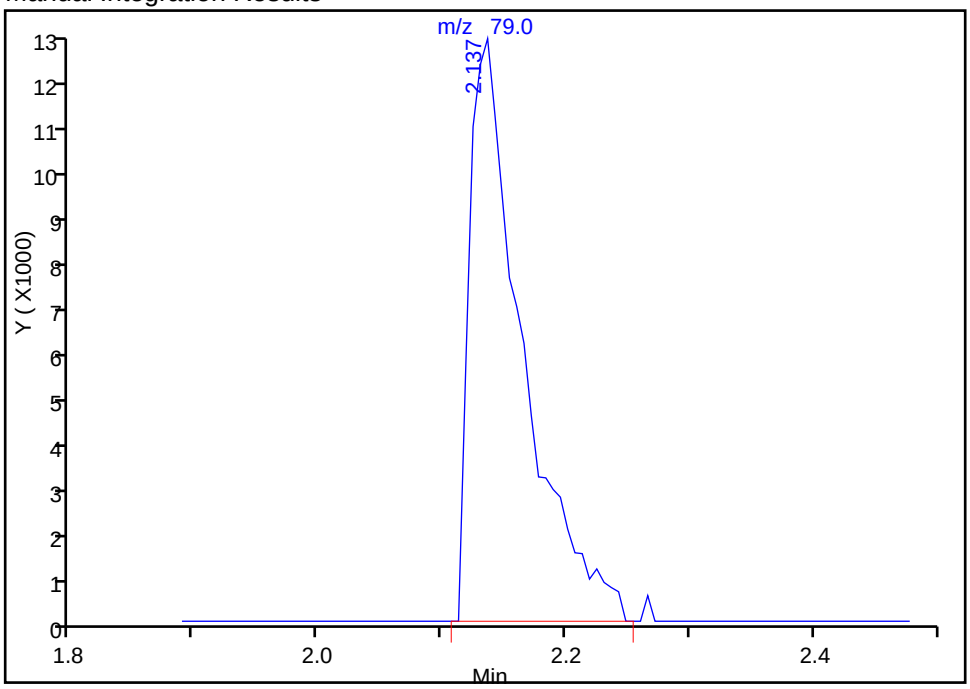
Processing Integration Results

RT: 2.14
Area: 35960
Amount: 2.000000
Amount Units: ng



Manual Integration Results

RT: 2.14
Area: 37125
Amount: 1.872934
Amount Units: ng



Reviewer: piccolinov, 30-Sep-2016 08:25:25

Audit Action: Manually Integrated Audit Reason: Poor chromatography

TestAmerica Pittsburgh

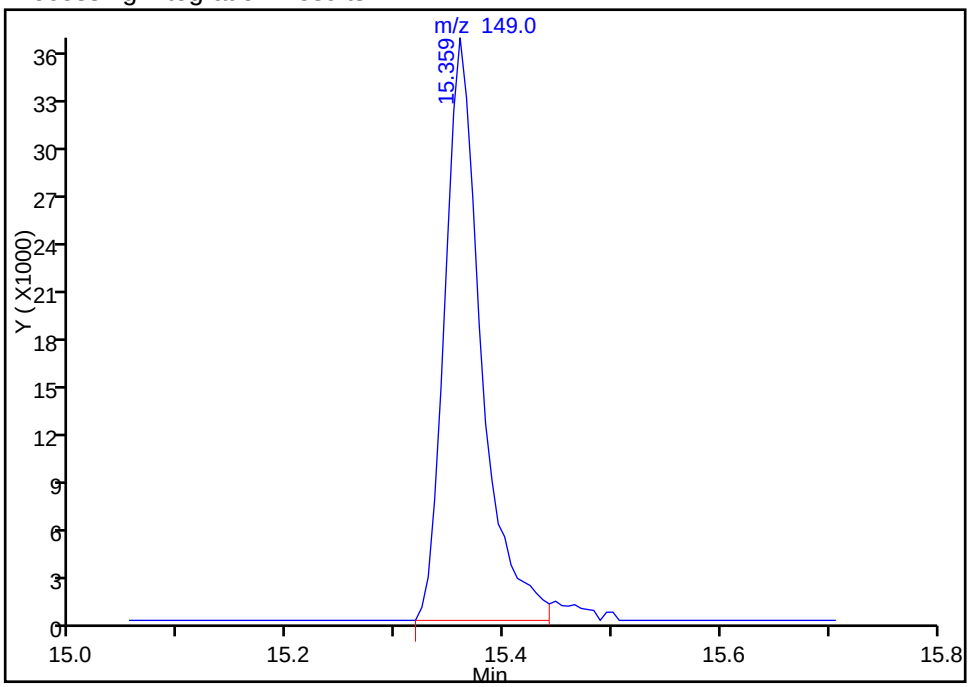
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300004.D				
Injection Date:	30-Sep-2016 07:47:30	Instrument ID:	CH733		
Lims ID:	IC				
Client ID:					
Operator ID:	03200	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

150 Di-n-octyl phthalate, CAS: 117-84-0

Signal: 1

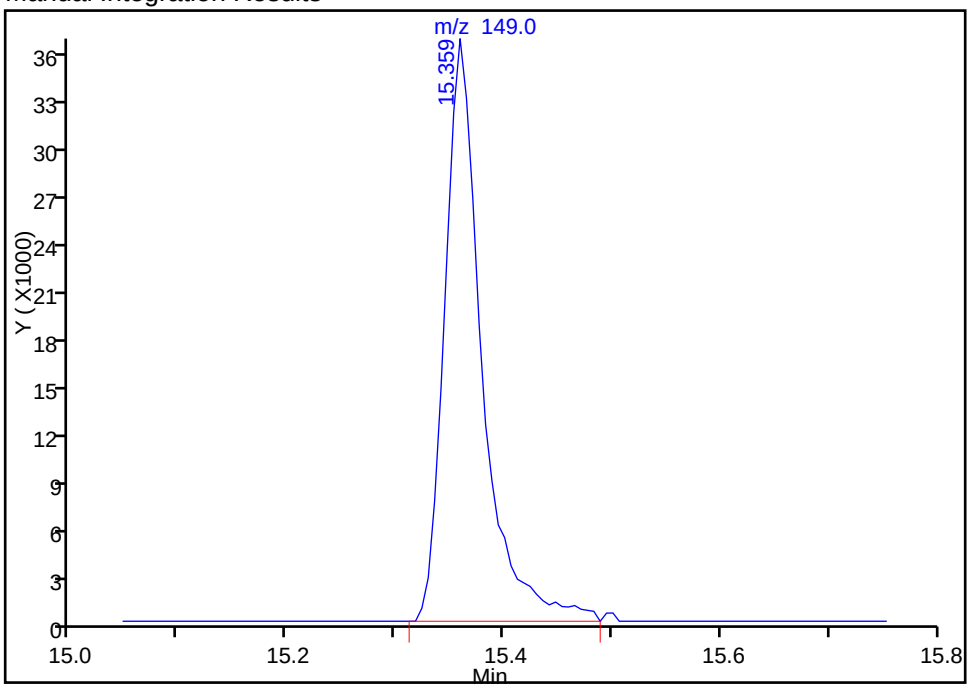
Processing Integration Results

RT: 15.36
Area: 85787
Amount: 2.000000
Amount Units: ng



Manual Integration Results

RT: 15.36
Area: 87925
Amount: 1.814666
Amount Units: ng



Reviewer: piccolinov, 30-Sep-2016 08:25:25
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300004.D

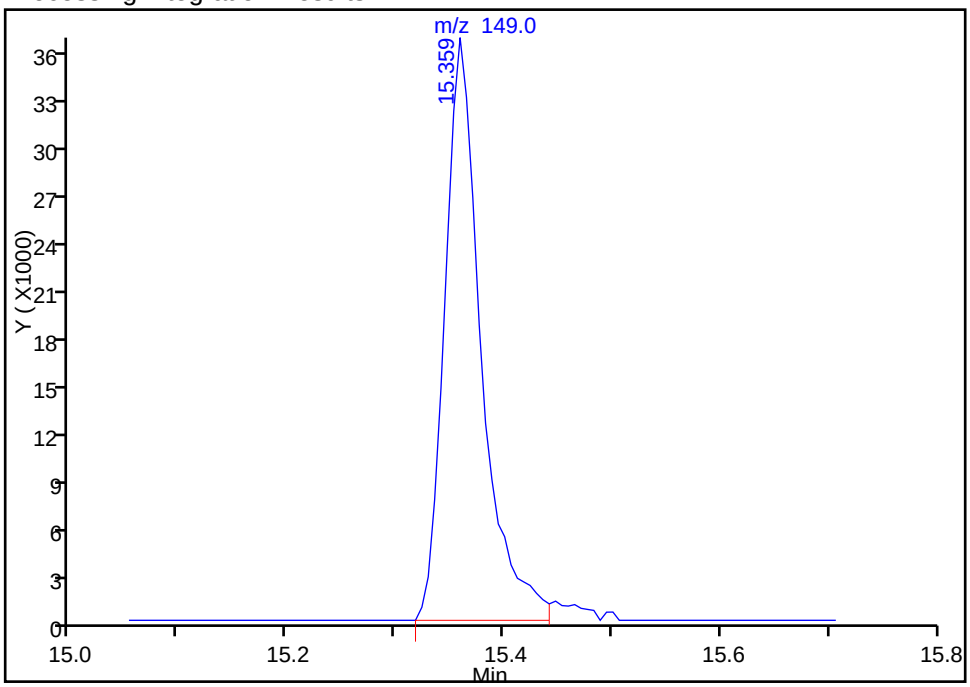
Injection Date:	30-Sep-2016 07:47:30	Instrument ID:	CH733		
Lims ID:	IC				
Client ID:					
Operator ID:	03200	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

150 Di-n-octyl phthalate, CAS: 117-84-0

Signal: 1

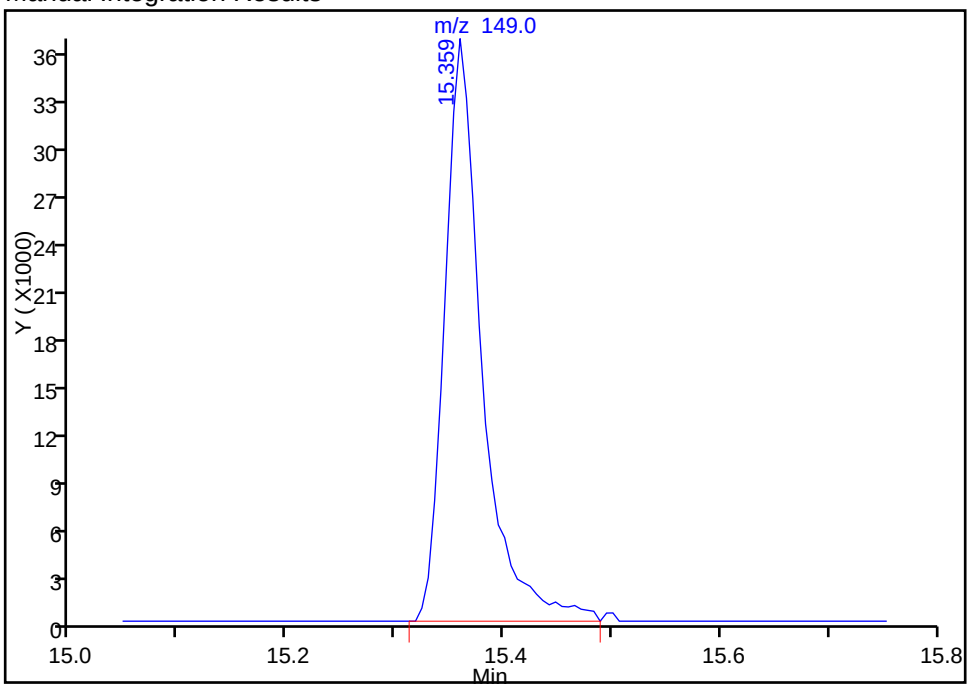
Processing Integration Results

RT: 15.36
Area: 85787
Amount: 2.000000
Amount Units: ng



Manual Integration Results

RT: 15.36
Area: 87925
Amount: 1.814666
Amount Units: ng



Reviewer: piccolinov, 30-Sep-2016 08:25:25

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

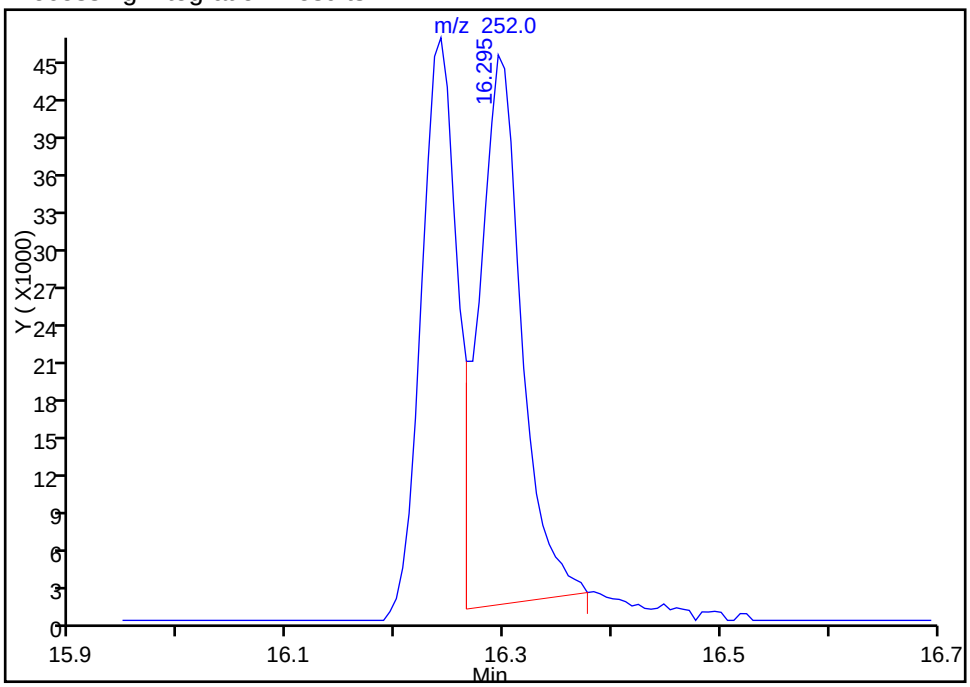
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300004.D				
Injection Date:	30-Sep-2016 07:47:30	Instrument ID:	CH733		
Lims ID:	IC				
Client ID:					
Operator ID:	03200	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

153 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

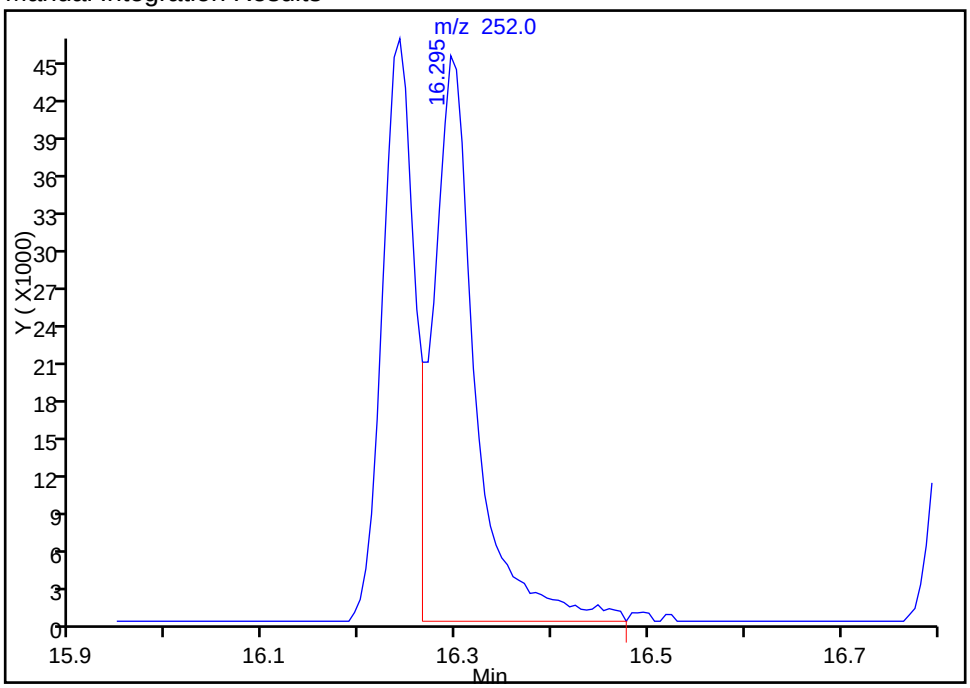
Processing Integration Results

RT: 16.29
Area: 121409
Amount: 1.941995
Amount Units: ng



Manual Integration Results

RT: 16.29
Area: 139904
Amount: 2.147500
Amount Units: ng



Reviewer: piccolinov, 30-Sep-2016 08:25:25

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

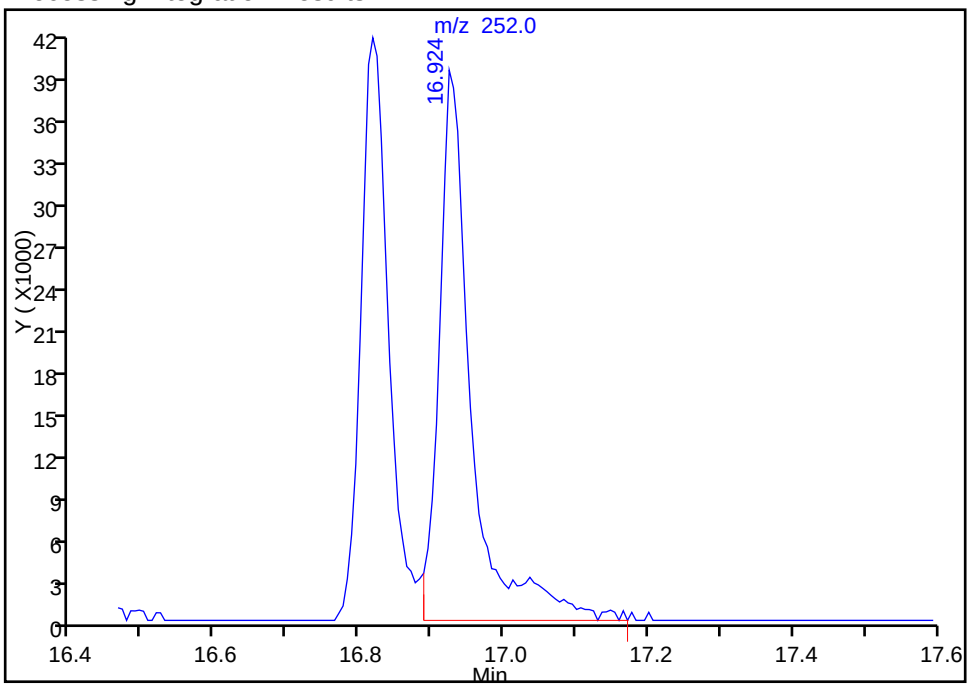
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300004.D				
Injection Date:	30-Sep-2016 07:47:30	Instrument ID:	CH733		
Lims ID:	IC				
Client ID:					
Operator ID:	03200	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

154 Benzo[a]pyrene, CAS: 50-32-8

Signal: 1

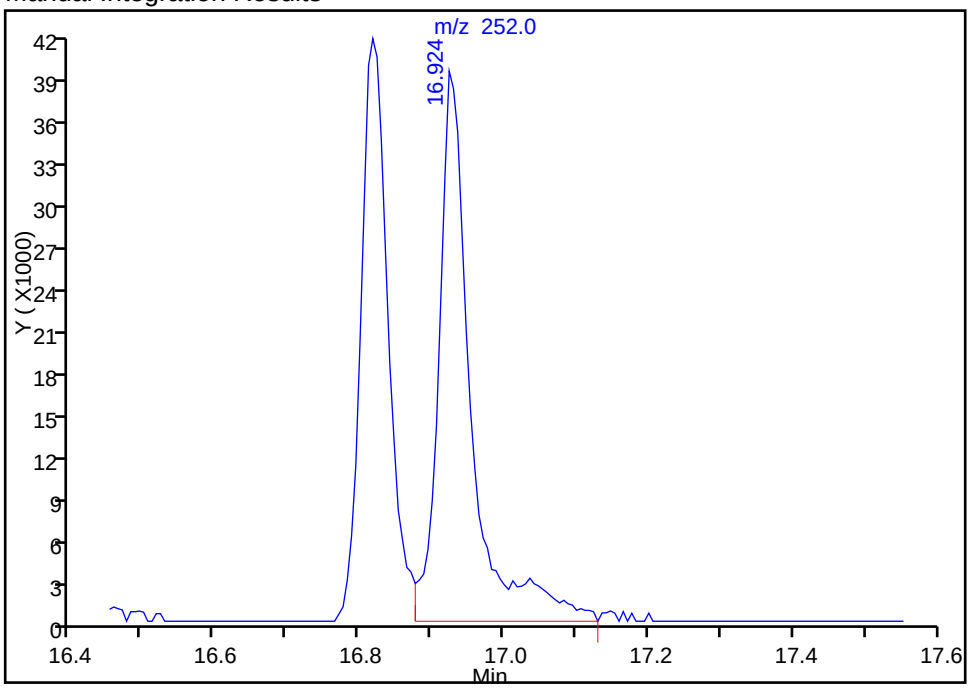
Processing Integration Results

RT: 16.92
Area: 120499
Amount: 2.118539
Amount Units: ng



Manual Integration Results

RT: 16.92
Area: 121351
Amount: 2.121069
Amount Units: ng



Reviewer: piccolinov, 30-Sep-2016 08:25:25

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300005.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 30-Sep-2016 08:14:30 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013670-005
Operator ID: 03200 Instrument ID: CH733
Sublist: chrom-BNA_CH733*sub2

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 30-Sep-2016 12:19:23 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: piccolinov Date: 30-Sep-2016 09:07:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.272	6.260	0.012	96	137227	8.00	8.00	
* 2 Naphthalene-d8	136	7.519	7.513	0.006	100	490986	8.00	8.00	
* 3 Acenaphthene-d10	164	9.166	9.154	0.012	92	310653	8.00	8.00	
* 4 Phenanthrene-d10	188	10.542	10.530	0.012	97	520790	8.00	8.00	
* 5 Chrysene-d12	240	14.112	14.089	0.023	97	518150	8.00	8.00	
* 6 Perylene-d12	264	17.053	17.030	0.023	98	408209	8.00	8.00	
$ 7 2-Fluorophenol	112	4.837	4.831	0.006	92	80706	4.00	4.08	
$ 8 Phenol-d5	99	5.901	5.889	0.012	94	100116	4.00	4.09	
$ 9 Nitrobenzene-d5	82	6.819	6.807	0.012	87	93167	4.00	4.11	
$ 10 2-Fluorobiphenyl	172	8.525	8.513	0.012	99	220981	4.00	4.13	
$ 11 2,4,6-Tribromophenol	330	9.889	9.883	0.006	90	23037	4.00	3.94	
$ 12 Terphenyl-d14	244	12.336	12.324	0.012	99	212158	4.00	4.11	
13 1,4-Dioxane	88	1.396	1.396	0.000	91	31857	4.00	4.11	
14 N-Nitrosodimethylamine	74	2.054	2.043	0.011	91	39799	4.00	3.95	
15 Pyridine	79	2.125	2.113	0.012	96	75183	4.00	3.88	
21 Methyl methanesulfonate	80	4.589	4.578	0.011	89	58166	4.00	4.20	
25 Benzaldehyde	77	5.807	5.801	0.006	95	61906	4.00	4.13	
26 Phenol	94	5.913	5.901	0.012	95	117282	4.00	4.24	
27 Aniline	93	5.931	5.919	0.012	94	126542	4.00	4.17	
29 Bis(2-chloroethyl)ether	93	6.001	5.989	0.012	99	88203	4.00	4.32	
30 2-Chlorophenol	128	6.054	6.042	0.012	95	87266	4.00	4.16	
31 n-Decane	43	6.125	6.113	0.012	82	68262	4.00	4.15	
32 1,3-Dichlorobenzene	146	6.213	6.207	0.006	95	108982	4.00	4.21	
33 1,4-Dichlorobenzene	146	6.289	6.278	0.011	92	110004	4.00	4.21	
34 Benzyl alcohol	108	6.407	6.395	0.012	89	48461	4.00	4.15	
35 1,2-Dichlorobenzene	146	6.442	6.436	0.006	94	103222	4.00	4.26	
36 2-Methylphenol	108	6.519	6.513	0.006	96	76226	4.00	4.27	
37 Indene	116	6.531	6.525	0.006	89	149704	4.00	4.24	
38 2,2'-oxybis[1-chloropropan	45	6.548	6.542	0.006	82	72516	4.00	4.26	
39 N-Nitrosopyrrolidine	100	6.636	6.625	0.011	87	28072	4.00	3.90	
42 4-Methylphenol	108	6.672	6.660	0.012	66	79646	4.00	4.39	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
40 Acetophenone	105	6.666	6.660	0.006	83	125934	4.00	4.40	
41 N-Nitrosodi-n-propylamine	70	6.672	6.660	0.012	64	63637	4.00	4.49	
45 Hexachloroethane	117	6.783	6.778	0.005	88	44383	4.00	4.34	
46 Nitrobenzene	77	6.836	6.825	0.011	85	99969	4.00	4.27	
48 Isophorone	82	7.066	7.054	0.012	99	162634	4.00	4.19	
49 2-Nitrophenol	139	7.148	7.142	0.006	97	38169	4.00	3.72	
50 2,4-Dimethylphenol	107	7.183	7.172	0.011	98	90419	4.00	4.20	
52 Benzoic acid	122	7.213	7.213	0.000	87	21386	4.00	3.44	M
53 Bis(2-chloroethoxy)methane	93	7.266	7.260	0.006	100	100822	4.00	4.21	
54 2,4-Dichlorophenol	162	7.378	7.366	0.012	94	77326	4.00	4.26	
56 1,2,4-Trichlorobenzene	180	7.466	7.454	0.012	93	99940	4.00	4.24	
58 Naphthalene	128	7.542	7.530	0.012	98	256917	4.00	4.21	
59 4-Chloroaniline	127	7.583	7.572	0.011	96	100152	4.00	4.19	
60 2,6-Dichlorophenol	162	7.595	7.583	0.012	96	76076	4.00	4.22	
62 Hexachlorobutadiene	225	7.660	7.654	0.006	97	64336	4.00	4.10	
64 Caprolactam	113	7.872	7.866	0.006	85	16532	4.00	3.55	
67 4-Chloro-3-methylphenol	107	8.019	8.013	0.006	93	68851	4.00	4.13	
69 2-Methylnaphthalene	142	8.195	8.183	0.012	91	176808	4.00	4.25	
71 1-Methylnaphthalene	142	8.289	8.277	0.012	92	165408	4.00	4.25	
72 Hexachlorocyclopentadiene	237	8.348	8.336	0.012	95	50753	4.00	3.24	
73 1,2,4,5-Tetrachlorobenzene	216	8.354	8.342	0.012	98	100100	4.00	4.00	
74 2,4,6-Trichlorophenol	196	8.448	8.436	0.012	92	57409	4.00	4.08	
75 2,4,5-Trichlorophenol	196	8.483	8.472	0.011	94	59969	4.00	4.18	
76 1,1'-Biphenyl	154	8.619	8.607	0.012	95	224372	4.00	4.14	
77 2-Chloronaphthalene	162	8.648	8.636	0.012	96	177334	4.00	4.14	
79 2-Nitroaniline	65	8.725	8.713	0.011	80	35470	4.00	3.53	
82 Dimethyl phthalate	163	8.877	8.866	0.011	98	193416	4.00	4.19	
83 1,3-Dinitrobenzene	168	8.913	8.901	0.012	87	20950	4.00	3.88	
84 2,6-Dinitrotoluene	165	8.936	8.930	0.006	94	38110	4.00	3.89	
85 Acenaphthylene	152	9.036	9.024	0.012	98	252477	4.00	4.22	
86 3-Nitroaniline	138	9.101	9.089	0.012	93	37254	4.00	3.78	
87 2,4-Dinitrophenol	184	9.195	9.183	0.012	60	29452	8.00	7.22	
88 Acenaphthene	153	9.195	9.189	0.006	92	172510	4.00	4.09	
89 4-Nitrophenol	109	9.224	9.219	0.005	90	49510	8.00	7.20	
91 2,4-Dinitrotoluene	165	9.313	9.301	0.012	91	48636	4.00	3.81	
93 Dibenzofuran	168	9.354	9.342	0.012	96	260308	4.00	4.18	
95 2,3,5,6-Tetrachlorophenol	232	9.419	9.413	0.006	93	50437	4.00	4.04	
96 2,3,4,6-Tetrachlorophenol	232	9.460	9.448	0.012	73	53948	4.00	4.26	
97 2-Naphthylamine	143	9.489	9.477	0.012	96	165230	4.00	4.32	
98 Diethyl phthalate	149	9.519	9.507	0.012	98	193920	4.00	4.13	
99 Hexadecane	57	9.524	9.513	0.011	93	93410	4.00	4.29	
100 4-Chlorophenyl phenyl ethe	204	9.648	9.642	0.006	92	104544	4.00	4.18	
101 4-Nitroaniline	138	9.660	9.648	0.012	86	36896	4.00	3.66	
103 Fluorene	166	9.672	9.660	0.012	95	200673	4.00	4.19	
104 4,6-Dinitro-2-methylphenol	198	9.689	9.683	0.006	90	47642	8.00	7.61	
105 N-Nitrosodiphenylamine	169	9.754	9.742	0.012	61	141890	4.00	4.30	
90 1,2-Diphenylhydrazine	77	9.795	9.783	0.012	97	207600	4.00	4.26	
57 Azobenzene	77	9.795	9.783	0.012	97	207600	4.00	4.26	
110 4-Bromophenyl phenyl ether	248	10.101	10.095	0.006	65	61944	4.00	4.10	
112 Hexachlorobenzene	284	10.189	10.177	0.012	93	65172	4.00	4.24	
113 Atrazine	200	10.213	10.201	0.012	94	52954	4.00	3.99	
116 Pentachlorophenol	266	10.354	10.342	0.012	92	67511	8.00	6.83	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
115 n-Octadecane	57	10.360	10.348	0.012	96	92260	4.00	4.35	
121 Phenanthrene	178	10.566	10.554	0.012	97	293794	4.00	4.07	
122 Anthracene	178	10.613	10.607	0.006	97	290128	4.00	4.16	
124 Carbazole	167	10.754	10.742	0.012	96	253073	4.00	4.22	
126 Di-n-butyl phthalate	149	11.054	11.042	0.012	100	260078	4.00	3.77	
131 Fluoranthene	202	11.871	11.860	0.011	97	302071	4.00	3.91	
132 Benzidine	184	12.001	11.983	0.018	99	67702	4.00	3.73	
133 Pyrene	202	12.177	12.165	0.012	98	320357	4.00	4.09	
138 Butyl benzyl phthalate	149	13.042	13.024	0.018	98	84111	4.00	3.26	
144 3,3'-Dichlorobenzidine	252	14.012	13.995	0.017	72	61850	4.00	3.49	
145 Bis(2-ethylhexyl) phthalat	149	14.054	14.036	0.018	95	112726	4.00	3.22	
146 Benzo[a]anthracene	228	14.089	14.071	0.018	98	275554	4.00	4.12	
147 Chrysene	228	14.159	14.142	0.017	96	267567	4.00	4.12	
150 Di-n-octyl phthalate	149	15.365	15.348	0.017	99	133635	4.00	2.73	M
151 7,12-Dimethylbenz(a)anthra	256	16.230	16.212	0.018	92	114289	4.00	3.65	
152 Benzo[b]fluoranthene	252	16.248	16.230	0.018	96	238833	4.00	3.78	
153 Benzo[k]fluoranthene	252	16.306	16.283	0.023	98	275825	4.00	4.18	M
219 Benzo[e]pyrene	252	16.830	16.806	0.024	0	226294	4.00	3.87	
154 Benzo[a]pyrene	252	16.936	16.912	0.024	77	216328	4.00	3.74	
157 Indeno[1,2,3-cd]pyrene	276	19.289	19.265	0.024	98	227286	4.00	3.64	M
158 Dibenz(a,h)anthracene	278	19.318	19.288	0.030	88	188475	4.00	3.80	M
159 Benzo[g,h,i]perylene	276	19.894	19.865	0.029	99	207721	4.00	3.89	M
S 197 Methyl Phenols,Total	108				0		8.00	8.66	
S 199 Total Cresols	108				0		8.00	8.66	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SVTAPSTD4.0i_00011 Amount Added: 1.00 Units: mL

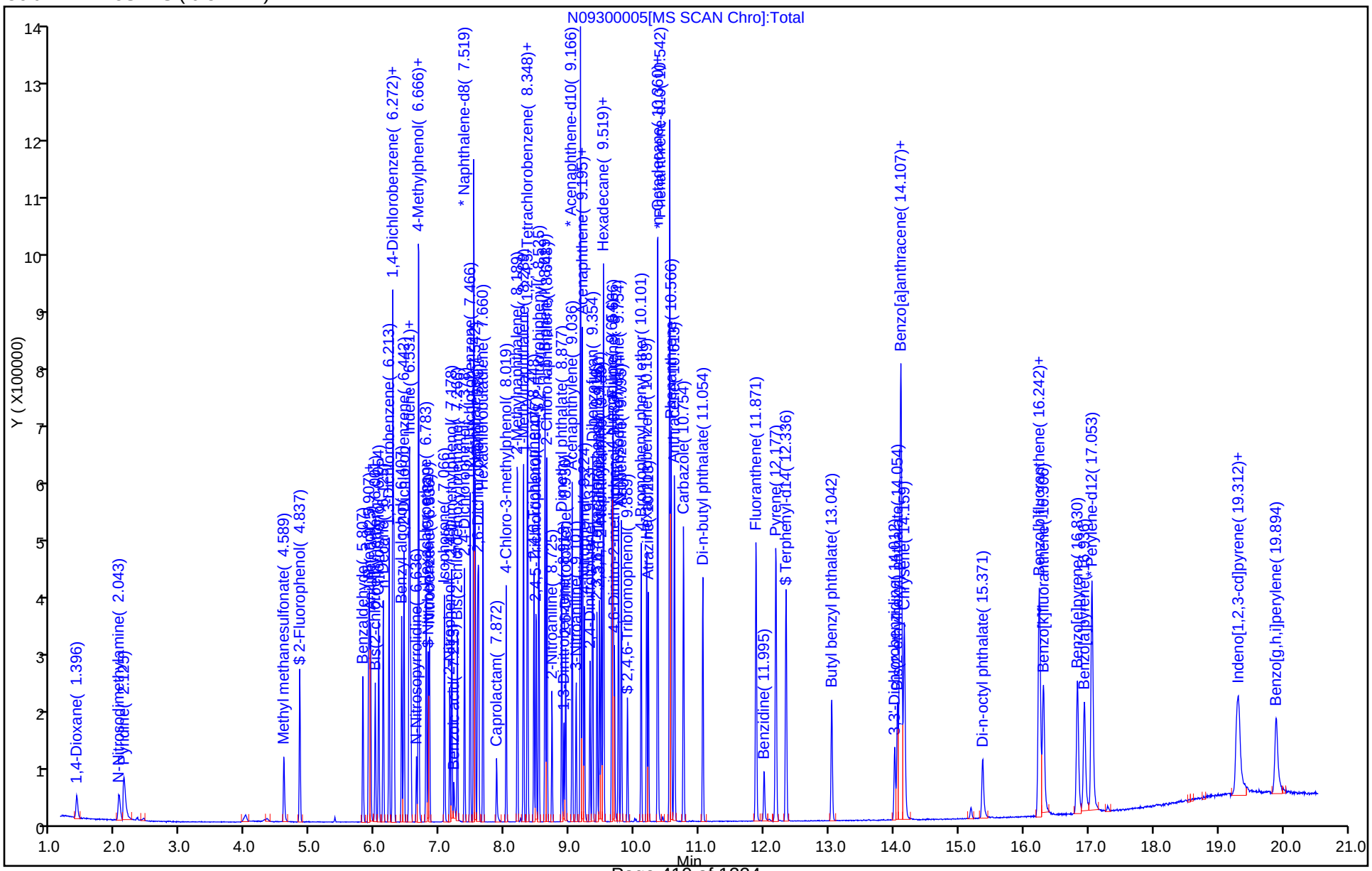
Report Date: 30-Sep-2016 12:19:25 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300005.D

Injection Date:	30-Sep-2016 08:14:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	IC			Worklist Smp#:	5
Client ID:					
Injection Vol:	2.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)



Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

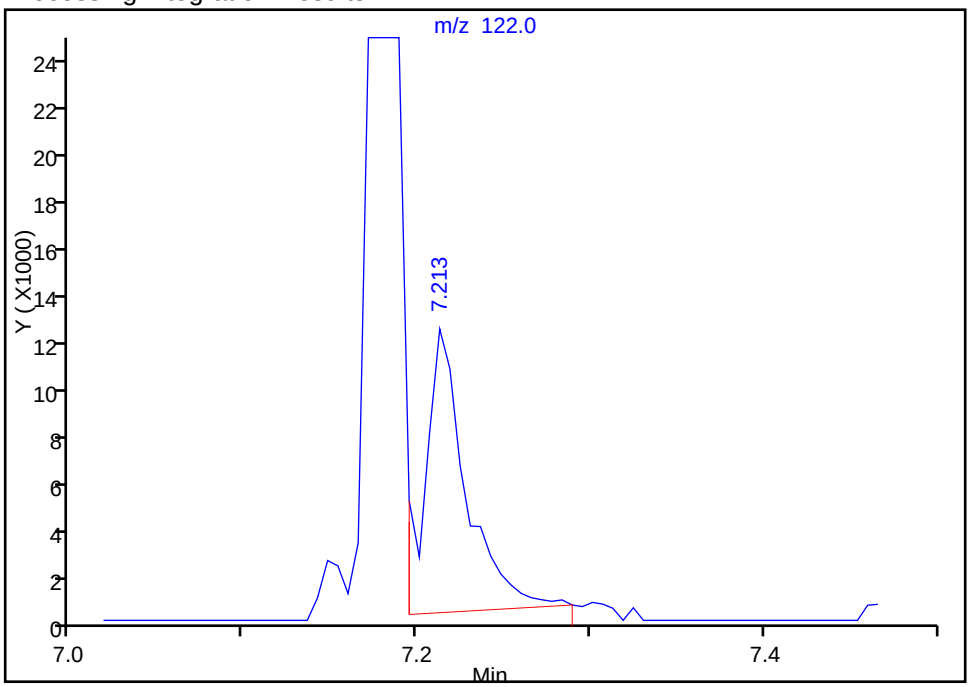
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300005.D				
Injection Date:	30-Sep-2016 08:14:30	Instrument ID:	CH733		
Lims ID:	IC				
Client ID:					
Operator ID:	03200	ALS Bottle#:	4	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

52 Benzoic acid, CAS: 65-85-0

Signal: 1

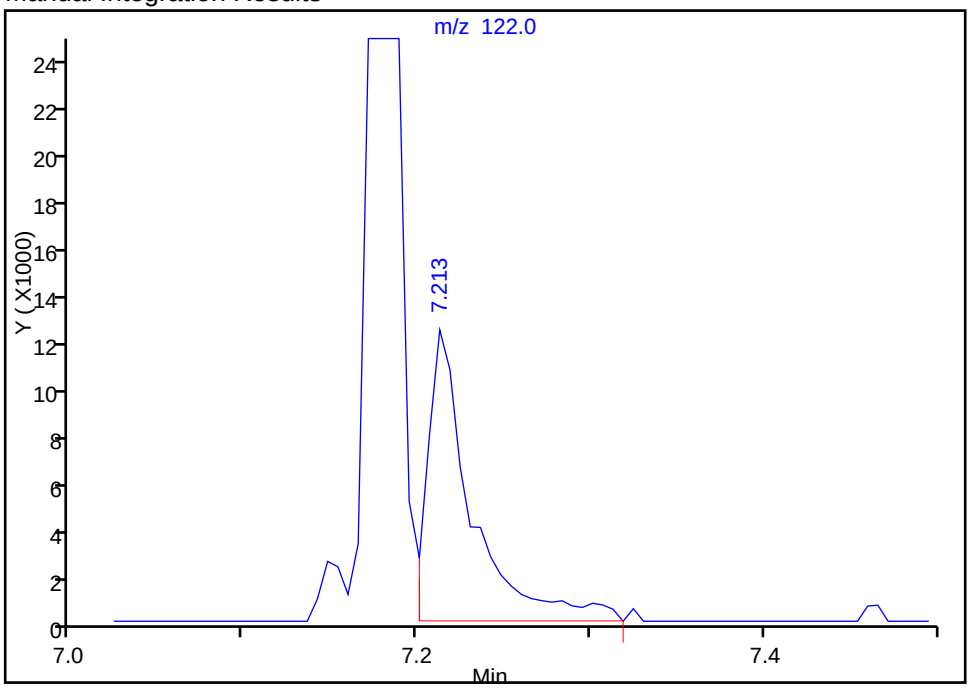
Processing Integration Results

RT: 7.21
Area: 19731
Amount: 3.270330
Amount Units: ng



Manual Integration Results

RT: 7.21
Area: 21386
Amount: 3.442164
Amount Units: ng



Reviewer: piccolinov, 30-Sep-2016 09:07:09

Audit Action: Manually Integrated Audit Reason: Poor chromatography

TestAmerica Pittsburgh

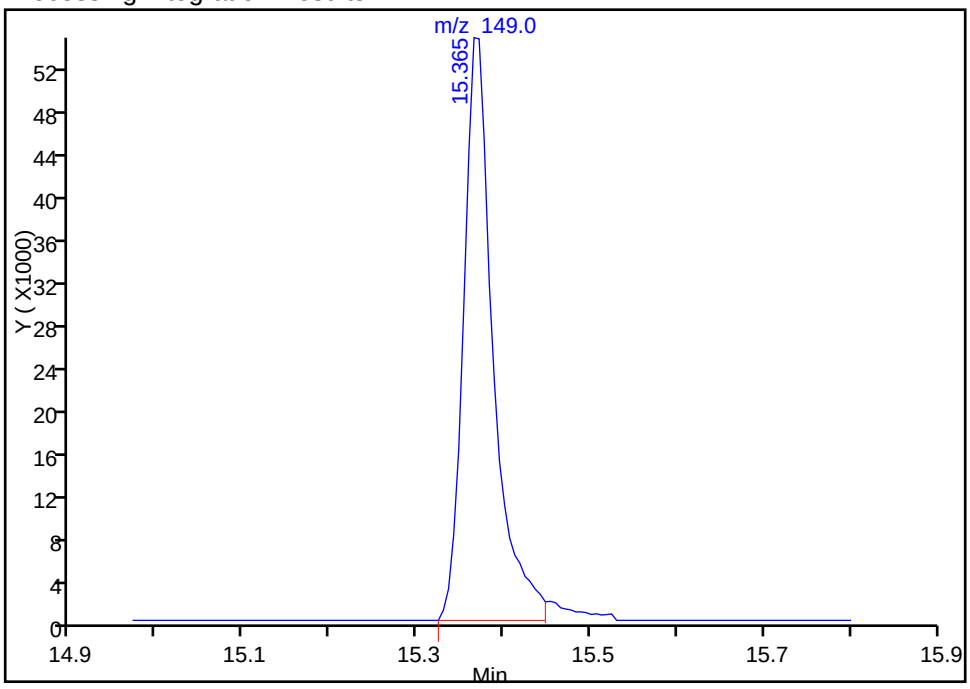
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300005.D				
Injection Date:	30-Sep-2016 08:14:30	Instrument ID:	CH733		
Lims ID:	IC				
Client ID:					
Operator ID:	03200	ALS Bottle#:	4	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

150 Di-n-octyl phthalate, CAS: 117-84-0

Signal: 1

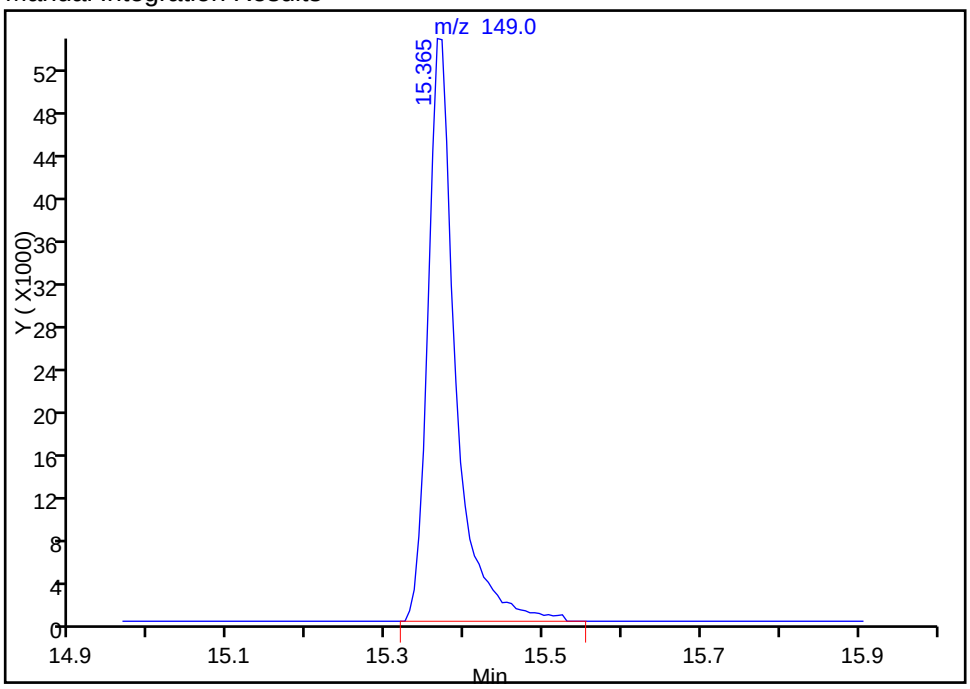
Processing Integration Results

RT: 15.37
Area: 129492
Amount: 2.956171
Amount Units: ng



Manual Integration Results

RT: 15.37
Area: 133635
Amount: 2.725364
Amount Units: ng



Reviewer: piccolinov, 30-Sep-2016 09:07:09
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

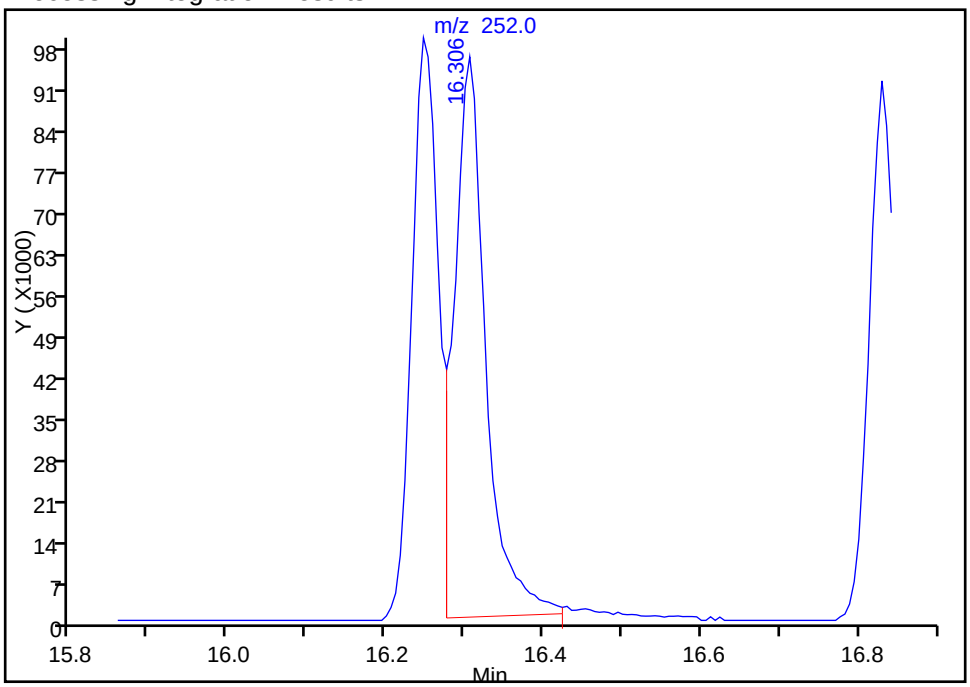
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300005.D				
Injection Date:	30-Sep-2016 08:14:30	Instrument ID:	CH733		
Lims ID:	IC				
Client ID:					
Operator ID:	03200	ALS Bottle#:	4	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

153 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

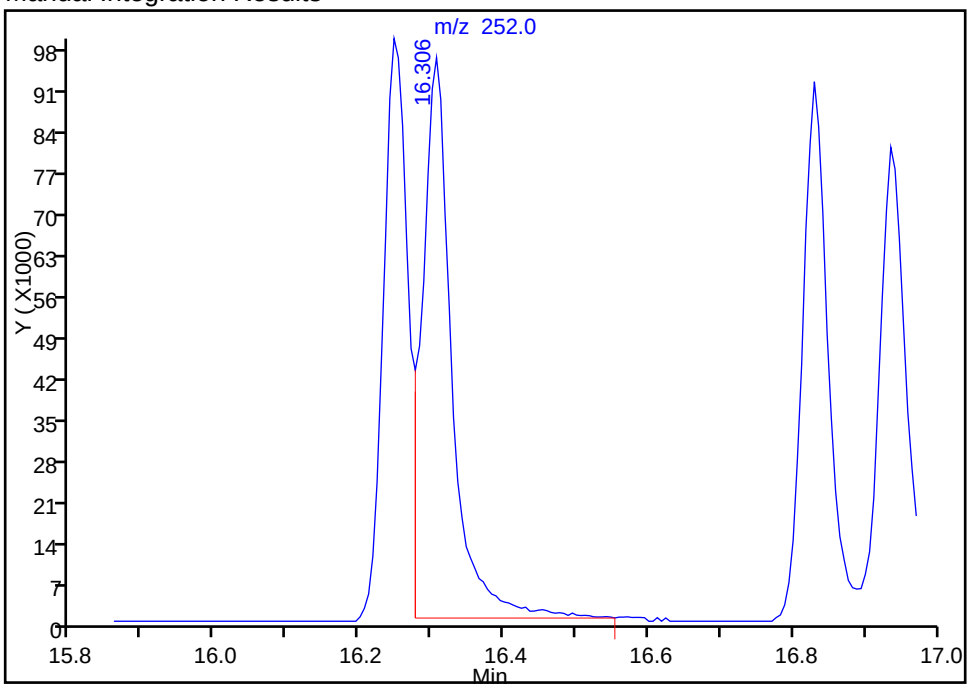
Processing Integration Results

RT: 16.31
Area: 268114
Amount: 3.893161
Amount Units: ng



Manual Integration Results

RT: 16.31
Area: 275825
Amount: 4.183661
Amount Units: ng



Reviewer: piccolinov, 30-Sep-2016 09:07:09

Audit Action: Manually Integrated Audit Reason: Poor chromatography

TestAmerica Pittsburgh

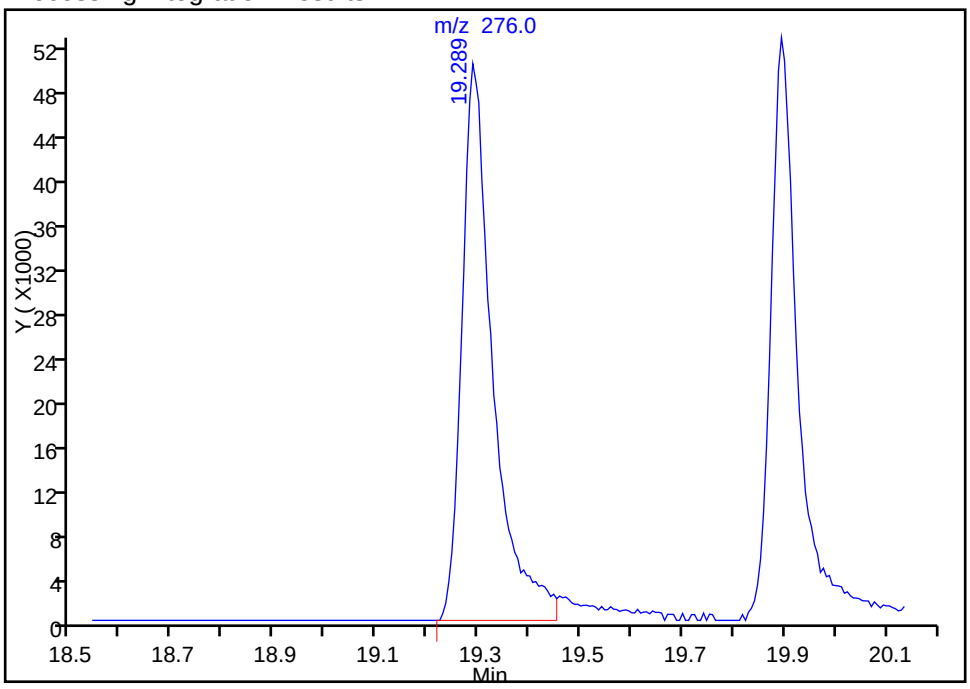
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300005.D				
Injection Date:	30-Sep-2016 08:14:30	Instrument ID:	CH733		
Lims ID:	IC				
Client ID:					
Operator ID:	03200	ALS Bottle#:	4	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

157 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

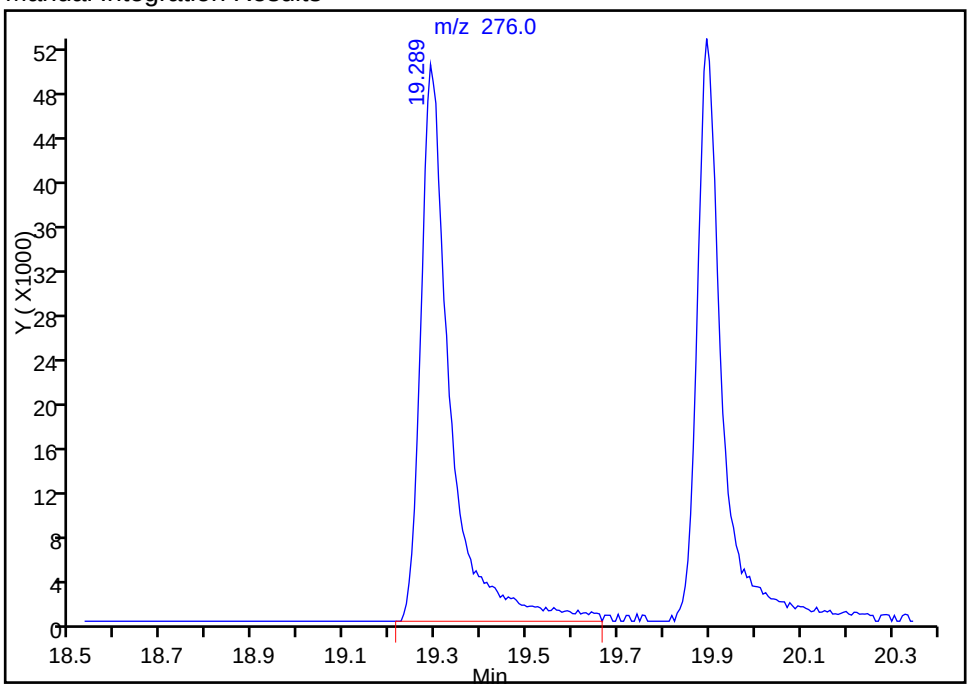
Processing Integration Results

RT: 19.29
Area: 213248
Amount: 4.077040
Amount Units: ng



Manual Integration Results

RT: 19.29
Area: 227286
Amount: 3.636633
Amount Units: ng



Reviewer: piccolinov, 30-Sep-2016 09:09:38
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

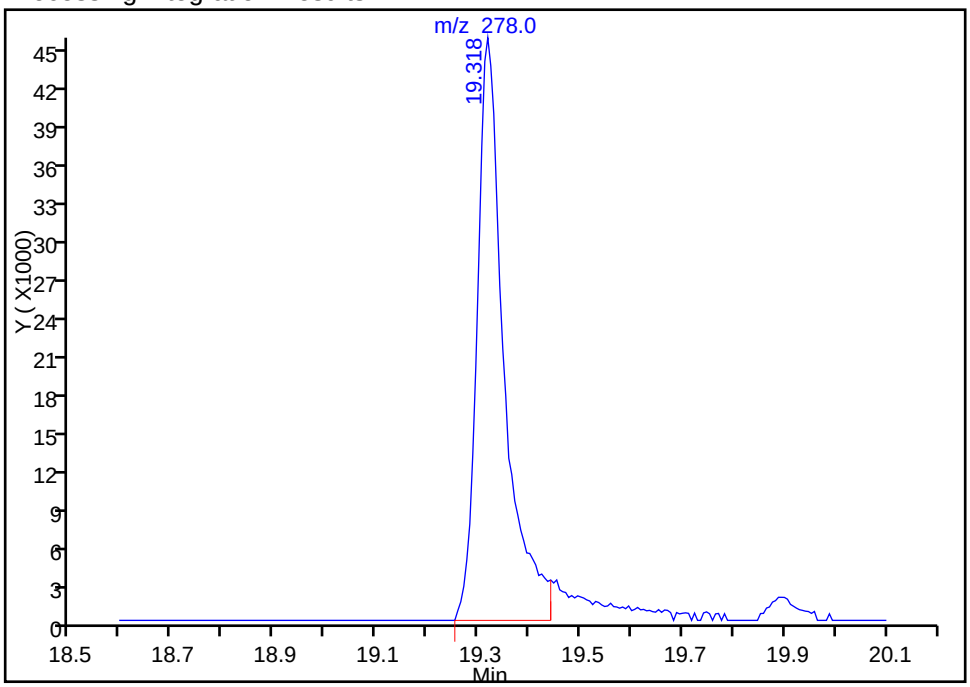
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300005.D				
Injection Date:	30-Sep-2016 08:14:30	Instrument ID:	CH733		
Lims ID:	IC				
Client ID:					
Operator ID:	03200	ALS Bottle#:	4	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

158 Dibenz(a,h)anthracene, CAS: 53-70-3

Signal: 1

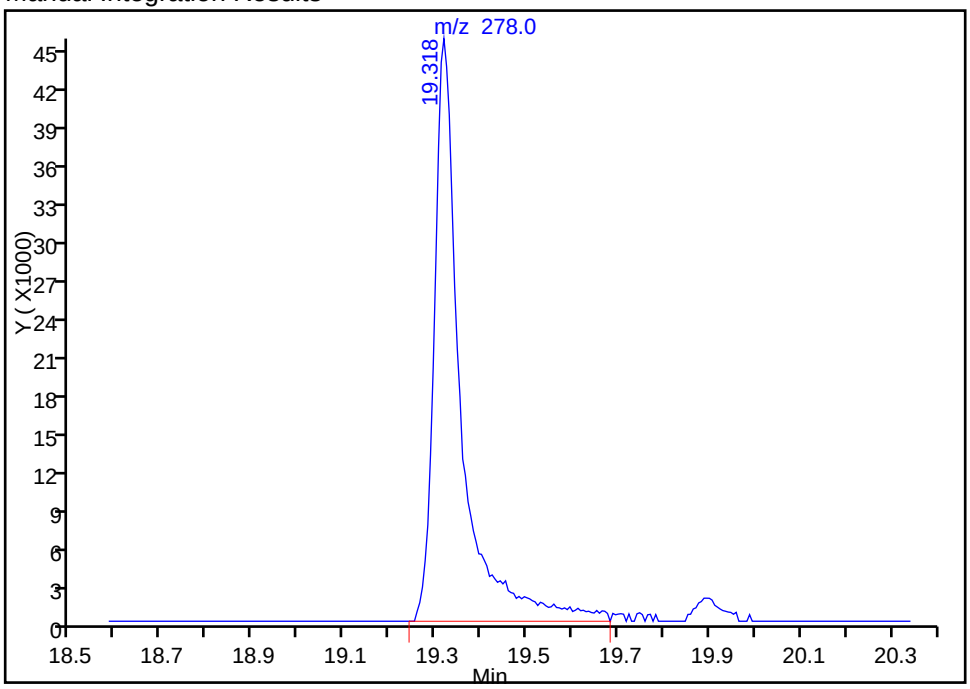
Processing Integration Results

RT: 19.32
Area: 169671
Amount: 4.075512
Amount Units: ng



Manual Integration Results

RT: 19.32
Area: 188475
Amount: 3.797682
Amount Units: ng



Reviewer: piccolinov, 30-Sep-2016 09:09:38

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

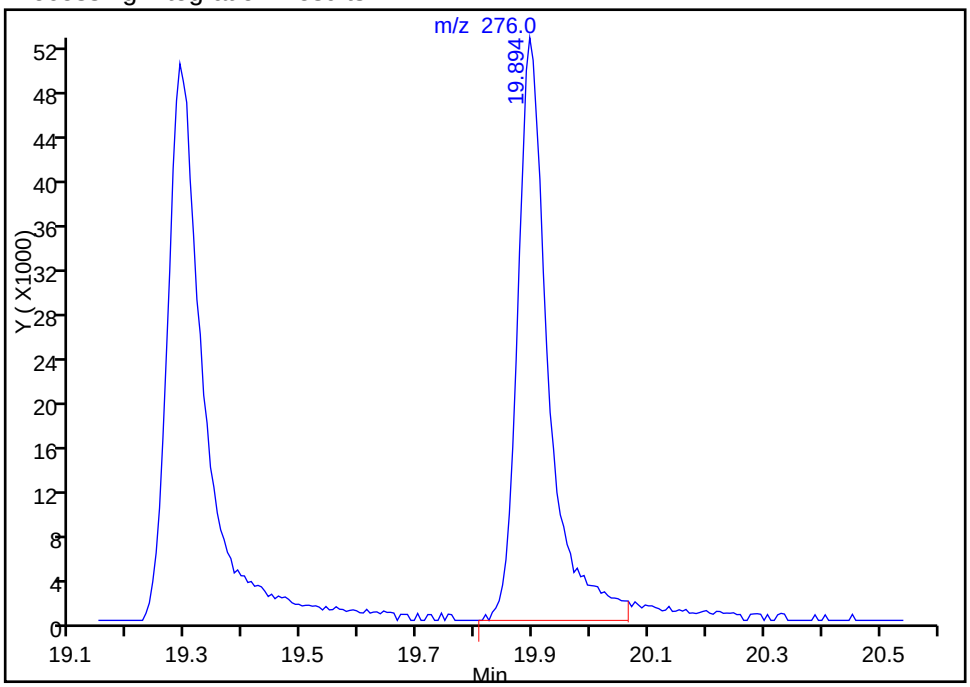
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300005.D				
Injection Date:	30-Sep-2016 08:14:30	Instrument ID:	CH733		
Lims ID:	IC				
Client ID:					
Operator ID:	03200	ALS Bottle#:	4	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

159 Benzo[g,h,i]perylene, CAS: 191-24-2

Signal: 1

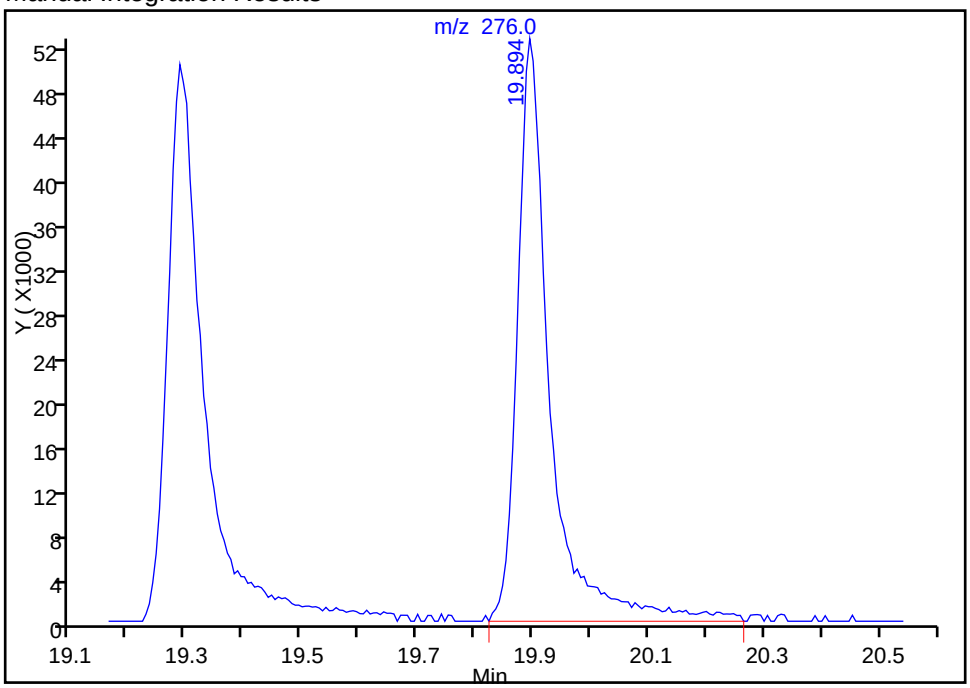
Processing Integration Results

RT: 19.89
Area: 197257
Amount: 4.041158
Amount Units: ng



Manual Integration Results

RT: 19.89
Area: 207721
Amount: 3.892183
Amount Units: ng



Reviewer: piccolinov, 30-Sep-2016 09:09:38

Audit Action: Manually Integrated Audit Reason: Poor chromatography

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300006.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 30-Sep-2016 08:40:30 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013670-006
Operator ID: 03200 Instrument ID: CH733
Sublist: chrom-BNA_CH733*sub2

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 30-Sep-2016 12:19:29 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: piccolinov Date: 30-Sep-2016 09:08:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.260	6.260	0.000	96	124701	8.00	8.00	
* 2 Naphthalene-d8	136	7.513	7.513	0.000	99	428786	8.00	8.00	
* 3 Acenaphthene-d10	164	9.154	9.154	0.000	91	263188	8.00	8.00	
* 4 Phenanthrene-d10	188	10.530	10.530	0.000	97	435686	8.00	8.00	
* 5 Chrysene-d12	240	14.089	14.089	0.000	97	435607	8.00	8.00	
* 6 Perylene-d12	264	17.030	17.030	0.000	98	349284	8.00	8.00	
$ 7 2-Fluorophenol	112	4.831	4.831	0.000	92	185434	10.0	10.3	
$ 8 Phenol-d5	99	5.889	5.889	0.000	94	231271	10.0	10.4	
$ 9 Nitrobenzene-d5	82	6.807	6.807	0.000	88	215598	10.0	10.9	
$ 10 2-Fluorobiphenyl	172	8.513	8.513	0.000	99	466268	10.0	10.3	
$ 11 2,4,6-Tribromophenol	330	9.883	9.883	0.000	90	50190	10.0	10.3	
$ 12 Terphenyl-d14	244	12.324	12.324	0.000	99	452494	10.0	10.4	
13 1,4-Dioxane	88	1.396	1.396	0.000	90	71727	10.0	10.2	
14 N-Nitrosodimethylamine	74	2.043	2.043	0.000	89	96244	10.0	10.5	
15 Pyridine	79	2.113	2.113	0.000	95	182377	10.0	10.3	
21 Methyl methanesulfonate	80	4.578	4.578	0.000	89	129041	10.0	10.3	
25 Benzaldehyde	77	5.801	5.801	0.000	94	142094	10.0	10.4	
26 Phenol	94	5.901	5.901	0.000	96	260776	10.0	10.4	
27 Aniline	93	5.919	5.919	0.000	96	291361	10.0	10.6	
29 Bis(2-chloroethyl)ether	93	5.989	5.989	0.000	98	191064	10.0	10.3	
30 2-Chlorophenol	128	6.042	6.042	0.000	95	197000	10.0	10.3	
31 n-Decane	43	6.113	6.113	0.000	82	153643	10.0	10.3	
32 1,3-Dichlorobenzene	146	6.207	6.207	0.000	95	242783	10.0	10.3	
33 1,4-Dichlorobenzene	146	6.278	6.278	0.000	91	243817	10.0	10.3	
34 Benzyl alcohol	108	6.395	6.395	0.000	88	111618	10.0	10.5	
35 1,2-Dichlorobenzene	146	6.436	6.436	0.000	94	228421	10.0	10.4	
36 2-Methylphenol	108	6.513	6.513	0.000	96	170407	10.0	10.5	
37 Indene	116	6.525	6.525	0.000	90	330133	10.0	10.3	
38 2,2'-oxybis[1-chloropropan	45	6.542	6.542	0.000	84	159810	10.0	10.3	
39 N-Nitrosopyrrolidine	100	6.625	6.625	0.000	91	68885	10.0	10.5	
42 4-Methylphenol	108	6.660	6.660	0.000	62	173966	10.0	10.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
40 Acetophenone	105	6.660	6.660	0.000	82	271746	10.0	10.5	
41 N-Nitrosodi-n-propylamine	70	6.660	6.660	0.000	64	141139	10.0	11.0	
45 Hexachloroethane	117	6.778	6.778	0.000	88	98857	10.0	10.6	
46 Nitrobenzene	77	6.825	6.825	0.000	85	228929	10.0	11.2	
48 Isophorone	82	7.054	7.054	0.000	99	360391	10.0	10.6	
49 2-Nitrophenol	139	7.142	7.142	0.000	97	94089	10.0	10.5	
50 2,4-Dimethylphenol	107	7.172	7.172	0.000	98	201310	10.0	10.7	
52 Benzoic acid	122	7.213	7.213	0.000	88	61128	10.0	8.44	M
53 Bis(2-chloroethoxy)methane	93	7.260	7.260	0.000	99	216312	10.0	10.3	
54 2,4-Dichlorophenol	162	7.366	7.366	0.000	95	171711	10.0	10.8	
56 1,2,4-Trichlorobenzene	180	7.454	7.454	0.000	93	213684	10.0	10.4	
58 Naphthalene	128	7.530	7.530	0.000	98	553092	10.0	10.4	
59 4-Chloroaniline	127	7.572	7.572	0.000	95	224219	10.0	10.7	
60 2,6-Dichlorophenol	162	7.583	7.583	0.000	96	169966	10.0	10.8	
62 Hexachlorobutadiene	225	7.654	7.654	0.000	97	143304	10.0	10.5	
64 Caprolactam	113	7.866	7.866	0.000	86	42444	10.0	10.4	
67 4-Chloro-3-methylphenol	107	8.013	8.013	0.000	94	156437	10.0	10.7	
69 2-Methylnaphthalene	142	8.183	8.183	0.000	91	377840	10.0	10.4	
71 1-Methylnaphthalene	142	8.277	8.277	0.000	92	357747	10.0	10.5	
72 Hexachlorocyclopentadiene	237	8.336	8.336	0.000	95	130781	10.0	9.86	
73 1,2,4,5-Tetrachlorobenzene	216	8.342	8.342	0.000	98	217577	10.0	10.3	
74 2,4,6-Trichlorophenol	196	8.436	8.436	0.000	93	126163	10.0	10.6	
75 2,4,5-Trichlorophenol	196	8.472	8.472	0.000	94	130785	10.0	10.8	
76 1,1'-Biphenyl	154	8.607	8.607	0.000	96	472402	10.0	10.3	
77 2-Chloronaphthalene	162	8.636	8.636	0.000	97	379892	10.0	10.5	
79 2-Nitroaniline	65	8.713	8.713	0.000	82	89815	10.0	9.89	
82 Dimethyl phthalate	163	8.866	8.866	0.000	98	415527	10.0	10.6	
83 1,3-Dinitrobenzene	168	8.901	8.901	0.000	87	55164	10.0	9.89	
84 2,6-Dinitrotoluene	165	8.930	8.930	0.000	94	88885	10.0	10.7	
85 Acenaphthylene	152	9.024	9.024	0.000	98	543228	10.0	10.7	
86 3-Nitroaniline	138	9.089	9.089	0.000	93	89960	10.0	10.8	
87 2,4-Dinitrophenol	184	9.183	9.183	0.000	86	87565	20.0	17.3	
88 Acenaphthene	153	9.189	9.189	0.000	94	367099	10.0	10.3	
89 4-Nitrophenol	109	9.219	9.219	0.000	89	119601	20.0	20.5	
91 2,4-Dinitrotoluene	165	9.301	9.301	0.000	92	115398	10.0	10.7	
93 Dibenzofuran	168	9.342	9.342	0.000	96	548579	10.0	10.4	
95 2,3,5,6-Tetrachlorophenol	232	9.413	9.413	0.000	93	113414	10.0	10.7	
96 2,3,4,6-Tetrachlorophenol	232	9.448	9.448	0.000	73	113402	10.0	10.6	
97 2-Naphthylamine	143	9.477	9.477	0.000	96	362883	10.0	11.2	
98 Diethyl phthalate	149	9.507	9.507	0.000	98	402146	10.0	10.1	
99 Hexadecane	57	9.513	9.513	0.000	93	204456	10.0	10.7	
100 4-Chlorophenyl phenyl ethe	204	9.642	9.642	0.000	91	219560	10.0	10.4	
101 4-Nitroaniline	138	9.648	9.648	0.000	80	89187	10.0	10.4	
103 Fluorene	166	9.660	9.660	0.000	94	417145	10.0	10.3	
104 4,6-Dinitro-2-methylphenol	198	9.683	9.683	0.000	90	128423	20.0	20.0	
105 N-Nitrosodiphenylamine	169	9.742	9.742	0.000	62	293327	10.0	10.6	
90 1,2-Diphenylhydrazine	77	9.783	9.783	0.000	98	446097	10.0	10.9	
57 Azobenzene	77	9.783	9.783	0.000	97	446097	10.0	10.9	
110 4-Bromophenyl phenyl ether	248	10.095	10.095	0.000	65	132320	10.0	10.5	
112 Hexachlorobenzene	284	10.177	10.177	0.000	93	133188	10.0	10.3	
113 Atrazine	200	10.201	10.201	0.000	94	119600	10.0	10.8	
116 Pentachlorophenol	266	10.342	10.342	0.000	91	165085	20.0	20.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
115 n-Octadecane	57	10.348	10.348	0.000	96	208561	10.0	10.8	
121 Phenanthrene	178	10.554	10.554	0.000	97	619983	10.0	10.3	
122 Anthracene	178	10.607	10.607	0.000	97	617109	10.0	10.6	
124 Carbazole	167	10.742	10.742	0.000	96	531350	10.0	10.6	
126 Di-n-butyl phthalate	149	11.042	11.042	0.000	100	590158	10.0	10.2	
131 Fluoranthene	202	11.860	11.860	0.000	97	672203	10.0	10.4	
132 Benzidine	184	11.983	11.983	0.000	99	195339	10.0	8.41	
133 Pyrene	202	12.165	12.165	0.000	98	686996	10.0	10.4	
138 Butyl benzyl phthalate	149	13.024	13.024	0.000	98	211359	10.0	9.73	
144 3,3'-Dichlorobenzidine	252	13.995	13.995	0.000	73	172613	10.0	9.06	
145 Bis(2-ethylhexyl) phthalat	149	14.036	14.036	0.000	95	290236	10.0	9.87	
146 Benzo[a]anthracene	228	14.071	14.071	0.000	97	586591	10.0	10.4	
147 Chrysene	228	14.142	14.142	0.000	96	558351	10.0	10.2	
150 Di-n-octyl phthalate	149	15.348	15.348	0.000	99	359325	10.0	8.56	M
151 7,12-Dimethylbenz(a)anthra	256	16.212	16.212	0.000	92	270514	10.0	10.1	
152 Benzo[b]fluoranthene	252	16.230	16.230	0.000	96	541995	10.0	10.0	
153 Benzo[k]fluoranthene	252	16.283	16.283	0.000	98	620767	10.0	11.0	
219 Benzo[e]pyrene	252	16.806	16.806	0.000	0	520745	10.0	10.4	
154 Benzo[a]pyrene	252	16.912	16.912	0.000	76	520584	10.0	10.5	
157 Indeno[1,2,3-cd]pyrene	276	19.265	19.265	0.000	98	545988	10.0	10.2	
158 Dibenz(a,h)anthracene	278	19.288	19.288	0.000	90	431445	10.0	10.2	
159 Benzo[g,h,i]perylene	276	19.865	19.865	0.000	99	468418	10.0	10.3	
S 197 Methyl Phenols,Total	108				0		20.0	21.1	
S 199 Total Cresols	108				0		20.0	21.1	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SVTAPSTD10i_00187 Amount Added: 1.00 Units: mL

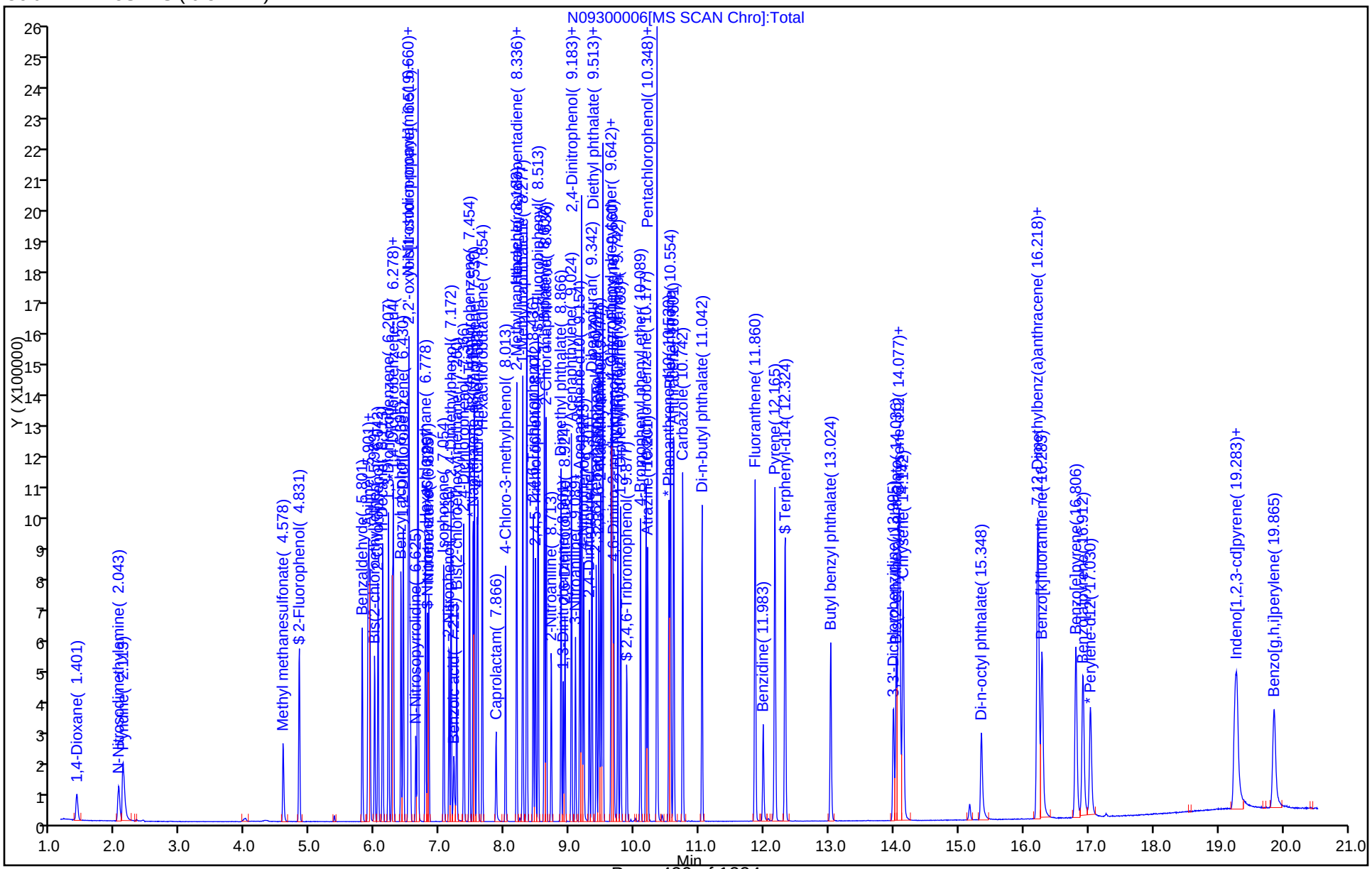
Report Date: 30-Sep-2016 12:19:31 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300006.D

Injection Date:	30-Sep-2016 08:40:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	ICIS			Worklist Smp#:	6
Client ID:					
Injection Vol:	2.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)



Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

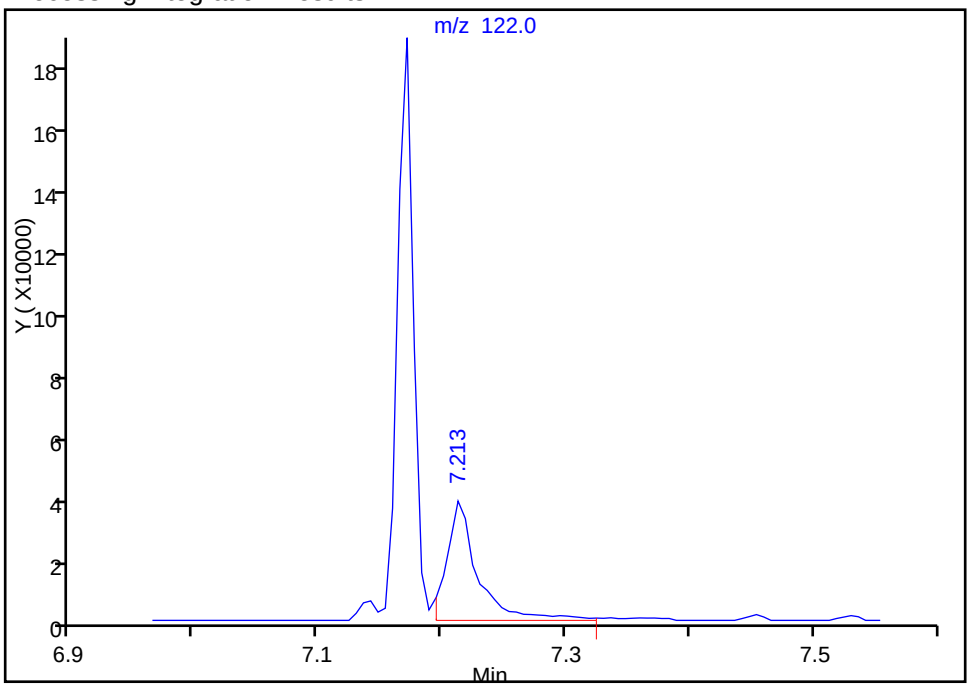
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300006.D				
Injection Date:	30-Sep-2016 08:40:30	Instrument ID:	CH733		
Lims ID:	ICIS				
Client ID:					
Operator ID:	03200	ALS Bottle#:	5	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

52 Benzoic acid, CAS: 65-85-0

Signal: 1

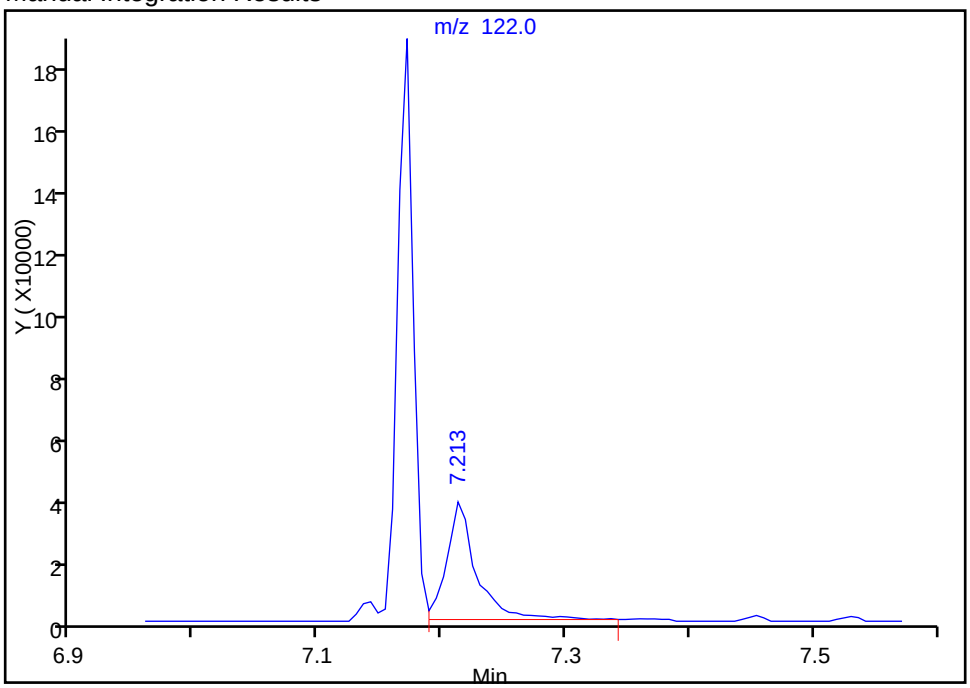
Processing Integration Results

RT: 7.21
Area: 64297
Amount: 11.997178
Amount Units: ng



Manual Integration Results

RT: 7.21
Area: 61128
Amount: 8.438074
Amount Units: ng



Reviewer: piccolinov, 30-Sep-2016 09:08:42

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

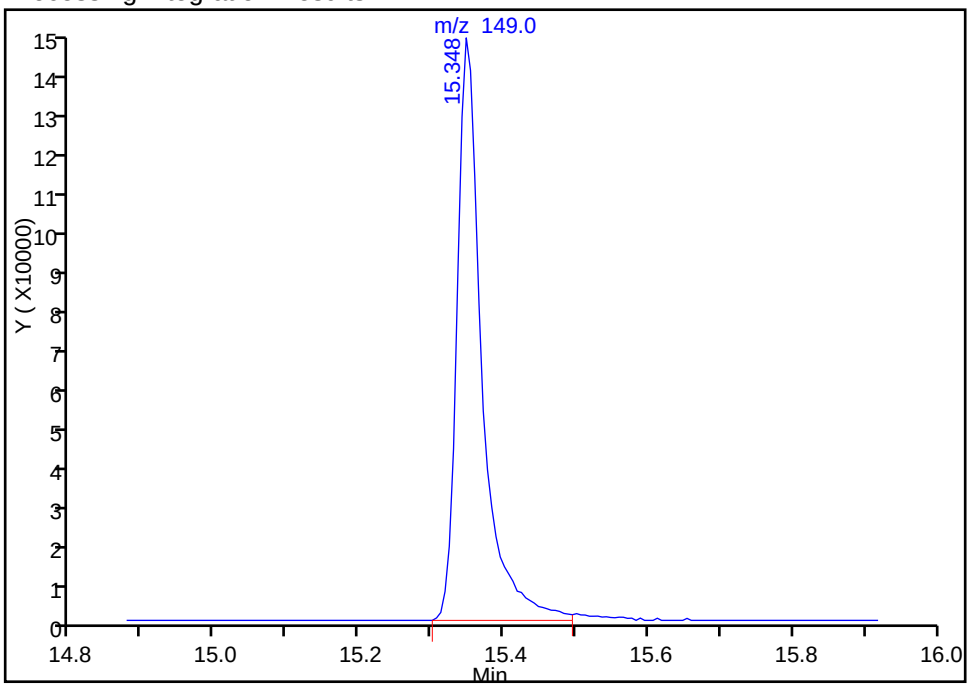
Data File:	\\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300006.D				
Injection Date:	30-Sep-2016 08:40:30	Instrument ID:	CH733		
Lims ID:	ICIS				
Client ID:					
Operator ID:	03200	ALS Bottle#:	5	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		
Column:	Rxi-5SilMS (0.32 mm)	Detector	MS SCAN		

150 Di-n-octyl phthalate, CAS: 117-84-0

Signal: 1

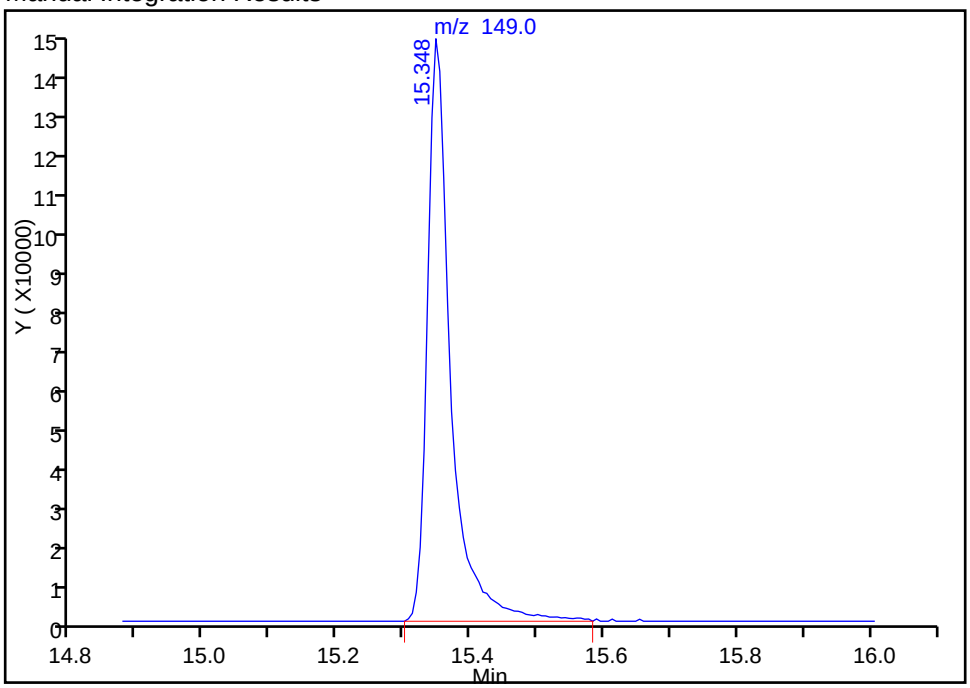
Processing Integration Results

RT: 15.35
Area: 354596
Amount: 9.405125
Amount Units: ng



Manual Integration Results

RT: 15.35
Area: 359325
Amount: 8.564374
Amount Units: ng



Reviewer: piccolinov, 30-Sep-2016 09:08:42

Audit Action: Manually Integrated Audit Reason: Poor chromatography

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300007.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 30-Sep-2016 09:07:30 ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013670-007
Operator ID: 03200 Instrument ID: CH733
Sublist: chrom-BNA_CH733*sub2

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 30-Sep-2016 12:19:36 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: piccolinov Date: 30-Sep-2016 09:36:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.272	6.260	0.012	96	119957	8.00	8.00	
* 2 Naphthalene-d8	136	7.525	7.513	0.012	99	406595	8.00	8.00	
* 3 Acenaphthene-d10	164	9.166	9.154	0.012	92	248280	8.00	8.00	
* 4 Phenanthrene-d10	188	10.542	10.530	0.012	97	419616	8.00	8.00	
* 5 Chrysene-d12	240	14.112	14.089	0.023	97	405840	8.00	8.00	
* 6 Perylene-d12	264	17.059	17.030	0.029	98	335867	8.00	8.00	
$ 7 2-Fluorophenol	112	4.837	4.831	0.005	92	369264	20.0	21.3	
$ 8 Phenol-d5	99	5.901	5.889	0.012	95	460606	20.0	21.5	
$ 9 Nitrobenzene-d5	82	6.819	6.807	0.012	88	431261	20.0	23.0	
$ 10 2-Fluorobiphenyl	172	8.525	8.513	0.011	99	898606	20.0	21.0	
$ 11 2,4,6-Tribromophenol	330	9.895	9.883	0.012	93	101990	20.0	21.7	
$ 12 Terphenyl-d14	244	12.342	12.324	0.018	99	890921	20.0	22.0	
13 1,4-Dioxane	88	1.396	1.396	0.000	91	135094	20.0	19.9	
14 N-Nitrosodimethylamine	74	2.043	2.043	0.000	89	192364	20.0	21.8	
15 Pyridine	79	2.107	2.113	-0.006	95	361081	20.0	21.3	
21 Methyl methanesulfonate	80	4.584	4.578	0.006	89	255248	20.0	21.1	
25 Benzaldehyde	77	5.807	5.801	0.006	95	330893	20.0	25.2	
26 Phenol	94	5.913	5.901	0.012	96	504450	20.0	20.9	
27 Aniline	93	5.931	5.919	0.012	94	570743	20.0	21.5	
29 Bis(2-chloroethyl)ether	93	6.001	5.989	0.012	98	373145	20.0	20.9	
30 2-Chlorophenol	128	6.054	6.042	0.012	95	386701	20.0	21.1	
31 n-Decane	43	6.125	6.113	0.012	82	295272	20.0	20.5	
32 1,3-Dichlorobenzene	146	6.213	6.207	0.006	95	461456	20.0	20.4	
33 1,4-Dichlorobenzene	146	6.289	6.278	0.011	91	469155	20.0	20.5	
34 Benzyl alcohol	108	6.407	6.395	0.012	89	226338	20.0	22.2	
35 1,2-Dichlorobenzene	146	6.442	6.436	0.006	94	432357	20.0	20.4	
36 2-Methylphenol	108	6.525	6.513	0.012	96	332880	20.0	21.3	
37 Indene	116	6.531	6.525	0.006	90	638917	20.0	20.7	
38 2,2'-oxybis[1-chloropropan	45	6.548	6.542	0.006	85	307046	20.0	20.6	
39 N-Nitrosopyrrolidine	100	6.636	6.625	0.011	91	144134	20.0	22.9	
42 4-Methylphenol	108	6.672	6.660	0.012	64	337567	20.0	21.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
40 Acetophenone	105	6.672	6.660	0.012	81	522707	20.0	20.9	
41 N-Nitrosodi-n-propylamine	70	6.672	6.660	0.012	65	276108	20.0	22.3	
45 Hexachloroethane	117	6.789	6.778	0.011	88	189477	20.0	21.2	
46 Nitrobenzene	77	6.836	6.825	0.011	85	433239	20.0	22.4	
48 Isophorone	82	7.066	7.054	0.012	99	714011	20.0	22.2	
49 2-Nitrophenol	139	7.154	7.142	0.012	97	192726	20.0	22.7	
50 2,4-Dimethylphenol	107	7.183	7.172	0.011	98	389000	20.0	21.8	
52 Benzoic acid	122	7.242	7.213	0.029	87	155508	20.0	20.5	
53 Bis(2-chloroethoxy)methane	93	7.272	7.260	0.012	99	418609	20.0	21.1	
54 2,4-Dichlorophenol	162	7.378	7.366	0.012	95	329210	20.0	21.9	
56 1,2,4-Trichlorobenzene	180	7.466	7.454	0.012	93	406242	20.0	20.8	
58 Naphthalene	128	7.542	7.530	0.012	98	1047514	20.0	20.7	
59 4-Chloroaniline	127	7.583	7.572	0.011	95	429559	20.0	21.7	
60 2,6-Dichlorophenol	162	7.595	7.583	0.012	96	322345	20.0	21.6	
62 Hexachlorobutadiene	225	7.666	7.654	0.012	96	271378	20.0	20.9	
64 Caprolactam	113	7.883	7.866	0.017	86	90515	20.0	23.5	
67 4-Chloro-3-methylphenol	107	8.025	8.013	0.012	94	308810	20.0	22.4	
69 2-Methylnaphthalene	142	8.195	8.183	0.012	91	726557	20.0	21.1	
71 1-Methylnaphthalene	142	8.289	8.277	0.012	91	665689	20.0	20.6	
72 Hexachlorocyclopentadiene	237	8.348	8.336	0.012	96	269155	20.0	21.5	
73 1,2,4,5-Tetrachlorobenzene	216	8.354	8.342	0.012	98	411842	20.0	20.6	
74 2,4,6-Trichlorophenol	196	8.448	8.436	0.012	93	249779	20.0	22.2	
75 2,4,5-Trichlorophenol	196	8.483	8.472	0.011	94	253513	20.0	22.1	
76 1,1'-Biphenyl	154	8.619	8.607	0.012	96	899336	20.0	20.8	
77 2-Chloronaphthalene	162	8.648	8.636	0.012	97	713112	20.0	20.8	
79 2-Nitroaniline	65	8.724	8.713	0.011	82	189751	20.0	21.7	
82 Dimethyl phthalate	163	8.877	8.866	0.011	98	800539	20.0	21.7	
83 1,3-Dinitrobenzene	168	8.913	8.901	0.012	87	122374	20.0	21.9	
84 2,6-Dinitrotoluene	165	8.942	8.930	0.012	94	181816	20.0	23.2	
85 Acenaphthylene	152	9.036	9.024	0.012	98	1050634	20.0	22.0	
86 3-Nitroaniline	138	9.101	9.089	0.012	94	182050	20.0	23.1	
87 2,4-Dinitrophenol	184	9.195	9.183	0.012	88	218022	40.0	40.4	
88 Acenaphthene	153	9.201	9.189	0.012	94	708171	20.0	21.0	
89 4-Nitrophenol	109	9.230	9.219	0.011	89	249003	40.0	45.3	
91 2,4-Dinitrotoluene	165	9.313	9.301	0.012	93	235388	20.0	23.1	
93 Dibenzofuran	168	9.354	9.342	0.012	96	1051098	20.0	21.1	
95 2,3,5,6-Tetrachlorophenol	232	9.419	9.413	0.006	93	229289	20.0	23.0	
96 2,3,4,6-Tetrachlorophenol	232	9.460	9.448	0.012	73	226356	20.0	22.4	
97 2-Naphthylamine	143	9.489	9.477	0.012	96	708997	20.0	23.2	
98 Diethyl phthalate	149	9.519	9.507	0.012	98	795878	20.0	21.2	
99 Hexadecane	57	9.524	9.513	0.011	93	396352	20.0	22.0	
100 4-Chlorophenyl phenyl ethe	204	9.654	9.642	0.012	92	420252	20.0	21.0	
101 4-Nitroaniline	138	9.666	9.648	0.018	84	182265	20.0	22.6	
103 Fluorene	166	9.671	9.660	0.011	94	807107	20.0	21.1	
104 4,6-Dinitro-2-methylphenol	198	9.695	9.683	0.012	90	274408	40.0	41.8	
105 N-Nitrosodiphenylamine	169	9.754	9.742	0.012	62	563167	20.0	21.2	
90 1,2-Diphenylhydrazine	77	9.795	9.783	0.012	98	851855	20.0	21.7	
57 Azobenzene	77	9.795	9.783	0.012	97	851855	20.0	21.7	
110 4-Bromophenyl phenyl ether	248	10.107	10.095	0.012	65	256223	20.0	21.0	
112 Hexachlorobenzene	284	10.189	10.177	0.012	93	256956	20.0	20.7	
113 Atrazine	200	10.219	10.201	0.017	94	238537	20.0	22.3	
116 Pentachlorophenol	266	10.360	10.342	0.018	90	346247	40.0	43.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
115 n-Octadecane	57	10.360	10.348	0.012	96	422190	20.0	22.8	
121 Phenanthrene	178	10.566	10.554	0.012	97	1180586	20.0	20.3	
122 Anthracene	178	10.618	10.607	0.011	97	1203043	20.0	21.4	
124 Carbazole	167	10.754	10.742	0.012	96	1039434	20.0	21.5	
126 Di-n-butyl phthalate	149	11.054	11.042	0.012	100	1215107	20.0	21.9	
131 Fluoranthene	202	11.877	11.860	0.017	97	1325653	20.0	21.3	
132 Benzidine	184	12.001	11.983	0.018	99	526403	20.0	21.8	
133 Pyrene	202	12.183	12.165	0.018	98	1330896	20.0	21.7	
138 Butyl benzyl phthalate	149	13.042	13.024	0.018	98	463283	20.0	22.9	
144 3,3'-Dichlorobenzidine	252	14.012	13.995	0.017	73	404883	20.0	21.2	
145 Bis(2-ethylhexyl) phthalat	149	14.059	14.036	0.023	95	622992	20.0	22.7	
146 Benzo[a]anthracene	228	14.095	14.071	0.024	97	1103241	20.0	21.1	
147 Chrysene	228	14.165	14.142	0.023	96	1052916	20.0	20.7	
150 Di-n-octyl phthalate	149	15.371	15.348	0.023	99	836590	20.0	20.7	
151 7,12-Dimethylbenz(a)anthra	256	16.242	16.212	0.030	93	572313	20.0	22.2	
152 Benzo[b]fluoranthene	252	16.253	16.230	0.023	97	1122311	20.0	21.6	
153 Benzo[k]fluoranthene	252	16.312	16.283	0.029	98	1131299	20.0	20.9	
219 Benzo[e]pyrene	252	16.836	16.806	0.030	0	1031186	20.0	21.4	
154 Benzo[a]pyrene	252	16.942	16.912	0.030	76	1031475	20.0	21.7	
157 Indeno[1,2,3-cd]pyrene	276	19.294	19.265	0.029	98	1122235	20.0	21.8	
158 Dibenz(a,h)anthracene	278	19.324	19.288	0.036	90	904691	20.0	22.2	
159 Benzo[g,h,i]perylene	276	19.900	19.865	0.035	98	947603	20.0	21.6	
S 197 Methyl Phenols,Total	108				0		40.0	42.6	
S 199 Total Cresols	108				0		40.0	42.6	

Reagents:

SVTAPSTD20i_00010 Amount Added: 1.00 Units: mL

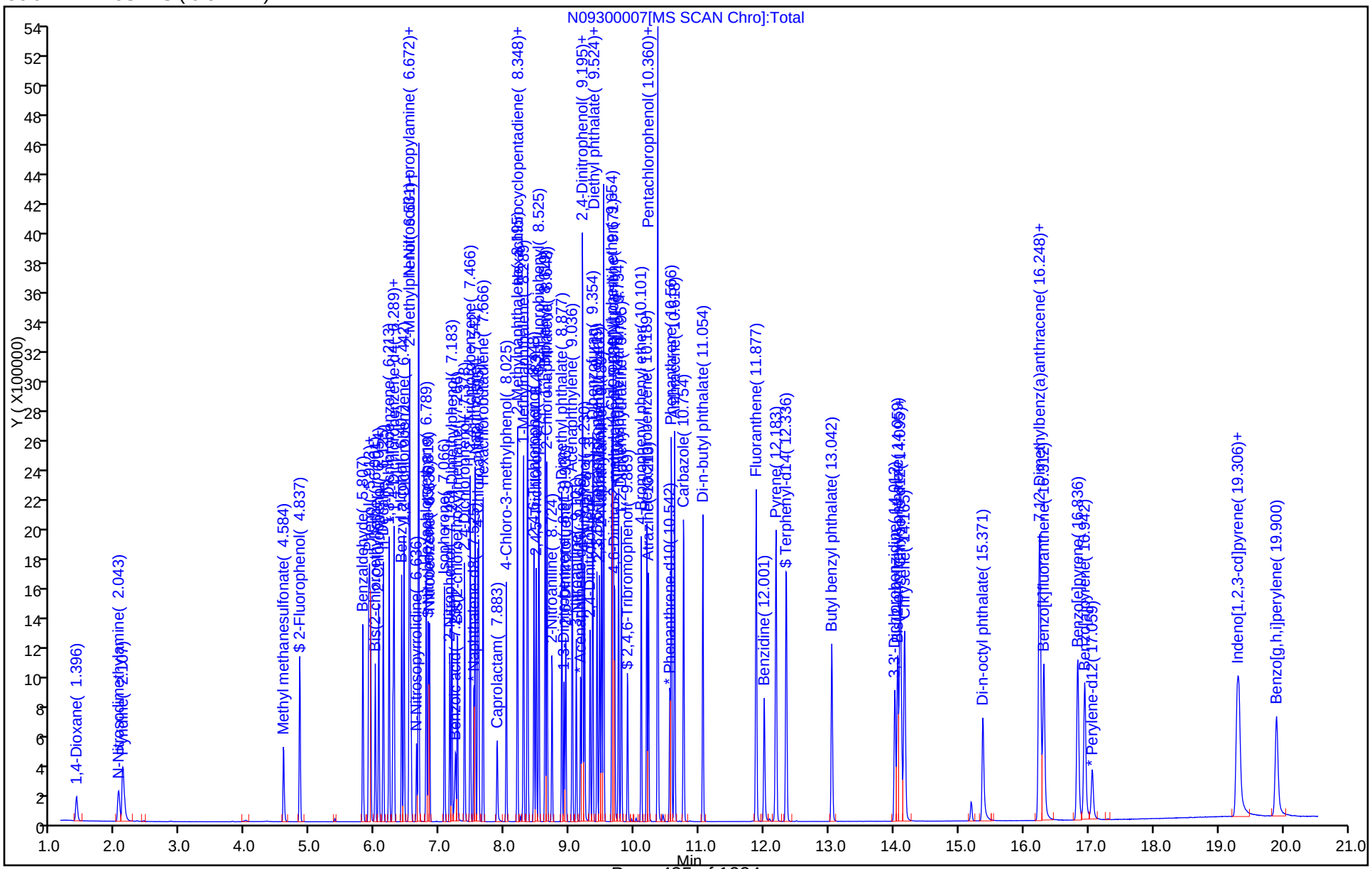
Report Date: 30-Sep-2016 12:19:38 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300007.D

Injection Date:	30-Sep-2016 09:07:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	IC			Worklist Smp#:	7
Client ID:					
Injection Vol:	2.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300008.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 30-Sep-2016 09:34:30 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013670-008
Operator ID: 03200 Instrument ID: CH733
Sublist: chrom-BNA_CH733*sub2

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 30-Sep-2016 12:19:41 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: piccolinov Date: 30-Sep-2016 10:05:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.266	6.260	0.006	96	123549	8.00	8.00	
* 2 Naphthalene-d8	136	7.513	7.513	0.000	99	423538	8.00	8.00	
* 3 Acenaphthene-d10	164	9.154	9.154	0.000	91	254442	8.00	8.00	
* 4 Phenanthrene-d10	188	10.530	10.530	0.000	97	417490	8.00	8.00	
* 5 Chrysene-d12	240	14.095	14.089	0.006	97	415847	8.00	8.00	
* 6 Perylene-d12	264	17.030	17.030	0.000	98	354185	8.00	8.00	
$ 7 2-Fluorophenol	112	4.825	4.831	-0.006	92	703872	40.0	39.5	
$ 8 Phenol-d5	99	5.895	5.889	0.006	94	869688	40.0	39.5	
$ 9 Nitrobenzene-d5	82	6.807	6.807	0.000	89	798753	40.0	40.9	
$ 10 2-Fluorobiphenyl	172	8.513	8.513	0.000	99	1605462	40.0	36.7	
$ 11 2,4,6-Tribromophenol	330	9.883	9.883	0.000	92	185399	40.0	39.6	
$ 12 Terphenyl-d14	244	12.324	12.324	0.000	99	1600003	40.0	38.6	
13 1,4-Dioxane	88	1.390	1.396	-0.006	91	259244	40.0	37.1	
14 N-Nitrosodimethylamine	74	2.037	2.043	-0.006	90	369955	40.0	40.7	
15 Pyridine	79	2.096	2.113	-0.017	95	683777	40.0	39.2	
21 Methyl methanesulfonate	80	4.578	4.578	0.000	89	477050	40.0	38.3	
25 Benzaldehyde	77	5.801	5.801	0.000	94	557013	40.0	41.2	
26 Phenol	94	5.907	5.901	0.006	97	940057	40.0	37.8	
27 Aniline	93	5.919	5.919	0.000	93	1073131	40.0	39.2	
29 Bis(2-chloroethyl)ether	93	5.995	5.989	0.006	99	693242	40.0	37.7	
30 2-Chlorophenol	128	6.048	6.042	0.006	95	728541	40.0	38.6	
31 n-Decane	43	6.119	6.113	0.006	82	553913	40.0	37.4	
32 1,3-Dichlorobenzene	146	6.207	6.207	0.000	95	856098	40.0	36.8	
33 1,4-Dichlorobenzene	146	6.284	6.278	0.006	92	866278	40.0	36.8	
34 Benzyl alcohol	108	6.401	6.395	0.006	89	420877	40.0	40.0	
35 1,2-Dichlorobenzene	146	6.437	6.436	0.001	94	797217	40.0	36.6	
36 2-Methylphenol	108	6.519	6.513	0.006	96	614339	40.0	38.2	
37 Indene	116	6.525	6.525	0.000	89	1180497	40.0	37.1	
38 2,2'-oxybis[1-chloropropan	45	6.542	6.542	0.000	84	552821	40.0	36.1	
39 N-Nitrosopyrrolidine	100	6.631	6.625	0.006	90	268451	40.0	41.4	
42 4-Methylphenol	108	6.666	6.660	0.006	69	607998	40.0	37.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
40 Acetophenone	105	6.660	6.660	0.000	82	931030	40.0	36.1	
41 N-Nitrosodi-n-propylamine	70	6.660	6.660	0.000	63	483470	40.0	37.9	
45 Hexachloroethane	117	6.778	6.778	0.000	88	347929	40.0	37.8	
46 Nitrobenzene	77	6.831	6.825	0.006	85	780722	40.0	38.7	
48 Isophorone	82	7.060	7.054	0.006	99	1283121	40.0	38.4	
49 2-Nitrophenol	139	7.142	7.142	0.000	97	362914	40.0	41.0	
50 2,4-Dimethylphenol	107	7.172	7.172	0.000	98	713832	40.0	38.4	
52 Benzoic acid	122	7.248	7.213	0.035	88	321055	40.0	39.5	
53 Bis(2-chloroethoxy)methane	93	7.260	7.260	0.000	99	765443	40.0	37.1	
54 2,4-Dichlorophenol	162	7.372	7.366	0.006	95	598468	40.0	38.2	
56 1,2,4-Trichlorobenzene	180	7.454	7.454	0.000	93	739839	40.0	36.4	
58 Naphthalene	128	7.531	7.530	0.001	98	1909879	40.0	36.3	
59 4-Chloroaniline	127	7.572	7.572	0.000	95	788060	40.0	38.2	
60 2,6-Dichlorophenol	162	7.584	7.583	0.001	96	578525	40.0	37.2	
62 Hexachlorobutadiene	225	7.654	7.654	0.000	97	494782	40.0	36.6	
64 Caprolactam	113	7.884	7.866	0.018	86	172427	40.0	43.0	
67 4-Chloro-3-methylphenol	107	8.013	8.013	0.000	94	571250	40.0	39.7	
69 2-Methylnaphthalene	142	8.184	8.183	0.001	91	1325155	40.0	36.9	
71 1-Methylnaphthalene	142	8.278	8.277	0.001	92	1230976	40.0	36.6	
72 Hexachlorocyclopentadiene	237	8.336	8.336	0.000	96	533035	40.0	41.6	
73 1,2,4,5-Tetrachlorobenzene	216	8.342	8.342	0.000	98	769463	40.0	37.5	
74 2,4,6-Trichlorophenol	196	8.436	8.436	0.000	93	454637	40.0	39.4	
75 2,4,5-Trichlorophenol	196	8.472	8.472	0.000	93	469991	40.0	40.0	
76 1,1'-Biphenyl	154	8.607	8.607	0.000	95	1618453	40.0	36.5	
77 2-Chloronaphthalene	162	8.636	8.636	0.000	97	1272491	40.0	36.3	
79 2-Nitroaniline	65	8.719	8.713	0.006	82	355885	40.0	39.5	
82 Dimethyl phthalate	163	8.866	8.866	0.000	98	1406502	40.0	37.2	
83 1,3-Dinitrobenzene	168	8.901	8.901	0.000	87	226921	40.0	38.7	
84 2,6-Dinitrotoluene	165	8.931	8.930	0.001	93	323139	40.0	40.3	
85 Acenaphthylene	152	9.025	9.024	0.001	98	1856750	40.0	37.9	
86 3-Nitroaniline	138	9.089	9.089	0.000	93	328949	40.0	40.8	
87 2,4-Dinitrophenol	184	9.183	9.183	0.000	87	443230	80.0	77.0	
88 Acenaphthene	153	9.189	9.189	0.000	94	1250654	40.0	36.2	
89 4-Nitrophenol	109	9.219	9.219	0.000	90	466564	80.0	82.8	
91 2,4-Dinitrotoluene	165	9.301	9.301	0.000	92	423594	40.0	40.5	
93 Dibenzofuran	168	9.342	9.342	0.000	95	1845731	40.0	36.2	
95 2,3,5,6-Tetrachlorophenol	232	9.413	9.413	0.000	93	417780	40.0	40.8	
96 2,3,4,6-Tetrachlorophenol	232	9.448	9.448	0.000	73	410810	40.0	39.6	
97 2-Naphthylamine	143	9.483	9.477	0.006	96	1197500	40.0	38.2	
98 Diethyl phthalate	149	9.513	9.507	0.006	98	1411488	40.0	36.7	
99 Hexadecane	57	9.513	9.513	0.000	93	709686	40.0	37.8	
100 4-Chlorophenyl phenyl ethe	204	9.642	9.642	0.000	92	750351	40.0	36.6	
101 4-Nitroaniline	138	9.654	9.648	0.006	79	341647	40.0	41.4	
103 Fluorene	166	9.660	9.660	0.000	94	1421434	40.0	36.3	
104 4,6-Dinitro-2-methylphenol	198	9.683	9.683	0.000	90	517442	80.0	77.5	
105 N-Nitrosodiphenylamine	169	9.742	9.742	0.000	62	991345	40.0	37.5	
90 1,2-Diphenylhydrazine	77	9.783	9.783	0.000	98	1507127	40.0	38.5	
57 Azobenzene	77	9.783	9.783	0.000	98	1507127	40.0	38.5	
110 4-Bromophenyl phenyl ether	248	10.095	10.095	0.000	65	461877	40.0	38.1	
112 Hexachlorobenzene	284	10.178	10.177	0.001	92	460670	40.0	37.3	
113 Atrazine	200	10.207	10.201	0.006	94	420163	40.0	39.5	
116 Pentachlorophenol	266	10.348	10.342	0.006	92	665010	80.0	83.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
115 n-Octadecane	57	10.348	10.348	0.000	96	753142	40.0	39.5	
121 Phenanthrene	178	10.554	10.554	0.000	98	2124003	40.0	36.7	
122 Anthracene	178	10.607	10.607	0.000	97	2115212	40.0	37.8	
124 Carbazole	167	10.742	10.742	0.000	96	1820054	40.0	37.9	
126 Di-n-butyl phthalate	149	11.042	11.042	0.000	100	2223194	40.0	40.2	
131 Fluoranthene	202	11.860	11.860	0.000	97	2445536	40.0	39.5	
132 Benzidine	184	11.983	11.983	0.000	99	964085	40.0	40.1	
133 Pyrene	202	12.166	12.165	0.001	98	2389556	40.0	38.0	
138 Butyl benzyl phthalate	149	13.024	13.024	0.000	98	905072	40.0	43.7	
144 3,3'-Dichlorobenzidine	252	13.995	13.995	0.000	73	805430	40.0	40.0	
145 Bis(2-ethylhexyl) phthalat	149	14.036	14.036	0.000	95	1220275	40.0	43.5	
146 Benzo[a]anthracene	228	14.071	14.071	0.000	97	1995501	40.0	37.2	
147 Chrysene	228	14.142	14.142	0.000	96	1858874	40.0	35.7	
150 Di-n-octyl phthalate	149	15.348	15.348	0.000	99	1785637	40.0	42.0	
151 7,12-Dimethylbenz(a)anthra	256	16.218	16.212	0.006	92	1122812	40.0	41.3	
152 Benzo[b]fluoranthene	252	16.230	16.230	0.000	96	2180124	40.0	39.7	
153 Benzo[k]fluoranthene	252	16.289	16.283	0.006	98	2081994	40.0	36.4	
219 Benzo[e]pyrene	252	16.807	16.806	0.000	0	1964113	40.0	38.7	
154 Benzo[a]pyrene	252	16.918	16.912	0.006	79	1905460	40.0	37.9	
157 Indeno[1,2,3-cd]pyrene	276	19.265	19.265	0.000	98	2327956	40.0	42.9	
158 Dibenz(a,h)anthracene	278	19.289	19.288	0.001	90	1807790	40.0	42.0	
159 Benzo[g,h,i]perylene	276	19.871	19.865	0.006	98	1850245	40.0	40.0	
S 197 Methyl Phenols,Total	108				0		80.0	75.4	
S 199 Total Cresols	108				0		80.0	75.4	

Reagents:

SVTAPSTD40i_00010 Amount Added: 1.00 Units: mL

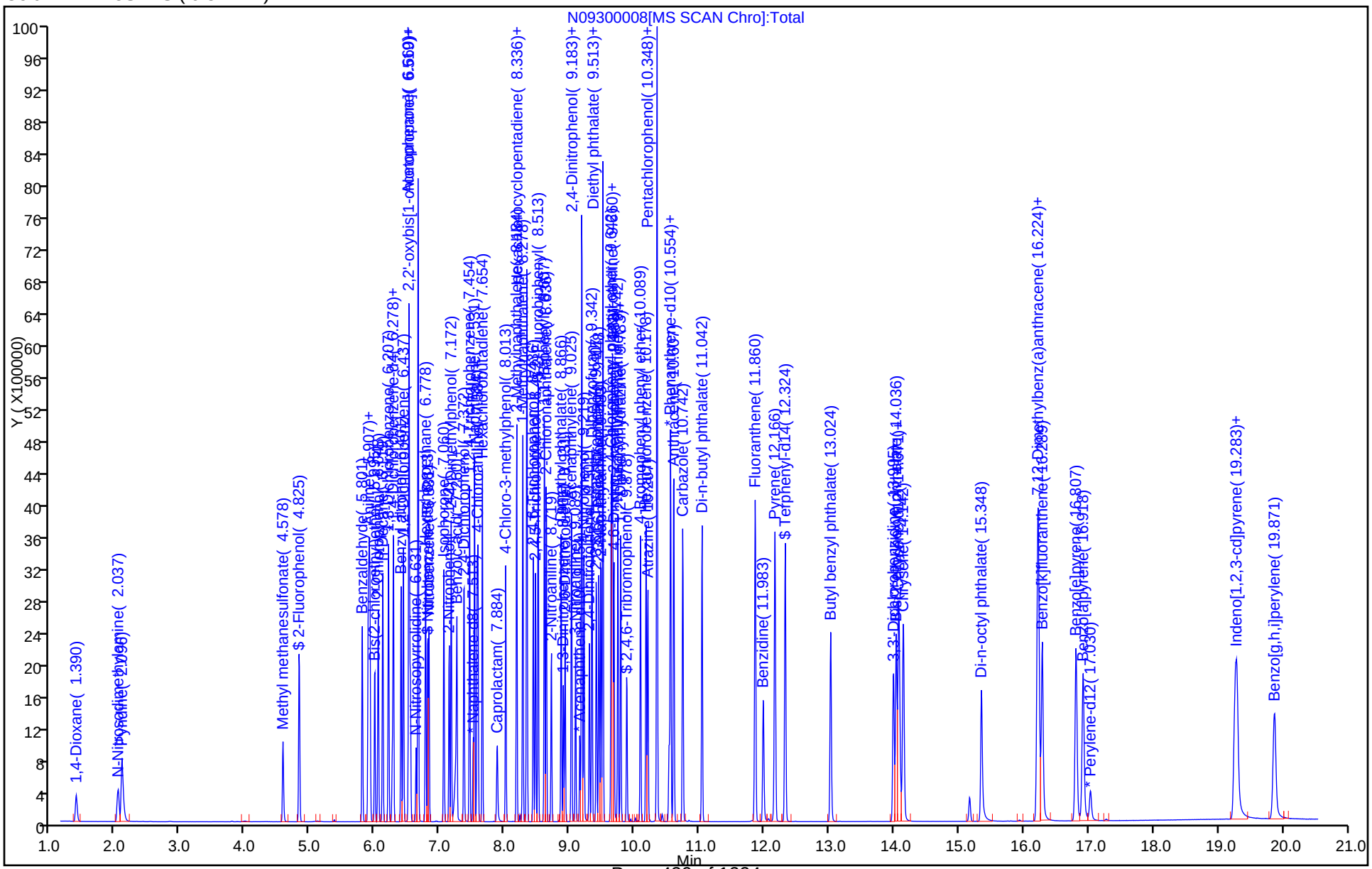
Report Date: 30-Sep-2016 12:19:42 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300008.D

Injection Date:	30-Sep-2016 09:34:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	IC			Worklist Smp#:	8
Client ID:					
Injection Vol:	2.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300009.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 30-Sep-2016 10:28:30 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013670-009
Operator ID: 03200 Instrument ID: CH733
Sublist: chrom-BNA_CH733*sub2

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 30-Sep-2016 12:19:45 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: piccolinov Date: 30-Sep-2016 10:58:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.272	6.260	0.012	96	114921	8.00	8.00	
* 2 Naphthalene-d8	136	7.519	7.513	0.006	99	375187	8.00	8.00	
* 3 Acenaphthene-d10	164	9.166	9.154	0.012	91	222366	8.00	8.00	
* 4 Phenanthrene-d10	188	10.542	10.530	0.012	97	366595	8.00	8.00	
* 5 Chrysene-d12	240	14.112	14.089	0.023	97	388984	8.00	8.00	
* 6 Perylene-d12	264	17.053	17.030	0.023	99	324435	8.00	8.00	
$ 7 2-Fluorophenol	112	4.836	4.831	0.005	92	1005088	60.0	60.7	
$ 8 Phenol-d5	99	5.901	5.889	0.012	95	1206883	60.0	58.9	
$ 9 Nitrobenzene-d5	82	6.819	6.807	0.012	88	1064904	60.0	61.5	
$ 10 2-Fluorobiphenyl	172	8.524	8.513	0.011	99	2146462	60.0	56.1	
$ 11 2,4,6-Tribromophenol	330	9.889	9.883	0.006	90	247051	60.0	60.1	
$ 12 Terphenyl-d14	244	12.336	12.324	0.012	99	2209456	60.0	57.0	
13 1,4-Dioxane	88	1.384	1.396	-0.012	91	379976	60.0	58.5	
14 N-Nitrosodimethylamine	74	2.037	2.043	-0.006	89	544050	60.0	64.4	
15 Pyridine	79	2.090	2.113	-0.023	96	986157	60.0	60.7	
21 Methyl methanesulfonate	80	4.584	4.578	0.006	89	689364	60.0	59.5	
25 Benzaldehyde	77	5.807	5.801	0.006	94	663313	60.0	52.8	
26 Phenol	94	5.919	5.901	0.018	98	1308273	60.0	56.5	
27 Aniline	93	5.930	5.919	0.011	98	1464577	60.0	57.6	
29 Bis(2-chloroethyl)ether	93	6.001	5.989	0.012	98	934064	60.0	54.6	
30 2-Chlorophenol	128	6.054	6.042	0.012	95	998689	60.0	56.9	
31 n-Decane	43	6.125	6.113	0.012	82	760315	60.0	55.1	
32 1,3-Dichlorobenzene	146	6.213	6.207	0.006	95	1182671	60.0	54.6	
33 1,4-Dichlorobenzene	146	6.289	6.278	0.011	91	1194541	60.0	54.6	
34 Benzyl alcohol	108	6.407	6.395	0.012	88	572246	60.0	58.5	
35 1,2-Dichlorobenzene	146	6.442	6.436	0.006	94	1082016	60.0	53.4	
36 2-Methylphenol	108	6.530	6.513	0.017	95	820947	60.0	54.9	
37 Indene	116	6.530	6.525	0.005	90	1628902	60.0	55.1	
38 2,2'-oxybis[1-chloropropan	45	6.548	6.542	0.006	81	721035	60.0	50.6	
39 N-Nitrosopyrrolidine	100	6.642	6.625	0.017	90	362157	60.0	60.1	
42 4-Methylphenol	108	6.672	6.660	0.012	64	806673	60.0	53.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
40 Acetophenone	105	6.672	6.660	0.012	81	1232879	60.0	51.5	
41 N-Nitrosodi-n-propylamine	70	6.672	6.660	0.012	63	638996	60.0	53.8	
45 Hexachloroethane	117	6.783	6.778	0.005	89	473315	60.0	55.2	
46 Nitrobenzene	77	6.836	6.825	0.011	85	1046201	60.0	58.5	
48 Isophorone	82	7.066	7.054	0.012	99	1715135	60.0	57.9	
49 2-Nitrophenol	139	7.148	7.142	0.006	97	485199	60.0	61.9	
50 2,4-Dimethylphenol	107	7.183	7.172	0.011	98	938383	60.0	57.0	
52 Benzoic acid	122	7.266	7.213	0.053	90	438327	60.0	60.2	
53 Bis(2-chloroethoxy)methane	93	7.266	7.260	0.006	99	1008114	60.0	55.1	
54 2,4-Dichlorophenol	162	7.377	7.366	0.011	95	805780	60.0	58.1	
56 1,2,4-Trichlorobenzene	180	7.466	7.454	0.012	93	1006252	60.0	55.8	
58 Naphthalene	128	7.542	7.530	0.012	98	2549548	60.0	54.7	
59 4-Chloroaniline	127	7.583	7.572	0.011	95	1035072	60.0	56.6	
60 2,6-Dichlorophenol	162	7.595	7.583	0.012	96	772032	60.0	56.1	
62 Hexachlorobutadiene	225	7.660	7.654	0.006	96	684382	60.0	57.1	
64 Caprolactam	113	7.901	7.866	0.035	86	224545	60.0	63.2	
67 4-Chloro-3-methylphenol	107	8.024	8.013	0.011	94	749521	60.0	58.8	
69 2-Methylnaphthalene	142	8.189	8.183	0.006	91	1796088	60.0	56.5	
71 1-Methylnaphthalene	142	8.289	8.277	0.012	92	1630907	60.0	54.8	
72 Hexachlorocyclopentadiene	237	8.348	8.336	0.012	96	766880	60.0	68.5	
73 1,2,4,5-Tetrachlorobenzene	216	8.354	8.342	0.012	98	1041137	60.0	58.1	
74 2,4,6-Trichlorophenol	196	8.448	8.436	0.012	93	614932	60.0	61.0	
75 2,4,5-Trichlorophenol	196	8.483	8.472	0.011	93	618924	60.0	60.3	
76 1,1'-Biphenyl	154	8.619	8.607	0.012	95	2162490	60.0	55.8	
77 2-Chloronaphthalene	162	8.648	8.636	0.012	97	1705029	60.0	55.6	
79 2-Nitroaniline	65	8.724	8.713	0.011	81	468647	60.0	59.3	
82 Dimethyl phthalate	163	8.877	8.866	0.011	98	1877302	60.0	56.8	
83 1,3-Dinitrobenzene	168	8.913	8.901	0.012	88	305433	60.0	59.1	
84 2,6-Dinitrotoluene	165	8.942	8.930	0.012	94	426246	60.0	60.8	
85 Acenaphthylene	152	9.036	9.024	0.012	98	2488305	60.0	58.1	
86 3-Nitroaniline	138	9.101	9.089	0.012	93	425737	60.0	60.4	
87 2,4-Dinitrophenol	184	9.195	9.183	0.012	87	615833	120.0	120.5	
88 Acenaphthene	153	9.195	9.189	0.006	88	1683304	60.0	55.8	
89 4-Nitrophenol	109	9.230	9.219	0.011	89	631823	120.0	128.3	
91 2,4-Dinitrotoluene	165	9.313	9.301	0.012	92	563149	60.0	61.7	
93 Dibenzofuran	168	9.354	9.342	0.012	95	2463880	60.0	55.3	
95 2,3,5,6-Tetrachlorophenol	232	9.419	9.413	0.005	93	561398	60.0	62.8	
96 2,3,4,6-Tetrachlorophenol	232	9.460	9.448	0.012	73	541937	60.0	59.8	
97 2-Naphthylamine	143	9.489	9.477	0.012	96	1531075	60.0	56.0	
98 Diethyl phthalate	149	9.519	9.507	0.011	98	1871857	60.0	55.7	
99 Hexadecane	57	9.524	9.513	0.011	94	959273	60.0	57.6	
100 4-Chlorophenyl phenyl ethe	204	9.648	9.642	0.006	93	1009595	60.0	56.3	
101 4-Nitroaniline	138	9.666	9.648	0.018	85	457691	60.0	63.4	
103 Fluorene	166	9.671	9.660	0.011	95	1903871	60.0	55.6	
104 4,6-Dinitro-2-methylphenol	198	9.695	9.683	0.012	90	712710	120.0	120.4	
105 N-Nitrosodiphenylamine	169	9.754	9.742	0.012	62	1304330	60.0	56.1	
90 1,2-Diphenylhydrazine	77	9.795	9.783	0.012	98	2005338	60.0	58.4	
57 Azobenzene	77	9.795	9.783	0.012	98	2005338	60.0	58.4	
110 4-Bromophenyl phenyl ether	248	10.101	10.095	0.006	65	611201	60.0	57.4	
112 Hexachlorobenzene	284	10.189	10.177	0.012	92	619320	60.0	57.2	
113 Atrazine	200	10.218	10.201	0.017	94	551327	60.0	59.0	
116 Pentachlorophenol	266	10.354	10.342	0.012	91	947190	120.0	136.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
115 n-Octadecane	57	10.360	10.348	0.012	95	1018396	60.0	57.4	
121 Phenanthrene	178	10.565	10.554	0.011	98	2774762	60.0	54.6	
122 Anthracene	178	10.618	10.607	0.011	97	2803204	60.0	57.1	
124 Carbazole	167	10.754	10.742	0.012	96	2407703	60.0	57.1	
126 Di-n-butyl phthalate	149	11.054	11.042	0.012	100	3047666	60.0	62.8	
131 Fluoranthene	202	11.871	11.860	0.011	97	3335442	60.0	61.3	
132 Benzidine	184	11.995	11.983	0.012	99	1239445	60.0	58.8	
133 Pyrene	202	12.177	12.165	0.012	98	3244755	60.0	55.1	
138 Butyl benzyl phthalate	149	13.042	13.024	0.018	98	1302455	60.0	67.2	
144 3,3'-Dichlorobenzidine	252	14.012	13.995	0.017	73	1180377	60.0	62.1	
145 Bis(2-ethylhexyl) phthalat	149	14.054	14.036	0.018	95	1779328	60.0	67.8	
146 Benzo[a]anthracene	228	14.095	14.071	0.024	97	2826610	60.0	56.3	
147 Chrysene	228	14.165	14.142	0.023	96	2635876	60.0	54.1	
150 Di-n-octyl phthalate	149	15.371	15.348	0.023	99	2672547	60.0	68.6	
151 7,12-Dimethylbenz(a)anthra	256	16.242	16.212	0.030	92	1670691	60.0	67.2	
152 Benzo[b]fluoranthene	252	16.259	16.230	0.029	96	3345152	60.0	66.6	
153 Benzo[k]fluoranthene	252	16.312	16.283	0.029	98	2874559	60.0	54.9	
219 Benzo[e]pyrene	252	16.836	16.806	0.030	0	2881544	60.0	62.0	
154 Benzo[a]pyrene	252	16.942	16.912	0.030	76	2748388	60.0	59.7	
157 Indeno[1,2,3-cd]pyrene	276	19.294	19.265	0.029	98	3573790	60.0	71.9	
158 Dibenz(a,h)anthracene	278	19.318	19.288	0.030	88	2794400	60.0	70.8	
159 Benzo[g,h,i]perylene	276	19.906	19.865	0.041	98	2809902	60.0	66.2	
S 197 Methyl Phenols,Total	108				0		120.0	108.0	
S 199 Total Cresols	108				0		120.0	108.0	

Reagents:

SVTAPSTD60i_00010 Amount Added: 1.00 Units: mL

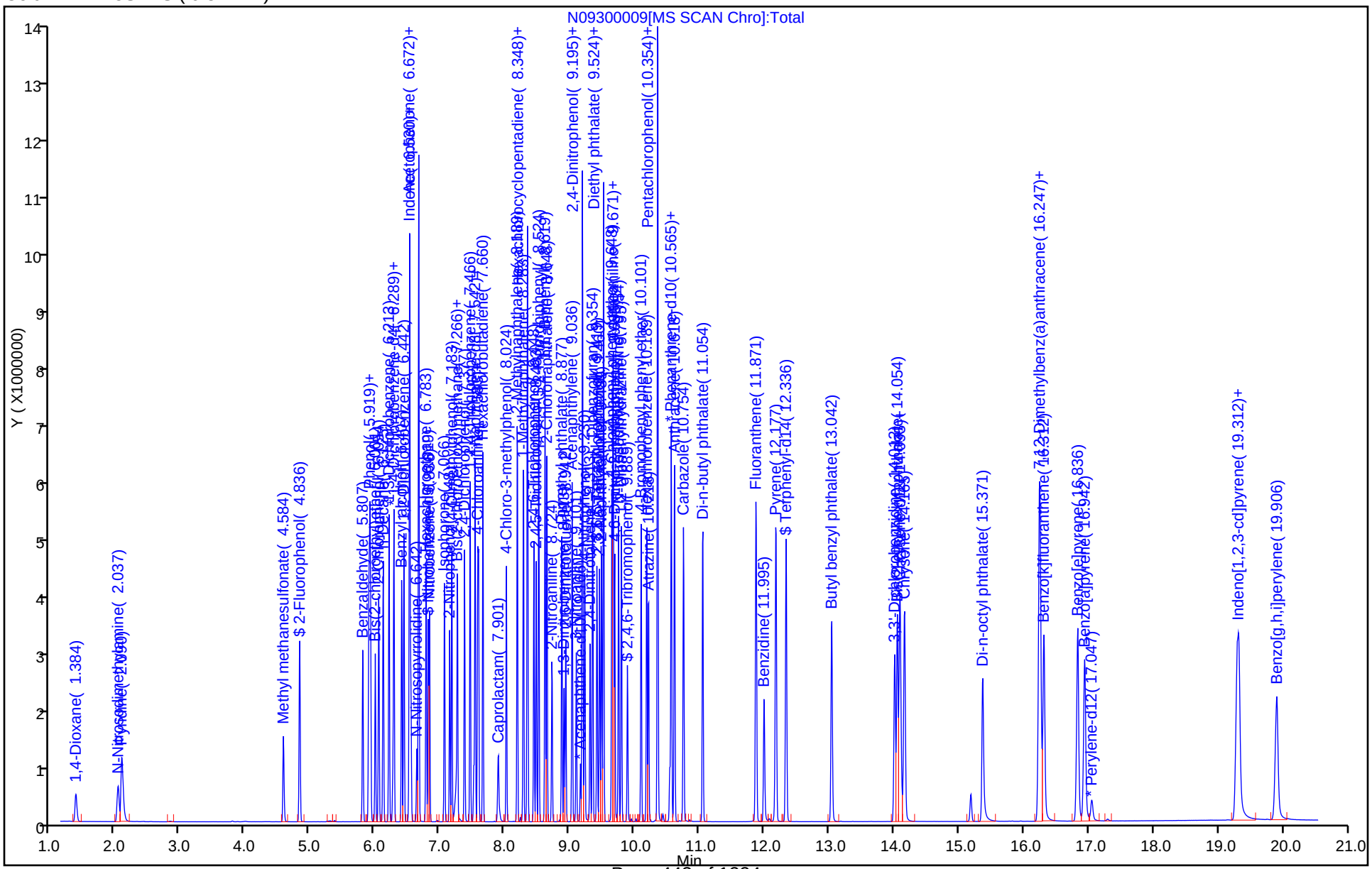
Report Date: 30-Sep-2016 12:19:47 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300009.D

Injection Date:	30-Sep-2016 10:28:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	IC			Worklist Smp#:	9
Client ID:					
Injection Vol:	2.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 30-Sep-2016 11:22:30 ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013670-010
Operator ID: 03200 Instrument ID: CH733
Sublist: chrom-BNA_CH733*sub2

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 30-Sep-2016 12:19:52 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: piccolinov Date: 30-Sep-2016 11:51:00

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.272	6.260	0.012	96	111371	8.00	8.00	
* 2 Naphthalene-d8	136	7.519	7.513	0.006	99	350281	8.00	8.00	
* 3 Acenaphthene-d10	164	9.166	9.154	0.012	91	208450	8.00	8.00	
* 4 Phenanthrene-d10	188	10.536	10.530	0.006	97	342437	8.00	8.00	
* 5 Chrysene-d12	240	14.107	14.089	0.018	97	380323	8.00	8.00	
* 6 Perylene-d12	264	17.048	17.030	0.018	98	322248	8.00	8.00	
$ 7 2-Fluorophenol	112	4.837	4.831	0.006	92	1290615	80.0	80.4	
$ 8 Phenol-d5	99	5.901	5.889	0.012	95	1541568	80.0	77.6	
$ 9 Nitrobenzene-d5	82	6.819	6.807	0.012	89	1342754	80.0	83.1	
$ 10 2-Fluorobiphenyl	172	8.519	8.513	0.006	99	2671556	80.0	74.4	
$ 11 2,4,6-Tribromophenol	330	9.889	9.883	0.006	90	312269	80.0	81.3	
$ 12 Terphenyl-d14	244	12.336	12.324	0.012	99	2839483	80.0	74.9	
13 1,4-Dioxane	88	1.384	1.396	-0.012	91	495296	80.0	78.7	
14 N-Nitrosodimethylamine	74	2.037	2.043	-0.006	89	705958	80.0	86.3	
15 Pyridine	79	2.090	2.113	-0.023	95	1264810	80.0	80.3	
21 Methyl methanesulfonate	80	4.584	4.578	0.006	89	865208	80.0	77.0	
25 Benzaldehyde	77	5.807	5.801	0.006	94	752306	80.0	61.8	
26 Phenol	94	5.913	5.901	0.012	97	1645234	80.0	73.3	
27 Aniline	93	5.925	5.919	0.006	98	1845966	80.0	74.9	
29 Bis(2-chloroethyl)ether	93	6.001	5.989	0.012	99	1184842	80.0	71.4	
30 2-Chlorophenol	128	6.054	6.042	0.012	95	1286034	80.0	75.6	
31 n-Decane	43	6.119	6.113	0.006	82	977209	80.0	73.1	
32 1,3-Dichlorobenzene	146	6.213	6.207	0.006	95	1518998	80.0	72.4	
33 1,4-Dichlorobenzene	146	6.289	6.278	0.011	91	1514436	80.0	71.4	
34 Benzyl alcohol	108	6.407	6.395	0.012	88	734125	80.0	77.5	
35 1,2-Dichlorobenzene	146	6.442	6.436	0.006	94	1372199	80.0	69.8	
36 2-Methylphenol	108	6.531	6.513	0.018	95	1032579	80.0	71.3	
37 Indene	116	6.531	6.525	0.006	89	2043138	80.0	71.3	
38 2,2'-oxybis[1-chloropropan	45	6.548	6.542	0.006	85	912657	80.0	66.1	
39 N-Nitrosopyrrolidine	100	6.642	6.625	0.017	90	455211	80.0	77.9	
42 4-Methylphenol	108	6.672	6.660	0.012	69	1012819	80.0	68.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
40 Acetophenone	105	6.672	6.660	0.012	81	1534933	80.0	66.1	
41 N-Nitrosodi-n-propylamine	70	6.672	6.660	0.012	66	779560	80.0	67.8	
45 Hexachloroethane	117	6.783	6.778	0.005	88	599628	80.0	72.2	
46 Nitrobenzene	77	6.836	6.825	0.011	85	1305632	80.0	78.2	
48 Isophorone	82	7.066	7.054	0.012	99	2131891	80.0	77.0	
49 2-Nitrophenol	139	7.148	7.142	0.006	97	606795	80.0	82.9	
50 2,4-Dimethylphenol	107	7.178	7.172	0.006	98	1165032	80.0	75.8	
52 Benzoic acid	122	7.278	7.213	0.065	88	556121	80.0	81.4	
53 Bis(2-chloroethoxy)methane	93	7.266	7.260	0.006	99	1251900	80.0	73.3	
54 2,4-Dichlorophenol	162	7.378	7.366	0.012	95	989494	80.0	76.4	
56 1,2,4-Trichlorobenzene	180	7.466	7.454	0.012	93	1263130	80.0	75.1	
58 Naphthalene	128	7.536	7.530	0.006	98	3203278	80.0	73.6	
59 4-Chloroaniline	127	7.578	7.572	0.006	96	1303646	80.0	76.4	
60 2,6-Dichlorophenol	162	7.595	7.583	0.012	96	970162	80.0	75.5	
62 Hexachlorobutadiene	225	7.660	7.654	0.006	96	865690	80.0	77.4	
64 Caprolactam	113	7.901	7.866	0.035	86	286988	80.0	86.5	
67 4-Chloro-3-methylphenol	107	8.025	8.013	0.012	94	949650	80.0	79.8	
69 2-Methylnaphthalene	142	8.189	8.183	0.006	91	2255849	80.0	76.0	
71 1-Methylnaphthalene	142	8.283	8.277	0.006	92	2049187	80.0	73.7	
72 Hexachlorocyclopentadiene	237	8.342	8.336	0.006	96	995890	80.0	94.8	
73 1,2,4,5-Tetrachlorobenzene	216	8.348	8.342	0.006	98	1330683	80.0	79.2	
74 2,4,6-Trichlorophenol	196	8.448	8.436	0.012	93	786369	80.0	83.2	
75 2,4,5-Trichlorophenol	196	8.483	8.472	0.011	93	770321	80.0	80.0	
76 1,1'-Biphenyl	154	8.619	8.607	0.012	95	2679153	80.0	73.7	
77 2-Chloronaphthalene	162	8.648	8.636	0.012	97	2118319	80.0	73.7	
79 2-Nitroaniline	65	8.725	8.713	0.012	82	595917	80.0	80.4	
82 Dimethyl phthalate	163	8.877	8.866	0.011	98	2326683	80.0	75.2	
83 1,3-Dinitrobenzene	168	8.913	8.901	0.012	88	382590	80.0	78.6	
84 2,6-Dinitrotoluene	165	8.936	8.930	0.006	94	525103	80.0	79.9	
85 Acenaphthylene	152	9.036	9.024	0.012	98	3097719	80.0	77.2	
86 3-Nitroaniline	138	9.101	9.089	0.012	93	537689	80.0	81.4	
87 2,4-Dinitrophenol	184	9.195	9.183	0.012	70	794537	160.0	164.7	
88 Acenaphthene	153	9.195	9.189	0.006	87	2118972	80.0	74.9	
89 4-Nitrophenol	109	9.230	9.219	0.011	89	776098	160.0	168.2	
91 2,4-Dinitrotoluene	165	9.313	9.301	0.012	92	692767	80.0	80.9	
93 Dibenzofuran	168	9.354	9.342	0.012	95	3096393	80.0	74.1	
95 2,3,5,6-Tetrachlorophenol	232	9.419	9.413	0.006	93	701021	80.0	83.6	
96 2,3,4,6-Tetrachlorophenol	232	9.460	9.448	0.012	73	689837	80.0	81.2	
97 2-Naphthylamine	143	9.489	9.477	0.012	96	1906672	80.0	74.3	
98 Diethyl phthalate	149	9.519	9.507	0.012	98	2361332	80.0	75.0	
99 Hexadecane	57	9.519	9.513	0.006	94	1173365	80.0	75.5	
100 4-Chlorophenyl phenyl ethe	204	9.648	9.642	0.006	92	1252427	80.0	74.6	
101 4-Nitroaniline	138	9.666	9.648	0.018	79	582229	80.0	86.0	
103 Fluorene	166	9.672	9.660	0.012	94	2377225	80.0	74.0	
104 4,6-Dinitro-2-methylphenol	198	9.695	9.683	0.012	89	898854	160.0	161.8	
105 N-Nitrosodiphenylamine	169	9.754	9.742	0.012	62	1623322	80.0	74.8	
90 1,2-Diphenylhydrazine	77	9.795	9.783	0.012	98	2456815	80.0	76.6	
57 Azobenzene	77	9.795	9.783	0.012	98	2456815	80.0	76.6	
110 4-Bromophenyl phenyl ether	248	10.101	10.095	0.006	64	787099	80.0	79.2	
112 Hexachlorobenzene	284	10.183	10.177	0.006	92	780105	80.0	77.1	
113 Atrazine	200	10.213	10.201	0.012	94	681784	80.0	78.1	
116 Pentachlorophenol	266	10.354	10.342	0.012	92	1243748	160.0	191.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
115 n-Octadecane	57	10.354	10.348	0.006	96	1223258	80.0	71.1	
121 Phenanthrene	178	10.566	10.554	0.012	97	3570297	80.0	75.2	
122 Anthracene	178	10.613	10.607	0.006	97	3498850	80.0	76.3	
124 Carbazole	167	10.754	10.742	0.012	96	3087986	80.0	78.3	
126 Di-n-butyl phthalate	149	11.048	11.042	0.006	100	3829235	80.0	84.4	
131 Fluoranthene	202	11.871	11.860	0.011	97	4287835	80.0	84.4	
132 Benzidine	184	11.995	11.983	0.012	99	1516376	80.0	80.7	
133 Pyrene	202	12.177	12.165	0.012	98	4175533	80.0	72.6	
138 Butyl benzyl phthalate	149	13.036	13.024	0.012	98	1710836	80.0	90.3	
144 3,3'-Dichlorobenzidine	252	14.007	13.995	0.012	73	1573544	80.0	84.3	
145 Bis(2-ethylhexyl) phthalat	149	14.048	14.036	0.012	95	2354350	80.0	91.7	
146 Benzo[a]anthracene	228	14.089	14.071	0.018	97	3672470	80.0	74.8	
147 Chrysene	228	14.159	14.142	0.017	96	3449679	80.0	72.4	
150 Di-n-octyl phthalate	149	15.365	15.348	0.017	99	3608159	80.0	93.2	
151 7,12-Dimethylbenz(a)anthra	256	16.236	16.212	0.024	92	2240431	80.0	90.7	
152 Benzo[b]fluoranthene	252	16.253	16.230	0.023	96	4401553	80.0	88.2	
153 Benzo[k]fluoranthene	252	16.312	16.283	0.029	98	3853347	80.0	74.0	
219 Benzo[e]pyrene	252	16.830	16.806	0.024	0	3792402	80.0	82.1	
154 Benzo[a]pyrene	252	16.942	16.912	0.030	76	3630999	80.0	79.4	
157 Indeno[1,2,3-cd]pyrene	276	19.289	19.265	0.024	98	4865816	80.0	98.6	
158 Dibenz(a,h)anthracene	278	19.318	19.288	0.030	90	3797938	80.0	96.9	
159 Benzo[g,h,i]perylene	276	19.900	19.865	0.035	98	3742786	80.0	88.8	
S 197 Methyl Phenols,Total	108				0		160.0	140.1	
S 199 Total Cresols	108				0		160.0	140.1	

Reagents:

SVTAPSTD80i_00010 Amount Added: 1.00 Units: mL

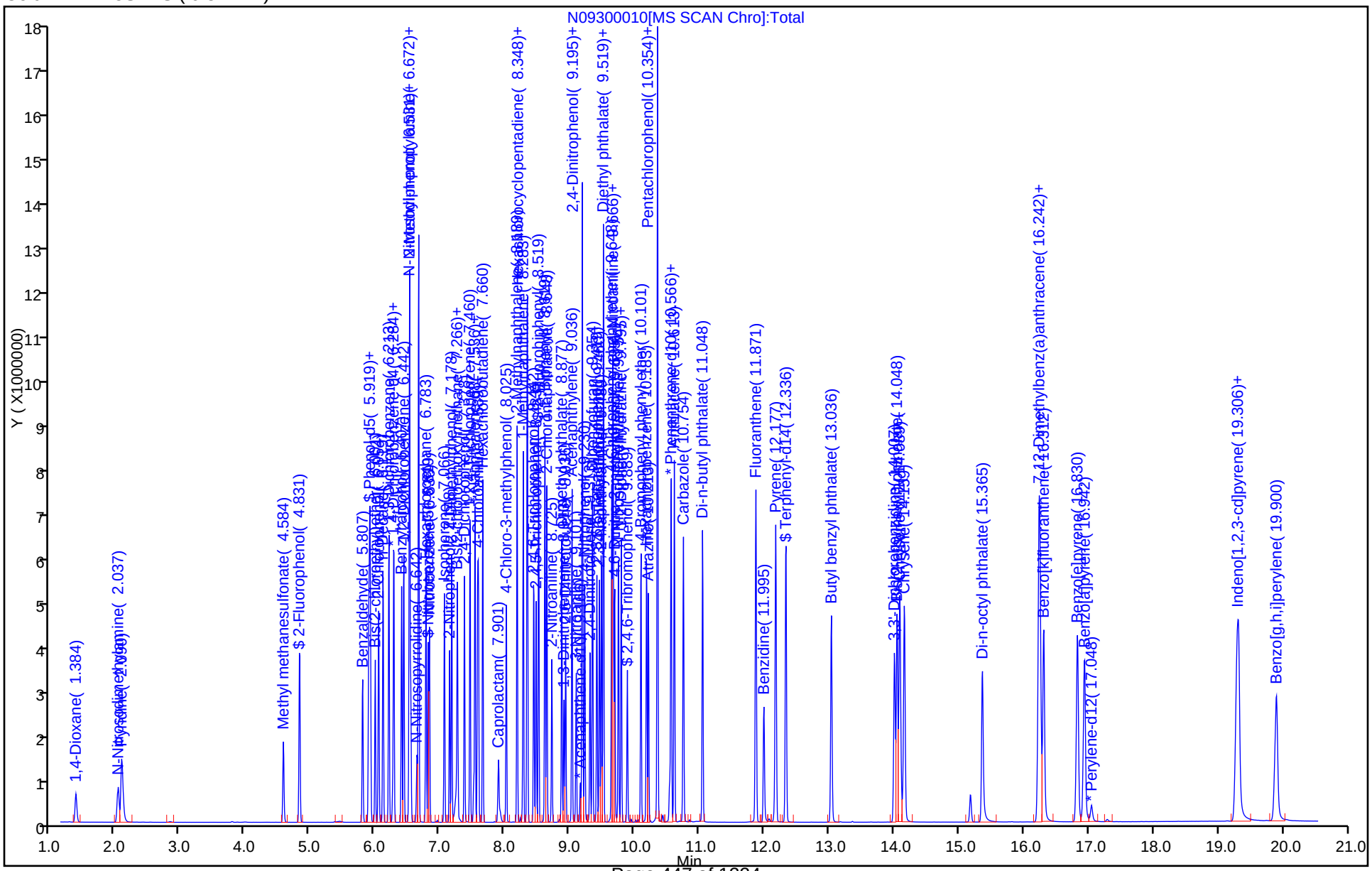
Report Date: 30-Sep-2016 12:19:54 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Injection Date:	30-Sep-2016 11:22:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	IC			Worklist Smp#:	10
Client ID:					
Injection Vol:	2.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCVIS 180-195402/3 Calibration Date: 11/25/2016 09:15

Instrument ID: CH733 Calib Start Date: 09/30/2016 07:20

GC Column: Rxi-5SilMS ID: 0.32(mm) Calib End Date: 09/30/2016 11:22

Lab File ID: N11250003.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4519	0.4716	0.0100	5.22	5.00	4.3	20.0
N-Nitrosodimethylamine	Ave	0.5879	0.6947	0.0100	5.91	5.00	18.2	20.0
Pyridine	Ave	1.131	1.254	0.0100	5.54	5.00	10.9	20.0
Methyl methanesulfonate	Ave	0.8070	0.7484	0.0100	4.64	5.00	-7.3	20.0
Benzaldehyde	Ave	0.8749	0.7856	0.0100	4.49	5.00	-10.2	20.0
Phenol	Ave	1.611	1.557	0.8000	4.83	5.00	-3.4	20.0
Aniline	Ave	1.771	1.722	0.0100	4.86	5.00	-2.8	20.0
Bis(2-chloroethyl)ether	Ave	1.191	1.114	0.7000	4.68	5.00	-6.5	20.0
2-Chlorophenol	Ave	1.222	1.233	0.8000	5.05	5.00	0.9	20.0
n-Decane	Ave	0.9598	0.9651		5.03	5.00	0.6	20.0
1,3-Dichlorobenzene	Ave	1.508	1.440	0.0100	4.78	5.00	-4.5	20.0
1,4-Dichlorobenzene	Ave	1.523	1.443	0.0100	4.74	5.00	-5.3	20.0
Benzyl alcohol	Ave	0.6807	0.7167	0.0100	5.26	5.00	5.3	20.0
1,2-Dichlorobenzene	Ave	1.411	1.337	0.0100	4.74	5.00	-5.3	20.0
2-Methylphenol	Ave	1.041	1.045	0.7000	5.02	5.00	0.5	20.0
Indene	Ave	2.059	2.016	0.0100	4.90	5.00	-2.1	20.0
2,2'-oxybis[1-chloropropane]	Ave	0.9922	1.026	0.0100	5.17	5.00	3.4	20.0
N-Nitrosopyrrolidine	Ave	0.4198	0.4621	0.0100	5.50	5.00	10.1	20.0
Acetophenone	Ave	1.668	1.696	0.0100	5.08	5.00	1.7	20.0
Methylphenol, 3 & 4	Ave	1.058	1.122	0.6000	5.31	5.00	6.1	20.0
N-Nitrosodi-n-propylamine	Ave	0.8263	0.8500	0.5000	5.14	5.00	2.9	20.0
Hexachloroethane	Ave	0.5966	0.5482	0.3000	4.59	5.00	-8.1	20.0
Nitrobenzene	Ave	0.3811	0.3631	0.2000	4.76	5.00	-4.7	20.0
Isophorone	Ave	0.6320	0.5901	0.4000	4.67	5.00	-6.6	20.0
2-Nitrophenol	Ave	0.1671	0.1728	0.1000	5.17	5.00	3.4	20.0
2,4-Dimethylphenol	Ave	0.3508	0.3541	0.2000	5.05	5.00	0.9	20.0
Benzoic acid	Lin1		0.1220	0.0100	4.47	5.00	-10.6	20.0
Bis(2-chloroethoxy)methane	Ave	0.3902	0.3489	0.3000	4.47	5.00	-10.6	20.0
2,4-Dichlorophenol	Ave	0.2957	0.2829	0.2000	4.78	5.00	-4.3	20.0
1,2,4-Trichlorobenzene	Ave	0.3842	0.3469	0.0100	4.51	5.00	-9.7	20.0
Naphthalene	Ave	0.9940	0.9236	0.7000	4.65	5.00	-7.1	20.0
4-Chloroaniline	Ave	0.3896	0.3812	0.0100	4.89	5.00	-2.1	20.0
2,6-Dichlorophenol	Ave	0.2936	0.2801	0.0100	4.77	5.00	-4.6	20.0
Hexachlorobutadiene	Ave	0.2554	0.2269	0.0100	4.44	5.00	-11.1	20.0
Caprolactam	Ave	0.0758	0.0833	0.0100	5.50	5.00	9.9	20.0
4-Chloro-3-methylphenol	Ave	0.2716	0.2990	0.2000	5.51	5.00	10.1	20.0
2-Methylnaphthalene	Ave	0.6778	0.6268	0.4000	4.62	5.00	-7.5	20.0
1-Methylnaphthalene	Ave	0.6346	0.5852	0.0100	4.61	5.00	-7.8	20.0
Hexachlorocyclopentadiene	Ave	0.4030	0.3505	0.0500	4.35	5.00	-13.0	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.6451	0.6251	0.0100	4.85	5.00	-3.1	20.0
2,4,6-Trichlorophenol	Ave	0.3625	0.3577	0.2000	4.93	5.00	-1.3	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCVIS 180-195402/3 Calibration Date: 11/25/2016 09:15

Instrument ID: CH733 Calib Start Date: 09/30/2016 07:20

GC Column: Rxi-5SilMS ID: 0.32(mm) Calib End Date: 09/30/2016 11:22

Lab File ID: N11250003.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2,4,5-Trichlorophenol	Ave	0.3695	0.3651	0.2000	4.94	5.00	-1.2	20.0
1,1'-Biphenyl	Ave	1.395	1.311	0.0100	4.70	5.00	-6.1	20.0
2-Chloronaphthalene	Ave	1.103	1.032	0.8000	4.68	5.00	-6.4	20.0
2-Nitroaniline	Lin1		0.3105	0.0100	5.60	5.00	12.0	20.0
Dimethyl phthalate	Ave	1.188	1.183	0.0100	4.98	5.00	-0.4	20.0
1,3-Dinitrobenzene	Lin2		0.1859	0.0100	5.43	5.00	8.6	20.0
2,6-Dinitrotoluene	Ave	0.2523	0.2671	0.2000	5.29	5.00	5.8	20.0
Acenaphthylene	Ave	1.540	1.421	0.9000	4.61	5.00	-7.7	20.0
3-Nitroaniline	Ave	0.2535	0.2561	0.0100	5.05	5.00	1.0	20.0
2,4-Dinitrophenol	Lin1		0.1587	0.0100	10.0	10.0	0.0	20.0
Acenaphthene	Ave	1.085	1.008	0.9000	4.65	5.00	-7.1	20.0
4-Nitrophenol	Ave	0.1771	0.1948	0.0100	11.0	10.0	10.0	20.0
2,4-Dinitrotoluene	Ave	0.3285	0.3680	0.2000	5.60	5.00	12.0	20.0
Dibenzofuran	Ave	1.604	1.466	0.8000	4.57	5.00	-8.6	20.0
2,3,5,6-Tetrachlorophenol	Ave	0.3218	0.3269	0.0100	5.08	5.00	1.6	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.3259	0.3383	0.0100	5.19	5.00	3.8	20.0
2-Naphthylamine	Ave	0.9845	0.9500	0.0100	4.83	5.00	-3.5	20.0
Diethyl phthalate	Ave	1.208	1.154	0.0100	4.77	5.00	-4.5	20.0
Hexadecane	Ave	0.3549	0.3366		4.74	5.00	-5.2	20.0
4-Chlorophenyl phenyl ether	Ave	0.6447	0.6430	0.4000	4.99	5.00	-0.3	20.0
4-Nitroaniline	Ave	0.2597	0.2668	0.0100	5.14	5.00	2.7	20.0
Fluorene	Ave	1.232	1.154	0.9000	4.68	5.00	-6.4	20.0
4,6-Dinitro-2-methylphenol	Lin2		0.1370	0.0100	11.5	10.0	14.5	20.0
N-Nitrosodiphenylamine	Ave	0.5069	0.5122	0.0100	5.05	5.00	1.0	20.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.7492	0.6568	0.0100	4.38	5.00	-12.3	20.0
4-Bromophenyl phenyl ether	Ave	0.2322	0.2398	0.1000	5.16	5.00	3.3	20.0
Hexachlorobenzene	Ave	0.2364	0.2301	0.1000	4.87	5.00	-2.7	20.0
Atrazine	Ave	0.2040	0.1734	0.0100	4.25	5.00	-15.0	20.0
n-Octadecane	Ave	1.235	1.182		4.79	5.00	-4.3	20.0
Pentachlorophenol	Ave	0.1518	0.1308	0.0500	8.61	10.0	-13.9	20.0
Phenanthrene	Ave	1.109	1.007	0.7000	4.54	5.00	-9.2	20.0
Anthracene	Ave	1.071	1.022	0.7000	4.77	5.00	-4.6	20.0
Carbazole	Ave	0.9209	0.8812	0.0100	4.79	5.00	-4.3	20.0
Di-n-butyl phthalate	Ave	1.059	1.049	0.0100	4.95	5.00	-1.0	20.0
Fluoranthene	Ave	1.187	1.165	0.6000	4.91	5.00	-1.8	20.0
Benzidine	Qua		0.4335	0.0100	4.91	5.00	-1.9	20.0
Pyrene	Ave	1.210	1.015	0.6000	4.19	5.00	-16.2	20.0
Butyl benzyl phthalate	Ave	0.3987	0.3865	0.0100	4.85	5.00	-3.1	20.0
3,3'-Dichlorobenzidine	Lin2		0.3504	0.0100	4.95	5.00	-1.0	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.5398	0.5386	0.0100	4.99	5.00	-0.2	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCVIS 180-195402/3 Calibration Date: 11/25/2016 09:15

Instrument ID: CH733 Calib Start Date: 09/30/2016 07:20

GC Column: Rxi-5SilMS ID: 0.32(mm) Calib End Date: 09/30/2016 11:22

Lab File ID: N11250003.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzo[a]anthracene	Ave	1.033	1.028	0.8000	4.98	5.00	-0.5	20.0
Chrysene	Ave	1.003	0.9794	0.7000	4.88	5.00	-2.3	20.0
Di-n-octyl phthalate	Ave	0.9610	0.9688	0.0100	5.04	5.00	0.8	20.0
7,12-Dimethylbenz(a)anthracene	Ave	0.6135	0.5612	0.0100	4.57	5.00	-8.5	20.0
Benzo[b]fluoranthene	Ave	1.239	1.176	0.7000	4.74	5.00	-5.1	20.0
Benzo[k]fluoranthene	Ave	1.292	1.151	0.7000	4.46	5.00	-10.9	20.0
Benzo[e]pyrene	Ave	1.146	1.059	0.0100	4.62	5.00	-7.6	20.0
Benzo[a]pyrene	Ave	1.135	1.053	0.7000	4.64	5.00	-7.2	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.225	1.123	0.5000	4.58	5.00	-8.3	20.0
Dibenz(a,h)anthracene	Ave	0.9726	0.9291	0.4000	4.78	5.00	-4.5	20.0
Benzo[g,h,i]perylene	Ave	1.046	0.9413	0.5000	4.50	5.00	-10.0	20.0
2-Fluorophenol (Surr)	Ave	1.153	1.146		4.97	5.00	-0.7	20.0
Phenol-d5 (Surr)	Ave	1.427	1.418		4.97	5.00	-0.6	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3691	0.3708		5.02	5.00	0.5	20.0
2-Fluorobiphenyl	Ave	1.377	1.251		4.54	5.00	-9.2	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.0898	0.0974	0.0100	5.43	5.00	8.5	20.0
Terphenyl-d14 (Surr)	Ave	0.7974	0.7614		4.77	5.00	-4.5	20.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250003.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 25-Nov-2016 09:15:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014485-003
Operator ID: 03200 Instrument ID: CH733
Sublist: chrom-BNA_CH733*sub2

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 26-Nov-2016 08:21:37 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK023

First Level Reviewer: piccolinov Date: 25-Nov-2016 09:51:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.307	6.307	0.000	97	108565	8.00	8.00	
* 2 Naphthalene-d8	136	7.548	7.548	0.000	99	389041	8.00	8.00	
* 3 Acenaphthene-d10	164	9.183	9.183	0.000	90	232300	8.00	8.00	
* 4 Phenanthrene-d10	188	10.560	10.560	0.000	97	389565	8.00	8.00	
* 5 Chrysene-d12	240	14.124	14.124	0.000	97	453148	8.00	8.00	
* 6 Perylene-d12	264	17.071	17.071	0.000	98	383387	8.00	8.00	
$ 7 2-Fluorophenol	112	4.872	4.872	0.000	93	155511	10.0	9.93	
$ 8 Phenol-d5	99	5.936	5.936	0.000	94	192476	10.0	9.94	
$ 9 Nitrobenzene-d5	82	6.848	6.848	0.000	90	180330	10.0	10.0	
$ 10 2-Fluorobiphenyl	172	8.542	8.542	0.000	100	363122	10.0	9.08	
$ 11 2,4,6-Tribromophenol	330	9.907	9.907	0.000	92	47420	10.0	10.8	
$ 12 Terphenyl-d14	244	12.348	12.348	0.000	99	431289	10.0	9.55	
13 1,4-Dioxane	88	1.401	1.401	0.000	94	63996	10.0	10.4	
14 N-Nitrosodimethylamine	74	2.060	2.060	0.000	90	94274	10.0	11.8	
15 Pyridine	79	2.137	2.137	0.000	96	170126	10.0	11.1	
21 Methyl methanesulfonate	80	4.619	4.619	0.000	89	101566	10.0	9.27	
25 Benzaldehyde	77	5.842	5.842	0.000	94	106615	10.0	8.98	
26 Phenol	94	5.948	5.948	0.000	98	211315	10.0	9.66	
27 Aniline	93	5.960	5.960	0.000	97	233668	10.0	9.72	
29 Bis(2-chloroethyl)ether	93	6.031	6.031	0.000	99	151169	10.0	9.35	
30 2-Chlorophenol	128	6.089	6.089	0.000	95	167370	10.0	10.1	
31 n-Decane	43	6.154	6.154	0.000	82	130963	10.0	10.1	
32 1,3-Dichlorobenzene	146	6.248	6.248	0.000	96	195384	10.0	9.55	
33 1,4-Dichlorobenzene	146	6.325	6.325	0.000	91	195771	10.0	9.47	
34 Benzyl alcohol	108	6.436	6.436	0.000	89	97257	10.0	10.5	
35 1,2-Dichlorobenzene	146	6.478	6.478	0.000	94	181401	10.0	9.47	
36 2-Methylphenol	108	6.554	6.554	0.000	97	141862	10.0	10.0	
37 Indene	116	6.566	6.566	0.000	89	273601	10.0	9.79	
38 2,2'-oxybis[1-chloropropan	45	6.578	6.578	0.000	85	139238	10.0	10.3	
39 N-Nitrosopyrrolidine	100	6.666	6.666	0.000	88	62714	10.0	11.0	
40 Acetophenone	105	6.701	6.701	0.000	80	230151	10.0	10.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
42 4-Methylphenol	108	6.701	6.701	0.000	67	152297	10.0	10.6	
41 N-Nitrosodi-n-propylamine	70	6.701	6.701	0.000	66	115351	10.0	10.3	
45 Hexachloroethane	117	6.819	6.819	0.000	91	74393	10.0	9.19	
46 Nitrobenzene	77	6.866	6.866	0.000	89	176594	10.0	9.53	
48 Isophorone	82	7.095	7.095	0.000	98	286983	10.0	9.34	
49 2-Nitrophenol	139	7.178	7.178	0.000	98	84016	10.0	10.3	
50 2,4-Dimethylphenol	107	7.207	7.207	0.000	99	172205	10.0	10.1	
52 Benzoic acid	122	7.254	7.254	0.000	88	59328	10.0	8.94	
53 Bis(2-chloroethoxy)methane	93	7.295	7.295	0.000	98	169674	10.0	8.94	
54 2,4-Dichlorophenol	162	7.407	7.407	0.000	96	137591	10.0	9.57	
56 1,2,4-Trichlorobenzene	180	7.495	7.495	0.000	93	168681	10.0	9.03	
58 Naphthalene	128	7.572	7.572	0.000	98	449166	10.0	9.29	
59 4-Chloroaniline	127	7.607	7.607	0.000	94	185392	10.0	9.79	
60 2,6-Dichlorophenol	162	7.619	7.619	0.000	97	136206	10.0	9.54	
62 Hexachlorobutadiene	225	7.689	7.689	0.000	95	110353	10.0	8.89	
64 Caprolactam	113	7.901	7.901	0.000	84	40506	10.0	11.0	
67 4-Chloro-3-methylphenol	107	8.042	8.042	0.000	94	145419	10.0	11.0	
69 2-Methylnaphthalene	142	8.213	8.213	0.000	91	304803	10.0	9.25	
71 1-Methylnaphthalene	142	8.307	8.307	0.000	92	284587	10.0	9.22	
72 Hexachlorocyclopentadiene	237	8.366	8.366	0.000	96	101778	10.0	8.70	
73 1,2,4,5-Tetrachlorobenzene	216	8.372	8.372	0.000	97	181523	10.0	9.69	
74 2,4,6-Trichlorophenol	196	8.472	8.472	0.000	92	103859	10.0	9.87	
75 2,4,5-Trichlorophenol	196	8.501	8.501	0.000	93	106002	10.0	9.88	
76 1,1'-Biphenyl	154	8.642	8.642	0.000	95	380546	10.0	9.39	
77 2-Chloronaphthalene	162	8.672	8.672	0.000	97	299678	10.0	9.36	
79 2-Nitroaniline	65	8.748	8.748	0.000	77	90160	10.0	11.2	
82 Dimethyl phthalate	163	8.895	8.895	0.000	98	343563	10.0	9.96	
83 1,3-Dinitrobenzene	168	8.930	8.930	0.000	88	53990	10.0	10.9	
84 2,6-Dinitrotoluene	165	8.954	8.954	0.000	93	77544	10.0	10.6	
85 Acenaphthylene	152	9.060	9.060	0.000	98	412741	10.0	9.23	
86 3-Nitroaniline	138	9.119	9.119	0.000	89	74370	10.0	10.1	
87 2,4-Dinitrophenol	184	9.213	9.213	0.000	85	92134	20.0	20.0	
88 Acenaphthene	153	9.213	9.213	0.000	92	292791	10.0	9.29	
89 4-Nitrophenol	109	9.242	9.242	0.000	92	113135	20.0	22.0	
91 2,4-Dinitrotoluene	165	9.330	9.330	0.000	92	106862	10.0	11.2	
93 Dibenzofuran	168	9.372	9.372	0.000	96	425697	10.0	9.14	
95 2,3,5,6-Tetrachlorophenol	232	9.436	9.436	0.000	92	94916	10.0	10.2	
96 2,3,4,6-Tetrachlorophenol	232	9.477	9.477	0.000	72	98228	10.0	10.4	
97 2-Naphthylamine	143	9.507	9.507	0.000	95	275854	10.0	9.65	
98 Diethyl phthalate	149	9.530	9.530	0.000	98	335047	10.0	9.55	
99 Hexadecane	57	9.536	9.536	0.000	95	163664	10.0	9.48	
100 4-Chlorophenyl phenyl ethe	204	9.666	9.666	0.000	92	186702	10.0	9.97	
101 4-Nitroaniline	138	9.677	9.677	0.000	81	77472	10.0	10.3	
103 Fluorene	166	9.689	9.689	0.000	95	335065	10.0	9.36	
104 4,6-Dinitro-2-methylphenol	198	9.707	9.707	0.000	88	133464	20.0	22.9	
105 N-Nitrosodiphenylamine	169	9.766	9.766	0.000	62	249418	10.0	10.1	
90 1,2-Diphenylhydrazine	77	9.813	9.813	0.000	97	319821	10.0	8.77	
57 Azobenzene	77	9.813	9.813	0.000	97	319821	10.0	8.77	
110 4-Bromophenyl phenyl ether	248	10.119	10.119	0.000	65	116776	10.0	10.3	
112 Hexachlorobenzene	284	10.201	10.201	0.000	95	112026	10.0	9.73	
113 Atrazine	200	10.224	10.224	0.000	95	84441	10.0	8.50	
116 Pentachlorophenol	266	10.371	10.371	0.000	83	127349	20.0	17.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
115 n-Octadecane	57	10.371	10.371	0.000	92	160435	10.0	9.57	
121 Phenanthrene	178	10.583	10.583	0.000	97	490271	10.0	9.08	
122 Anthracene	178	10.630	10.630	0.000	97	497637	10.0	9.54	
124 Carbazole	167	10.771	10.771	0.000	96	429118	10.0	9.57	
126 Di-n-butyl phthalate	149	11.066	11.066	0.000	100	510747	10.0	9.90	
131 Fluoranthene	202	11.889	11.889	0.000	97	567452	10.0	9.82	
132 Benzidine	184	12.013	12.013	0.000	99	245551	10.0	9.81	
133 Pyrene	202	12.195	12.195	0.000	99	574800	10.0	8.38	
138 Butyl benzyl phthalate	149	13.048	13.048	0.000	98	218929	10.0	9.69	
144 3,3'-Dichlorobenzidine	252	14.024	14.024	0.000	73	198498	10.0	9.90	
145 Bis(2-ethylhexyl) phthalat	149	14.054	14.054	0.000	95	305067	10.0	9.98	
146 Benzo[a]anthracene	228	14.101	14.101	0.000	97	582259	10.0	9.95	
147 Chrysene	228	14.171	14.171	0.000	96	554773	10.0	9.77	
150 Di-n-octyl phthalate	149	15.371	15.371	0.000	99	464300	10.0	10.1	
151 7,12-Dimethylbenz(a)anthra	256	16.248	16.248	0.000	90	268967	10.0	9.15	
152 Benzo[b]fluoranthene	252	16.265	16.265	0.000	96	563355	10.0	9.49	
153 Benzo[k]fluoranthene	252	16.318	16.318	0.000	98	551777	10.0	8.91	
219 Benzo[e]pyrene	252	16.848	16.848	0.000	0	507727	10.0	9.24	
154 Benzo[a]pyrene	252	16.953	16.953	0.000	74	504482	10.0	9.28	
157 Indeno[1,2,3-cd]pyrene	276	19.306	19.306	0.000	96	538167	10.0	9.17	
158 Dibenz(a,h)anthracene	278	19.341	19.341	0.000	87	445239	10.0	9.55	
159 Benzo[g,h,i]perylene	276	19.924	19.924	0.000	97	451088	10.0	9.00	
S 197 Methyl Phenols,Total	108				0		20.0	20.7	
S 199 Total Cresols	108				0		20.0	20.7	

Reagents:

SVTAPSTD10i_00197 Amount Added: 1.00 Units: mL

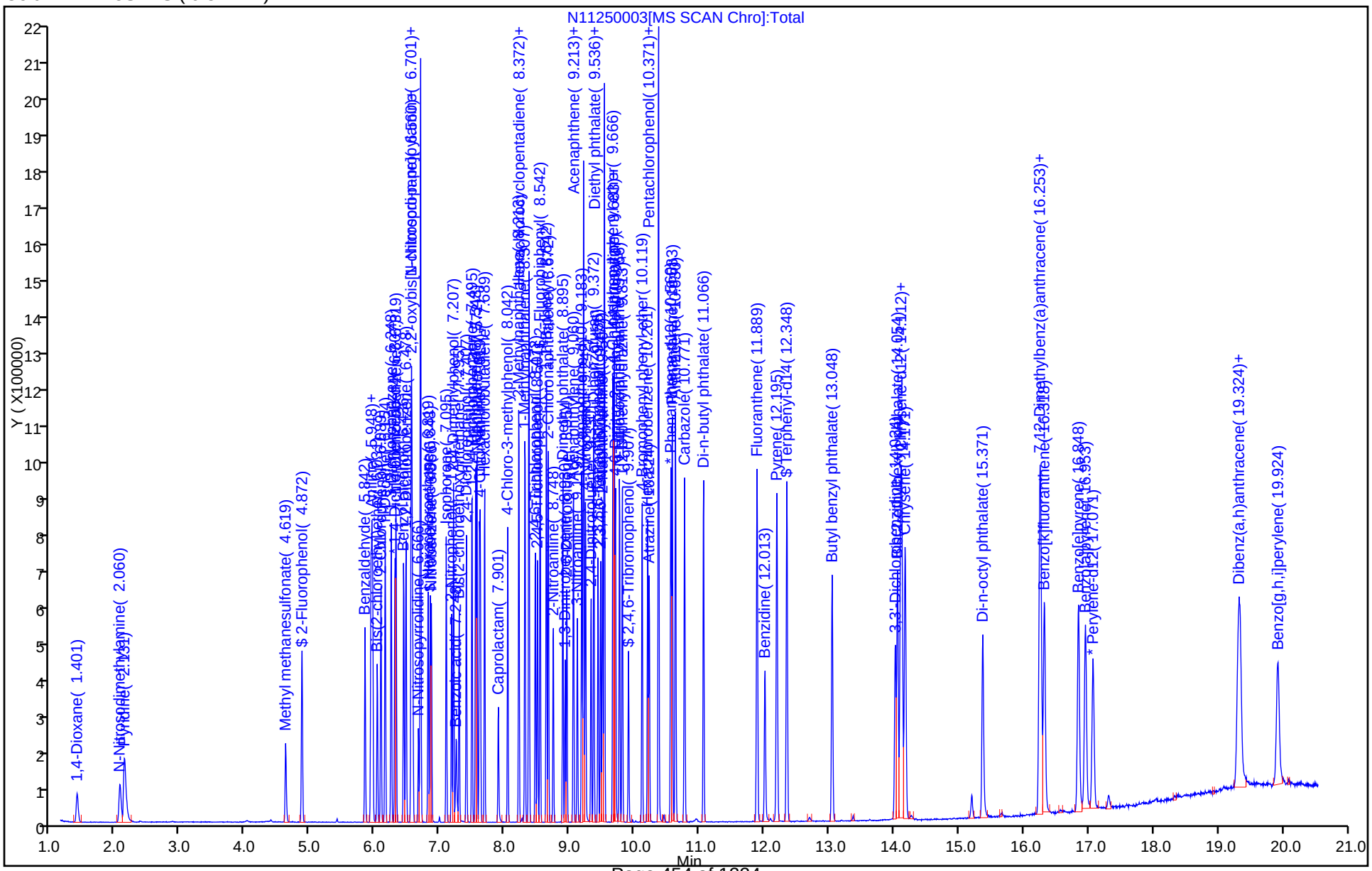
Report Date: 26-Nov-2016 08:21:39 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250003.D

Injection Date:	25-Nov-2016 09:15:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	CCVIS			Worklist Smp#:	3
Client ID:					
Injection Vol:	2.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300002.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 30-Sep-2016 07:04:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013670-002
Operator ID: 03200 Instrument ID: CH733

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 30-Sep-2016 12:19:01 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: piccolinov Date: 30-Sep-2016 08:21:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
189 Pentachlorophenol_T	266	5.334	5.334	0.000	91	507412	NR	NR	
190 DFTPP									
191 Benzidine_T	184	8.028	8.028	0.000	99	2928456	NR	NR	
192 4,4'-DDE	246		8.966					ND	
193 4,4'-DDD	235	8.986	8.986	0.000	90	2915		NR	
194 4,4'-DDT	235	9.592	9.592	0.000	98	1371742	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

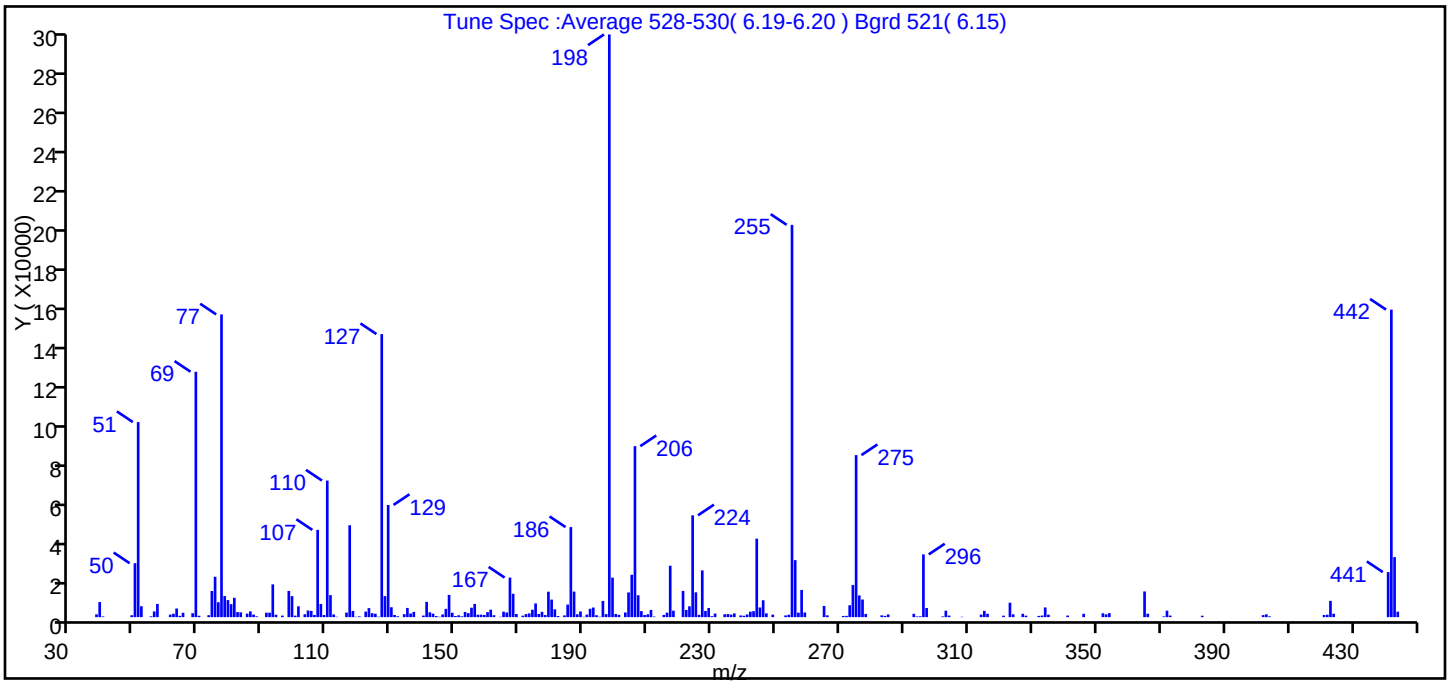
SVDFTPP50i_00025 Amount Added: 1.00 Units: mL

MS Tune Report

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300002.D
Injection Date: 30-Sep-2016 07:04:30 Instrument ID: CH733
Lims ID: DFTPP
Client ID:
Operator ID: 03200 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: BNA_CH733 Limit Group: BNA 8270D ICAL
Tune Method: DFTPP Method 8270

190 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	33.5
68	<2% of mass 69	0.7 (1.6)
69	Present	42.1
70	<2% of mass 69	0.2 (0.6)
127	40-60% of mass 198	48.6
197	<1% of mass 198	0.5
199	5-9% of mass 198	6.8
275	10-30% of mass 198	27.8
365	>1% of mass 198	4.4
441	Present but less than mass 443	7.7 (75.1)
442	>40% of mass 198	52.8
443	17-23% of mass 442	10.3 (19.5)

Report Date: 30-Sep-2016 12:19:05 Chrom Revision: 2.2 08-Sep-2016 14:45:52

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300002.D\BNA_CH733.rslt\spectra.d
Injection Date: 30-Sep-2016 07:04:30
Spectrum: Tune Spec :Average 528-530(6.19-6.20) Bgrd 521(6.15)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 234

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	1414	123.00	4568	188.00	1472	259.00	2365
39.00	7641	124.00	1998	189.00	2900	265.00	5687
40.00	369	125.00	1742	190.00	171	266.00	914
49.00	966	126.00	219	191.00	1311	271.00	613
50.00	27368	127.00	143616	192.00	4257	272.00	654
51.00	98976	128.00	10659	193.00	4875	273.00	6047
52.00	5538	129.00	56920	194.00	980	274.00	16336
55.00	410	130.00	5031	195.00	223	275.00	82216
56.00	2903	131.00	1097	196.00	8207	276.00	10996
57.00	6715	132.00	453	197.00	1537	277.00	8930
61.00	1294	134.00	1505	198.00	295616	278.00	1639
62.00	1714	135.00	4675	199.00	20040	283.00	901
63.00	4397	136.00	1835	200.00	1607	284.00	646
64.00	670	137.00	2658	201.00	1160	285.00	1369
65.00	2213	140.00	808	203.00	2368	293.00	1690
68.00	1980	141.00	7765	204.00	12525	294.00	350
69.00	124504	142.00	2459	205.00	21504	295.00	431
70.00	704	143.00	1761	206.00	86752	296.00	31832
73.00	987	144.00	555	207.00	11109	297.00	4627
74.00	13263	145.00	189	208.00	3043	302.00	356
75.00	20488	146.00	1366	209.00	1077	303.00	3285
76.00	7562	147.00	4213	210.00	1449	304.00	795
77.00	153600	148.00	11286	211.00	3655	308.00	180
78.00	10684	149.00	2211	212.00	289	314.00	1301
79.00	8646	150.00	578	215.00	1134	315.00	3176
80.00	6578	151.00	955	216.00	2274	316.00	1705
81.00	9823	152.00	426	217.00	26096	321.00	745
82.00	2561	153.00	2587	218.00	3278	323.00	7322
83.00	2434	154.00	2020	221.00	13290	324.00	1439
85.00	1795	155.00	4792	222.00	3620	327.00	1716
86.00	2935	156.00	6699	223.00	5508	328.00	753
87.00	1312	157.00	1218	224.00	51664	332.00	638
88.00	394	158.00	1261	225.00	12606	333.00	804

Report Date: 30-Sep-2016 12:19:05 Chrom Revision: 2.2 08-Sep-2016 14:45:52
Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300002.D\BNA_CH733.rslt\spectra.d
Injection Date: 30-Sep-2016 07:04:30
Spectrum: Tune Spec :Average 528-530(6.19-6.20) Bgrd 521(6.15)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 234

m/z	Y	m/z	Y	m/z	Y	m/z	Y
91.00	2234	159.00	1121	226.00	1184	334.00	4916
92.00	2270	160.00	2547	227.00	23712	335.00	1252
93.00	16640	161.00	3805	228.00	3152	341.00	818
94.00	1196	162.00	988	229.00	4633	346.00	1686
96.00	779	164.00	187	230.00	500	352.00	1973
98.00	13281	165.00	2793	231.00	1813	353.00	1399
99.00	10658	166.00	2364	234.00	1479	354.00	2024
100.00	761	167.00	20064	235.00	1559	365.00	13038
101.00	5498	168.00	11856	236.00	1283	366.00	1741
103.00	1459	169.00	1585	237.00	1874	371.00	379
104.00	3366	171.00	761	239.00	858	372.00	3283
105.00	3188	172.00	1543	240.00	722	373.00	812
106.00	1108	173.00	1898	241.00	1371	383.00	718
107.00	44264	174.00	3760	242.00	2779	402.00	1046
108.00	6687	175.00	6962	243.00	3041	403.00	1443
109.00	1055	176.00	1613	244.00	39848	404.00	393
110.00	69312	177.00	2699	245.00	4916	421.00	1075
111.00	11176	178.00	1073	246.00	8573	422.00	1228
112.00	1382	179.00	12903	247.00	1934	423.00	8252
113.00	189	180.00	8900	249.00	1276	424.00	1732
116.00	2317	181.00	3970	253.00	871	441.00	22864
117.00	46624	182.00	569	254.00	1217	442.00	156032
118.00	3145	184.00	890	255.00	199040	443.00	30464
119.00	195	185.00	6370	256.00	28920	444.00	2774
120.00	383	186.00	45696	257.00	2285		
122.00	2820	187.00	12962	258.00	13808		

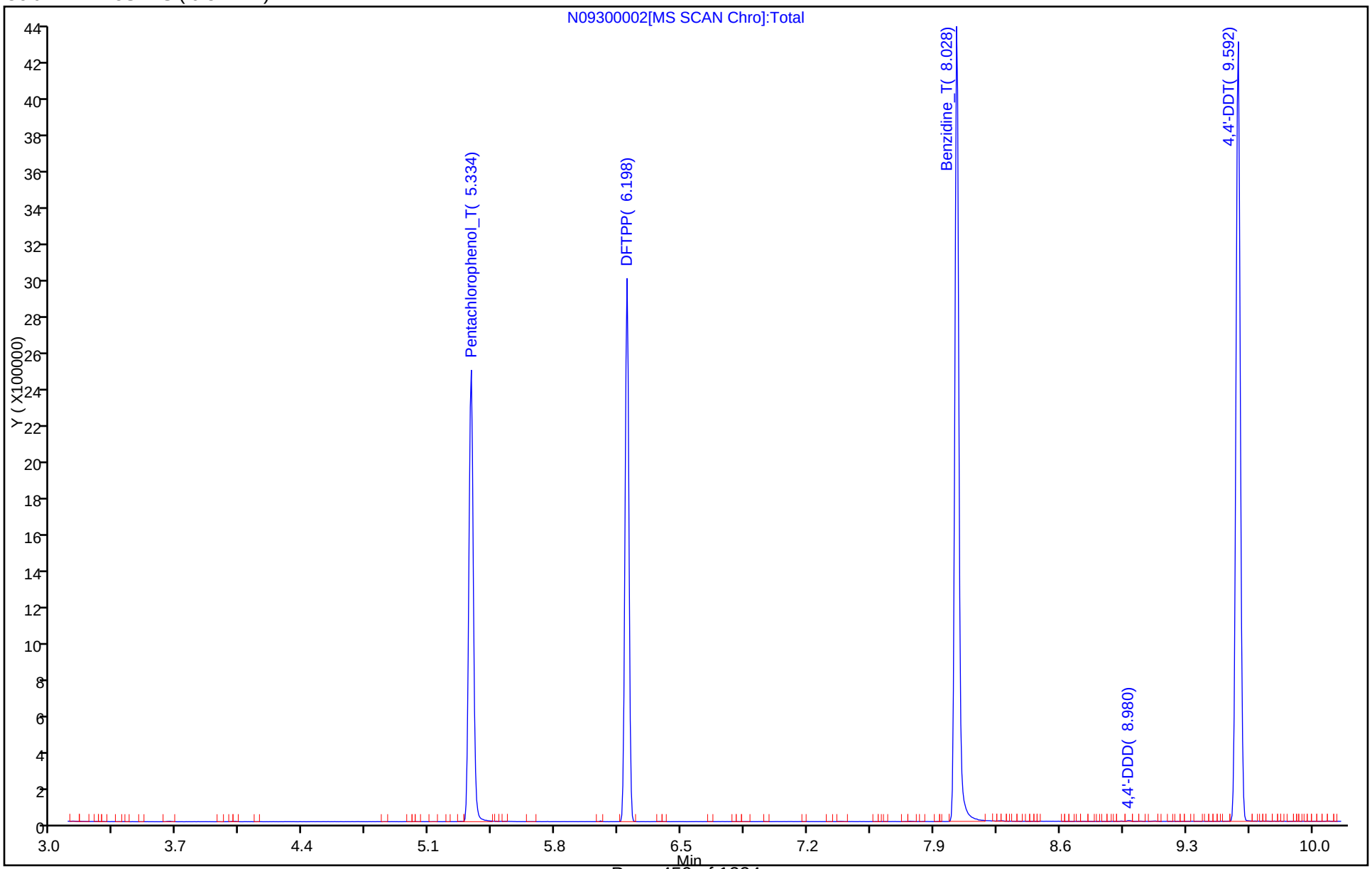
Report Date: 30-Sep-2016 12:19:05 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300002.D

Injection Date:	30-Sep-2016 07:04:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	DFTPP			Worklist Smp#:	2
Client ID:					
Injection Vol:	2.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)

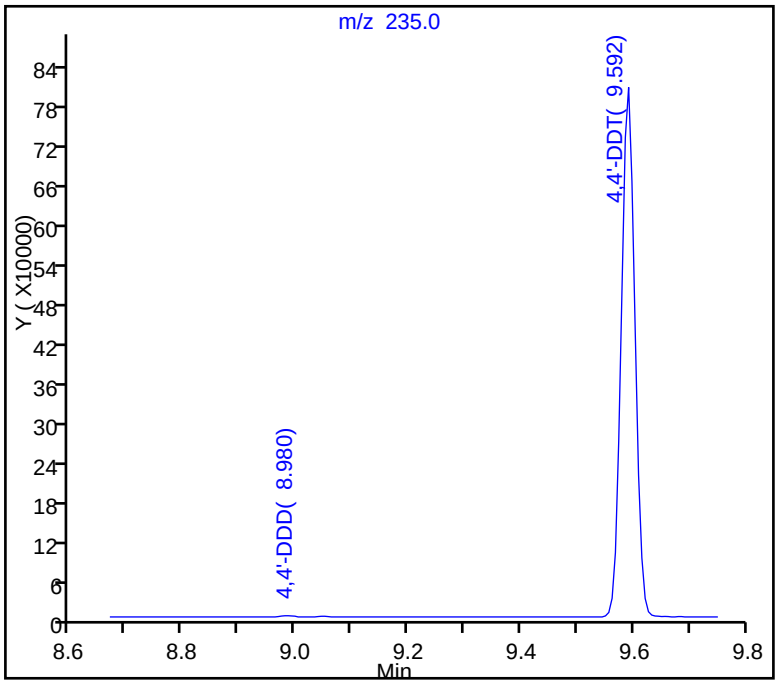


Breakdown Report

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300002.D
Injection Date: 30-Sep-2016 07:04:30 Instrument ID: CH733
Lims ID: DFTPP
Client ID:
Operator ID: 03200 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: BNA_CH733 Limit Group: BNA 8270D ICAL

194 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

194 4,4'-DDT, Area = 1371742
192 4,4'-DDE, Area = 0
193 4,4'-DDD, Area = 2915

%Breakdown: 0.21%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Pittsburgh

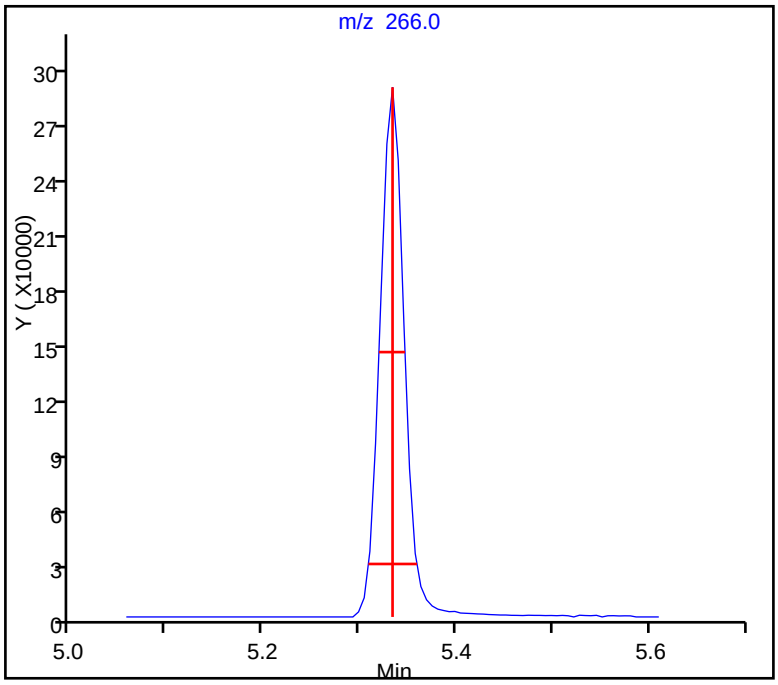
Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300002.D
Injection Date: 30-Sep-2016 07:04:30 Instrument ID: CH733
Lims ID: DFTPP
Client ID:
Operator ID: 03200 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: BNA_CH733 Limit Group: BNA 8270D ICAL

189 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.025 (min.)
Front Width = 0.025 (min.)

Tailing Factor = 1.0, Max. Tailing < 2.00
Passed



Peak Tailing Report

TestAmerica Pittsburgh

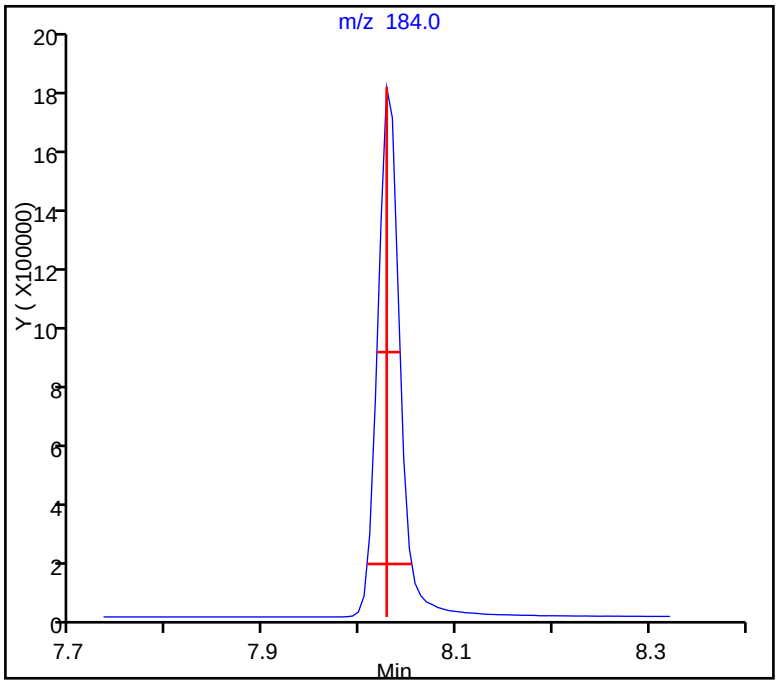
Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300002.D
Injection Date: 30-Sep-2016 07:04:30 Instrument ID: CH733
Lims ID: DFTPP
Client ID:
Operator ID: 03200 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: BNA_CH733 Limit Group: BNA 8270D ICAL

191 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.026 (min.)
Front Width = 0.020 (min.)

Tailing Factor = 1.3, Max. Tailing < 2.00
Passed



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250002.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 25-Nov-2016 09:00:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014485-002
Operator ID: 03200 Instrument ID: CH733

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 26-Nov-2016 08:21:35 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK023

First Level Reviewer: piccolinov Date: 25-Nov-2016 09:28:39

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
189 Pentachlorophenol_T	266	5.375	5.375	0.000	92	744452	NR	NR	
190 DFTPP									
191 Benzidine_T	184	8.057	8.057	0.000	99	5000725	NR	NR	
192 4,4'-DDE	246		8.966					ND	
193 4,4'-DDD	235	9.010	9.010	0.000	94	5629		NR	
194 4,4'-DDT	235	9.616	9.616	0.000	99	2590348	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

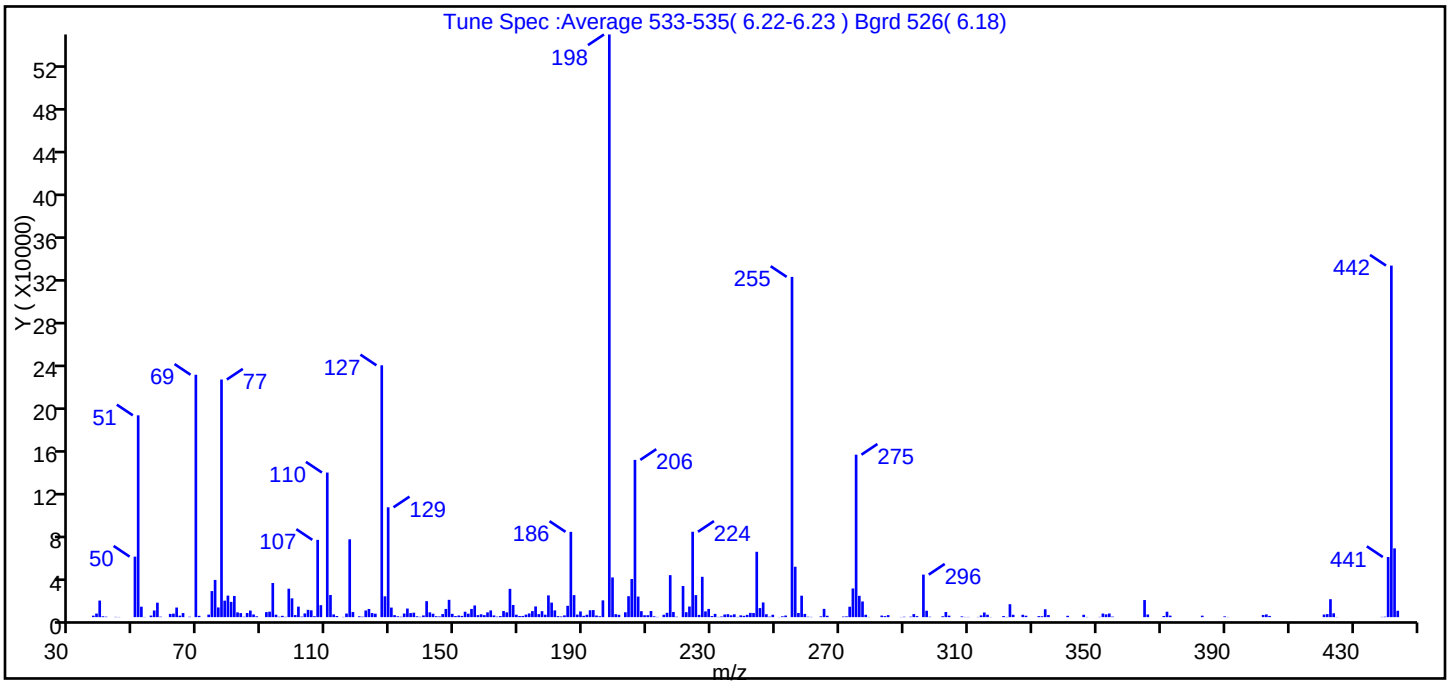
SVDFTPP50i_00027 Amount Added: 1.00 Units: mL

MS Tune Report

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250002.D
Injection Date: 25-Nov-2016 09:00:30 Instrument ID: CH733
Lims ID: DFTPP
Client ID:
Operator ID: 03200 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: BNA_CH733 Limit Group: BNA 8270D ICAL
Tune Method: DFTPP Method 8270

190 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	34.6
68	<2% of mass 69	0.0 (0.0)
69	Present	41.6
70	<2% of mass 69	0.2 (0.5)
127	40-60% of mass 198	43.2
197	<1% of mass 198	0.0
199	5-9% of mass 198	6.8
275	10-30% of mass 198	27.9
365	>1% of mass 198	2.9
441	Present but less than mass 443	10.3 (87.4)
442	>40% of mass 198	60.3
443	17-23% of mass 442	11.8 (19.6)

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250002.D\BNA_CH733.rslt\spectra.d
Injection Date: 25-Nov-2016 09:00:30
Spectrum: Tune Spec :Average 533-535(6.22-6.23) Bgrd 526(6.18)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 274

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1386	124.00	3804	194.00	1542	275.00	151936
38.00	3363	125.00	3222	195.00	824	276.00	19928
39.00	15511	127.00	235520	196.00	15701	277.00	14647
40.00	802	128.00	19480	198.00	544896	278.00	2228
41.00	433	129.00	102736	199.00	37128	279.00	208
44.00	247	130.00	8939	200.00	2755	283.00	1480
45.00	170	131.00	1878	201.00	2179	284.00	953
50.00	56592	132.00	786	203.00	4543	285.00	1878
51.00	188736	133.00	379	204.00	19576	289.00	167
52.00	9763	134.00	3367	205.00	35688	290.00	373
53.00	187	135.00	8034	206.00	147072	292.00	445
55.00	1478	136.00	3789	207.00	19216	293.00	2832
56.00	6209	137.00	4179	208.00	5582	294.00	922
57.00	13534	138.00	753	209.00	1783	296.00	39776
58.00	405	139.00	333	210.00	1818	297.00	5983
61.00	3042	140.00	1597	211.00	5717	298.00	376
62.00	3269	141.00	14959	212.00	760	302.00	805
63.00	8981	142.00	4480	213.00	227	303.00	4797
64.00	1380	143.00	3203	215.00	2211	304.00	1400
65.00	3830	144.00	845	216.00	4069	308.00	697
67.00	384	145.00	662	217.00	39272	309.00	198
69.00	226688	146.00	2858	218.00	4804	310.00	199
70.00	1230	147.00	7667	219.00	393	313.00	197
73.00	2363	148.00	16205	221.00	29152	314.00	1631
74.00	24368	149.00	3101	222.00	4629	315.00	4344
75.00	34816	150.00	984	223.00	9938	316.00	2254
76.00	9089	151.00	1533	224.00	79848	317.00	168
77.00	222208	152.00	1165	225.00	20616	321.00	1016
78.00	15417	153.00	5069	226.00	2084	322.00	203
79.00	20136	154.00	3199	227.00	37728	323.00	12095
80.00	14273	155.00	7683	228.00	5384	324.00	2228
81.00	19808	156.00	10935	229.00	7681	327.00	2210
82.00	4453	157.00	1889	230.00	1012	328.00	1323

Report Date: 26-Nov-2016 08:21:35 Chrom Revision: 2.2 14-Nov-2016 08:15:18
Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250002.D\BNA_CH733.rslt\spectra.d
Injection Date: 25-Nov-2016 09:00:30
Spectrum: Tune Spec :Average 533-535(6.22-6.23) Bgrd 526(6.18)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 274

m/z	Y	m/z	Y	m/z	Y	m/z	Y
83.00	3777	158.00	2679	231.00	3057	332.00	951
84.00	361	159.00	1871	232.00	244	333.00	811
85.00	3853	160.00	4473	233.00	594	334.00	7372
86.00	6152	161.00	6254	234.00	2481	335.00	1941
87.00	2493	162.00	1601	235.00	2769	341.00	1261
88.00	763	163.00	474	236.00	1734	346.00	2192
91.00	4691	164.00	963	237.00	2685	347.00	207
92.00	5114	165.00	5720	238.00	232	351.00	242
93.00	31920	166.00	4473	239.00	1680	352.00	3374
94.00	2286	167.00	26472	240.00	1234	353.00	2618
95.00	380	168.00	11359	241.00	2139	354.00	3378
96.00	1234	169.00	2271	242.00	3989	355.00	512
97.00	279	170.00	1038	243.00	3856	365.00	15987
98.00	26608	171.00	1133	244.00	61120	366.00	2490
99.00	17576	172.00	2380	245.00	8477	371.00	1062
100.00	1932	173.00	3444	246.00	13733	372.00	5077
101.00	9828	174.00	5648	247.00	2709	373.00	1421
102.00	479	175.00	10010	248.00	454	383.00	1368
103.00	3464	176.00	2796	249.00	2235	390.00	726
104.00	6816	177.00	5596	251.00	167	391.00	171
105.00	6384	178.00	2285	252.00	773	402.00	2055
106.00	858	179.00	20352	253.00	1476	403.00	2560
107.00	72280	180.00	13600	255.00	318208	404.00	1144
108.00	11220	181.00	6313	256.00	47144	421.00	2447
110.00	135232	182.00	944	257.00	3874	422.00	2832
111.00	20704	183.00	593	258.00	20056	423.00	16776
112.00	2565	184.00	1646	259.00	3023	424.00	3588
113.00	1062	185.00	10604	260.00	394	425.00	168
115.00	222	186.00	79776	261.00	229	439.00	220
116.00	3386	187.00	20592	264.00	698	440.00	415
117.00	72792	188.00	2408	265.00	7748	441.00	56232
118.00	4776	189.00	5354	266.00	1293	442.00	328768
120.00	798	190.00	1240	271.00	544	443.00	64320
121.00	409	191.00	2245	272.00	709	444.00	5959

Report Date: 26-Nov-2016 08:21:35 Chrom Revision: 2.2 14-Nov-2016 08:15:18
Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250002.D\BNA_CH733.rslt\spectra.d
Injection Date: 25-Nov-2016 09:00:30
Spectrum: Tune Spec :Average 533-535(6.22-6.23) Bgrd 526(6.18)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 274

m/z	Y	m/z	Y	m/z	Y	m/z	Y
122.00	6213	192.00	6452	273.00	9753		
123.00	7646	193.00	6592	274.00	26832		

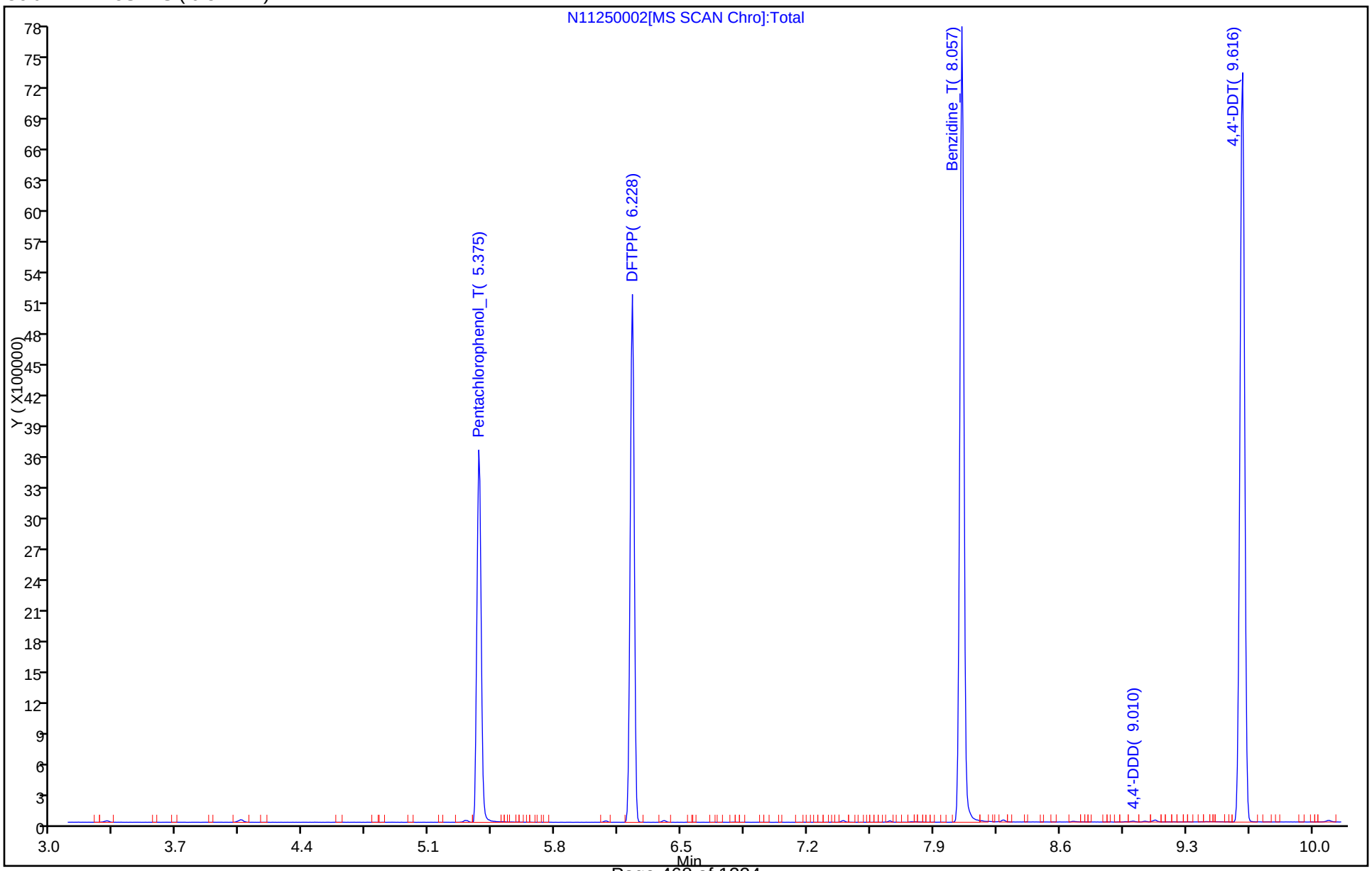
Report Date: 26-Nov-2016 08:21:35 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250002.D

Injection Date:	25-Nov-2016 09:00:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	DFTPP			Worklist Smp#:	2
Client ID:					
Injection Vol:	2.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)

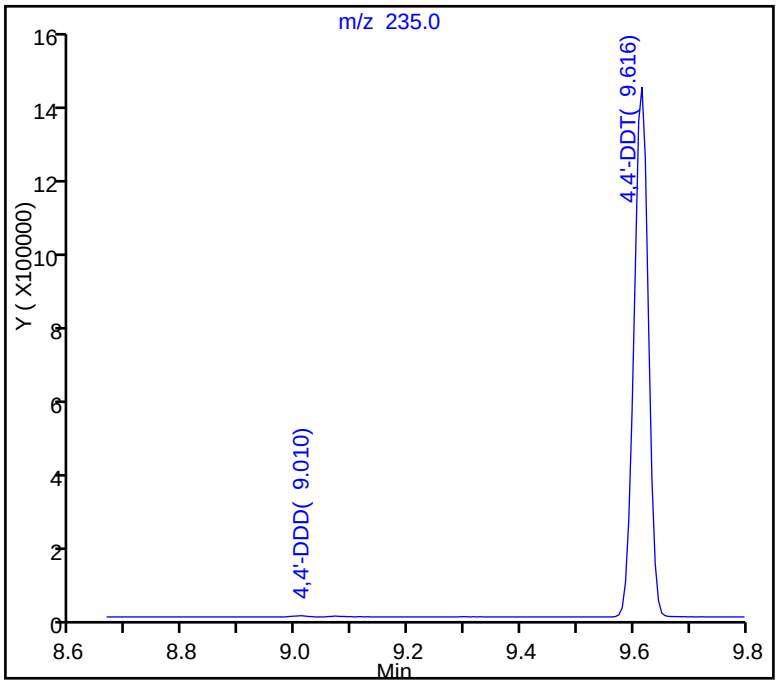


Breakdown Report

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250002.D
Injection Date: 25-Nov-2016 09:00:30 Instrument ID: CH733
Lims ID: DFTPP
Client ID:
Operator ID: 03200 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: BNA_CH733 Limit Group: BNA 8270D ICAL

194 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

194 4,4'-DDT, Area = 2590348
192 4,4'-DDE, Area = 0
193 4,4'-DDD, Area = 5629

%Breakdown: 0.22%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Pittsburgh

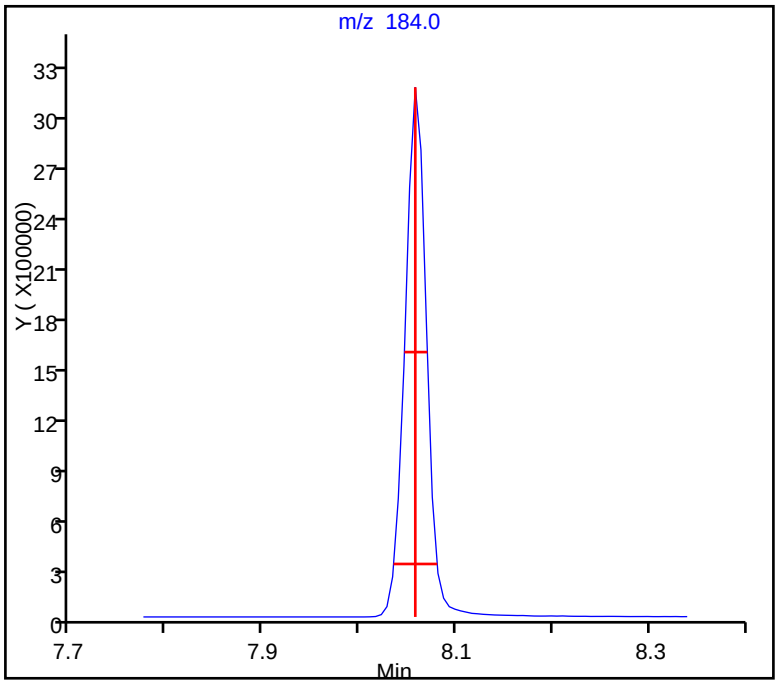
Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250002.D
Injection Date: 25-Nov-2016 09:00:30 Instrument ID: CH733
Lims ID: DFTPP
Client ID:
Operator ID: 03200 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: BNA_CH733 Limit Group: BNA 8270D ICAL

191 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.023 (min.)
Front Width = 0.023 (min.)

Tailing Factor = 1.0, Max. Tailing < 2.00
Passed



Peak Tailing Report

TestAmerica Pittsburgh

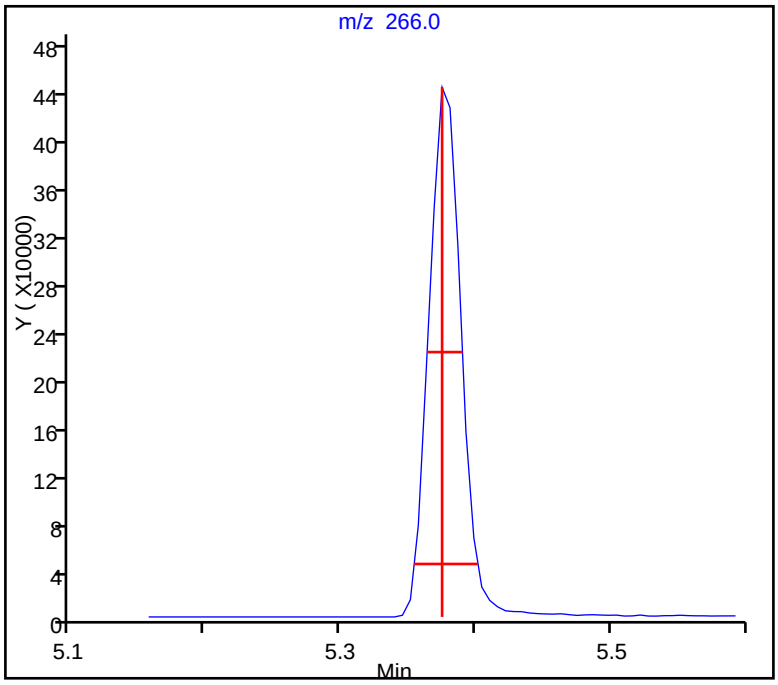
Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250002.D
Injection Date: 25-Nov-2016 09:00:30 Instrument ID: CH733
Lims ID: DFTPP
Client ID:
Operator ID: 03200 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: BNA_CH733 Limit Group: BNA 8270D ICAL

189 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.027 (min.)
Front Width = 0.021 (min.)

Tailing Factor = 1.3, Max. Tailing < 2.00
Passed



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 180-195373/1-A

Matrix: Solid | Lab File ID: N11250005.D

Analysis Method: 8270D LL | Date Collected:

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.0(g) | Date Analyzed: 11/25/2016 10:08

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
92-52-4	1,1'-Biphenyl	0.00298	U	0.0330	0.00298
123-91-1	1,4-Dioxane	0.00383	U	0.0667	0.00383
90-12-0	1-Methylnaphthalene	0.000712	U	0.00670	0.000712
95-94-3	1,2,4,5-Tetrachlorobenzene	0.00253	U	0.0330	0.00253
91-58-7	2-Chloronaphthalene	0.000696	U	0.00670	0.000696
95-57-8	2-Chlorophenol	0.00273	U	0.0330	0.00273
120-83-2	2,4-Dichlorophenol	0.000669	U	0.00670	0.000669
105-67-9	2,4-Dimethylphenol	0.00522	U	0.0330	0.00522
51-28-5	2,4-Dinitrophenol	0.0397	U	0.170	0.0397
121-14-2	2,4-Dinitrotoluene	0.00269	U	0.0330	0.00269
606-20-2	2,6-Dinitrotoluene	0.00344	U	0.0330	0.00344
91-57-6	2-Methylnaphthalene	0.000600	U	0.00670	0.000600
95-48-7	2-Methylphenol	0.00233	U	0.0330	0.00233
106-44-5	Methylphenol, 3 & 4	0.00327	U	0.0330	0.00327
88-74-4	2-Nitroaniline	0.0149	U	0.170	0.0149
99-09-2	3-Nitroaniline	0.0137	U	0.170	0.0137
100-01-6	4-Nitroaniline	0.0135	U	0.170	0.0135
88-75-5	2-Nitrophenol	0.00368	U	0.0330	0.00368
100-02-7	4-Nitrophenol	0.0122	U	0.170	0.0122
108-60-1	2,2'-oxybis[1-chloropropane]	0.000720	U	0.00670	0.000720
58-90-2	2,3,4,6-Tetrachlorophenol	0.00214	U	0.0330	0.00214
95-95-4	2,4,5-Trichlorophenol	0.00356	U	0.0330	0.00356
88-06-2	2,4,6-Trichlorophenol	0.00499	U	0.0330	0.00499
59-50-7	4-Chloro-3-methylphenol	0.00307	U	0.0330	0.00307
7005-72-3	4-Chlorophenyl phenyl ether	0.00371	U	0.0330	0.00371
534-52-1	4,6-Dinitro-2-methylphenol	0.0134	U	0.170	0.0134
83-32-9	Acenaphthene	0.000641	U	0.00670	0.000641
208-96-8	Acenaphthylene	0.000764	U	0.00670	0.000764
98-86-2	Acetophenone	0.00274	U	0.0330	0.00274
120-12-7	Anthracene	0.000653	U	0.00670	0.000653
1912-24-9	Atrazine	0.00325	U	0.0330	0.00325
100-52-7	Benzaldehyde	0.00500	U	0.0330	0.00500
56-55-3	Benzo[a]anthracene	0.000836	U	0.00670	0.000836
205-99-2	Benzo[b]fluoranthene	0.00105	U	0.00670	0.00105

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 180-195373/1-A

Matrix: Solid | Lab File ID: N11250005.D

Analysis Method: 8270D LL | Date Collected:

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.0(g) | Date Analyzed: 11/25/2016 10:08

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
207-08-9	Benzo[k]fluoranthene	0.00135	U	0.00670	0.00135
191-24-2	Benzo[g,h,i]perylene	0.000664	U	0.00670	0.000664
50-32-8	Benzo[a]pyrene	0.000668	U	0.00670	0.000668
111-91-1	Bis(2-chloroethoxy)methane	0.00220	U	0.0330	0.00220
111-44-4	Bis(2-chloroethyl)ether	0.000895	U	0.00670	0.000895
117-81-7	Bis(2-ethylhexyl) phthalate	0.00539	U	0.0667	0.00539
101-55-3	4-Bromophenyl phenyl ether	0.00290	U	0.0330	0.00290
85-68-7	Butyl benzyl phthalate	0.00456	U	0.0330	0.00456
105-60-2	Caprolactam	0.0252	U	0.170	0.0252
86-74-8	Carbazole	0.000615	U	0.00670	0.000615
53-70-3	Dibenz(a,h)anthracene	0.000742	U	0.00670	0.000742
132-64-9	Dibenzofuran	0.00328	U	0.0330	0.00328
84-74-2	Di-n-butyl phthalate	0.00418	U	0.0330	0.00418
117-84-0	Di-n-octyl phthalate	0.00352	U	0.0330	0.00352
84-66-2	Diethyl phthalate	0.00364	U	0.0330	0.00364
131-11-3	Dimethyl phthalate	0.00363	U	0.0330	0.00363
206-44-0	Fluoranthene	0.000713	U	0.00670	0.000713
86-73-7	Fluorene	0.000879	U	0.00670	0.000879
118-74-1	Hexachlorobenzene	0.000711	U	0.00670	0.000711
87-68-3	Hexachlorobutadiene	0.000747	U	0.00670	0.000747
77-47-4	Hexachlorocyclopentadiene	0.00360	U	0.0330	0.00360
67-72-1	Hexachloroethane	0.00240	U	0.0330	0.00240
193-39-5	Indeno[1,2,3-cd]pyrene	0.000687	U	0.00670	0.000687
78-59-1	Isophorone	0.00251	U	0.0330	0.00251
91-20-3	Naphthalene	0.000575	U	0.00670	0.000575
98-95-3	Nitrobenzene	0.00278	U	0.0667	0.00278
86-30-6	N-Nitrosodiphenylamine	0.00309	U	0.0330	0.00309
621-64-7	N-Nitrosodi-n-propylamine	0.000782	U	0.00670	0.000782
87-86-5	Pentachlorophenol	0.00298	U	0.0330	0.00298
85-01-8	Phenanthrene	0.00106	U	0.00670	0.00106
108-95-2	Phenol	0.000788	U	0.0330	0.000788
129-00-0	Pyrene	0.000675	U	0.00670	0.000675
91-94-1	3,3'-Dichlorobenzidine	0.00353	U	0.0330	0.00353

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 180-195373/1-A

Matrix: Solid | Lab File ID: N11250005.D

Analysis Method: 8270D LL | Date Collected:

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.0(g) | Date Analyzed: 11/25/2016 10:08

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	62		42-100
367-12-4	2-Fluorophenol (Surr)	60		21-107
118-79-6	2,4,6-Tribromophenol (Surr)	76		20-134
4165-60-0	Nitrobenzene-d5 (Surr)	61		35-109
4165-62-2	Phenol-d5 (Surr)	61		29-105
1718-51-0	Terphenyl-d14 (Surr)	76		36-113

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250005.D
Lims ID: MB 180-195373/1-A
Client ID:
Sample Type: MB
Inject. Date: 25-Nov-2016 10:08:30 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014496-005
Operator ID: 03200 Instrument ID: CH733

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 26-Nov-2016 08:21:37 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK023

First Level Reviewer: piccolinov Date: 25-Nov-2016 13:23:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.301	6.307	-0.006	98	114688	8.00	8.00	
* 2 Naphthalene-d8	136	7.542	7.548	-0.006	99	423185	8.00	8.00	
* 3 Acenaphthene-d10	164	9.183	9.183	0.000	92	254638	8.00	8.00	
* 4 Phenanthrene-d10	188	10.554	10.560	-0.006	97	447278	8.00	8.00	
* 5 Chrysene-d12	240	14.118	14.124	-0.006	96	504280	8.00	8.00	
* 6 Perylene-d12	264	17.071	17.071	0.000	98	441320	8.00	8.00	
$ 7 2-Fluorophenol	112	4.866	4.872	-0.006	93	399934	40.0	24.2	
$ 8 Phenol-d5	99	5.931	5.936	-0.005	94	502187	40.0	24.5	
$ 9 Nitrobenzene-d5	82	6.842	6.848	-0.006	91	478482	40.0	24.5	
$ 10 2-Fluorobiphenyl	172	8.542	8.542	0.000	100	1086923	40.0	24.8	
$ 11 2,4,6-Tribromophenol	330	9.907	9.907	0.000	93	153042	40.0	30.5	
$ 12 Terphenyl-d14	244	12.348	12.348	0.000	99	1537567	40.0	30.6	
13 1,4-Dioxane	88		1.401					ND	
14 N-Nitrosodimethylamine	74		2.060					ND	
15 Pyridine	79		2.137					ND	
18 2-Picoline	93		4.030					ND	
19 N-Nitrosomethylethylamine	88		4.233					ND	
20 Acrylamide	71		4.597					ND	
21 Methyl methanesulfonate	80		4.619					ND	
23 N-Nitrosodiethylamine	102		5.115					ND	
24 Ethyl methanesulfonate	79		5.445					ND	
25 Benzaldehyde	77		5.842					ND	
26 Phenol	94		5.948					ND	
27 Aniline	93		5.960					ND	
28 Pentachloroethane	167		5.979					ND	
29 Bis(2-chloroethyl)ether	93		6.031					ND	
30 2-Chlorophenol	128		6.089					ND	
31 n-Decane	43		6.154					ND	
32 1,3-Dichlorobenzene	146		6.248					ND	
33 1,4-Dichlorobenzene	146		6.325					ND	
34 Benzyl alcohol	108		6.436					ND	
35 1,2-Dichlorobenzene	146		6.478					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 2-Methylphenol	108		6.554					ND	
37 Indene	116		6.566					ND	
38 2,2'-oxybis[1-chloropropan	45		6.578					ND	
43 N-Nitrosomorpholine	116		6.632					ND	
39 N-Nitrosopyrrolidine	100		6.666					ND	
40 Acetophenone	105		6.701					ND	
42 4-Methylphenol	108		6.701					ND	
41 N-Nitrosodi-n-propylamine	70		6.701					ND	
45 Hexachloroethane	117		6.819					ND	
46 Nitrobenzene	77		6.866					ND	
47 N-Nitrosopiperidine	114		6.926					ND	
48 Isophorone	82		7.095					ND	
49 2-Nitrophenol	139		7.178					ND	
51 o,o',o''-Triethylphosphoro	198		7.182					ND	
50 2,4-Dimethylphenol	107		7.207					ND	
52 Benzoic acid	122		7.254					ND	
53 Bis(2-chloroethoxy)methane	93		7.295					ND	
55 alpha,alpha-Dimethyl phene	58		7.353					ND	
54 2,4-Dichlorophenol	162		7.407					ND	
56 1,2,4-Trichlorobenzene	180		7.495					ND	
58 Naphthalene	128		7.572					ND	
59 4-Chloroaniline	127		7.607					ND	
60 2,6-Dichlorophenol	162		7.619					ND	
61 Hexachloropropene	213		7.630					ND	
62 Hexachlorobutadiene	225		7.689					ND	
63 Quinoline	129		7.786					ND	
65 N-Nitrosodi-n-butylamine	84		7.818					ND	
66 p-Phenylene diamine	108		7.834					ND	
64 Caprolactam	113		7.901					ND	
68 Safrole, Total	162		8.026					ND	
67 4-Chloro-3-methylphenol	107		8.042					ND	
70 Diphenamid	168		8.200					ND	
69 2-Methylnaphthalene	142		8.213					ND	
71 1-Methylnaphthalene	142		8.307					ND	
72 Hexachlorocyclopentadiene	237		8.366					ND	
73 1,2,4,5-Tetrachlorobenzene	216		8.372					ND	
74 2,4,6-Trichlorophenol	196		8.472					ND	
75 2,4,5-Trichlorophenol	196		8.501					ND	
76 1,1'-Biphenyl	154		8.642					ND	
77 2-Chloronaphthalene	162		8.672					ND	
78 1-Chloronaphthalene	162		8.682					ND	
79 2-Nitroaniline	65		8.748					ND	
81 1,4-Dinitrobenzene	168		8.769					ND	
80 1,4-Naphthoquinone	158		8.810					ND	
82 Dimethyl phthalate	163		8.895					ND	
83 1,3-Dinitrobenzene	168		8.930					ND	
84 2,6-Dinitrotoluene	165		8.954					ND	
85 Acenaphthylene	152		9.060					ND	
86 3-Nitroaniline	138		9.119					ND	
87 2,4-Dinitrophenol	184		9.213					ND	
88 Acenaphthene	153		9.213					ND	
89 4-Nitrophenol	109		9.242					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
91 2,4-Dinitrotoluene	165		9.330					ND	
94 1-Naphthylamine	143		9.340					ND	
92 Pentachlorobenzene	250		9.345					ND	
93 Dibenzofuran	168		9.372					ND	
44 2-Toluidine	106		9.432					ND	
95 2,3,5,6-Tetrachlorophenol	232		9.436					ND	
96 2,3,4,6-Tetrachlorophenol	232		9.477					ND	
97 2-Naphthylamine	143		9.507					ND	
98 Diethyl phthalate	149		9.530					ND	
99 Hexadecane	57		9.536					ND	
102 N-Nitro-o-toluidine	152		9.586					ND	
100 4-Chlorophenyl phenyl ethe	204		9.666					ND	
101 4-Nitroaniline	138		9.677					ND	
103 Fluorene	166		9.689					ND	
104 4,6-Dinitro-2-methylphenol	198		9.707					ND	
105 N-Nitrosodiphenylamine	169		9.766					ND	
106 Diphenylamine	169		9.778					ND	
90 1,2-Diphenylhydrazine	77		9.813					ND	
57 Azobenzene	77		9.813					ND	
107 1,3,5-Trinitrobenzene	213		9.896					ND	
108 Phenacetin	108		9.939					ND	
109 Phorate	121		9.944					ND	
111 Dimethoate	87		10.099					ND	
110 4-Bromophenyl phenyl ether	248		10.119					ND	
112 Hexachlorobenzene	284		10.201					ND	
113 Atrazine	200		10.224					ND	
114 4-Aminobiphenyl	169		10.265					ND	
117 Pronamide	173		10.297					ND	
118 Pentachloronitrobenzene	237		10.302					ND	
116 Pentachlorophenol	266		10.371					ND	
115 n-Octadecane	57		10.371					ND	
119 Disulfoton	88		10.419					ND	
121 Phenanthrene	178		10.583					ND	
123 Hexachlorophene TIC	198		10.600					ND	
122 Anthracene	178		10.630					ND	
124 Carbazole	167		10.771					ND	
125 Methyl parathion	109		10.793					ND	
126 Di-n-butyl phthalate	149		11.066					ND	
127 Ethyl Parathion	109		11.189					ND	
128 4-Nitroquinoline-1-oxide	190		11.263					ND	
129 Methapyrilene	58		11.317					ND	
120 Dinoseb	211		11.715					ND	
130 Isodrin	193		11.765					ND	
131 Fluoranthene	202		11.889					ND	
132 Benzidine	184		12.013					ND	
133 Pyrene	202		12.195					ND	
134 1,2,3,4 -Tetrachlorobenzen	216		12.215					ND	
135 p-Dimethylamino azobenzene	225	12.348	12.428	-0.080	42	10067			NC
136 Chlorobenzilate	139		12.678					ND	
137 Famphur	218		12.850					ND	
139 3,3'-Dimethylbenzidine	212		12.936					ND	
140 Kepone	272		13.030					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
138 Butyl benzyl phthalate	149		13.048					ND	
141 2-Acetylaminofluorene	181		13.363					ND	
142 Thionazin	97		13.789					ND	
143 4,4'-Methylene bis(2-chlor	231		13.881					ND	
144 3,3'-Dichlorobenzidine	252		14.024					ND	
145 Bis(2-ethylhexyl) phthalat	149		14.054					ND	
146 Benzo[a]anthracene	228		14.101					ND	
147 Chrysene	228		14.171					ND	
148 Sulfotepp	97		14.530					ND	
149 6-Methylchrysene	242		14.907					ND	
150 Di-n-octyl phthalate	149		15.371					ND	
151 7,12-Dimethylbenz(a)anthra	256		16.248					ND	
152 Benzo[b]fluoranthene	252		16.265					ND	
153 Benzo[k]fluoranthene	252		16.318					ND	
219 Benzo[e]pyrene	252		16.848					ND	
154 Benzo[a]pyrene	252		16.953					ND	
155 3-Methylcholanthrene	268		17.524					ND	
156 Dibenz[a,h]acridine	279		18.636					ND	
220 Dibenz[a,j]acridine	279		19.204					ND	
157 Indeno[1,2,3-cd]pyrene	276		19.306					ND	
158 Dibenz(a,h)anthracene	278		19.341					ND	
159 Benzo[g,h,i]perylene	276		19.924					ND	
176 Dimethylformamide	73		0.000					ND	
162 3-Chlorobenzoic Acid	139		0.000					ND	
218 Benzotrichloride TIC	1		0.000					ND	
171 4-Methyl-1-cyclohexanemeth	97		0.000					ND	
167 Phthalic anhydride	104		0.000					ND	
161 4-Methyl-1-cyclohexanemeth	97		0.000					ND	
169 Octachlorostyrene	308		0.000					ND	
160 n,n'-Dimethylaniline	120		0.000					ND	
184 Diallate Peak 1	86		0.000					ND	
183 2,3-Dichlorophenol	162		0.000					ND	
181 4-Chlorobenzoic Acid	139		0.000					ND	
186 o-Phenylphenol	1		0.000					ND	
177 1,2,3,4-Tetrahydronaphthal	104		0.000					ND	
182 4-Chlorophenol	128		0.000					ND	
178 Trifluralin	306		0.000					ND	
168 Aramite Peak 1	185		0.000					ND	
170 4-tert-Octylphenol	135		0.000					ND	
163 Diallate Peak 2	86		0.000					ND	
165 Benzotrichloride	159		0.000					ND	
215 2,3,7,8-TCDD TIC	1		0.000					ND	
166 4-Chloro-3-nitro-alpha,alp	179		0.000					ND	
174 2-Chlorobenzoic Acid	139		0.000					ND	
164 Aramite Peak 2	185		0.000					ND	
214 1-Phenyl-1-(2,4-dimethylph	1		0.000					ND	
185 4-Nitrobiphenyl	199		0.000					ND	
180 Isosafrole	162		0.000					ND	
173 Octachlorocyclopentene	307		0.000					ND	
187 1,2-Dibromo-3-Chloropropan	157		0.000					ND	
188 2-Bromonaphthalene	127		0.000					ND	
175 1,2,3-Trimethylbenzene	105		0.000					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
172 Carbaryl	144		0.000					ND	
213 1-Phenyl-1-(4-methylphenyl	1		0.000					ND	
179 2,5-Dichlorophenol	162		0.000					ND	
217 1-Phenyl-1-(4-methylphenyl	1		0.000					ND	
216 1-Phenyl-1-(2,4-dimethylph	1		0.000					ND	
212 3-Methylphenol	1		0.000					ND	
222 2-Butoxyethanol	1		0.000					ND	
223 2,6-Dichlorotoluene	1		0.000					ND	
189 Pentachlorophenol_T	266		5.375					ND	
191 Benzidine_T	184		8.057					ND	
192 4,4'-DDE	246		8.966					ND	
193 4,4'-DDD	235		9.010					ND	
194 4,4'-DDT	235		9.616					ND	
S 195 Aramite, Total	185		1.000					ND	
S 196 4-Methyl-1-cyclohexanemeth	97		0.000					ND	
S 197 Methyl Phenols,Total	108		0.000					ND	
S 198 Diallate	86		0.000					ND	
S 199 Total Cresols	108		0.000					ND	
T 221 Phenyl ether TIC	170	9.901	11.515	-1.599	0	17106		0.5374	
T 200 Quinoline TIC	129		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

SVTAPITINTRNi_00012 Amount Added: 1.00 Units: uL Run Reagent

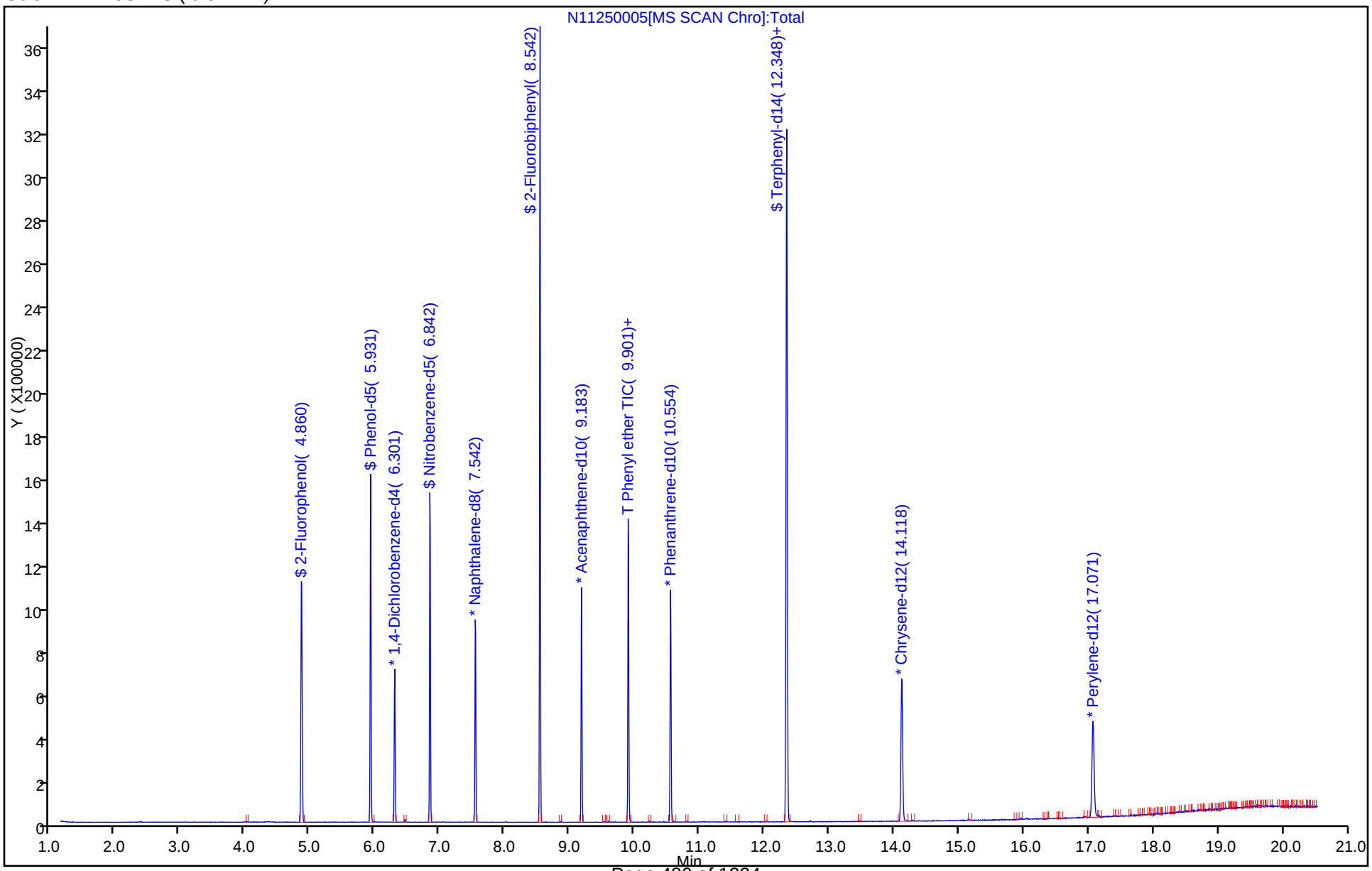
Report Date: 26-Nov-2016 08:21:47 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250005.D

Injection Date:	25-Nov-2016 10:08:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	MB 180-195373/1-A			Worklist Smp#:	5
Client ID:					
Injection Vol:	2.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)



TestAmerica Pittsburgh
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250005.D
Lims ID: MB 180-195373/1-A
Client ID:
Sample Type: MB
Inject. Date: 25-Nov-2016 10:08:30 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014496-005
Operator ID: 03200 Instrument ID: CH733

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 26-Nov-2016 08:21:37 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK023

First Level Reviewer: piccolinov Date: 25-Nov-2016 13:23:21

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	40.0	24.2	60.46
$ 8 Phenol-d5	40.0	24.5	61.36
$ 9 Nitrobenzene-d5	40.0	24.5	61.26
$ 10 2-Fluorobiphenyl	40.0	24.8	61.99
$ 11 2,4,6-Tribromophenol	40.0	30.5	76.25
$ 12 Terphenyl-d14	40.0	30.6	76.47

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-195373/2-A

Matrix: Solid | Lab File ID: N11250006.D

Analysis Method: 8270D LL | Date Collected:

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.0(g) | Date Analyzed: 11/25/2016 10:35

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
92-52-4	1,1'-Biphenyl	0.4610		0.0330	0.00298
123-91-1	1,4-Dioxane	0.4336		0.0667	0.00383
90-12-0	1-Methylnaphthalene	0.4603		0.00670	0.000712
95-94-3	1,2,4,5-Tetrachlorobenzene	0.4730		0.0330	0.00253
91-58-7	2-Chloronaphthalene	0.4498		0.00670	0.000696
95-57-8	2-Chlorophenol	0.4554		0.0330	0.00273
120-83-2	2,4-Dichlorophenol	0.4734		0.00670	0.000669
105-67-9	2,4-Dimethylphenol	0.4951		0.0330	0.00522
51-28-5	2,4-Dinitrophenol	1.065		0.170	0.0397
121-14-2	2,4-Dinitrotoluene	0.5605		0.0330	0.00269
606-20-2	2,6-Dinitrotoluene	0.5449		0.0330	0.00344
91-57-6	2-Methylnaphthalene	0.4627		0.00670	0.000600
95-48-7	2-Methylphenol	0.4692		0.0330	0.00233
106-44-5	Methylphenol, 3 & 4	0.4885		0.0330	0.00327
88-74-4	2-Nitroaniline	0.5541		0.170	0.0149
99-09-2	3-Nitroaniline	0.5101		0.170	0.0137
100-01-6	4-Nitroaniline	0.5364		0.170	0.0135
88-75-5	2-Nitrophenol	0.5300		0.0330	0.00368
100-02-7	4-Nitrophenol	1.194		0.170	0.0122
108-60-1	2,2'-oxybis[1-chloropropane]	0.4627		0.00670	0.000720
58-90-2	2,3,4,6-Tetrachlorophenol	0.5129		0.0330	0.00214
95-95-4	2,4,5-Trichlorophenol	0.5017		0.0330	0.00356
88-06-2	2,4,6-Trichlorophenol	0.5025		0.0330	0.00499
59-50-7	4-Chloro-3-methylphenol	0.5495		0.0330	0.00307
7005-72-3	4-Chlorophenyl phenyl ether	0.4971		0.0330	0.00371
534-52-1	4,6-Dinitro-2-methylphenol	1.161		0.170	0.0134
83-32-9	Acenaphthene	0.4620		0.00670	0.000641
208-96-8	Acenaphthylene	0.4546		0.00670	0.000764
98-86-2	Acetophenone	0.4340		0.0330	0.00274
120-12-7	Anthracene	0.4803		0.00670	0.000653
1912-24-9	Atrazine	0.4651		0.0330	0.00325
100-52-7	Benzaldehyde	0.3684		0.0330	0.00500
56-55-3	Benzo[a]anthracene	0.4936		0.00670	0.000836
205-99-2	Benzo[b]fluoranthene	0.4528		0.00670	0.00105

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-195373/2-A

Matrix: Solid | Lab File ID: N11250006.D

Analysis Method: 8270D LL | Date Collected:

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.0(g) | Date Analyzed: 11/25/2016 10:35

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
207-08-9	Benzo[k]fluoranthene	0.4431		0.00670	0.00135
191-24-2	Benzo[g,h,i]perylene	0.4664		0.00670	0.000664
50-32-8	Benzo[a]pyrene	0.4694		0.00670	0.000668
111-91-1	Bis(2-chloroethoxy)methane	0.4339		0.0330	0.00220
111-44-4	Bis(2-chloroethyl)ether	0.4214		0.00670	0.000895
117-81-7	Bis(2-ethylhexyl) phthalate	0.5206		0.0667	0.00539
101-55-3	4-Bromophenyl phenyl ether	0.5155		0.0330	0.00290
85-68-7	Butyl benzyl phthalate	0.5038		0.0330	0.00456
105-60-2	Caprolactam	0.5944		0.170	0.0252
86-74-8	Carbazole	0.4813		0.00670	0.000615
53-70-3	Dibenz(a,h)anthracene	0.5138		0.00670	0.000742
132-64-9	Dibenzofuran	0.4488		0.0330	0.00328
84-74-2	Di-n-butyl phthalate	0.5176		0.0330	0.00418
117-84-0	Di-n-octyl phthalate	0.5428		0.0330	0.00352
84-66-2	Diethyl phthalate	0.4924		0.0330	0.00364
131-11-3	Dimethyl phthalate	0.4985		0.0330	0.00363
206-44-0	Fluoranthene	0.5142		0.00670	0.000713
86-73-7	Fluorene	0.4728		0.00670	0.000879
118-74-1	Hexachlorobenzene	0.4908		0.00670	0.000711
87-68-3	Hexachlorobutadiene	0.4307		0.00670	0.000747
77-47-4	Hexachlorocyclopentadiene	0.4544		0.0330	0.00360
67-72-1	Hexachloroethane	0.3899		0.0330	0.00240
193-39-5	Indeno[1,2,3-cd]pyrene	0.4848		0.00670	0.000687
78-59-1	Isophorone	0.4575		0.0330	0.00251
91-20-3	Naphthalene	0.4452		0.00670	0.000575
98-95-3	Nitrobenzene	0.4631		0.0667	0.00278
86-30-6	N-Nitrosodiphenylamine	0.4964		0.0330	0.00309
621-64-7	N-Nitrosodi-n-propylamine	0.4815		0.00670	0.000782
87-86-5	Pentachlorophenol	0.9957		0.0330	0.00298
85-01-8	Phenanthrene	0.4445		0.00670	0.00106
108-95-2	Phenol	0.4512		0.0330	0.000788
129-00-0	Pyrene	0.4162		0.00670	0.000675
91-94-1	3,3'-Dichlorobenzidine	0.4304		0.0330	0.00353

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-195373/2-A

Matrix: Solid | Lab File ID: N11250006.D

Analysis Method: 8270D LL | Date Collected:

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.0(g) | Date Analyzed: 11/25/2016 10:35

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	68		42-100
367-12-4	2-Fluorophenol (Surr)	71		21-107
118-79-6	2,4,6-Tribromophenol (Surr)	87		20-134
4165-60-0	Nitrobenzene-d5 (Surr)	74		35-109
4165-62-2	Phenol-d5 (Surr)	70		29-105
1718-51-0	Terphenyl-d14 (Surr)	74		36-113

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250006.D
Lims ID: LCS 180-195373/2-A
Client ID:
Sample Type: LCS
Inject. Date: 25-Nov-2016 10:35:30 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014496-006
Operator ID: 03200 Instrument ID: CH733

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 26-Nov-2016 08:21:37 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK023

First Level Reviewer: piccolinov Date: 25-Nov-2016 13:23:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.301	6.307	-0.006	96	107610	8.00	8.00	
* 2 Naphthalene-d8	136	7.542	7.548	-0.006	99	356604	8.00	8.00	
* 3 Acenaphthene-d10	164	9.177	9.183	-0.006	91	217380	8.00	8.00	
* 4 Phenanthrene-d10	188	10.554	10.560	-0.006	97	370317	8.00	8.00	
* 5 Chrysene-d12	240	14.118	14.124	-0.006	96	451229	8.00	8.00	
* 6 Perylene-d12	264	17.065	17.071	-0.006	98	394727	8.00	8.00	
$ 7 2-Fluorophenol	112	4.866	4.872	-0.006	93	439554	40.0	28.3	
$ 8 Phenol-d5	99	5.931	5.936	-0.006	94	540941	40.0	28.2	
$ 9 Nitrobenzene-d5	82	6.848	6.848	0.000	90	485874	40.0	29.5	
$ 10 2-Fluorobiphenyl	172	8.536	8.542	-0.006	100	1020622	40.0	27.3	
$ 11 2,4,6-Tribromophenol	330	9.901	9.907	-0.006	92	144277	40.0	34.7	
$ 12 Terphenyl-d14	244	12.342	12.348	-0.006	99	1322424	40.0	29.4	
13 1,4-Dioxane	88	1.390	1.401	-0.011	94	158140	40.0	26.0	
14 N-Nitrosodimethylamine	74	2.048	2.060	-0.012	90	248606	40.0	31.4	
15 Pyridine	79	2.119	2.137	-0.018	97	471605	40.0	31.0	
25 Benzaldehyde	77	5.842	5.842	0.000	95	260138	40.0	22.1	
26 Phenol	94	5.948	5.948	0.000	97	586820	40.0	27.1	
27 Aniline	93	5.960	5.960	0.000	89	629706	40.0	26.4	
29 Bis(2-chloroethyl)ether	93	6.031	6.031	-0.001	99	405209	40.0	25.3	
30 2-Chlorophenol	128	6.089	6.089	0.000	96	449199	40.0	27.3	
31 n-Decane	43	6.154	6.154	0.000	82	334841	40.0	25.9	
32 1,3-Dichlorobenzene	146	6.242	6.248	-0.006	96	500062	40.0	24.7	
33 1,4-Dichlorobenzene	146	6.319	6.325	-0.006	92	515322	40.0	25.2	
34 Benzyl alcohol	108	6.436	6.436	0.000	89	270360	40.0	29.5	
35 1,2-Dichlorobenzene	146	6.472	6.478	-0.006	95	479019	40.0	25.2	
36 2-Methylphenol	108	6.548	6.554	-0.006	97	394059	40.0	28.2	
37 Indene	116	6.560	6.566	-0.006	89	721803	40.0	26.1	
38 2,2'-oxybis[1-chloropropan	45	6.578	6.578	0.000	83	370529	40.0	27.8	
40 Acetophenone	105	6.695	6.701	-0.006	79	584203	40.0	26.0	
42 4-Methylphenol	108	6.695	6.701	-0.006	65	417039	40.0	29.3	
41 N-Nitrosodi-n-propylamine	70	6.695	6.701	-0.006	70	321126	40.0	28.9	
45 Hexachloroethane	117	6.813	6.819	-0.006	90	187725	40.0	23.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
46 Nitrobenzene	77	6.866	6.866	0.000	88	472029	40.0	27.8	
48 Isophorone	82	7.089	7.095	-0.006	98	773225	40.0	27.4	
49 2-Nitrophenol	139	7.177	7.178	-0.001	98	236911	40.0	31.8	
50 2,4-Dimethylphenol	107	7.207	7.207	0.000	99	464555	40.0	29.7	
52 Benzoic acid	122	7.272	7.254	0.018	89	211250	40.0	31.1	
53 Bis(2-chloroethoxy)methane	93	7.289	7.295	-0.006	99	452897	40.0	26.0	
54 2,4-Dichlorophenol	162	7.401	7.407	-0.006	96	374413	40.0	28.4	
56 1,2,4-Trichlorobenzene	180	7.489	7.495	-0.006	94	448979	40.0	26.2	
58 Naphthalene	128	7.566	7.572	-0.006	98	1183567	40.0	26.7	
59 4-Chloroaniline	127	7.601	7.607	-0.006	94	508244	40.0	29.3	
60 2,6-Dichlorophenol	162	7.619	7.619	0.000	97	364707	40.0	27.9	
62 Hexachlorobutadiene	225	7.683	7.689	-0.006	95	294200	40.0	25.8	
64 Caprolactam	113	7.907	7.901	0.006	83	120475	40.0	35.7	
67 4-Chloro-3-methylphenol	107	8.042	8.042	0.000	95	399194	40.0	33.0	
69 2-Methylnaphthalene	142	8.213	8.213	0.000	92	838818	40.0	27.8	
71 1-Methylnaphthalene	142	8.307	8.307	0.000	92	781209	40.0	27.6	
72 Hexachlorocyclopentadiene	237	8.360	8.366	-0.006	95	298586	40.0	27.3	
73 1,2,4,5-Tetrachlorobenzene	216	8.372	8.372	0.000	97	497508	40.0	28.4	
74 2,4,6-Trichlorophenol	196	8.466	8.472	-0.006	92	296975	40.0	30.1	
75 2,4,5-Trichlorophenol	196	8.501	8.501	0.000	94	302213	40.0	30.1	
76 1,1'-Biphenyl	154	8.636	8.642	-0.006	95	1048657	40.0	27.7	
77 2-Chloronaphthalene	162	8.666	8.672	-0.006	97	808742	40.0	27.0	
79 2-Nitroaniline	65	8.742	8.748	-0.006	79	255601	40.0	33.2	
82 Dimethyl phthalate	163	8.889	8.895	-0.006	98	965549	40.0	29.9	
83 1,3-Dinitrobenzene	168	8.924	8.930	-0.006	87	162508	40.0	32.6	
84 2,6-Dinitrotoluene	165	8.954	8.954	0.000	93	224145	40.0	32.7	
85 Acenaphthylene	152	9.054	9.060	-0.006	98	1141538	40.0	27.3	
86 3-Nitroaniline	138	9.113	9.119	-0.006	91	210848	40.0	30.6	
87 2,4-Dinitrophenol	184	9.207	9.213	-0.006	85	311392	80.0	63.9	
88 Acenaphthene	153	9.213	9.213	0.000	92	817428	40.0	27.7	
89 4-Nitrophenol	109	9.242	9.242	0.000	93	344703	80.0	71.6	
91 2,4-Dinitrotoluene	165	9.324	9.330	-0.006	92	300219	40.0	33.6	
93 Dibenzofuran	168	9.366	9.372	-0.006	96	1173767	40.0	26.9	
96 2,3,4,6-Tetrachlorophenol	232	9.471	9.477	-0.006	72	272480	40.0	30.8	
98 Diethyl phthalate	149	9.530	9.530	0.000	98	970258	40.0	29.5	
99 Hexadecane	57	9.530	9.536	-0.006	97	469054	40.0	29.7	
100 4-Chlorophenyl phenyl ethe	204	9.660	9.666	-0.006	92	522534	40.0	29.8	
101 4-Nitroaniline	138	9.671	9.677	-0.006	79	227122	40.0	32.2	
103 Fluorene	166	9.683	9.689	-0.006	95	949880	40.0	28.4	
104 4,6-Dinitro-2-methylphenol	198	9.701	9.707	-0.006	91	411434	80.0	69.7	
105 N-Nitrosodiphenylamine	169	9.760	9.766	-0.006	62	698851	40.0	29.8	
90 1,2-Diphenylhydrazine	77	9.807	9.813	-0.006	98	901920	40.0	26.0	
57 Azobenzene	77	9.807	9.813	-0.006	98	901920	40.0	26.0	
110 4-Bromophenyl phenyl ether	248	10.113	10.119	-0.006	64	332470	40.0	30.9	
112 Hexachlorobenzene	284	10.195	10.201	-0.006	95	322213	40.0	29.4	
113 Atrazine	200	10.224	10.224	0.000	95	263561	40.0	27.9	
116 Pentachlorophenol	266	10.366	10.371	-0.005	85	419834	80.0	59.7	
115 n-Octadecane	57	10.360	10.371	-0.011	93	481539	40.0	29.0	
121 Phenanthrene	178	10.577	10.583	-0.006	97	1369582	40.0	26.7	
122 Anthracene	178	10.624	10.630	-0.006	96	1428528	40.0	28.8	
124 Carbazole	167	10.765	10.771	-0.006	96	1231041	40.0	28.9	
126 Di-n-butyl phthalate	149	11.054	11.066	-0.012	100	1523078	40.0	31.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
131 Fluoranthene	202	11.883	11.889	-0.006	96	1695419	40.0	30.9	
132 Benzidine	184	12.001	12.013	-0.012	98	237335	40.0	9.57	
133 Pyrene	202	12.189	12.195	-0.006	98	1704836	40.0	25.0	
138 Butyl benzyl phthalate	149	13.036	13.048	-0.012	98	679888	40.0	30.2	
144 3,3'-Dichlorobenzidine	252	14.012	14.024	-0.012	73	554934	40.0	25.8	
145 Bis(2-ethylhexyl) phthalat	149	14.042	14.054	-0.012	95	951181	40.0	31.2	
146 Benzo[a]anthracene	228	14.095	14.101	-0.006	96	1724868	40.0	29.6	
147 Chrysene	228	14.165	14.171	-0.006	96	1630536	40.0	28.8	
150 Di-n-octyl phthalate	149	15.359	15.371	-0.012	99	1544291	40.0	32.6	
152 Benzo[b]fluoranthene	252	16.259	16.265	-0.006	95	1661102	40.0	27.2	
153 Benzo[k]fluoranthene	252	16.318	16.318	0.000	98	1695071	40.0	26.6	
154 Benzo[a]pyrene	252	16.947	16.953	-0.006	74	1576944	40.0	28.2	
157 Indeno[1,2,3-cd]pyrene	276	19.312	19.306	0.006	98	1757829	40.0	29.1	
158 Dibenz(a,h)anthracene	278	19.341	19.341	0.000	88	1479323	40.0	30.8	
159 Benzo[g,h,i]perylene	276	19.924	19.924	0.000	97	1444289	40.0	28.0	
S 197 Methyl Phenols,Total	108				0		80.0	57.5	
S 199 Total Cresols	108				0		80.0	57.5	

Reagents:

SVTAPITINTRNi_00012 Amount Added: 1.00 Units: uL Run Reagent

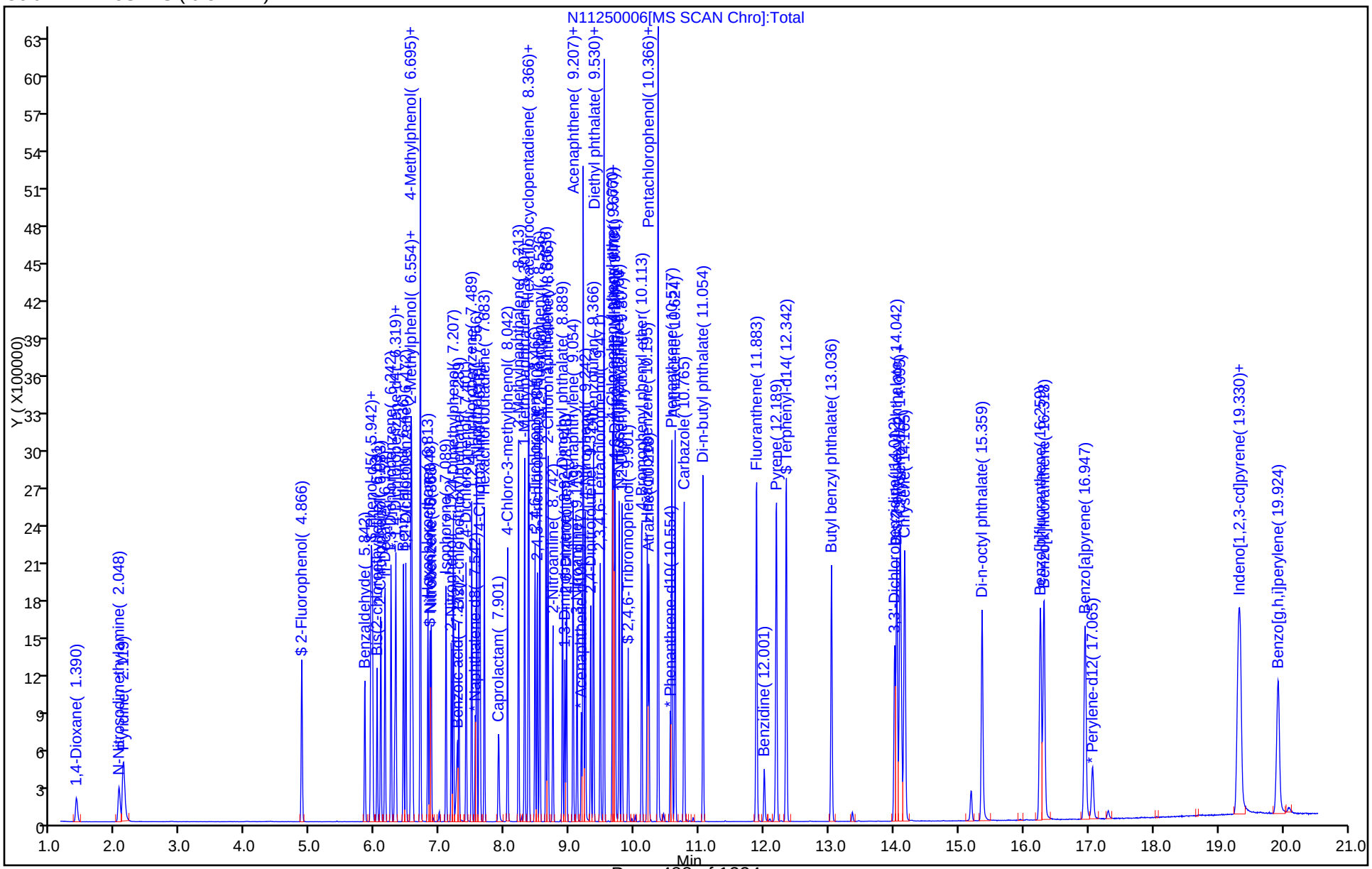
Report Date: 26-Nov-2016 08:21:49 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250006.D

Injection Date:	25-Nov-2016 10:35:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	LCS 180-195373/2-A			Worklist Smp#:	6
Client ID:					
Injection Vol:	2.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)



TestAmerica Pittsburgh
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250006.D
Lims ID: LCS 180-195373/2-A
Client ID:
Sample Type: LCS
Inject. Date: 25-Nov-2016 10:35:30 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014496-006
Operator ID: 03200 Instrument ID: CH733

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 26-Nov-2016 08:21:37 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK023

First Level Reviewer: piccolinov Date: 25-Nov-2016 13:23:49

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	40.0	28.3	70.82
$ 8 Phenol-d5	40.0	28.2	70.45
$ 9 Nitrobenzene-d5	40.0	29.5	73.83
$ 10 2-Fluorobiphenyl	40.0	27.3	68.18
$ 11 2,4,6-Tribromophenol	40.0	34.7	86.82
$ 12 Terphenyl-d14	40.0	29.4	73.50

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(0.0-0.5)-161122-S | Lab Sample ID: 180-61122-1 MS

Matrix: Solid | Lab File ID: N11250025.D

Analysis Method: 8270D LL | Date Collected: 11/22/2016 09:35

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.1(g) | Date Analyzed: 11/25/2016 18:59

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 8.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
92-52-4	1,1'-Biphenyl	0.4629		0.0357	0.00322
123-91-1	1,4-Dioxane	0.2815		0.0721	0.00413
90-12-0	1-Methylnaphthalene	0.4384		0.00724	0.000769
95-94-3	1,2,4,5-Tetrachlorobenzene	0.4481		0.0357	0.00273
91-58-7	2-Chloronaphthalene	0.4540		0.00724	0.000752
95-57-8	2-Chlorophenol	0.4333		0.0357	0.00295
120-83-2	2,4-Dichlorophenol	0.4608		0.00724	0.000723
105-67-9	2,4-Dimethylphenol	0.4074		0.0357	0.00564
51-28-5	2,4-Dinitrophenol	0.5790		0.184	0.0429
121-14-2	2,4-Dinitrotoluene	0.5892		0.0357	0.00291
606-20-2	2,6-Dinitrotoluene	0.5662		0.0357	0.00372
91-57-6	2-Methylnaphthalene	0.4409		0.00724	0.000648
95-48-7	2-Methylphenol	0.4623		0.0357	0.00252
106-44-5	Methylphenol, 3 & 4	0.4938		0.0357	0.00353
88-74-4	2-Nitroaniline	0.5845		0.184	0.0161
99-09-2	3-Nitroaniline	0.4917		0.184	0.0148
100-01-6	4-Nitroaniline	0.5175		0.184	0.0146
88-75-5	2-Nitrophenol	0.4789		0.0357	0.00397
100-02-7	4-Nitrophenol	1.024		0.184	0.0131
108-60-1	2,2'-oxybis[1-chloropropane]	0.4441		0.00724	0.000778
58-90-2	2,3,4,6-Tetrachlorophenol	0.5199		0.0357	0.00232
95-95-4	2,4,5-Trichlorophenol	0.5317		0.0357	0.00385
88-06-2	2,4,6-Trichlorophenol	0.5191		0.0357	0.00540
59-50-7	4-Chloro-3-methylphenol	0.5486		0.0357	0.00332
7005-72-3	4-Chlorophenyl phenyl ether	0.5065		0.0357	0.00401
534-52-1	4,6-Dinitro-2-methylphenol	0.9143		0.184	0.0145
83-32-9	Acenaphthene	0.4682		0.00724	0.000692
208-96-8	Acenaphthylene	0.4619		0.00724	0.000826
98-86-2	Acetophenone	0.4677		0.0357	0.00296
120-12-7	Anthracene	0.4840		0.00724	0.000705
1912-24-9	Atrazine	0.3695		0.0357	0.00351
100-52-7	Benzaldehyde	0.4077		0.0357	0.00540
56-55-3	Benzo[a]anthracene	0.5363		0.00724	0.000903
205-99-2	Benzo[b]fluoranthene	0.4487		0.00724	0.00113

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(0.0-0.5)-161122-S | Lab Sample ID: 180-61122-1 MS

Matrix: Solid | Lab File ID: N11250025.D

Analysis Method: 8270D LL | Date Collected: 11/22/2016 09:35

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.1(g) | Date Analyzed: 11/25/2016 18:59

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 8.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
207-08-9	Benzo[k]fluoranthene	0.4090		0.00724	0.00146
191-24-2	Benzo[g,h,i]perylene	0.5336		0.00724	0.000717
50-32-8	Benzo[a]pyrene	0.4528		0.00724	0.000721
111-91-1	Bis(2-chloroethoxy)methane	0.4118		0.0357	0.00237
111-44-4	Bis(2-chloroethyl)ether	0.3864		0.00724	0.000967
117-81-7	Bis(2-ethylhexyl) phthalate	0.6488		0.0721	0.00582
101-55-3	4-Bromophenyl phenyl ether	0.5054		0.0357	0.00314
85-68-7	Butyl benzyl phthalate	0.5228		0.0357	0.00493
105-60-2	Caprolactam	0.05352	J	0.184	0.0272
86-74-8	Carbazole	0.4961		0.00724	0.000664
53-70-3	Dibenz(a,h)anthracene	0.5640		0.00724	0.000802
132-64-9	Dibenzofuran	0.4559		0.0357	0.00355
84-74-2	Di-n-butyl phthalate	0.5481		0.0357	0.00452
117-84-0	Di-n-octyl phthalate	0.5079		0.0357	0.00380
84-66-2	Diethyl phthalate	0.5179		0.0357	0.00394
131-11-3	Dimethyl phthalate	0.5192		0.0357	0.00393
206-44-0	Fluoranthene	0.5278		0.00724	0.000771
86-73-7	Fluorene	0.4841		0.00724	0.000950
118-74-1	Hexachlorobenzene	0.4817		0.00724	0.000768
87-68-3	Hexachlorobutadiene	0.3781		0.00724	0.000807
77-47-4	Hexachlorocyclopentadiene	0.1241		0.0357	0.00389
67-72-1	Hexachloroethane	0.3251		0.0357	0.00259
193-39-5	Indeno[1,2,3-cd]pyrene	0.5310		0.00724	0.000743
78-59-1	Isophorone	0.4313		0.0357	0.00272
91-20-3	Naphthalene	0.4173		0.00724	0.000621
98-95-3	Nitrobenzene	0.4035		0.0721	0.00300
86-30-6	N-Nitrosodiphenylamine	0.4680		0.0357	0.00334
621-64-7	N-Nitrosodi-n-propylamine	0.4940		0.00724	0.000845
87-86-5	Pentachlorophenol	0.8971		0.0357	0.00322
85-01-8	Phenanthrene	0.4587		0.00724	0.00115
108-95-2	Phenol	0.4057		0.0357	0.000852
129-00-0	Pyrene	0.4130		0.00724	0.000729
91-94-1	3,3'-Dichlorobenzidine	0.1450		0.0357	0.00381

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(0.0-0.5)-161122-S | Lab Sample ID: 180-61122-1 MS

Matrix: Solid | Lab File ID: N11250025.D

Analysis Method: 8270D LL | Date Collected: 11/22/2016 09:35

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.1(g) | Date Analyzed: 11/25/2016 18:59

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 8.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	61		42-100
367-12-4	2-Fluorophenol (Surr)	52		21-107
118-79-6	2,4,6-Tribromophenol (Surr)	79		20-134
4165-60-0	Nitrobenzene-d5 (Surr)	59		35-109
4165-62-2	Phenol-d5 (Surr)	60		29-105
1718-51-0	Terphenyl-d14 (Surr)	62		36-113

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250025.D
Lims ID: 180-61122-A-1-A MS
Client ID:
Sample Type: MS
Inject. Date: 25-Nov-2016 18:59:30 ALS Bottle#: 24 Worklist Smp#: 25
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014496-025
Operator ID: 03200 Instrument ID: CH733

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 26-Nov-2016 08:21:37 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK023

First Level Reviewer: piccolinov Date: 26-Nov-2016 08:13:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.307	6.307	0.000	96	102926	8.00	8.00	
* 2 Naphthalene-d8	136	7.548	7.548	0.000	99	380361	8.00	8.00	
* 3 Acenaphthene-d10	164	9.189	9.183	0.006	91	223787	8.00	8.00	
* 4 Phenanthrene-d10	188	10.566	10.560	0.006	97	384681	8.00	8.00	
* 5 Chrysene-d12	240	14.142	14.124	0.018	96	489073	8.00	8.00	
* 6 Perylene-d12	264	17.101	17.071	0.030	98	507240	8.00	8.00	
$ 7 2-Fluorophenol	112	4.872	4.872	0.000	93	308824	40.0	20.8	
$ 8 Phenol-d5	99	5.937	5.936	0.001	95	444072	40.0	24.2	
$ 9 Nitrobenzene-d5	82	6.848	6.848	0.000	91	414740	40.0	23.6	
$ 10 2-Fluorobiphenyl	172	8.548	8.542	0.006	100	936746	40.0	24.3	
$ 11 2,4,6-Tribromophenol	330	9.913	9.907	0.006	92	135917	40.0	31.5	
$ 12 Terphenyl-d14	244	12.354	12.348	0.006	99	1204779	40.0	24.7	
13 1,4-Dioxane	88	1.396	1.401	-0.005	93	90900	40.0	15.6	
25 Benzaldehyde	77	5.842	5.842	0.000	95	254853	40.0	22.6	
26 Phenol	94	5.954	5.948	0.006	96	466987	40.0	22.5	
29 Bis(2-chloroethyl)ether	93	6.031	6.031	0.000	99	328879	40.0	21.5	
30 2-Chlorophenol	128	6.090	6.089	0.001	96	378308	40.0	24.1	
36 2-Methylphenol	108	6.554	6.554	0.000	97	343683	40.0	25.7	
38 2,2'-oxybis[1-chloropropan	45	6.578	6.578	0.000	82	314817	40.0	24.7	
40 Acetophenone	105	6.701	6.701	0.000	88	557300	40.0	26.0	
42 4-Methylphenol	108	6.701	6.701	0.000	91	373209	40.0	27.4	
41 N-Nitrosodi-n-propylamine	70	6.701	6.701	0.000	72	291649	40.0	27.4	
45 Hexachloroethane	117	6.819	6.819	0.000	91	138572	40.0	18.1	
46 Nitrobenzene	77	6.866	6.866	0.000	88	406050	40.0	22.4	
48 Isophorone	82	7.095	7.095	0.000	99	719677	40.0	24.0	
49 2-Nitrophenol	139	7.178	7.178	0.000	98	211333	40.0	26.6	
50 2,4-Dimethylphenol	107	7.213	7.207	0.006	98	377367	40.0	22.6	
53 Bis(2-chloroethoxy)methane	93	7.295	7.295	0.000	99	424232	40.0	22.9	
54 2,4-Dichlorophenol	162	7.413	7.407	0.006	95	359756	40.0	25.6	
58 Naphthalene	128	7.572	7.572	0.000	98	1095155	40.0	23.2	
62 Hexachlorobutadiene	225	7.689	7.689	0.000	95	254945	40.0	21.0	
64 Caprolactam	113	7.919	7.901	0.018	84	10708	40.0	2.97	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
67 4-Chloro-3-methylphenol	107	8.048	8.042	0.006	95	393414	40.0	30.5	
69 2-Methylnaphthalene	142	8.219	8.213	0.006	92	789048	40.0	24.5	
71 1-Methylnaphthalene	142	8.313	8.307	0.006	96	734554	40.0	24.3	
72 Hexachlorocyclopentadiene	237	8.366	8.366	0.000	93	77716	40.0	6.89	
73 1,2,4,5-Tetrachlorobenzene	216	8.378	8.372	0.006	97	449075	40.0	24.9	
74 2,4,6-Trichlorophenol	196	8.472	8.472	0.000	92	292347	40.0	28.8	
75 2,4,5-Trichlorophenol	196	8.507	8.501	0.006	94	305139	40.0	29.5	
76 1,1'-Biphenyl	154	8.642	8.642	0.000	94	1003184	40.0	25.7	
77 2-Chloronaphthalene	162	8.672	8.672	0.000	97	777718	40.0	25.2	
79 2-Nitroaniline	65	8.748	8.748	0.000	79	256797	40.0	32.5	
82 Dimethyl phthalate	163	8.895	8.895	0.000	98	958171	40.0	28.8	
84 2,6-Dinitrotoluene	165	8.960	8.954	0.006	95	221900	40.0	31.4	
85 Acenaphthylene	152	9.060	9.060	0.000	98	1105045	40.0	25.6	
86 3-Nitroaniline	138	9.125	9.119	0.006	91	193653	40.0	27.3	
87 2,4-Dinitrophenol	184	9.219	9.213	0.006	81	152942	80.0	32.2	
88 Acenaphthene	153	9.219	9.213	0.006	91	789338	40.0	26.0	
89 4-Nitrophenol	109	9.254	9.242	0.012	92	281707	80.0	56.9	
91 2,4-Dinitrotoluene	165	9.336	9.330	0.006	92	300706	40.0	32.7	
93 Dibenzofuran	168	9.372	9.372	0.000	96	1136055	40.0	25.3	
96 2,3,4,6-Tetrachlorophenol	232	9.483	9.477	0.006	72	263160	40.0	28.9	
98 Diethyl phthalate	149	9.536	9.530	0.006	98	972293	40.0	28.8	
100 4-Chlorophenyl phenyl ethe	204	9.666	9.666	0.000	93	507202	40.0	28.1	
101 4-Nitroaniline	138	9.683	9.677	0.006	81	208806	40.0	28.7	
103 Fluorene	166	9.689	9.689	0.000	95	926683	40.0	26.9	
104 4,6-Dinitro-2-methylphenol	198	9.713	9.707	0.006	89	307992	80.0	50.8	
105 N-Nitrosodiphenylamine	169	9.772	9.766	0.006	62	633466	40.0	26.0	
110 4-Bromophenyl phenyl ether	248	10.119	10.119	0.000	64	313409	40.0	28.1	
112 Hexachlorobenzene	284	10.207	10.201	0.006	95	304067	40.0	26.8	
113 Atrazine	200	10.230	10.224	0.006	94	201331	40.0	20.5	
116 Pentachlorophenol	266	10.377	10.371	0.006	91	363655	80.0	49.8	
121 Phenanthrene	178	10.589	10.583	0.006	97	1358883	40.0	25.5	
122 Anthracene	178	10.636	10.630	0.006	97	1383924	40.0	26.9	
124 Carbazole	167	10.777	10.771	0.006	96	1219880	40.0	27.5	
126 Di-n-butyl phthalate	149	11.066	11.066	0.000	100	1550650	40.0	30.4	
131 Fluoranthene	202	11.895	11.889	0.006	96	1672855	40.0	29.3	
133 Pyrene	202	12.207	12.195	0.012	99	1696791	40.0	22.9	
138 Butyl benzyl phthalate	149	13.060	13.048	0.012	99	707743	40.0	29.0	
144 3,3'-Dichlorobenzidine	252	14.036	14.024	0.012	72	169326	40.0	8.05	
145 Bis(2-ethylhexyl) phthalat	149	14.071	14.054	0.017	95	1189018	40.0	36.0	
146 Benzo[a]anthracene	228	14.124	14.101	0.023	97	1879939	40.0	29.8	
150 Di-n-octyl phthalate	149	15.389	15.371	0.018	99	1718423	40.0	28.2	
152 Benzo[b]fluoranthene	252	16.295	16.265	0.030	95	1957826	40.0	24.9	
153 Benzo[k]fluoranthene	252	16.348	16.318	0.030	98	1860820	40.0	22.7	
154 Benzo[a]pyrene	252	16.983	16.953	0.030	75	1809136	40.0	25.1	
157 Indeno[1,2,3-cd]pyrene	276	19.365	19.306	0.059	98	2290150	40.0	29.5	
158 Dibenz(a,h)anthracene	278	19.395	19.341	0.054	91	1931299	40.0	31.3	
159 Benzo[g,h,i]perylene	276	19.989	19.924	0.065	97	1964946	40.0	29.6	

Reagents:

SVTAPITINTRNi_00012 Amount Added: 1.00 Units: uL Run Reagent

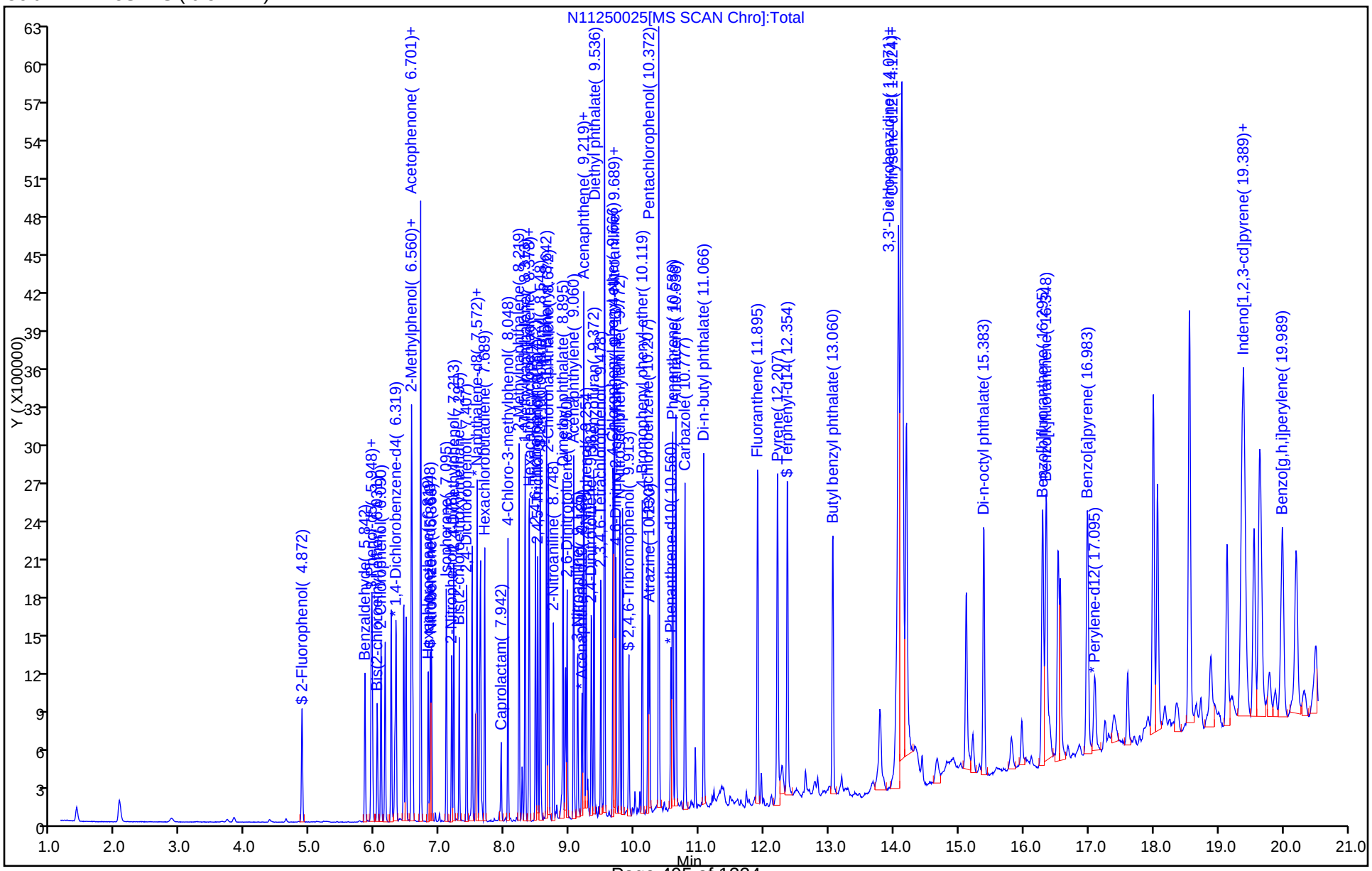
Report Date: 26-Nov-2016 08:23:10 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250025.D

Injection Date:	25-Nov-2016 18:59:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	180-61122-A-1-A MS			Worklist Smp#:	25
Client ID:					
Injection Vol:	2.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)



TestAmerica Pittsburgh
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250025.D
Lims ID: 180-61122-A-1-A MS
Client ID:
Sample Type: MS
Inject. Date: 25-Nov-2016 18:59:30 ALS Bottle#: 24 Worklist Smp#: 25
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014496-025
Operator ID: 03200 Instrument ID: CH733

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 26-Nov-2016 08:21:37 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK023

First Level Reviewer: piccolinov Date: 26-Nov-2016 08:13:32

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	40.0	20.8	52.02
$ 8 Phenol-d5	40.0	24.2	60.46
$ 9 Nitrobenzene-d5	40.0	23.6	59.08
$ 10 2-Fluorobiphenyl	40.0	24.3	60.79
$ 11 2,4,6-Tribromophenol	40.0	31.5	78.73
$ 12 Terphenyl-d14	40.0	24.7	61.78

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(0.0-0.5)-161122-S | Lab Sample ID: 180-61122-1 MSD

Matrix: Solid | Lab File ID: N11250026.D

Analysis Method: 8270D LL | Date Collected: 11/22/2016 09:35

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.2(g) | Date Analyzed: 11/25/2016 19:26

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 8.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
92-52-4	1,1'-Biphenyl	0.5114		0.0354	0.00319
123-91-1	1,4-Dioxane	0.3058		0.0716	0.00411
90-12-0	1-Methylnaphthalene	0.4835		0.00719	0.000764
95-94-3	1,2,4,5-Tetrachlorobenzene	0.5022		0.0354	0.00271
91-58-7	2-Chloronaphthalene	0.5017		0.00719	0.000747
95-57-8	2-Chlorophenol	0.4669		0.0354	0.00293
120-83-2	2,4-Dichlorophenol	0.4978		0.00719	0.000718
105-67-9	2,4-Dimethylphenol	0.4546		0.0354	0.00560
51-28-5	2,4-Dinitrophenol	0.6500		0.182	0.0426
121-14-2	2,4-Dinitrotoluene	0.6584		0.0354	0.00289
606-20-2	2,6-Dinitrotoluene	0.6175		0.0354	0.00369
91-57-6	2-Methylnaphthalene	0.4866		0.00719	0.000644
95-48-7	2-Methylphenol	0.5014		0.0354	0.00250
106-44-5	Methylphenol, 3 & 4	0.5340		0.0354	0.00350
88-74-4	2-Nitroaniline	0.6513		0.182	0.0160
99-09-2	3-Nitroaniline	0.5564		0.182	0.0147
100-01-6	4-Nitroaniline	0.5669		0.182	0.0145
88-75-5	2-Nitrophenol	0.5280		0.0354	0.00395
100-02-7	4-Nitrophenol	1.154		0.182	0.0131
108-60-1	2,2'-oxybis[1-chloropropane]	0.4758		0.00719	0.000773
58-90-2	2,3,4,6-Tetrachlorophenol	0.5856		0.0354	0.00230
95-95-4	2,4,5-Trichlorophenol	0.5850		0.0354	0.00382
88-06-2	2,4,6-Trichlorophenol	0.5742		0.0354	0.00536
59-50-7	4-Chloro-3-methylphenol	0.6064		0.0354	0.00330
7005-72-3	4-Chlorophenyl phenyl ether	0.5537		0.0354	0.00398
534-52-1	4,6-Dinitro-2-methylphenol	1.012		0.182	0.0144
83-32-9	Acenaphthene	0.5187		0.00719	0.000688
208-96-8	Acenaphthylene	0.5150		0.00719	0.000820
98-86-2	Acetophenone	0.5056		0.0354	0.00294
120-12-7	Anthracene	0.5344		0.00719	0.000701
1912-24-9	Atrazine	0.3956		0.0354	0.00349
100-52-7	Benzaldehyde	0.4511		0.0354	0.00537
56-55-3	Benzo[a]anthracene	0.5818		0.00719	0.000897
205-99-2	Benzo[b]fluoranthene	0.4814		0.00719	0.00113

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(0.0-0.5)-161122-S | Lab Sample ID: 180-61122-1 MSD

Matrix: Solid | Lab File ID: N11250026.D

Analysis Method: 8270D LL | Date Collected: 11/22/2016 09:35

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.2(g) | Date Analyzed: 11/25/2016 19:26

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 8.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
207-08-9	Benzo[k]fluoranthene	0.4538		0.00719	0.00145
191-24-2	Benzo[g,h,i]perylene	0.5850		0.00719	0.000712
50-32-8	Benzo[a]pyrene	0.4914		0.00719	0.000716
111-91-1	Bis(2-chloroethoxy)methane	0.4518		0.0354	0.00236
111-44-4	Bis(2-chloroethyl)ether	0.4156		0.00719	0.000961
117-81-7	Bis(2-ethylhexyl) phthalate	0.6854		0.0716	0.00579
101-55-3	4-Bromophenyl phenyl ether	0.5498		0.0354	0.00312
85-68-7	Butyl benzyl phthalate	0.5625		0.0354	0.00489
105-60-2	Caprolactam	0.06227	J	0.182	0.0270
86-74-8	Carbazole	0.5358		0.00719	0.000660
53-70-3	Dibenz(a,h)anthracene	0.6075		0.00719	0.000797
132-64-9	Dibenzofuran	0.5018		0.0354	0.00352
84-74-2	Di-n-butyl phthalate	0.6024		0.0354	0.00449
117-84-0	Di-n-octyl phthalate	0.5547		0.0354	0.00377
84-66-2	Diethyl phthalate	0.5718		0.0354	0.00391
131-11-3	Dimethyl phthalate	0.5798		0.0354	0.00390
206-44-0	Fluoranthene	0.5794		0.00719	0.000766
86-73-7	Fluorene	0.5305		0.00719	0.000944
118-74-1	Hexachlorobenzene	0.5173		0.00719	0.000763
87-68-3	Hexachlorobutadiene	0.4141		0.00719	0.000801
77-47-4	Hexachlorocyclopentadiene	0.1470		0.0354	0.00386
67-72-1	Hexachloroethane	0.3547		0.0354	0.00257
193-39-5	Indeno[1,2,3-cd]pyrene	0.5814		0.00719	0.000738
78-59-1	Isophorone	0.4732		0.0354	0.00270
91-20-3	Naphthalene	0.4518		0.00719	0.000617
98-95-3	Nitrobenzene	0.4481		0.0716	0.00298
86-30-6	N-Nitrosodiphenylamine	0.5084		0.0354	0.00331
621-64-7	N-Nitrosodi-n-propylamine	0.5289		0.00719	0.000840
87-86-5	Pentachlorophenol	1.023		0.0354	0.00320
85-01-8	Phenanthrene	0.5003		0.00719	0.00114
108-95-2	Phenol	0.4412		0.0354	0.000846
129-00-0	Pyrene	0.4467		0.00719	0.000724
91-94-1	3,3'-Dichlorobenzidine	0.1628		0.0354	0.00379

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(0.0-0.5)-161122-S | Lab Sample ID: 180-61122-1 MSD

Matrix: Solid | Lab File ID: N11250026.D

Analysis Method: 8270D LL | Date Collected: 11/22/2016 09:35

Extract. Method: 3541 | Date Extracted: 11/25/2016 02:15

Sample wt/vol: 15.2(g) | Date Analyzed: 11/25/2016 19:26

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: 8.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195402 | Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	67		42-100
367-12-4	2-Fluorophenol (Surr)	56		21-107
118-79-6	2,4,6-Tribromophenol (Surr)	88		20-134
4165-60-0	Nitrobenzene-d5 (Surr)	65		35-109
4165-62-2	Phenol-d5 (Surr)	66		29-105
1718-51-0	Terphenyl-d14 (Surr)	67		36-113

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250026.D
Lims ID: 180-61122-A-1-B MSD
Client ID:
Sample Type: MSD
Inject. Date: 25-Nov-2016 19:26:30 ALS Bottle#: 25 Worklist Smp#: 26
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014496-026
Operator ID: 03200 Instrument ID: CH733

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 26-Nov-2016 08:21:37 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK023

First Level Reviewer: piccolinov Date: 26-Nov-2016 08:13:55

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
*	1 1,4-Dichlorobenzene-d4	152	6.307	6.307	0.000	96	98439	8.00	8.00	
*	2 Naphthalene-d8	136	7.548	7.548	0.000	99	356688	8.00	8.00	
*	3 Acenaphthene-d10	164	9.189	9.183	0.006	92	208996	8.00	8.00	
*	4 Phenanthrene-d10	188	10.566	10.560	0.006	97	365004	8.00	8.00	
*	5 Chrysene-d12	240	14.142	14.124	0.018	96	471815	8.00	8.00	
*	6 Perylene-d12	264	17.101	17.071	0.030	98	488068	8.00	8.00	
$	7 2-Fluorophenol	112	4.872	4.872	0.000	93	319325	40.0	22.5	
$	8 Phenol-d5	99	5.937	5.936	0.001	94	461312	40.0	26.3	
$	9 Nitrobenzene-d5	82	6.848	6.848	0.000	90	428251	40.0	26.0	
$	10 2-Fluorobiphenyl	172	8.548	8.542	0.006	100	961229	40.0	26.7	
$	11 2,4,6-Tribromophenol	330	9.913	9.907	0.006	93	144647	40.0	35.3	
$	12 Terphenyl-d14	244	12.360	12.348	0.012	99	1264020	40.0	26.9	
	13 1,4-Dioxane	88	1.396	1.401	-0.005	94	95064	40.0	17.1	
	25 Benzaldehyde	77	5.843	5.842	0.001	94	271443	40.0	25.2	
	26 Phenol	94	5.954	5.948	0.006	97	488956	40.0	24.7	
	29 Bis(2-chloroethyl)ether	93	6.031	6.031	0.000	98	340534	40.0	23.2	
	30 2-Chlorophenol	128	6.090	6.089	0.001	96	392457	40.0	26.1	
	36 2-Methylphenol	108	6.560	6.554	0.006	96	358891	40.0	28.0	
	38 2,2'-oxybis[1-chloropropan	45	6.578	6.578	0.000	84	324706	40.0	26.6	
	40 Acetophenone	105	6.701	6.701	0.000	91	580111	40.0	28.3	
	42 4-Methylphenol	108	6.707	6.701	0.006	92	388518	40.0	29.8	
	41 N-Nitrosodi-n-propylamine	70	6.701	6.701	0.000	72	300579	40.0	29.6	
	45 Hexachloroethane	117	6.819	6.819	0.000	91	145563	40.0	19.8	
	46 Nitrobenzene	77	6.866	6.866	0.000	89	425628	40.0	25.0	
	48 Isophorone	82	7.095	7.095	0.000	98	745361	40.0	26.5	
	49 2-Nitrophenol	139	7.178	7.178	0.000	99	219942	40.0	29.5	
	50 2,4-Dimethylphenol	107	7.213	7.207	0.006	98	397498	40.0	25.4	
	53 Bis(2-chloroethoxy)methane	93	7.295	7.295	0.000	99	439352	40.0	25.3	
	54 2,4-Dichlorophenol	162	7.413	7.407	0.006	95	366868	40.0	27.8	
	58 Naphthalene	128	7.572	7.572	0.000	98	1119360	40.0	25.3	
	62 Hexachlorobutadiene	225	7.689	7.689	0.000	95	263576	40.0	23.1	
	64 Caprolactam	113	7.919	7.901	0.018	83	11760	40.0	3.48	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
67 4-Chloro-3-methylphenol	107	8.048	8.042	0.006	95	410499	40.0	33.9	
69 2-Methylnaphthalene	142	8.219	8.213	0.006	92	822085	40.0	27.2	
71 1-Methylnaphthalene	142	8.313	8.307	0.006	92	764715	40.0	27.0	
72 Hexachlorocyclopentadiene	237	8.372	8.366	0.006	95	86514	40.0	8.22	
73 1,2,4,5-Tetrachlorobenzene	216	8.378	8.372	0.006	97	473165	40.0	28.1	
74 2,4,6-Trichlorophenol	196	8.472	8.472	0.000	92	304001	40.0	32.1	
75 2,4,5-Trichlorophenol	196	8.507	8.501	0.006	93	315620	40.0	32.7	
76 1,1'-Biphenyl	154	8.642	8.642	0.000	95	1042001	40.0	28.6	
77 2-Chloronaphthalene	162	8.672	8.672	0.000	97	807949	40.0	28.0	
79 2-Nitroaniline	65	8.748	8.748	0.000	79	269305	40.0	36.4	
82 Dimethyl phthalate	163	8.895	8.895	0.000	98	1005907	40.0	32.4	
84 2,6-Dinitrotoluene	165	8.960	8.954	0.006	95	227535	40.0	34.5	
85 Acenaphthylene	152	9.060	9.060	0.000	98	1158292	40.0	28.8	
86 3-Nitroaniline	138	9.125	9.119	0.006	90	205996	40.0	31.1	
87 2,4-Dinitrophenol	184	9.219	9.213	0.006	72	163451	80.0	36.3	
88 Acenaphthene	153	9.219	9.213	0.006	91	822043	40.0	29.0	
89 4-Nitrophenol	109	9.254	9.242	0.012	92	298612	80.0	64.5	
91 2,4-Dinitrotoluene	165	9.336	9.330	0.006	93	315886	40.0	36.8	
93 Dibenzofuran	168	9.378	9.372	0.006	96	1175600	40.0	28.0	
96 2,3,4,6-Tetrachlorophenol	232	9.483	9.477	0.006	75	278676	40.0	32.7	
98 Diethyl phthalate	149	9.536	9.530	0.006	98	1009097	40.0	32.0	
100 4-Chlorophenyl phenyl ethe	204	9.672	9.666	0.006	91	521283	40.0	31.0	
101 4-Nitroaniline	138	9.683	9.677	0.006	84	215022	40.0	31.7	
103 Fluorene	166	9.689	9.689	0.000	95	954660	40.0	29.7	
104 4,6-Dinitro-2-methylphenol	198	9.713	9.707	0.006	88	326943	80.0	56.6	
105 N-Nitrosodiphenylamine	169	9.772	9.766	0.006	62	657287	40.0	28.4	
110 4-Bromophenyl phenyl ether	248	10.119	10.119	0.000	65	325647	40.0	30.7	
112 Hexachlorobenzene	284	10.207	10.201	0.006	94	311889	40.0	28.9	
113 Atrazine	200	10.230	10.224	0.006	95	205842	40.0	22.1	
116 Pentachlorophenol	266	10.378	10.371	0.007	91	396102	80.0	57.2	
121 Phenanthrene	178	10.589	10.583	0.006	97	1415612	40.0	28.0	
122 Anthracene	178	10.636	10.630	0.006	97	1459527	40.0	29.9	
124 Carbazole	167	10.777	10.771	0.006	96	1258244	40.0	29.9	
126 Di-n-butyl phthalate	149	11.072	11.066	0.006	100	1627717	40.0	33.7	
131 Fluoranthene	202	11.901	11.889	0.012	96	1754248	40.0	32.4	
133 Pyrene	202	12.207	12.195	0.012	99	1782613	40.0	25.0	
138 Butyl benzyl phthalate	149	13.060	13.048	0.012	99	739496	40.0	31.4	
144 3,3'-Dichlorobenzidine	252	14.036	14.024	0.012	74	187996	40.0	9.10	
145 Bis(2-ethylhexyl) phthalat	149	14.071	14.054	0.017	95	1219751	40.0	38.3	
146 Benzo[a]anthracene	228	14.124	14.101	0.023	97	1980617	40.0	32.5	
150 Di-n-octyl phthalate	149	15.389	15.371	0.018	99	1817870	40.0	31.0	
152 Benzo[b]fluoranthene	252	16.295	16.265	0.030	95	2034749	40.0	26.9	
153 Benzo[k]fluoranthene	252	16.354	16.318	0.036	98	1999700	40.0	25.4	
154 Benzo[a]pyrene	252	16.989	16.953	0.036	76	1901332	40.0	27.5	
157 Indeno[1,2,3-cd]pyrene	276	19.377	19.306	0.071	98	2428479	40.0	32.5	
158 Dibenz(a,h)anthracene	278	19.400	19.341	0.059	93	2014942	40.0	34.0	
159 Benzo[g,h,i]perylene	276	19.995	19.924	0.071	97	2086636	40.0	32.7	

Reagents:

SVTAPITINTRNi_00012 Amount Added: 1.00 Units: uL Run Reagent

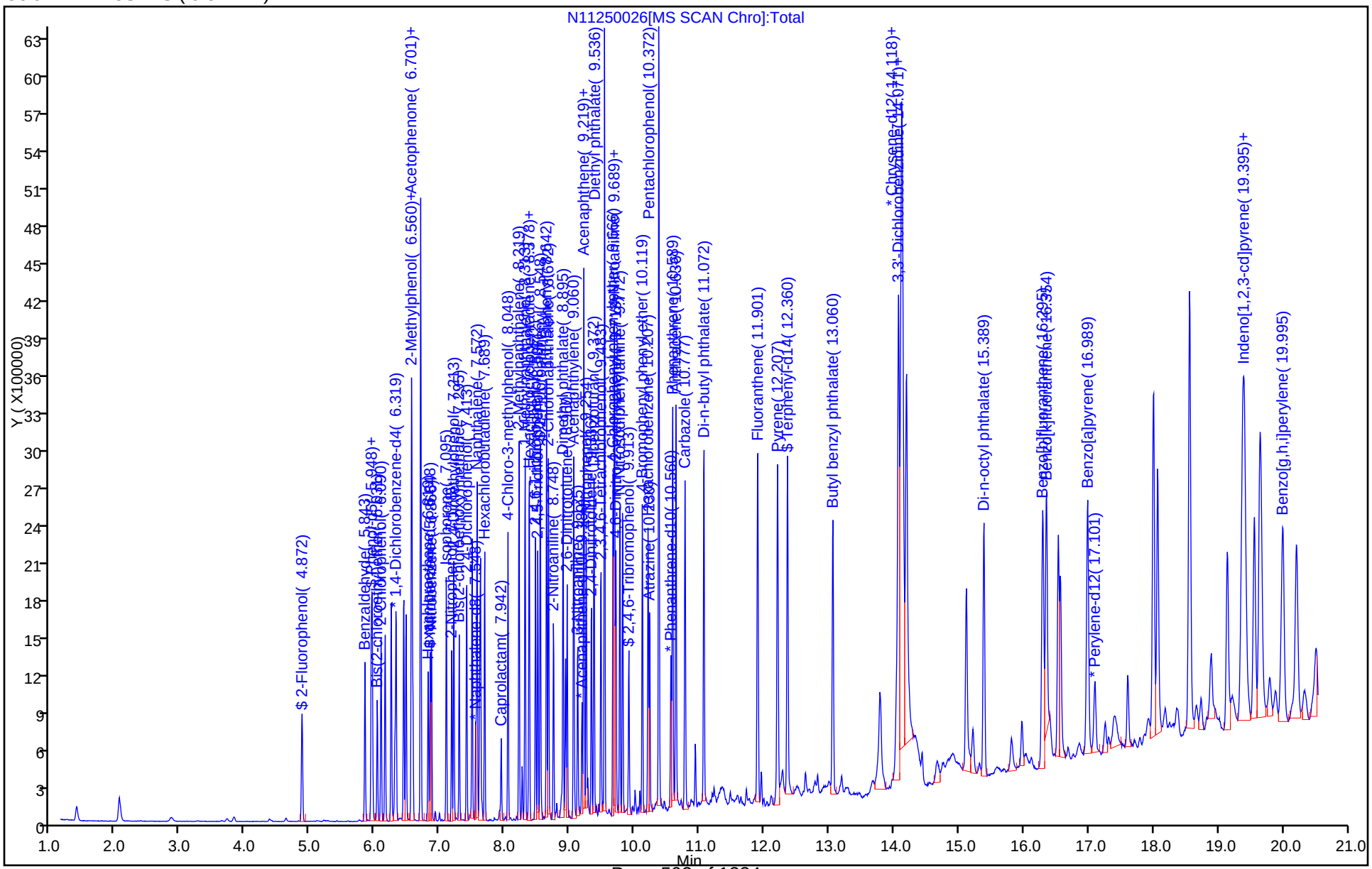
Report Date: 26-Nov-2016 08:23:12 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250026.D

Injection Date:	25-Nov-2016 19:26:30	Instrument ID:	CH733	Operator ID:	03200
Lims ID:	180-61122-A-1-B MSD			Worklist Smp#:	26
Client ID:					
Injection Vol:	2.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	BNA_CH733	Limit Group:	BNA 8270D ICAL		

Column: Rxi-5SilMS (0.32 mm)



TestAmerica Pittsburgh
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\N11250026.D
Lims ID: 180-61122-A-1-B MSD
Client ID:
Sample Type: MSD
Inject. Date: 25-Nov-2016 19:26:30 ALS Bottle#: 25 Worklist Smp#: 26
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014496-026
Operator ID: 03200 Instrument ID: CH733

Method: \\ChromNA\Pittsburgh\ChromData\CH733\20161125-14496.b\BNA_CH733.m
Limit Group: BNA 8270D ICAL
Last Update: 26-Nov-2016 08:21:37 Calib Date: 30-Sep-2016 11:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CH733\20160930-13670.b\N09300010.D

Column 1 : Rxi-5SilMS (0.32 mm) Det: MS SCAN
Process Host: XAWRK023

First Level Reviewer: piccolinov Date: 26-Nov-2016 08:13:55

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	40.0	22.5	56.24
$ 8 Phenol-d5	40.0	26.3	65.67
$ 9 Nitrobenzene-d5	40.0	26.0	65.06
$ 10 2-Fluorobiphenyl	40.0	26.7	66.79
$ 11 2,4,6-Tribromophenol	40.0	35.3	88.31
$ 12 Terphenyl-d14	40.0	26.9	67.19

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CH733 Start Date: 09/30/2016 07:04

Analysis Batch Number: 189702 End Date: 09/30/2016 12:17

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 180-189702/2		09/30/2016 07:04	1	N09300002.D	Rxi-5SilMS 0.32(mm)
IC 180-189702/3		09/30/2016 07:20	1	N09300003.D	Rxi-5SilMS 0.32(mm)
IC 180-189702/4		09/30/2016 07:47	1	N09300004.D	Rxi-5SilMS 0.32(mm)
IC 180-189702/5		09/30/2016 08:14	1	N09300005.D	Rxi-5SilMS 0.32(mm)
ICIS 180-189702/6		09/30/2016 08:40	1	N09300006.D	Rxi-5SilMS 0.32(mm)
IC 180-189702/7		09/30/2016 09:07	1	N09300007.D	Rxi-5SilMS 0.32(mm)
IC 180-189702/8		09/30/2016 09:34	1	N09300008.D	Rxi-5SilMS 0.32(mm)
IC 180-189702/9		09/30/2016 10:28	1	N09300009.D	Rxi-5SilMS 0.32(mm)
IC 180-189702/10		09/30/2016 11:22	1	N09300010.D	Rxi-5SilMS 0.32(mm)
ICV 180-189702/11		09/30/2016 11:49	1		Rxi-5SilMS 0.32(mm)
ICV 180-189702/12		09/30/2016 12:17	1		Rxi-5SilMS 0.32(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CH733 Start Date: 11/25/2016 09:00

Analysis Batch Number: 195402 End Date: 11/25/2016 20:46

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 180-195402/2		11/25/2016 09:00	1	N11250002.D	Rxi-5SilMS 0.32(mm)
CCVIS 180-195402/3		11/25/2016 09:15	1	N11250003.D	Rxi-5SilMS 0.32(mm)
ZZZZZ		11/25/2016 09:42	1		Rxi-5SilMS 0.32(mm)
MB 180-195373/1-A		11/25/2016 10:08	1	N11250005.D	Rxi-5SilMS 0.32(mm)
LCS 180-195373/2-A		11/25/2016 10:35	1	N11250006.D	Rxi-5SilMS 0.32(mm)
ZZZZZ		11/25/2016 11:01	1		Rxi-5SilMS 0.32(mm)
ZZZZZ		11/25/2016 11:28	50		Rxi-5SilMS 0.32(mm)
ZZZZZ		11/25/2016 11:54	10		Rxi-5SilMS 0.32(mm)
ZZZZZ		11/25/2016 12:21	5		Rxi-5SilMS 0.32(mm)
ZZZZZ		11/25/2016 12:48	40		Rxi-5SilMS 0.32(mm)
ZZZZZ		11/25/2016 13:14	40		Rxi-5SilMS 0.32(mm)
ZZZZZ		11/25/2016 13:41	10		Rxi-5SilMS 0.32(mm)
ZZZZZ		11/25/2016 14:07	50		Rxi-5SilMS 0.32(mm)
ZZZZZ		11/25/2016 14:34	50		Rxi-5SilMS 0.32(mm)
ZZZZZ		11/25/2016 15:00	50		Rxi-5SilMS 0.32(mm)
ZZZZZ		11/25/2016 15:27	40		Rxi-5SilMS 0.32(mm)
ZZZZZ		11/25/2016 15:53	50		Rxi-5SilMS 0.32(mm)
ZZZZZ		11/25/2016 16:20	50		Rxi-5SilMS 0.32(mm)
ZZZZZ		11/25/2016 16:46	50		Rxi-5SilMS 0.32(mm)
ZZZZZ		11/25/2016 17:13	50		Rxi-5SilMS 0.32(mm)
ZZZZZ		11/25/2016 17:40	50		Rxi-5SilMS 0.32(mm)
ZZZZZ		11/25/2016 18:06	50		Rxi-5SilMS 0.32(mm)
180-61122-1		11/25/2016 18:33	1	N11250024.D	Rxi-5SilMS 0.32(mm)
180-61122-1 MS		11/25/2016 18:59	1	N11250025.D	Rxi-5SilMS 0.32(mm)
180-61122-1 MSD		11/25/2016 19:26	1	N11250026.D	Rxi-5SilMS 0.32(mm)
180-61122-2		11/25/2016 19:53	1	N11250027.D	Rxi-5SilMS 0.32(mm)
180-61122-3		11/25/2016 20:19	10	N11250028.D	Rxi-5SilMS 0.32(mm)
180-61122-4		11/25/2016 20:46	5	N11250029.D	Rxi-5SilMS 0.32(mm)

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Batch Number: 195373 Batch Start Date: 11/25/16 02:15 Batch Analyst: Geehring, Kevin

Batch Method: 3541 Batch End Date: 11/25/16 10:11

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	InitialAmount	OPLVISPKMIX1i 00054	OPQL8270SURi 00049		
MB 180-195373/1		3541, 8270D LL		0.5 mL	15.0 g		50 uL		
LCS 180-195373/2		3541, 8270D LL		0.5 mL	15.0 g	50 uL	50 uL		
180-61122-A-1 MS	BGSB22-(0.0-0.5) -161122-S	3541, 8270D LL	T	0.5 mL	15.1 g	50 uL	50 uL		
180-61122-A-1 MSD	BGSB22-(0.0-0.5) -161122-S	3541, 8270D LL	T	0.5 mL	15.2 g	50 uL	50 uL		
180-61122-A-1	BGSB22-(0.0-0.5) -161122-S	3541, 8270D LL	T	0.5 mL	15.1 g		50 uL		
180-61122-A-2	BGSB22-(1-2) -161122-S	3541, 8270D LL	T	0.5 mL	15.2 g		50 uL		
180-61122-A-3	BGSB10-(0.0-0.5) -161122-S	3541, 8270D LL	T	0.5 mL	15.2 g		50 uL		
180-61122-A-4	BGSB10-(1-2) -161122-S	3541, 8270D LL	T	0.5 mL	15.0 g		50 uL		

Batch Notes	
Balance ID	T0358722
Batch Comment	sox # 1 - 2 - 3 - 4
Concentrator ID	kg
Exchange Solvent ID	2148007
Exchange Solvent Name	Methylene chloride
Magnesium Sulfate ID	2144283
N-evap ID	2
Na2SO4 ID	2119020
Person's name who did the prep	kg kg
Solvent	Mecl2 / Acetone
Solvent Lot #	2148262
Uncorrected N-evap Temperature	32 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method 8081B Low Level

Organochlorine Pesticides (GC) by Method 8081B Low Level

FORM II
PESTICIDES SURROGATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): MR-1 ID: 0.53(mm) GC Column (2): MR-2 ID: 0.53(mm)

Client Sample ID	Lab Sample ID	TCX1	#	TCX2	#	DCB1	#	DCB2	#
BGSB22-(0.0-0.5) -161122-S	180-61122-1	63		62		84		92	
BGSB22-(1-2) -161122-S	180-61122-2	63		61		77		77	
BGSB10-(0.0-0.5) -161122-S	180-61122-3	76		74		166	X	193	X
BGSB10-(1-2) -161122-S	180-61122-4	60		56		93	p	152	X
	MB 180-195769/1-A	80		76		99		92	
	LCS 180-195769/2-A	83		74		91		99	

	QC LIMITS
TCX = Tetrachloro-m-xylene	32-114
DCB = DCB Decachlorobiphenyl (Surr)	26-143

Column to be used to flag recovery values

FORM II 8081B_LL

FORM III
PESTICIDES LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: Q1201160000026.D

Lab ID: LCS 180-195769/2-A Client ID:

COMPOUND	SPIKE ADDED (mg/Kg)	LCS CONCENTRATION (mg/Kg)	LCS % REC	QC LIMITS REC	#
Aldrin	0.00167	0.001366	82	42-114	
alpha-BHC	0.00167	0.001256	75	44-100	
beta-BHC	0.00167	0.001220	73	32-110	
delta-BHC	0.00167	0.0007284	44	20-106	
gamma-BHC (Lindane)	0.00167	0.001300	78	44-100	
cis-Chlordane	0.00167	0.001356	81	38-112	
trans-Chlordane	0.00167	0.001394	84	37-113	
4,4'-DDD	0.00167	0.001751	105	41-111	
4,4'-DDE	0.00167	0.001434	86	39-119	
4,4'-DDT	0.00167	0.0007379	44	25-112	
Dieldrin	0.00167	0.001539	92	38-116	
Endosulfan I	0.00167	0.001329	80	39-114	
Endosulfan II	0.00167	0.001407	84	37-108	
Endosulfan sulfate	0.00167	0.001271	76	29-100	
Endrin	0.00167	0.001437	86	38-114	
Endrin aldehyde	0.00167	0.001316	79	25-105	
Endrin ketone	0.00167	0.001301	78	31-113	
Heptachlor	0.00167	0.001367	82	47-114	
Heptachlor epoxide	0.00167	0.001368	82	40-115	
Methoxychlor	0.00167	0.0008964	54	26-119	

Column to be used to flag recovery and RPD values

FORM III 8081B_LL

FORM IV
PESTICIDES METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: MB 180-195769/1-A

Matrix: Solid Date Extracted: 11/30/2016 04:24

Lab File ID:(1) Q1201160000016.D Lab File ID:(2) Q1201160000016.D

Date Analyzed:(1) 12/01/2016 13:44 Date Analyzed:(2) 12/01/2016 13:44

Instrument ID:(1) CHGC15 Instrument ID:(2) CHGC15

GC Column:(1) MR-1 ID: 0.53(mm) GC Column:(2) MR-2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
BGSB22-(0.0-0.5) -161122-S	180-61122-1	12/01/2016 15:17	12/01/2016 15:17
BGSB22-(1-2)-161122-S	180-61122-2	12/01/2016 15:32	12/01/2016 15:32
BGSB10-(0.0-0.5) -161122-S	180-61122-3	12/01/2016 15:48	12/01/2016 15:48
BGSB10-(1-2)-161122-S	180-61122-4	12/01/2016 16:03	12/01/2016 16:03
	LCS 180-195769/2-A	12/01/2016 16:19	12/01/2016 16:19

FORM VIII
PESTICIDES INTERNAL STANDARD HEIGHT AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Sample No.: CCVIS 180-195949/6 Date Analyzed: 12/01/2016 11:10

Instrument ID: CHGC15 GC Column: MR-1 ID: 0.53(mm)

Lab File ID (Standard): Q1201160000006.D Heated Purge: (Y/N) N

Calibration ID: 33113

		BNB		DBC			
		HEIGHT #	RT #	HEIGHT #	RT #	HEIGHT #	RT #
12/24 HOUR STD		92493495	3.73	55382255	8.18		
UPPER LIMIT		184986990	3.76	110764510	8.21		
LOWER LIMIT		46246748	3.70	27691128	8.15		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-195769/1-A		94153403	3.73	51141271	8.18		
180-61122-1	BGSB22-(0.0-0.5) -161122-S	99516384	3.73	56629024	8.18		
180-61122-2	BGSB22-(1-2)-161122-S	102507315	3.73	56687002	8.18		
180-61122-3	BGSB10-(0.0-0.5) -161122-S	103626619	3.73	56106800	8.18		
180-61122-4	BGSB10-(1-2)-161122-S	100513758	3.74	56822438	8.18		
LCS 180-195769/2-A		94230738	3.73	50279423	8.18		

BNB = 1-Bromo-2-nitrobenzene
DBC = Dibutylchlorendate ISTD

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.03 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8081B_LL

FORM VIII
PESTICIDES INTERNAL STANDARD HEIGHT AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Sample No.: CCVIS 180-195949/6 Date Analyzed: 12/01/2016 11:10

Instrument ID: CHGC15 GC Column: MR-2 ID: 0.53(mm)

Lab File ID (Standard): Q1201160000006.D Heated Purge: (Y/N) N

Calibration ID: 33114

		BNB		DBC			
		HEIGHT #	RT #	HEIGHT #	RT #	HEIGHT #	RT #
12/24 HOUR STD		127183551	3.80	85271773	7.95		
UPPER LIMIT		254367102	3.83	170543546	7.98		
LOWER LIMIT		63591776	3.77	42635887	7.92		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-195769/1-A		129450735	3.80	81208509	7.95		
180-61122-1	BGSB22-(0.0-0.5) -161122-S	140783198	3.80	85957888	7.95		
180-61122-2	BGSB22-(1-2)-161122-S	145036409	3.80	89092607	7.95		
180-61122-3	BGSB10-(0.0-0.5) -161122-S	145153900	3.80	90816804	7.95		
180-61122-4	BGSB10-(1-2)-161122-S	142720024	3.81	85635565	7.95		
LCS 180-195769/2-A		130410408	3.80	78645250	7.95		

BNB = 1-Bromo-2-nitrobenzene
DBC = Dibutylchlorendate ISTD

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.03 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8081B_LL

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(0.0-0.5)-161122-S Lab Sample ID: 180-61122-1

Instrument ID (1): CHGC15 Instrument ID (2): CHGC15

Date Analyzed (1): 12/01/2016 15:17 Date Analyzed (2): 12/01/2016 15:17

GC Column (1): MR-1 ID: 0.53(mm) GC Column (2): MR-2 ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Heptachlor	1		5.84	5.83	5.85	0.000453		57.5
	2		5.71	5.70	5.72	0.000251		
Heptachlor epoxide	1		6.48	6.48	6.50	0.00575		145.6
	2		6.41	6.40	6.42	0.000906		
4,4'-DDE	1		6.92	6.92	6.94	0.00909		58.0
	2		6.83	6.82	6.84	0.00500		
4,4'-DDD	1		7.39	7.38	7.40	0.00532		167.4
	2		7.34	7.34	7.36	0.000472		
4,4'-DDT	1		7.67	7.66	7.68	0.00420		100.9
	2		7.58	7.58	7.60	0.0128		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB10-(0.0-0.5)-161122-S Lab Sample ID: 180-61122-3

Instrument ID (1): CHGC15 Instrument ID (2): CHGC15

Date Analyzed (1): 12/01/2016 15:48 Date Analyzed (2): 12/01/2016 15:48

GC Column (1): MR-1 ID: 0.53(mm) GC Column (2): MR-2 ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Aldrin	1		6.12	6.12	6.14	0.000148		17.9
	2		5.97	5.96	5.98	0.000123		
Heptachlor epoxide	1		6.48	6.48	6.50	0.000322		54.9
	2		6.41	6.40	6.42	0.000183		
cis-Chlordane	1		6.78	6.76	6.78	0.00478		122.4
	2		6.69	6.68	6.70	0.00115		
Dieldrin	1		7.05	7.05	7.07	0.00140		88.1
	2		6.99	6.99	7.01	0.00359		
4,4'-DDD	1		7.39	7.38	7.40	0.000970		21.3
	2		7.34	7.34	7.36	0.000784		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB10-(1-2)-161122-S Lab Sample ID: 180-61122-4

Instrument ID (1): CHGC15 Instrument ID (2): CHGC15

Date Analyzed (1): 12/01/2016 16:03 Date Analyzed (2): 12/01/2016 16:03

GC Column (1): MR-1 ID: 0.53(mm) GC Column (2): MR-2 ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Aldrin	1		6.13	6.12	6.14	0.0000595		30.6
	2		5.97	5.96	5.98	0.0000811		
cis-Chlordane	1		6.78	6.76	6.78	0.00884		173.8
	2		6.69	6.68	6.70	0.000621		
Dieldrin	1		7.05	7.05	7.07	0.000716		22.7
	2		7.00	6.99	7.01	0.000899		
4,4'-DDD	1		7.39	7.38	7.40	0.00212		147.7
	2		7.34	7.34	7.36	0.000319		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-195769/2-A

Instrument ID (1): CHGC15 Instrument ID (2): CHGC15

Date Analyzed (1): 12/01/2016 16:19 Date Analyzed (2): 12/01/2016 16:19

GC Column (1): MR-1 ID: 0.53(mm) GC Column (2): MR-2 ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
alpha-BHC	1		5.11	5.09	5.11	0.001256		4.7
	2		5.11	5.09	5.11	0.001198		
gamma-BHC (Lindane)	1		5.37	5.36	5.38	0.001300		1.4
	2		5.40	5.39	5.41	0.001282		
beta-BHC	1		5.54	5.53	5.55	0.001220		2.6
	2		5.64	5.63	5.65	0.001188		
delta-BHC	1		5.74	5.73	5.75	0.0007284		4.8
	2		5.86	5.85	5.87	0.0006942		
Heptachlor	1		5.85	5.83	5.85	0.001367		5.9
	2		5.71	5.70	5.72	0.001289		
Aldrin	1		6.13	6.12	6.14	0.001366		3.3
	2		5.97	5.96	5.98	0.001321		
Heptachlor epoxide	1		6.49	6.48	6.50	0.001368		4.4
	2		6.41	6.40	6.42	0.001309		
trans-Chlordane	1		6.71	6.70	6.72	0.001394		5.6
	2		6.63	6.62	6.64	0.001318		
cis-Chlordane	1		6.77	6.76	6.78	0.001356		4.9
	2		6.69	6.68	6.70	0.001291		
Endosulfan I	1		6.82	6.81	6.83	0.001329		2.0
	2		6.76	6.75	6.77	0.001303		
4,4'-DDE	1		6.93	6.92	6.94	0.001434		1.1
	2		6.84	6.82	6.84	0.001418		
Dieldrin	1		7.06	7.05	7.07	0.001539		2.5
	2		7.00	6.99	7.01	0.001501		
Endrin	1		7.26	7.25	7.27	0.001437		0.6
	2		7.26	7.25	7.27	0.001429		
4,4'-DDD	1		7.39	7.38	7.40	0.001751		1.9
	2		7.35	7.34	7.36	0.001718		
Endosulfan II	1		7.46	7.45	7.47	0.001407		1.3
	2		7.52	7.51	7.53	0.001426		
Endrin aldehyde	1		7.58	7.57	7.59	0.001316		0.1
	2		7.69	7.68	7.70	0.001317		
4,4'-DDT	1		7.67	7.66	7.68	0.0007379		0.3
	2		7.59	7.58	7.60	0.0007356		
Endosulfan sulfate	1		7.79	7.78	7.80	0.001271		2.7
	2		7.89	7.88	7.90	0.001305		
Methoxychlor	1		8.11	8.10	8.12	0.0008964		3.5
	2		8.12	8.11	8.13	0.0009285		
Endrin ketone	1		8.24	8.23	8.25	0.001301		5.5
	2		8.43	8.42	8.44	0.001374		

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(0.0-0.5)-161122-S | Lab Sample ID: 180-61122-1

Matrix: Solid | Lab File ID: Q1201160000022.D

Analysis Method: 8081B_LL | Date Collected: 11/22/2016 09:35

Extraction Method: 3541 | Date Extracted: 11/30/2016 04:24

Sample wt/vol: 15.1(g) | Date Analyzed: 12/01/2016 15:17

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 5

Injection Volume: 1(uL) | GC Column: MR-1 ID: 0.53(mm)

% Moisture: 8.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195949 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
309-00-2	Aldrin	0.0000475	U	0.000450	0.0000475
319-84-6	alpha-BHC	0.000132	U	0.000450	0.000132
319-85-7	beta-BHC	0.000101	U	0.000450	0.000101
319-86-8	delta-BHC	0.000160	U	0.000450	0.000160
58-89-9	gamma-BHC (Lindane)	0.0000929	U	0.000450	0.0000929
5103-71-9	cis-Chlordane	0.0000724	U	0.000450	0.0000724
5103-74-2	trans-Chlordane	0.0000351	U	0.000450	0.0000351
50-29-3	4,4'-DDT	0.00420	p	0.000450	0.0000459
60-57-1	Dieldrin	0.0000427	U	0.000450	0.0000427
959-98-8	Endosulfan I	0.0000286	U	0.000450	0.0000286
33213-65-9	Endosulfan II	0.000138	U	0.000450	0.000138
1031-07-8	Endosulfan sulfate	0.0000573	U	0.000450	0.0000573
72-20-8	Endrin	0.000131	U	0.000450	0.000131
7421-93-4	Endrin aldehyde	0.000132	U	0.000450	0.000132
53494-70-5	Endrin ketone	0.000150	U	0.000450	0.000150
72-43-5	Methoxychlor	0.000131	U	0.000450	0.000131
8001-35-2	Toxaphene	0.0148	U	0.0180	0.0148

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	63		32-114
2051-24-3	DCB Decachlorobiphenyl (Surr)	84		26-143

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000022.D
Lims ID: 180-61122-A-1-I
Client ID: BGSB22-(0.0-0.5)-161122-S
Sample Type: Client
Inject. Date: 01-Dec-2016 15:17:25 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 5.0000
Sample Info: 180-0014572-022
Operator ID: 402331 Instrument ID: CHGC15

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 02-Dec-2016 07:31:16 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK011

First Level Reviewer: eppinged Date: 02-Dec-2016 07:27:52

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene						
1	3.733	3.733	0.000	99516384	H 0.1000	
2	3.804	3.804	0.001	140783198	H 0.1000	
$ 3 Tetrachloro-m-xylene						
1	4.734	4.734	0.000	3178920	H 0.002517	
2	4.648	4.647	0.001	4938347	H 0.002491	
					RPD = 1.04	
5 alpha-BHC						
1		5.104			ND	
2		5.104				
7 gamma-BHC (Lindane)						
1		5.371			ND	
2		5.398				
8 beta-BHC						
1		5.537			ND	
2		5.640				
10 delta-BHC						
1		5.737			ND	
2		5.859				
11 Heptachlor						
1	5.844	5.844	0.000	1560196	H 0.001259	
2	5.707	5.707	0.000	1280376	H 0.000697	
					RPD = 57.45	
13 Aldrin						
1		6.127			ND	
2		5.967				
16 Heptachlor epoxide						
1	6.482	6.488	-0.006	18097667	H 0.0160	
2	6.411	6.409	0.002	4121530	H 0.002514	
					RPD = 145.56	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
18 gamma-Chlordane						
1		6.706			ND	
2		6.630				
20 alpha-Chlordane						
1		6.773			ND	
2		6.690				
21 Endosulfan I						
1		6.819			ND	
2		6.755				
23 4,4'-DDE						
1	6.924	6.926	-0.002	26916435H	0.0252	
2	6.834	6.834	0.000	20260701H	0.0139	
					RPD = 58.00	
24 Dieldrin						
1		7.059			ND	
2		6.996				
34 Toxaphene						
1		7.212			ND	
1		7.697				
1		7.861				
1		8.546				
2		6.948				
2		7.522				
2		8.306				
2		8.946				
27 Endrin						
1		7.261			ND	
2		7.258				
29 4,4'-DDD						
1	7.389	7.386	0.003	12862036H	0.0148	
2	7.339	7.346	-0.007	1526572H	0.001309	
					RPD = 167.40	
31 Endosulfan II						
1		7.460			ND	
2		7.522				
32 Endrin aldehyde						
1		7.577			ND	
2		7.686				
33 4,4'-DDT						M
1	7.665	7.665	0.000	8451088H	0.0117	M
2	7.584	7.585	-0.001	35599468H	0.0354	a
					RPD = 100.87	
35 Endosulfan sulfate						
1		7.787			ND	
2		7.891				
36 Methoxychlor						
1		8.108			ND	
2		8.116				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
* 44 Dibutylchlorendate ISTD						
1	8.180	8.181	-0.001	56629024	H 0.1000	
2	7.947	7.948	-0.001	85957888	H 0.1000	
37 Endrin ketone						
1		8.242			ND	
2		8.432				
$ 39 DCB Decachlorobiphenyl (Surr)						
1	9.961	9.962	-0.001	1393931	H 0.003374	
2	9.873	9.872	0.001	2202904	H 0.003667	
					RPD = 8.34	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

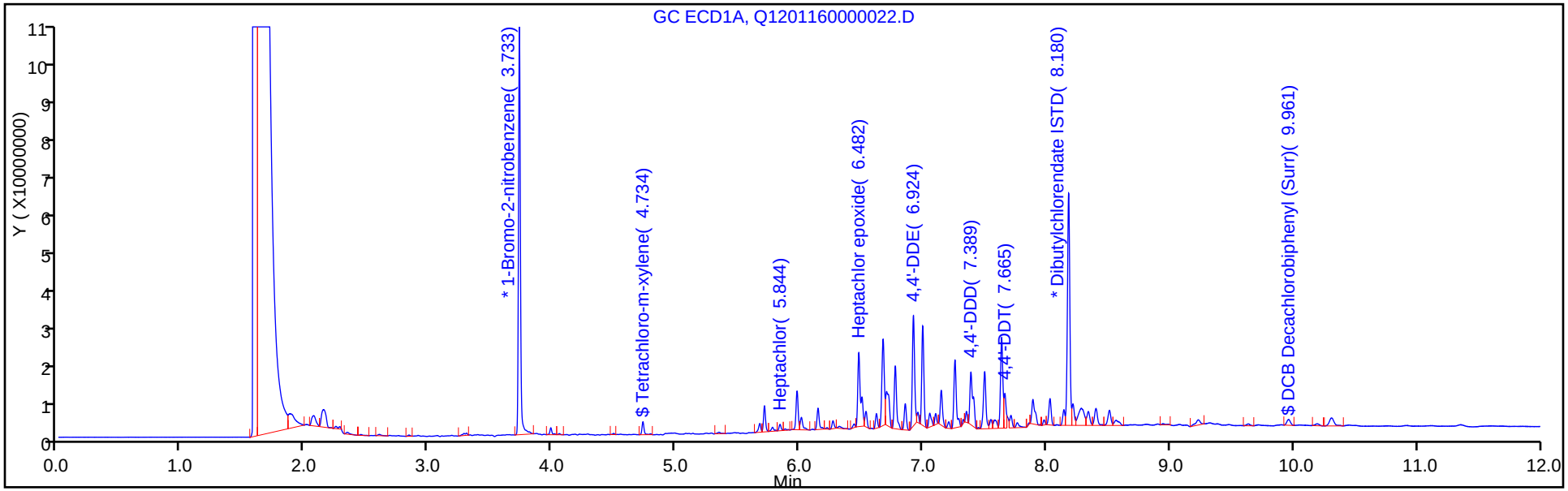
GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

Report Date: 02-Dec-2016 07:31:40 Chrom Revision: 2.2 14-Nov-2016 08:15:18

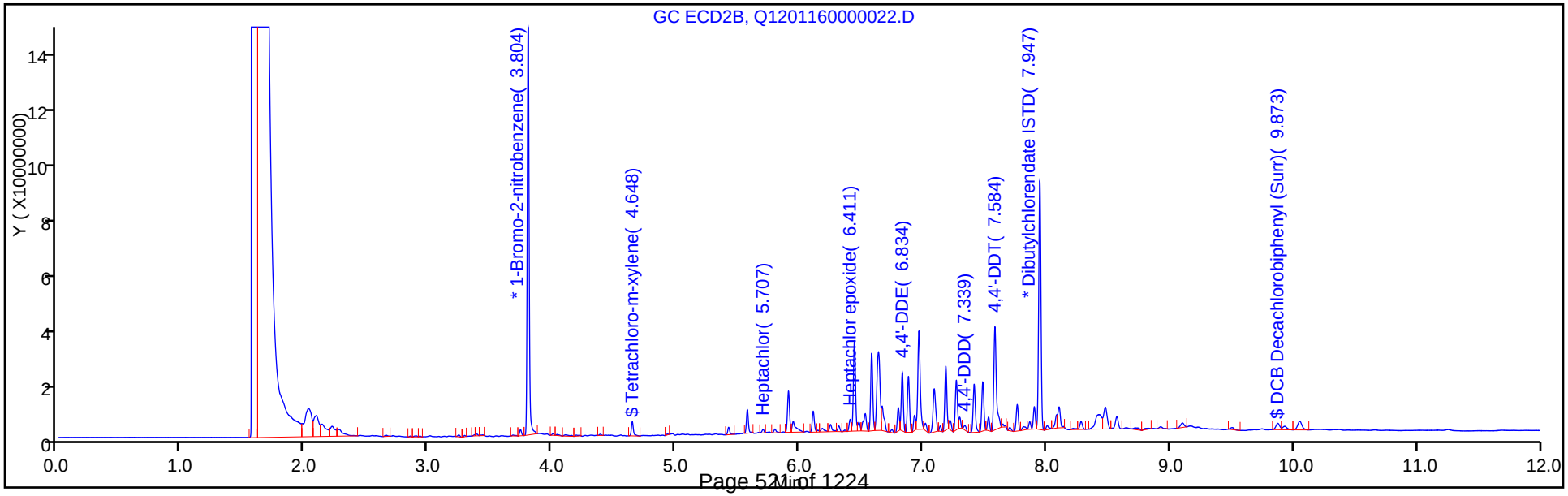
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000022.D				
Injection Date:	01-Dec-2016 15:17:25	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	180-61122-A-1-I	Lab Sample ID:	180-61122-1	Worklist Smp#:	22
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Injection Vol:	1.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	22
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000022.D				
Lims ID:	180-61122-A-1-I				
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Sample Type:	Client				
Inject. Date:	01-Dec-2016 15:17:25	ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	5.0000		
Sample Info:	180-0014572-022				
Operator ID:	402331	Instrument ID:	CHGC15		
Method:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m				
Limit Group:	GCS 8081B ICAL with IS				
Last Update:	02-Dec-2016 07:31:16	Calib Date:	06-Oct-2016 14:25:55		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D				
Column 1 :	MR-1 (0.53 mm)		Det: GC ECD1A		
Column 2 :	MR-2 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK011				
First Level Reviewer: eppinged		Date:	02-Dec-2016 07:27:52		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.002517	62.93
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.003374	84.34

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.002491	62.28
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.003667	91.68

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

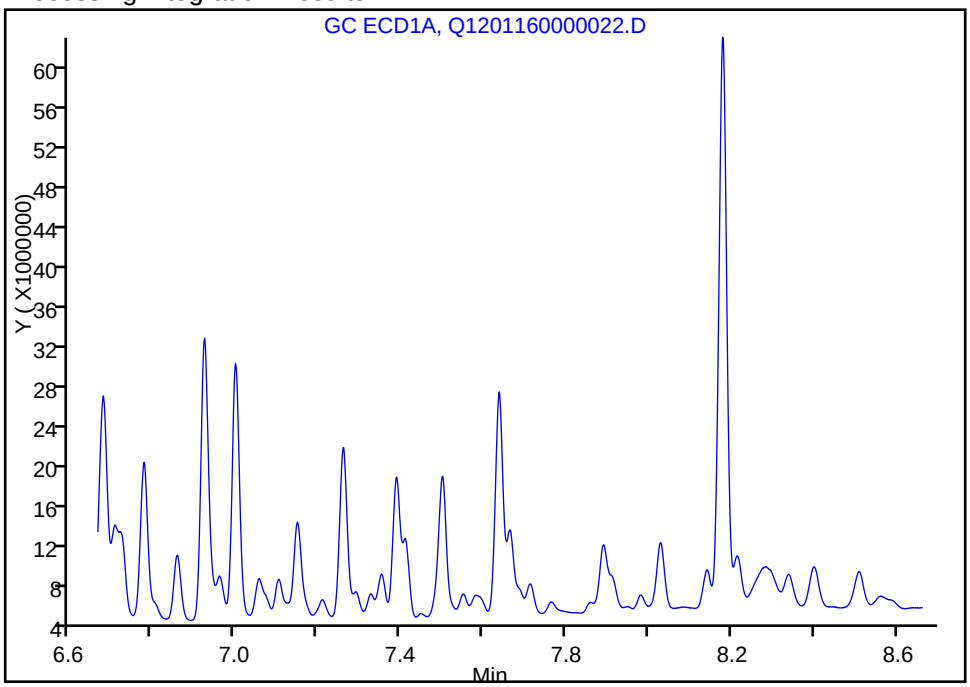
Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000022.D				
Injection Date:	01-Dec-2016 15:17:25	Instrument ID:	CHGC15		
Lims ID:	180-61122-A-1-I	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	402331	ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	5.0000		
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		
Column:	MR-1 (0.53 mm)	Detector	GC ECD1A		

33 4,4'-DDT, CAS: 50-29-3

Signal: 1

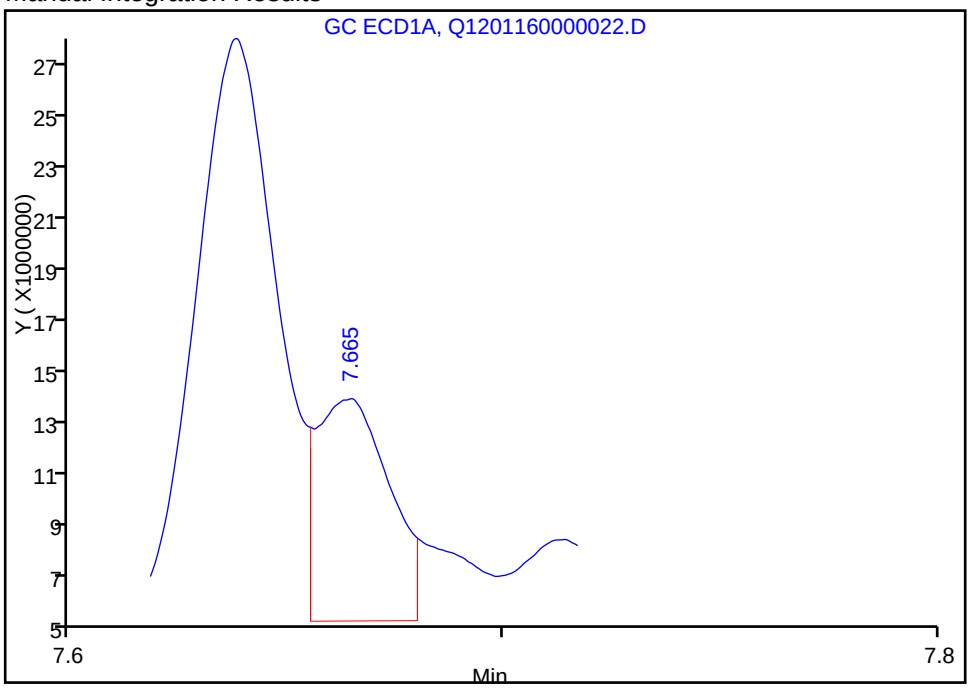
Not Detected
Expected RT: 7.67

Processing Integration Results



Manual Integration Results

RT: 7.66
Height: 8451088
Amount: 0.011670
Amount Units: ng



Reviewer: eppinged, 02-Dec-2016 07:27:52
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(0.0-0.5)-161122-S | Lab Sample ID: 180-61122-1

Matrix: Solid | Lab File ID: Q1201160000022.D

Analysis Method: 8081B_LL | Date Collected: 11/22/2016 09:35

Extraction Method: 3541 | Date Extracted: 11/30/2016 04:24

Sample wt/vol: 15.1(g) | Date Analyzed: 12/01/2016 15:17

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 5

Injection Volume: 1(uL) | GC Column: MR-2 ID: 0.53(mm)

% Moisture: 8.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195949 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
72-54-8	4,4'-DDD	0.000472	p	0.000450	0.0000459
72-55-9	4,4'-DDE	0.00500	p	0.000450	0.000143
76-44-8	Heptachlor	0.000251	J p	0.000450	0.0000389
1024-57-3	Heptachlor epoxide	0.000906	p	0.000450	0.0000540

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	62		32-114
2051-24-3	DCB Decachlorobiphenyl (Surr)	92		26-143

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000022.D
Lims ID: 180-61122-A-1-I
Client ID: BGSB22-(0.0-0.5)-161122-S
Sample Type: Client
Inject. Date: 01-Dec-2016 15:17:25 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 5.0000
Sample Info: 180-0014572-022
Operator ID: 402331 Instrument ID: CHGC15

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 02-Dec-2016 07:31:16 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK011

First Level Reviewer: eppinged Date: 02-Dec-2016 07:27:52

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene						
1	3.733	3.733	0.000	99516384	H 0.1000	
2	3.804	3.804	0.001	140783198	H 0.1000	
$ 3 Tetrachloro-m-xylene						
1	4.734	4.734	0.000	3178920	H 0.002517	
2	4.648	4.647	0.001	4938347	H 0.002491	
					RPD = 1.04	
5 alpha-BHC						
1		5.104			ND	
2		5.104				
7 gamma-BHC (Lindane)						
1		5.371			ND	
2		5.398				
8 beta-BHC						
1		5.537			ND	
2		5.640				
10 delta-BHC						
1		5.737			ND	
2		5.859				
11 Heptachlor						
1	5.844	5.844	0.000	1560196	H 0.001259	
2	5.707	5.707	0.000	1280376	H 0.000697	
					RPD = 57.45	
13 Aldrin						
1		6.127			ND	
2		5.967				
16 Heptachlor epoxide						
1	6.482	6.488	-0.006	18097667	H 0.0160	
2	6.411	6.409	0.002	4121530	H 0.002514	
					RPD = 145.56	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
18 gamma-Chlordane						
1		6.706			ND	
2		6.630				
20 alpha-Chlordane						
1		6.773			ND	
2		6.690				
21 Endosulfan I						
1		6.819			ND	
2		6.755				
23 4,4'-DDE						
1	6.924	6.926	-0.002	26916435H	0.0252	
2	6.834	6.834	0.000	20260701H	0.0139	
					RPD = 58.00	
24 Dieldrin						
1		7.059			ND	
2		6.996				
34 Toxaphene						
1		7.212			ND	
1		7.697				
1		7.861				
1		8.546				
2		6.948				
2		7.522				
2		8.306				
2		8.946				
27 Endrin						
1		7.261			ND	
2		7.258				
29 4,4'-DDD						
1	7.389	7.386	0.003	12862036H	0.0148	
2	7.339	7.346	-0.007	1526572H	0.001309	
					RPD = 167.40	
31 Endosulfan II						
1		7.460			ND	
2		7.522				
32 Endrin aldehyde						
1		7.577			ND	
2		7.686				
33 4,4'-DDT						M
1	7.665	7.665	0.000	8451088H	0.0117	M
2	7.584	7.585	-0.001	35599468H	0.0354	a
					RPD = 100.87	
35 Endosulfan sulfate						
1		7.787			ND	
2		7.891				
36 Methoxychlor						
1		8.108			ND	
2		8.116				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
* 44 Dibutylchlorendate ISTD						
1	8.180	8.181	-0.001	56629024	H 0.1000	
2	7.947	7.948	-0.001	85957888	H 0.1000	
37 Endrin ketone						
1		8.242			ND	
2		8.432				
$ 39 DCB Decachlorobiphenyl (Surr)						
1	9.961	9.962	-0.001	1393931	H 0.003374	
2	9.873	9.872	0.001	2202904	H 0.003667	
					RPD = 8.34	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

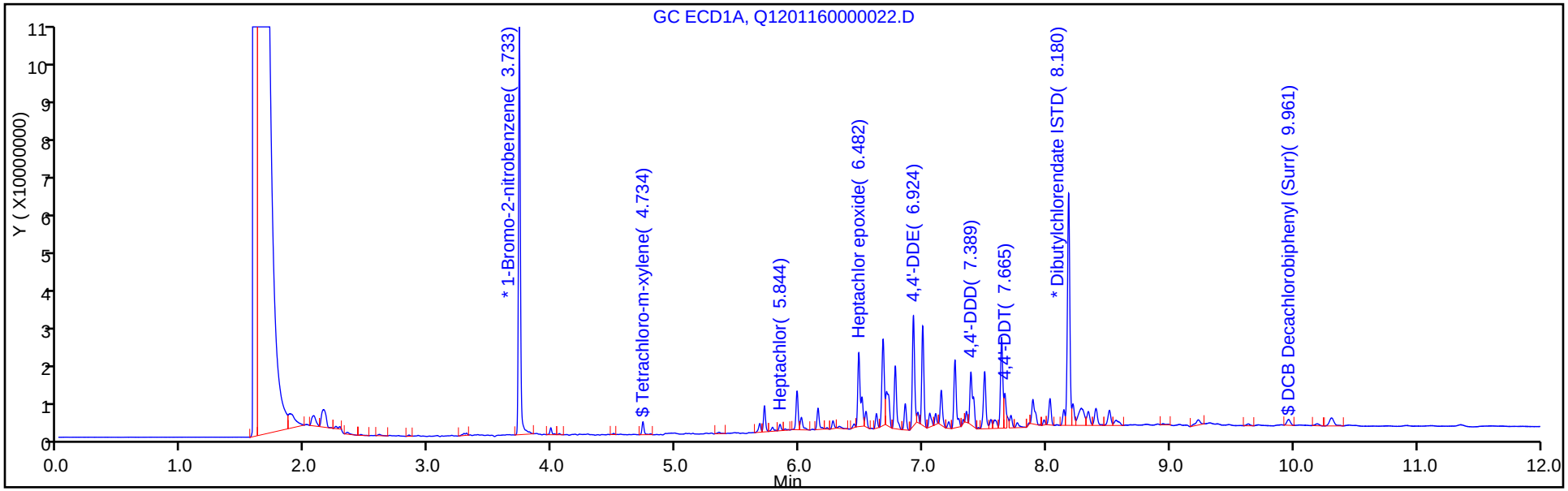
GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

Report Date: 02-Dec-2016 07:31:41 Chrom Revision: 2.2 14-Nov-2016 08:15:18

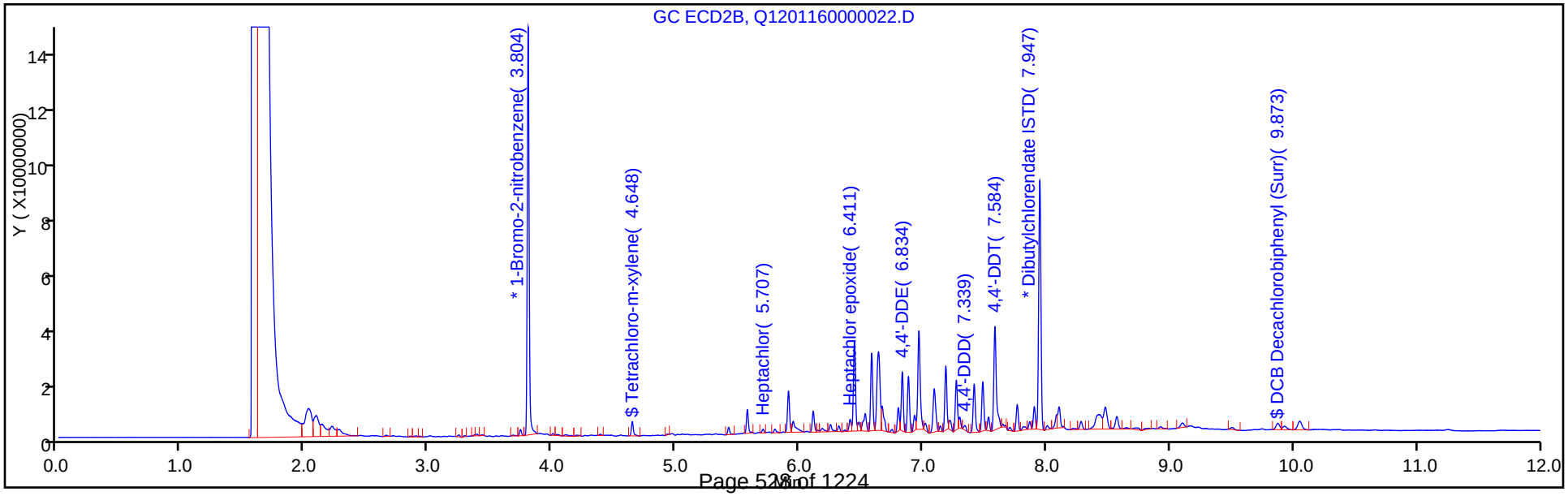
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000022.D				
Injection Date:	01-Dec-2016 15:17:25	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	180-61122-A-1-I	Lab Sample ID:	180-61122-1	Worklist Smp#:	22
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Injection Vol:	1.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	22
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000022.D				
Lims ID:	180-61122-A-1-I				
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Sample Type:	Client				
Inject. Date:	01-Dec-2016 15:17:25	ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	5.0000		
Sample Info:	180-0014572-022				
Operator ID:	402331	Instrument ID:	CHGC15		
Method:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m				
Limit Group:	GCS 8081B ICAL with IS				
Last Update:	02-Dec-2016 07:31:16	Calib Date:	06-Oct-2016 14:25:55		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D				
Column 1 :	MR-1 (0.53 mm)		Det: GC ECD1A		
Column 2 :	MR-2 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK011				
First Level Reviewer: eppinged		Date:	02-Dec-2016 07:27:52		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.002517	62.93
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.003374	84.34

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.002491	62.28
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.003667	91.68

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

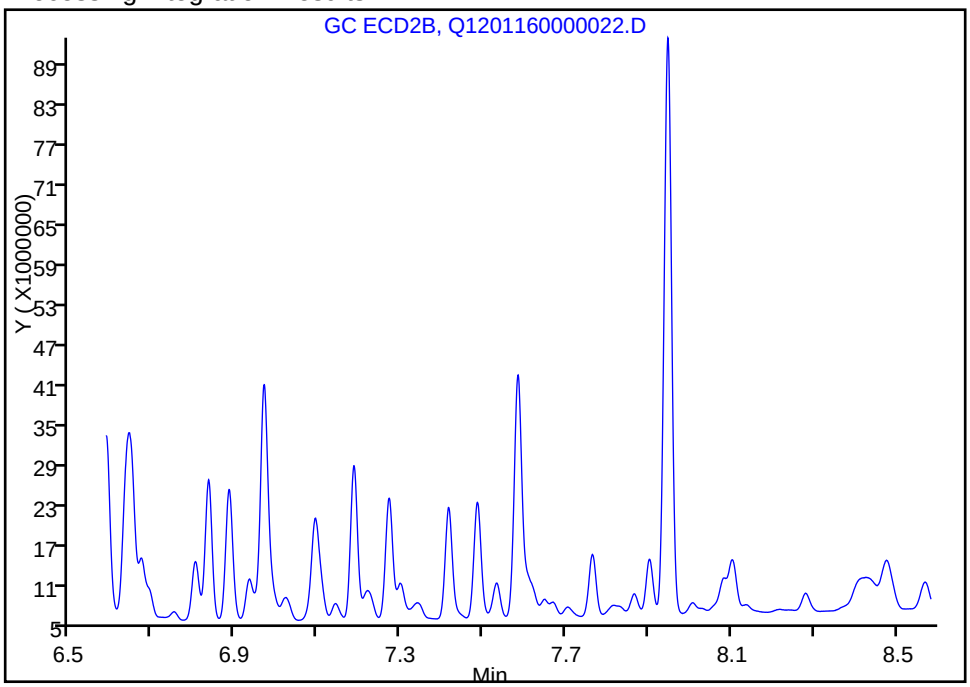
Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000022.D				
Injection Date:	01-Dec-2016 15:17:25	Instrument ID:	CHGC15		
Lims ID:	180-61122-A-1-I	Lab Sample ID:	180-61122-1		
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Operator ID:	402331	ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	1.0 ul	Dil. Factor:	5.0000		
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		
Column:	MR-2 (0.53 mm)	Detector	GC ECD2B		

33 4,4'-DDT, CAS: 50-29-3

Signal: 2

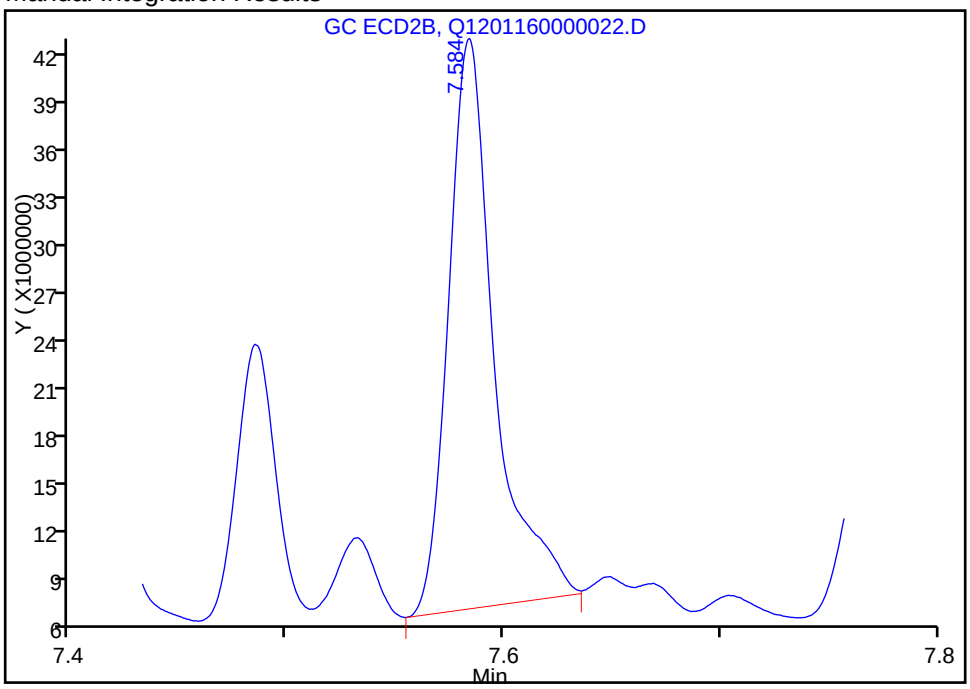
Not Detected
Expected RT: 7.59

Processing Integration Results



Manual Integration Results

RT: 7.58
Height: 35599468
Amount: 0.035421
Amount Units: ng



Reviewer: eppinged, 02-Dec-2016 07:27:52
Audit Action: Assigned Compound ID Audit Reason: Split Peak

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(1-2)-161122-S | Lab Sample ID: 180-61122-2

Matrix: Solid | Lab File ID: Q1201160000023.D

Analysis Method: 8081B_LL | Date Collected: 11/22/2016 09:40

Extraction Method: 3541 | Date Extracted: 11/30/2016 04:24

Sample wt/vol: 15.2(g) | Date Analyzed: 12/01/2016 15:32

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 5

Injection Volume: 1(uL) | GC Column: MR-1 ID: 0.53(mm)

% Moisture: 19.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195949 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
309-00-2	Aldrin	0.0000541	U	0.000512	0.0000541
319-84-6	alpha-BHC	0.000151	U	0.000512	0.000151
319-85-7	beta-BHC	0.000115	U	0.000512	0.000115
319-86-8	delta-BHC	0.000183	U	0.000512	0.000183
58-89-9	gamma-BHC (Lindane)	0.000106	U	0.000512	0.000106
5103-71-9	cis-Chlordane	0.0000824	U	0.000512	0.0000824
5103-74-2	trans-Chlordane	0.0000400	U	0.000512	0.0000400
72-54-8	4,4'-DDD	0.0000522	U	0.000512	0.0000522
50-29-3	4,4'-DDT	0.0000522	U	0.000512	0.0000522
60-57-1	Dieldrin	0.0000486	U	0.000512	0.0000486
959-98-8	Endosulfan I	0.0000326	U	0.000512	0.0000326
33213-65-9	Endosulfan II	0.000157	U	0.000512	0.000157
1031-07-8	Endosulfan sulfate	0.0000652	U	0.000512	0.0000652
72-20-8	Endrin	0.000149	U	0.000512	0.000149
7421-93-4	Endrin aldehyde	0.000151	U	0.000512	0.000151
53494-70-5	Endrin ketone	0.000171	U	0.000512	0.000171
76-44-8	Heptachlor	0.0000443	U	0.000512	0.0000443
1024-57-3	Heptachlor epoxide	0.0000615	U	0.000512	0.0000615
72-43-5	Methoxychlor	0.000149	U	0.000512	0.000149
8001-35-2	Toxaphene	0.0169	U	0.0205	0.0169

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	63		32-114
2051-24-3	DCB Decachlorobiphenyl (Surr)	77		26-143

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000023.D
Lims ID: 180-61122-A-2-E
Client ID: BGSB22-(1-2)-161122-S
Sample Type: Client
Inject. Date: 01-Dec-2016 15:32:47 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 5.0000
Sample Info: 180-0014572-023
Operator ID: 402331 Instrument ID: CHGC15

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 02-Dec-2016 07:31:16 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK011

First Level Reviewer: eppinged Date: 02-Dec-2016 07:28:02

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene						
1	3.733	3.733	0.000	102507315	H 0.1000	
2	3.804	3.804	0.001	145036409	H 0.1000	
$ 3 Tetrachloro-m-xylene						
1	4.734	4.734	0.000	3296820	H 0.002534	
2	4.647	4.647	0.000	4962228	H 0.002430	
					RPD = 4.21	
5 alpha-BHC						
1		5.104			ND	
2		5.104				
7 gamma-BHC (Lindane)						
1		5.371			ND	
2		5.398				
8 beta-BHC						
1		5.537			ND	
2		5.640				
10 delta-BHC						
1		5.737			ND	
2		5.859				
11 Heptachlor						
1		5.844			ND	
2		5.707				
13 Aldrin						
1		6.127			ND	
2		5.967				
16 Heptachlor epoxide						
1		6.488			ND	
2		6.409				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
18 gamma-Chlordane						
1		6.706			ND	
2		6.630				
20 alpha-Chlordane						
1		6.773			ND	
2		6.690				
21 Endosulfan I						
1		6.819			ND	
2		6.755				
23 4,4'-DDE						
1	6.924	6.926	-0.002	848129H	0.000794	
2	6.833	6.834	-0.001	433393H	0.000287	
					RPD = 93.93	
24 Dieldrin						
1		7.059			ND	
2		6.996				
34 Toxaphene						
1		7.212			ND	
1		7.697				
1		7.861				
1		8.546				
2		6.948				
2		7.522				
2		8.306				
2		8.946				
27 Endrin						
1		7.261			ND	
2		7.258				
29 4,4'-DDD						
1		7.386			ND	
2		7.346				
31 Endosulfan II						
1		7.460			ND	
2		7.522				
32 Endrin aldehyde						
1		7.577			ND	
2		7.686				
33 4,4'-DDT						
1		7.665			ND	
2		7.585				
35 Endosulfan sulfate						
1		7.787			ND	
2		7.891				
36 Methoxychlor						
1		8.108			ND	
2		8.116				
* 44 Dibutylchlorendate ISTD						
1	8.180	8.181	-0.001	56687002H	0.1000	
2	7.947	7.948	-0.001	89092607H	0.1000	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
37 Endrin ketone						
1		8.242			ND	
2		8.432				
$ 39 DCB Decachlorobiphenyl (Surr)						
1	9.959	9.962	-0.003	1278321H	0.003091	
2	9.875	9.872	0.003	1923104H	0.003089	
					RPD = 0.06	

Reagents:

GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

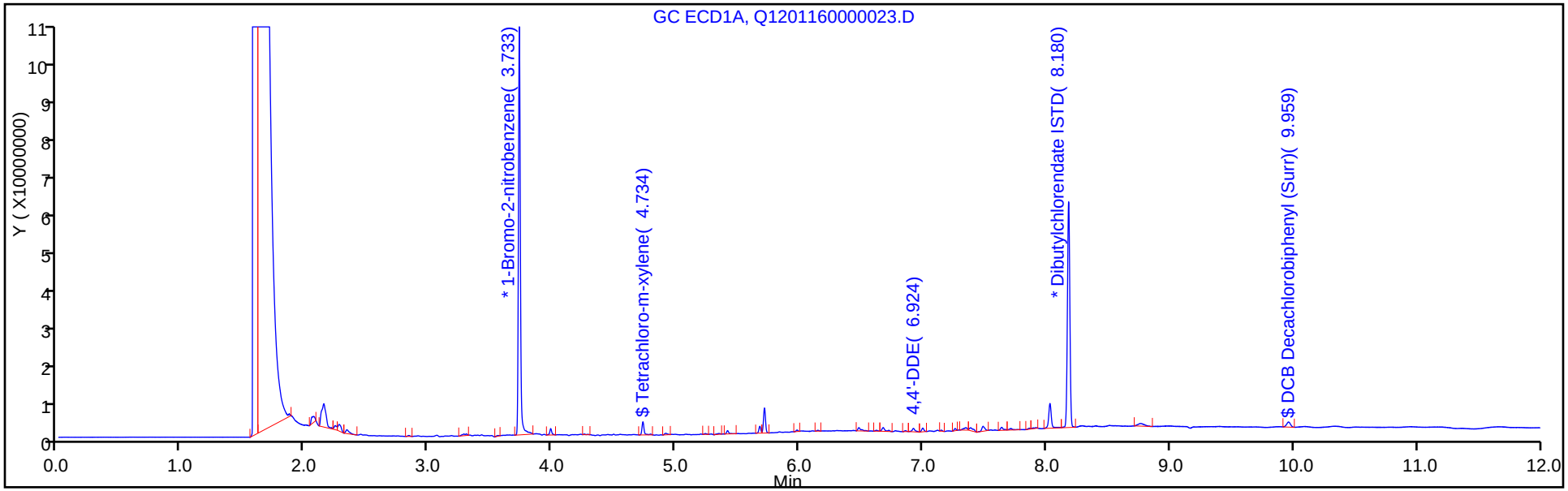
Report Date: 02-Dec-2016 07:31:43 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

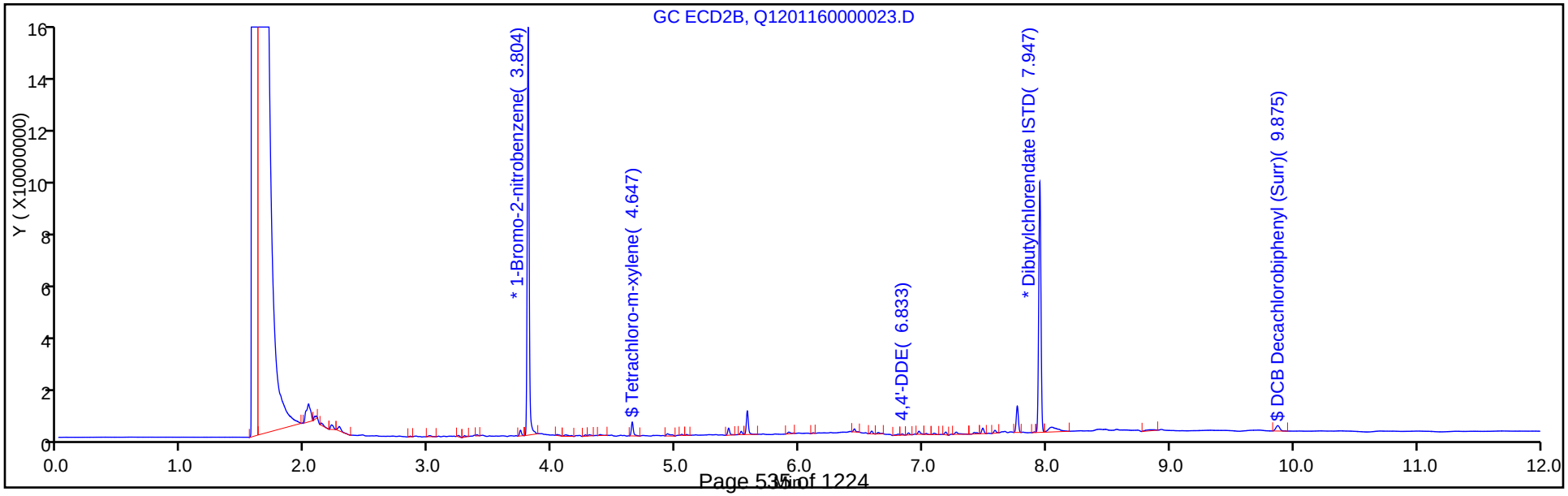
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000023.D

Injection Date:	01-Dec-2016 15:32:47	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	180-61122-A-2-E	Lab Sample ID:	180-61122-2	Worklist Smp#:	23
Client ID:	BGSB22-(1-2)-161122-S				
Injection Vol:	1.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	23
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000023.D				
Lims ID:	180-61122-A-2-E				
Client ID:	BGSB22-(1-2)-161122-S				
Sample Type:	Client				
Inject. Date:	01-Dec-2016 15:32:47	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	5.0000		
Sample Info:	180-0014572-023				
Operator ID:	402331	Instrument ID:	CHGC15		
Method:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m				
Limit Group:	GCS 8081B ICAL with IS				
Last Update:	02-Dec-2016 07:31:16	Calib Date:	06-Oct-2016 14:25:55		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D				
Column 1 :	MR-1 (0.53 mm)		Det: GC ECD1A		
Column 2 :	MR-2 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK011				
First Level Reviewer: eppinged		Date:	02-Dec-2016 07:28:02		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.002534	63.36
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.003091	77.27

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.002430	60.75
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.003089	77.22

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(1-2)-161122-S | Lab Sample ID: 180-61122-2

Matrix: Solid | Lab File ID: Q1201160000023.D

Analysis Method: 8081B_LL | Date Collected: 11/22/2016 09:40

Extraction Method: 3541 | Date Extracted: 11/30/2016 04:24

Sample wt/vol: 15.2(g) | Date Analyzed: 12/01/2016 15:32

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 5

Injection Volume: 1(uL) | GC Column: MR-2 ID: 0.53(mm)

% Moisture: 19.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195949 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
72-55-9	4,4'-DDE	0.000163	U	0.000512	0.000163

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	61		32-114
2051-24-3	DCB Decachlorobiphenyl (Surr)	77		26-143

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000023.D
Lims ID: 180-61122-A-2-E
Client ID: BGSB22-(1-2)-161122-S
Sample Type: Client
Inject. Date: 01-Dec-2016 15:32:47 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 5.0000
Sample Info: 180-0014572-023
Operator ID: 402331 Instrument ID: CHGC15

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 02-Dec-2016 07:31:16 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK011

First Level Reviewer: eppinged Date: 02-Dec-2016 07:28:02

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene						
1	3.733	3.733	0.000	102507315	H 0.1000	
2	3.804	3.804	0.001	145036409	H 0.1000	
$ 3 Tetrachloro-m-xylene						
1	4.734	4.734	0.000	3296820	H 0.002534	
2	4.647	4.647	0.000	4962228	H 0.002430	
					RPD = 4.21	
5 alpha-BHC						
1		5.104			ND	
2		5.104				
7 gamma-BHC (Lindane)						
1		5.371			ND	
2		5.398				
8 beta-BHC						
1		5.537			ND	
2		5.640				
10 delta-BHC						
1		5.737			ND	
2		5.859				
11 Heptachlor						
1		5.844			ND	
2		5.707				
13 Aldrin						
1		6.127			ND	
2		5.967				
16 Heptachlor epoxide						
1		6.488			ND	
2		6.409				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
18 gamma-Chlordane						
1		6.706			ND	
2		6.630				
20 alpha-Chlordane						
1		6.773			ND	
2		6.690				
21 Endosulfan I						
1		6.819			ND	
2		6.755				
23 4,4'-DDE						
1	6.924	6.926	-0.002	848129H	0.000794	
2	6.833	6.834	-0.001	433393H	0.000287	
					RPD = 93.93	
24 Dieldrin						
1		7.059			ND	
2		6.996				
34 Toxaphene						
1		7.212			ND	
1		7.697				
1		7.861				
1		8.546				
2		6.948				
2		7.522				
2		8.306				
2		8.946				
27 Endrin						
1		7.261			ND	
2		7.258				
29 4,4'-DDD						
1		7.386			ND	
2		7.346				
31 Endosulfan II						
1		7.460			ND	
2		7.522				
32 Endrin aldehyde						
1		7.577			ND	
2		7.686				
33 4,4'-DDT						
1		7.665			ND	
2		7.585				
35 Endosulfan sulfate						
1		7.787			ND	
2		7.891				
36 Methoxychlor						
1		8.108			ND	
2		8.116				
* 44 Dibutylchlorendate ISTD						
1	8.180	8.181	-0.001	56687002H	0.1000	
2	7.947	7.948	-0.001	89092607H	0.1000	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
37 Endrin ketone						
1		8.242			ND	
2		8.432				
$ 39 DCB Decachlorobiphenyl (Surr)						
1	9.959	9.962	-0.003	1278321H	0.003091	
2	9.875	9.872	0.003	1923104H	0.003089	
					RPD = 0.06	

Reagents:

GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

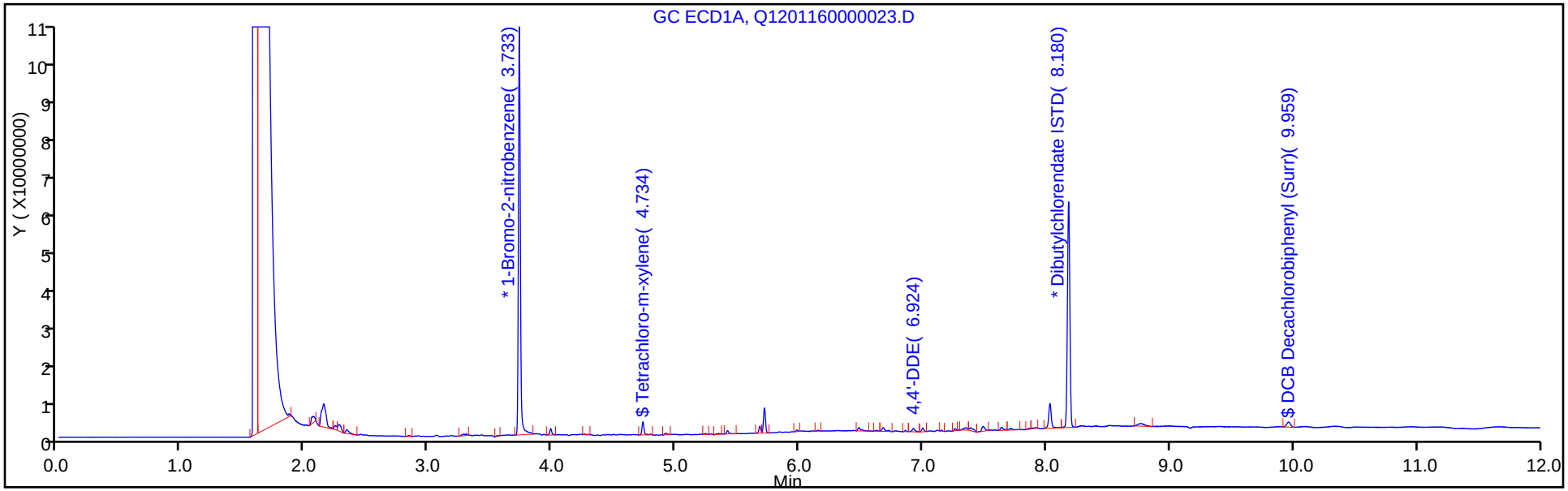
Report Date: 02-Dec-2016 07:31:43 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

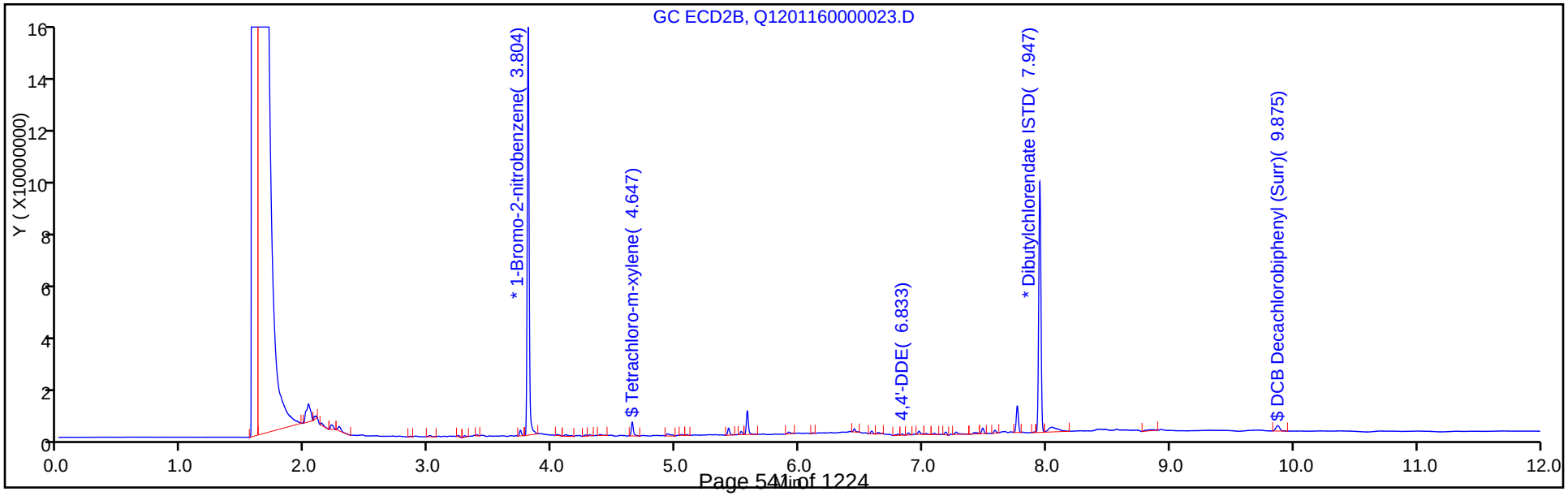
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000023.D

Injection Date:	01-Dec-2016 15:32:47	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	180-61122-A-2-E	Lab Sample ID:	180-61122-2	Worklist Smp#:	23
Client ID:	BGSB22-(1-2)-161122-S				
Injection Vol:	1.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	23
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000023.D				
Lims ID:	180-61122-A-2-E				
Client ID:	BGSB22-(1-2)-161122-S				
Sample Type:	Client				
Inject. Date:	01-Dec-2016 15:32:47	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	5.0000		
Sample Info:	180-0014572-023				
Operator ID:	402331	Instrument ID:	CHGC15		
Method:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m				
Limit Group:	GCS 8081B ICAL with IS				
Last Update:	02-Dec-2016 07:31:16	Calib Date:	06-Oct-2016 14:25:55		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D				
Column 1 :	MR-1 (0.53 mm)		Det: GC ECD1A		
Column 2 :	MR-2 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK011				
First Level Reviewer: eppinged		Date:	02-Dec-2016 07:28:02		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.002534	63.36
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.003091	77.27

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.002430	60.75
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.003089	77.22

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB10-(0.0-0.5)-161122-S | Lab Sample ID: 180-61122-3

Matrix: Solid | Lab File ID: Q1201160000024.D

Analysis Method: 8081B_LL | Date Collected: 11/22/2016 15:30

Extraction Method: 3541 | Date Extracted: 11/30/2016 04:24

Sample wt/vol: 15.0(g) | Date Analyzed: 12/01/2016 15:48

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 5

Injection Volume: 1(uL) | GC Column: MR-1 ID: 0.53(mm)

% Moisture: 9.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195949 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
309-00-2	Aldrin	0.000148	J	0.000459	0.0000485
319-84-6	alpha-BHC	0.000135	U	0.000459	0.000135
319-85-7	beta-BHC	0.000103	U	0.000459	0.000103
319-86-8	delta-BHC	0.000164	U	0.000459	0.000164
58-89-9	gamma-BHC (Lindane)	0.0000947	U	0.000459	0.0000947
5103-74-2	trans-Chlordane	0.0000358	U	0.000459	0.0000358
72-54-8	4,4'-DDD	0.000970		0.000459	0.0000468
72-55-9	4,4'-DDE	0.000146	U	0.000459	0.000146
50-29-3	4,4'-DDT	0.0000468	U	0.000459	0.0000468
60-57-1	Dieldrin	0.00140	p	0.000459	0.0000435
959-98-8	Endosulfan I	0.0000292	U	0.000459	0.0000292
33213-65-9	Endosulfan II	0.000140	U	0.000459	0.000140
1031-07-8	Endosulfan sulfate	0.0000584	U	0.000459	0.0000584
72-20-8	Endrin	0.000134	U	0.000459	0.000134
7421-93-4	Endrin aldehyde	0.000135	U	0.000459	0.000135
53494-70-5	Endrin ketone	0.000153	U	0.000459	0.000153
76-44-8	Heptachlor	0.0000397	U	0.000459	0.0000397
72-43-5	Methoxychlor	0.000133	U	0.000459	0.000133
8001-35-2	Toxaphene	0.0151	U	0.0184	0.0151

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	76		32-114
2051-24-3	DCB Decachlorobiphenyl (Surr)	166	*X*	26-143

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000024.D
Lims ID: 180-61122-A-3-E
Client ID: BGSB10-(0.0-0.5)-161122-S
Sample Type: Client
Inject. Date: 01-Dec-2016 15:48:13 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 5.0000
Sample Info: 180-0014572-024
Operator ID: 402331 Instrument ID: CHGC15

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 02-Dec-2016 07:31:16 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK011

First Level Reviewer: eppinged Date: 02-Dec-2016 07:29:07

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene						
1	3.733	3.733	0.000	103626619	H 0.1000	
2	3.804	3.804	0.001	145153900	H 0.1000	
$ 3 Tetrachloro-m-xylene						
1	4.734	4.734	0.000	4008323	H 0.003048	
2	4.647	4.647	0.000	6040460	H 0.002955	
					RPD = 3.09	
5 alpha-BHC						
1		5.104			ND	
2		5.104				
7 gamma-BHC (Lindane)						
1		5.371			ND	
2		5.398				
8 beta-BHC						
1		5.537			ND	
2		5.640				
10 delta-BHC						
1		5.737			ND	
2		5.859				
11 Heptachlor						
1		5.844			ND	
2		5.707				
13 Aldrin						
1	6.124	6.127	-0.003	520985	H 0.000402	
2	5.969	5.967	0.002	640148	H 0.000336	
					RPD = 17.90	
16 Heptachlor epoxide						
1	6.480	6.488	-0.008	1034106	H 0.000876	
2	6.407	6.409	-0.002	842682	H 0.000499	
					RPD = 54.89	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
18 gamma-Chlordane						
1		6.706			ND	
2		6.630				
20 alpha-Chlordane						
1	6.776	6.773	0.003	14817237	H 0.0130	
2	6.690	6.690	0.000	5265779	H 0.003135	
					RPD = 122.38	
21 Endosulfan I						
1		6.819			ND	
2		6.755				
23 4,4'-DDE						
1		6.926			ND	
2		6.834				
24 Dieldrin						
1	7.053	7.059	-0.006	4018500	H 0.003801	
2	6.987	6.996	-0.009	15206287	H 0.009785	
					RPD = 88.08	
34 Toxaphene						
1		7.212			ND	
1		7.697				
1		7.861				
1		8.546				
2		6.948				
2		7.522				
2		8.306				
2		8.946				
27 Endrin						
1		7.261			ND	
2		7.258				
29 4,4'-DDD						
1	7.385	7.386	-0.001	2281205	H 0.002642	
2	7.338	7.346	-0.008	2628479	H 0.002134	
					RPD = 21.27	
31 Endosulfan II						
1		7.460			ND	
2		7.522				
32 Endrin aldehyde						
1		7.577			ND	
2		7.686				
33 4,4'-DDT						
1		7.665			ND	
2		7.585				
35 Endosulfan sulfate						
1		7.787			ND	
2		7.891				
36 Methoxychlor						
1		8.108			ND	
2		8.116				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
* 44 Dibutylchlorendate ISTD						
1	8.180	8.181	-0.001	56106800H	0.1000	
2	7.946	7.948	-0.002	90816804H	0.1000	
37 Endrin ketone						
1		8.242			ND	
2		8.432				
$ 39 DCB Decachlorobiphenyl (Surr)						M
1	9.953	9.962	-0.009	2711868H	0.006624	M
2	9.878	9.872	0.006	4907579H	0.007733	a
					RPD = 15.44	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

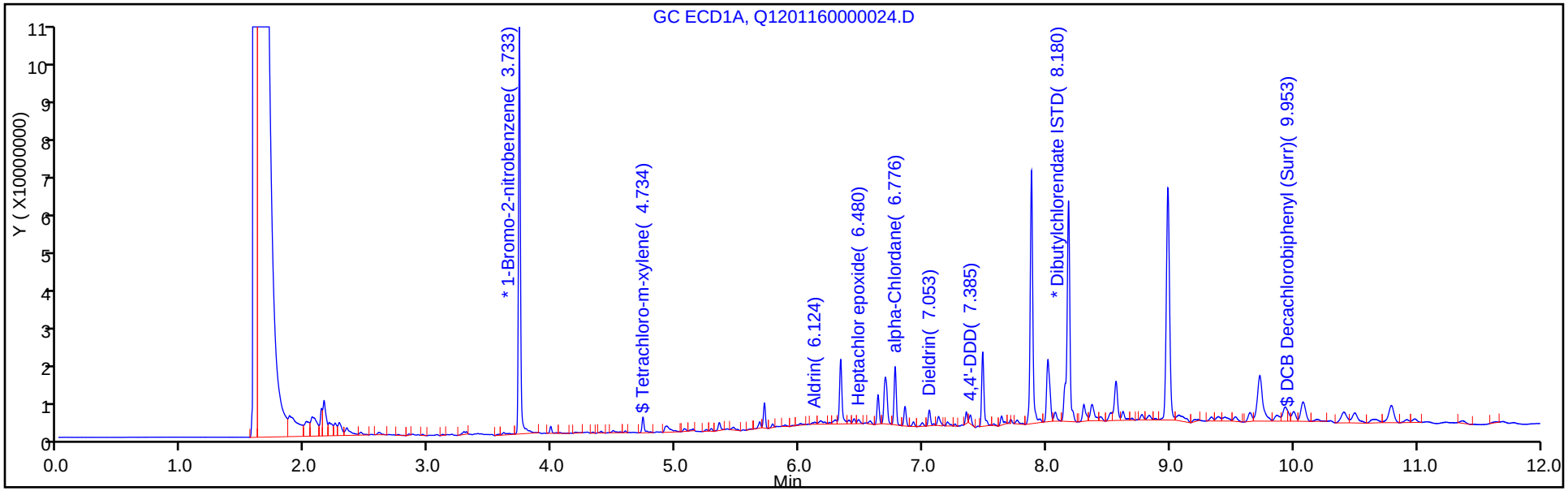
GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

Report Date: 02-Dec-2016 07:31:47 Chrom Revision: 2.2 14-Nov-2016 08:15:18

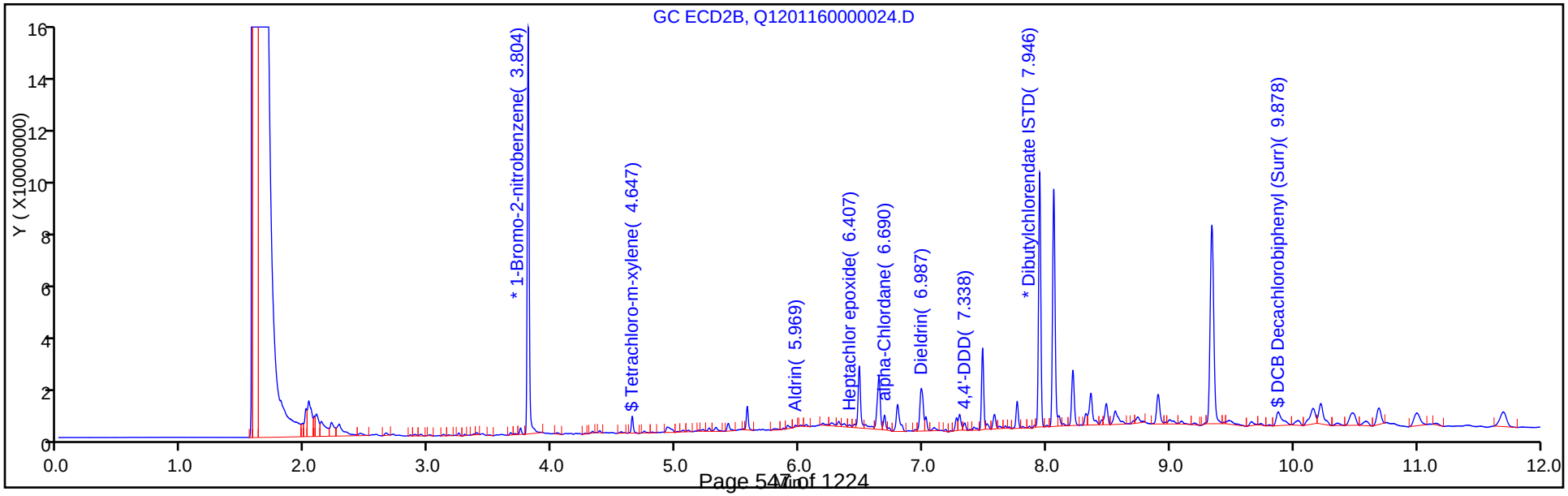
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000024.D				
Injection Date:	01-Dec-2016 15:48:13	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	180-61122-A-3-E	Lab Sample ID:	180-61122-3	Worklist Smp#:	24
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Injection Vol:	1.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	24
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000024.D				
Lims ID:	180-61122-A-3-E				
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Sample Type:	Client				
Inject. Date:	01-Dec-2016 15:48:13	ALS Bottle#:	24	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	5.0000		
Sample Info:	180-0014572-024				
Operator ID:	402331	Instrument ID:	CHGC15		
Method:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m				
Limit Group:	GCS 8081B ICAL with IS				
Last Update:	02-Dec-2016 07:31:16	Calib Date:	06-Oct-2016 14:25:55		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D				
Column 1 :	MR-1 (0.53 mm)		Det: GC ECD1A		
Column 2 :	MR-2 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK011				
First Level Reviewer: eppinged		Date:	02-Dec-2016 07:29:07		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.003048	76.20
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.006624	165.61

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.002955	73.89
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.007733	193.32

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

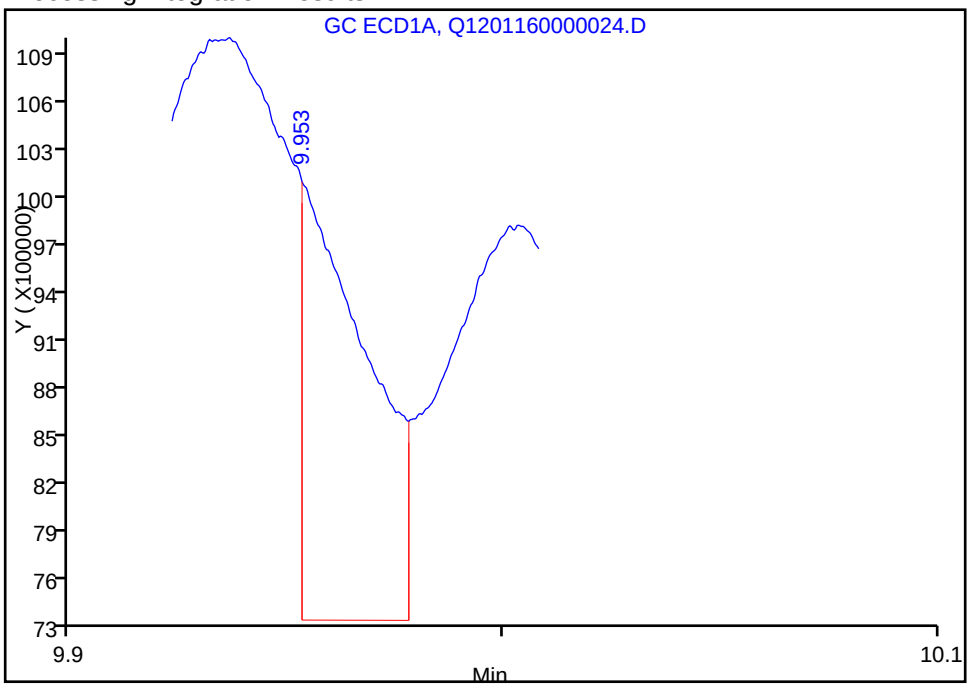
Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000024.D				
Injection Date:	01-Dec-2016 15:48:13	Instrument ID:	CHGC15		
Lims ID:	180-61122-A-3-E	Lab Sample ID:	180-61122-3		
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Operator ID:	402331	ALS Bottle#:	24	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	5.0000		
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		
Column:	MR-1 (0.53 mm)	Detector	GC ECD1A		

$ 39 DCB Decachlorobiphenyl (Surr), CAS: 2051-24-3

Signal: 1

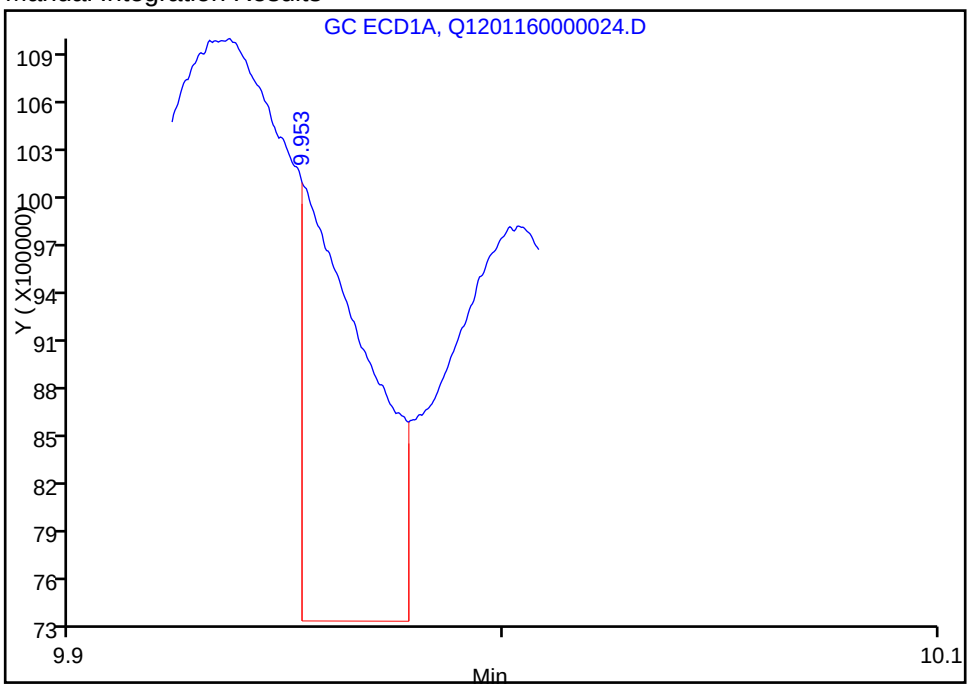
Processing Integration Results

RT: 9.95
Height: 2711868
Amount: 0.006624
Amount Units: ng



Manual Integration Results

RT: 9.95
Height: 2711868
Amount: 0.006624
Amount Units: ng



Reviewer: eppinged, 02-Dec-2016 07:29:07

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB10-(0.0-0.5)-161122-S | Lab Sample ID: 180-61122-3

Matrix: Solid | Lab File ID: Q1201160000024.D

Analysis Method: 8081B_LL | Date Collected: 11/22/2016 15:30

Extraction Method: 3541 | Date Extracted: 11/30/2016 04:24

Sample wt/vol: 15.0(g) | Date Analyzed: 12/01/2016 15:48

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 5

Injection Volume: 1(uL) | GC Column: MR-2 ID: 0.53(mm)

% Moisture: 9.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195949 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
5103-71-9	cis-Chlordane	0.00115	p	0.000459	0.0000738
1024-57-3	Heptachlor epoxide	0.000183	J p	0.000459	0.0000551

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	74		32-114
2051-24-3	DCB Decachlorobiphenyl (Surr)	193	X	26-143

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000024.D
Lims ID: 180-61122-A-3-E
Client ID: BGSB10-(0.0-0.5)-161122-S
Sample Type: Client
Inject. Date: 01-Dec-2016 15:48:13 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 5.0000
Sample Info: 180-0014572-024
Operator ID: 402331 Instrument ID: CHGC15

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 02-Dec-2016 07:31:16 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK011

First Level Reviewer: eppinged Date: 02-Dec-2016 07:29:07

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene						
1	3.733	3.733	0.000	103626619	H 0.1000	
2	3.804	3.804	0.001	145153900	H 0.1000	
$ 3 Tetrachloro-m-xylene						
1	4.734	4.734	0.000	4008323	H 0.003048	
2	4.647	4.647	0.000	6040460	H 0.002955	
					RPD = 3.09	
5 alpha-BHC						
1		5.104			ND	
2		5.104				
7 gamma-BHC (Lindane)						
1		5.371			ND	
2		5.398				
8 beta-BHC						
1		5.537			ND	
2		5.640				
10 delta-BHC						
1		5.737			ND	
2		5.859				
11 Heptachlor						
1		5.844			ND	
2		5.707				
13 Aldrin						
1	6.124	6.127	-0.003	520985	H 0.000402	
2	5.969	5.967	0.002	640148	H 0.000336	
					RPD = 17.90	
16 Heptachlor epoxide						
1	6.480	6.488	-0.008	1034106	H 0.000876	
2	6.407	6.409	-0.002	842682	H 0.000499	
					RPD = 54.89	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
18 gamma-Chlordane						
1		6.706			ND	
2		6.630				
20 alpha-Chlordane						
1	6.776	6.773	0.003	14817237	H 0.0130	
2	6.690	6.690	0.000	5265779	H 0.003135	
					RPD = 122.38	
21 Endosulfan I						
1		6.819			ND	
2		6.755				
23 4,4'-DDE						
1		6.926			ND	
2		6.834				
24 Dieldrin						
1	7.053	7.059	-0.006	4018500	H 0.003801	
2	6.987	6.996	-0.009	15206287	H 0.009785	
					RPD = 88.08	
34 Toxaphene						
1		7.212			ND	
1		7.697				
1		7.861				
1		8.546				
2		6.948				
2		7.522				
2		8.306				
2		8.946				
27 Endrin						
1		7.261			ND	
2		7.258				
29 4,4'-DDD						
1	7.385	7.386	-0.001	2281205	H 0.002642	
2	7.338	7.346	-0.008	2628479	H 0.002134	
					RPD = 21.27	
31 Endosulfan II						
1		7.460			ND	
2		7.522				
32 Endrin aldehyde						
1		7.577			ND	
2		7.686				
33 4,4'-DDT						
1		7.665			ND	
2		7.585				
35 Endosulfan sulfate						
1		7.787			ND	
2		7.891				
36 Methoxychlor						
1		8.108			ND	
2		8.116				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
* 44 Dibutylchlorendate ISTD						
1	8.180	8.181	-0.001	56106800H	0.1000	
2	7.946	7.948	-0.002	90816804H	0.1000	
37 Endrin ketone						
1		8.242			ND	
2		8.432				
$ 39 DCB Decachlorobiphenyl (Surr)						M
1	9.953	9.962	-0.009	2711868H	0.006624	M
2	9.878	9.872	0.006	4907579H	0.007733	a
					RPD = 15.44	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

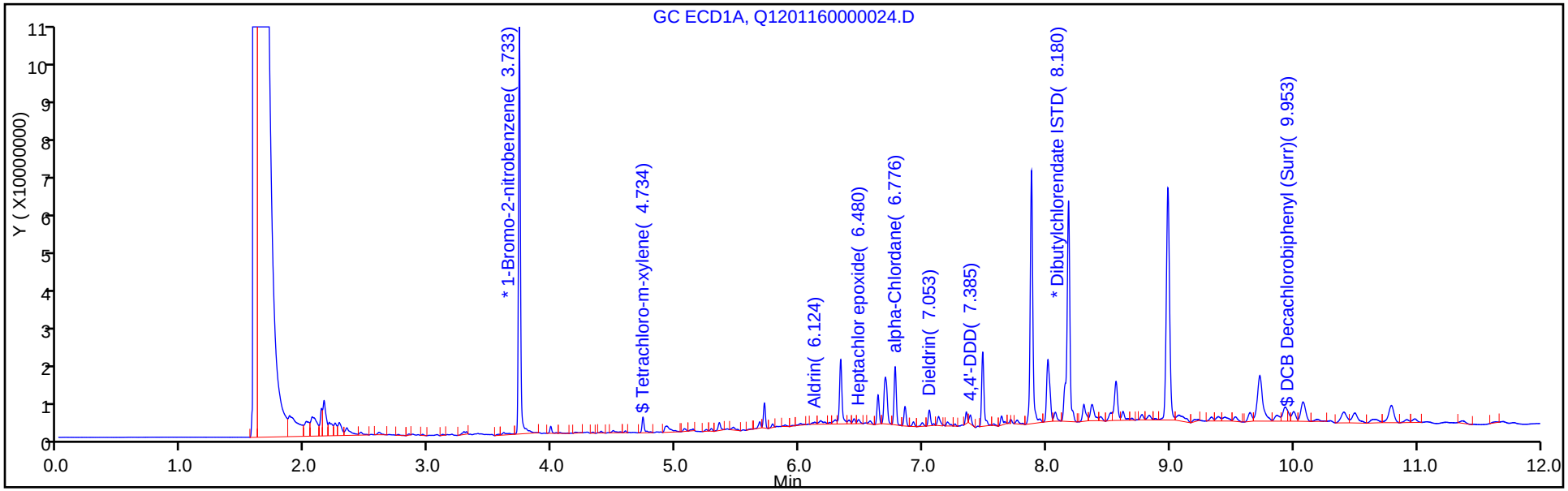
GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

Report Date: 02-Dec-2016 07:31:48 Chrom Revision: 2.2 14-Nov-2016 08:15:18

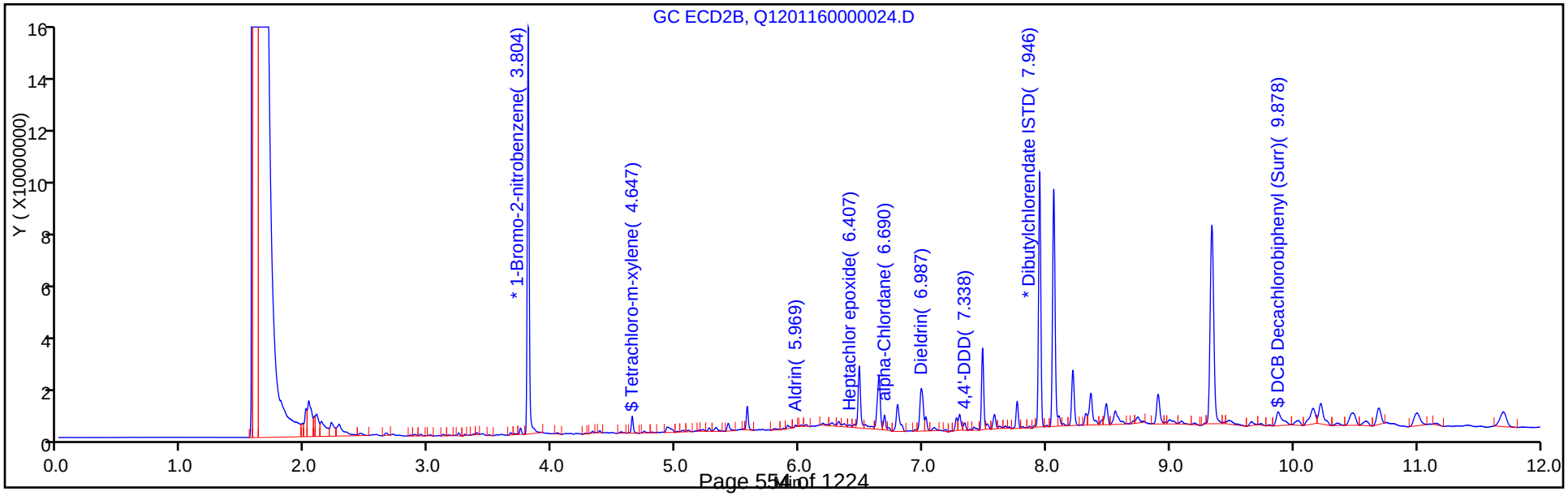
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000024.D				
Injection Date:	01-Dec-2016 15:48:13	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	180-61122-A-3-E	Lab Sample ID:	180-61122-3	Worklist Smp#:	24
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Injection Vol:	1.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	24
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000024.D				
Lims ID:	180-61122-A-3-E				
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Sample Type:	Client				
Inject. Date:	01-Dec-2016 15:48:13	ALS Bottle#:	24	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	5.0000		
Sample Info:	180-0014572-024				
Operator ID:	402331	Instrument ID:	CHGC15		
Method:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m				
Limit Group:	GCS 8081B ICAL with IS				
Last Update:	02-Dec-2016 07:31:16	Calib Date:	06-Oct-2016 14:25:55		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D				
Column 1 :	MR-1 (0.53 mm)		Det: GC ECD1A		
Column 2 :	MR-2 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK011				
First Level Reviewer: eppinged		Date:	02-Dec-2016 07:29:07		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.003048	76.20
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.006624	165.61

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.002955	73.89
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.007733	193.32

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

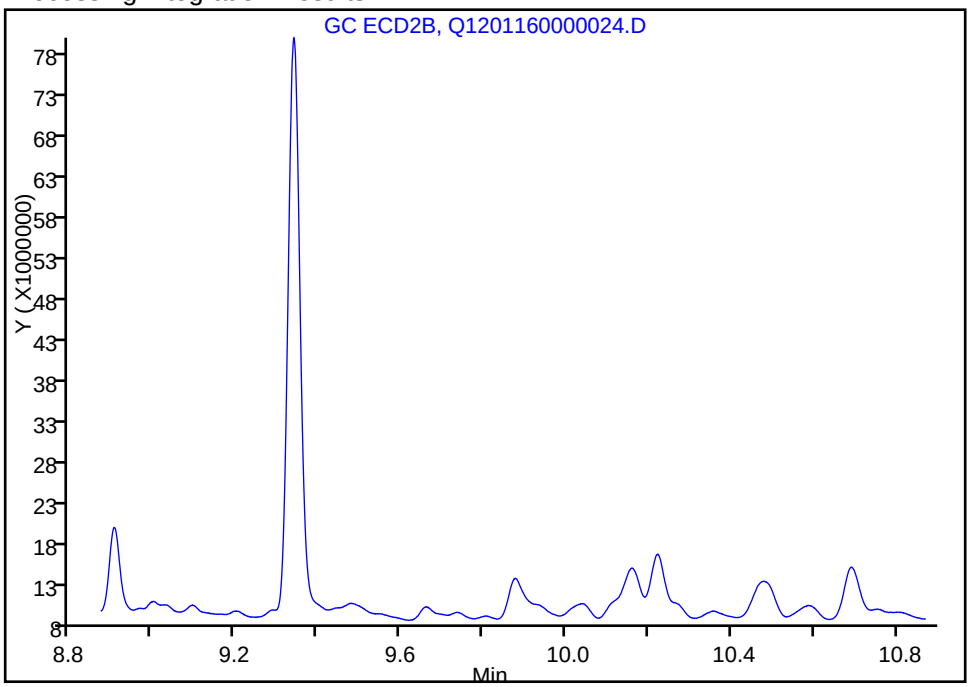
Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000024.D				
Injection Date:	01-Dec-2016 15:48:13	Instrument ID:	CHGC15		
Lims ID:	180-61122-A-3-E	Lab Sample ID:	180-61122-3		
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Operator ID:	402331	ALS Bottle#:	24	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	5.0000		
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		
Column:	MR-2 (0.53 mm)	Detector	GC ECD2B		

$ 39 DCB Decachlorobiphenyl (Surr), CAS: 2051-24-3

Signal: 2

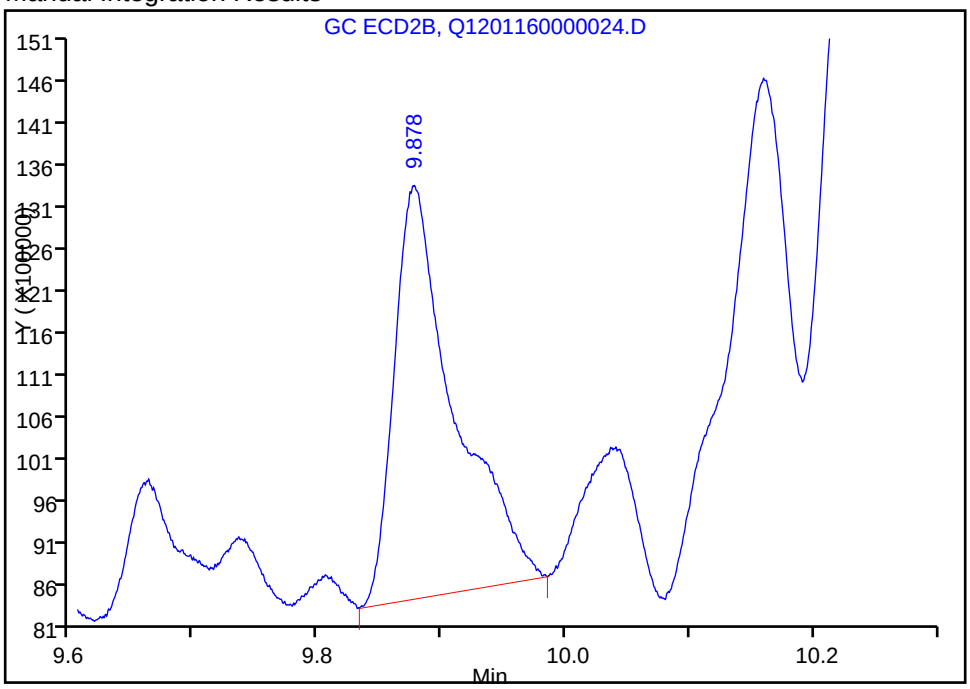
Processing Integration Results

RT: 9.87
Height: 0
Amount: 0
Amount Units: ng



Manual Integration Results

RT: 9.88
Height: 4907579
Amount: 0.007733
Amount Units: ng



Reviewer: eppinged, 02-Dec-2016 07:29:07

Audit Action: Assigned Compound ID Audit Reason: Split Peak

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB10-(1-2)-161122-S | Lab Sample ID: 180-61122-4

Matrix: Solid | Lab File ID: Q1201160000025.D

Analysis Method: 8081B_LL | Date Collected: 11/22/2016 15:35

Extraction Method: 3541 | Date Extracted: 11/30/2016 04:24

Sample wt/vol: 15.0(g) | Date Analyzed: 12/01/2016 16:03

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 5

Injection Volume: 1(uL) | GC Column: MR-1 ID: 0.53(mm)

% Moisture: 9.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195949 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
319-84-6	alpha-BHC	0.000135	U	0.000459	0.000135
319-85-7	beta-BHC	0.000103	U	0.000459	0.000103
319-86-8	delta-BHC	0.000163	U	0.000459	0.000163
58-89-9	gamma-BHC (Lindane)	0.0000947	U	0.000459	0.0000947
5103-74-2	trans-Chlordane	0.0000358	U	0.000459	0.0000358
72-55-9	4,4'-DDE	0.000146	U	0.000459	0.000146
50-29-3	4,4'-DDT	0.0000468	U	0.000459	0.0000468
959-98-8	Endosulfan I	0.0000292	U	0.000459	0.0000292
33213-65-9	Endosulfan II	0.000140	U	0.000459	0.000140
1031-07-8	Endosulfan sulfate	0.0000583	U	0.000459	0.0000583
72-20-8	Endrin	0.000134	U	0.000459	0.000134
7421-93-4	Endrin aldehyde	0.000135	U	0.000459	0.000135
53494-70-5	Endrin ketone	0.000153	U	0.000459	0.000153
76-44-8	Heptachlor	0.0000396	U	0.000459	0.0000396
1024-57-3	Heptachlor epoxide	0.0000550	U	0.000459	0.0000550
72-43-5	Methoxychlor	0.000133	U	0.000459	0.000133
8001-35-2	Toxaphene	0.0151	U	0.0183	0.0151

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	60		32-114
2051-24-3	DCB Decachlorobiphenyl (Surr)	93	p	26-143

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000025.D
Lims ID: 180-61122-A-4-E
Client ID: BGSB10-(1-2)-161122-S
Sample Type: Client
Inject. Date: 01-Dec-2016 16:03:48 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 5.0000
Sample Info: 180-0014572-025
Operator ID: 402331 Instrument ID: CHGC15

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 02-Dec-2016 07:31:16 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK011

First Level Reviewer: eppinged Date: 02-Dec-2016 07:30:45

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene						
1	3.735	3.733	0.002	100513758H	0.1000	
2	3.805	3.804	0.001	142720024H	0.1000	
$ 3 Tetrachloro-m-xylene						
1	4.735	4.734	0.001	3043228H	0.002386	
2	4.648	4.647	0.001	4474246H	0.002227	
					RPD = 6.91	
5 alpha-BHC						
1		5.104			ND	
2		5.104				
7 gamma-BHC (Lindane)						
1		5.371			ND	
2		5.398				
8 beta-BHC						
1		5.537			ND	
2		5.640				
10 delta-BHC						
1		5.737			ND	
2		5.859				
11 Heptachlor						
1		5.844			ND	
2		5.707				
13 Aldrin						M
1	6.126	6.127	-0.001	204092H	0.000162	
2	5.972	5.967	0.005	414192H	0.000221	M
					RPD = 30.63	
16 Heptachlor epoxide						
1		6.488			ND	
2		6.409				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
18 gamma-Chlordane						
1		6.706			ND	
2		6.630				
20 alpha-Chlordane						
1	6.777	6.773	0.004	26596130H	0.0241	
2	6.691	6.690	0.001	2793602H	0.001691	
					RPD = 173.76	
21 Endosulfan I						
1		6.819			ND	
2		6.755				
23 4,4'-DDE						
1		6.926			ND	
2		6.834				
24 Dieldrin						M
1	7.053	7.059	-0.006	2088510H	0.001951	
2	6.998	6.996	0.002	3590251H	0.002450	M
					RPD = 22.69	
34 Toxaphene						
1		7.212			ND	
1		7.697				
1		7.861				
1		8.546				
2		6.948				
2		7.522				
2		8.306				
2		8.946				
27 Endrin						
1		7.261			ND	
2		7.258				
29 4,4'-DDD						
1	7.388	7.386	0.002	5056984H	0.005783	
2	7.340	7.346	-0.006	1009530H	0.000869	
					RPD = 147.74	
31 Endosulfan II						
1		7.460			ND	
2		7.522				
32 Endrin aldehyde						
1		7.577			ND	
2		7.686				
33 4,4'-DDT						
1		7.665			ND	
2		7.585				
35 Endosulfan sulfate						
1		7.787			ND	
2		7.891				
36 Methoxychlor						
1		8.108			ND	
2		8.116				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
* 44 Dibutylchlorendate ISTD						
1	8.180	8.181	-0.002	56822438H	0.1000	
2	7.946	7.948	-0.002	85635565H	0.1000	
37 Endrin ketone						
1		8.242			ND	
2		8.432				
$ 39 DCB Decachlorobiphenyl (Surr)						M
1	9.961	9.962	-0.001	1538518H	0.003711	
2	9.869	9.872	-0.003	3641892H	0.006086	M
					RPD = 48.48	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

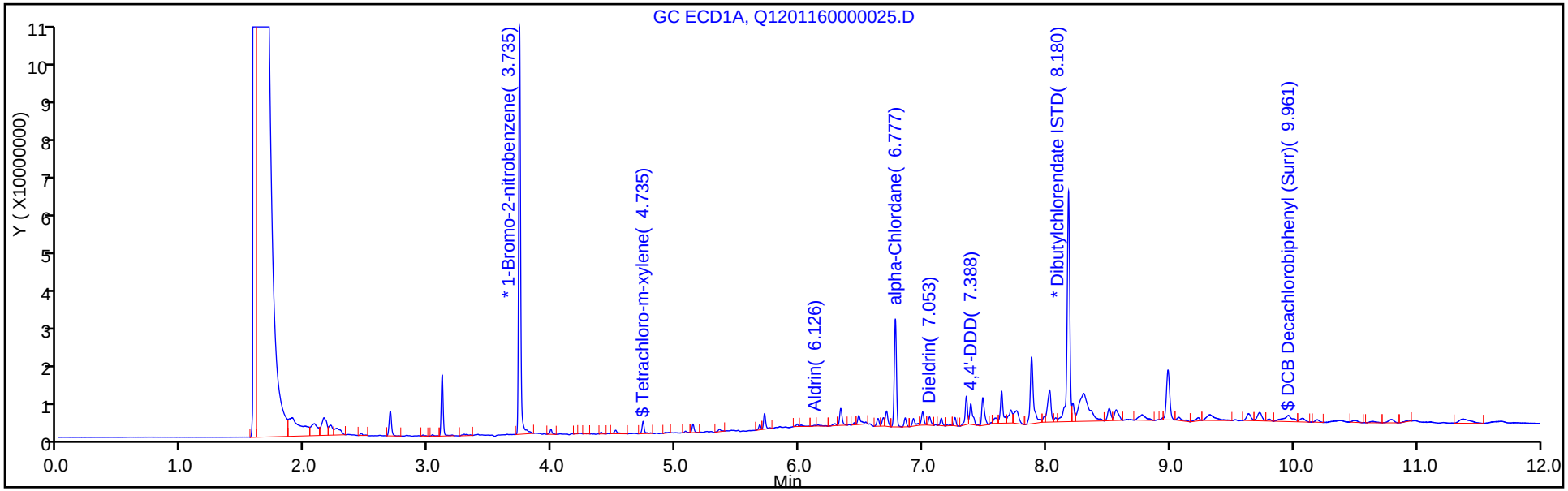
GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

Report Date: 02-Dec-2016 07:31:50 Chrom Revision: 2.2 14-Nov-2016 08:15:18

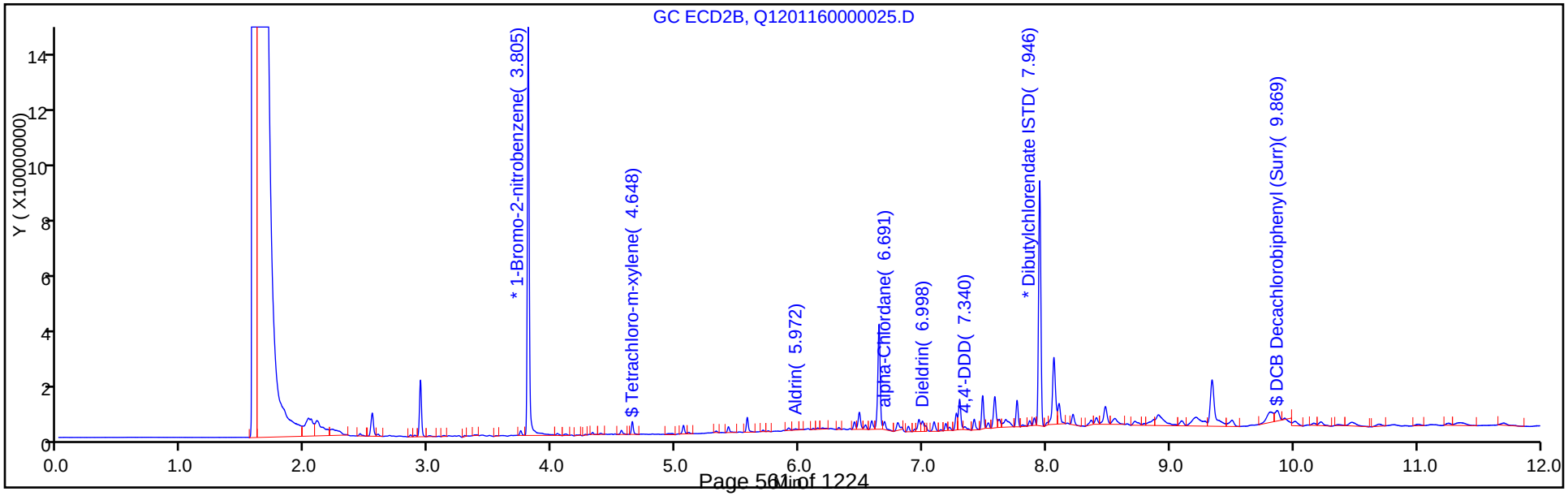
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000025.D				
Injection Date:	01-Dec-2016 16:03:48	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	180-61122-A-4-E	Lab Sample ID:	180-61122-4	Worklist Smp#:	25
Client ID:	BGSB10-(1-2)-161122-S				
Injection Vol:	1.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	25
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000025.D				
Lims ID:	180-61122-A-4-E				
Client ID:	BGSB10-(1-2)-161122-S				
Sample Type:	Client				
Inject. Date:	01-Dec-2016 16:03:48	ALS Bottle#:	25	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	5.0000		
Sample Info:	180-0014572-025				
Operator ID:	402331	Instrument ID:	CHGC15		
Method:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m				
Limit Group:	GCS 8081B ICAL with IS				
Last Update:	02-Dec-2016 07:31:16	Calib Date:	06-Oct-2016 14:25:55		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D				
Column 1 :	MR-1 (0.53 mm)		Det: GC ECD1A		
Column 2 :	MR-2 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK011				
First Level Reviewer: eppinged		Date:	02-Dec-2016 07:30:45		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.002386	59.65
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.003711	92.77

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.002227	55.66
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.006086	152.14

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB10-(1-2)-161122-S | Lab Sample ID: 180-61122-4

Matrix: Solid | Lab File ID: Q1201160000025.D

Analysis Method: 8081B_LL | Date Collected: 11/22/2016 15:35

Extraction Method: 3541 | Date Extracted: 11/30/2016 04:24

Sample wt/vol: 15.0(g) | Date Analyzed: 12/01/2016 16:03

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 5

Injection Volume: 1(uL) | GC Column: MR-2 ID: 0.53(mm)

% Moisture: 9.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195949 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
309-00-2	Aldrin	0.0000811	J	0.000459	0.0000484
5103-71-9	cis-Chlordane	0.000621	p	0.000459	0.0000738
72-54-8	4,4'-DDD	0.000319	J p	0.000459	0.0000468
60-57-1	Dieldrin	0.000899		0.000459	0.0000435

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	56		32-114
2051-24-3	DCB Decachlorobiphenyl (Surr)	152	*X*	26-143

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000025.D
Lims ID: 180-61122-A-4-E
Client ID: BGSB10-(1-2)-161122-S
Sample Type: Client
Inject. Date: 01-Dec-2016 16:03:48 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 5.0000
Sample Info: 180-0014572-025
Operator ID: 402331 Instrument ID: CHGC15

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 02-Dec-2016 07:31:16 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK011

First Level Reviewer: eppinged Date: 02-Dec-2016 07:30:45

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene						
1	3.735	3.733	0.002	100513758H	0.1000	
2	3.805	3.804	0.001	142720024H	0.1000	
$ 3 Tetrachloro-m-xylene						
1	4.735	4.734	0.001	3043228H	0.002386	
2	4.648	4.647	0.001	4474246H	0.002227	
					RPD = 6.91	
5 alpha-BHC						
1		5.104			ND	
2		5.104				
7 gamma-BHC (Lindane)						
1		5.371			ND	
2		5.398				
8 beta-BHC						
1		5.537			ND	
2		5.640				
10 delta-BHC						
1		5.737			ND	
2		5.859				
11 Heptachlor						
1		5.844			ND	
2		5.707				
13 Aldrin						M
1	6.126	6.127	-0.001	204092H	0.000162	
2	5.972	5.967	0.005	414192H	0.000221	M
					RPD = 30.63	
16 Heptachlor epoxide						
1		6.488			ND	
2		6.409				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
18 gamma-Chlordane						
1		6.706			ND	
2		6.630				
20 alpha-Chlordane						
1	6.777	6.773	0.004	26596130H	0.0241	
2	6.691	6.690	0.001	2793602H	0.001691	
					RPD = 173.76	
21 Endosulfan I						
1		6.819			ND	
2		6.755				
23 4,4'-DDE						
1		6.926			ND	
2		6.834				
24 Dieldrin						M
1	7.053	7.059	-0.006	2088510H	0.001951	
2	6.998	6.996	0.002	3590251H	0.002450	M
					RPD = 22.69	
34 Toxaphene						
1		7.212			ND	
1		7.697				
1		7.861				
1		8.546				
2		6.948				
2		7.522				
2		8.306				
2		8.946				
27 Endrin						
1		7.261			ND	
2		7.258				
29 4,4'-DDD						
1	7.388	7.386	0.002	5056984H	0.005783	
2	7.340	7.346	-0.006	1009530H	0.000869	
					RPD = 147.74	
31 Endosulfan II						
1		7.460			ND	
2		7.522				
32 Endrin aldehyde						
1		7.577			ND	
2		7.686				
33 4,4'-DDT						
1		7.665			ND	
2		7.585				
35 Endosulfan sulfate						
1		7.787			ND	
2		7.891				
36 Methoxychlor						
1		8.108			ND	
2		8.116				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
* 44 Dibutylchlorendate ISTD						
1	8.180	8.181	-0.002	56822438H	0.1000	
2	7.946	7.948	-0.002	85635565H	0.1000	
37 Endrin ketone						
1		8.242			ND	
2		8.432				
$ 39 DCB Decachlorobiphenyl (Surr)						M
1	9.961	9.962	-0.001	1538518H	0.003711	
2	9.869	9.872	-0.003	3641892H	0.006086	M
					RPD = 48.48	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

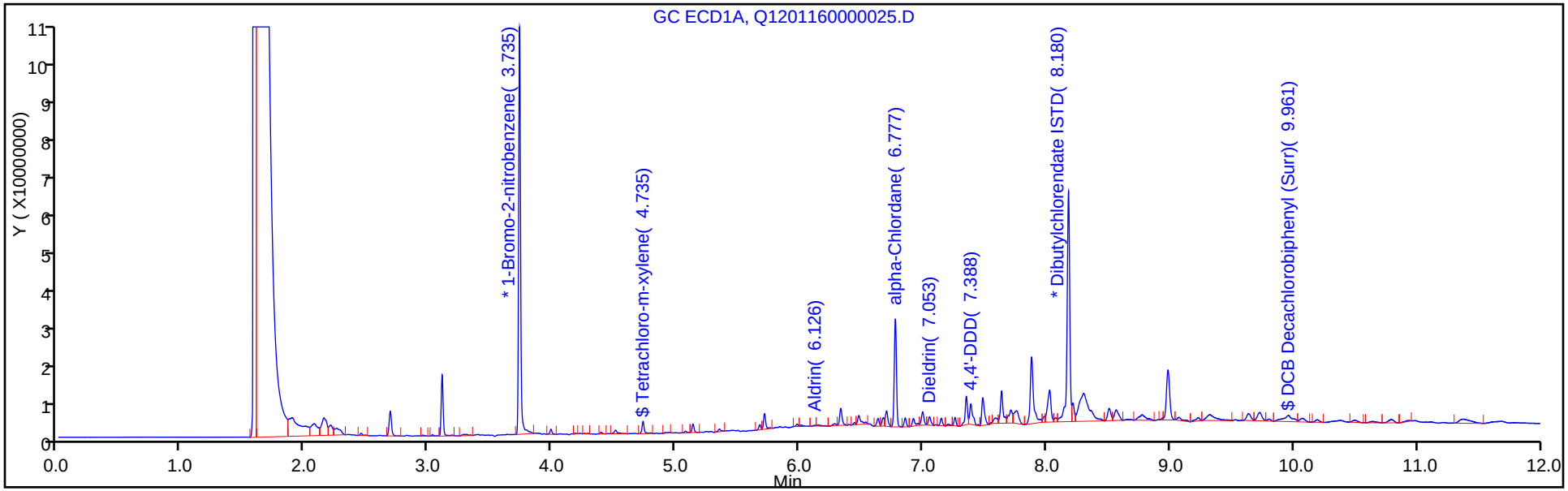
Report Date: 02-Dec-2016 07:31:51 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

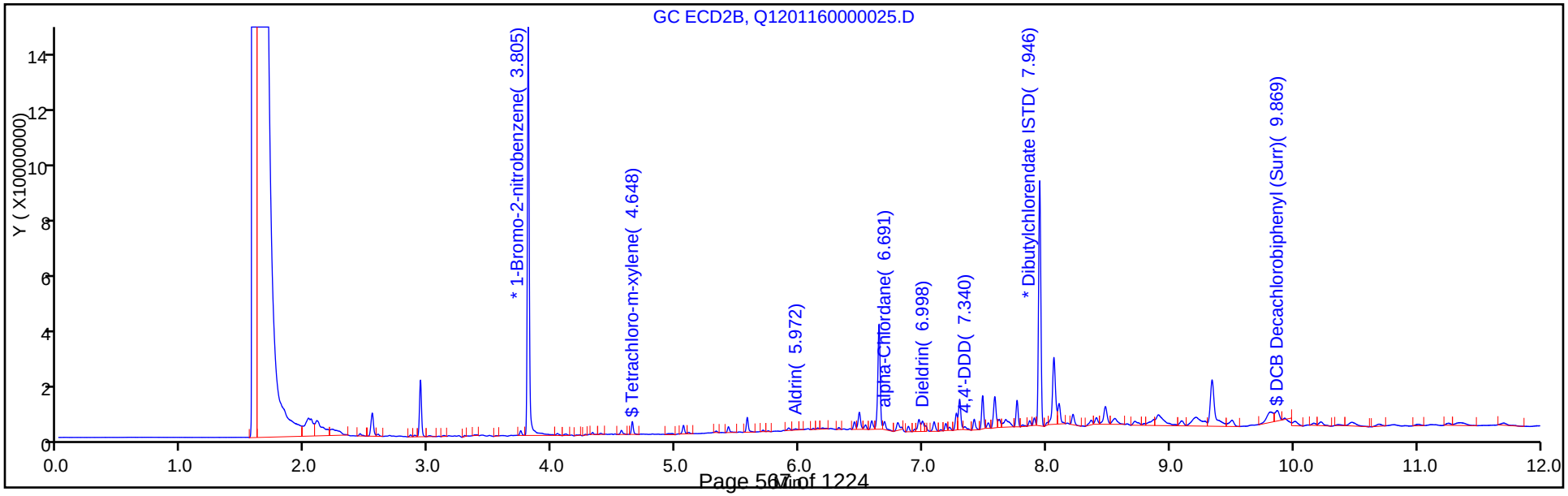
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000025.D

Injection Date:	01-Dec-2016 16:03:48	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	180-61122-A-4-E	Lab Sample ID:	180-61122-4	Worklist Smp#:	25
Client ID:	BGSB10-(1-2)-161122-S				
Injection Vol:	1.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	25
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000025.D				
Lims ID:	180-61122-A-4-E				
Client ID:	BGSB10-(1-2)-161122-S				
Sample Type:	Client				
Inject. Date:	01-Dec-2016 16:03:48	ALS Bottle#:	25	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	5.0000		
Sample Info:	180-0014572-025				
Operator ID:	402331	Instrument ID:	CHGC15		
Method:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m				
Limit Group:	GCS 8081B ICAL with IS				
Last Update:	02-Dec-2016 07:31:16	Calib Date:	06-Oct-2016 14:25:55		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D				
Column 1 :	MR-1 (0.53 mm)		Det: GC ECD1A		
Column 2 :	MR-2 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK011				
First Level Reviewer: eppinged		Date:	02-Dec-2016 07:30:45		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.002386	59.65
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.003711	92.77

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.002227	55.66
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.006086	152.14

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

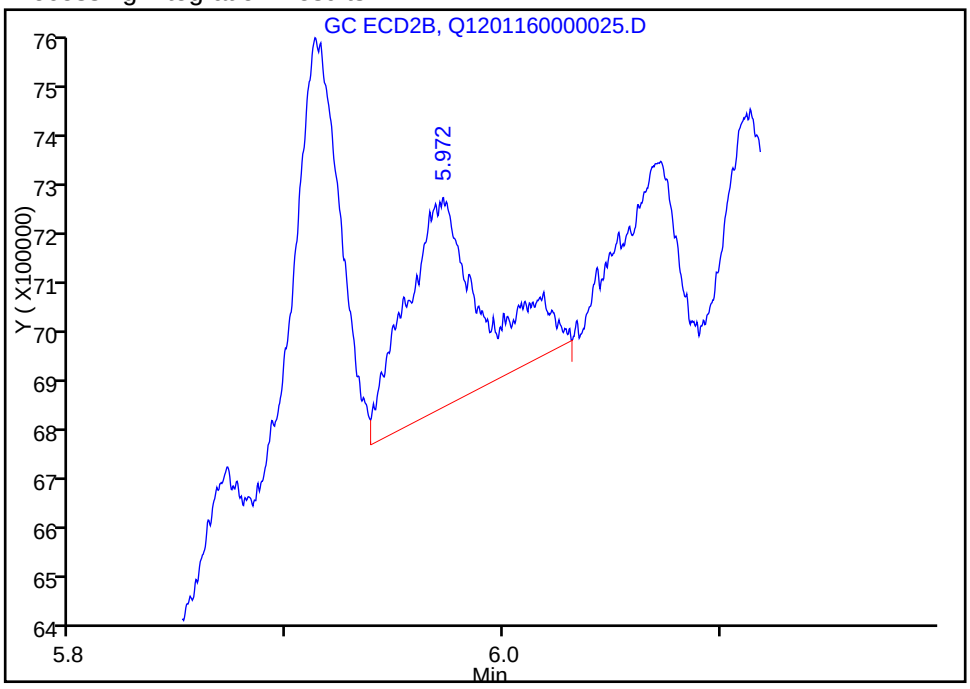
Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000025.D				
Injection Date:	01-Dec-2016 16:03:48	Instrument ID:	CHGC15		
Lims ID:	180-61122-A-4-E	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	402331	ALS Bottle#:	25	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	5.0000		
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		
Column:	MR-2 (0.53 mm)	Detector	GC ECD2B		

13 Aldrin, CAS: 309-00-2

Signal: 2

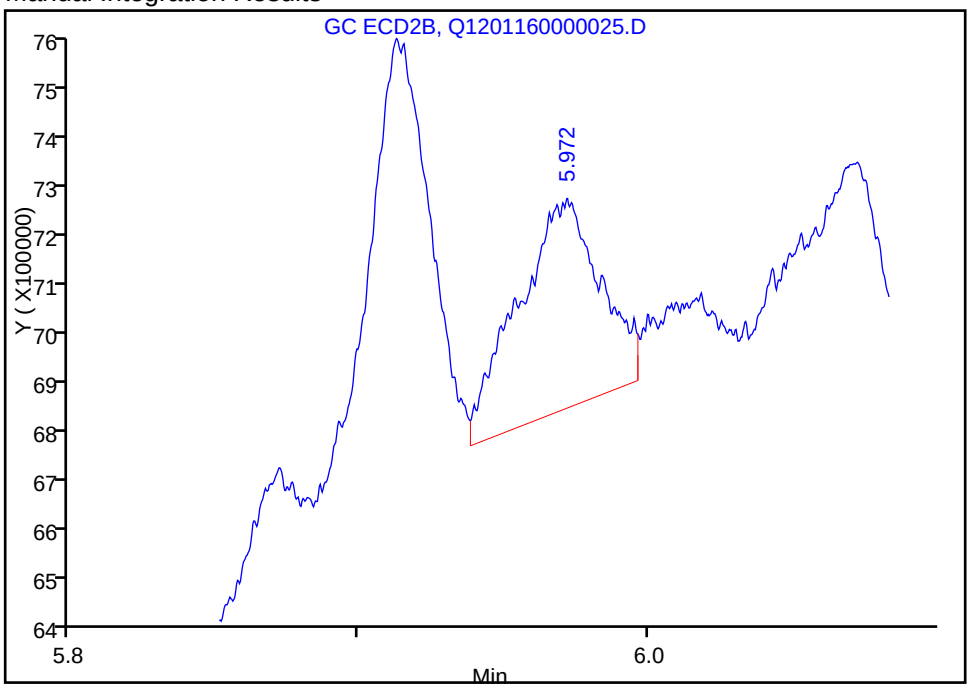
Processing Integration Results

RT: 5.97
Height: 414368
Amount: 0.000221
Amount Units: ng



Manual Integration Results

RT: 5.97
Height: 414192
Amount: 0.000221
Amount Units: ng



Reviewer: eppinged, 02-Dec-2016 07:30:45
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

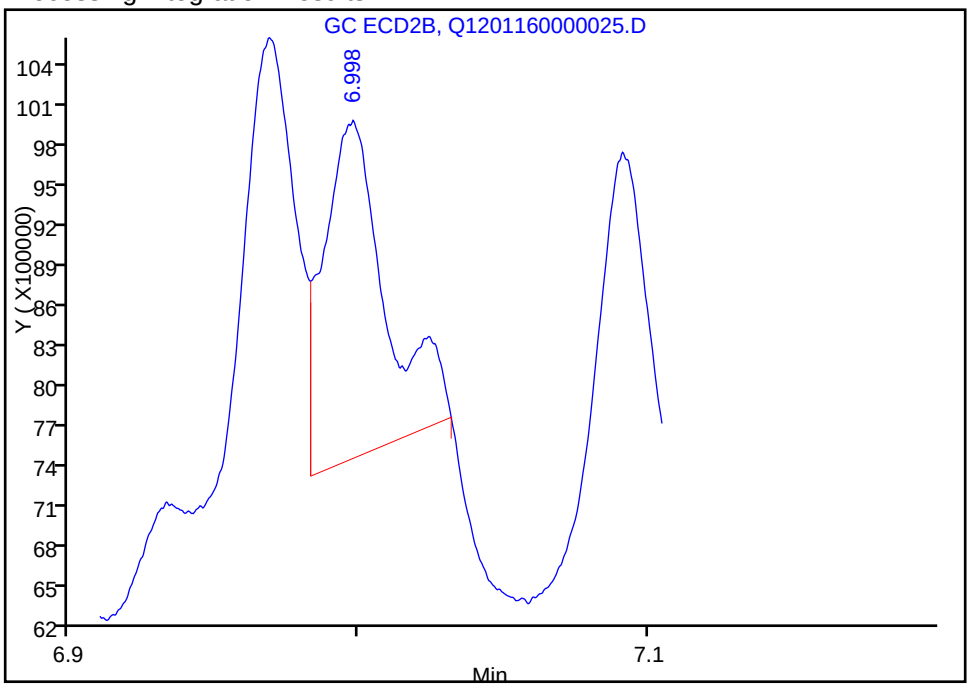
Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000025.D				
Injection Date:	01-Dec-2016 16:03:48	Instrument ID:	CHGC15		
Lims ID:	180-61122-A-4-E	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	402331	ALS Bottle#:	25	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	5.0000		
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		
Column:	MR-2 (0.53 mm)	Detector	GC ECD2B		

24 Dieldrin, CAS: 60-57-1

Signal: 2

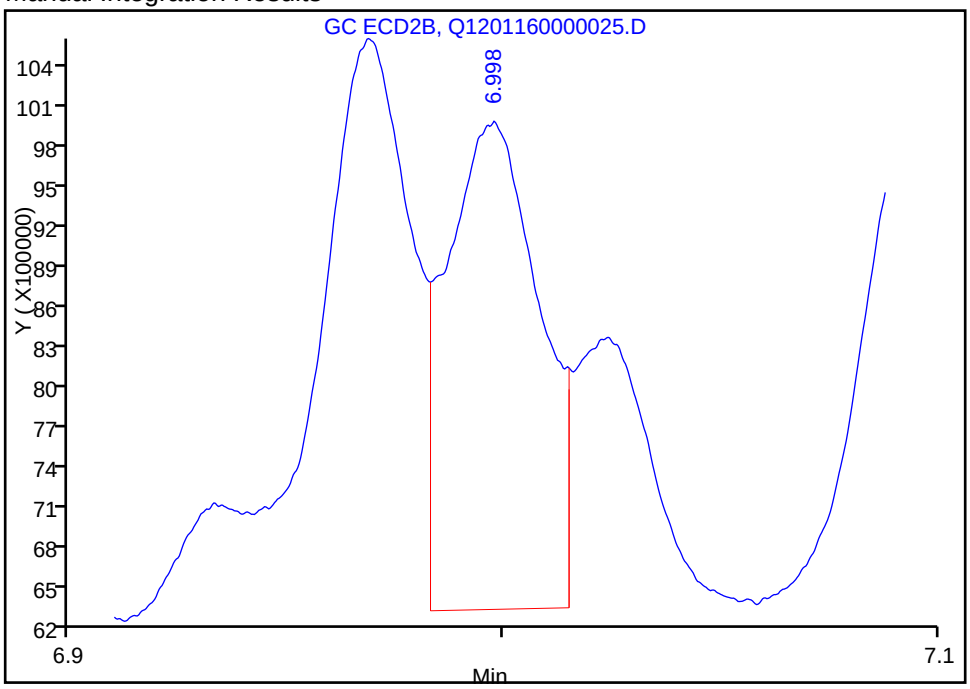
Processing Integration Results

RT: 7.00
Height: 2486265
Amount: 0.001697
Amount Units: ng



Manual Integration Results

RT: 7.00
Height: 3590251
Amount: 0.002450
Amount Units: ng



Reviewer: eppinged, 02-Dec-2016 07:30:45

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

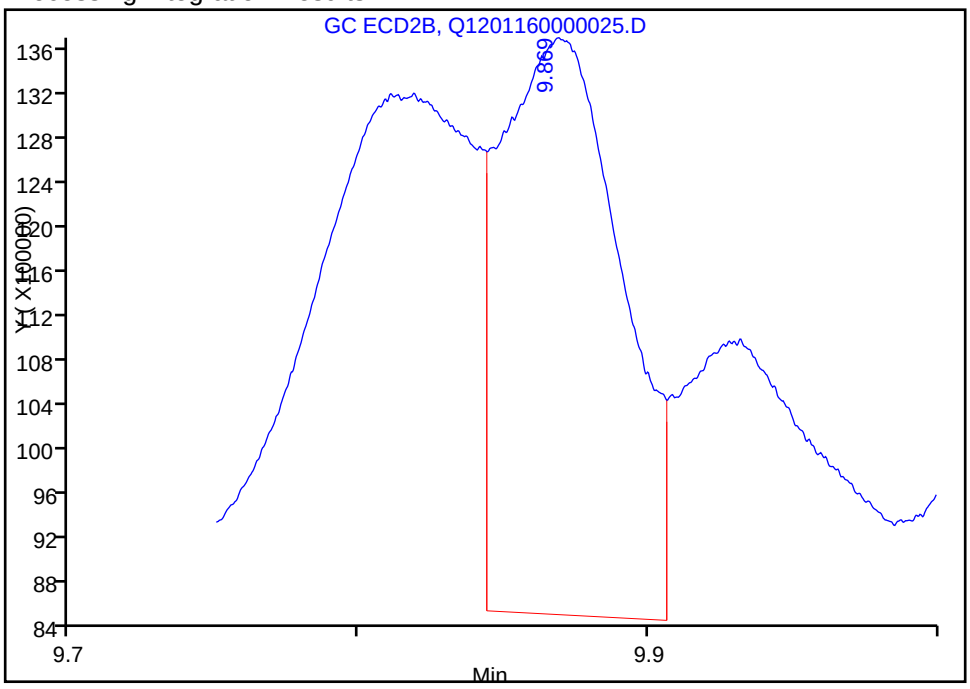
Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000025.D				
Injection Date:	01-Dec-2016 16:03:48	Instrument ID:	CHGC15		
Lims ID:	180-61122-A-4-E	Lab Sample ID:	180-61122-4		
Client ID:	BGSB10-(1-2)-161122-S				
Operator ID:	402331	ALS Bottle#:	25	Worklist Smp#:	25
Injection Vol:	1.0 ul	Dil. Factor:	5.0000		
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		
Column:	MR-2 (0.53 mm)	Detector	GC ECD2B		

$ 39 DCB Decachlorobiphenyl (Surr), CAS: 2051-24-3

Signal: 2

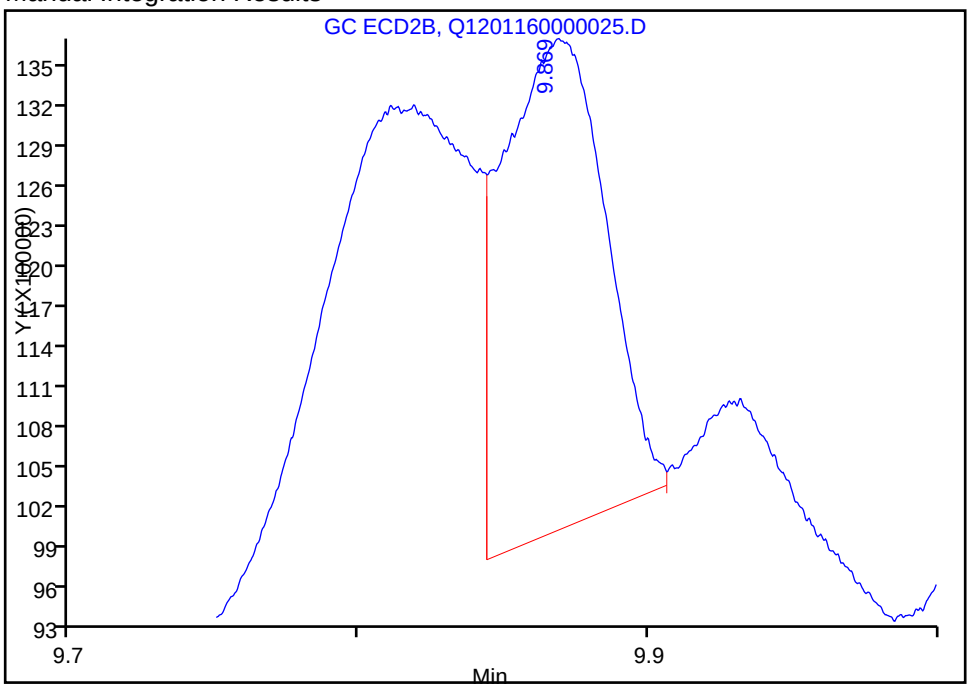
Processing Integration Results

RT: 9.87
Height: 5109218
Amount: 0.008538
Amount Units: ng



Manual Integration Results

RT: 9.87
Height: 3641892
Amount: 0.006086
Amount Units: ng



Reviewer: eppinged, 02-Dec-2016 07:30:45

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189037

SDG No.:

Instrument ID: CHGC15 GC Column: MR-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/24/2016 09:17 Calibration End Date: 09/24/2016 10:18 Calibration ID: 32931

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-189037/2	Q0924160000002.D
Level 2	IC 180-189037/3	Q0924160000003.D
Level 3	IC 180-189037/4	Q0924160000004.D
Level 4	IC 180-189037/5	Q0924160000005.D
Level 5	IC 180-189037/6	Q0924160000006.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Toxaphene Peak 1	0.0298	0.0229	0.0210	0.0240	0.0199	Ave		0.0235				16.3		20.0			
Toxaphene Peak 2	0.0316	0.0436	0.0395	0.0462	0.0379	Ave		0.0397				14.1		20.0			
Toxaphene Peak 3	0.0311	0.0245	0.0219	0.0258	0.0212	Ave		0.0249				15.7		20.0			
Toxaphene Peak 4	0.0193	0.0186	0.0177	0.0208	0.0170	Ave		0.0187				7.8		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189037

SDG No.:

Instrument ID: CHGC15 GC Column: MR-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/24/2016 09:17 Calibration End Date: 09/24/2016 10:18 Calibration ID: 32931

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-189037/2	Q0924160000002.D
Level 2	IC 180-189037/3	Q0924160000003.D
Level 3	IC 180-189037/4	Q0924160000004.D
Level 4	IC 180-189037/5	Q0924160000005.D
Level 5	IC 180-189037/6	Q0924160000006.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
Toxaphene Peak 1	DBC	Ave	283681	2381105	12753061	31634642	65476633	0.0200	0.200	1.00	2.50	5.00
Toxaphene Peak 2	DBC	Ave	301187	4527643	23957553	60869839	124808527	0.0200	0.200	1.00	2.50	5.00
Toxaphene Peak 3	DBC	Ave	296046	2548259	13276929	34069146	69996346	0.0200	0.200	1.00	2.50	5.00
Toxaphene Peak 4	DBC	Ave	184392	1931369	10738006	27387011	56077316	0.0200	0.200	1.00	2.50	5.00

Curve Type Legend:
Ave = Average ISTD by Height

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000002.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 24-Sep-2016 09:17:05 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013569-002
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub4

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 25-Sep-2016 23:18:24 Calib Date: 24-Sep-2016 16:14:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000029.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK001

First Level Reviewer: eppinged Date: 25-Sep-2016 23:18:24

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.702	3.701	0.000	105001567H	0.1000	0.1000	
2	3.775	3.775	0.000	131729980H	0.1000	0.1000	
34 Toxaphene							M
1	7.174	7.177	-0.003	283681H	0.0200	0.0253	M
1	7.662	7.663	-0.001	301187H	0.0200	0.0159	
1	7.831	7.828	0.003	296046H	0.0200	0.0249	
1	8.508	8.505	0.003	184392H	0.0200	0.0207	M
		Average of Peak Amounts =				0.0217	
2	6.916	6.918	-0.002	257224H	0.0200	0.0256	M
2	7.493	7.493	0.000	394004H	0.0200	0.0220	M
2	8.904	8.275	0.629	230370H	0.0200	0.0200	M
2	8.904	8.910	-0.006	230370H	0.0200	0.0242	M
		Average of Peak Amounts =				0.0229	
						RPD = 5.48	
* 44 Dibutylchlorendate ISTD							M
1	8.151	8.152	-0.001	47666269H	0.1000	0.1000	M
2	7.926	7.927	-0.001	73123748H	0.1000	0.1000	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

GCTOXLEVEL1_00005 Amount Added: 1.00 Units: mL
GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

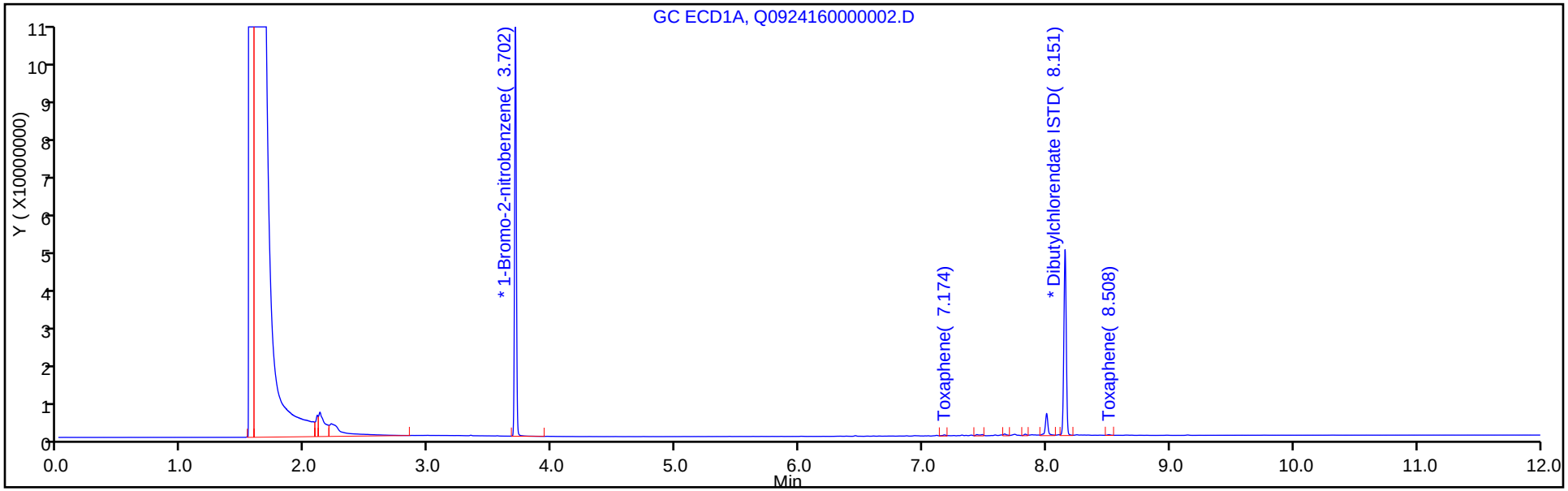
Report Date: 25-Sep-2016 23:18:28 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

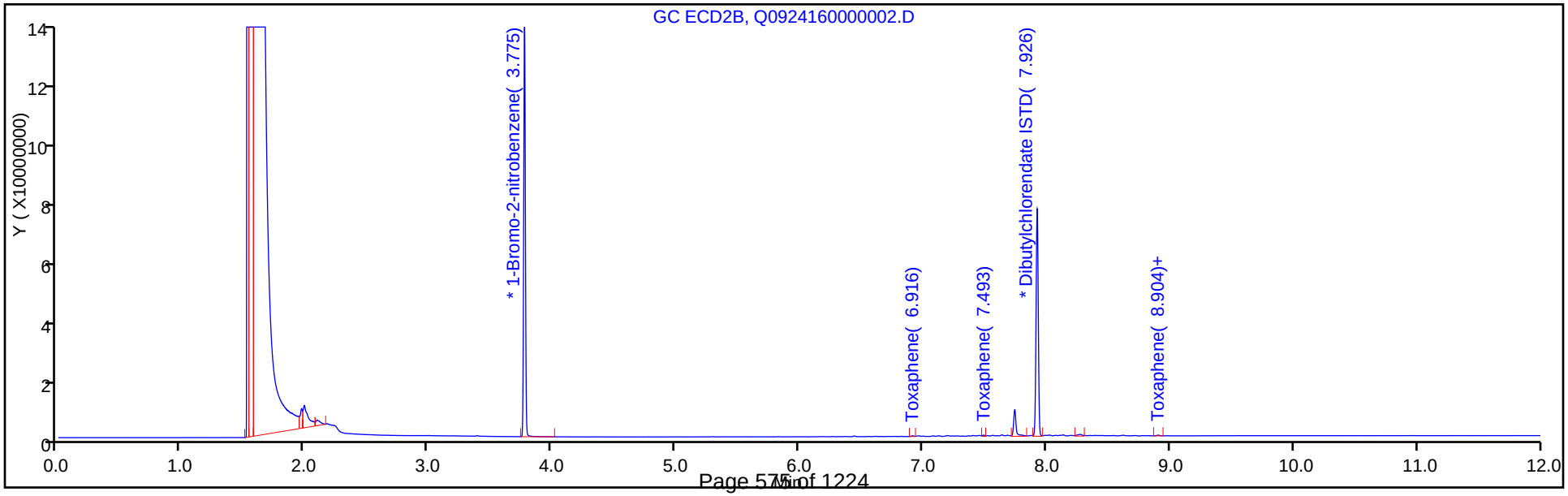
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000002.D

Injection Date:	24-Sep-2016 09:17:05	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



Report Date: 25-Sep-2016 23:18:29 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000002.D

Injection Date: 24-Sep-2016 09:17:05 Instrument ID: CHGC15

Lims ID: IC

Client ID:

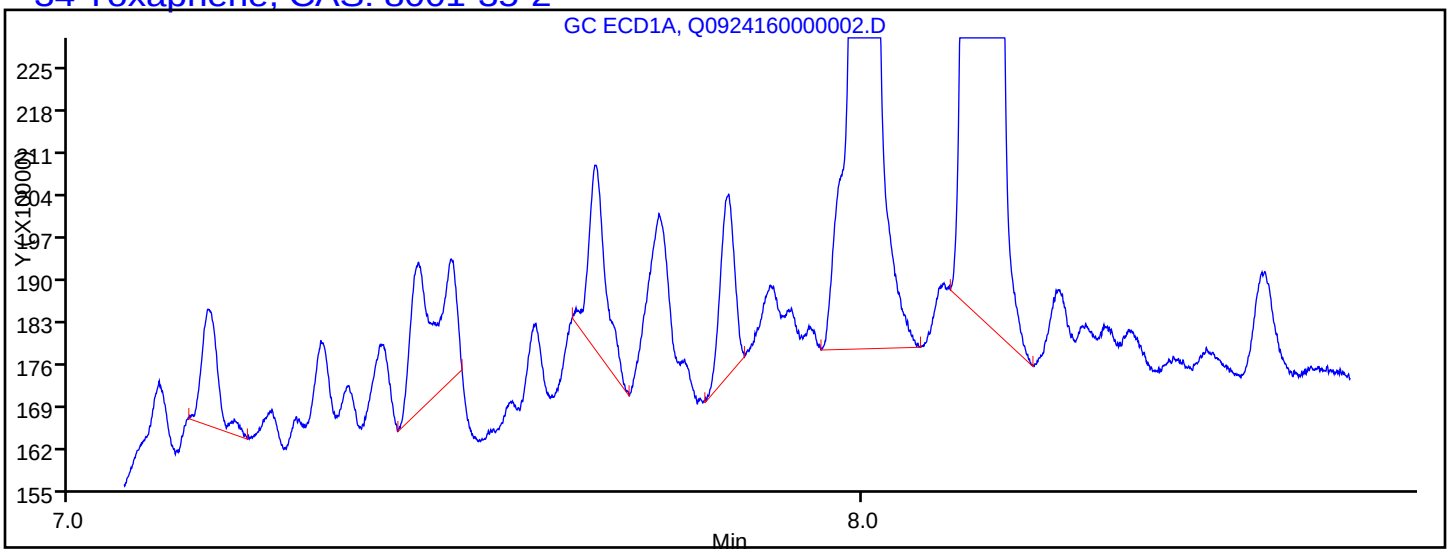
Operator ID: 402331 ALS Bottle#: 2 Worklist Smp#: 2

Injection Vol: 1.0 ul Dil. Factor: 1.0000

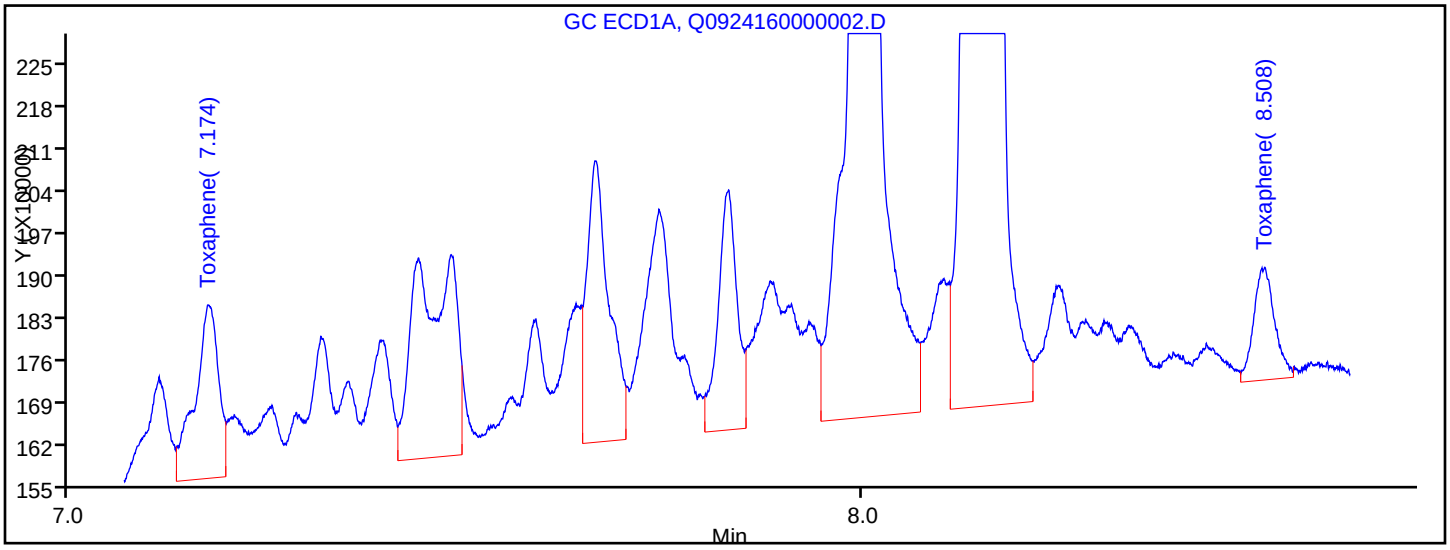
Method: IS PEST_CHGC15 Limit Group: GCS 8081B ICAL with IS

Column: MR-1 (0.53 mm) Detector GC ECD1A

34 Toxaphene, CAS: 8001-35-2



Processing Integration Results



Manual Integration Results

7.174	Response = 283681	M
7.662	Response = 301187	
7.831	Response = 296046	
8.508	Response = 184392	M

Reviewer: eppinged, 24-Sep-2016 09:49:59

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

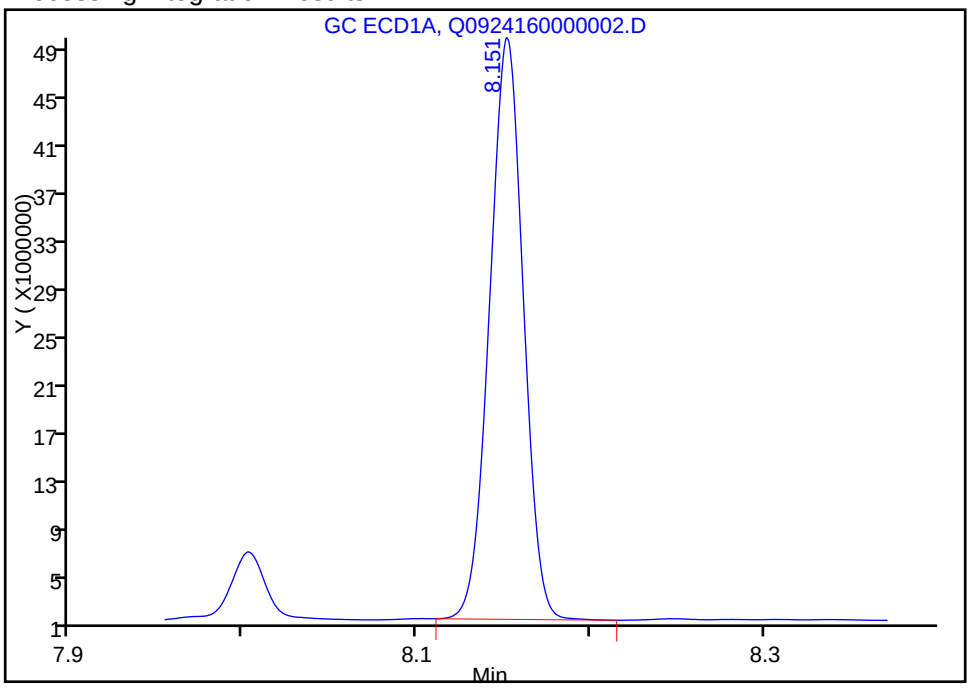
Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000002.D				
Injection Date:	24-Sep-2016 09:17:05	Instrument ID:	CHGC15		
Lims ID:	IC				
Client ID:					
Operator ID:	402331	ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		
Column:	MR-1 (0.53 mm)	Detector	GC ECD1A		

* 44 Dibutylchlorendate ISTD, CAS: 1770-80-5

Signal: 1

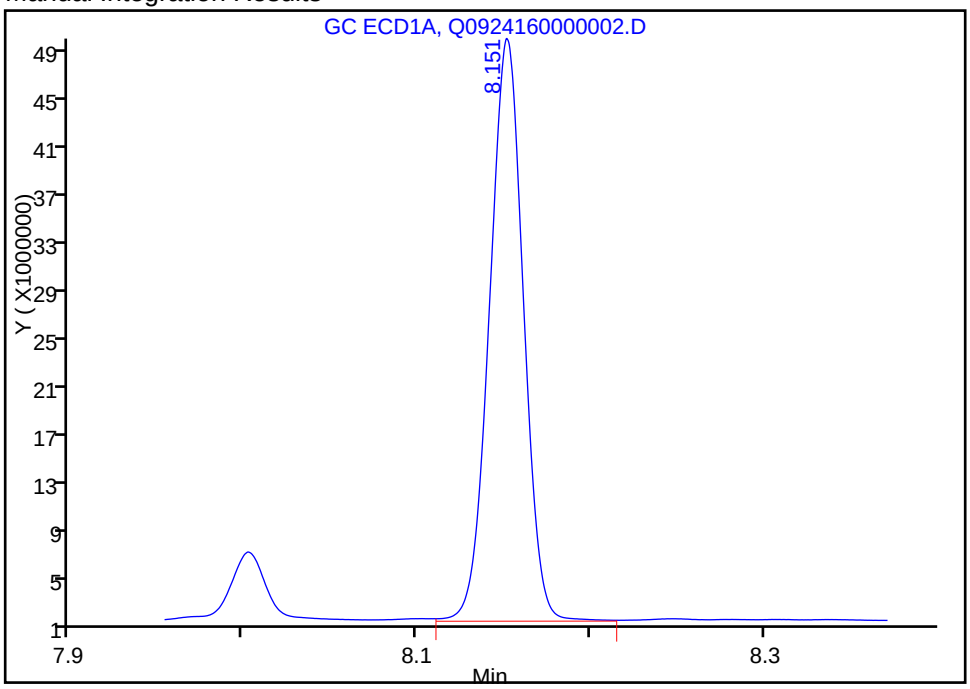
Processing Integration Results

RT: 8.15
Height: 47517637
Amount: 0.100000
Amount Units: ng



Manual Integration Results

RT: 8.15
Height: 47666269
Amount: 0.100000
Amount Units: ng



Reviewer: eppinged, 24-Sep-2016 09:49:59

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000003.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 24-Sep-2016 09:32:31 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013569-003
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub4

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 25-Sep-2016 23:10:08 Calib Date: 24-Sep-2016 16:14:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000029.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK001

First Level Reviewer: eppinged Date: 24-Sep-2016 10:14:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.702	3.701	0.000	111567811H	0.1000	0.1000	
2	3.775	3.775	0.000	139748907H	0.1000	0.1000	
34 Toxaphene							M
1	7.178	7.177	0.001	2381105H	0.2000	0.1951	M
1	7.663	7.663	0.000	4527643H	0.2000	0.2195	M
1	7.829	7.828	0.001	2548259H	0.2000	0.1971	M
1	8.505	8.505	0.000	1931369H	0.2000	0.1992	M
		Average of Peak Amounts =				0.2027	
2	6.917	6.918	-0.001	2350921H	0.2000	0.2152	M
2	7.494	7.493	0.001	3820614H	0.2000	0.1962	M
2	8.274	8.275	-0.001	5125155H	0.2000	0.2047	M
2	8.910	8.910	0.000	689789H	0.2000	0.1602	M
		Average of Peak Amounts =				0.1941	
						RPD = 4.36	
* 44 Dibutylchlorendate ISTD							M
1	8.151	8.152	-0.001	51904416H	0.1000	0.1000	M
2	7.926	7.927	-0.001	79494250H	0.1000	0.1000	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

GCTOXLEVEL2_00003 Amount Added: 1.00 Units: mL
GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

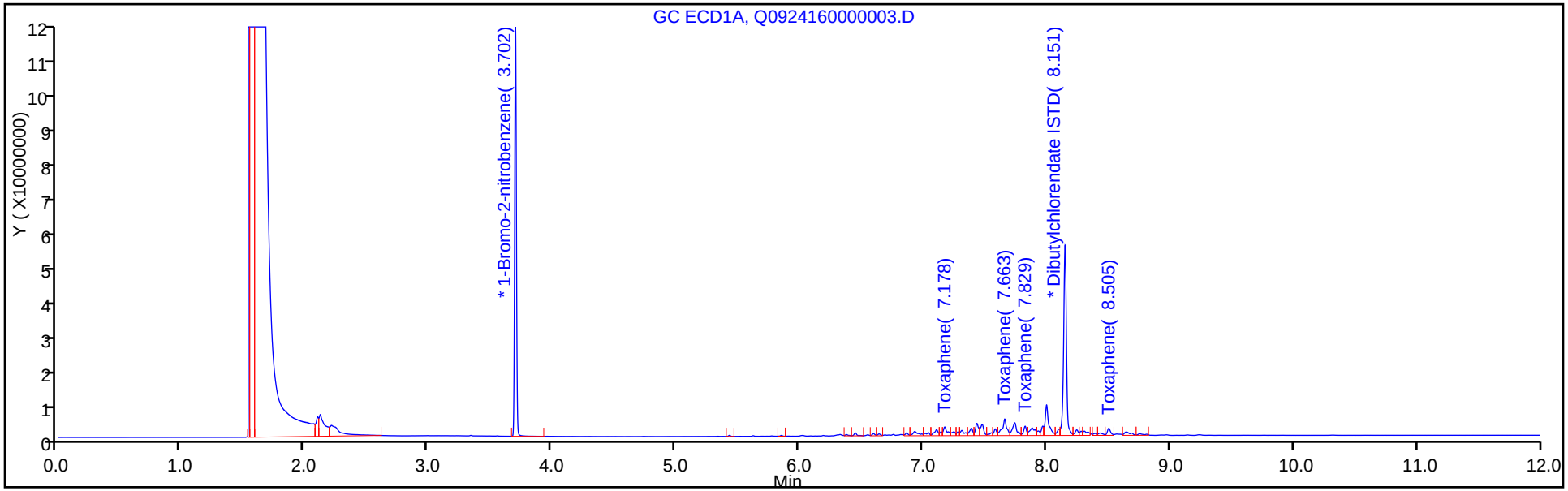
Report Date: 25-Sep-2016 23:10:09 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

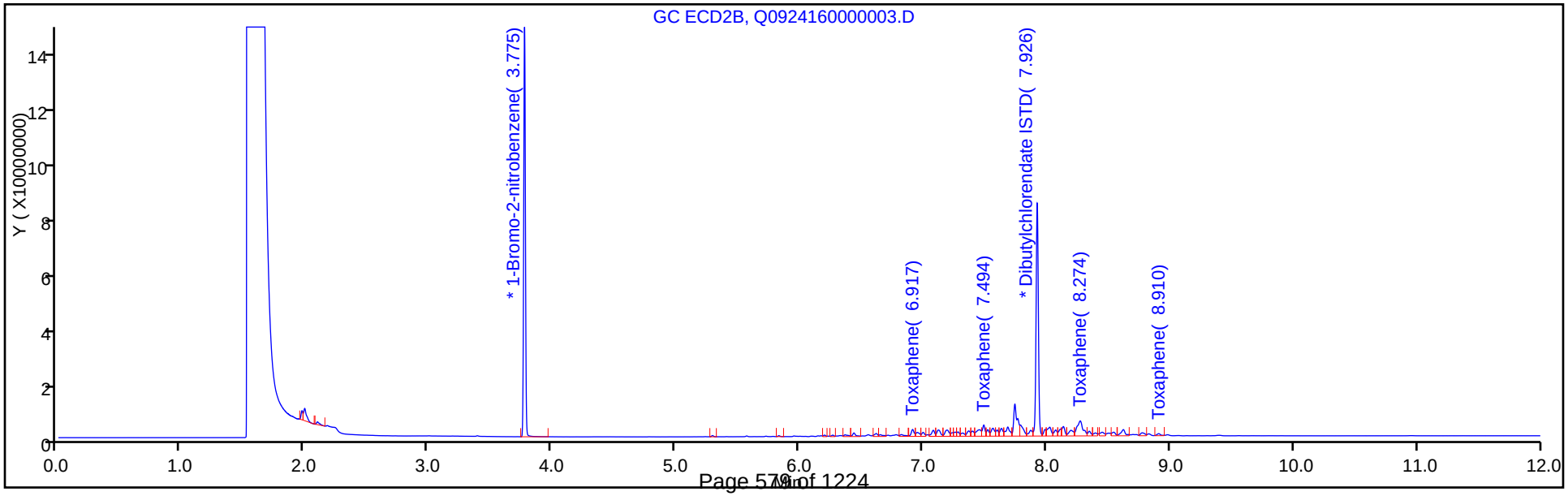
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000003.D

Injection Date:	24-Sep-2016 09:32:31	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



Report Date: 25-Sep-2016 23:10:10 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000003.D

Injection Date: 24-Sep-2016 09:32:31 Instrument ID: CHGC15

Lims ID: IC

Client ID:

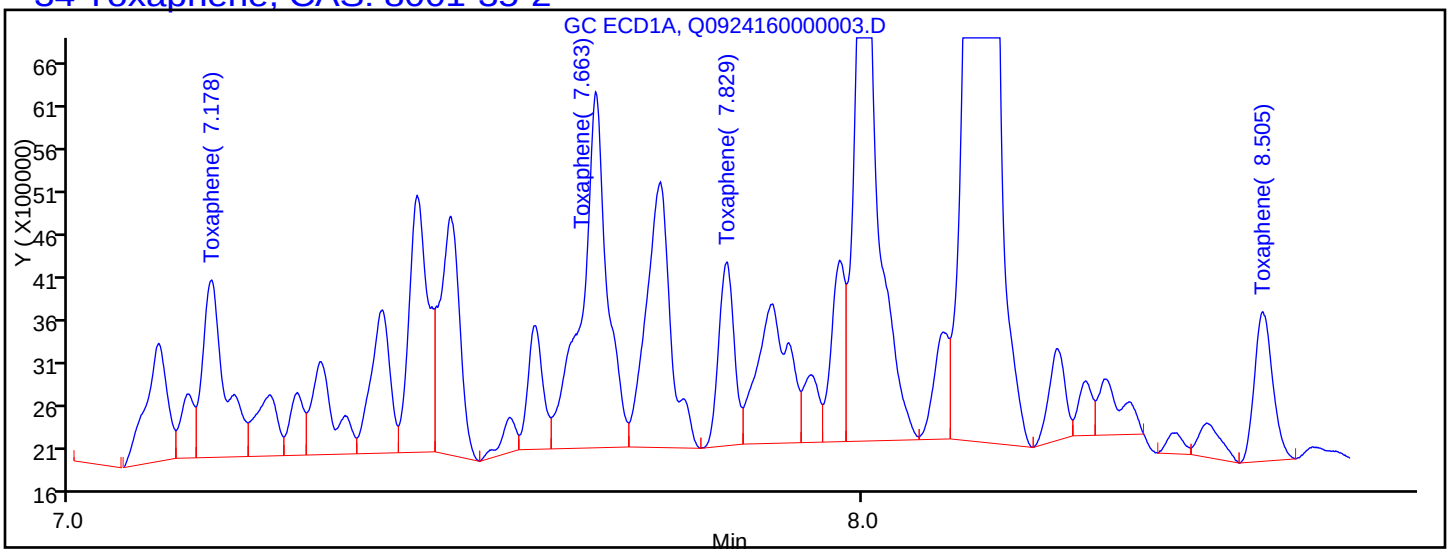
Operator ID: 402331 ALS Bottle#: 3 Worklist Smp#: 3

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: IS PEST_CHGC15 Limit Group: GCS 8081B ICAL with IS

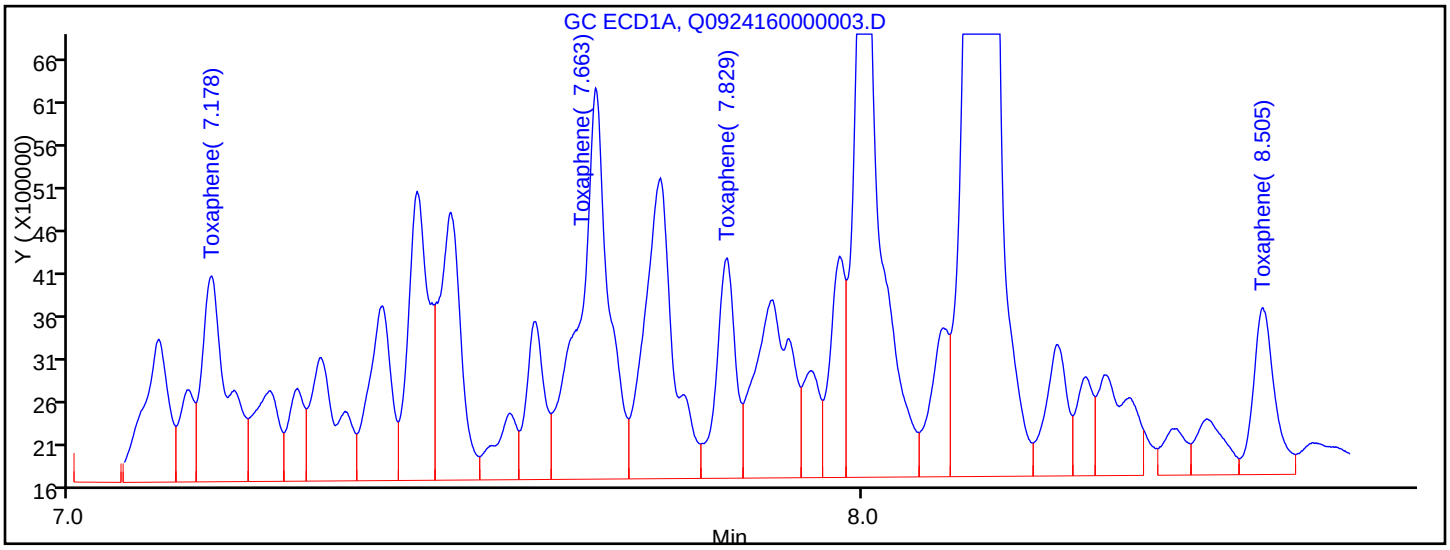
Column: MR-1 (0.53 mm) Detector GC ECD1A

34 Toxaphene, CAS: 8001-35-2



Processing Integration Results

7.178	Response = 2050083
7.663	Response = 4116130
7.829	Response = 2122798
8.505	Response = 1729275



Manual Integration Results

7.178	Response = 2381105	M
7.663	Response = 4527643	M
7.829	Response = 2548259	M
8.505	Response = 1931369	M

Reviewer: eppinged, 24-Sep-2016 10:14:55

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Pittsburgh

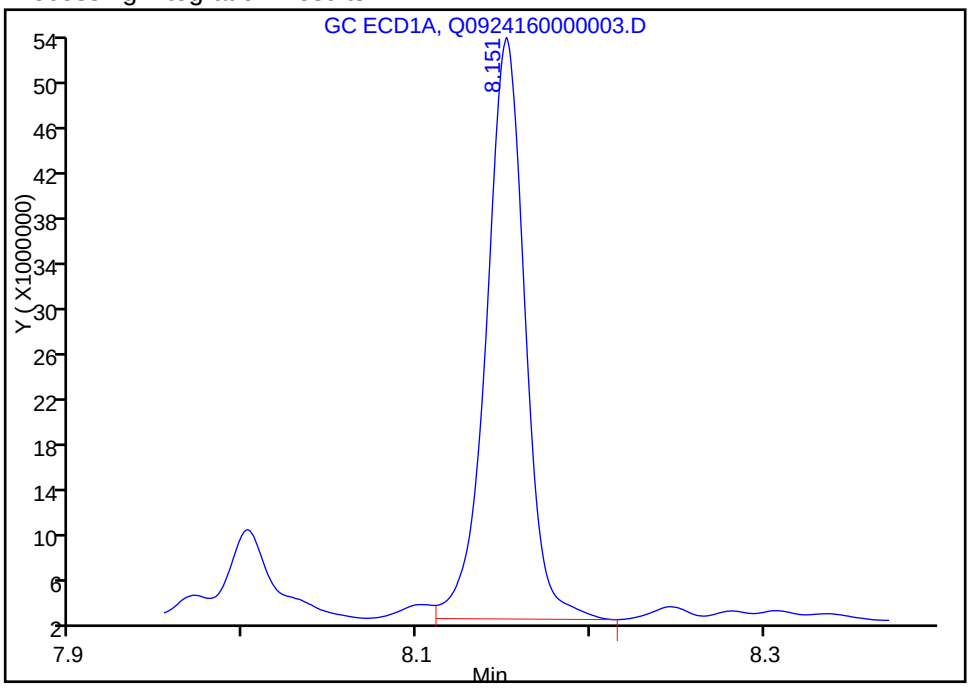
Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000003.D				
Injection Date:	24-Sep-2016 09:32:31	Instrument ID:	CHGC15		
Lims ID:	IC				
Client ID:					
Operator ID:	402331	ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		
Column:	MR-1 (0.53 mm)	Detector	GC ECD1A		

* 44 Dibutylchlorendate ISTD, CAS: 1770-80-5

Signal: 1

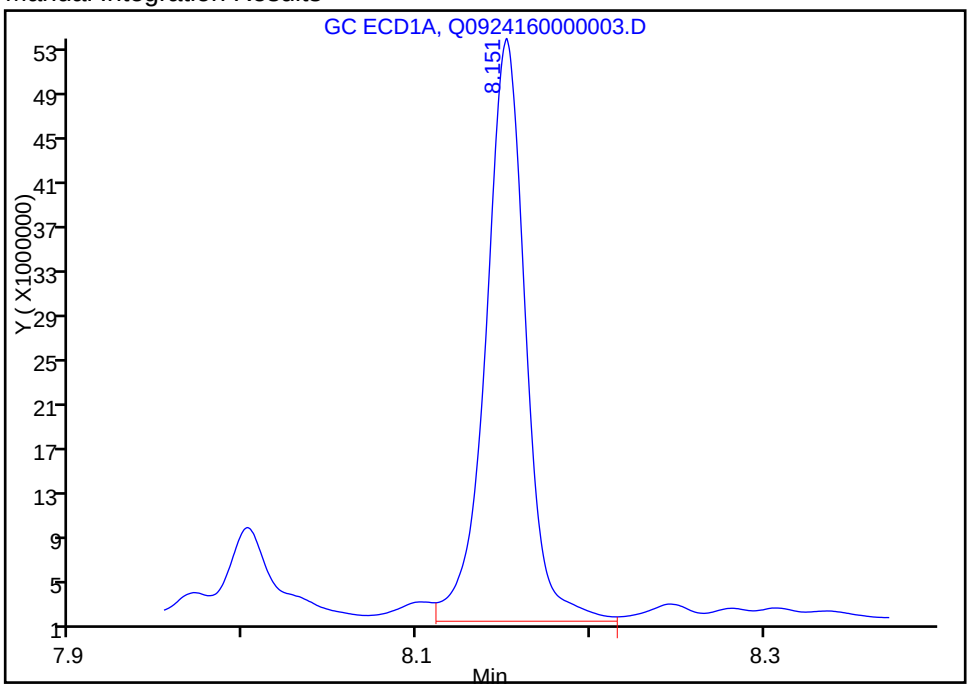
Processing Integration Results

RT: 8.15
Height: 51459494
Amount: 0.100000
Amount Units: ng



Manual Integration Results

RT: 8.15
Height: 51904416
Amount: 0.100000
Amount Units: ng



Reviewer: eppinged, 24-Sep-2016 10:14:55
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000004.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 24-Sep-2016 09:47:56 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013569-004
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub4

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 25-Sep-2016 23:10:20 Calib Date: 24-Sep-2016 16:14:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000029.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK001

First Level Reviewer: eppinged Date: 24-Sep-2016 10:25:57

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.702	3.701	0.000	109835071H	0.1000	0.1000	
2	3.775	3.775	0.000	138515881H	0.1000	0.1000	
34 Toxaphene							M
1	7.177	7.177	0.000	12753061H	1.00	0.8935	M
1	7.663	7.663	0.000	23957553H	1.00	0.99	M
1	7.828	7.828	0.000	13276929H	1.00	0.8780	M
1	8.505	8.505	0.000	10738006H	1.00	0.9467	M
		Average of Peak Amounts =				0.9278	
2	6.918	6.918	0.000	10861150H	1.00	0.9506	M
2	7.493	7.493	0.000	20785642H	1.00	1.02	M
2	8.275	8.275	0.000	27533636H	1.00	1.01	M
2	8.910	8.910	0.000	3591913H	1.00	1.01	M
		Average of Peak Amounts =				1.00	
						RPD = 7.21	
* 44 Dibutylchlorendate ISTD							M
1	8.150	8.152	-0.002	60709301H	0.1000	0.1000	M
2	7.926	7.927	-0.001	83145122H	0.1000	0.1000	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

GCTOXLEVEL3_00007 Amount Added: 1.00 Units: mL
GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

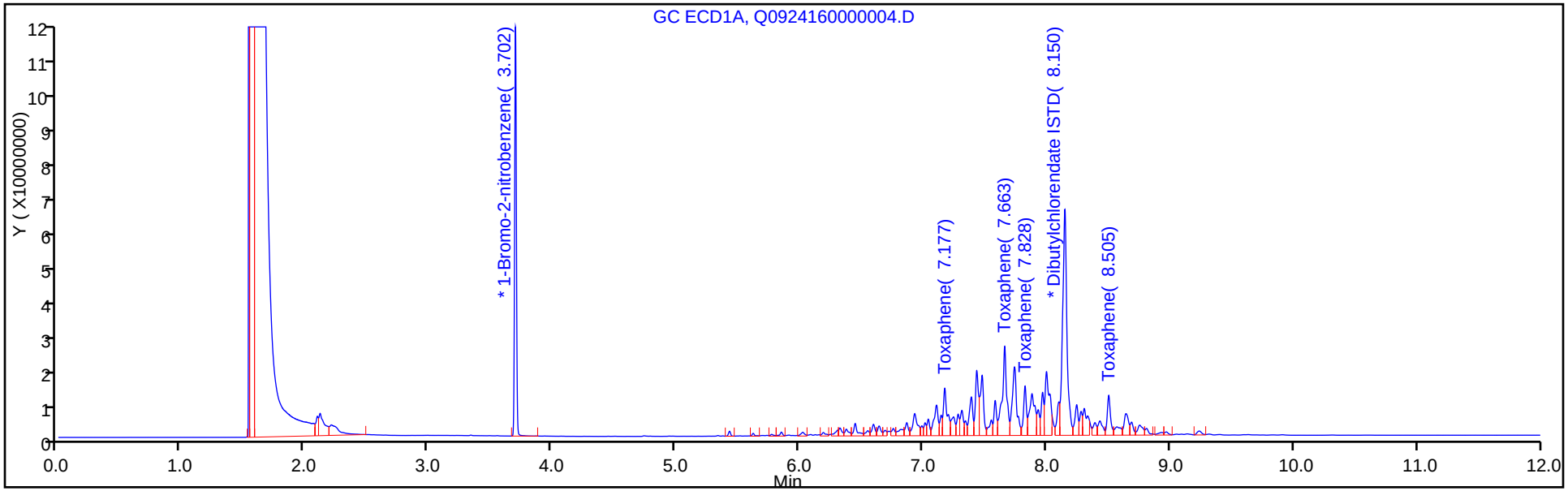
Report Date: 25-Sep-2016 23:10:21 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

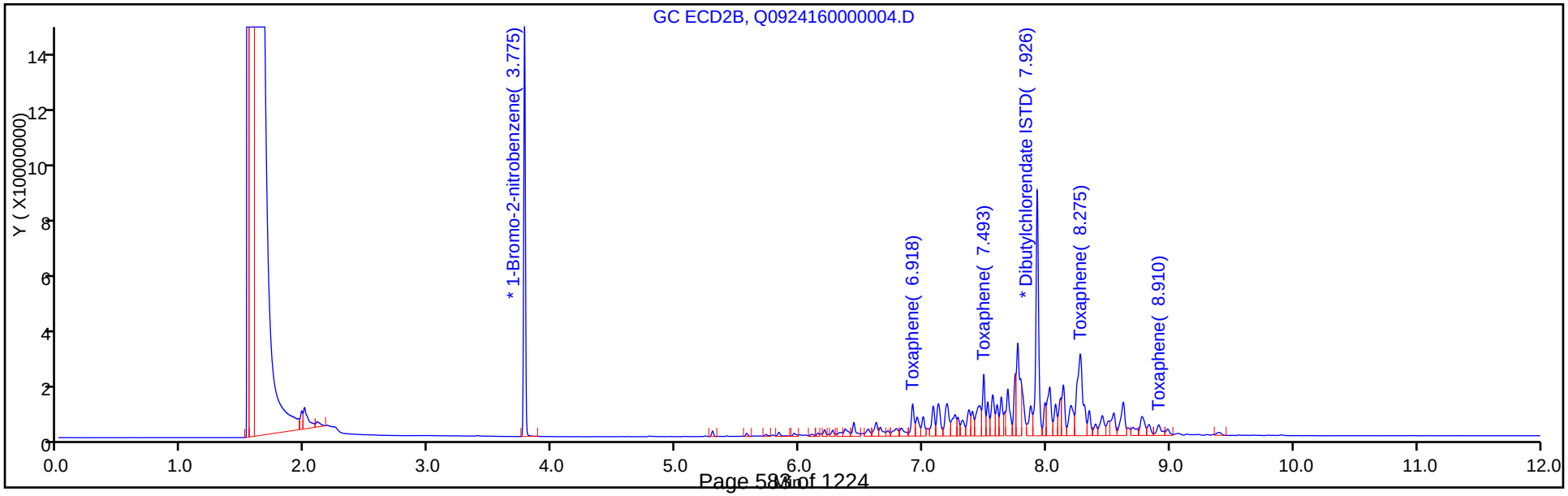
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000004.D

Injection Date:	24-Sep-2016 09:47:56	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



Report Date: 25-Sep-2016 23:10:21 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000004.D

Injection Date: 24-Sep-2016 09:47:56 Instrument ID: CHGC15

Lims ID: IC

Client ID:

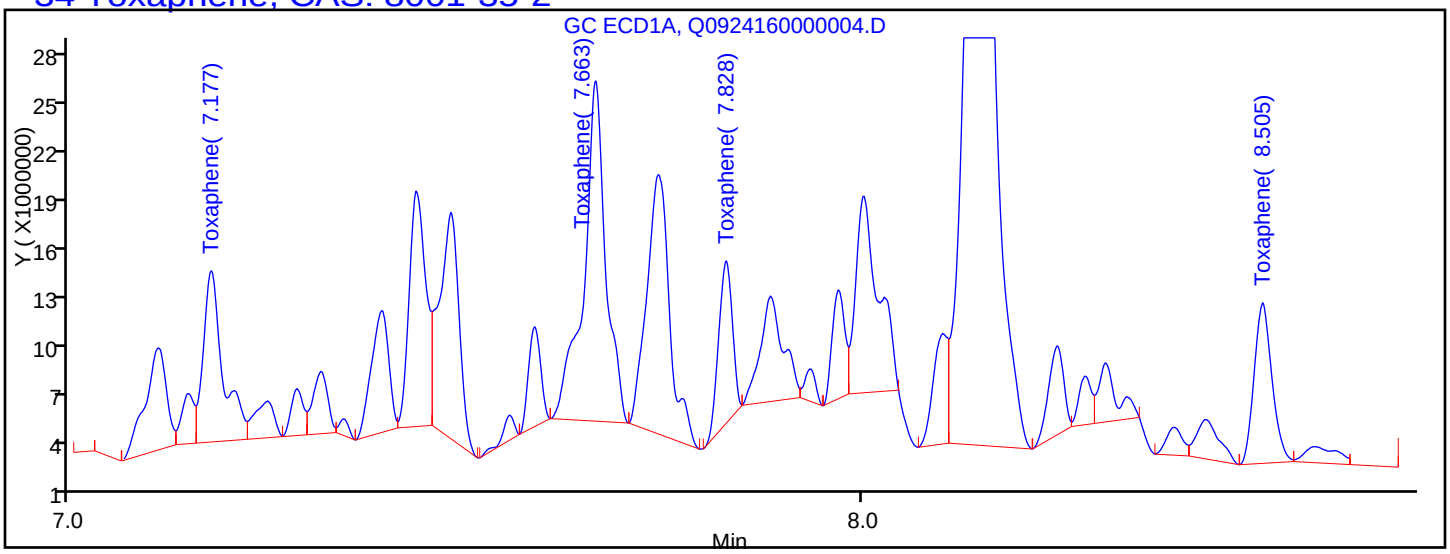
Operator ID: 402331 ALS Bottle#: 4 Worklist Smp#: 4

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: IS PEST_CHGC15 Limit Group: GCS 8081B ICAL with IS

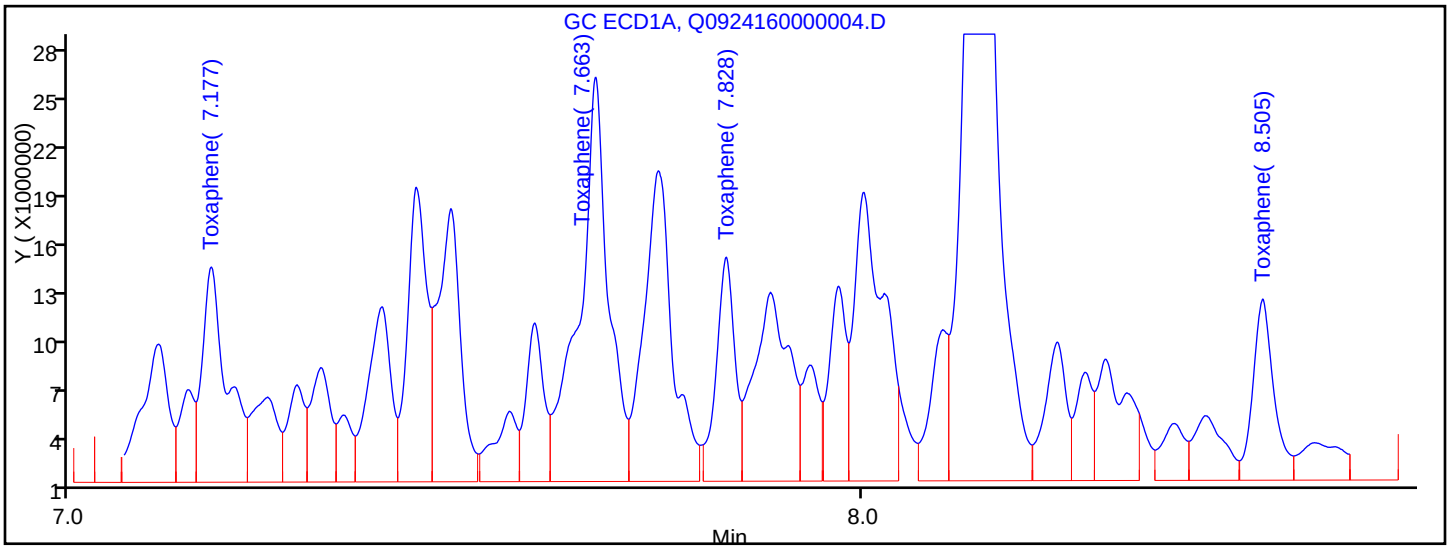
Column: MR-1 (0.53 mm) Detector GC ECD1A

34 Toxaphene, CAS: 8001-35-2



Processing Integration Results

7.177	Response = 10136881
7.663	Response = 20150809
7.828	Response = 9588074
8.505	Response = 9506931



Manual Integration Results

7.177	Response = 12753061	M
7.663	Response = 23957553	M
7.828	Response = 13276929	M
8.505	Response = 10738006	M

Reviewer: eppinged, 24-Sep-2016 10:25:57

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Pittsburgh

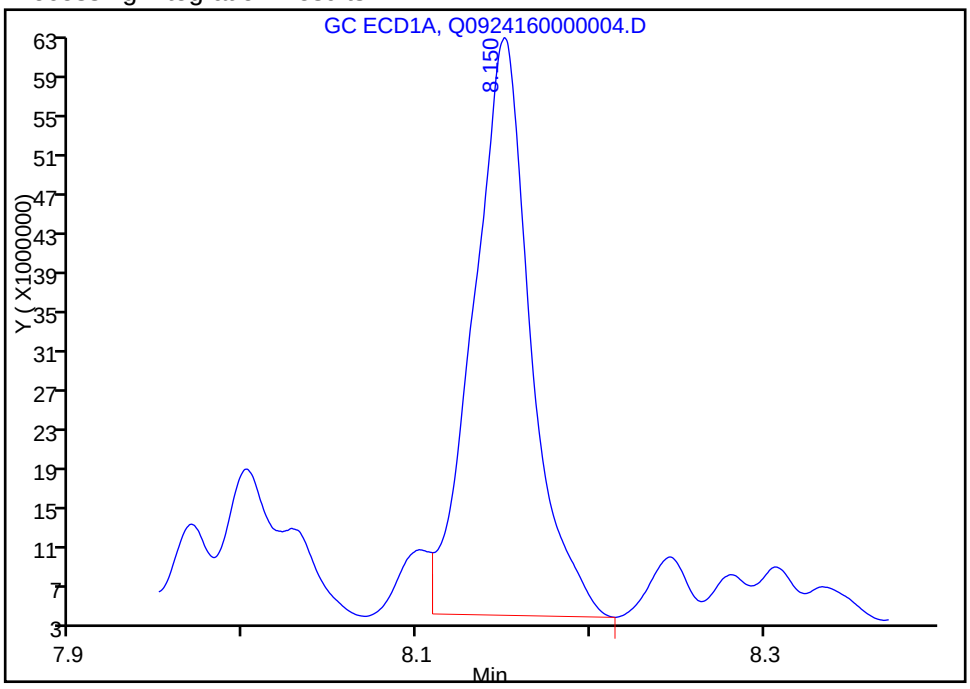
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000004.D
Injection Date: 24-Sep-2016 09:47:56 Instrument ID: CHGC15
Lims ID: IC
Client ID:
Operator ID: 402331 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: IS PEST_CHGC15 Limit Group: GCS 8081B ICAL with IS
Column: MR-1 (0.53 mm) Detector GC ECD1A

* 44 Dibutylchlorendate ISTD, CAS: 1770-80-5

Signal: 1

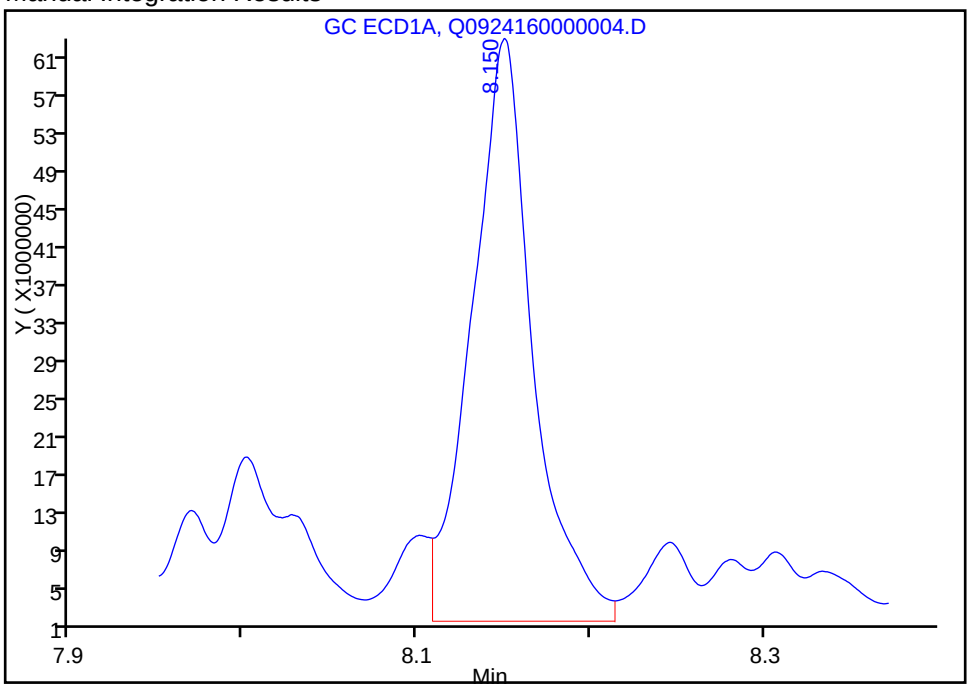
Processing Integration Results

RT: 8.15
Height: 58386628
Amount: 0.100000
Amount Units: ng



Manual Integration Results

RT: 8.15
Height: 60709301
Amount: 0.100000
Amount Units: ng



Reviewer: eppinged, 24-Sep-2016 10:25:57
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000005.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 24-Sep-2016 10:03:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013569-005
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub4

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 25-Sep-2016 23:10:32 Calib Date: 24-Sep-2016 16:14:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000029.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK001

First Level Reviewer: eppinged Date: 24-Sep-2016 10:29:17

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.702	3.701	0.000	107869690H	0.1000	0.1000	
2	3.775	3.775	0.000	136433046H	0.1000	0.1000	
34 Toxaphene							M
1	7.177	7.177	0.000	31634642H	2.50	2.55	M
1	7.664	7.663	0.001	60869839H	2.50	2.90	M
1	7.828	7.828	0.000	34069146H	2.50	2.59	M
1	8.506	8.505	0.001	27387011H	2.50	2.78	M
		Average of Peak Amounts =				2.71	
2	6.918	6.918	0.000	26040673H	2.50	2.14	
2	7.494	7.493	0.001	50722139H	2.50	2.33	
2	8.275	8.275	0.000	70927561H	2.50	2.42	
2	8.911	8.910	0.001	8753741H	2.50	2.37	
		Average of Peak Amounts =				2.32	
						RPD = 15.57	
* 44 Dibutylchlorendate ISTD							M
1	8.153	8.152	0.000	52747530H	0.1000	0.1000	M
2	7.926	7.927	0.000	88724373H	0.1000	0.1000	a

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

GCTOXLEVEL4_00003 Amount Added: 1.00 Units: mL
GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

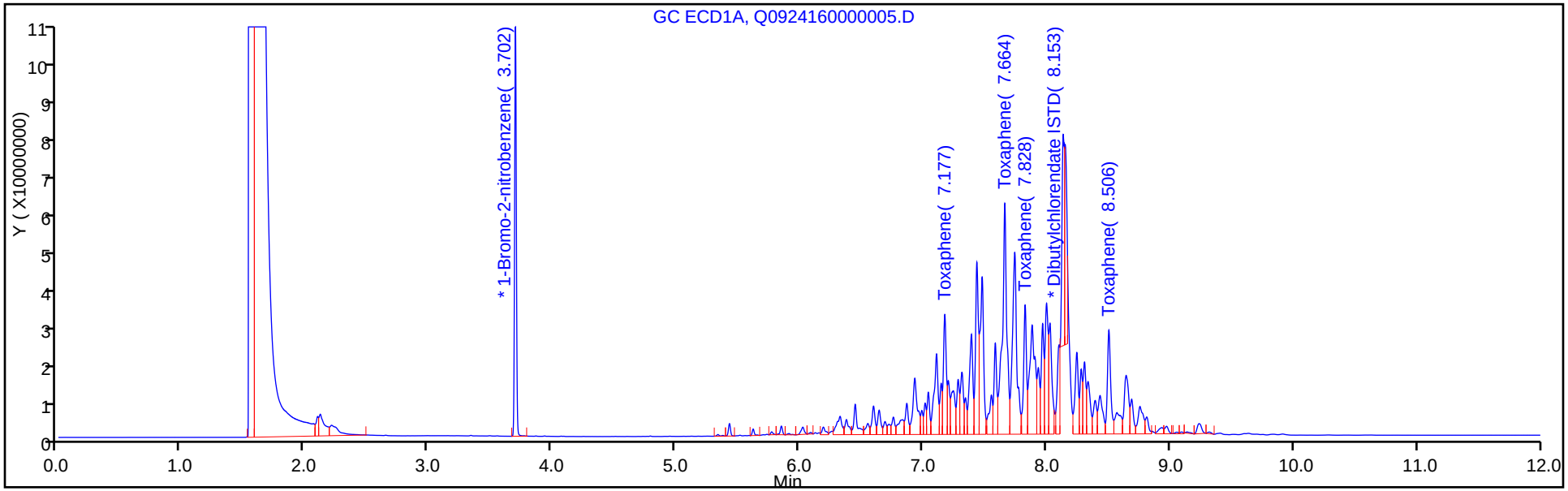
Report Date: 25-Sep-2016 23:10:33 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

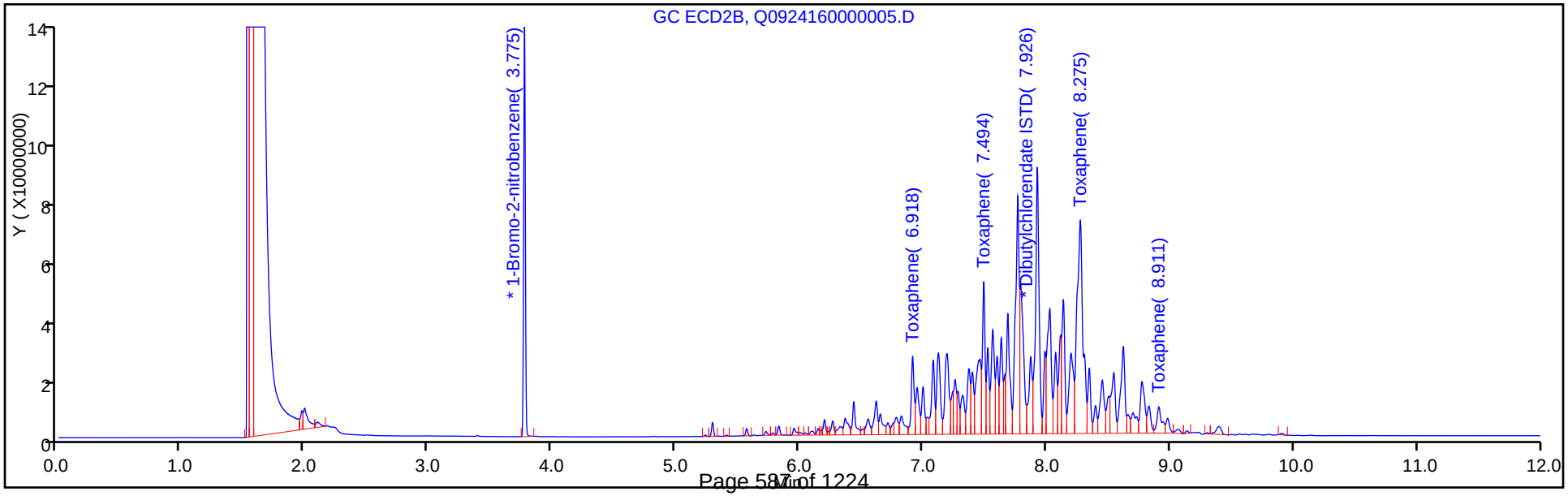
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000005.D

Injection Date:	24-Sep-2016 10:03:30	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



Report Date: 25-Sep-2016 23:10:33 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000005.D

Injection Date: 24-Sep-2016 10:03:30 Instrument ID: CHGC15

Lims ID: IC

Client ID:

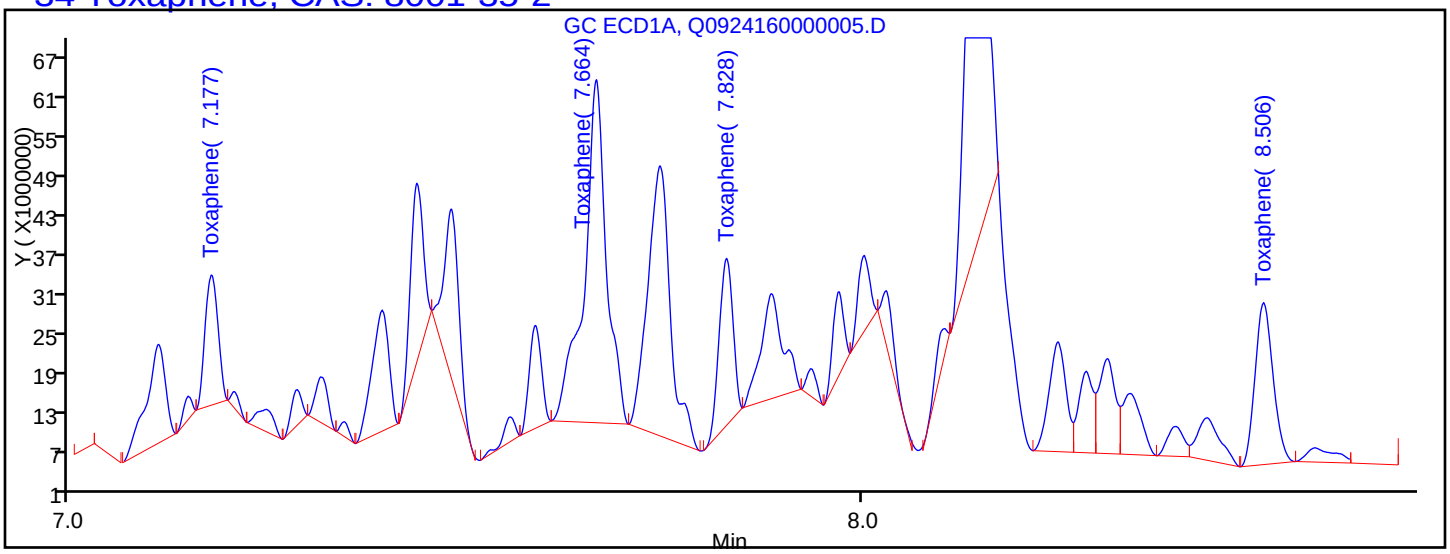
Operator ID: 402331 ALS Bottle#: 5 Worklist Smp#: 5

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: IS PEST_CHGC15 Limit Group: GCS 8081B ICAL with IS

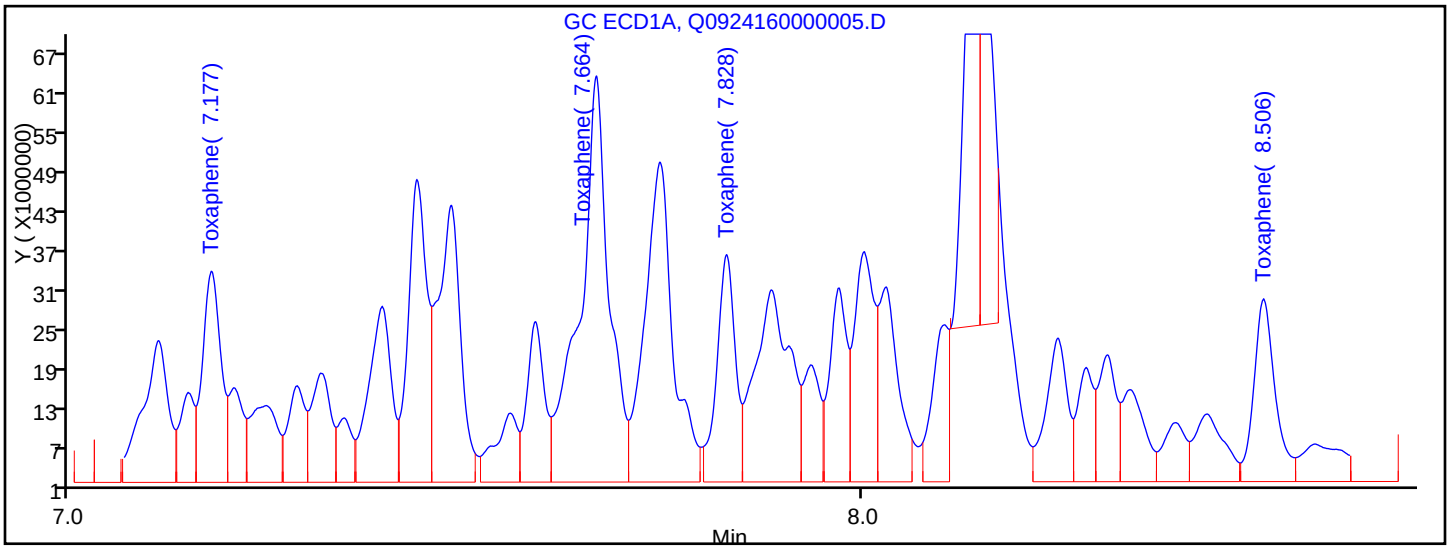
Column: MR-1 (0.53 mm) Detector GC ECD1A

34 Toxaphene, CAS: 8001-35-2



Processing Integration Results

7.177	Response = 19501276
7.664	Response = 51405839
7.828	Response = 25027197
8.506	Response = 24269380



Manual Integration Results

7.177	Response = 31634642	M
7.664	Response = 60869839	M
7.828	Response = 34069146	M
8.506	Response = 27387011	M

Reviewer: eppinged, 24-Sep-2016 10:29:17

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Pittsburgh

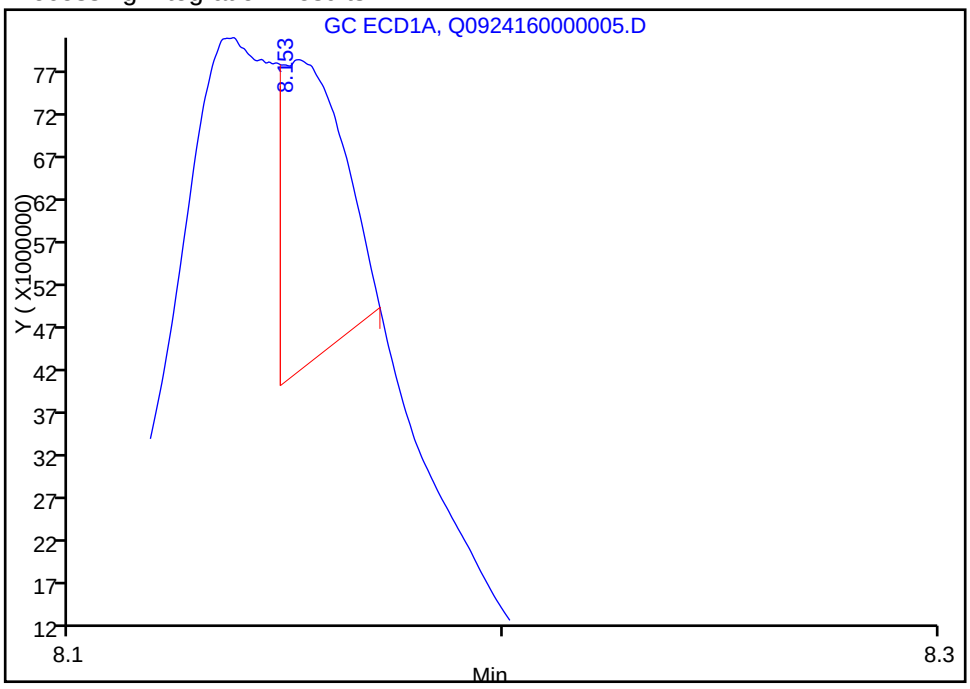
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000005.D
Injection Date: 24-Sep-2016 10:03:30 Instrument ID: CHGC15
Lims ID: IC
Client ID:
Operator ID: 402331 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: IS PEST_CHGC15 Limit Group: GCS 8081B ICAL with IS
Column: MR-1 (0.53 mm) Detector GC ECD1A

* 44 Dibutylchlorendate ISTD, CAS: 1770-80-5

Signal: 1

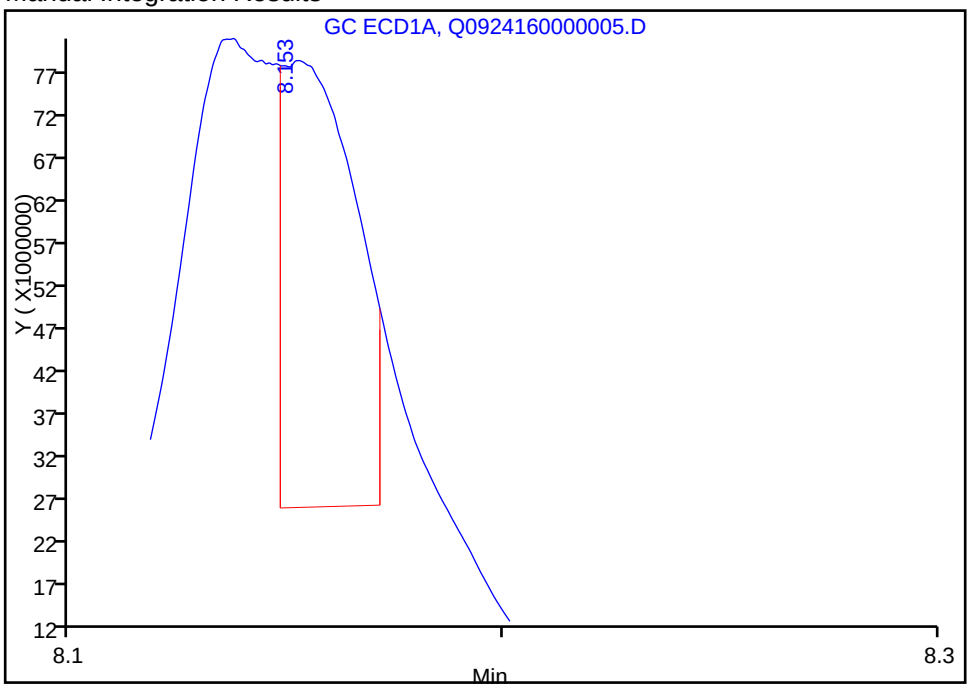
Processing Integration Results

RT: 8.15
Height: 36742180
Amount: 0.100000
Amount Units: ng



Manual Integration Results

RT: 8.15
Height: 52747530
Amount: 0.100000
Amount Units: ng



Reviewer: eppinged, 24-Sep-2016 10:29:17
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000006.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 24-Sep-2016 10:18:55 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013569-006
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub4

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 25-Sep-2016 23:10:42 Calib Date: 24-Sep-2016 16:14:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000029.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK001

First Level Reviewer: eppinged Date: 24-Sep-2016 10:51:35

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.702	3.701	0.000	116954535H	0.1000	0.1000	
2	3.775	3.775	0.000	145223817H	0.1000	0.1000	
34 Toxaphene							M
1	7.178	7.177	0.001	65476633H	5.00	4.23	M
1	7.663	7.663	0.000	124808527H	5.00	4.77	M
1	7.827	7.828	-0.001	69996346H	5.00	4.26	M
1	8.506	8.505	0.001	56077316H	5.00	4.55	M
		Average of Peak Amounts =				4.45	
2	6.918	6.918	0.000	49778778H	5.00	4.20	
2	7.492	7.493	-0.001	102105960H	5.00	4.83	
2	8.277	8.275	0.002	143393794H	5.00	5.01	
2	8.911	8.910	0.001	18268134H	5.00	5.15	
		Average of Peak Amounts =				4.80	
						RPD = 7.48	
* 44 Dibutylchlorendate ISTD							M
1	8.159	8.152	0.007	65908555H	0.1000	0.1000	M
2	7.928	7.927	0.001	86328786H	0.1000	0.1000	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

GCTOXLEVEL5_00005 Amount Added: 1.00 Units: mL
GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

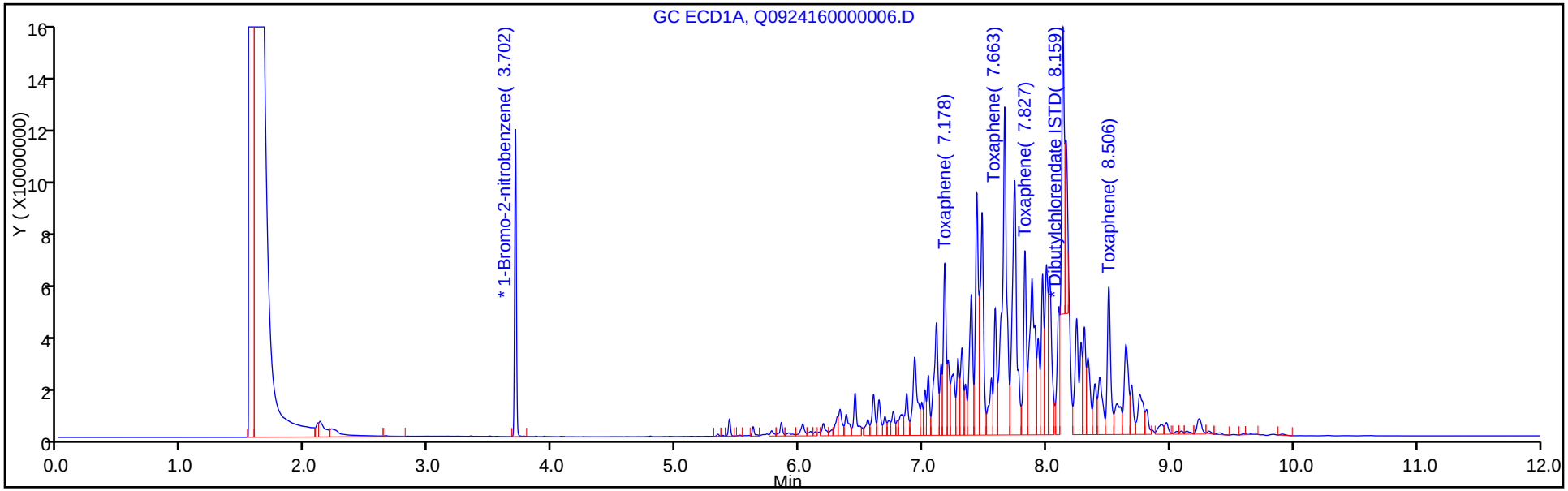
Report Date: 25-Sep-2016 23:10:43 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

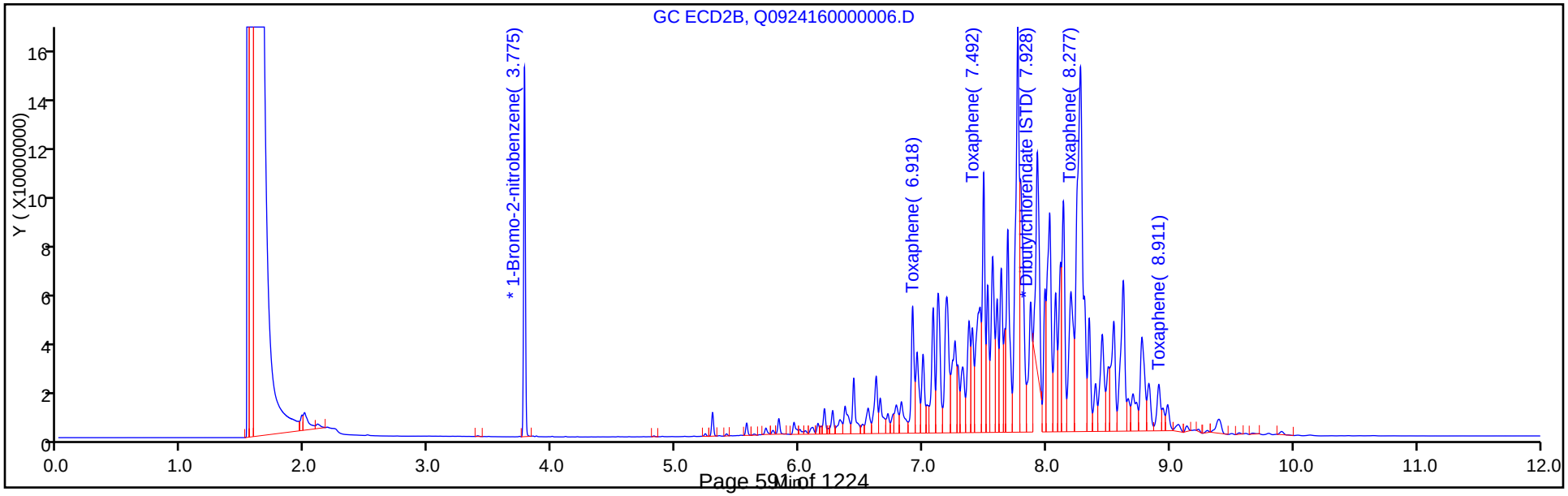
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000006.D

Injection Date:	24-Sep-2016 10:18:55	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



Report Date: 25-Sep-2016 23:10:43 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000006.D

Injection Date: 24-Sep-2016 10:18:55 Instrument ID: CHGC15

Lims ID: IC

Client ID:

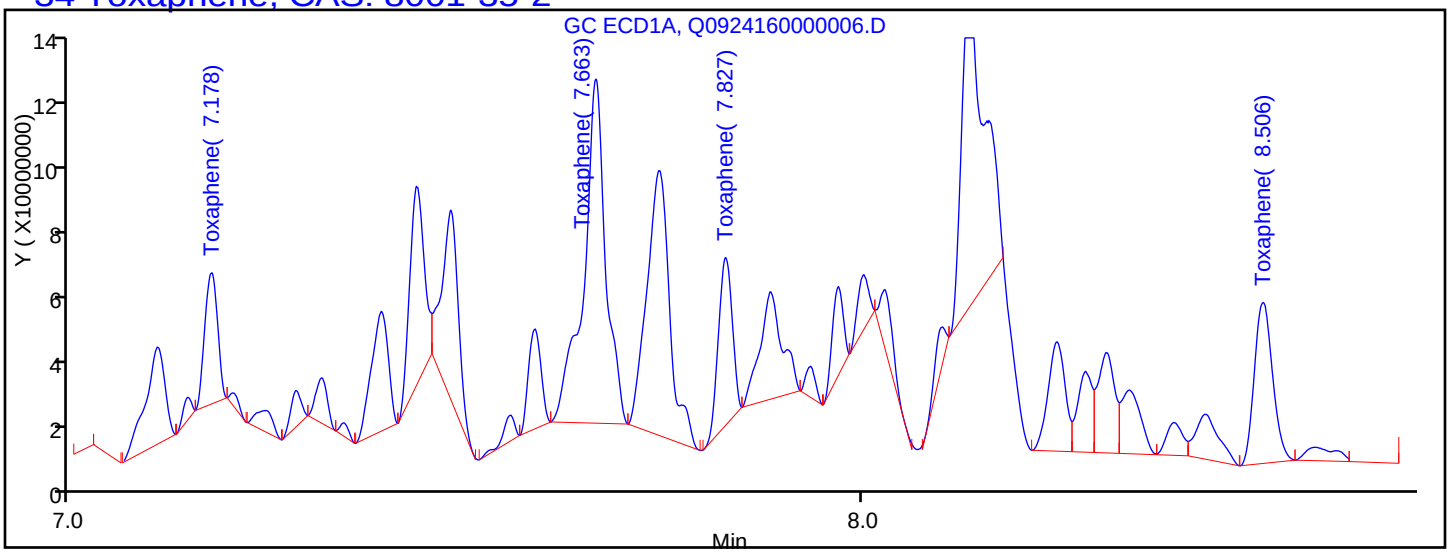
Operator ID: 402331 ALS Bottle#: 6 Worklist Smp#: 6

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: IS PEST_CHGC15 Limit Group: GCS 8081B ICAL with IS

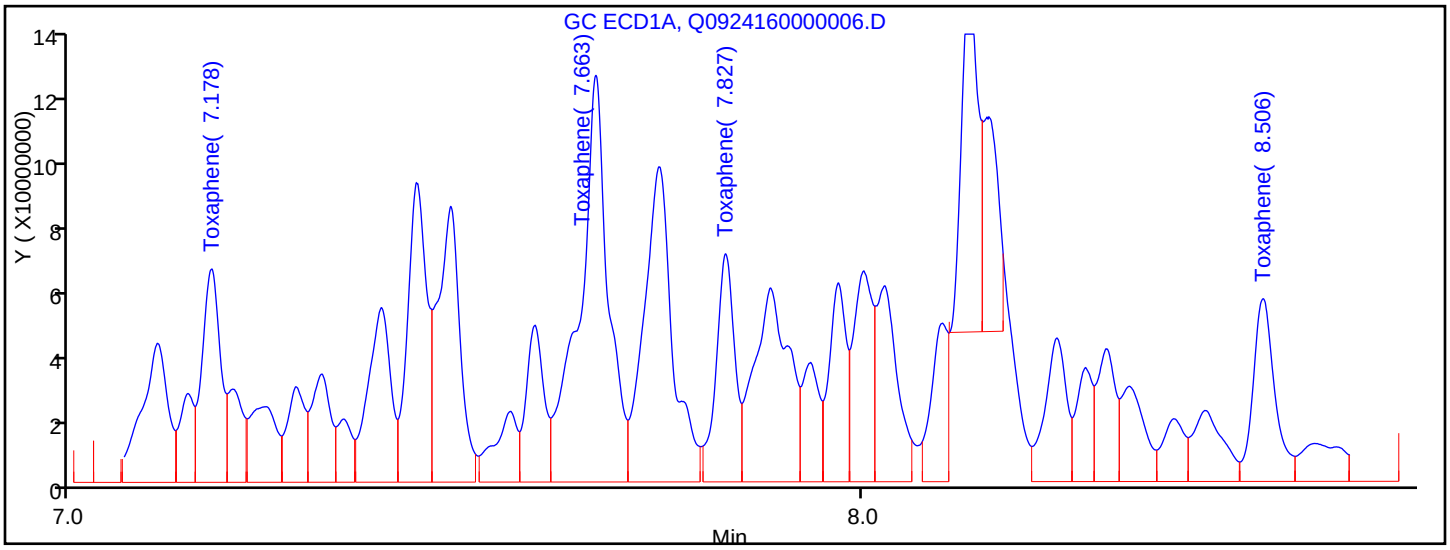
Column: MR-1 (0.53 mm) Detector GC ECD1A

34 Toxaphene, CAS: 8001-35-2



Processing Integration Results

7.178	Response = 40221598
7.663	Response = 105583032
7.827	Response = 51526870
8.506	Response = 49388127



Manual Integration Results

7.178	Response = 65476633	M
7.663	Response = 124808527	M
7.827	Response = 69996346	M
8.506	Response = 56077316	M

Reviewer: eppinged, 24-Sep-2016 10:51:35

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Pittsburgh

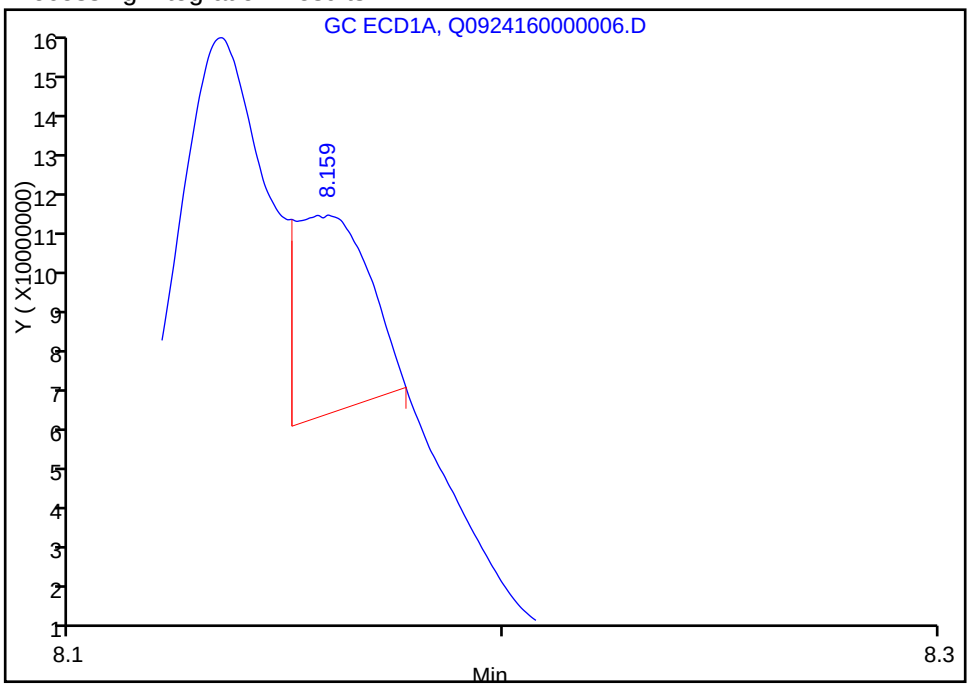
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000006.D
Injection Date: 24-Sep-2016 10:18:55 Instrument ID: CHGC15
Lims ID: IC
Client ID:
Operator ID: 402331 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: IS PEST_CHGC15 Limit Group: GCS 8081B ICAL with IS
Column: MR-1 (0.53 mm) Detector GC ECD1A

* 44 Dibutylchlorendate ISTD, CAS: 1770-80-5

Signal: 1

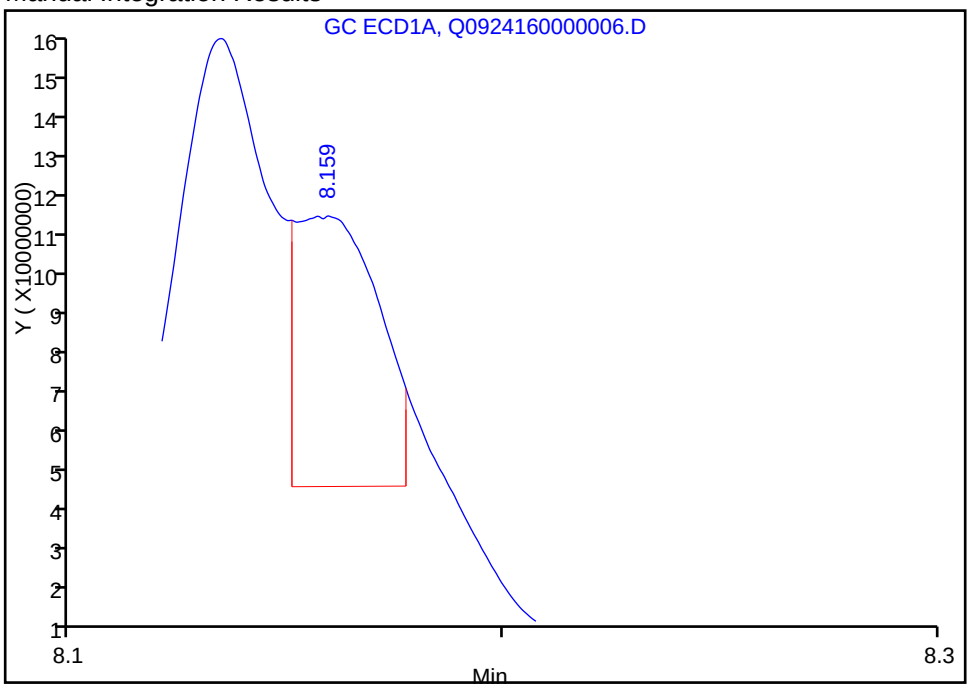
Processing Integration Results

RT: 8.16
Height: 48437051
Amount: 0.100000
Amount Units: ng



Manual Integration Results

RT: 8.16
Height: 65908555
Amount: 0.100000
Amount Units: ng



Reviewer: eppinged, 24-Sep-2016 10:51:35
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189037

SDG No.:

Instrument ID: CHGC15 GC Column: MR-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/24/2016 09:17 Calibration End Date: 09/24/2016 10:18 Calibration ID: 32932

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-189037/2	Q0924160000002.D
Level 2	IC 180-189037/3	Q0924160000003.D
Level 3	IC 180-189037/4	Q0924160000004.D
Level 4	IC 180-189037/5	Q0924160000005.D
Level 5	IC 180-189037/6	Q0924160000006.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Toxaphene Peak 1	0.0176	0.0148	0.0131	0.0117	0.0115	Ave		0.0137				18.3		20.0			
Toxaphene Peak 2	0.0269	0.0240	0.0250	0.0229	0.0237	Ave		0.0245				6.4		20.0			
Toxaphene Peak 3	0.0158	0.0322	0.0331	0.0320	0.0332	Lin1	0	0.0332							1.0000		0.9900
Toxaphene Peak 4	0.0158	0.0043	0.0043	0.0039	0.0042	Lin1	0.0002	0.0041							0.9980		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189037

SDG No.:

Instrument ID: CHGC15 GC Column: MR-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/24/2016 09:17 Calibration End Date: 09/24/2016 10:18 Calibration ID: 32932

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-189037/2	Q0924160000002.D
Level 2	IC 180-189037/3	Q0924160000003.D
Level 3	IC 180-189037/4	Q0924160000004.D
Level 4	IC 180-189037/5	Q0924160000005.D
Level 5	IC 180-189037/6	Q0924160000006.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
Toxaphene Peak 1	DBC	Ave	257224	2350921	10861150	26040673	49778778	0.0200	0.200	1.00	2.50	5.00
Toxaphene Peak 2	DBC	Ave	394004	3820614	20785642	50722139	102105960	0.0200	0.200	1.00	2.50	5.00
Toxaphene Peak 3	DBC	Lin1	230370	5125155	27533636	70927561	143393794	0.0200	0.200	1.00	2.50	5.00
Toxaphene Peak 4	DBC	Lin1	230370	689789	3591913	8753741	18268134	0.0200	0.200	1.00	2.50	5.00

Curve Type Legend:

Ave = Average ISTD by Height
Lin1 = Linear 1/Conc^2 ISTD by Height

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000002.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 24-Sep-2016 09:17:05 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013569-002
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub4

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 25-Sep-2016 23:18:24 Calib Date: 24-Sep-2016 16:14:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000029.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK001

First Level Reviewer: eppinged Date: 25-Sep-2016 23:18:24

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.702	3.701	0.000	105001567H	0.1000	0.1000	
2	3.775	3.775	0.000	131729980H	0.1000	0.1000	
34 Toxaphene							M
1	7.174	7.177	-0.003	283681H	0.0200	0.0253	M
1	7.662	7.663	-0.001	301187H	0.0200	0.0159	
1	7.831	7.828	0.003	296046H	0.0200	0.0249	
1	8.508	8.505	0.003	184392H	0.0200	0.0207	M
		Average of Peak Amounts =				0.0217	
2	6.916	6.918	-0.002	257224H	0.0200	0.0256	M
2	7.493	7.493	0.000	394004H	0.0200	0.0220	M
2	8.904	8.275	0.629	230370H	0.0200	0.0200	M
2	8.904	8.910	-0.006	230370H	0.0200	0.0242	M
		Average of Peak Amounts =				0.0229	
						RPD = 5.48	
* 44 Dibutylchlorendate ISTD							M
1	8.151	8.152	-0.001	47666269H	0.1000	0.1000	M
2	7.926	7.927	-0.001	73123748H	0.1000	0.1000	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

GCTOXLEVEL1_00005 Amount Added: 1.00 Units: mL
GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

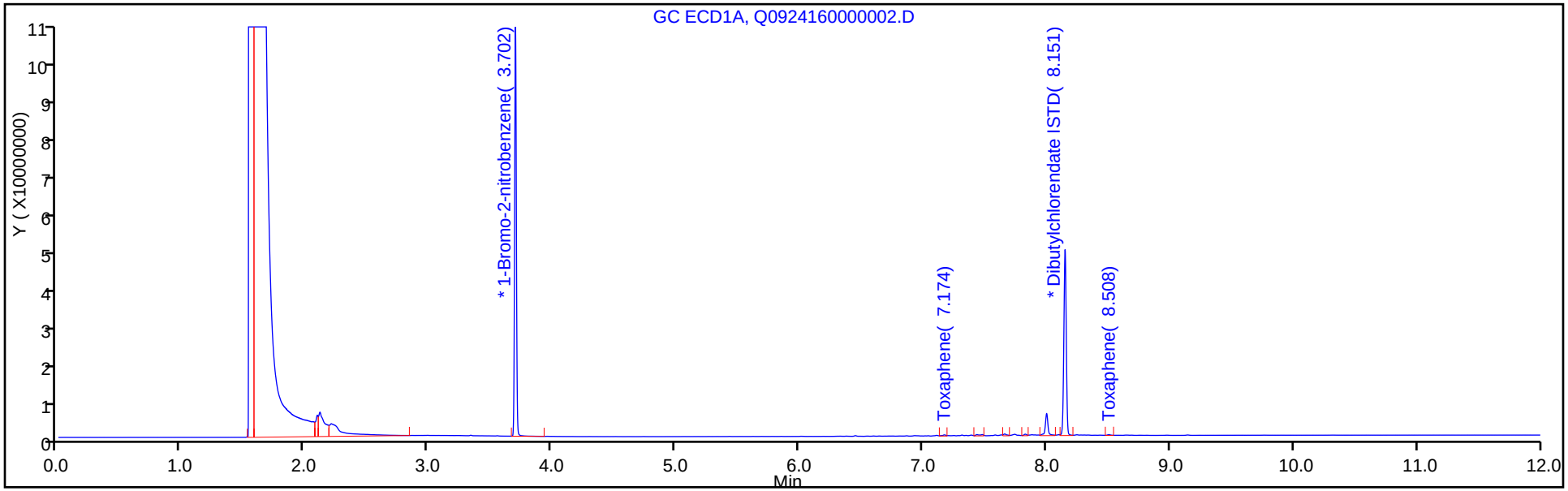
Report Date: 25-Sep-2016 23:18:32 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

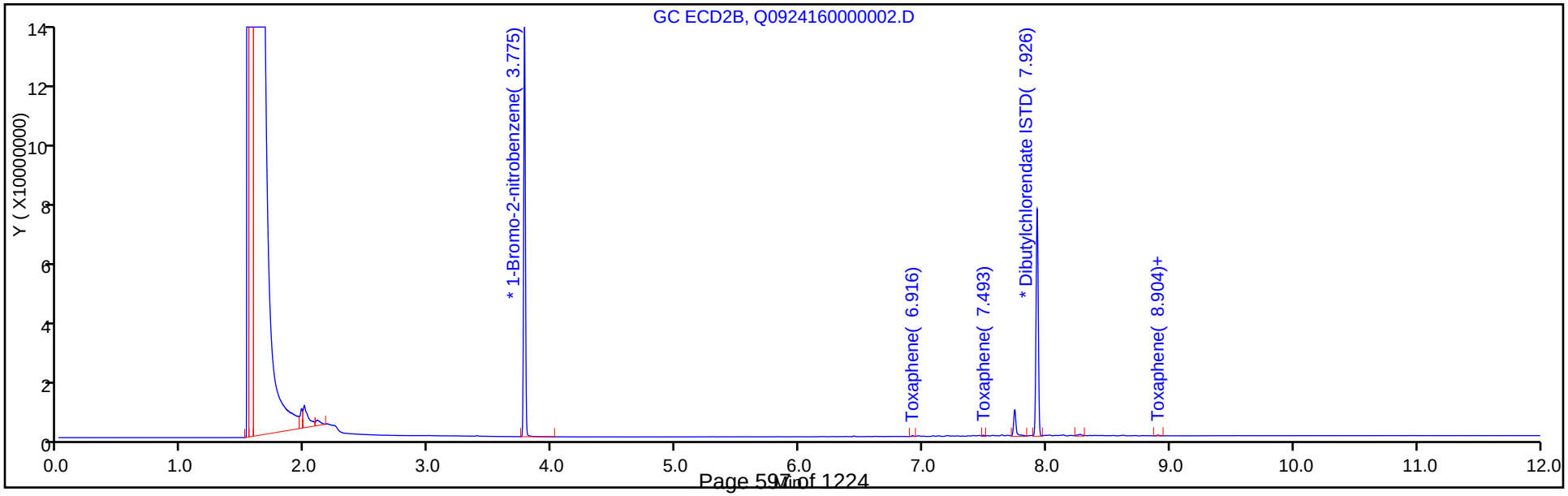
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000002.D

Injection Date:	24-Sep-2016 09:17:05	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



Report Date: 25-Sep-2016 23:18:32 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000002.D

Injection Date: 24-Sep-2016 09:17:05 Instrument ID: CHGC15

Lims ID: IC

Client ID:

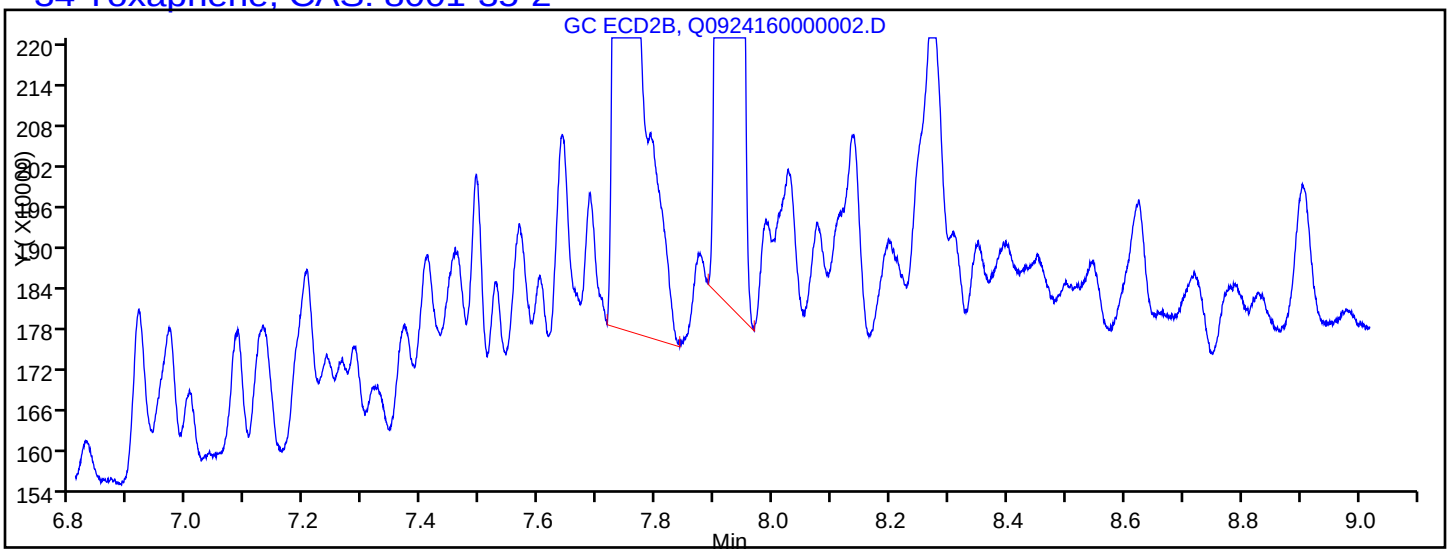
Operator ID: 402331 ALS Bottle#: 2 Worklist Smp#: 2

Injection Vol: 1.0 ul Dil. Factor: 1.0000

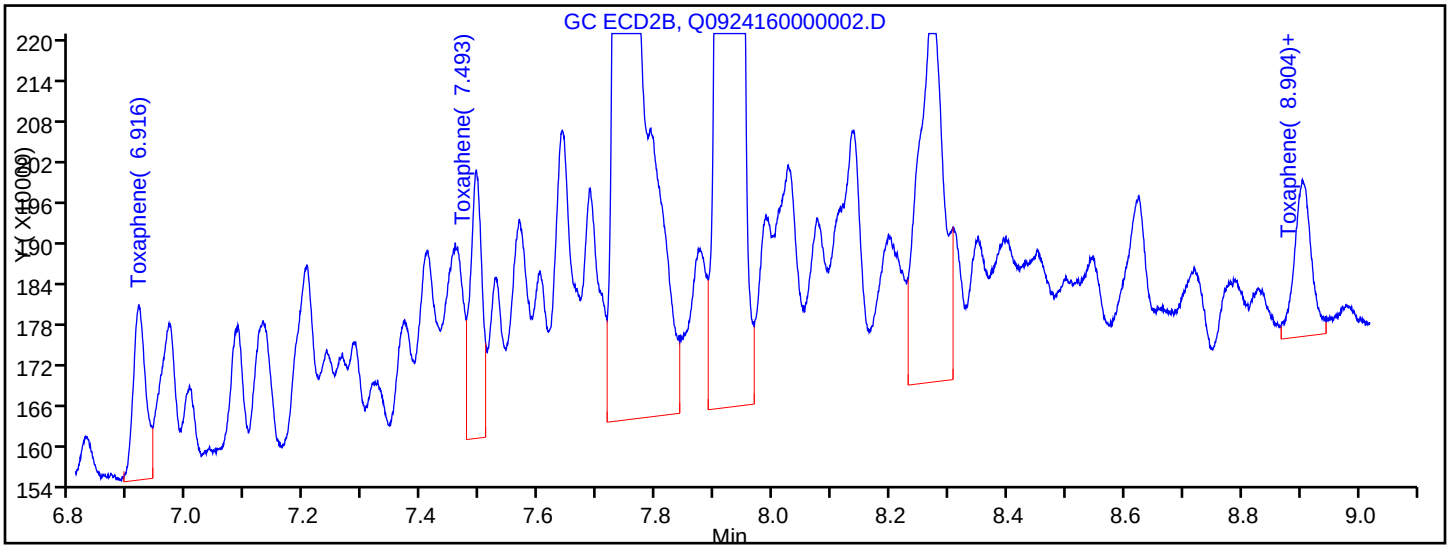
Method: IS PEST_CHGC15 Limit Group: GCS 8081B ICAL with IS

Column: MR-2 (0.53 mm) Detector GC ECD2B

34 Toxaphene, CAS: 8001-35-2



Processing Integration Results



Manual Integration Results

6.916	Response = 257224	M
7.493	Response = 394004	M
8.904	Response = 230370	M
8.904	Response = 230370	M

Reviewer: eppinged, 24-Sep-2016 09:49:59

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Pittsburgh

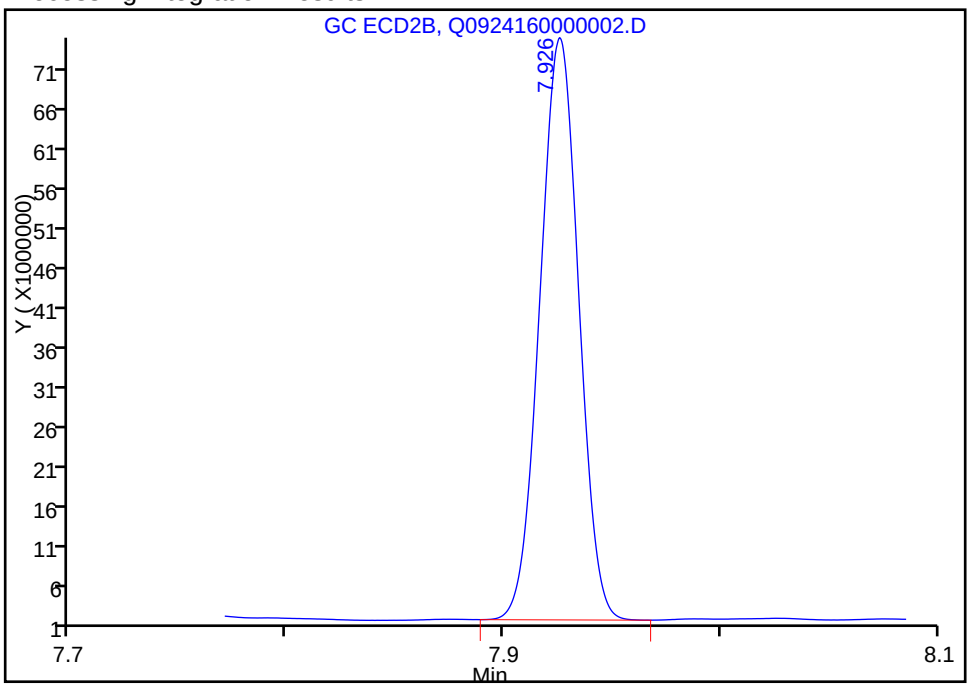
Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000002.D				
Injection Date:	24-Sep-2016 09:17:05	Instrument ID:	CHGC15		
Lims ID:	IC				
Client ID:					
Operator ID:	402331	ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		
Column:	MR-2 (0.53 mm)	Detector	GC ECD2B		

* 44 Dibutylchlorendate ISTD, CAS: 1770-80-5

Signal: 2

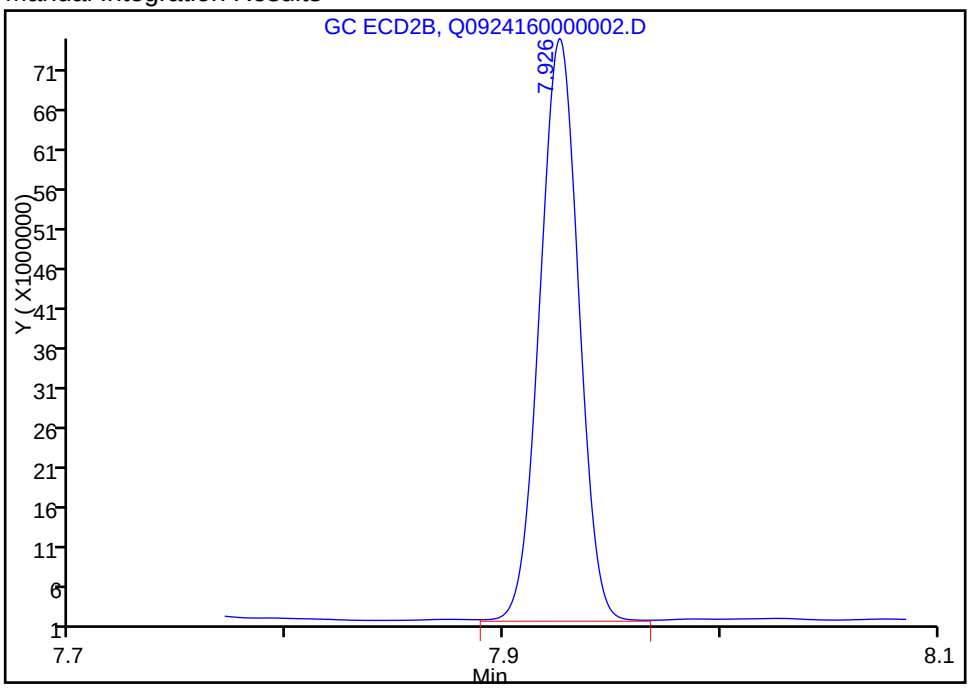
Processing Integration Results

RT: 7.93
Height: 72969122
Amount: 0.100000
Amount Units: ng



Manual Integration Results

RT: 7.93
Height: 73123748
Amount: 0.100000
Amount Units: ng



Reviewer: eppinged, 24-Sep-2016 09:49:59
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000003.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 24-Sep-2016 09:32:31 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013569-003
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub4

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 25-Sep-2016 23:10:08 Calib Date: 24-Sep-2016 16:14:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000029.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK001

First Level Reviewer: eppinged Date: 24-Sep-2016 10:14:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.702	3.701	0.000	111567811H	0.1000	0.1000	
2	3.775	3.775	0.000	139748907H	0.1000	0.1000	
34 Toxaphene							M
1	7.178	7.177	0.001	2381105H	0.2000	0.1951	M
1	7.663	7.663	0.000	4527643H	0.2000	0.2195	M
1	7.829	7.828	0.001	2548259H	0.2000	0.1971	M
1	8.505	8.505	0.000	1931369H	0.2000	0.1992	M
		Average of Peak Amounts =				0.2027	
2	6.917	6.918	-0.001	2350921H	0.2000	0.2152	M
2	7.494	7.493	0.001	3820614H	0.2000	0.1962	M
2	8.274	8.275	-0.001	5125155H	0.2000	0.2047	M
2	8.910	8.910	0.000	689789H	0.2000	0.1602	M
		Average of Peak Amounts =				0.1941	
						RPD = 4.36	
* 44 Dibutylchlorendate ISTD							M
1	8.151	8.152	-0.001	51904416H	0.1000	0.1000	M
2	7.926	7.927	-0.001	79494250H	0.1000	0.1000	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

GCTOXLEVEL2_00003 Amount Added: 1.00 Units: mL
GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

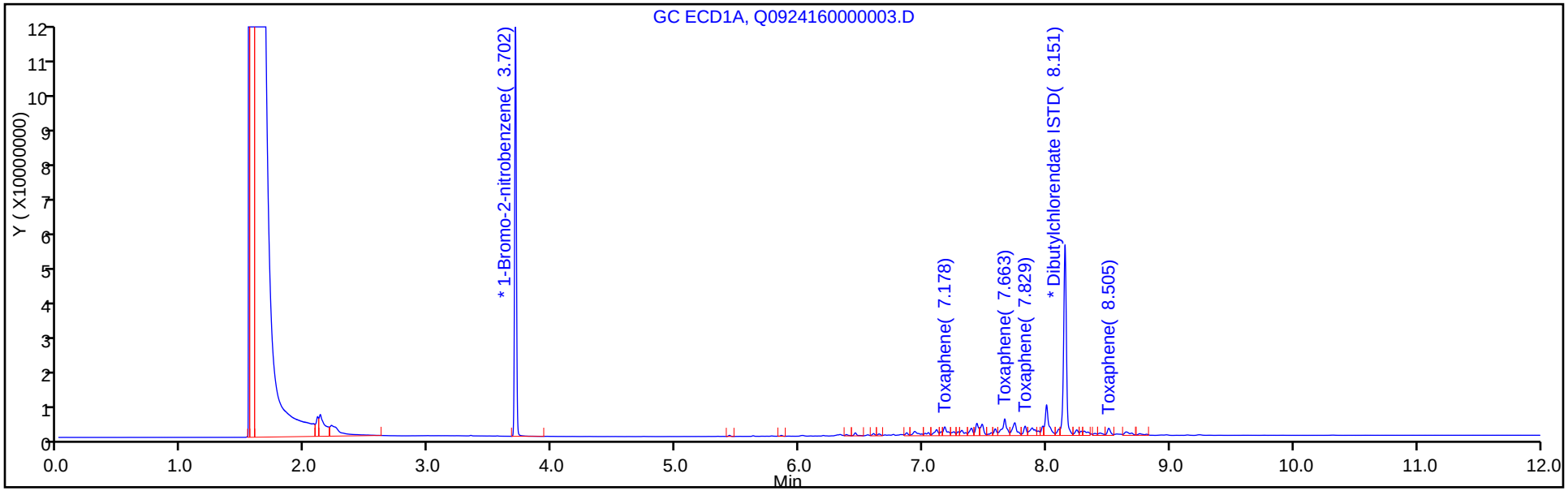
Report Date: 25-Sep-2016 23:10:10 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

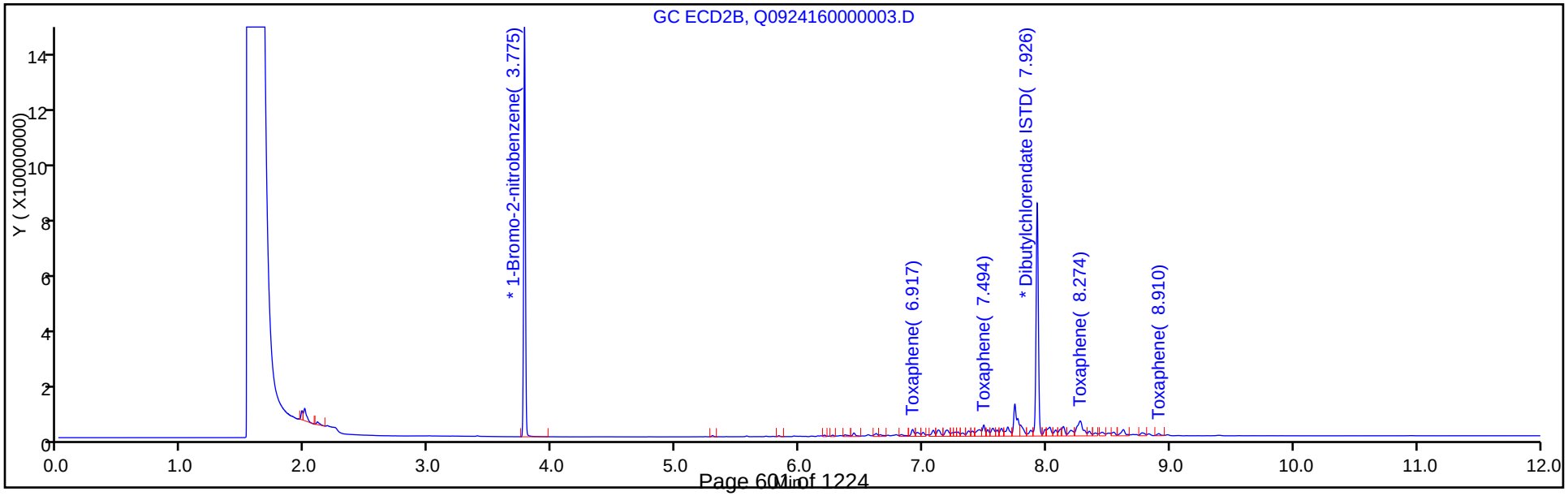
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000003.D

Injection Date:	24-Sep-2016 09:32:31	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



Report Date: 25-Sep-2016 23:10:10 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000003.D

Injection Date: 24-Sep-2016 09:32:31 Instrument ID: CHGC15

Lims ID: IC

Client ID:

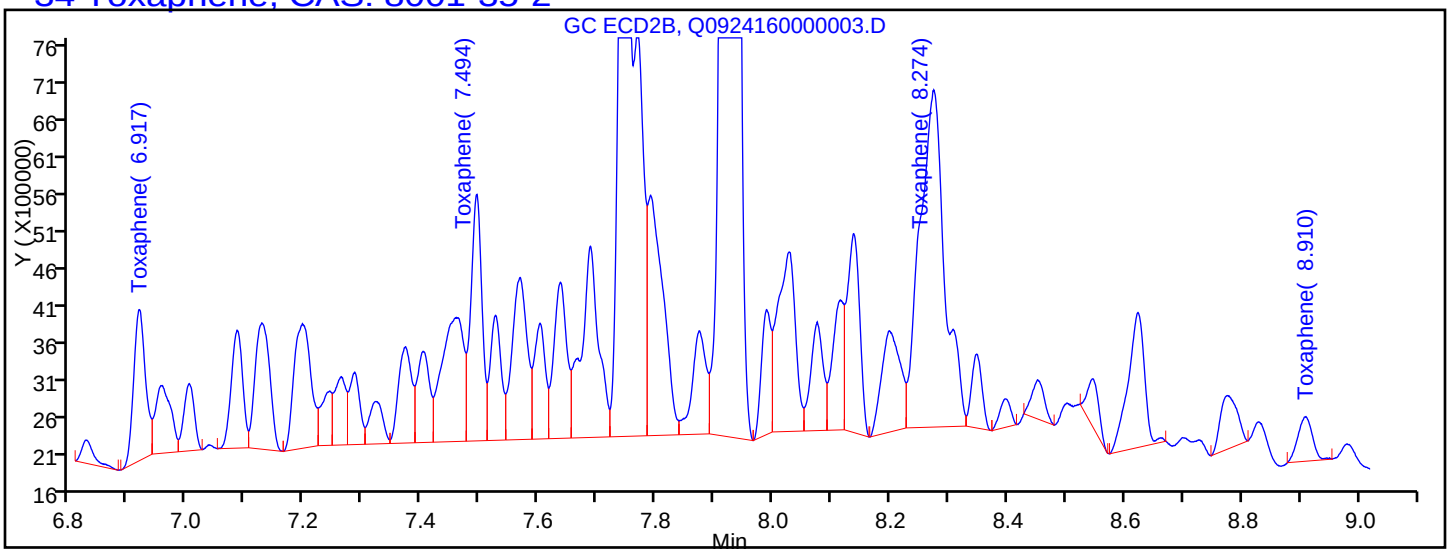
Operator ID: 402331 ALS Bottle#: 3 Worklist Smp#: 3

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: IS PEST_CHGC15 Limit Group: GCS 8081B ICAL with IS

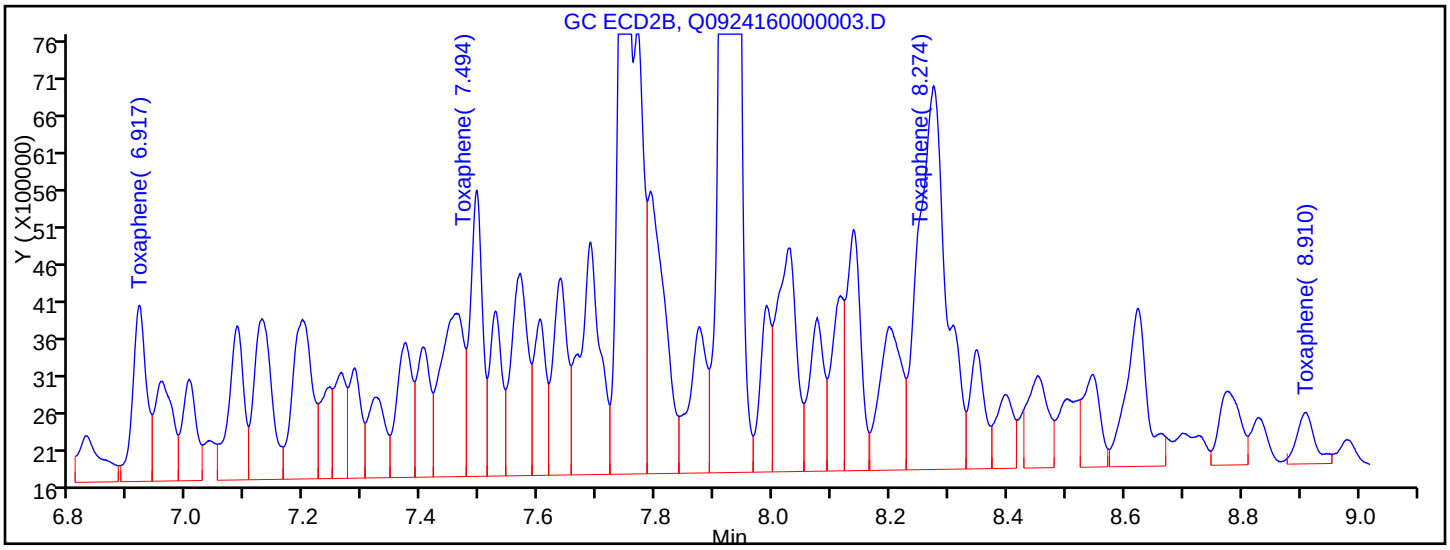
Column: MR-2 (0.53 mm) Detector GC ECD2B

34 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.917	Response = 2013996
7.494	Response = 3288212
8.274	Response = 4500645
8.910	Response = 595448



Manual Integration Results

6.917	Response = 2350921	M
7.494	Response = 3820614	M
8.274	Response = 5125155	M
8.910	Response = 689789	M

Reviewer: eppinged, 24-Sep-2016 10:14:55

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Pittsburgh

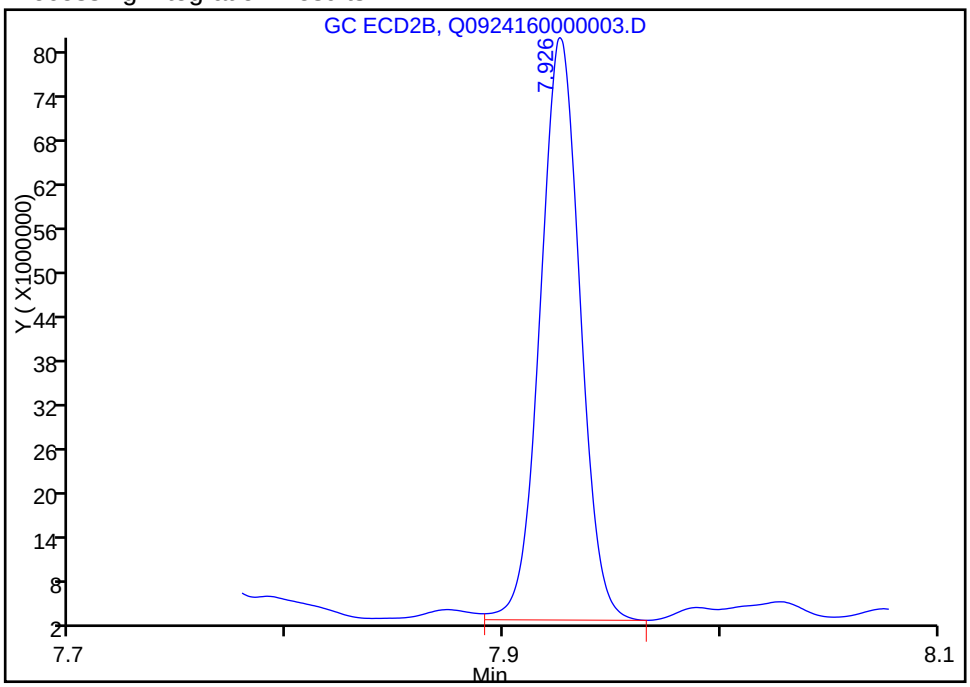
Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000003.D				
Injection Date:	24-Sep-2016 09:32:31	Instrument ID:	CHGC15		
Lims ID:	IC				
Client ID:					
Operator ID:	402331	ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		
Column:	MR-2 (0.53 mm)	Detector	GC ECD2B		

* 44 Dibutylchlorendate ISTD, CAS: 1770-80-5

Signal: 2

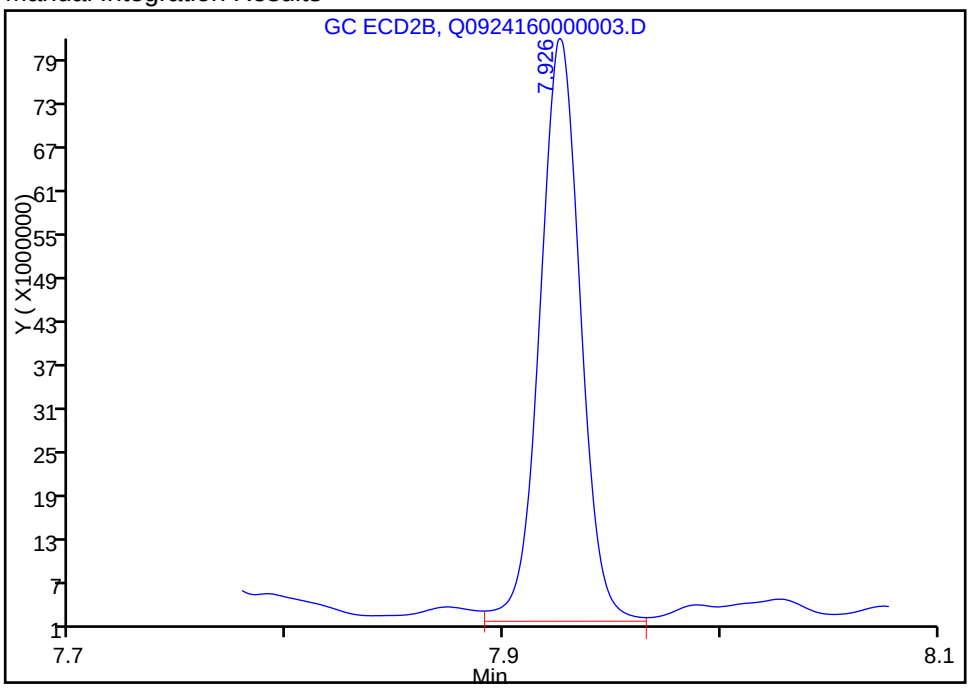
Processing Integration Results

RT: 7.93
Height: 78960789
Amount: 0.100000
Amount Units: ng



Manual Integration Results

RT: 7.93
Height: 79494250
Amount: 0.100000
Amount Units: ng



Reviewer: eppinged, 24-Sep-2016 10:14:55
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000004.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 24-Sep-2016 09:47:56 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013569-004
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub4

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 25-Sep-2016 23:10:20 Calib Date: 24-Sep-2016 16:14:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000029.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK001

First Level Reviewer: eppinged Date: 24-Sep-2016 10:25:57

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.702	3.701	0.000	109835071H	0.1000	0.1000	
2	3.775	3.775	0.000	138515881H	0.1000	0.1000	
34 Toxaphene							M
1	7.177	7.177	0.000	12753061H	1.00	0.8935	M
1	7.663	7.663	0.000	23957553H	1.00	0.99	M
1	7.828	7.828	0.000	13276929H	1.00	0.8780	M
1	8.505	8.505	0.000	10738006H	1.00	0.9467	M
		Average of Peak Amounts =				0.9278	
2	6.918	6.918	0.000	10861150H	1.00	0.9506	M
2	7.493	7.493	0.000	20785642H	1.00	1.02	M
2	8.275	8.275	0.000	27533636H	1.00	1.01	M
2	8.910	8.910	0.000	3591913H	1.00	1.01	M
		Average of Peak Amounts =				1.00	
						RPD = 7.21	
* 44 Dibutylchlorendate ISTD							M
1	8.150	8.152	-0.002	60709301H	0.1000	0.1000	M
2	7.926	7.927	-0.001	83145122H	0.1000	0.1000	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

GCTOXLEVEL3_00007 Amount Added: 1.00 Units: mL
GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

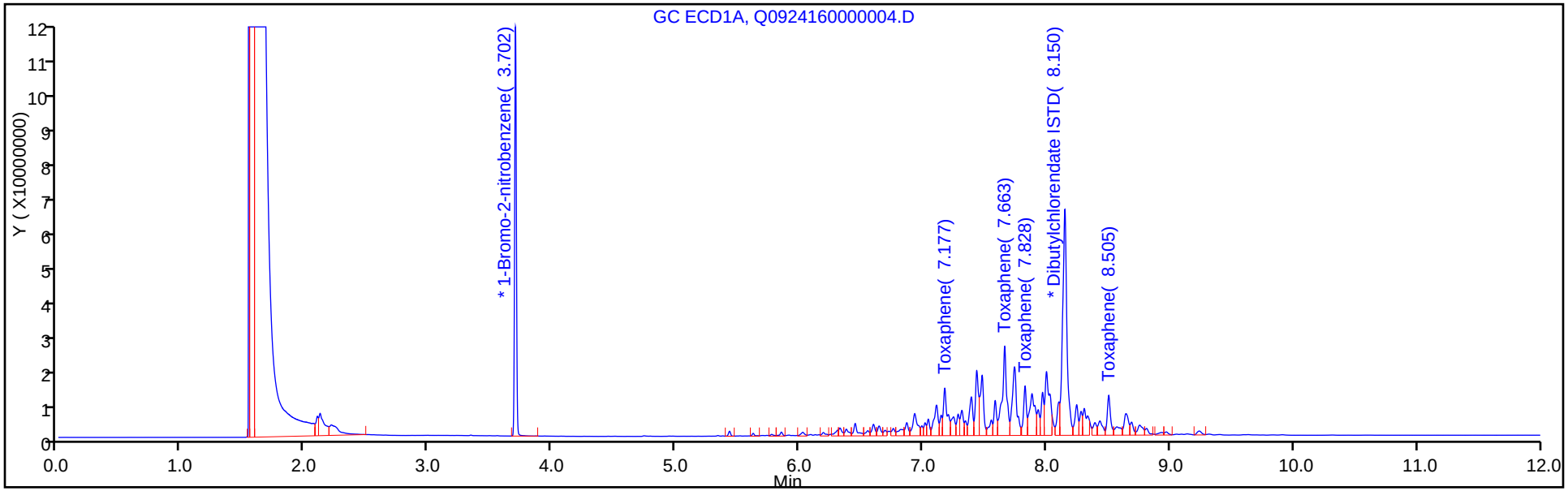
Report Date: 25-Sep-2016 23:10:22 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

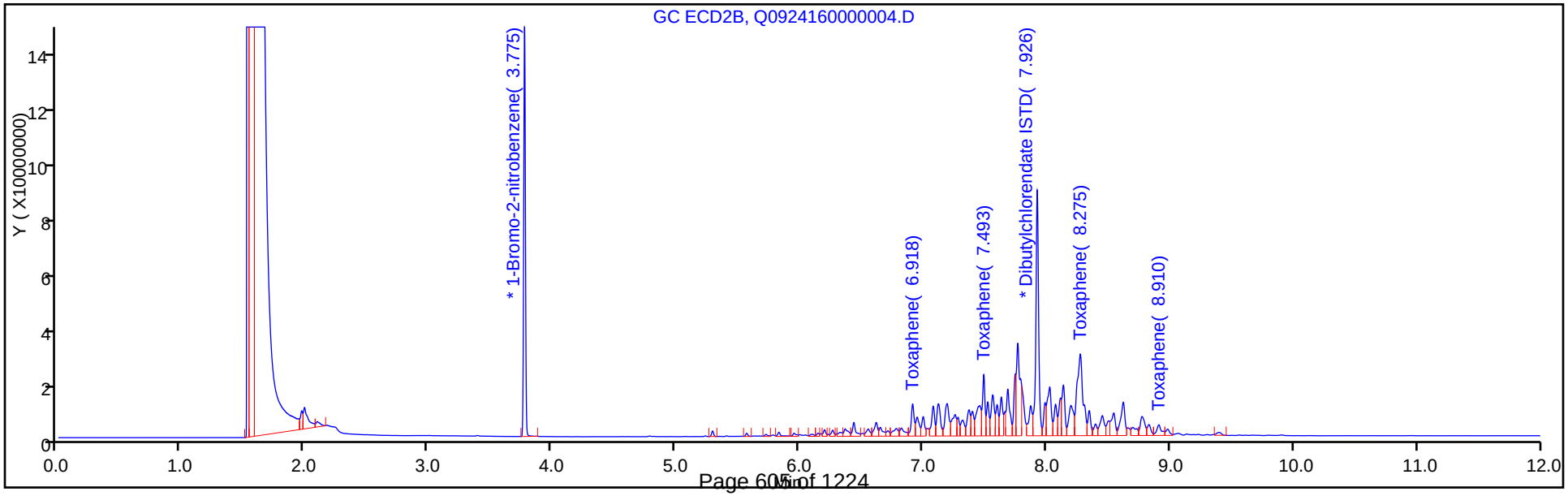
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000004.D

Injection Date:	24-Sep-2016 09:47:56	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



Report Date: 25-Sep-2016 23:10:22 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000004.D

Injection Date: 24-Sep-2016 09:47:56 Instrument ID: CHGC15

Lims ID: IC

Client ID:

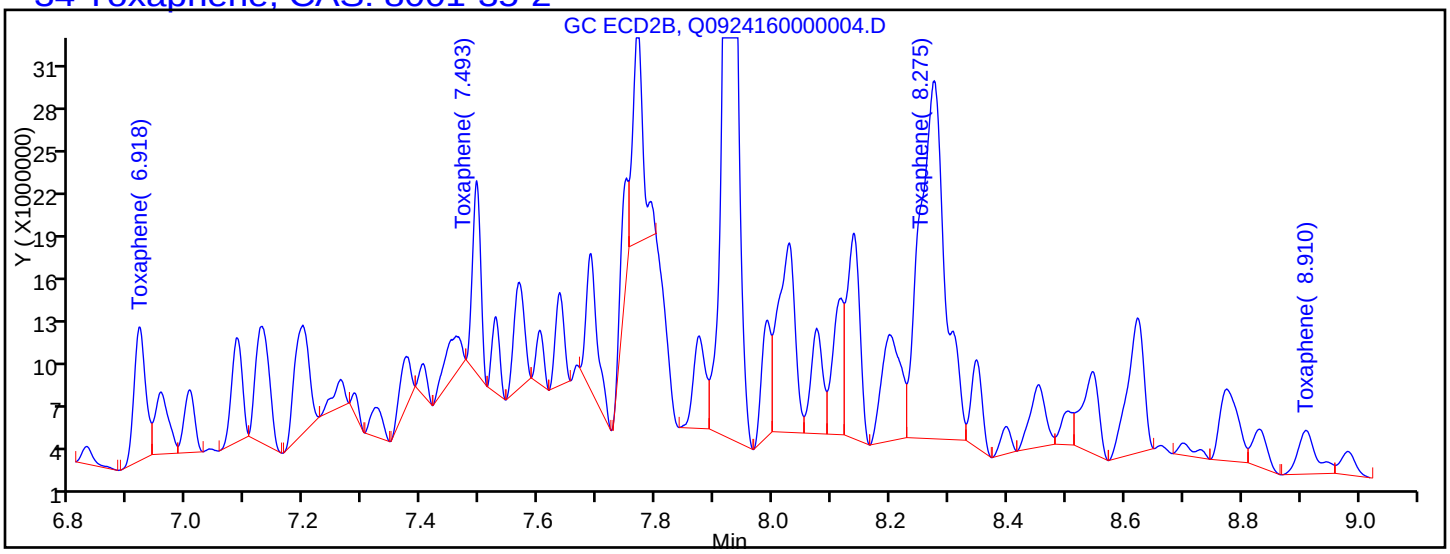
Operator ID: 402331 ALS Bottle#: 4 Worklist Smp#: 4

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: IS PEST_CHGC15 Limit Group: GCS 8081B ICAL with IS

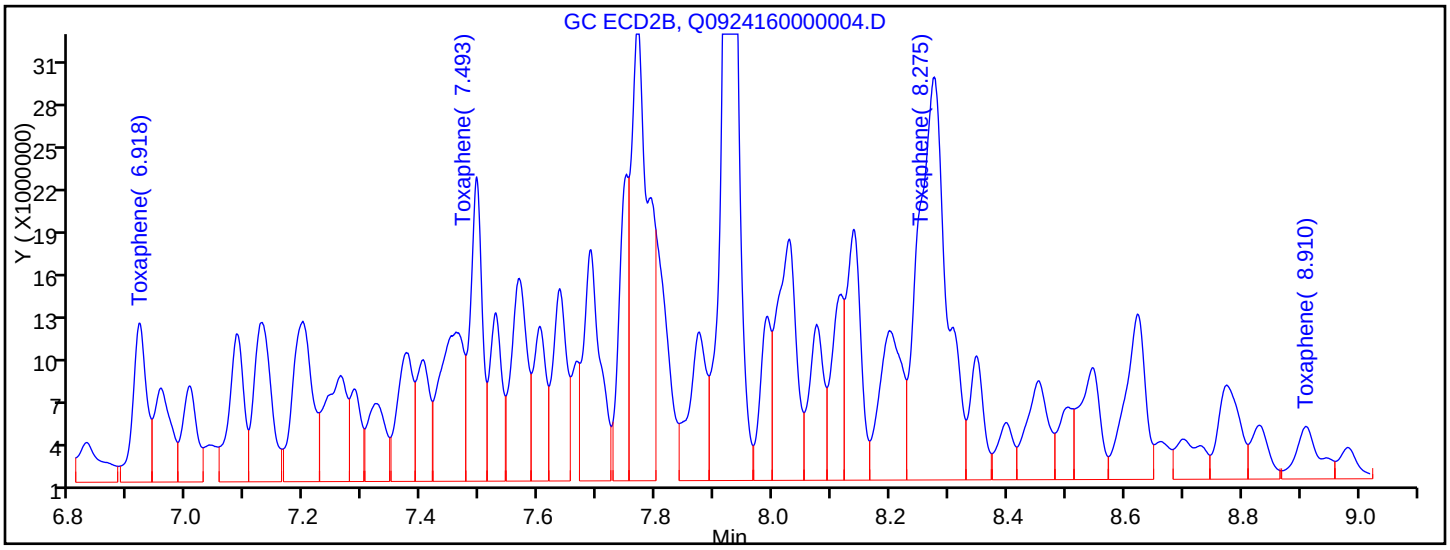
Column: MR-2 (0.53 mm) Detector GC ECD2B

34 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.918	Response = 9128293	
7.493	Response = 13138959	
8.275	Response = 24451981	
8.910	Response = 2988047	



Manual Integration Results

6.918	Response = 10861150	M
7.493	Response = 20785642	M
8.275	Response = 27533636	M
8.910	Response = 3591913	M

Reviewer: eppinged, 24-Sep-2016 10:25:57

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Pittsburgh

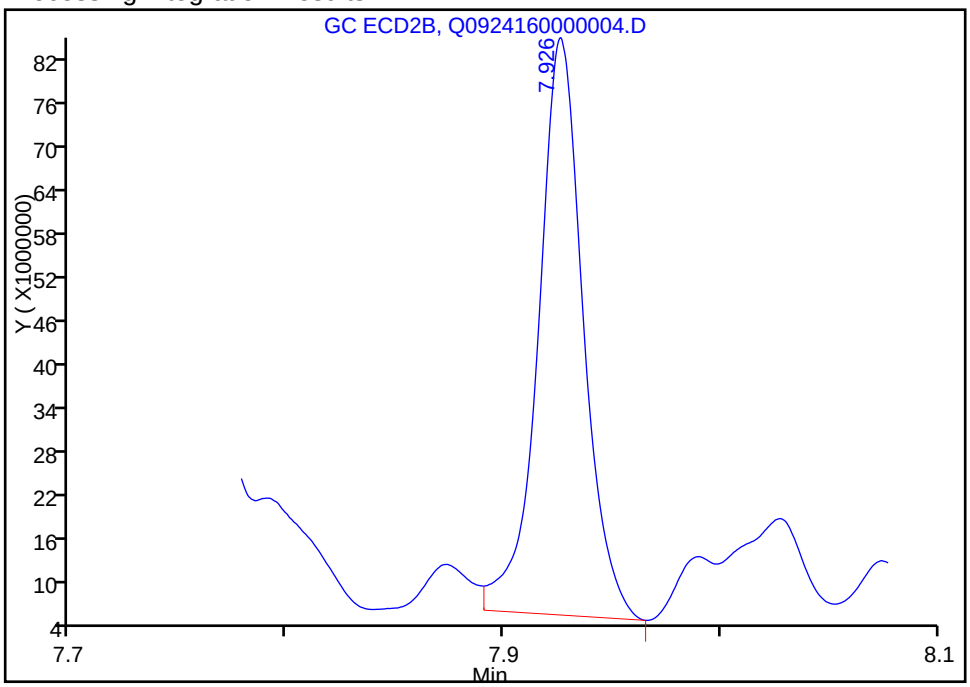
Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000004.D				
Injection Date:	24-Sep-2016 09:47:56	Instrument ID:	CHGC15		
Lims ID:	IC				
Client ID:					
Operator ID:	402331	ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		
Column:	MR-2 (0.53 mm)	Detector	GC ECD2B		

* 44 Dibutylchlorendate ISTD, CAS: 1770-80-5

Signal: 2

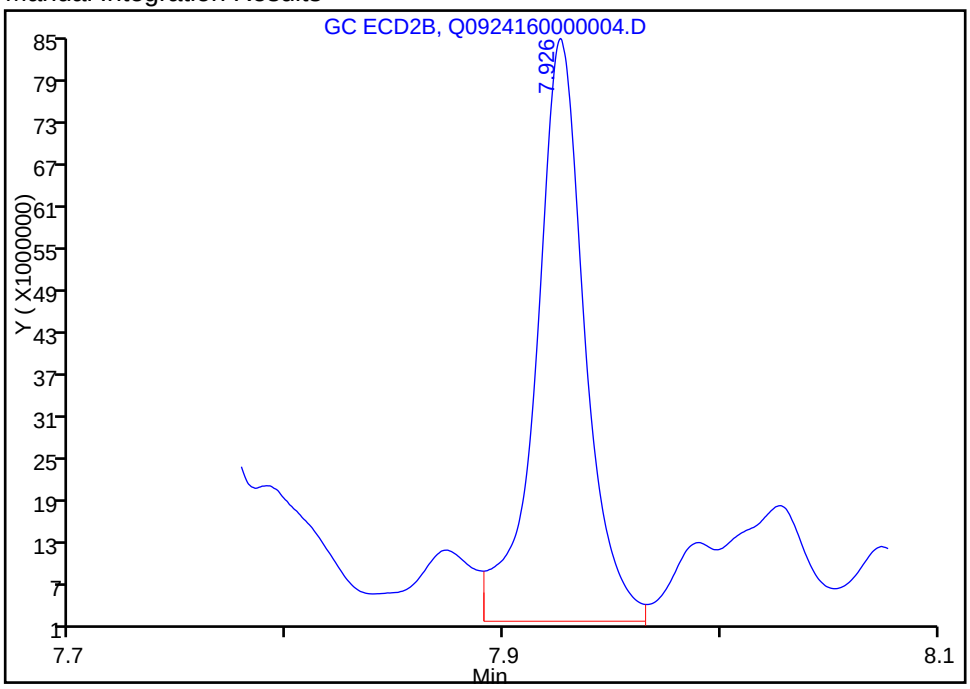
Processing Integration Results

RT: 7.93
Height: 80012587
Amount: 0.100000
Amount Units: ng



Manual Integration Results

RT: 7.93
Height: 83145122
Amount: 0.100000
Amount Units: ng



Reviewer: eppinged, 24-Sep-2016 10:25:57
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000005.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 24-Sep-2016 10:03:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013569-005
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub4

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 25-Sep-2016 23:10:32 Calib Date: 24-Sep-2016 16:14:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000029.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK001

First Level Reviewer: eppinged Date: 24-Sep-2016 10:29:17

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.702	3.701	0.000	107869690H	0.1000	0.1000	
2	3.775	3.775	0.000	136433046H	0.1000	0.1000	
34 Toxaphene							M
1	7.177	7.177	0.000	31634642H	2.50	2.55	M
1	7.664	7.663	0.001	60869839H	2.50	2.90	M
1	7.828	7.828	0.000	34069146H	2.50	2.59	M
1	8.506	8.505	0.001	27387011H	2.50	2.78	M
		Average of Peak Amounts =				2.71	
2	6.918	6.918	0.000	26040673H	2.50	2.14	
2	7.494	7.493	0.001	50722139H	2.50	2.33	
2	8.275	8.275	0.000	70927561H	2.50	2.42	
2	8.911	8.910	0.001	8753741H	2.50	2.37	
		Average of Peak Amounts =				2.32	
						RPD = 15.57	
* 44 Dibutylchlorendate ISTD							M
1	8.153	8.152	0.000	52747530H	0.1000	0.1000	M
2	7.926	7.927	0.000	88724373H	0.1000	0.1000	a

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

GCTOXLEVEL4_00003 Amount Added: 1.00 Units: mL
GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

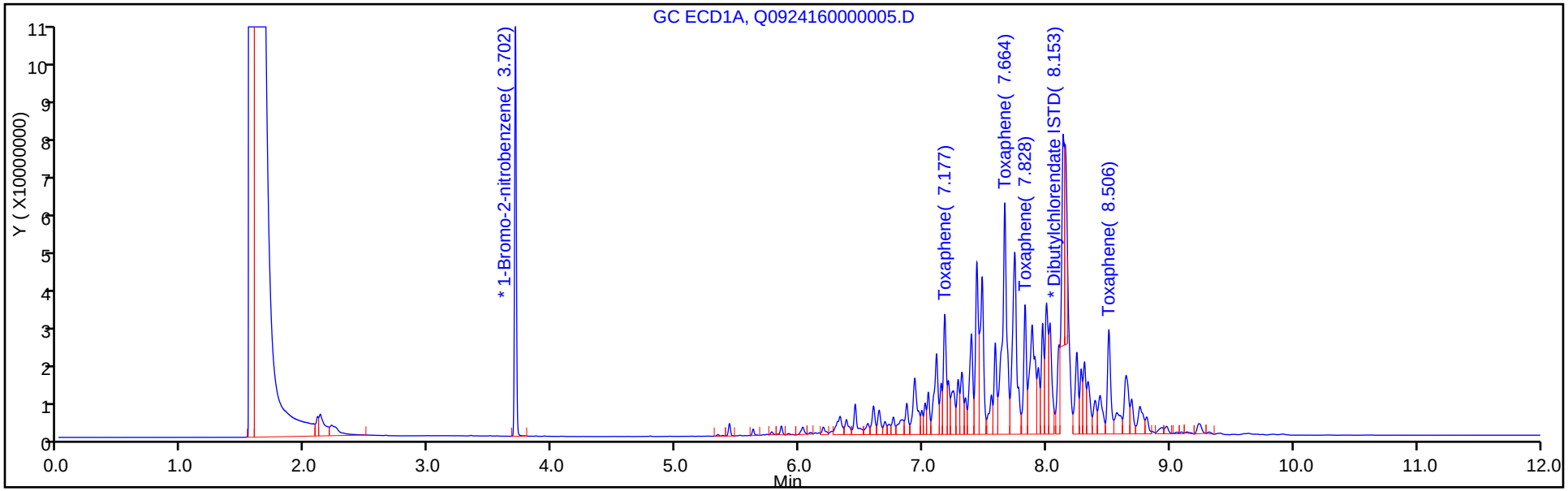
Report Date: 25-Sep-2016 23:10:33 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

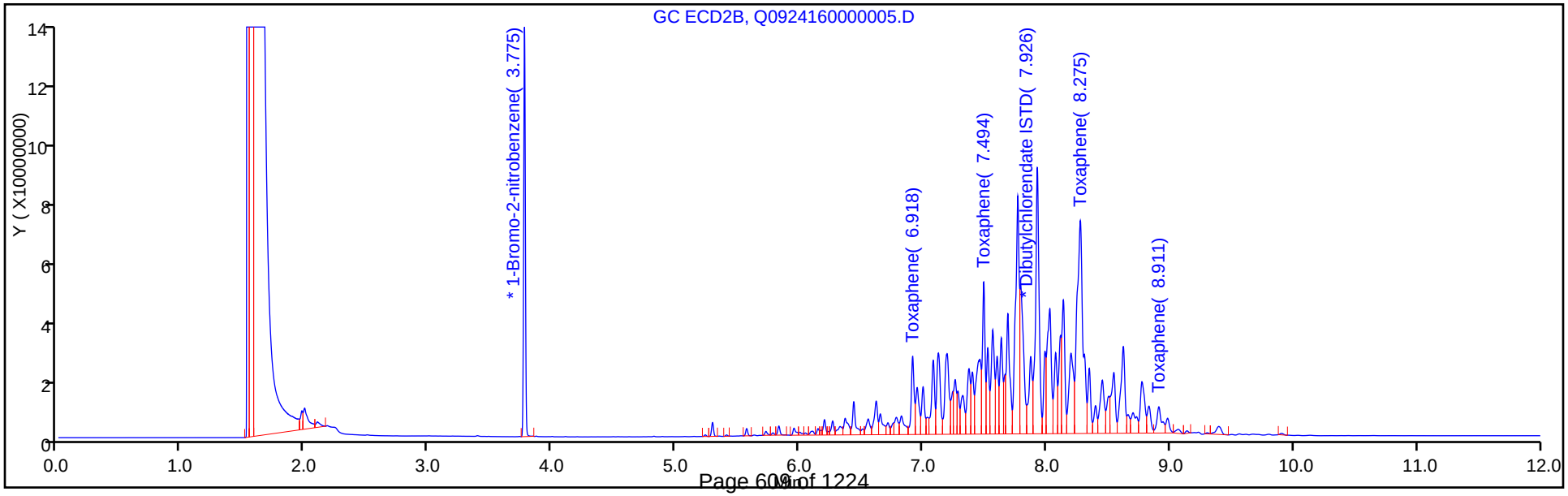
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000005.D

Injection Date:	24-Sep-2016 10:03:30	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh

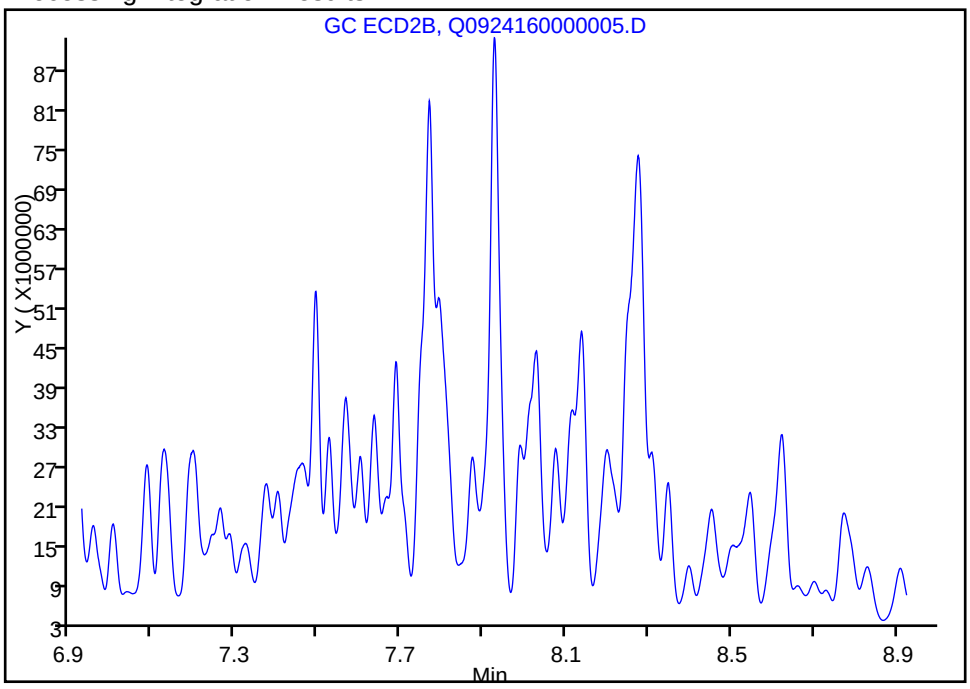
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000005.D
Injection Date: 24-Sep-2016 10:03:30 Instrument ID: CHGC15
Lims ID: IC
Client ID:
Operator ID: 402331 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: IS PEST_CHGC15 Limit Group: GCS 8081B ICAL with IS
Column: MR-2 (0.53 mm) Detector GC ECD2B

* 44 Dibutylchlorendate ISTD, CAS: 1770-80-5

Signal: 2

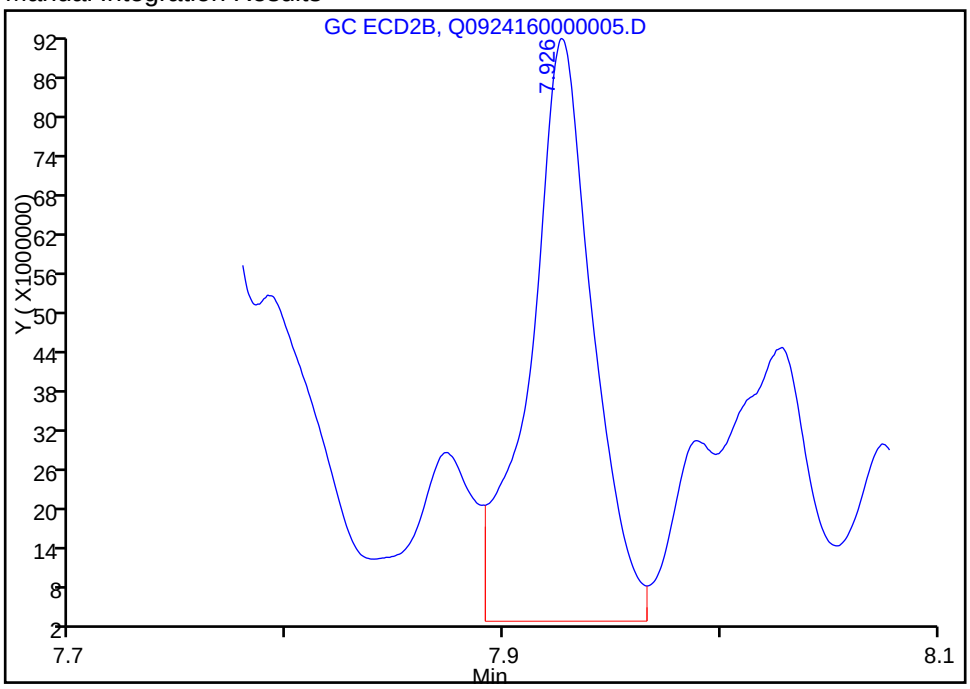
Processing Integration Results

RT: 7.93
Height: 0
Amount: 0.100000
Amount Units: ng



Manual Integration Results

RT: 7.93
Height: 88724373
Amount: 0.100000
Amount Units: ng



Reviewer: eppinged, 24-Sep-2016 10:29:17
Audit Action: Assigned Compound ID Audit Reason: Split Peak

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000006.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 24-Sep-2016 10:18:55 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013569-006
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub4

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 25-Sep-2016 23:10:42 Calib Date: 24-Sep-2016 16:14:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000029.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK001

First Level Reviewer: eppinged Date: 24-Sep-2016 10:51:35

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.702	3.701	0.000	116954535H	0.1000	0.1000	
2	3.775	3.775	0.000	145223817H	0.1000	0.1000	
34 Toxaphene							M
1	7.178	7.177	0.001	65476633H	5.00	4.23	M
1	7.663	7.663	0.000	124808527H	5.00	4.77	M
1	7.827	7.828	-0.001	69996346H	5.00	4.26	M
1	8.506	8.505	0.001	56077316H	5.00	4.55	M
		Average of Peak Amounts =				4.45	
2	6.918	6.918	0.000	49778778H	5.00	4.20	
2	7.492	7.493	-0.001	102105960H	5.00	4.83	
2	8.277	8.275	0.002	143393794H	5.00	5.01	
2	8.911	8.910	0.001	18268134H	5.00	5.15	
		Average of Peak Amounts =				4.80	
						RPD = 7.48	
* 44 Dibutylchlorendate ISTD							M
1	8.159	8.152	0.007	65908555H	0.1000	0.1000	M
2	7.928	7.927	0.001	86328786H	0.1000	0.1000	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

GCTOXLEVEL5_00005 Amount Added: 1.00 Units: mL
GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

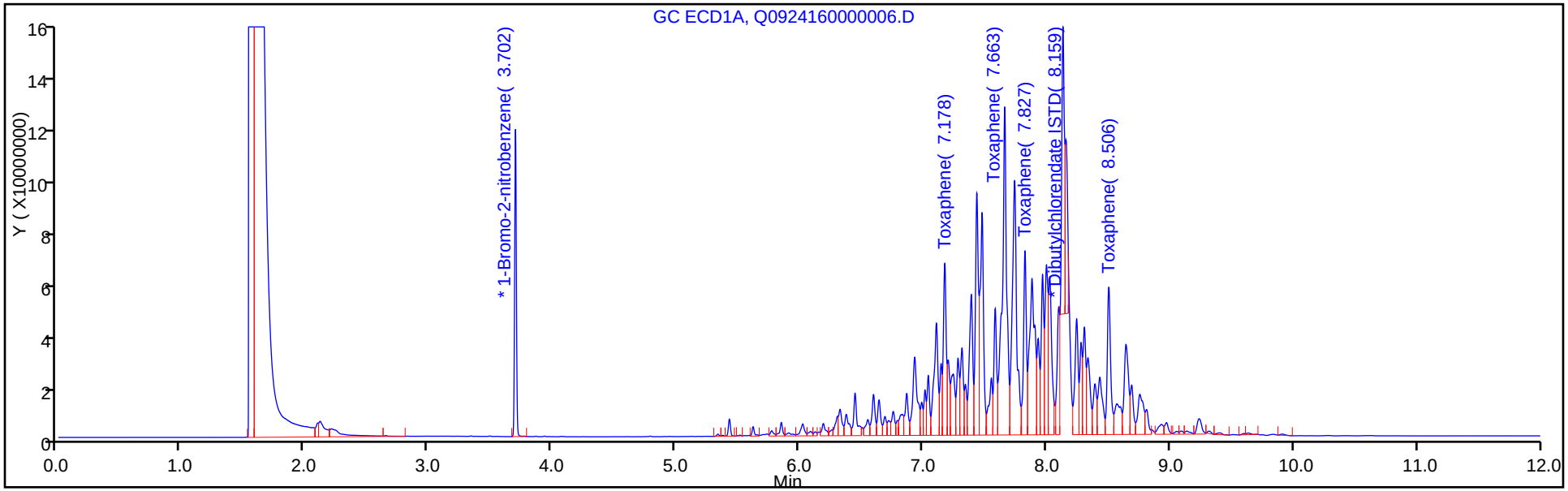
Report Date: 25-Sep-2016 23:10:43 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

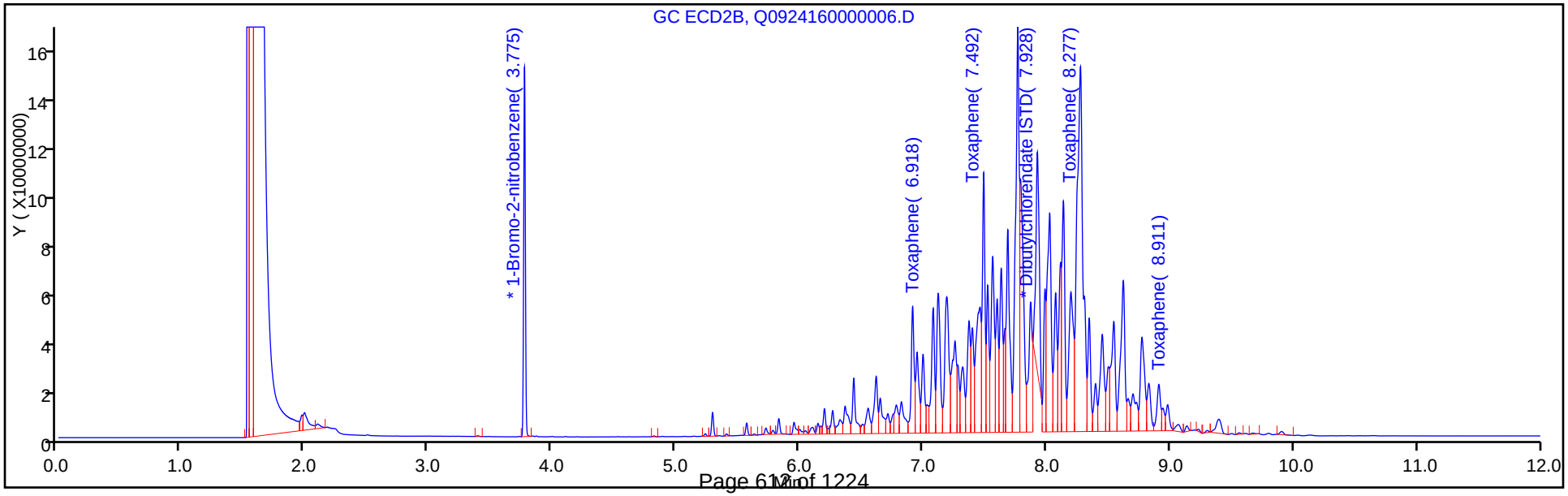
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000006.D

Injection Date:	24-Sep-2016 10:18:55	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

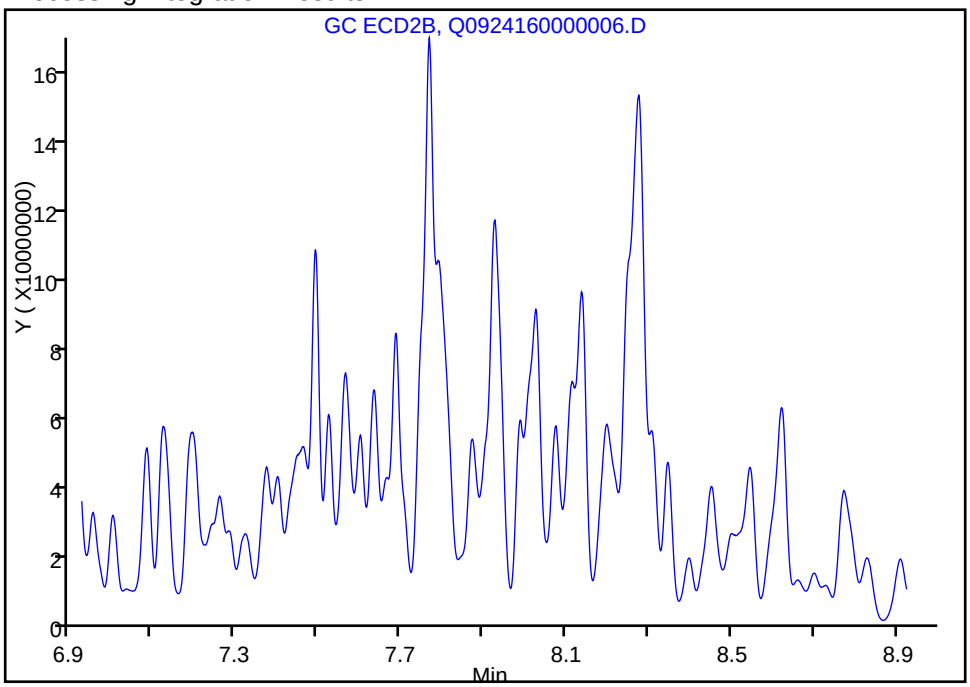
Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000006.D				
Injection Date:	24-Sep-2016 10:18:55	Instrument ID:	CHGC15		
Lims ID:	IC				
Client ID:					
Operator ID:	402331	ALS Bottle#:	6	Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		
Column:	MR-2 (0.53 mm)	Detector	GC ECD2B		

* 44 Dibutylchlorendate ISTD, CAS: 1770-80-5

Signal: 2

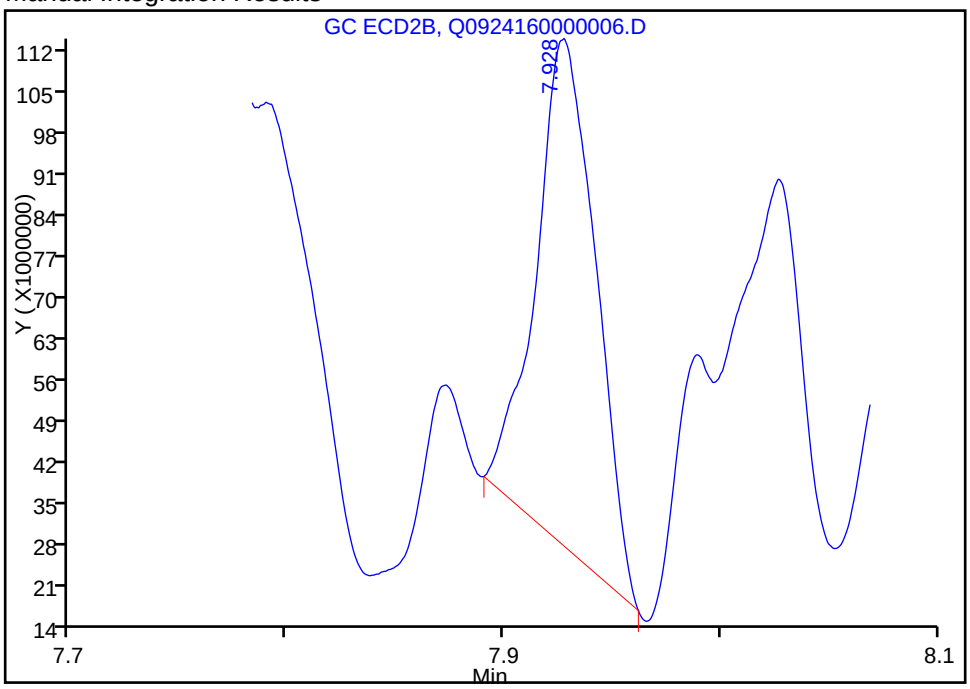
Processing Integration Results

RT: 7.93
Height: 0
Amount: 0.100000
Amount Units: ng



Manual Integration Results

RT: 7.93
Height: 86328786
Amount: 0.100000
Amount Units: ng



Reviewer: eppinged, 24-Sep-2016 10:51:35
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

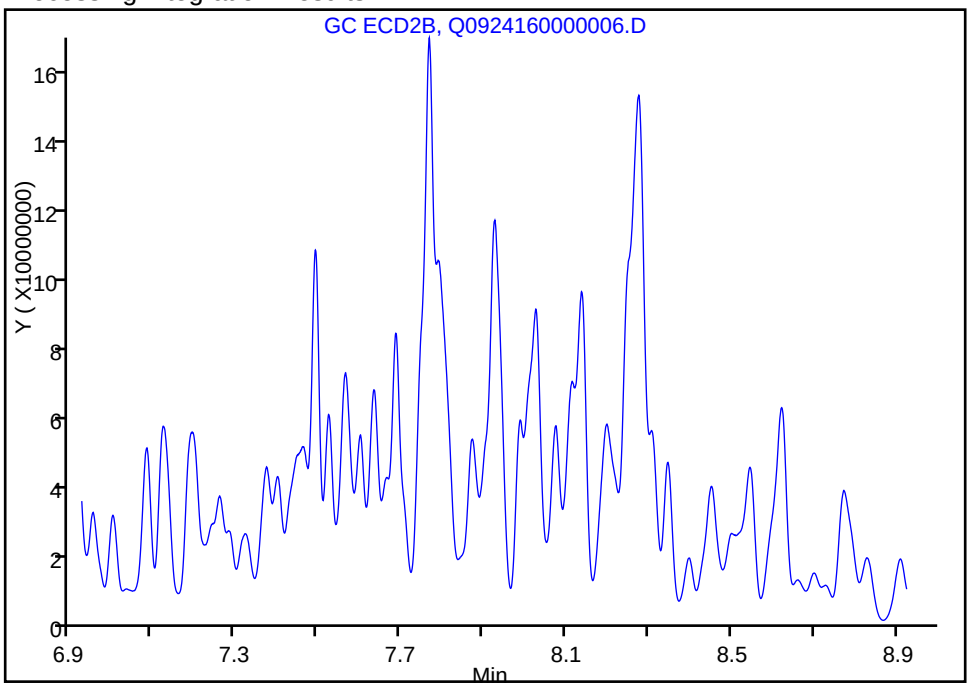
Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20160924-13569.b\Q0924160000006.D				
Injection Date:	24-Sep-2016 10:18:55	Instrument ID:	CHGC15		
Lims ID:	IC				
Client ID:					
Operator ID:	402331	ALS Bottle#:	6	Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		
Column:	MR-2 (0.53 mm)	Detector	GC ECD2B		

* 44 Dibutylchlorendate ISTD, CAS: 1770-80-5

Signal: 2

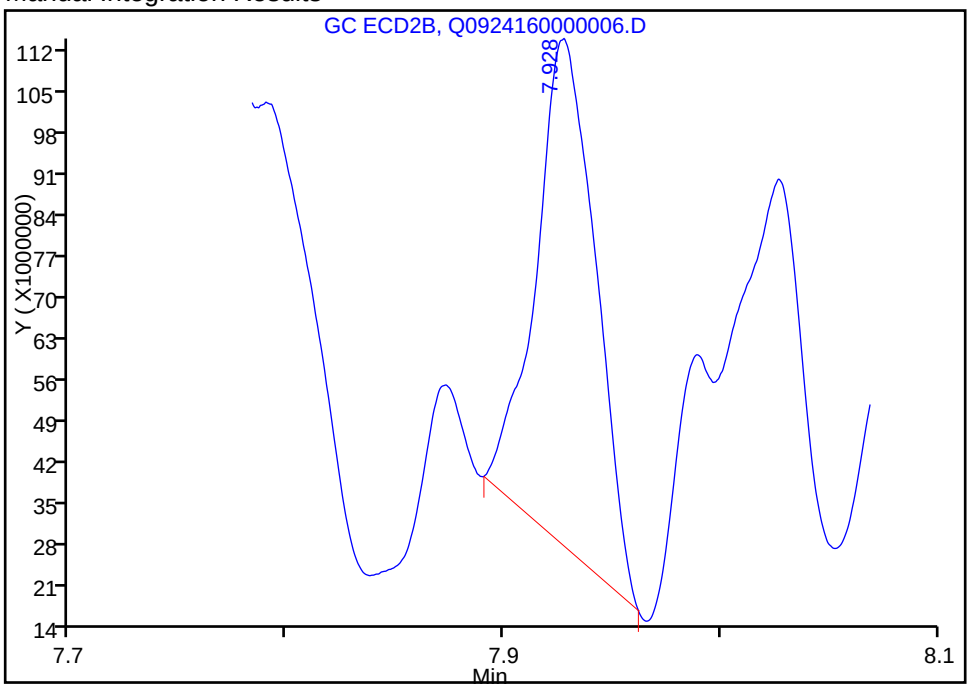
Processing Integration Results

RT: 7.93
Height: 0
Amount: 0.100000
Amount Units: ng



Manual Integration Results

RT: 7.93
Height: 86328786
Amount: 0.100000
Amount Units: ng



Reviewer: eppinged, 24-Sep-2016 10:51:35

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 190365

SDG No.:

Instrument ID: CHGC15 GC Column: MR-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/06/2016 13:08 Calibration End Date: 10/06/2016 14:25 Calibration ID: 33113

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-190365/7	Q100616A0000007.D
Level 2	IC 180-190365/8	Q100616A0000008.D
Level 3	ICIS 180-190365/9	Q100616A0000009.D
Level 4	IC 180-190365/10	Q100616A0000010.D
Level 5	IC 180-190365/11	Q100616A0000011.D
Level 6	IC 180-190365/12	Q100616A0000012.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
alpha-BHC	1.7902 1.5768	1.7708	1.7829	1.7231	1.7395	Ave		1.7306				4.6		20.0			
gamma-BHC (Lindane)	1.5885 1.3355	1.5485	1.5280	1.4534	1.4962	Ave		1.4917				6.0		20.0			
beta-BHC	0.7971 0.5733	0.6859	0.6543	0.6332	0.6400	Ave		0.6640				11.3		20.0			
delta-BHC	1.4076 1.2722	1.3902	1.3961	1.3747	1.4555	Ave		1.3827				4.4		20.0			
Heptachlor	1.3959 1.0802	1.2856	1.2966	1.2058	1.2067	Ave		1.2451				8.6		20.0			
Aldrin	1.3385 1.1002	1.2899	1.2865	1.2318	1.2620	Ave		1.2515				6.6		20.0			
Heptachlor epoxide	1.3395 0.9573	1.2133	1.1500	1.0979	1.0788	Ave		1.1394				11.4		20.0			
trans-Chlordane	1.2651 1.0266	1.1615	1.1554	1.1190	1.1489	Ave		1.1461				6.7		20.0			
cis-Chlordane	1.2597 0.9666	1.1024	1.1113	1.0720	1.0775	Ave		1.0983				8.6		20.0			
Endosulfan I	1.1821 0.8842	1.0641	1.0382	0.9987	1.0107	Ave		1.0297				9.4		20.0			
4,4'-DDE	1.9742 1.6710	1.9644	1.9191	1.8526	1.9202	Ave		1.8836				6.0		20.0			
Dieldrin	2.0980 1.6198	1.9925	1.9115	1.8209	1.8616	Ave		1.8841				8.6		20.0			
Endrin	1.7555 1.4165	1.7734	1.6526	1.5636	1.6117	Ave		1.6289				8.1		20.0			
4,4'-DDD	1.7362 1.3297	1.6058	1.5225	1.4906	1.5487	Ave		1.5389				8.7		20.0			
Endosulfan II	1.8012 1.3340	1.7429	1.6095	1.5393	1.5766	Ave		1.6006				10.3		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 190365

SDG No.:

Instrument ID: CHGC15 GC Column: MR-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/06/2016 13:08 Calibration End Date: 10/06/2016 14:25 Calibration ID: 33113

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Endrin aldehyde	1.4304 1.0752	1.3707	1.2410	1.1721	1.2264	Ave		1.2527				10.4		20.0			
4,4'-DDT	1.2943 1.1830	1.3225	1.2955	1.2508	1.3266	Ave		1.2788				4.2		20.0			
Endosulfan sulfate	1.6526 1.2339	1.5438	1.4163	1.3499	1.4066	Ave		1.4339				10.3		20.0			
Methoxychlor	0.8219 0.5315	0.6811	0.5933	0.5771	0.5902	Ave		0.6325				16.6		20.0			
Endrin ketone	1.6697 1.2930	1.6048	1.4512	1.4294	1.4781	Ave		1.4877				9.0		20.0			
Tetrachloro-m-xylene	1.4280 1.0912	1.3300	1.2801	1.2366	1.2479	Ave		1.2690				8.8		20.0			
DCB Decachlorobiphenyl (Surr)	0.9202 0.5829	0.8214	0.6961	0.6554	0.7020	Ave		0.7296				16.6		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 190365

SDG No.:

Instrument ID: CHGC15 GC Column: MR-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/06/2016 13:08 Calibration End Date: 10/06/2016 14:25 Calibration ID: 33113

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-190365/7	Q100616A0000007.D
Level 2	IC 180-190365/8	Q100616A0000008.D
Level 3	ICIS 180-190365/9	Q100616A0000009.D
Level 4	IC 180-190365/10	Q100616A0000010.D
Level 5	IC 180-190365/11	Q100616A0000011.D
Level 6	IC 180-190365/12	Q100616A0000012.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
alpha-BHC	BNB	Ave	1554209 307275055	7771974	40013274	80642043	158307297	0.00100 0.200	0.00500	0.0250	0.0500	0.100
gamma-BHC (Lindane)	BNB	Ave	1379101 260264260	6796072	34292631	68019324	136162459	0.00100 0.200	0.00500	0.0250	0.0500	0.100
beta-BHC	BNB	Ave	692033 111722818	3010263	14684809	29634415	58242766	0.00100 0.200	0.00500	0.0250	0.0500	0.100
delta-BHC	BNB	Ave	1221995 247922954	6101583	31333023	64333190	132454570	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Heptachlor	BNB	Ave	1211853 210499004	5642570	29099823	56428567	109812772	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Aldrin	BNB	Ave	1162027 214400378	5661287	28873298	57646936	114847559	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Heptachlor epoxide	BNB	Ave	1162896 186547749	5325024	25810017	51379126	98173151	0.00100 0.200	0.00500	0.0250	0.0500	0.100
trans-Chlordane	BNB	Ave	1098288 200060544	5097498	25932000	52367183	104558407	0.00100 0.200	0.00500	0.0250	0.0500	0.100
cis-Chlordane	BNB	Ave	1093654 188368514	4838127	24941212	50169273	98059726	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Endosulfan I	BNB	Ave	1026267 172310430	4670333	23299969	46736620	91978788	0.00100 0.200	0.00500	0.0250	0.0500	0.100
4,4'-DDE	DBC	Ave	1012095 196337098	4876941	25607546	51885169	103538302	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Dieldrin	DBC	Ave	1075583 190322504	4946736	25506034	50997264	100377657	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Endrin	DBC	Ave	899989 166433282	4402563	22052357	43791306	86900179	0.00100 0.200	0.00500	0.0250	0.0500	0.100
4,4'-DDD	DBC	Ave	890084 156230940	3986653	20316484	41746036	83506794	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Endosulfan II	DBC	Ave	923406 156744125	4326900	21476842	43109630	85007734	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Endrin aldehyde	DBC	Ave	733317 126331566	3403046	16559906	32827784	66127470	0.00100 0.200	0.00500	0.0250	0.0500	0.100

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 190365

SDG No.:

Instrument ID: CHGC15 GC Column: MR-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/06/2016 13:08 Calibration End Date: 10/06/2016 14:25 Calibration ID: 33113

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
4,4'-DDT	DBC	Ave	663545 138996087	3283299	17287077	35030649	71532272	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Endosulfan sulfate	DBC	Ave	847244 144982180	3832608	18899271	37806557	75844288	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Methoxychlor	DBC	Ave	421354 62445659	1691032	7916442	16162260	31820955	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Endrin ketone	DBC	Ave	856004 151922717	3984149	19364556	40033352	79699748	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Tetrachloro-m-xylene	BNB	Ave	1239738 212658136	5837170	28729776	57869750	113569642	0.00100 0.200	0.00500	0.0250	0.0500	0.100
DCB Decachlorobiphenyl (Surr)	DBC	Ave	471747 68484866	2039125	9288223	18354225	37852178	0.00100 0.200	0.00500	0.0250	0.0500	0.100

Curve Type Legend:
Ave = Average ISTD by Height

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000007.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 06-Oct-2016 13:08:38 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013765-007
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 06-Oct-2016 15:15:11 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK015

First Level Reviewer: eppinged Date: 06-Oct-2016 13:45:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.696	3.696	-0.001	86816136H	0.1000	0.1000	
2	3.770	3.770	0.000	112258136H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.695	4.696	-0.001	1239738H	0.001000	0.001125	
2	4.614	4.614	0.000	1910092H	0.001000	0.001208	
						RPD = 7.12	
5 alpha-BHC							
1	5.064	5.065	-0.001	1554209H	0.001000	0.001034	
2	5.070	5.070	0.000	2293632H	0.001000	0.001135	
						RPD = 9.24	
7 gamma-BHC (Lindane)							
1	5.331	5.331	0.000	1379101H	0.001000	0.001065	
2	5.363	5.364	-0.001	1996399H	0.001000	0.001162	
						RPD = 8.71	
8 beta-BHC							
1	5.494	5.493	0.001	692033H	0.001000	0.001201	
2	5.603	5.602	0.001	923028H	0.001000	0.001206	
						RPD = 0.45	
10 delta-BHC							
1	5.691	5.692	-0.001	1221995H	0.001000	0.001018	
2	5.822	5.822	0.000	1741322H	0.001000	0.001108	
						RPD = 8.47	
11 Heptachlor							
1	5.802	5.804	-0.002	1211853H	0.001000	0.001121	
2	5.673	5.673	0.000	1762280H	0.001000	0.001203	
						RPD = 7.08	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
13 Aldrin							
1	6.085	6.086	-0.001	1162027H	0.001000	0.001070	
2	5.931	5.932	-0.001	1715340H	0.001000	0.001163	
						RPD = 8.40	
16 Heptachlor epoxide							
1	6.446	6.445	0.001	1162896H	0.001000	0.001176	
2	6.374	6.373	0.001	1555779H	0.001000	0.001190	
						RPD = 1.24	
18 gamma-Chlordane							
1	6.664	6.664	0.000	1098288H	0.001000	0.001104	
2	6.596	6.595	0.001	1551717H	0.001000	0.001152	
						RPD = 4.24	
20 alpha-Chlordane							
1	6.732	6.732	0.000	1093654H	0.001000	0.001147	
2	6.656	6.656	0.000	1522741H	0.001000	0.001172	
						RPD = 2.16	
21 Endosulfan I							
1	6.775	6.777	-0.002	1026267H	0.001000	0.001148	
2	6.720	6.719	0.001	1444799H	0.001000	0.001193	
						RPD = 3.84	
23 4,4'-DDE							
1	6.884	6.885	-0.001	1012095H	0.001000	0.001048	
2	6.800	6.800	0.000	1441315H	0.001000	0.001107	
						RPD = 5.43	
24 Dieldrin							
1	7.016	7.017	-0.001	1075583H	0.001000	0.001114	
2	6.961	6.961	0.000	1639088H	0.001000	0.001248	
						RPD = 11.39	
27 Endrin							
1	7.220	7.219	0.001	899989H	0.001000	0.001078	
2	7.223	7.222	0.001	1286419H	0.001000	0.001184	
						RPD = 9.43	
29 4,4'-DDD							
1	7.345	7.345	0.000	890084H	0.001000	0.001128	
2	7.312	7.313	-0.001	1180844H	0.001000	0.001134	
						RPD = 0.55	
31 Endosulfan II							
1	7.416	7.417	-0.001	923406H	0.001000	0.001125	
2	7.487	7.486	0.001	1272823H	0.001000	0.001178	
						RPD = 4.54	
32 Endrin aldehyde							
1	7.534	7.533	0.001	733317H	0.001000	0.001142	
2	7.649	7.652	-0.003	1131250H	0.001000	0.001289	
						RPD = 12.08	
33 4,4'-DDT							
1	7.623	7.623	0.000	663545H	0.001000	0.001012	
2	7.553	7.552	0.001	955302H	0.001000	0.001065	
						RPD = 5.05	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
35 Endosulfan sulfate							
1	7.744	7.743	0.001	847244H	0.001000	0.001153	
2	7.857	7.857	0.000	1101324H	0.001000	0.001145	
						RPD = 0.65	
36 Methoxychlor							
1	8.065	8.066	-0.001	421354H	0.001000	0.001299	
2	8.084	8.082	0.002	491625H	0.001000	0.001155	
						RPD = 11.76	
* 44 Dibutylchlorendate ISTD							
1	8.140	8.140	0.000	51266890H	0.1000	0.1000	
2	7.919	7.919	0.000	76748218H	0.1000	0.1000	
37 Endrin ketone							
1	8.195	8.194	0.001	856004H	0.001000	0.001122	
2	8.391	8.391	0.000	1220809H	0.001000	0.001267	
						RPD = 12.13	
$ 39 DCB Decachlorobiphenyl (Surr)							M
1	9.892	9.892	0.000	471747H	0.001000	0.001261	M
2	9.823	9.822	0.001	671012H	0.001000	0.001251	M
						RPD = 0.80	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCPest L1_00017	Amount Added:	1.00	Units: mL	
GCPESTISSPK2_00004	Amount Added:	0.02	Units: mL	Run Reagent

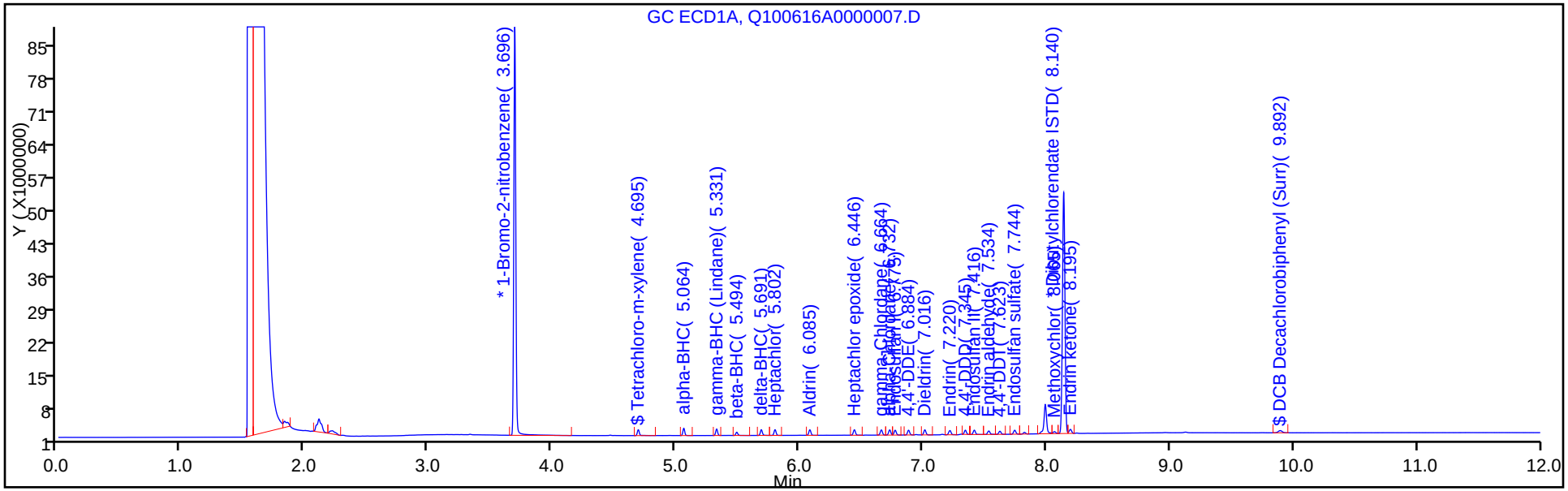
Report Date: 06-Oct-2016 15:15:12 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

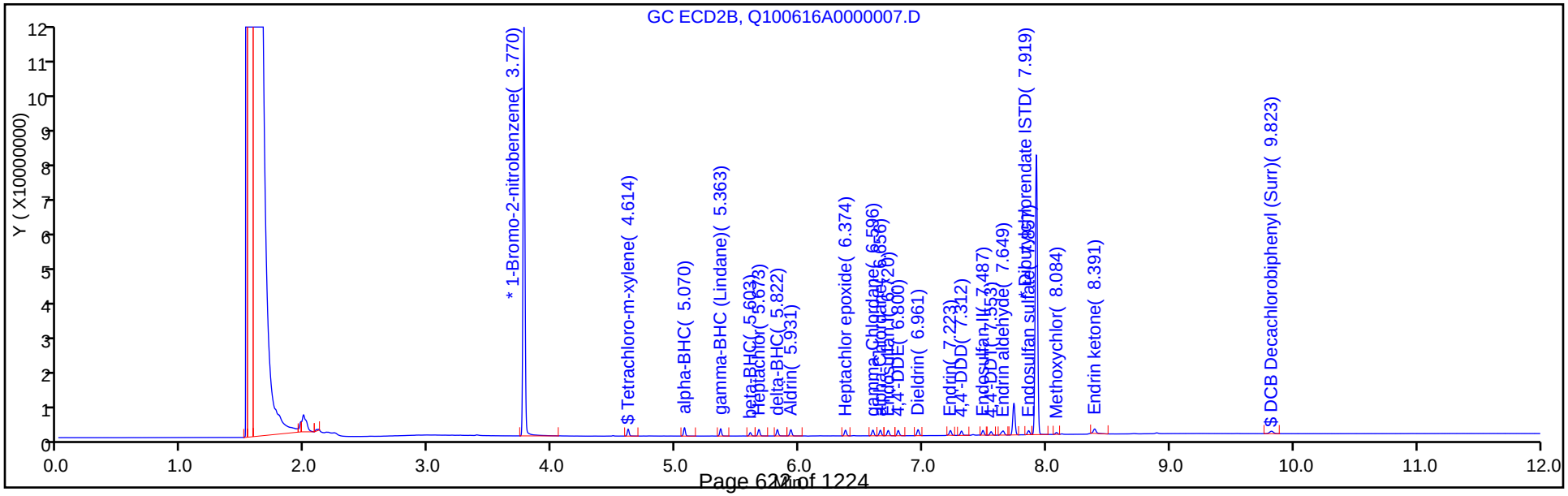
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000007.D

Injection Date:	06-Oct-2016 13:08:38	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

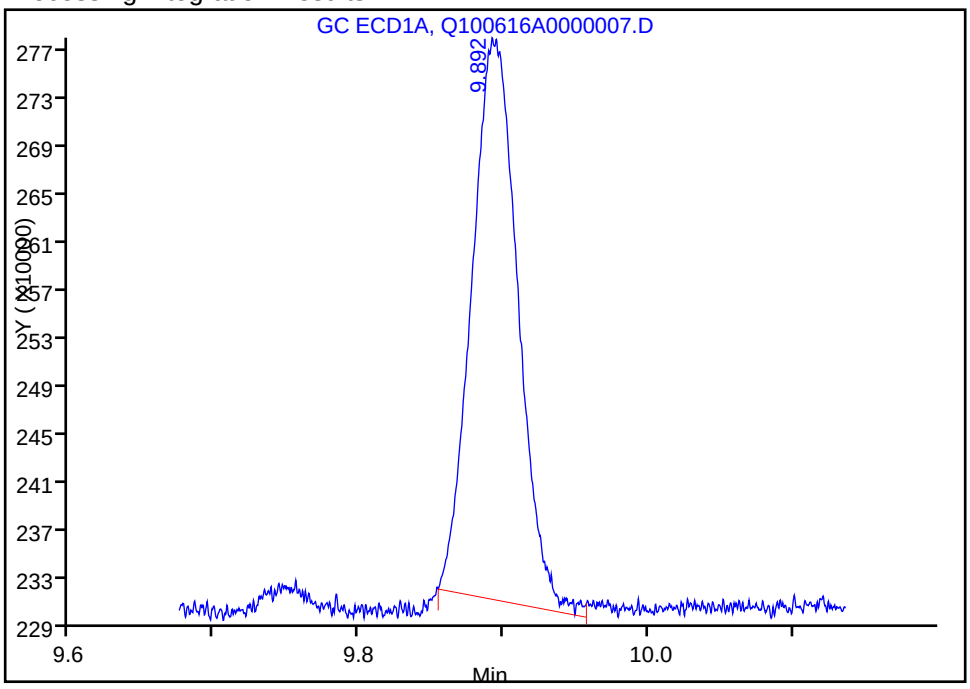
Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000007.D				
Injection Date:	06-Oct-2016 13:08:38	Instrument ID:	CHGC15		
Lims ID:	IC				
Client ID:					
Operator ID:	402331	ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		
Column:	MR-1 (0.53 mm)	Detector	GC ECD1A		

$ 39 DCB Decachlorobiphenyl (Surr), CAS: 2051-24-3

Signal: 1

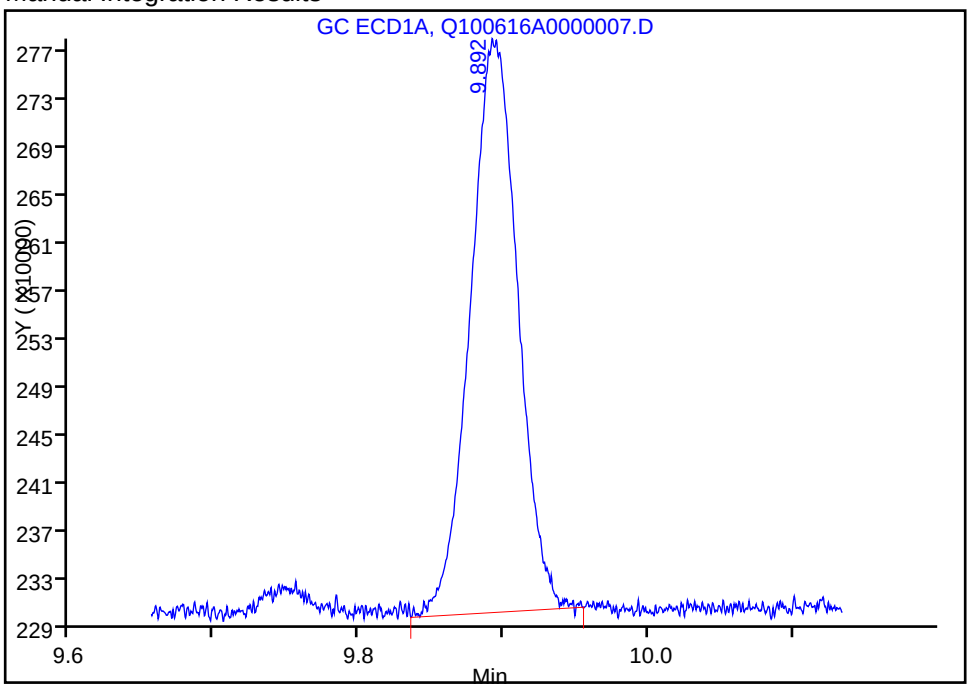
Processing Integration Results

RT: 9.89
Height: 461509
Amount: 0.001001
Amount Units: ng



Manual Integration Results

RT: 9.89
Height: 471747
Amount: 0.001261
Amount Units: ng



Reviewer: eppinged, 06-Oct-2016 13:45:16

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000008.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 06-Oct-2016 13:24:01 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013765-008
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 06-Oct-2016 15:15:23 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK015

First Level Reviewer: eppinged Date: 06-Oct-2016 13:56:10

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.696	3.696	0.000	87777818H	0.1000	0.1000	
2	3.770	3.770	0.000	111664303H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.696	4.696	0.000	5837170H	0.005000	0.005240	
2	4.614	4.614	0.000	8745301H	0.005000	0.005562	
						RPD = 5.96	
5 alpha-BHC							
1	5.064	5.065	-0.001	7771974H	0.005000	0.005116	
2	5.070	5.070	0.000	10972850H	0.005000	0.005457	
						RPD = 6.45	
7 gamma-BHC (Lindane)							
1	5.330	5.331	-0.001	6796072H	0.005000	0.005190	
2	5.363	5.364	-0.001	9286540H	0.005000	0.005434	
						RPD = 4.58	
8 beta-BHC							
1	5.493	5.493	0.000	3010263H	0.005000	0.005165	
2	5.603	5.602	0.001	4075771H	0.005000	0.005353	
						RPD = 3.58	
10 delta-BHC							
1	5.692	5.692	0.000	6101583H	0.005000	0.005027	
2	5.822	5.822	0.000	8195232H	0.005000	0.005242	
						RPD = 4.19	
11 Heptachlor							
1	5.803	5.804	-0.001	5642570H	0.005000	0.005163	
2	5.673	5.673	0.000	7982776H	0.005000	0.005480	
						RPD = 5.96	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
13 Aldrin							
1	6.086	6.086	0.000	5661287H	0.005000	0.005154	
2	5.932	5.932	0.000	8055611H	0.005000	0.005492	
						RPD = 6.36	
16 Heptachlor epoxide							
1	6.445	6.445	0.000	5325024H	0.005000	0.005324	
2	6.374	6.373	0.001	7261198H	0.005000	0.005585	
						RPD = 4.78	
18 gamma-Chlordane							
1	6.664	6.664	0.000	5097498H	0.005000	0.005067	
2	6.596	6.595	0.001	7314678H	0.005000	0.005457	
						RPD = 7.42	
20 alpha-Chlordane							
1	6.732	6.732	0.000	4838127H	0.005000	0.005019	
2	6.656	6.656	0.000	7071702H	0.005000	0.005472	
						RPD = 8.65	
21 Endosulfan I							
1	6.776	6.777	-0.001	4670333H	0.005000	0.005167	
2	6.719	6.719	0.000	6614584H	0.005000	0.005491	
						RPD = 6.07	
23 4,4'-DDE							
1	6.884	6.885	-0.001	4876941H	0.005000	0.005215	
2	6.801	6.800	0.001	7112149H	0.005000	0.005349	
						RPD = 2.55	
24 Dieldrin							
1	7.016	7.017	-0.001	4946736H	0.005000	0.005288	
2	6.961	6.961	0.000	7238742H	0.005000	0.005400	
						RPD = 2.09	
27 Endrin							
1	7.219	7.219	0.000	4402563H	0.005000	0.005443	
2	7.223	7.222	0.001	6021229H	0.005000	0.005431	
						RPD = 0.24	
29 4,4'-DDD							
1	7.343	7.345	-0.002	3986653H	0.005000	0.005217	
2	7.313	7.313	0.000	5625752H	0.005000	0.005294	
						RPD = 1.47	
31 Endosulfan II							
1	7.416	7.417	-0.001	4326900H	0.005000	0.005445	
2	7.486	7.486	0.000	5924030H	0.005000	0.005369	
						RPD = 1.40	
32 Endrin aldehyde							
1	7.533	7.533	0.000	3403046H	0.005000	0.005471	
2	7.651	7.652	-0.001	4788926H	0.005000	0.005344	
						RPD = 2.35	
33 4,4'-DDT							
1	7.624	7.623	0.001	3283299H	0.005000	0.005171	
2	7.552	7.552	0.000	4677980H	0.005000	0.005107	
						RPD = 1.25	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
35 Endosulfan sulfate							
1	7.743	7.743	0.000	3832608H	0.005000	0.005383	
2	7.856	7.857	-0.001	5244208H	0.005000	0.005341	
						RPD = 0.78	
36 Methoxychlor							
1	8.066	8.066	0.000	1691032H	0.005000	0.005385	
2	8.082	8.082	0.000	2308252H	0.005000	0.005313	
						RPD = 1.34	
* 44 Dibutylchlorendate ISTD							
1	8.140	8.140	0.000	49652434H	0.1000	0.1000	
2	7.919	7.919	0.001	78345398H	0.1000	0.1000	
37 Endrin ketone							
1	8.194	8.194	0.000	3984149H	0.005000	0.005394	
2	8.391	8.391	0.000	5247718H	0.005000	0.005336	
						RPD = 1.06	
$ 39 DCB Decachlorobiphenyl (Surr)							
1	9.890	9.892	-0.002	2039125H	0.005000	0.005629	
2	9.822	9.822	0.000	3032537H	0.005000	0.005539	
						RPD = 1.60	

Reagents:

GCPestL2_00016	Amount Added:	1.00	Units: mL	
GCPESTISSPK2_00004	Amount Added:	0.02	Units: mL	Run Reagent

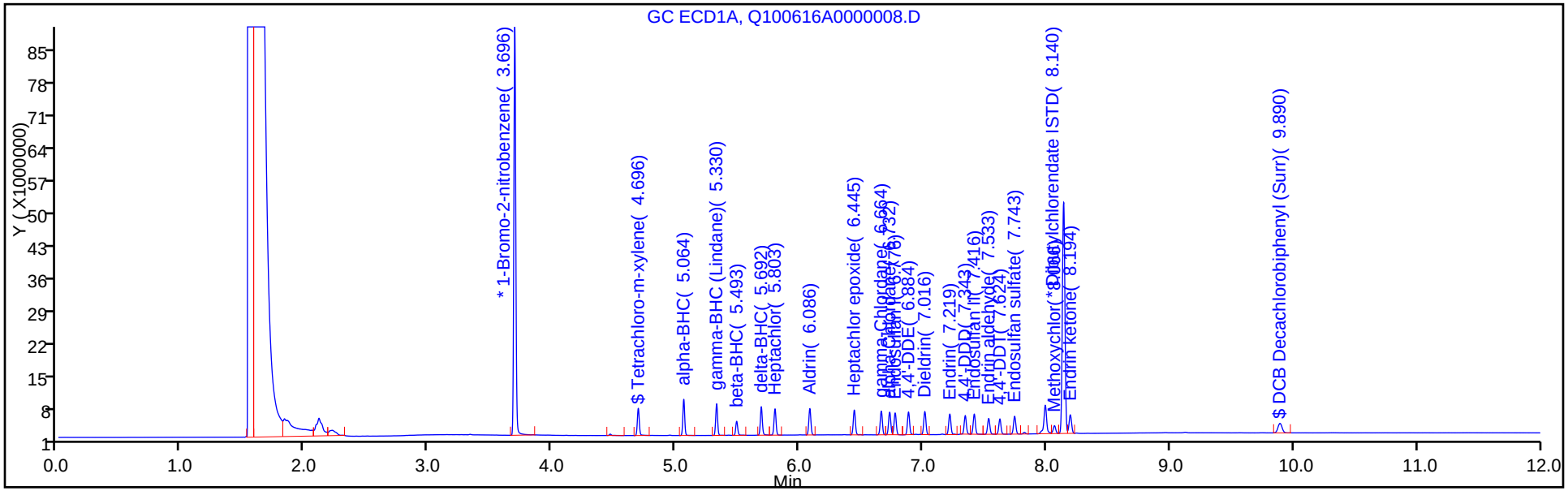
Report Date: 06-Oct-2016 15:15:24 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

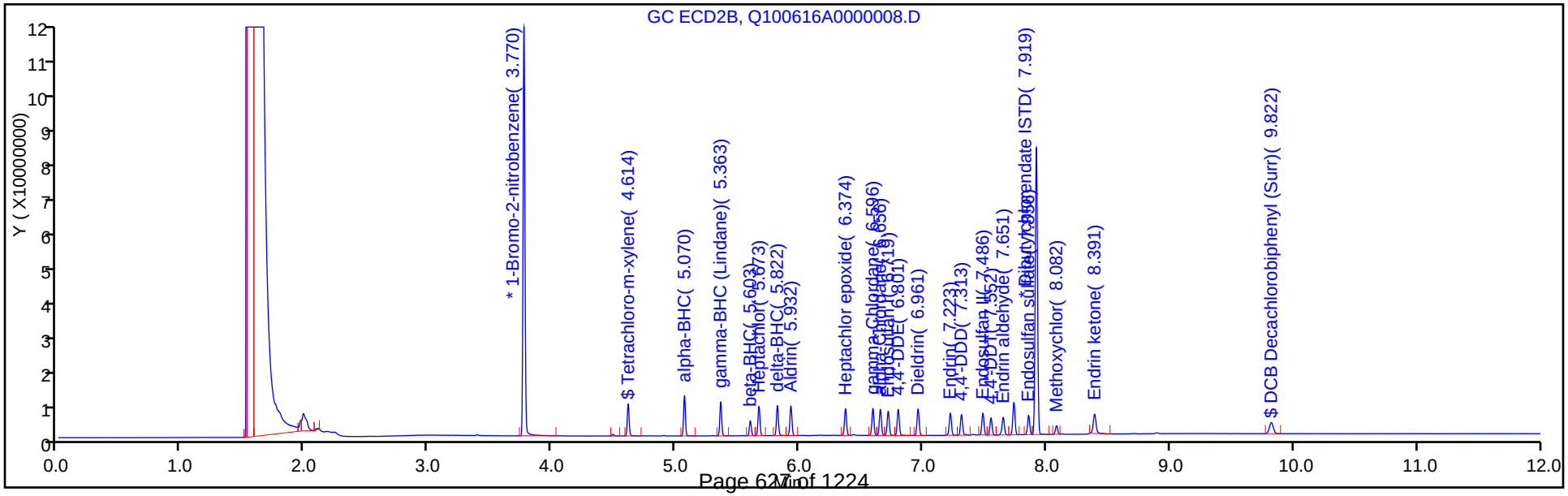
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000008.D

Injection Date:	06-Oct-2016 13:24:01	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000009.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 3
Inject. Date: 06-Oct-2016 13:39:35 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013765-009
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 06-Oct-2016 15:15:29 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK015

First Level Reviewer: eppinged Date: 06-Oct-2016 13:56:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.696	3.696	0.000	89773362H	0.1000	0.1000	
2	3.770	3.770	0.000	116698430H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.696	4.696	0.000	28729776H	0.0250	0.0252	
2	4.614	4.614	0.000	41272557H	0.0250	0.0251	
						RPD = 0.40	
5 alpha-BHC							
1	5.065	5.065	0.000	40013274H	0.0250	0.0258	
2	5.070	5.070	0.000	52979205H	0.0250	0.0252	
						RPD = 2.13	
7 gamma-BHC (Lindane)							
1	5.331	5.331	0.000	34292631H	0.0250	0.0256	
2	5.364	5.364	0.000	45174399H	0.0250	0.0253	
						RPD = 1.24	
8 beta-BHC							
1	5.493	5.493	0.000	14684809H	0.0250	0.0246	
2	5.602	5.602	0.000	19778021H	0.0250	0.0249	
						RPD = 0.89	
10 delta-BHC							
1	5.692	5.692	0.000	31333023H	0.0250	0.0252	
2	5.822	5.822	0.000	41623401H	0.0250	0.0255	
						RPD = 0.93	
11 Heptachlor							
1	5.804	5.804	0.000	29099823H	0.0250	0.0260	
2	5.673	5.673	0.000	38479289H	0.0250	0.0253	
						RPD = 2.95	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
13 Aldrin							
1	6.086	6.086	0.000	28873298H	0.0250	0.0257	
2	5.932	5.932	0.000	39096794H	0.0250	0.0255	
						RPD = 0.76	
16 Heptachlor epoxide							
1	6.445	6.445	0.000	25810017H	0.0250	0.0252	
2	6.373	6.373	0.000	34347109H	0.0250	0.0253	
						RPD = 0.18	
18 gamma-Chlordane							
1	6.664	6.664	0.000	25932000H	0.0250	0.0252	
2	6.595	6.595	0.000	34821922H	0.0250	0.0249	
						RPD = 1.38	
20 alpha-Chlordane							
1	6.732	6.732	0.000	24941212H	0.0250	0.0253	
2	6.656	6.656	0.000	33797062H	0.0250	0.0250	
						RPD = 1.08	
21 Endosulfan I							
1	6.777	6.777	0.000	23299969H	0.0250	0.0252	
2	6.719	6.719	0.000	31636053H	0.0250	0.0251	
						RPD = 0.31	
23 4,4'-DDE							
1	6.885	6.885	0.000	25607546H	0.0250	0.0255	
2	6.800	6.800	0.000	35236224H	0.0250	0.0250	
						RPD = 1.95	
24 Dieldrin							
1	7.017	7.017	0.000	25506034H	0.0250	0.0254	
2	6.961	6.961	0.000	34930431H	0.0250	0.0246	
						RPD = 3.22	
27 Endrin							
1	7.219	7.219	0.000	22052357H	0.0250	0.0254	
2	7.222	7.222	0.000	28867705H	0.0250	0.0245	
						RPD = 3.30	
29 4,4'-DDD							
1	7.345	7.345	0.000	20316484H	0.0250	0.0247	
2	7.313	7.313	0.000	28044751H	0.0250	0.0249	
						RPD = 0.58	
31 Endosulfan II							
1	7.417	7.417	0.000	21476842H	0.0250	0.0251	
2	7.486	7.486	0.000	28614892H	0.0250	0.0244	
						RPD = 2.80	
32 Endrin aldehyde							
1	7.533	7.533	0.000	16559906H	0.0250	0.0248	
2	7.652	7.652	0.000	22488896H	0.0250	0.0237	
						RPD = 4.59	
33 4,4'-DDT							
1	7.623	7.623	0.000	17287077H	0.0250	0.0253	
2	7.552	7.552	0.000	23866713H	0.0250	0.0246	
						RPD = 3.08	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
35 Endosulfan sulfate							
1	7.743	7.743	0.000	18899271H	0.0250	0.0247	
2	7.857	7.857	0.000	25262144H	0.0250	0.0243	
						RPD = 1.80	
36 Methoxychlor							
1	8.066	8.066	0.000	7916442H	0.0250	0.0234	
2	8.082	8.082	0.000	11230260H	0.0250	0.0244	
						RPD = 3.82	
* 44 Dibutylchlorendate ISTD							
1	8.140	8.140	0.000	53375035H	0.1000	0.1000	
2	7.919	7.919	0.000	83117573H	0.1000	0.1000	
37 Endrin ketone							
1	8.194	8.194	0.000	19364556H	0.0250	0.0244	
2	8.391	8.391	0.000	24905062H	0.0250	0.0239	
						RPD = 2.13	
$ 39 DCB Decachlorobiphenyl (Surr)							
1	9.892	9.892	0.000	9288223H	0.0250	0.0238	
2	9.822	9.822	0.000	13726299H	0.0250	0.0236	
						RPD = 0.92	

Reagents:

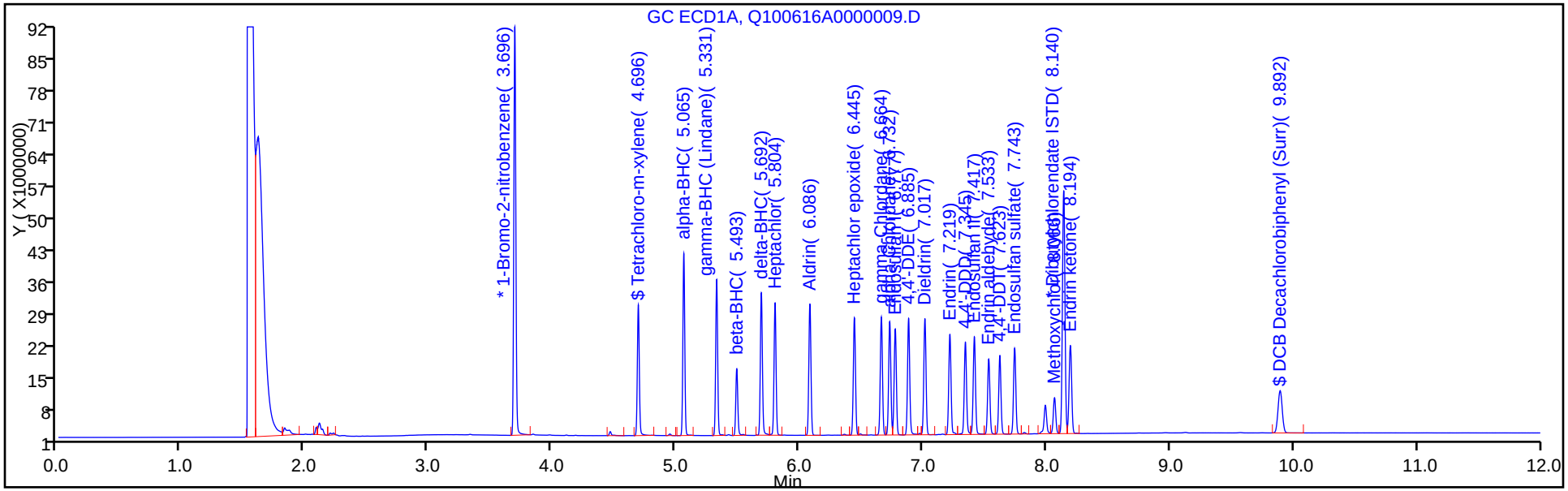
GCPestL3_00017	Amount Added:	1.00	Units: mL	
GCPESTISSPK2_00004	Amount Added:	0.02	Units: mL	Run Reagent

Report Date: 06-Oct-2016 15:15:30 Chrom Revision: 2.2 08-Sep-2016 14:45:52

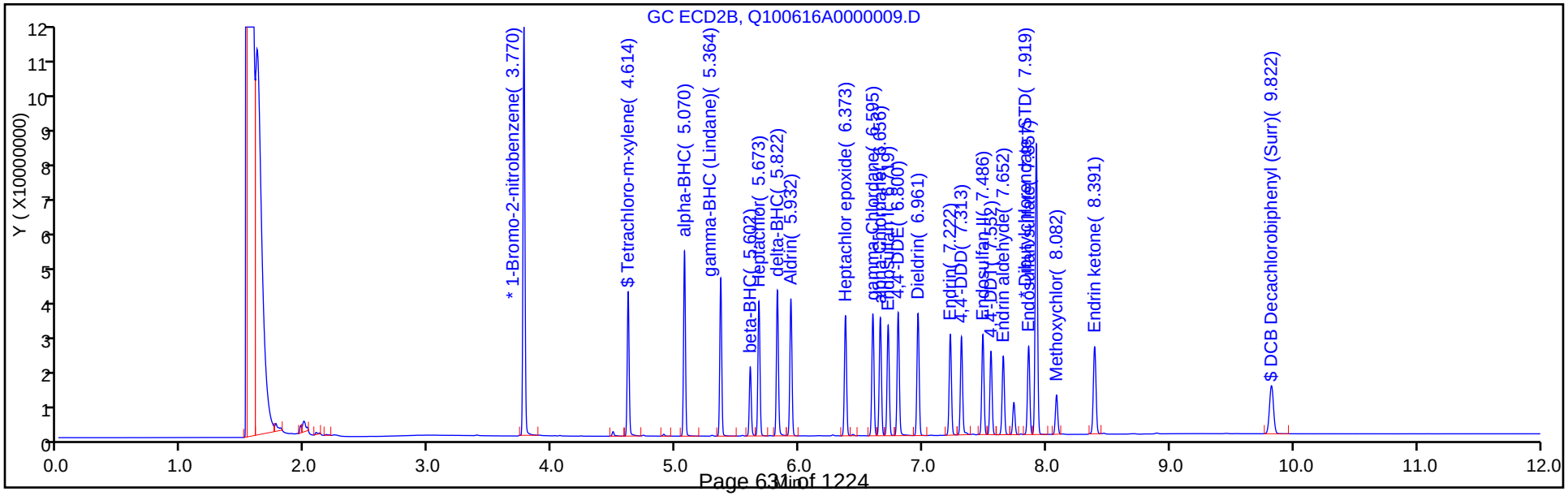
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000009.D				
Injection Date:	06-Oct-2016 13:39:35	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	ICIS			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000010.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 06-Oct-2016 13:55:03 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013765-010
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 06-Oct-2016 15:15:37 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK015

First Level Reviewer: eppinged Date: 06-Oct-2016 14:22:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.697	3.696	0.000	93598429H	0.1000	0.1000	
2	3.771	3.770	0.000	119102301H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.696	4.696	0.000	57869750H	0.0500	0.0487	
2	4.614	4.614	0.000	79105784H	0.0500	0.0472	
						RPD = 3.24	
5 alpha-BHC							
1	5.064	5.065	-0.001	80642043H	0.0500	0.0498	
2	5.070	5.070	0.000	103674192H	0.0500	0.0483	
						RPD = 2.94	
7 gamma-BHC (Lindane)							
1	5.330	5.331	-0.001	68019324H	0.0500	0.0487	
2	5.364	5.364	0.000	87027333H	0.0500	0.0477	
						RPD = 2.03	
8 beta-BHC							
1	5.492	5.493	-0.001	29634415H	0.0500	0.0477	
2	5.603	5.602	0.001	38847855H	0.0500	0.0478	
						RPD = 0.32	
10 delta-BHC							
1	5.693	5.692	0.001	64333190H	0.0500	0.0497	
2	5.823	5.822	0.001	81979520H	0.0500	0.0492	
						RPD = 1.10	
11 Heptachlor							
1	5.803	5.804	-0.001	56428567H	0.0500	0.0484	
2	5.673	5.673	0.000	74931264H	0.0500	0.0482	
						RPD = 0.40	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
13 Aldrin							
1	6.085	6.086	-0.001	57646936H	0.0500	0.0492	
2	5.932	5.932	0.000	75298453H	0.0500	0.0481	
						RPD = 2.23	
16 Heptachlor epoxide							
1	6.446	6.445	0.001	51379126H	0.0500	0.0482	
2	6.374	6.373	0.001	66254351H	0.0500	0.0478	
						RPD = 0.83	
18 gamma-Chlordane							
1	6.664	6.664	0.000	52367183H	0.0500	0.0488	
2	6.596	6.595	0.001	69632463H	0.0500	0.0487	
						RPD = 0.23	
20 alpha-Chlordane							
1	6.731	6.732	-0.001	50169273H	0.0500	0.0488	
2	6.655	6.656	-0.001	66219497H	0.0500	0.0480	
						RPD = 1.57	
21 Endosulfan I							
1	6.776	6.777	-0.001	46736620H	0.0500	0.0485	
2	6.719	6.719	0.000	61438141H	0.0500	0.0478	
						RPD = 1.41	
23 4,4'-DDE							
1	6.885	6.885	0.000	51885169H	0.0500	0.0492	
2	6.801	6.800	0.001	69407607H	0.0500	0.0486	
						RPD = 1.21	
24 Dieldrin							
1	7.017	7.017	0.000	50997264H	0.0500	0.0483	
2	6.961	6.961	0.000	68352596H	0.0500	0.0475	
						RPD = 1.82	
27 Endrin							
1	7.219	7.219	0.000	43791306H	0.0500	0.0480	
2	7.222	7.222	0.000	56536775H	0.0500	0.0475	
						RPD = 1.13	
29 4,4'-DDD							
1	7.344	7.345	-0.001	41746036H	0.0500	0.0484	
2	7.313	7.313	0.000	55486191H	0.0500	0.0486	
						RPD = 0.35	
31 Endosulfan II							
1	7.417	7.417	0.000	43109630H	0.0500	0.0481	
2	7.487	7.486	0.001	56602871H	0.0500	0.0477	
						RPD = 0.71	
32 Endrin aldehyde							
1	7.534	7.533	0.001	32827784H	0.0500	0.0468	
2	7.651	7.652	-0.001	44446993H	0.0500	0.0462	
						RPD = 1.34	
33 4,4'-DDT							
1	7.623	7.623	0.000	35030649H	0.0500	0.0489	
2	7.552	7.552	0.000	49530594H	0.0500	0.0503	
						RPD = 2.86	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
35 Endosulfan sulfate							
1	7.743	7.743	0.000	37806557H	0.0500	0.0471	
2	7.856	7.857	-0.001	51131531H	0.0500	0.0485	
						RPD = 2.92	
36 Methoxychlor							
1	8.066	8.066	0.000	16162260H	0.0500	0.0456	
2	8.083	8.082	0.001	22287764H	0.0500	0.0477	
						RPD = 4.55	
* 44 Dibutylchlorendate ISTD							
1	8.140	8.140	0.000	56012956H	0.1000	0.1000	
2	7.919	7.919	0.001	84179778H	0.1000	0.1000	
37 Endrin ketone							
1	8.195	8.194	0.001	40033352H	0.0500	0.0480	
2	8.391	8.391	0.000	49287937H	0.0500	0.0466	
						RPD = 2.94	
$ 39 DCB Decachlorobiphenyl (Surr)							
1	9.893	9.892	0.001	18354225H	0.0500	0.0449	
2	9.821	9.822	-0.001	26898040H	0.0500	0.0457	
						RPD = 1.80	

Reagents:

GCPestL4_00016	Amount Added:	1.00	Units: mL	
GCPESTISSPK2_00004	Amount Added:	0.02	Units: mL	Run Reagent

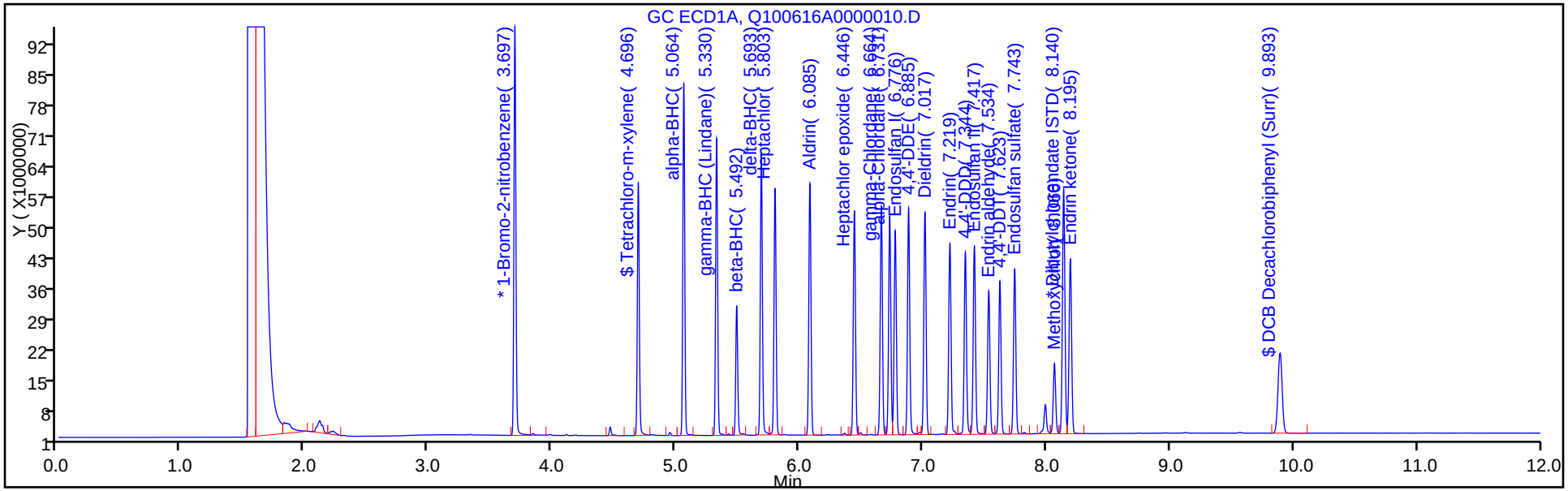
Report Date: 06-Oct-2016 15:15:38 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

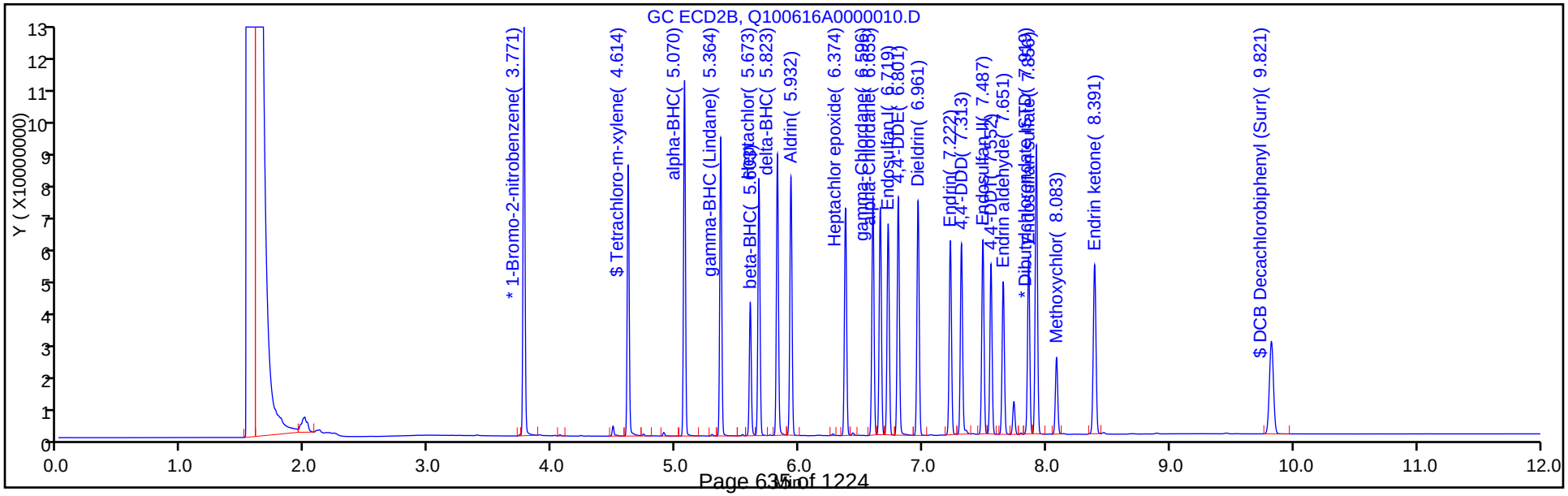
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000010.D

Injection Date:	06-Oct-2016 13:55:03	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000011.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 06-Oct-2016 14:10:30 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013765-011
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 06-Oct-2016 15:15:47 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK015

First Level Reviewer: eppinged Date: 06-Oct-2016 14:43:27

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.696	3.696	0.000	91005326H	0.1000	0.1000	
2	3.770	3.770	0.000	116454136H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.696	4.696	0.000	113569642H	0.1000	0.0983	
2	4.614	4.614	0.000	152765468H	0.1000	0.0932	
						RPD = 5.41	
5 alpha-BHC							
1	5.064	5.065	-0.001	158307297H	0.1000	0.1005	
2	5.070	5.070	0.000	202668188H	0.1000	0.0967	
						RPD = 3.92	
7 gamma-BHC (Lindane)							
1	5.331	5.331	0.000	136162459H	0.1000	0.1003	
2	5.363	5.364	-0.001	169766875H	0.1000	0.0952	
						RPD = 5.17	
8 beta-BHC							
1	5.492	5.493	-0.001	58242766H	0.1000	0.0964	
2	5.602	5.602	0.000	75553589H	0.1000	0.0952	
						RPD = 1.29	
10 delta-BHC							
1	5.692	5.692	0.000	132454570H	0.1000	0.1053	
2	5.821	5.822	-0.001	158674112H	0.1000	0.0973	
						RPD = 7.84	
11 Heptachlor							
1	5.803	5.804	-0.001	109812772H	0.1000	0.0969	
2	5.672	5.673	-0.001	141709023H	0.1000	0.0933	
						RPD = 3.82	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
13 Aldrin							
1	6.085	6.086	-0.001	114847559H	0.1000	0.1008	
2	5.931	5.932	-0.001	144970741H	0.1000	0.0948	
						RPD = 6.21	
16 Heptachlor epoxide							
1	6.445	6.445	0.000	98173151H	0.1000	0.0947	
2	6.373	6.373	0.000	125648610H	0.1000	0.0927	
						RPD = 2.15	
18 gamma-Chlordane							
1	6.664	6.664	0.000	104558407H	0.1000	0.1002	
2	6.595	6.595	0.000	133607253H	0.1000	0.0956	
						RPD = 4.76	
20 alpha-Chlordane							
1	6.732	6.732	0.000	98059726H	0.1000	0.0981	
2	6.655	6.656	-0.001	127509478H	0.1000	0.0946	
						RPD = 3.63	
21 Endosulfan I							
1	6.777	6.777	0.000	91978788H	0.1000	0.0982	
2	6.719	6.719	0.000	117489201H	0.1000	0.0935	
						RPD = 4.85	
23 4,4'-DDE							
1	6.884	6.885	-0.001	103538302H	0.1000	0.1019	
2	6.800	6.800	0.000	135787536H	0.1000	0.0980	
						RPD = 3.99	
24 Dieldrin							
1	7.016	7.017	-0.001	100377657H	0.1000	0.0988	
2	6.961	6.961	0.000	128961089H	0.1000	0.0923	
						RPD = 6.85	
27 Endrin							
1	7.219	7.219	0.000	86900179H	0.1000	0.0989	
2	7.223	7.222	0.001	110395322H	0.1000	0.0955	
						RPD = 3.55	
29 4,4'-DDD							
1	7.343	7.345	-0.002	83506794H	0.1000	0.1006	
2	7.312	7.313	-0.001	108646550H	0.1000	0.0981	
						RPD = 2.59	
31 Endosulfan II							
1	7.416	7.417	-0.001	85007734H	0.1000	0.0985	
2	7.486	7.486	0.000	110310282H	0.1000	0.0959	
						RPD = 2.69	
32 Endrin aldehyde							
1	7.533	7.533	0.000	66127470H	0.1000	0.0979	
2	7.651	7.652	-0.001	87448409H	0.1000	0.0936	
						RPD = 4.50	
33 4,4'-DDT							
1	7.624	7.623	0.001	71532272H	0.1000	0.1037	
2	7.552	7.552	0.000	96843596H	0.1000	0.1014	
						RPD = 2.29	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
35 Endosulfan sulfate							
1	7.743	7.743	0.000	75844288H	0.1000	0.0981	
2	7.857	7.857	0.000	99151547H	0.1000	0.0969	
						RPD = 1.27	
36 Methoxychlor							
1	8.064	8.066	-0.002	31820955H	0.1000	0.0933	
2	8.082	8.082	0.000	44311122H	0.1000	0.0978	
						RPD = 4.72	
* 44 Dibutylchlorendate ISTD							
1	8.139	8.140	-0.001	53919598H	0.1000	0.1000	
2	7.919	7.919	0.000	81684273H	0.1000	0.1000	
37 Endrin ketone							
1	8.194	8.194	0.000	79699748H	0.1000	0.0994	
2	8.391	8.391	0.000	96871652H	0.1000	0.0945	
						RPD = 5.03	
$ 39 DCB Decachlorobiphenyl (Surr)							
1	9.893	9.892	0.001	37852178H	0.1000	0.0962	
2	9.824	9.822	0.002	53966784H	0.1000	0.0945	
						RPD = 1.75	

Reagents:

GCPestL5_00016	Amount Added:	1.00	Units: mL	
GCPESTISSPK2_00004	Amount Added:	0.02	Units: mL	Run Reagent

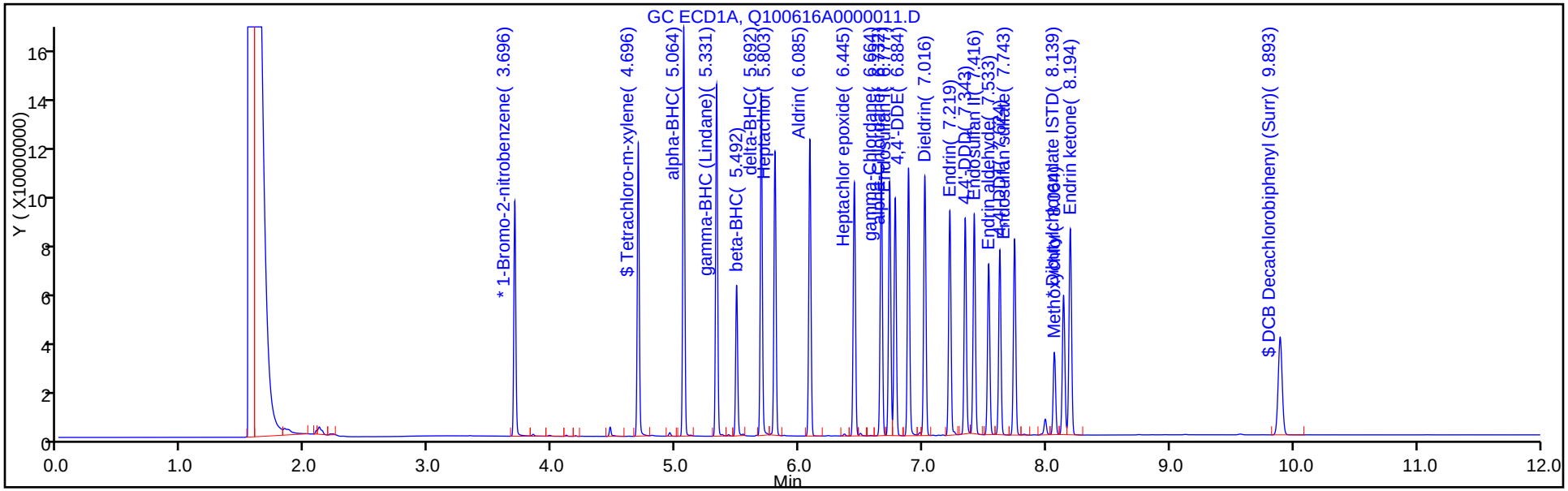
Report Date: 06-Oct-2016 15:15:48 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

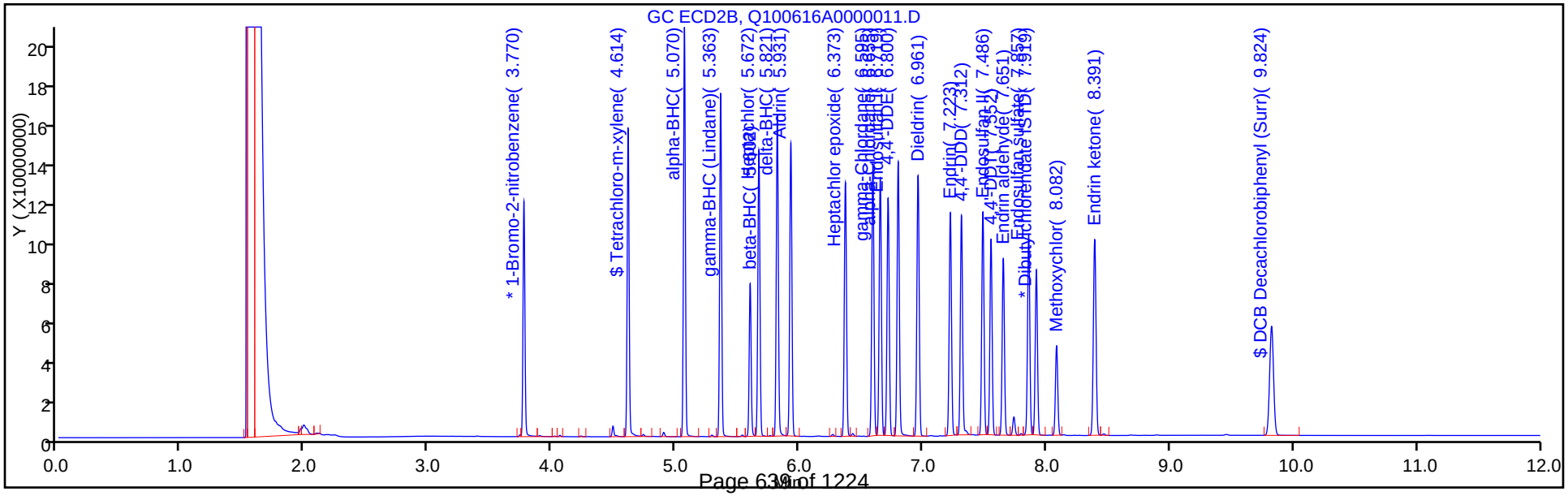
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000011.D

Injection Date:	06-Oct-2016 14:10:30	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 06-Oct-2016 14:25:55 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013765-012
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 06-Oct-2016 15:15:54 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK015

First Level Reviewer: eppinged Date: 06-Oct-2016 14:51:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.695	3.696	-0.001	97438488H	0.1000	0.1000	
2	3.769	3.770	-0.001	125252530H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.696	4.696	0.000	212658136H	0.2000	0.1720	
2	4.614	4.614	0.000	281928123H	0.2000	0.1599	
						RPD = 7.31	
5 alpha-BHC							
1	5.064	5.065	-0.001	307275055H	0.2000	0.1822	
2	5.070	5.070	0.000	375229035H	0.2000	0.1664	
						RPD = 9.09	
7 gamma-BHC (Lindane)							
1	5.330	5.331	-0.001	260264260H	0.2000	0.1791	
2	5.363	5.364	-0.001	319179566H	0.2000	0.1665	
						RPD = 7.28	
8 beta-BHC							
1	5.492	5.493	-0.001	111722818H	0.2000	0.1727	
2	5.602	5.602	0.000	140170399H	0.2000	0.1641	
						RPD = 5.08	
10 delta-BHC							
1	5.692	5.692	0.000	247922954H	0.2000	0.1840	
2	5.822	5.822	0.000	304378034H	0.2000	0.1736	
						RPD = 5.84	
11 Heptachlor							
1	5.803	5.804	-0.001	210499004H	0.2000	0.1735	
2	5.673	5.673	0.000	258914831H	0.2000	0.1585	
						RPD = 9.07	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
13 Aldrin							
1	6.085	6.086	-0.001	214400378H	0.2000	0.1758	
2	5.932	5.932	0.000	265829308H	0.2000	0.1616	
						RPD = 8.45	
16 Heptachlor epoxide							
1	6.446	6.445	0.001	186547749H	0.2000	0.1680	
2	6.373	6.373	0.000	233211673H	0.2000	0.1599	
						RPD = 4.95	
18 gamma-Chlordane							
1	6.663	6.664	-0.001	200060544H	0.2000	0.1791	
2	6.595	6.595	0.000	250338070H	0.2000	0.1665	
						RPD = 7.31	
20 alpha-Chlordane							
1	6.731	6.732	-0.001	188368514H	0.2000	0.1760	
2	6.656	6.656	0.000	239290627H	0.2000	0.1651	
						RPD = 6.42	
21 Endosulfan I							
1	6.776	6.777	-0.001	172310430H	0.2000	0.1717	
2	6.719	6.719	0.000	219547101H	0.2000	0.1625	
						RPD = 5.55	
23 4,4'-DDE							
1	6.884	6.885	-0.001	196337098H	0.2000	0.1774	
2	6.800	6.800	0.000	255578316H	0.2000	0.1746	
						RPD = 1.59	
24 Dieldrin							
1	7.016	7.017	-0.001	190322504H	0.2000	0.1719	
2	6.961	6.961	0.000	241393412H	0.2000	0.1636	
						RPD = 4.99	
27 Endrin							
1	7.218	7.219	-0.001	166433282H	0.2000	0.1739	
2	7.223	7.222	0.001	205985565H	0.2000	0.1688	
						RPD = 3.01	
29 4,4'-DDD							
1	7.344	7.345	-0.001	156230940H	0.2000	0.1728	
2	7.313	7.313	0.000	200939062H	0.2000	0.1718	
						RPD = 0.59	
31 Endosulfan II							
1	7.417	7.417	0.000	156744125H	0.2000	0.1667	
2	7.486	7.486	0.000	208192634H	0.2000	0.1714	
						RPD = 2.79	
32 Endrin aldehyde							
1	7.533	7.533	0.000	126331566H	0.2000	0.1717	
2	7.652	7.652	0.000	165109468H	0.2000	0.1674	
						RPD = 2.52	
33 4,4'-DDT							
1	7.623	7.623	0.000	138996087H	0.2000	0.1850	
2	7.552	7.552	0.000	183789830H	0.2000	0.1823	
						RPD = 1.50	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
35 Endosulfan sulfate							
1	7.743	7.743	0.000	144982180H	0.2000	0.1721	
2	7.856	7.857	-0.001	189903808H	0.2000	0.1757	
						RPD = 2.07	
36 Methoxychlor							
1	8.066	8.066	0.000	62445659H	0.2000	0.1681	
2	8.083	8.082	0.001	83683870H	0.2000	0.1750	
						RPD = 4.03	
* 44 Dibutylchlorendate ISTD							
1	8.140	8.140	0.000	58748583H	0.1000	0.1000	
2	7.919	7.919	0.000	86241530H	0.1000	0.1000	
37 Endrin ketone							
1	8.195	8.194	0.001	151922717H	0.2000	0.1738	
2	8.392	8.391	0.001	180290391H	0.2000	0.1666	
						RPD = 4.27	
$ 39 DCB Decachlorobiphenyl (Surr)							
1	9.892	9.892	0.000	68484866H	0.2000	0.1598	
2	9.823	9.822	0.001	100746334H	0.2000	0.1672	
						RPD = 4.53	

Reagents:

GCPestL6_00016	Amount Added:	1.00	Units: mL	
GCPESTISSPK2_00004	Amount Added:	0.02	Units: mL	Run Reagent

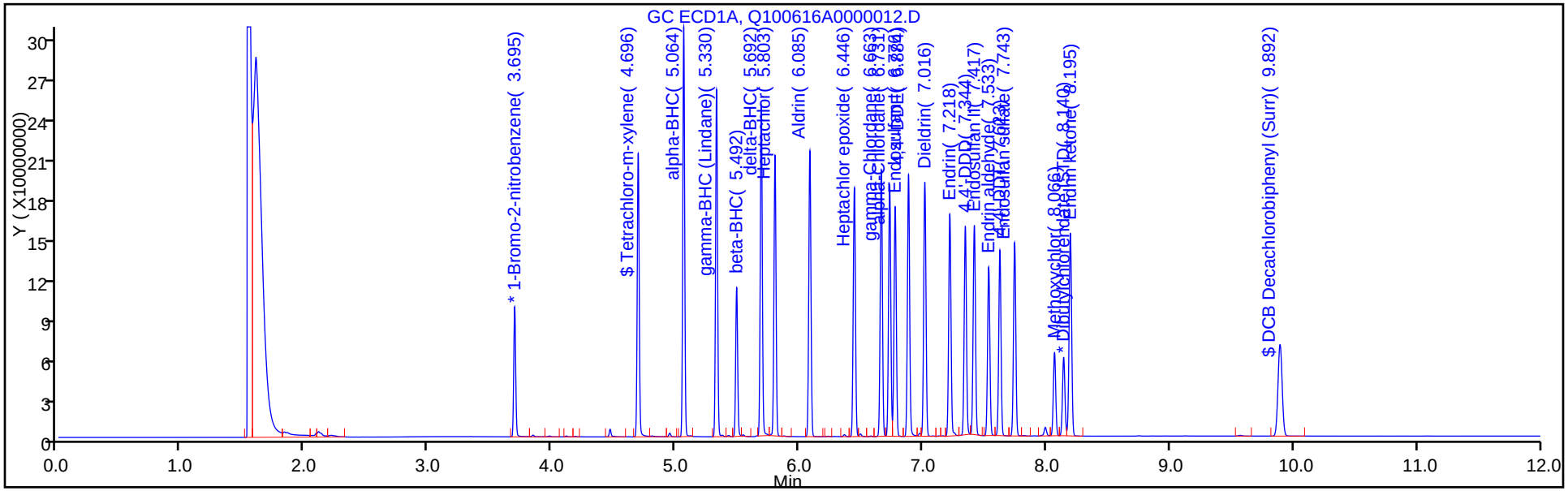
Report Date: 06-Oct-2016 15:15:54 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

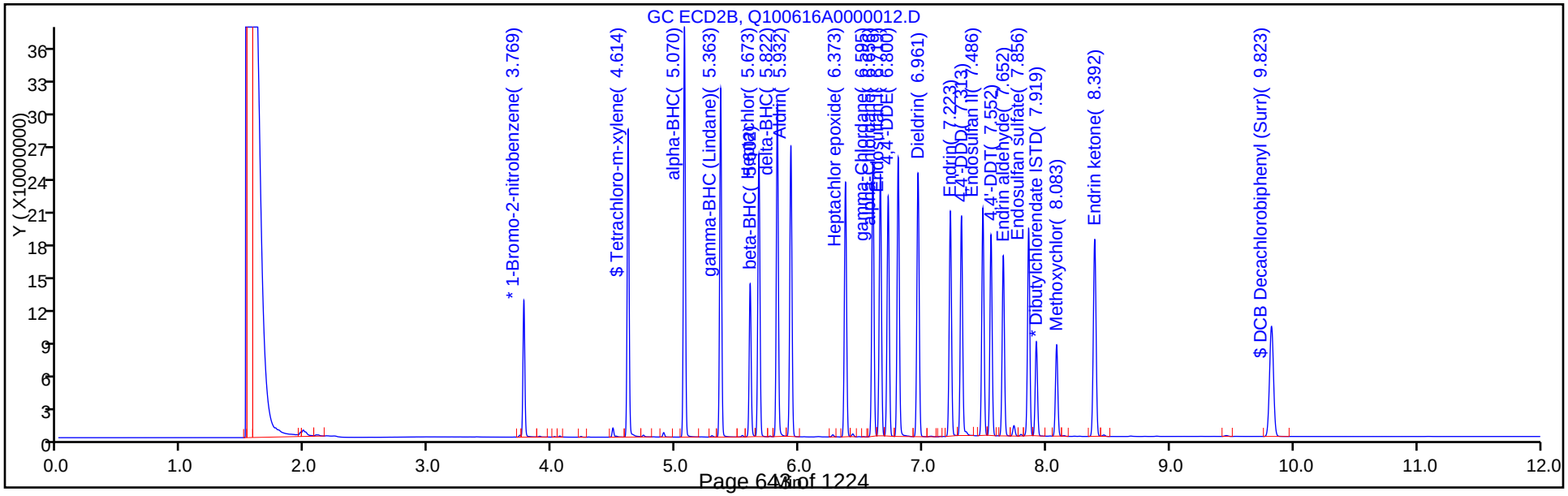
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Injection Date:	06-Oct-2016 14:25:55	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 190365

SDG No.:

Instrument ID: CHGC15 GC Column: MR-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/06/2016 13:08 Calibration End Date: 10/06/2016 14:25 Calibration ID: 33114

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-190365/7	Q100616A0000007.D
Level 2	IC 180-190365/8	Q100616A0000008.D
Level 3	ICIS 180-190365/9	Q100616A0000009.D
Level 4	IC 180-190365/10	Q100616A0000010.D
Level 5	IC 180-190365/11	Q100616A0000011.D
Level 6	IC 180-190365/12	Q100616A0000012.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
alpha-BHC	2.0432 1.4979	1.9653	1.8159	1.7409	1.7403	Ave		1.8006				10.7		20.0			
gamma-BHC (Lindane)	1.7784 1.2741	1.6633	1.5484	1.4614	1.4578	Ave		1.5306				11.5		20.0			
beta-BHC	0.8222 0.5596	0.7300	0.6779	0.6523	0.6488	Ave		0.6818				12.9		20.0			
Heptachlor	1.5698 1.0336	1.4298	1.3189	1.2583	1.2169	Ave		1.3045				14.1		20.0			
delta-BHC	1.5512 1.2151	1.4678	1.4267	1.3766	1.3625	Ave		1.4000				8.1		20.0			
Aldrin	1.5280 1.0612	1.4428	1.3401	1.2644	1.2449	Ave		1.3136				12.5		20.0			
Heptachlor epoxide	1.3859 0.9310	1.3005	1.1773	1.1126	1.0790	Ave		1.1644				14.0		20.0			
trans-Chlordane	1.3823 0.9993	1.3101	1.1936	1.1693	1.1473	Ave		1.2003				11.1		20.0			
cis-Chlordane	1.3565 0.9552	1.2666	1.1584	1.1120	1.0949	Ave		1.1573				12.1		20.0			
Endosulfan I	1.2870 0.8764	1.1847	1.0844	1.0317	1.0089	Ave		1.0789				13.3		20.0			
4,4'-DDE	1.8780 1.4818	1.8156	1.6957	1.6490	1.6623	Ave		1.6971				8.2		20.0			
Dieldrin	2.1357 1.3995	1.8479	1.6810	1.6240	1.5788	Ave		1.7111				14.8		20.0			
Endrin	1.6762 1.1942	1.5371	1.3892	1.3432	1.3515	Ave		1.4152				11.9		20.0			
4,4'-DDD	1.5386 1.1650	1.4361	1.3496	1.3183	1.3301	Ave		1.3563				9.2		20.0			
Endosulfan II	1.6584 1.2070	1.5123	1.3771	1.3448	1.3504	Ave		1.4083				11.1		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 190365

SDG No.:

Instrument ID: CHGC15 GC Column: MR-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/06/2016 13:08 Calibration End Date: 10/06/2016 14:25 Calibration ID: 33114

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
4,4'-DDT	1.2447 1.0656	1.1942	1.1486	1.1768	1.1856	Ave		1.1692				5.1		20.0			
Endrin aldehyde	1.4740 0.9573	1.2225	1.0823	1.0560	1.0706	Ave		1.1438				16.0		20.0			
Endosulfan sulfate	1.4350 1.1010	1.3387	1.2157	1.2148	1.2138	Ave		1.2532				9.3		20.0			
Methoxychlor	0.6406 0.4852	0.5893	0.5405	0.5295	0.5425	Ave		0.5546				9.7		20.0			
Endrin ketone	1.5907 1.0453	1.3396	1.1985	1.1710	1.1859	Ave		1.2552				15.1		20.0			
Tetrachloro-m-xylene	1.7015 1.1254	1.5664	1.4147	1.3284	1.3118	Ave		1.4080				14.4		20.0			
DCB Decachlorobiphenyl (Surr)	0.8743 0.5841	0.7741	0.6606	0.6391	0.6607	Ave		0.6988				15.2		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 190365

SDG No.:

Instrument ID: CHGC15 GC Column: MR-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/06/2016 13:08 Calibration End Date: 10/06/2016 14:25 Calibration ID: 33114

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-190365/7	Q100616A0000007.D
Level 2	IC 180-190365/8	Q100616A0000008.D
Level 3	ICIS 180-190365/9	Q100616A0000009.D
Level 4	IC 180-190365/10	Q100616A0000010.D
Level 5	IC 180-190365/11	Q100616A0000011.D
Level 6	IC 180-190365/12	Q100616A0000012.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
alpha-BHC	BNB	Ave	2293632 375229035	10972850	52979205	103674192	202668188	0.00100 0.200	0.00500	0.0250	0.0500	0.100
gamma-BHC (Lindane)	BNB	Ave	1996399 319179566	9286540	45174399	87027333	169766875	0.00100 0.200	0.00500	0.0250	0.0500	0.100
beta-BHC	BNB	Ave	923028 140170399	4075771	19778021	38847855	75553589	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Heptachlor	BNB	Ave	1762280 258914831	7982776	38479289	74931264	141709023	0.00100 0.200	0.00500	0.0250	0.0500	0.100
delta-BHC	BNB	Ave	1741322 304378034	8195232	41623401	81979520	158674112	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Aldrin	BNB	Ave	1715340 265829308	8055611	39096794	75298453	144970741	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Heptachlor epoxide	BNB	Ave	1555779 233211673	7261198	34347109	66254351	125648610	0.00100 0.200	0.00500	0.0250	0.0500	0.100
trans-Chlordane	BNB	Ave	1551717 250338070	7314678	34821922	69632463	133607253	0.00100 0.200	0.00500	0.0250	0.0500	0.100
cis-Chlordane	BNB	Ave	1522741 239290627	7071702	33797062	66219497	127509478	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Endosulfan I	BNB	Ave	1444799 219547101	6614584	31636053	61438141	117489201	0.00100 0.200	0.00500	0.0250	0.0500	0.100
4,4'-DDE	DBC	Ave	1441315 255578316	7112149	35236224	69407607	135787536	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Dieldrin	DBC	Ave	1639088 241393412	7238742	34930431	68352596	128961089	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Endrin	DBC	Ave	1286419 205985565	6021229	28867705	56536775	110395322	0.00100 0.200	0.00500	0.0250	0.0500	0.100
4,4'-DDD	DBC	Ave	1180844 200939062	5625752	28044751	55486191	108646550	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Endosulfan II	DBC	Ave	1272823 208192634	5924030	28614892	56602871	110310282	0.00100 0.200	0.00500	0.0250	0.0500	0.100
4,4'-DDT	DBC	Ave	955302 183789830	4677980	23866713	49530594	96843596	0.00100 0.200	0.00500	0.0250	0.0500	0.100

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 190365

SDG No.:

Instrument ID: CHGC15 GC Column: MR-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/06/2016 13:08 Calibration End Date: 10/06/2016 14:25 Calibration ID: 33114

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Endrin aldehyde	DBC	Ave	1131250 165109468	4788926	22488896	44446993	87448409	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Endosulfan sulfate	DBC	Ave	1101324 189903808	5244208	25262144	51131531	99151547	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Methoxychlor	DBC	Ave	491625 83683870	2308252	11230260	22287764	44311122	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Endrin ketone	DBC	Ave	1220809 180290391	5247718	24905062	49287937	96871652	0.00100 0.200	0.00500	0.0250	0.0500	0.100
Tetrachloro-m-xylene	BNB	Ave	1910092 281928123	8745301	41272557	79105784	152765468	0.00100 0.200	0.00500	0.0250	0.0500	0.100
DCB Decachlorobiphenyl (Surr)	DBC	Ave	671012 100746334	3032537	13726299	26898040	53966784	0.00100 0.200	0.00500	0.0250	0.0500	0.100

Curve Type Legend:
Ave = Average ISTD by Height

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000007.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 06-Oct-2016 13:08:38 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013765-007
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 06-Oct-2016 15:15:11 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK015

First Level Reviewer: eppinged Date: 06-Oct-2016 13:45:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.696	3.696	-0.001	86816136H	0.1000	0.1000	
2	3.770	3.770	0.000	112258136H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.695	4.696	-0.001	1239738H	0.001000	0.001125	
2	4.614	4.614	0.000	1910092H	0.001000	0.001208	
						RPD = 7.12	
5 alpha-BHC							
1	5.064	5.065	-0.001	1554209H	0.001000	0.001034	
2	5.070	5.070	0.000	2293632H	0.001000	0.001135	
						RPD = 9.24	
7 gamma-BHC (Lindane)							
1	5.331	5.331	0.000	1379101H	0.001000	0.001065	
2	5.363	5.364	-0.001	1996399H	0.001000	0.001162	
						RPD = 8.71	
8 beta-BHC							
1	5.494	5.493	0.001	692033H	0.001000	0.001201	
2	5.603	5.602	0.001	923028H	0.001000	0.001206	
						RPD = 0.45	
10 delta-BHC							
1	5.691	5.692	-0.001	1221995H	0.001000	0.001018	
2	5.822	5.822	0.000	1741322H	0.001000	0.001108	
						RPD = 8.47	
11 Heptachlor							
1	5.802	5.804	-0.002	1211853H	0.001000	0.001121	
2	5.673	5.673	0.000	1762280H	0.001000	0.001203	
						RPD = 7.08	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
13 Aldrin							
1	6.085	6.086	-0.001	1162027H	0.001000	0.001070	
2	5.931	5.932	-0.001	1715340H	0.001000	0.001163	
						RPD = 8.40	
16 Heptachlor epoxide							
1	6.446	6.445	0.001	1162896H	0.001000	0.001176	
2	6.374	6.373	0.001	1555779H	0.001000	0.001190	
						RPD = 1.24	
18 gamma-Chlordane							
1	6.664	6.664	0.000	1098288H	0.001000	0.001104	
2	6.596	6.595	0.001	1551717H	0.001000	0.001152	
						RPD = 4.24	
20 alpha-Chlordane							
1	6.732	6.732	0.000	1093654H	0.001000	0.001147	
2	6.656	6.656	0.000	1522741H	0.001000	0.001172	
						RPD = 2.16	
21 Endosulfan I							
1	6.775	6.777	-0.002	1026267H	0.001000	0.001148	
2	6.720	6.719	0.001	1444799H	0.001000	0.001193	
						RPD = 3.84	
23 4,4'-DDE							
1	6.884	6.885	-0.001	1012095H	0.001000	0.001048	
2	6.800	6.800	0.000	1441315H	0.001000	0.001107	
						RPD = 5.43	
24 Dieldrin							
1	7.016	7.017	-0.001	1075583H	0.001000	0.001114	
2	6.961	6.961	0.000	1639088H	0.001000	0.001248	
						RPD = 11.39	
27 Endrin							
1	7.220	7.219	0.001	899989H	0.001000	0.001078	
2	7.223	7.222	0.001	1286419H	0.001000	0.001184	
						RPD = 9.43	
29 4,4'-DDD							
1	7.345	7.345	0.000	890084H	0.001000	0.001128	
2	7.312	7.313	-0.001	1180844H	0.001000	0.001134	
						RPD = 0.55	
31 Endosulfan II							
1	7.416	7.417	-0.001	923406H	0.001000	0.001125	
2	7.487	7.486	0.001	1272823H	0.001000	0.001178	
						RPD = 4.54	
32 Endrin aldehyde							
1	7.534	7.533	0.001	733317H	0.001000	0.001142	
2	7.649	7.652	-0.003	1131250H	0.001000	0.001289	
						RPD = 12.08	
33 4,4'-DDT							
1	7.623	7.623	0.000	663545H	0.001000	0.001012	
2	7.553	7.552	0.001	955302H	0.001000	0.001065	
						RPD = 5.05	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
35 Endosulfan sulfate							
1	7.744	7.743	0.001	847244H	0.001000	0.001153	
2	7.857	7.857	0.000	1101324H	0.001000	0.001145	
						RPD = 0.65	
36 Methoxychlor							
1	8.065	8.066	-0.001	421354H	0.001000	0.001299	
2	8.084	8.082	0.002	491625H	0.001000	0.001155	
						RPD = 11.76	
* 44 Dibutylchlorendate ISTD							
1	8.140	8.140	0.000	51266890H	0.1000	0.1000	
2	7.919	7.919	0.000	76748218H	0.1000	0.1000	
37 Endrin ketone							
1	8.195	8.194	0.001	856004H	0.001000	0.001122	
2	8.391	8.391	0.000	1220809H	0.001000	0.001267	
						RPD = 12.13	
$ 39 DCB Decachlorobiphenyl (Surr)							M
1	9.892	9.892	0.000	471747H	0.001000	0.001261	M
2	9.823	9.822	0.001	671012H	0.001000	0.001251	M
						RPD = 0.80	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCPest L1_00017	Amount Added:	1.00	Units: mL	
GCPESTISSPK2_00004	Amount Added:	0.02	Units: mL	Run Reagent

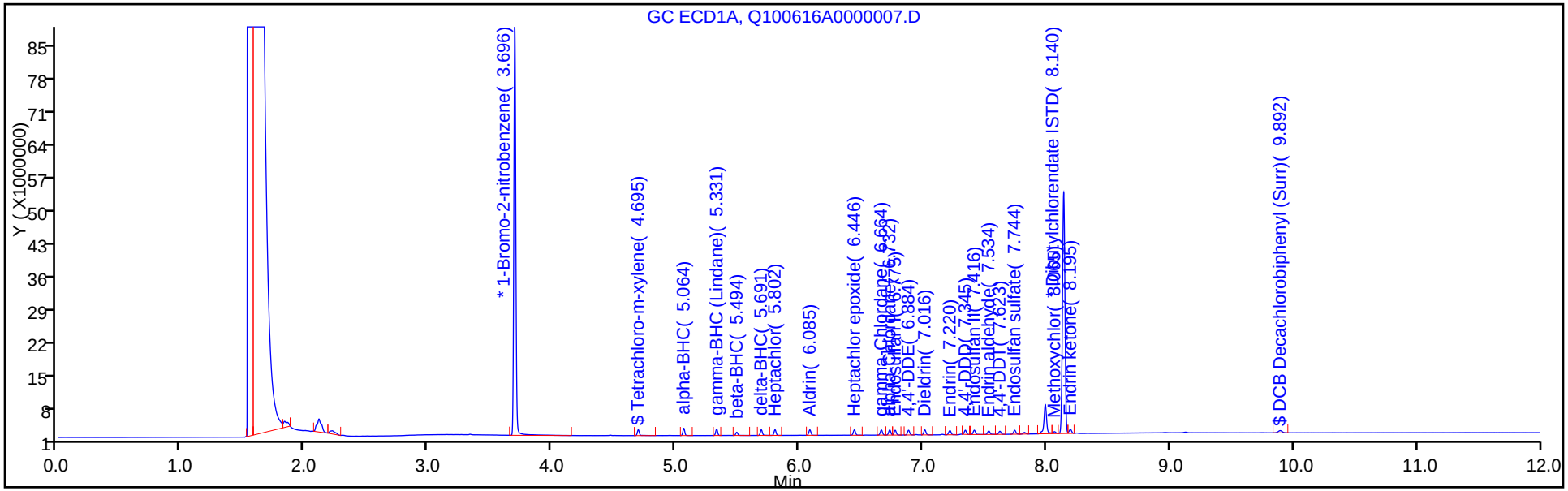
Report Date: 06-Oct-2016 15:15:13 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

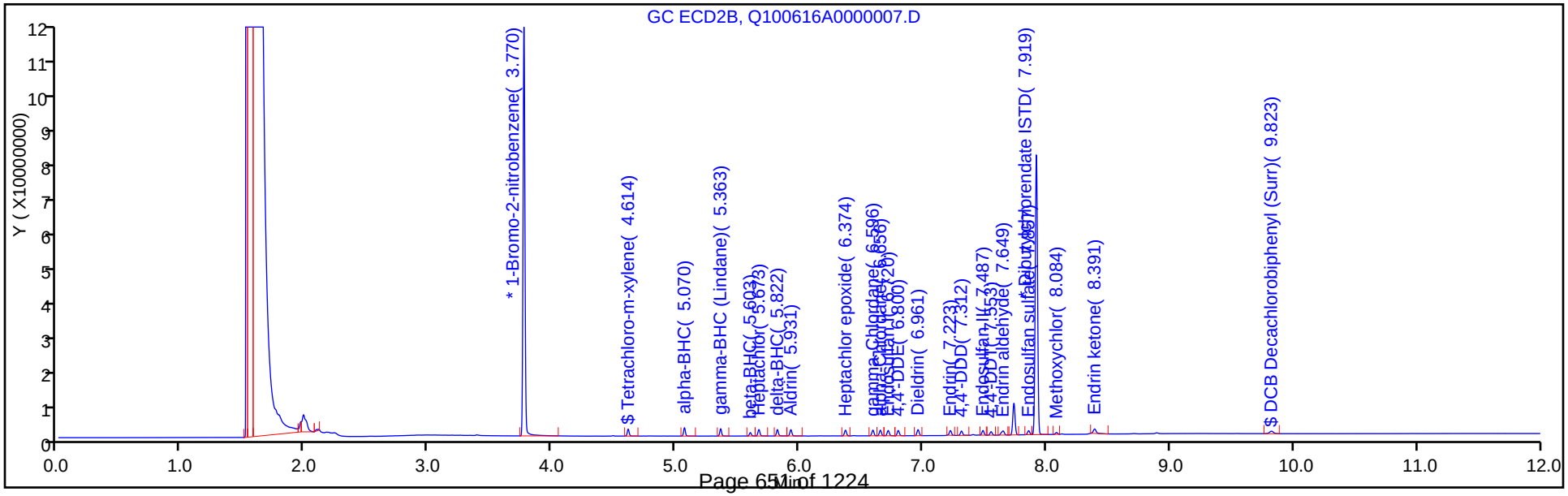
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000007.D

Injection Date:	06-Oct-2016 13:08:38	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh

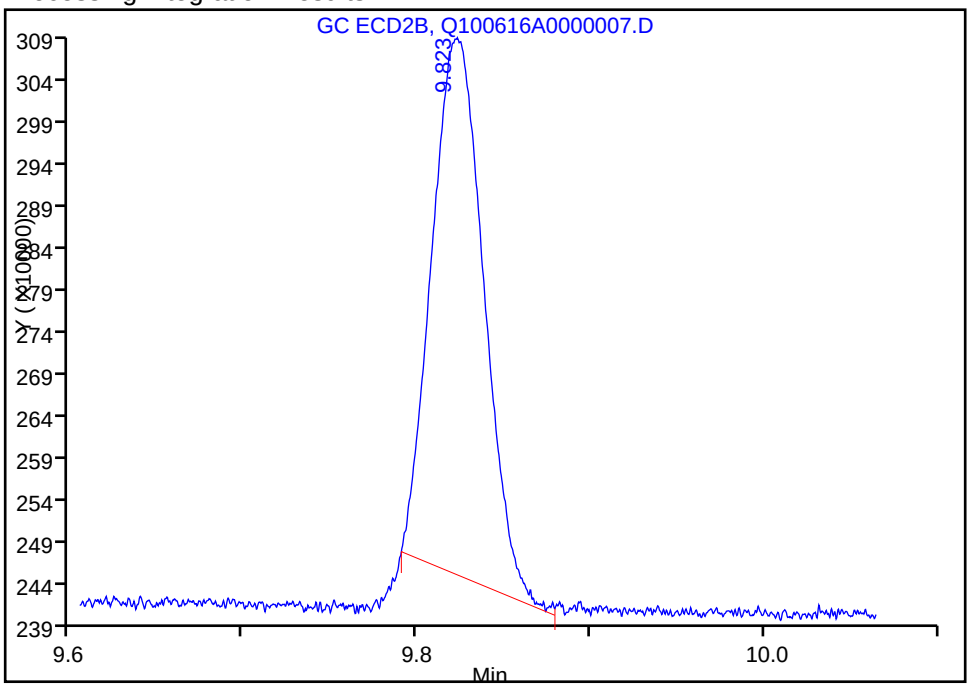
Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000007.D				
Injection Date:	06-Oct-2016 13:08:38	Instrument ID:	CHGC15		
Lims ID:	IC				
Client ID:					
Operator ID:	402331	ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		
Column:	MR-2 (0.53 mm)	Detector	GC ECD2B		

$ 39 DCB Decachlorobiphenyl (Surr), CAS: 2051-24-3

Signal: 2

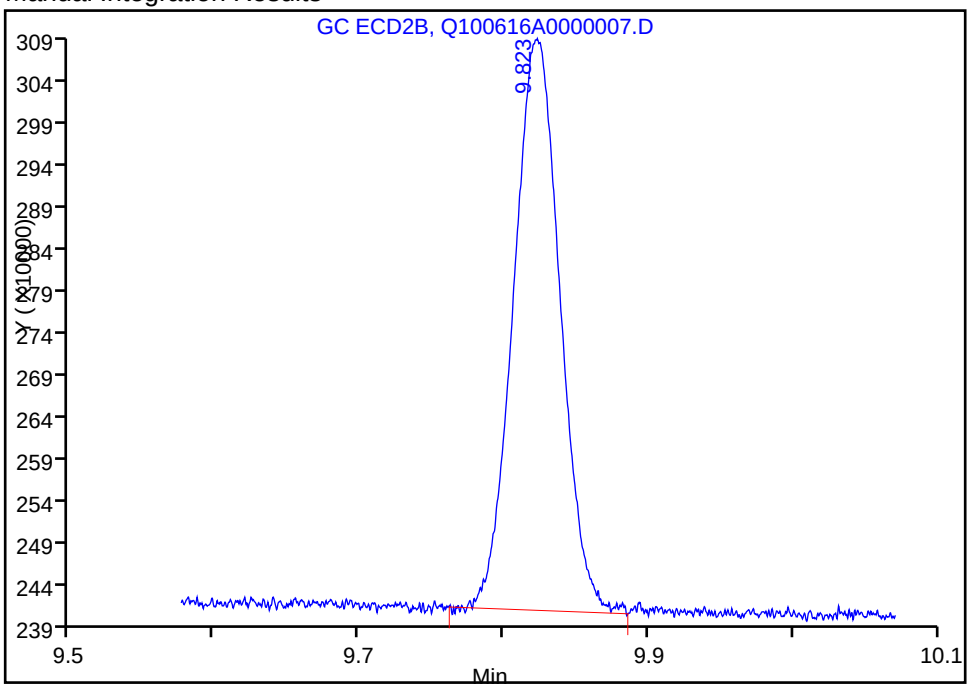
Processing Integration Results

RT: 9.82
Height: 630417
Amount: 0.000996
Amount Units: ng



Manual Integration Results

RT: 9.82
Height: 671012
Amount: 0.001251
Amount Units: ng



Reviewer: eppinged, 06-Oct-2016 13:45:16
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000008.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 06-Oct-2016 13:24:01 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013765-008
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 06-Oct-2016 15:15:23 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK015

First Level Reviewer: eppinged Date: 06-Oct-2016 13:56:10

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.696	3.696	0.000	87777818H	0.1000	0.1000	
2	3.770	3.770	0.000	111664303H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.696	4.696	0.000	5837170H	0.005000	0.005240	
2	4.614	4.614	0.000	8745301H	0.005000	0.005562	
						RPD = 5.96	
5 alpha-BHC							
1	5.064	5.065	-0.001	7771974H	0.005000	0.005116	
2	5.070	5.070	0.000	10972850H	0.005000	0.005457	
						RPD = 6.45	
7 gamma-BHC (Lindane)							
1	5.330	5.331	-0.001	6796072H	0.005000	0.005190	
2	5.363	5.364	-0.001	9286540H	0.005000	0.005434	
						RPD = 4.58	
8 beta-BHC							
1	5.493	5.493	0.000	3010263H	0.005000	0.005165	
2	5.603	5.602	0.001	4075771H	0.005000	0.005353	
						RPD = 3.58	
10 delta-BHC							
1	5.692	5.692	0.000	6101583H	0.005000	0.005027	
2	5.822	5.822	0.000	8195232H	0.005000	0.005242	
						RPD = 4.19	
11 Heptachlor							
1	5.803	5.804	-0.001	5642570H	0.005000	0.005163	
2	5.673	5.673	0.000	7982776H	0.005000	0.005480	
						RPD = 5.96	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
13 Aldrin							
1	6.086	6.086	0.000	5661287H	0.005000	0.005154	
2	5.932	5.932	0.000	8055611H	0.005000	0.005492	
						RPD = 6.36	
16 Heptachlor epoxide							
1	6.445	6.445	0.000	5325024H	0.005000	0.005324	
2	6.374	6.373	0.001	7261198H	0.005000	0.005585	
						RPD = 4.78	
18 gamma-Chlordane							
1	6.664	6.664	0.000	5097498H	0.005000	0.005067	
2	6.596	6.595	0.001	7314678H	0.005000	0.005457	
						RPD = 7.42	
20 alpha-Chlordane							
1	6.732	6.732	0.000	4838127H	0.005000	0.005019	
2	6.656	6.656	0.000	7071702H	0.005000	0.005472	
						RPD = 8.65	
21 Endosulfan I							
1	6.776	6.777	-0.001	4670333H	0.005000	0.005167	
2	6.719	6.719	0.000	6614584H	0.005000	0.005491	
						RPD = 6.07	
23 4,4'-DDE							
1	6.884	6.885	-0.001	4876941H	0.005000	0.005215	
2	6.801	6.800	0.001	7112149H	0.005000	0.005349	
						RPD = 2.55	
24 Dieldrin							
1	7.016	7.017	-0.001	4946736H	0.005000	0.005288	
2	6.961	6.961	0.000	7238742H	0.005000	0.005400	
						RPD = 2.09	
27 Endrin							
1	7.219	7.219	0.000	4402563H	0.005000	0.005443	
2	7.223	7.222	0.001	6021229H	0.005000	0.005431	
						RPD = 0.24	
29 4,4'-DDD							
1	7.343	7.345	-0.002	3986653H	0.005000	0.005217	
2	7.313	7.313	0.000	5625752H	0.005000	0.005294	
						RPD = 1.47	
31 Endosulfan II							
1	7.416	7.417	-0.001	4326900H	0.005000	0.005445	
2	7.486	7.486	0.000	5924030H	0.005000	0.005369	
						RPD = 1.40	
32 Endrin aldehyde							
1	7.533	7.533	0.000	3403046H	0.005000	0.005471	
2	7.651	7.652	-0.001	4788926H	0.005000	0.005344	
						RPD = 2.35	
33 4,4'-DDT							
1	7.624	7.623	0.001	3283299H	0.005000	0.005171	
2	7.552	7.552	0.000	4677980H	0.005000	0.005107	
						RPD = 1.25	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
35 Endosulfan sulfate							
1	7.743	7.743	0.000	3832608H	0.005000	0.005383	
2	7.856	7.857	-0.001	5244208H	0.005000	0.005341	
						RPD = 0.78	
36 Methoxychlor							
1	8.066	8.066	0.000	1691032H	0.005000	0.005385	
2	8.082	8.082	0.000	2308252H	0.005000	0.005313	
						RPD = 1.34	
* 44 Dibutylchlorendate ISTD							
1	8.140	8.140	0.000	49652434H	0.1000	0.1000	
2	7.919	7.919	0.001	78345398H	0.1000	0.1000	
37 Endrin ketone							
1	8.194	8.194	0.000	3984149H	0.005000	0.005394	
2	8.391	8.391	0.000	5247718H	0.005000	0.005336	
						RPD = 1.06	
$ 39 DCB Decachlorobiphenyl (Surr)							
1	9.890	9.892	-0.002	2039125H	0.005000	0.005629	
2	9.822	9.822	0.000	3032537H	0.005000	0.005539	
						RPD = 1.60	

Reagents:

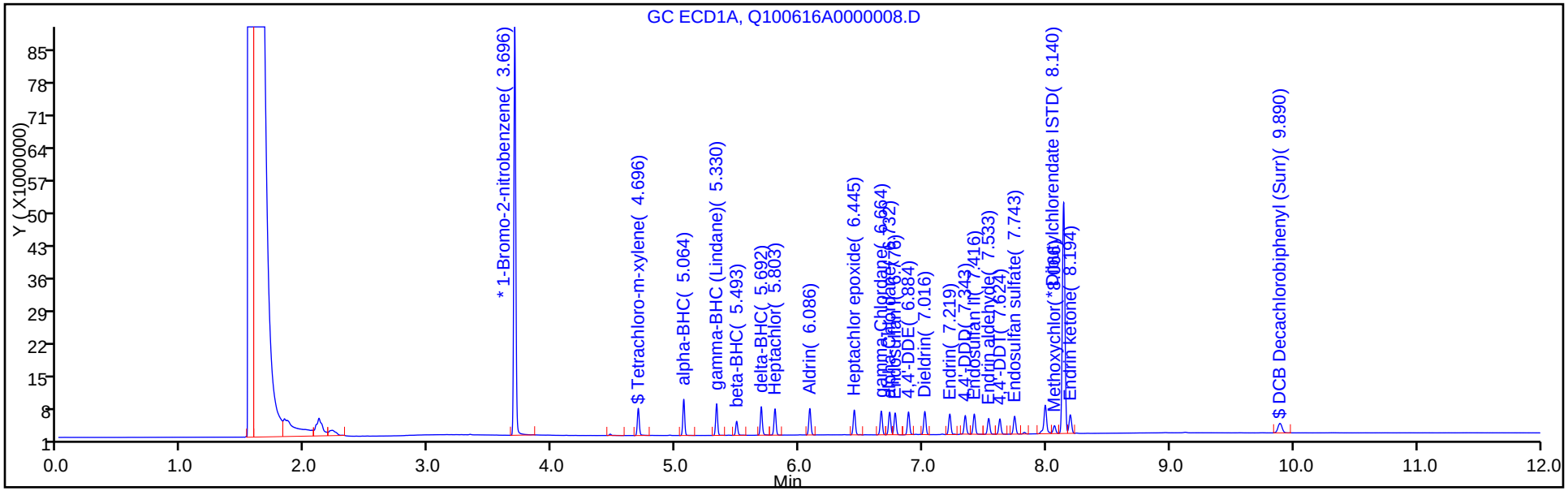
GCPestL2_00016	Amount Added:	1.00	Units: mL	
GCPESTISSPK2_00004	Amount Added:	0.02	Units: mL	Run Reagent

Report Date: 06-Oct-2016 15:15:24 Chrom Revision: 2.2 08-Sep-2016 14:45:52

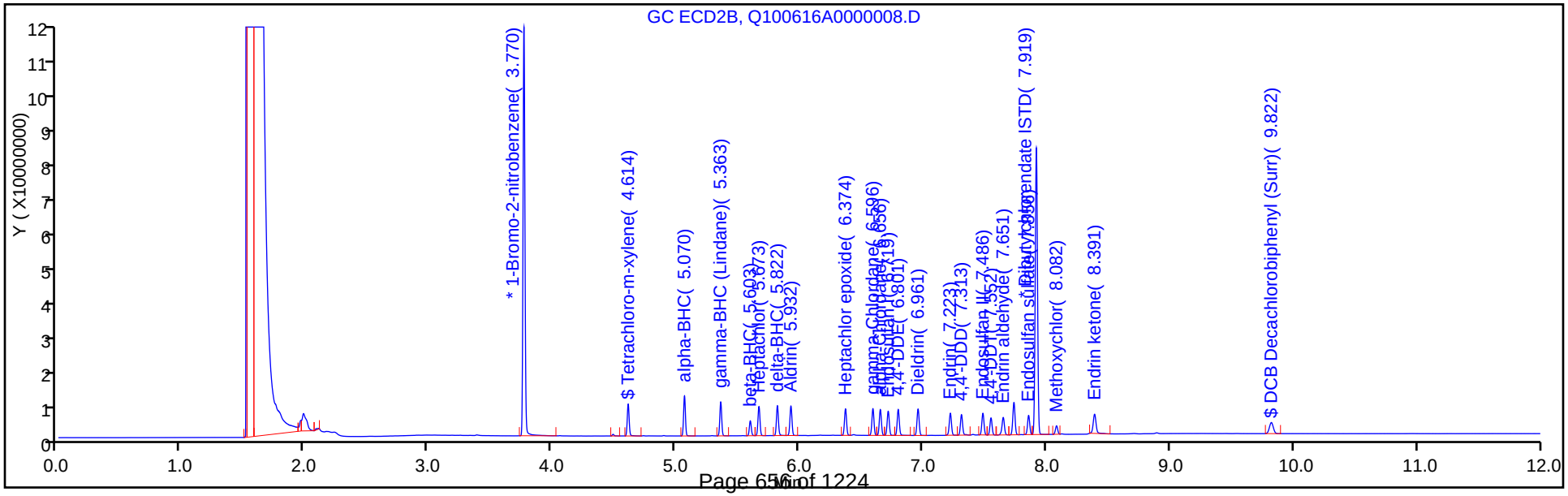
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000008.D				
Injection Date:	06-Oct-2016 13:24:01	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000009.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 3
Inject. Date: 06-Oct-2016 13:39:35 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013765-009
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 06-Oct-2016 15:15:29 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK015

First Level Reviewer: eppinged Date: 06-Oct-2016 13:56:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.696	3.696	0.000	89773362H	0.1000	0.1000	
2	3.770	3.770	0.000	116698430H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.696	4.696	0.000	28729776H	0.0250	0.0252	
2	4.614	4.614	0.000	41272557H	0.0250	0.0251	
						RPD = 0.40	
5 alpha-BHC							
1	5.065	5.065	0.000	40013274H	0.0250	0.0258	
2	5.070	5.070	0.000	52979205H	0.0250	0.0252	
						RPD = 2.13	
7 gamma-BHC (Lindane)							
1	5.331	5.331	0.000	34292631H	0.0250	0.0256	
2	5.364	5.364	0.000	45174399H	0.0250	0.0253	
						RPD = 1.24	
8 beta-BHC							
1	5.493	5.493	0.000	14684809H	0.0250	0.0246	
2	5.602	5.602	0.000	19778021H	0.0250	0.0249	
						RPD = 0.89	
10 delta-BHC							
1	5.692	5.692	0.000	31333023H	0.0250	0.0252	
2	5.822	5.822	0.000	41623401H	0.0250	0.0255	
						RPD = 0.93	
11 Heptachlor							
1	5.804	5.804	0.000	29099823H	0.0250	0.0260	
2	5.673	5.673	0.000	38479289H	0.0250	0.0253	
						RPD = 2.95	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
13 Aldrin							
1	6.086	6.086	0.000	28873298H	0.0250	0.0257	
2	5.932	5.932	0.000	39096794H	0.0250	0.0255	
						RPD = 0.76	
16 Heptachlor epoxide							
1	6.445	6.445	0.000	25810017H	0.0250	0.0252	
2	6.373	6.373	0.000	34347109H	0.0250	0.0253	
						RPD = 0.18	
18 gamma-Chlordane							
1	6.664	6.664	0.000	25932000H	0.0250	0.0252	
2	6.595	6.595	0.000	34821922H	0.0250	0.0249	
						RPD = 1.38	
20 alpha-Chlordane							
1	6.732	6.732	0.000	24941212H	0.0250	0.0253	
2	6.656	6.656	0.000	33797062H	0.0250	0.0250	
						RPD = 1.08	
21 Endosulfan I							
1	6.777	6.777	0.000	23299969H	0.0250	0.0252	
2	6.719	6.719	0.000	31636053H	0.0250	0.0251	
						RPD = 0.31	
23 4,4'-DDE							
1	6.885	6.885	0.000	25607546H	0.0250	0.0255	
2	6.800	6.800	0.000	35236224H	0.0250	0.0250	
						RPD = 1.95	
24 Dieldrin							
1	7.017	7.017	0.000	25506034H	0.0250	0.0254	
2	6.961	6.961	0.000	34930431H	0.0250	0.0246	
						RPD = 3.22	
27 Endrin							
1	7.219	7.219	0.000	22052357H	0.0250	0.0254	
2	7.222	7.222	0.000	28867705H	0.0250	0.0245	
						RPD = 3.30	
29 4,4'-DDD							
1	7.345	7.345	0.000	20316484H	0.0250	0.0247	
2	7.313	7.313	0.000	28044751H	0.0250	0.0249	
						RPD = 0.58	
31 Endosulfan II							
1	7.417	7.417	0.000	21476842H	0.0250	0.0251	
2	7.486	7.486	0.000	28614892H	0.0250	0.0244	
						RPD = 2.80	
32 Endrin aldehyde							
1	7.533	7.533	0.000	16559906H	0.0250	0.0248	
2	7.652	7.652	0.000	22488896H	0.0250	0.0237	
						RPD = 4.59	
33 4,4'-DDT							
1	7.623	7.623	0.000	17287077H	0.0250	0.0253	
2	7.552	7.552	0.000	23866713H	0.0250	0.0246	
						RPD = 3.08	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
35 Endosulfan sulfate							
1	7.743	7.743	0.000	18899271H	0.0250	0.0247	
2	7.857	7.857	0.000	25262144H	0.0250	0.0243	
						RPD = 1.80	
36 Methoxychlor							
1	8.066	8.066	0.000	7916442H	0.0250	0.0234	
2	8.082	8.082	0.000	11230260H	0.0250	0.0244	
						RPD = 3.82	
* 44 Dibutylchlorendate ISTD							
1	8.140	8.140	0.000	53375035H	0.1000	0.1000	
2	7.919	7.919	0.000	83117573H	0.1000	0.1000	
37 Endrin ketone							
1	8.194	8.194	0.000	19364556H	0.0250	0.0244	
2	8.391	8.391	0.000	24905062H	0.0250	0.0239	
						RPD = 2.13	
$ 39 DCB Decachlorobiphenyl (Surr)							
1	9.892	9.892	0.000	9288223H	0.0250	0.0238	
2	9.822	9.822	0.000	13726299H	0.0250	0.0236	
						RPD = 0.92	

Reagents:

GCPestL3_00017	Amount Added:	1.00	Units: mL	
GCPESTISSPK2_00004	Amount Added:	0.02	Units: mL	Run Reagent

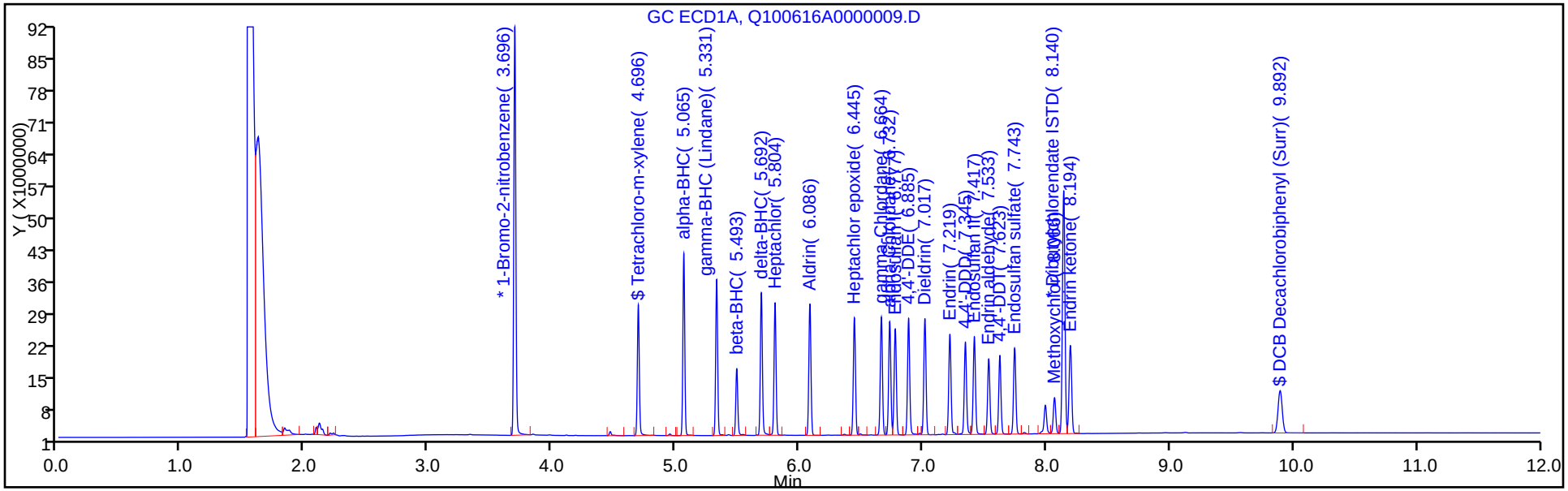
Report Date: 06-Oct-2016 15:15:31 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

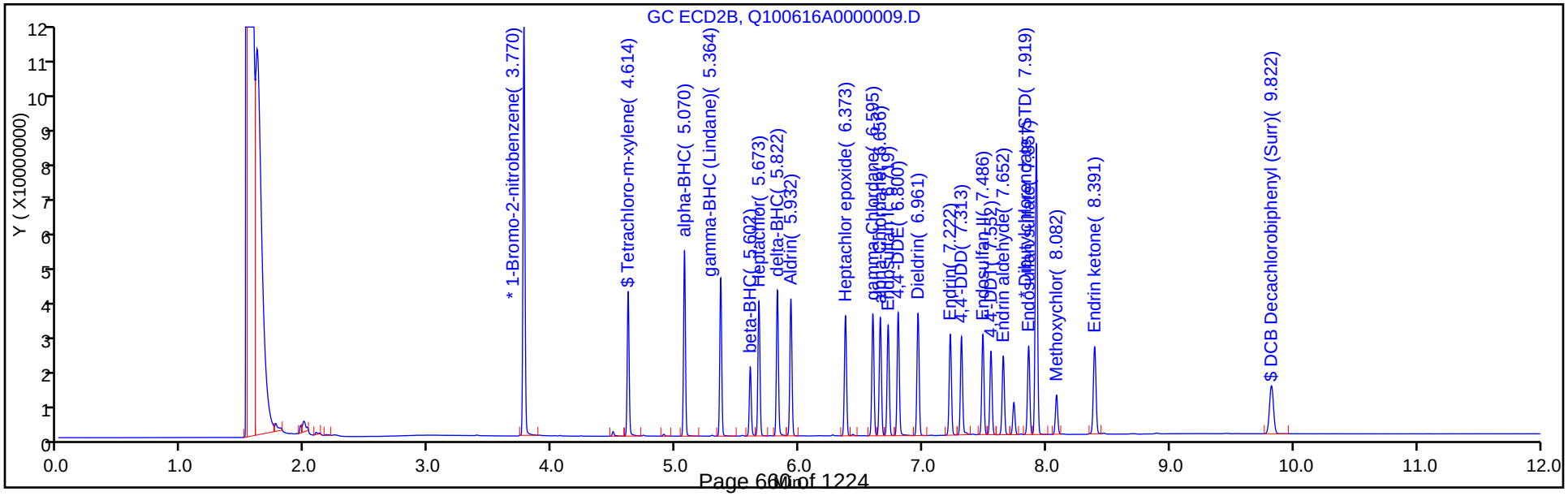
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000009.D

Injection Date:	06-Oct-2016 13:39:35	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	ICIS			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000010.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 06-Oct-2016 13:55:03 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013765-010
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 06-Oct-2016 15:15:37 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK015

First Level Reviewer: eppinged Date: 06-Oct-2016 14:22:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.697	3.696	0.000	93598429H	0.1000	0.1000	
2	3.771	3.770	0.000	119102301H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.696	4.696	0.000	57869750H	0.0500	0.0487	
2	4.614	4.614	0.000	79105784H	0.0500	0.0472	
						RPD = 3.24	
5 alpha-BHC							
1	5.064	5.065	-0.001	80642043H	0.0500	0.0498	
2	5.070	5.070	0.000	103674192H	0.0500	0.0483	
						RPD = 2.94	
7 gamma-BHC (Lindane)							
1	5.330	5.331	-0.001	68019324H	0.0500	0.0487	
2	5.364	5.364	0.000	87027333H	0.0500	0.0477	
						RPD = 2.03	
8 beta-BHC							
1	5.492	5.493	-0.001	29634415H	0.0500	0.0477	
2	5.603	5.602	0.001	38847855H	0.0500	0.0478	
						RPD = 0.32	
10 delta-BHC							
1	5.693	5.692	0.001	64333190H	0.0500	0.0497	
2	5.823	5.822	0.001	81979520H	0.0500	0.0492	
						RPD = 1.10	
11 Heptachlor							
1	5.803	5.804	-0.001	56428567H	0.0500	0.0484	
2	5.673	5.673	0.000	74931264H	0.0500	0.0482	
						RPD = 0.40	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
13 Aldrin							
1	6.085	6.086	-0.001	57646936H	0.0500	0.0492	
2	5.932	5.932	0.000	75298453H	0.0500	0.0481	
						RPD = 2.23	
16 Heptachlor epoxide							
1	6.446	6.445	0.001	51379126H	0.0500	0.0482	
2	6.374	6.373	0.001	66254351H	0.0500	0.0478	
						RPD = 0.83	
18 gamma-Chlordane							
1	6.664	6.664	0.000	52367183H	0.0500	0.0488	
2	6.596	6.595	0.001	69632463H	0.0500	0.0487	
						RPD = 0.23	
20 alpha-Chlordane							
1	6.731	6.732	-0.001	50169273H	0.0500	0.0488	
2	6.655	6.656	-0.001	66219497H	0.0500	0.0480	
						RPD = 1.57	
21 Endosulfan I							
1	6.776	6.777	-0.001	46736620H	0.0500	0.0485	
2	6.719	6.719	0.000	61438141H	0.0500	0.0478	
						RPD = 1.41	
23 4,4'-DDE							
1	6.885	6.885	0.000	51885169H	0.0500	0.0492	
2	6.801	6.800	0.001	69407607H	0.0500	0.0486	
						RPD = 1.21	
24 Dieldrin							
1	7.017	7.017	0.000	50997264H	0.0500	0.0483	
2	6.961	6.961	0.000	68352596H	0.0500	0.0475	
						RPD = 1.82	
27 Endrin							
1	7.219	7.219	0.000	43791306H	0.0500	0.0480	
2	7.222	7.222	0.000	56536775H	0.0500	0.0475	
						RPD = 1.13	
29 4,4'-DDD							
1	7.344	7.345	-0.001	41746036H	0.0500	0.0484	
2	7.313	7.313	0.000	55486191H	0.0500	0.0486	
						RPD = 0.35	
31 Endosulfan II							
1	7.417	7.417	0.000	43109630H	0.0500	0.0481	
2	7.487	7.486	0.001	56602871H	0.0500	0.0477	
						RPD = 0.71	
32 Endrin aldehyde							
1	7.534	7.533	0.001	32827784H	0.0500	0.0468	
2	7.651	7.652	-0.001	44446993H	0.0500	0.0462	
						RPD = 1.34	
33 4,4'-DDT							
1	7.623	7.623	0.000	35030649H	0.0500	0.0489	
2	7.552	7.552	0.000	49530594H	0.0500	0.0503	
						RPD = 2.86	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
35 Endosulfan sulfate							
1	7.743	7.743	0.000	37806557H	0.0500	0.0471	
2	7.856	7.857	-0.001	51131531H	0.0500	0.0485	
						RPD = 2.92	
36 Methoxychlor							
1	8.066	8.066	0.000	16162260H	0.0500	0.0456	
2	8.083	8.082	0.001	22287764H	0.0500	0.0477	
						RPD = 4.55	
* 44 Dibutylchlorendate ISTD							
1	8.140	8.140	0.000	56012956H	0.1000	0.1000	
2	7.919	7.919	0.001	84179778H	0.1000	0.1000	
37 Endrin ketone							
1	8.195	8.194	0.001	40033352H	0.0500	0.0480	
2	8.391	8.391	0.000	49287937H	0.0500	0.0466	
						RPD = 2.94	
$ 39 DCB Decachlorobiphenyl (Surr)							
1	9.893	9.892	0.001	18354225H	0.0500	0.0449	
2	9.821	9.822	-0.001	26898040H	0.0500	0.0457	
						RPD = 1.80	

Reagents:

GCPestL4_00016	Amount Added:	1.00	Units: mL	
GCPESTISSPK2_00004	Amount Added:	0.02	Units: mL	Run Reagent

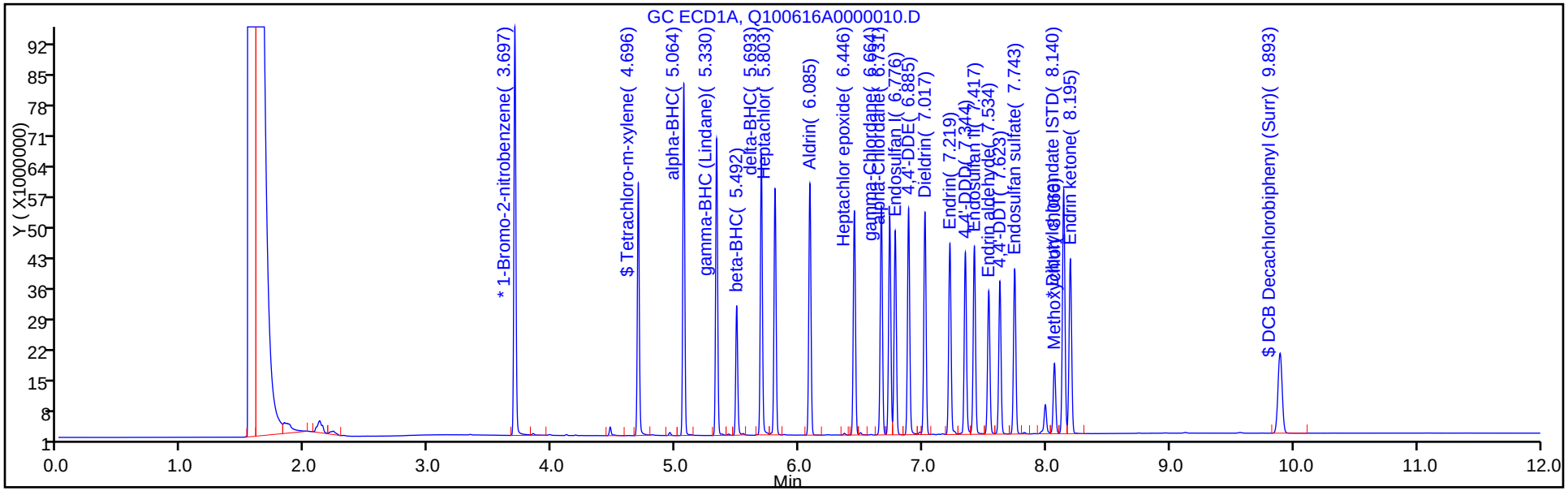
Report Date: 06-Oct-2016 15:15:38 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

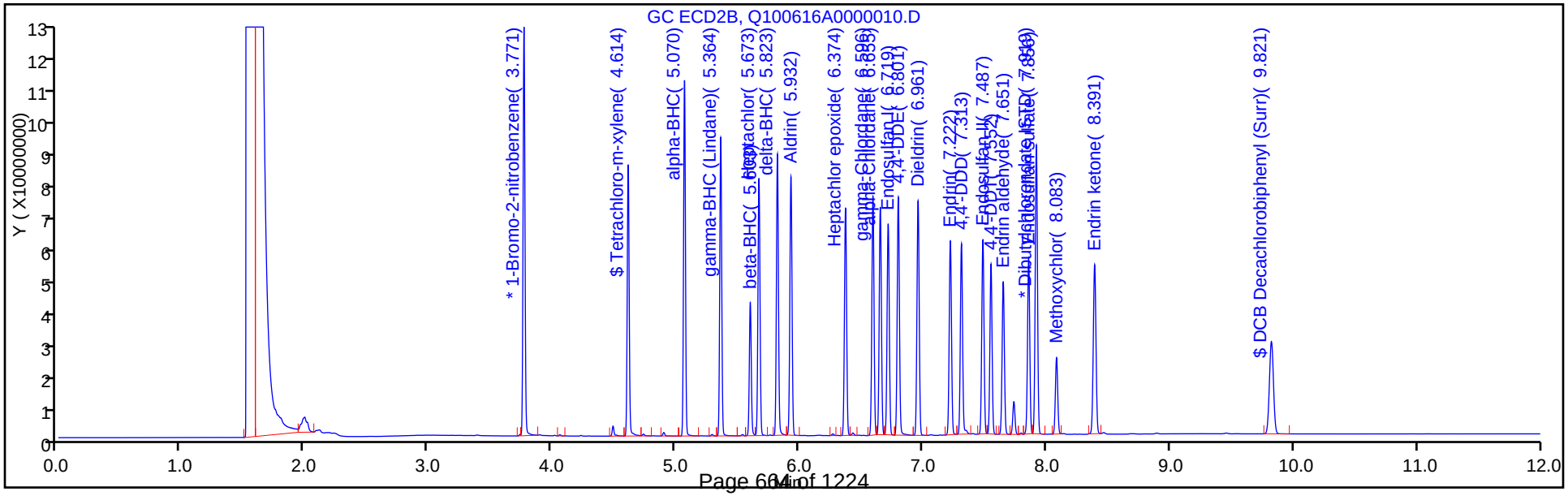
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000010.D

Injection Date:	06-Oct-2016 13:55:03	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000011.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 06-Oct-2016 14:10:30 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013765-011
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 06-Oct-2016 15:15:47 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK015

First Level Reviewer: eppinged Date: 06-Oct-2016 14:43:27

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.696	3.696	0.000	91005326H	0.1000	0.1000	
2	3.770	3.770	0.000	116454136H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.696	4.696	0.000	113569642H	0.1000	0.0983	
2	4.614	4.614	0.000	152765468H	0.1000	0.0932	
						RPD = 5.41	
5 alpha-BHC							
1	5.064	5.065	-0.001	158307297H	0.1000	0.1005	
2	5.070	5.070	0.000	202668188H	0.1000	0.0967	
						RPD = 3.92	
7 gamma-BHC (Lindane)							
1	5.331	5.331	0.000	136162459H	0.1000	0.1003	
2	5.363	5.364	-0.001	169766875H	0.1000	0.0952	
						RPD = 5.17	
8 beta-BHC							
1	5.492	5.493	-0.001	58242766H	0.1000	0.0964	
2	5.602	5.602	0.000	75553589H	0.1000	0.0952	
						RPD = 1.29	
10 delta-BHC							
1	5.692	5.692	0.000	132454570H	0.1000	0.1053	
2	5.821	5.822	-0.001	158674112H	0.1000	0.0973	
						RPD = 7.84	
11 Heptachlor							
1	5.803	5.804	-0.001	109812772H	0.1000	0.0969	
2	5.672	5.673	-0.001	141709023H	0.1000	0.0933	
						RPD = 3.82	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
13 Aldrin							
1	6.085	6.086	-0.001	114847559H	0.1000	0.1008	
2	5.931	5.932	-0.001	144970741H	0.1000	0.0948	
						RPD = 6.21	
16 Heptachlor epoxide							
1	6.445	6.445	0.000	98173151H	0.1000	0.0947	
2	6.373	6.373	0.000	125648610H	0.1000	0.0927	
						RPD = 2.15	
18 gamma-Chlordane							
1	6.664	6.664	0.000	104558407H	0.1000	0.1002	
2	6.595	6.595	0.000	133607253H	0.1000	0.0956	
						RPD = 4.76	
20 alpha-Chlordane							
1	6.732	6.732	0.000	98059726H	0.1000	0.0981	
2	6.655	6.656	-0.001	127509478H	0.1000	0.0946	
						RPD = 3.63	
21 Endosulfan I							
1	6.777	6.777	0.000	91978788H	0.1000	0.0982	
2	6.719	6.719	0.000	117489201H	0.1000	0.0935	
						RPD = 4.85	
23 4,4'-DDE							
1	6.884	6.885	-0.001	103538302H	0.1000	0.1019	
2	6.800	6.800	0.000	135787536H	0.1000	0.0980	
						RPD = 3.99	
24 Dieldrin							
1	7.016	7.017	-0.001	100377657H	0.1000	0.0988	
2	6.961	6.961	0.000	128961089H	0.1000	0.0923	
						RPD = 6.85	
27 Endrin							
1	7.219	7.219	0.000	86900179H	0.1000	0.0989	
2	7.223	7.222	0.001	110395322H	0.1000	0.0955	
						RPD = 3.55	
29 4,4'-DDD							
1	7.343	7.345	-0.002	83506794H	0.1000	0.1006	
2	7.312	7.313	-0.001	108646550H	0.1000	0.0981	
						RPD = 2.59	
31 Endosulfan II							
1	7.416	7.417	-0.001	85007734H	0.1000	0.0985	
2	7.486	7.486	0.000	110310282H	0.1000	0.0959	
						RPD = 2.69	
32 Endrin aldehyde							
1	7.533	7.533	0.000	66127470H	0.1000	0.0979	
2	7.651	7.652	-0.001	87448409H	0.1000	0.0936	
						RPD = 4.50	
33 4,4'-DDT							
1	7.624	7.623	0.001	71532272H	0.1000	0.1037	
2	7.552	7.552	0.000	96843596H	0.1000	0.1014	
						RPD = 2.29	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
35 Endosulfan sulfate							
1	7.743	7.743	0.000	75844288H	0.1000	0.0981	
2	7.857	7.857	0.000	99151547H	0.1000	0.0969	
						RPD = 1.27	
36 Methoxychlor							
1	8.064	8.066	-0.002	31820955H	0.1000	0.0933	
2	8.082	8.082	0.000	44311122H	0.1000	0.0978	
						RPD = 4.72	
* 44 Dibutylchlorendate ISTD							
1	8.139	8.140	-0.001	53919598H	0.1000	0.1000	
2	7.919	7.919	0.000	81684273H	0.1000	0.1000	
37 Endrin ketone							
1	8.194	8.194	0.000	79699748H	0.1000	0.0994	
2	8.391	8.391	0.000	96871652H	0.1000	0.0945	
						RPD = 5.03	
$ 39 DCB Decachlorobiphenyl (Surr)							
1	9.893	9.892	0.001	37852178H	0.1000	0.0962	
2	9.824	9.822	0.002	53966784H	0.1000	0.0945	
						RPD = 1.75	

Reagents:

GCPestL5_00016	Amount Added:	1.00	Units: mL	
GCPESTISSPK2_00004	Amount Added:	0.02	Units: mL	Run Reagent

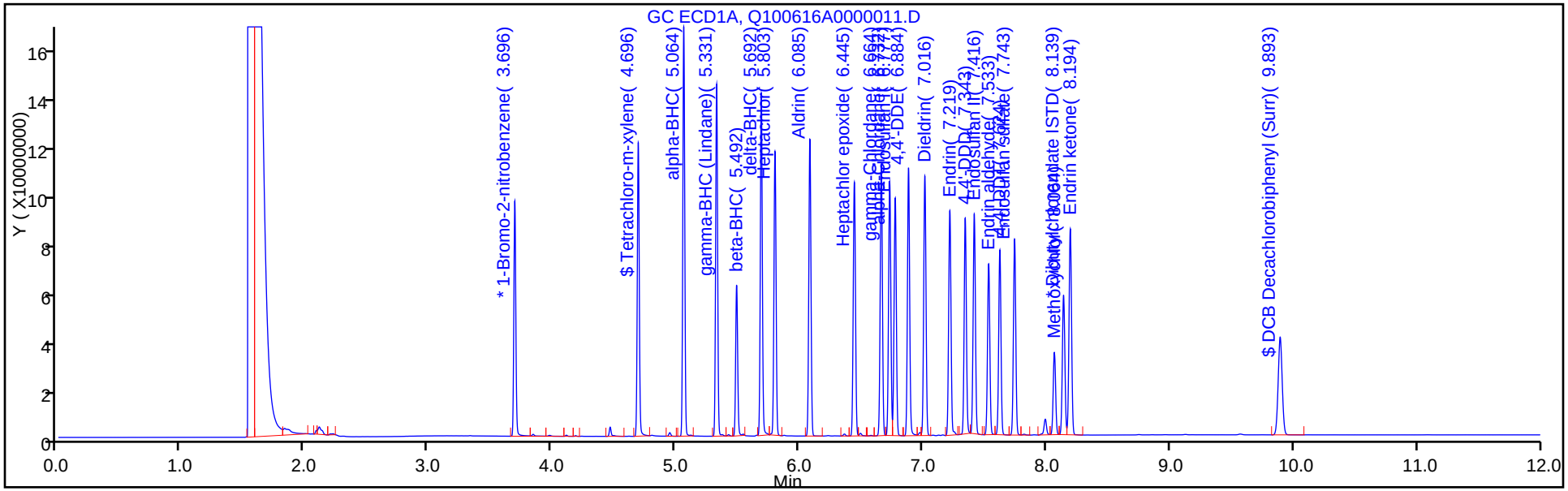
Report Date: 06-Oct-2016 15:15:48 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

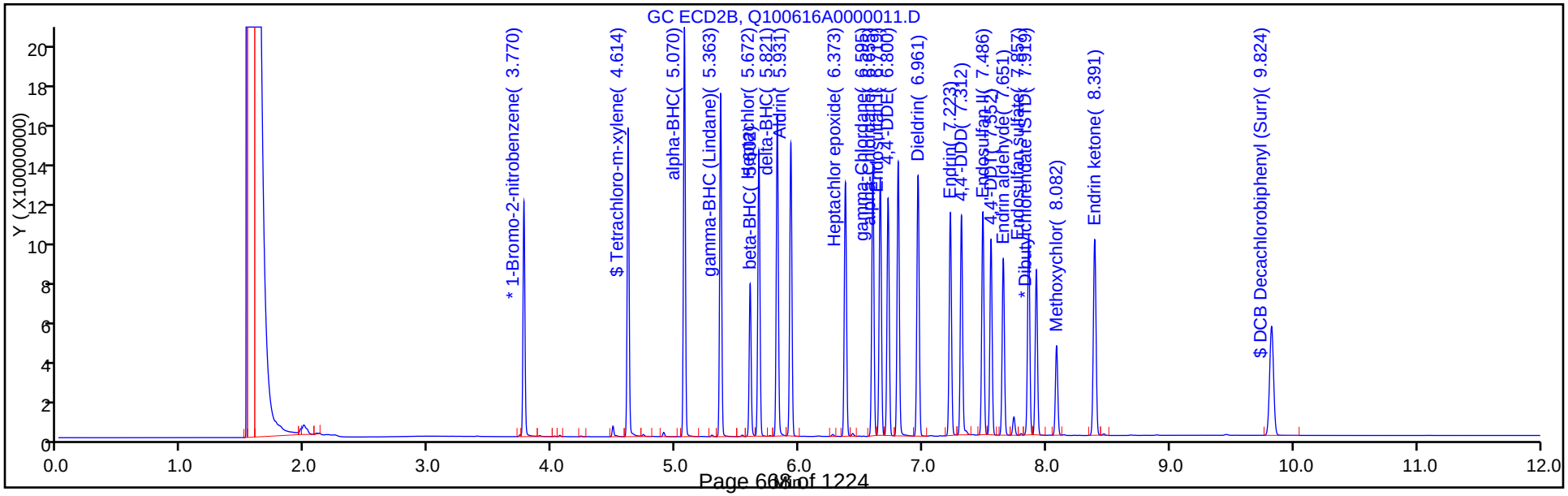
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000011.D

Injection Date:	06-Oct-2016 14:10:30	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 06-Oct-2016 14:25:55 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013765-012
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 06-Oct-2016 15:15:54 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK015

First Level Reviewer: eppinged Date: 06-Oct-2016 14:51:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.695	3.696	-0.001	97438488H	0.1000	0.1000	
2	3.769	3.770	-0.001	125252530H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.696	4.696	0.000	212658136H	0.2000	0.1720	
2	4.614	4.614	0.000	281928123H	0.2000	0.1599	
						RPD = 7.31	
5 alpha-BHC							
1	5.064	5.065	-0.001	307275055H	0.2000	0.1822	
2	5.070	5.070	0.000	375229035H	0.2000	0.1664	
						RPD = 9.09	
7 gamma-BHC (Lindane)							
1	5.330	5.331	-0.001	260264260H	0.2000	0.1791	
2	5.363	5.364	-0.001	319179566H	0.2000	0.1665	
						RPD = 7.28	
8 beta-BHC							
1	5.492	5.493	-0.001	111722818H	0.2000	0.1727	
2	5.602	5.602	0.000	140170399H	0.2000	0.1641	
						RPD = 5.08	
10 delta-BHC							
1	5.692	5.692	0.000	247922954H	0.2000	0.1840	
2	5.822	5.822	0.000	304378034H	0.2000	0.1736	
						RPD = 5.84	
11 Heptachlor							
1	5.803	5.804	-0.001	210499004H	0.2000	0.1735	
2	5.673	5.673	0.000	258914831H	0.2000	0.1585	
						RPD = 9.07	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
13 Aldrin							
1	6.085	6.086	-0.001	214400378H	0.2000	0.1758	
2	5.932	5.932	0.000	265829308H	0.2000	0.1616	
						RPD = 8.45	
16 Heptachlor epoxide							
1	6.446	6.445	0.001	186547749H	0.2000	0.1680	
2	6.373	6.373	0.000	233211673H	0.2000	0.1599	
						RPD = 4.95	
18 gamma-Chlordane							
1	6.663	6.664	-0.001	200060544H	0.2000	0.1791	
2	6.595	6.595	0.000	250338070H	0.2000	0.1665	
						RPD = 7.31	
20 alpha-Chlordane							
1	6.731	6.732	-0.001	188368514H	0.2000	0.1760	
2	6.656	6.656	0.000	239290627H	0.2000	0.1651	
						RPD = 6.42	
21 Endosulfan I							
1	6.776	6.777	-0.001	172310430H	0.2000	0.1717	
2	6.719	6.719	0.000	219547101H	0.2000	0.1625	
						RPD = 5.55	
23 4,4'-DDE							
1	6.884	6.885	-0.001	196337098H	0.2000	0.1774	
2	6.800	6.800	0.000	255578316H	0.2000	0.1746	
						RPD = 1.59	
24 Dieldrin							
1	7.016	7.017	-0.001	190322504H	0.2000	0.1719	
2	6.961	6.961	0.000	241393412H	0.2000	0.1636	
						RPD = 4.99	
27 Endrin							
1	7.218	7.219	-0.001	166433282H	0.2000	0.1739	
2	7.223	7.222	0.001	205985565H	0.2000	0.1688	
						RPD = 3.01	
29 4,4'-DDD							
1	7.344	7.345	-0.001	156230940H	0.2000	0.1728	
2	7.313	7.313	0.000	200939062H	0.2000	0.1718	
						RPD = 0.59	
31 Endosulfan II							
1	7.417	7.417	0.000	156744125H	0.2000	0.1667	
2	7.486	7.486	0.000	208192634H	0.2000	0.1714	
						RPD = 2.79	
32 Endrin aldehyde							
1	7.533	7.533	0.000	126331566H	0.2000	0.1717	
2	7.652	7.652	0.000	165109468H	0.2000	0.1674	
						RPD = 2.52	
33 4,4'-DDT							
1	7.623	7.623	0.000	138996087H	0.2000	0.1850	
2	7.552	7.552	0.000	183789830H	0.2000	0.1823	
						RPD = 1.50	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
35 Endosulfan sulfate							
1	7.743	7.743	0.000	144982180H	0.2000	0.1721	
2	7.856	7.857	-0.001	189903808H	0.2000	0.1757	
						RPD = 2.07	
36 Methoxychlor							
1	8.066	8.066	0.000	62445659H	0.2000	0.1681	
2	8.083	8.082	0.001	83683870H	0.2000	0.1750	
						RPD = 4.03	
* 44 Dibutylchlorendate ISTD							
1	8.140	8.140	0.000	58748583H	0.1000	0.1000	
2	7.919	7.919	0.000	86241530H	0.1000	0.1000	
37 Endrin ketone							
1	8.195	8.194	0.001	151922717H	0.2000	0.1738	
2	8.392	8.391	0.001	180290391H	0.2000	0.1666	
						RPD = 4.27	
$ 39 DCB Decachlorobiphenyl (Surr)							
1	9.892	9.892	0.000	68484866H	0.2000	0.1598	
2	9.823	9.822	0.001	100746334H	0.2000	0.1672	
						RPD = 4.53	

Reagents:

GCPestL6_00016	Amount Added:	1.00	Units: mL	
GCPESTISSPK2_00004	Amount Added:	0.02	Units: mL	Run Reagent

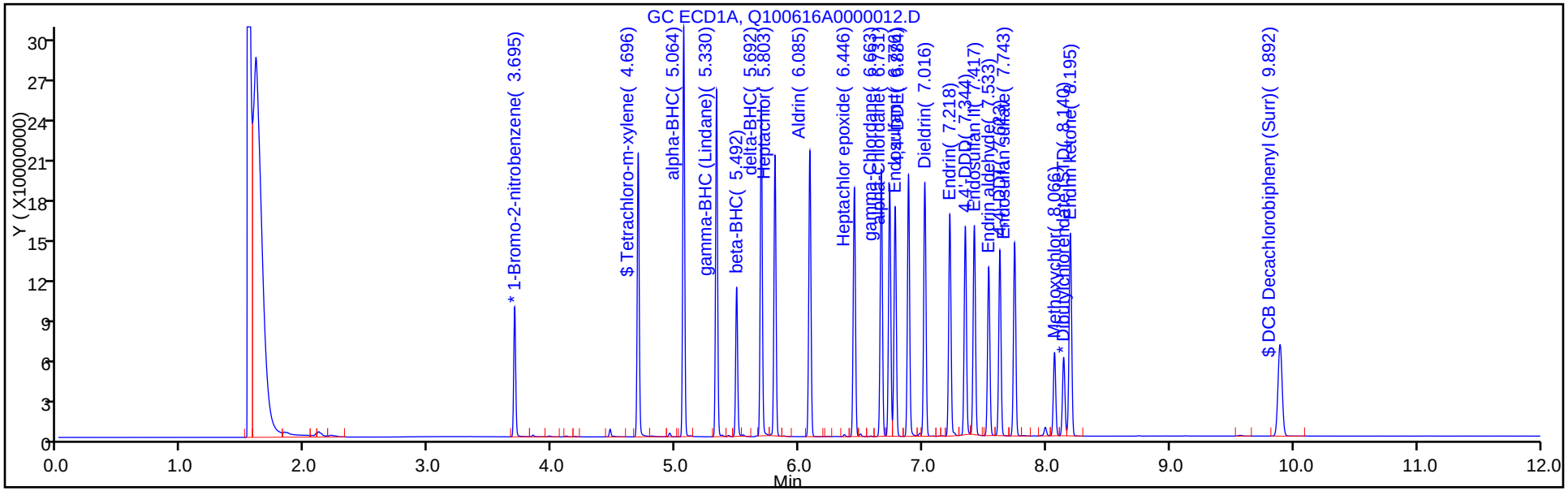
Report Date: 06-Oct-2016 15:15:55 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

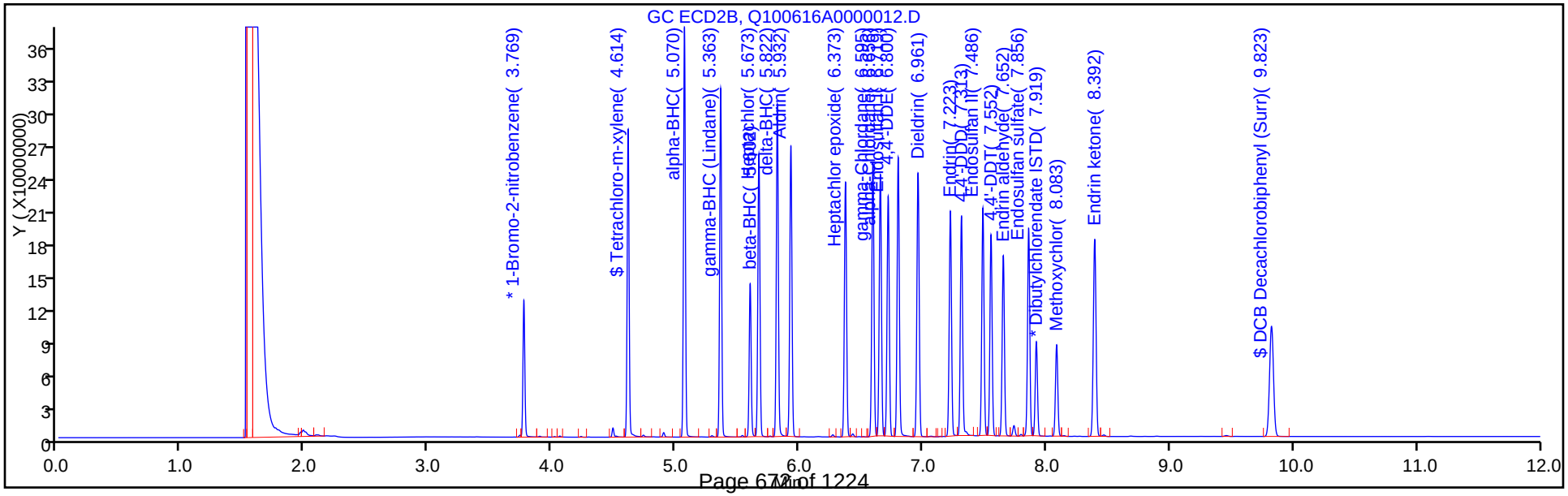
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Injection Date:	06-Oct-2016 14:25:55	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	IC			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID (1): PEM 180-195949/1 Instrument ID (1): CHGC15

GC Column (1): MR-1 ID: 0.53(mm) Date Analyzed (1): 12/01/2016 09:53

ANALYTE	RT	RESOLUTION (%)
Endrin aldehyde		100.0
4,4'-DDE		100.0
Tetrachloro-m-xylene	4.74	100.0
Endrin	7.26	100.0
4,4'-DDD	7.39	100.0
4,4'-DDT	7.67	100.0
Endrin ketone	8.25	100.0

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID (2): PEM 180-195949/1 Instrument ID (2): CHGC15

GC Column (2): MR-2 ID: 0.53(mm) Date Analyzed (2): 12/01/2016 09:53

ANALYTE	RT	RESOLUTION (%)
Endrin aldehyde		100.0
4,4'-DDE		100.0
Tetrachloro-m-xylene	4.65	100.0
Endrin	7.26	100.0
4,4'-DDD	7.35	100.0
4,4'-DDT	7.59	100.0
Endrin ketone	8.43	100.0

FORM VII
PESTICIDES PERFORMANCE EVALUATION MIXTURE (PEM)

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: PEM 180-195949/1 Calibration Date: 12/01/2016 09:53

Instrument ID: CHGC15 Calib Start Date: 10/06/2016 13:08

GC Column: MR-1 ID: 0.53(mm) Calib End Date: 10/06/2016 14:25

Lab File ID: Q1201160000001.D Conc. Units: ng/uL

ANALYTE	RT	RESPONSE	BREAKDOWN (%)	LIMIT	#
Endrin	7.26	25312205	4.58	15	
Endrin aldehyde		0			
Endrin ketone	8.25	1214097			

ANALYTE	RT	RESPONSE	BREAKDOWN (%)	LIMIT	#
4,4'-DDT	7.67	34317127	10.80	15	
4,4'-DDD	7.39	4156167			
4,4'-DDE		0			

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000001.D
Lims ID: PEM
Client ID:
Sample Type: PEM
Inject. Date: 01-Dec-2016 09:53:02 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014572-001
Operator ID: 402331 Instrument ID: CHGC15
Sublist:

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 01-Dec-2016 11:57:29 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK017

First Level Reviewer: eppinged Date: 01-Dec-2016 11:57:31

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.735	3.735	0.001	89554945H	0.1000	0.1000	
2	3.805	3.805	0.000	123365938H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.736	4.734	0.002	26082953H	0.0250	0.0230	
2	4.648	4.647	0.001	38861911H	0.0250	0.0224	
						RPD = 2.56	
23 4,4'-DDE							
1		6.926				ND	
2		6.834					
27 Endrin							
1	7.264	7.261	0.003	20307066H	0.0250	0.0240	
2	7.260	7.258	0.002	26941550H	0.0250	0.0232	
						RPD = 3.67	
29 4,4'-DDD							
1	7.391	7.386	0.005	2276946H		0.002853	
2	7.351	7.346	0.005	3192857H		0.002866	
						RPD = 0.44	
32 Endrin aldehyde							
1		7.577				ND	
2		7.686					
33 4,4'-DDT							
1	7.668	7.665	0.003	27626970H	0.0500	0.0417	
2	7.587	7.585	0.002	39882646H	0.0500	0.0415	
						RPD = 0.33	
* 44 Dibutylchlorendate ISTD							
1	8.185	8.182	0.003	51857513H	0.1000	0.1000	
2	7.951	7.950	0.002	82147758H	0.1000	0.1000	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
37 Endrin ketone							
1	8.245	8.242	0.003	710216H		0.000921	
2	8.433	8.432	0.001	909608H		0.000882	
						RPD = 4.26	
$ 39 DCB Decachlorobiphenyl (Surr)							
1	9.965	9.962	0.003	9460526H	0.0250	0.0250	
2	9.878	9.872	0.006	13607757H	0.0250	0.0237	
						RPD = 5.33	

Reagents:

GCPESTPEMSTD_00022	Amount Added:	1.00	Units: mL	
GCPESTISSPK2_00004	Amount Added:	0.02	Units: mL	Run Reagent

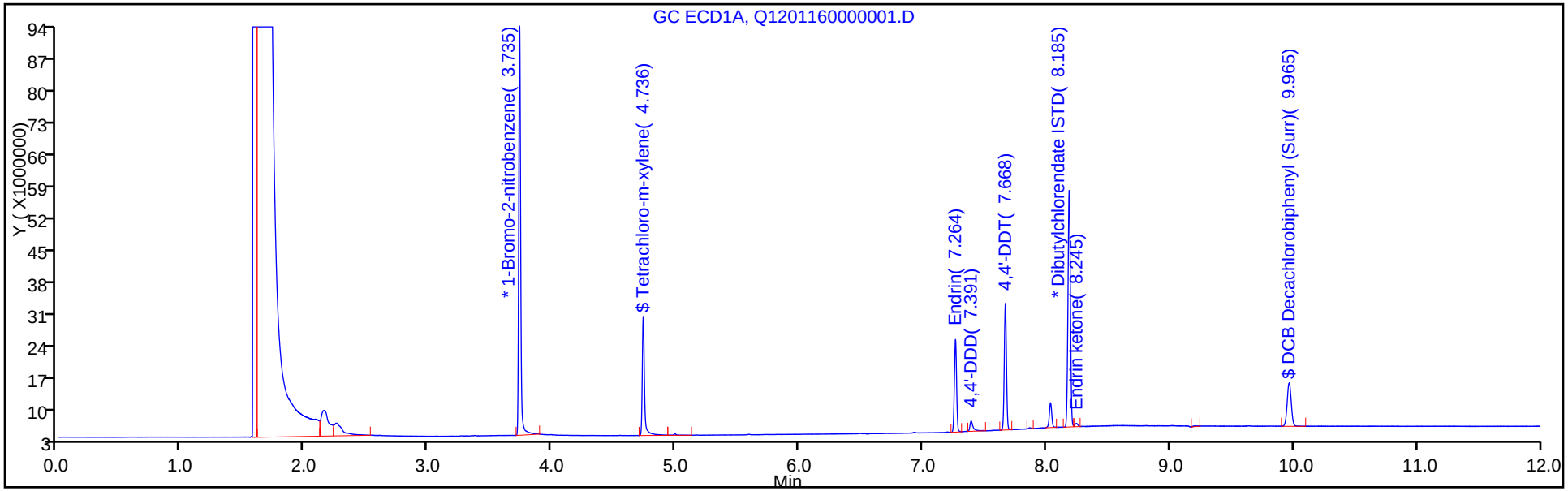
Report Date: 01-Dec-2016 11:57:32 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

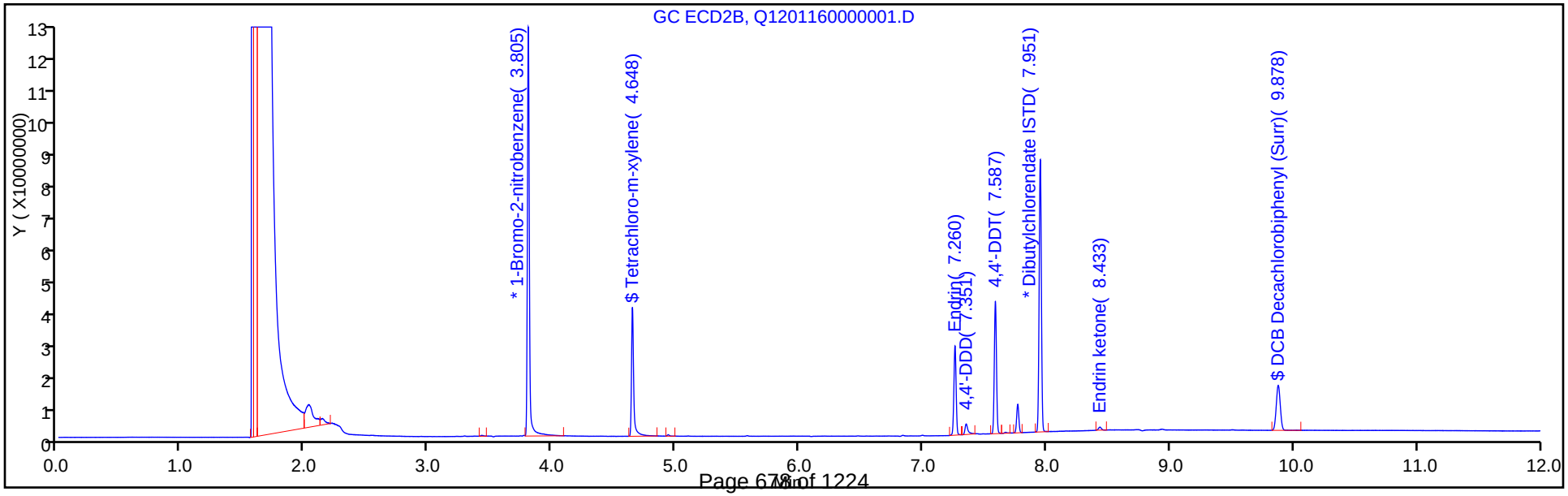
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000001.D

Injection Date:	01-Dec-2016 09:53:02	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	PEM			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



FORM VII
PESTICIDES PERFORMANCE EVALUATION MIXTURE (PEM)

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: PEM 180-195949/1 Calibration Date: 12/01/2016 09:53

Instrument ID: CHGC15 Calib Start Date: 10/06/2016 13:08

GC Column: MR-2 ID: 0.53(mm) Calib End Date: 10/06/2016 14:25

Lab File ID: Q1201160000001.D Conc. Units: ng/uL

ANALYTE	RT	RESPONSE	BREAKDOWN (%)	LIMIT	#
Endrin	7.26	33847681	4.25	15	
Endrin aldehyde		0			
Endrin ketone	8.43	1502043			

ANALYTE	RT	RESPONSE	BREAKDOWN (%)	LIMIT	#
4,4'-DDT	7.59	49012628	9.83	15	
4,4'-DDD	7.35	5345204			
4,4'-DDE		0			

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000001.D
Lims ID: PEM
Client ID:
Sample Type: PEM
Inject. Date: 01-Dec-2016 09:53:02 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014572-001
Operator ID: 402331 Instrument ID: CHGC15
Sublist:

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 01-Dec-2016 11:57:29 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK017

First Level Reviewer: eppinged Date: 01-Dec-2016 11:57:31

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.735	3.735	0.001	89554945H	0.1000	0.1000	
2	3.805	3.805	0.000	123365938H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.736	4.734	0.002	26082953H	0.0250	0.0230	
2	4.648	4.647	0.001	38861911H	0.0250	0.0224	
						RPD = 2.56	
23 4,4'-DDE							
1		6.926				ND	
2		6.834					
27 Endrin							
1	7.264	7.261	0.003	20307066H	0.0250	0.0240	
2	7.260	7.258	0.002	26941550H	0.0250	0.0232	
						RPD = 3.67	
29 4,4'-DDD							
1	7.391	7.386	0.005	2276946H		0.002853	
2	7.351	7.346	0.005	3192857H		0.002866	
						RPD = 0.44	
32 Endrin aldehyde							
1		7.577				ND	
2		7.686					
33 4,4'-DDT							
1	7.668	7.665	0.003	27626970H	0.0500	0.0417	
2	7.587	7.585	0.002	39882646H	0.0500	0.0415	
						RPD = 0.33	
* 44 Dibutylchlorendate ISTD							
1	8.185	8.182	0.003	51857513H	0.1000	0.1000	
2	7.951	7.950	0.002	82147758H	0.1000	0.1000	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
37 Endrin ketone							
1	8.245	8.242	0.003	710216H		0.000921	
2	8.433	8.432	0.001	909608H		0.000882	
						RPD = 4.26	
$ 39 DCB Decachlorobiphenyl (Surr)							
1	9.965	9.962	0.003	9460526H	0.0250	0.0250	
2	9.878	9.872	0.006	13607757H	0.0250	0.0237	
						RPD = 5.33	

Reagents:

GCPESTPEMSTD_00022	Amount Added:	1.00	Units: mL	
GCPESTISSPK2_00004	Amount Added:	0.02	Units: mL	Run Reagent

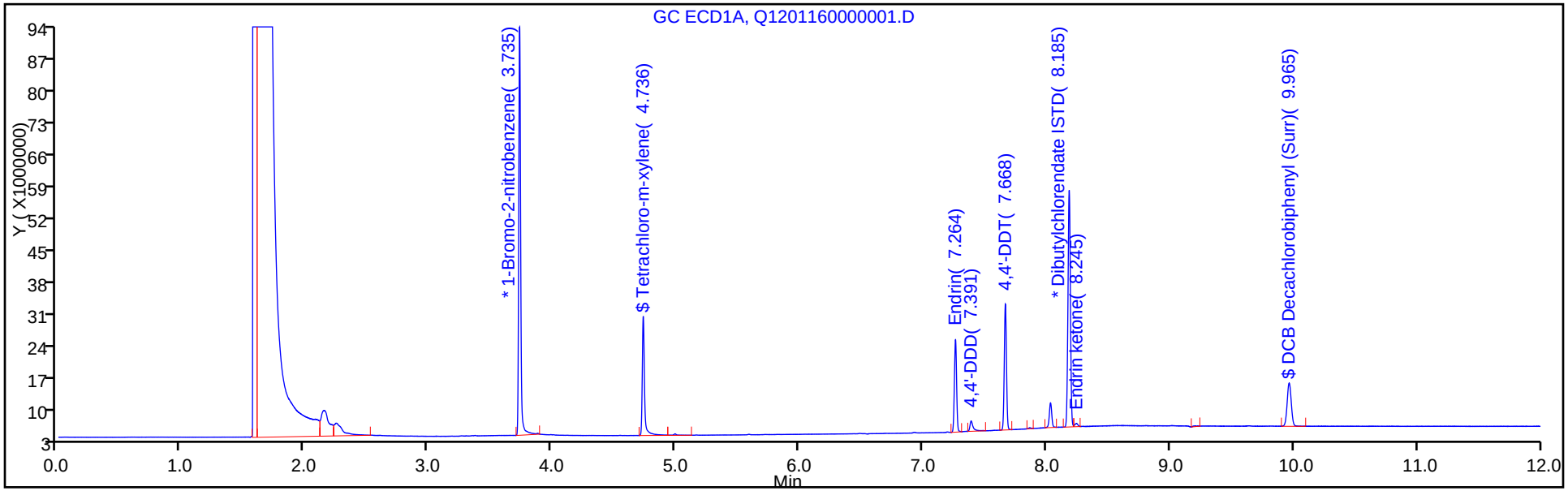
Report Date: 01-Dec-2016 11:57:32 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

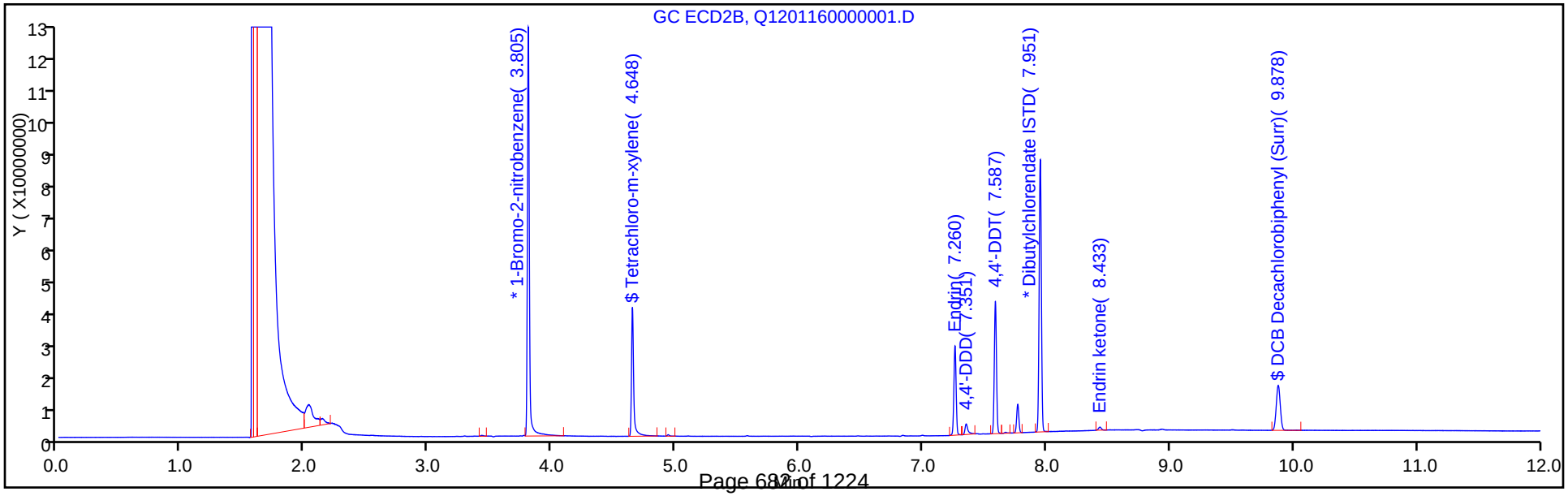
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000001.D

Injection Date:	01-Dec-2016 09:53:02	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	PEM			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCV 180-195949/2 Calibration Date: 12/01/2016 10:08

Instrument ID: CHGC15 Calib Start Date: 09/24/2016 09:17

GC Column: MR-1 ID: 0.53(mm) Calib End Date: 09/24/2016 10:18

Lab File ID: Q1201160000002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Ave	0.0235	0.0229		0.974	1.00	-2.6	20.0
Toxaphene Peak 2	Ave	0.0397	0.0435		1.09	1.00	9.4	20.0
Toxaphene Peak 3	Ave	0.0249	0.0252		1.01	1.00	1.2	20.0
Toxaphene Peak 4	Ave	0.0187	0.0192		1.03	1.00	2.5	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCV 180-195949/2 Calibration Date: 12/01/2016 10:08

Instrument ID: CHGC15 Calib Start Date: 09/24/2016 09:17

GC Column: MR-1 ID: 0.53(mm) Calib End Date: 09/24/2016 10:18

Lab File ID: Q1201160000002.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	7.21	7.20	7.22
Toxaphene Peak 2	7.70	7.69	7.71
Toxaphene Peak 3	7.86	7.85	7.87
Toxaphene Peak 4	8.55	8.54	8.56

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000002.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 01-Dec-2016 10:08:27 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014572-002
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub4

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 01-Dec-2016 11:52:19 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK017

First Level Reviewer: eppinged Date: 01-Dec-2016 11:52:19

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.735	3.735	0.000	90850007H	0.1000	0.1000	
2	3.805	3.805	0.000	125370251H	0.1000	0.1000	
34 Toxaphene							M
1	7.212	7.212	0.000	15592278H	1.00	0.9736	M
1	7.697	7.697	0.000	29607916H	1.00	1.09	M
1	7.861	7.861	0.000	17172562H	1.00	1.01	M
1	8.546	8.546	0.000	13044210H	1.00	1.03	M
		Average of Peak Amounts =				1.03	
2	6.948	6.948	0.000	11876589H	1.00	0.9589	M
2	7.522	7.522	0.000	26459419H	1.00	1.20	M
2	8.306	8.306	0.000	34619347H	1.00	1.17	M
2	8.946	8.946	0.000	4602556H	1.00	1.20	M
		Average of Peak Amounts =				1.13	
						RPD = 9.81	
* 44 Dibutylchlorendate ISTD							sM
1	8.182	8.182	0.000	68111767H	0.1000	0.1000	M
2	7.950	7.950	0.000	90124954H	0.1000	0.1000	M

QC Flag Legend

Processing Flags
s - Failed ISTD Recovery Test
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

GCTOXLEVEL3_00008	Amount Added:	1.00	Units: mL	
GCPESTISSPK2_00004	Amount Added:	0.02	Units: mL	Run Reagent

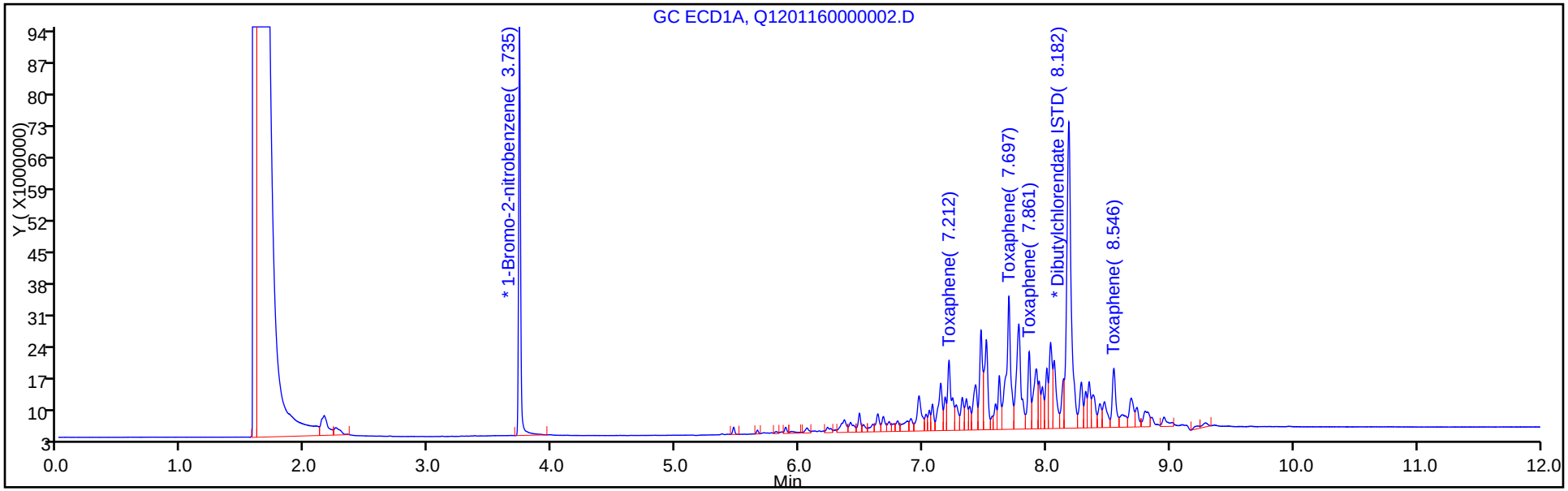
Report Date: 01-Dec-2016 11:52:20 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

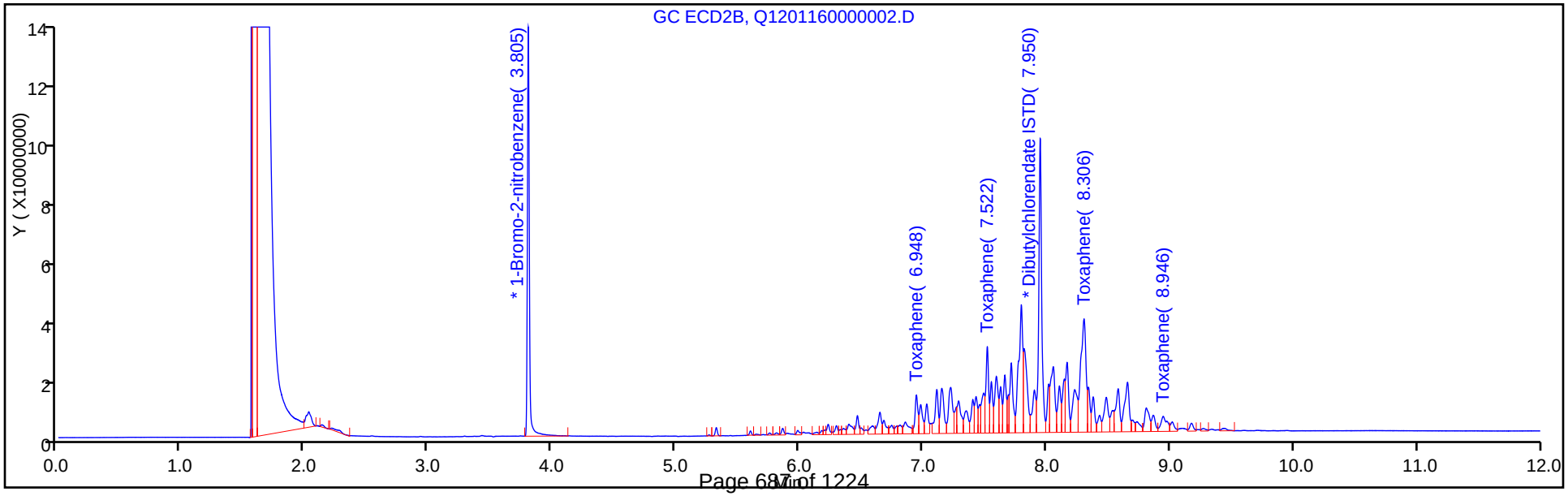
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000002.D

Injection Date:	01-Dec-2016 10:08:27	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



Report Date: 01-Dec-2016 11:52:20 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000002.D

Injection Date: 01-Dec-2016 10:08:27 Instrument ID: CHGC15

Lims ID: CCV

Client ID:

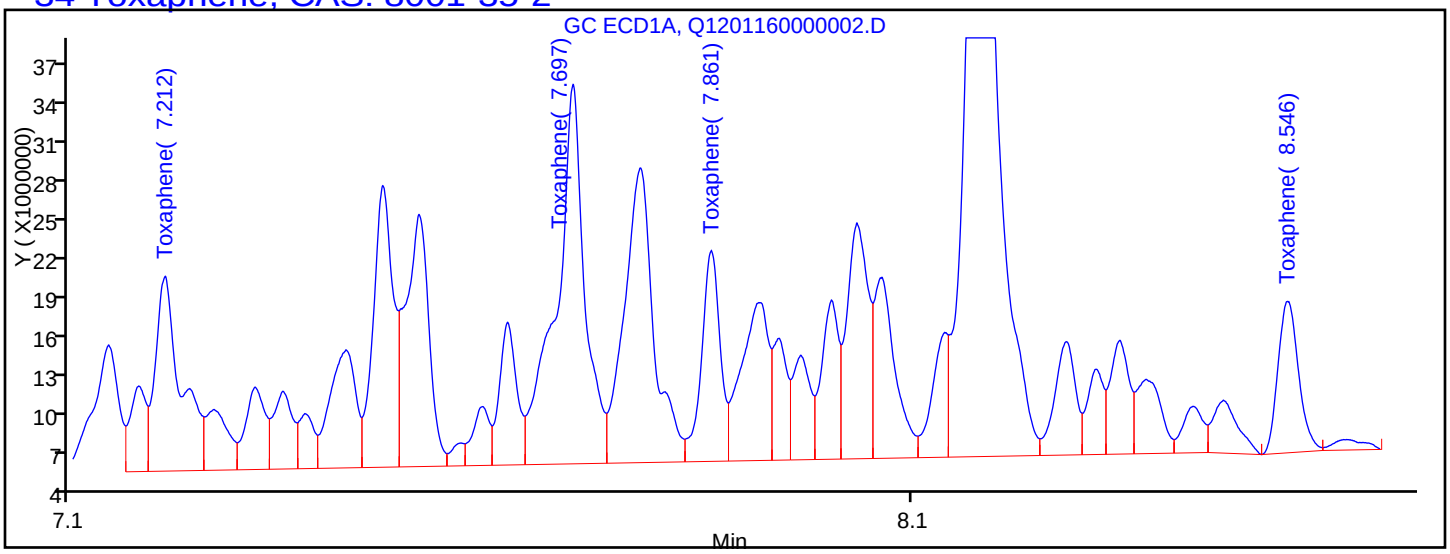
Operator ID: 402331 ALS Bottle#: 2 Worklist Smp#: 2

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: IS PEST_CHGC15 Limit Group: GCS 8081B ICAL with IS

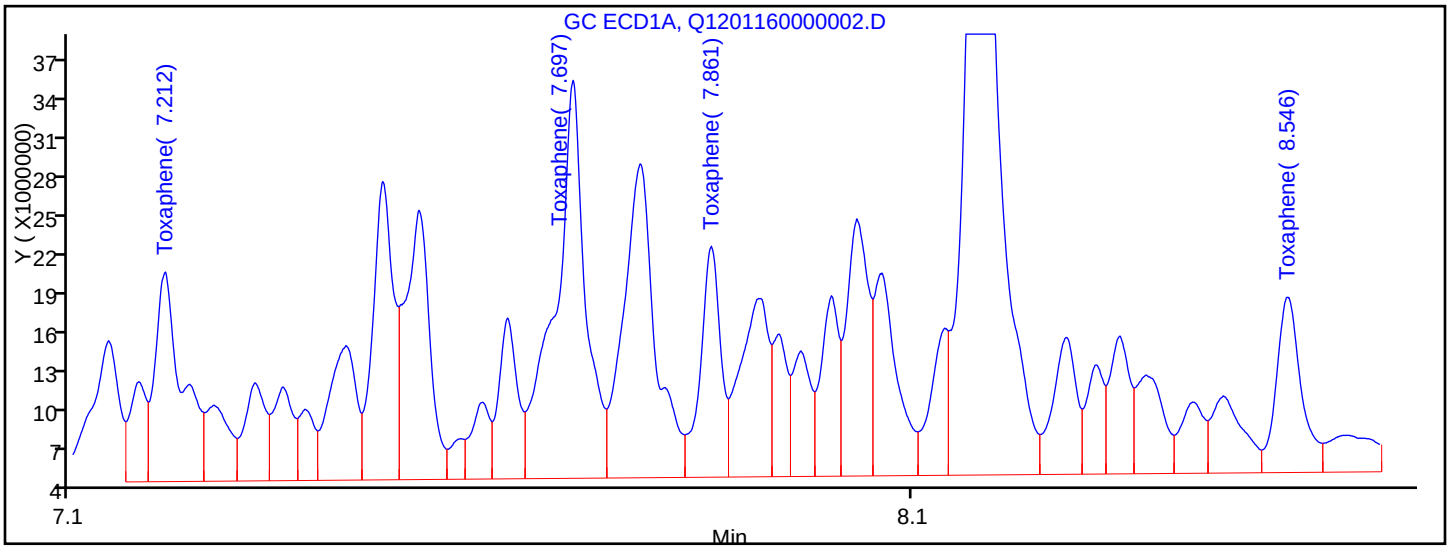
Column: MR-1 (0.53 mm) Detector GC ECD1A

34 Toxaphene, CAS: 8001-35-2



Processing Integration Results

7.212	Response = 14484702
7.697	Response = 28205584
7.861	Response = 15670289
8.546	Response = 11255333



Manual Integration Results

7.212	Response = 15592278	M
7.697	Response = 29607916	M
7.861	Response = 17172562	M
8.546	Response = 13044210	M

Reviewer: eppinged, 01-Dec-2016 10:44:33

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCV 180-195949/2 Calibration Date: 12/01/2016 10:08

Instrument ID: CHGC15 Calib Start Date: 09/24/2016 09:17

GC Column: MR-2 ID: 0.53(mm) Calib End Date: 09/24/2016 10:18

Lab File ID: Q1201160000002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Ave	0.0137	0.0132		0.959	1.00	-4.1	20.0
Toxaphene Peak 2	Ave	0.0245	0.0294		1.20	1.00	19.8	20.0
Toxaphene Peak 3	Lin1		0.0384		1.17	1.00	16.8	20.0
Toxaphene Peak 4	Lin1		0.0051		1.20	1.00	20.3*	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCV 180-195949/2 Calibration Date: 12/01/2016 10:08

Instrument ID: CHGC15 Calib Start Date: 09/24/2016 09:17

GC Column: MR-2 ID: 0.53(mm) Calib End Date: 09/24/2016 10:18

Lab File ID: Q1201160000002.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	6.95	6.94	6.96
Toxaphene Peak 2	7.52	7.51	7.53
Toxaphene Peak 3	8.31	8.30	8.32
Toxaphene Peak 4	8.95	8.94	8.96

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000002.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 01-Dec-2016 10:08:27 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014572-002
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub4

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 01-Dec-2016 11:52:19 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK017

First Level Reviewer: eppinged Date: 01-Dec-2016 11:52:19

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.735	3.735	0.000	90850007H	0.1000	0.1000	
2	3.805	3.805	0.000	125370251H	0.1000	0.1000	
34 Toxaphene							M
1	7.212	7.212	0.000	15592278H	1.00	0.9736	M
1	7.697	7.697	0.000	29607916H	1.00	1.09	M
1	7.861	7.861	0.000	17172562H	1.00	1.01	M
1	8.546	8.546	0.000	13044210H	1.00	1.03	M
		Average of Peak Amounts =				1.03	
2	6.948	6.948	0.000	11876589H	1.00	0.9589	M
2	7.522	7.522	0.000	26459419H	1.00	1.20	M
2	8.306	8.306	0.000	34619347H	1.00	1.17	M
2	8.946	8.946	0.000	4602556H	1.00	1.20	M
		Average of Peak Amounts =				1.13	
						RPD = 9.81	
* 44 Dibutylchlorendate ISTD							sM
1	8.182	8.182	0.000	68111767H	0.1000	0.1000	M
2	7.950	7.950	0.000	90124954H	0.1000	0.1000	M

QC Flag Legend

Processing Flags
s - Failed ISTD Recovery Test
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

GCTOXLEVEL3_00008	Amount Added:	1.00	Units: mL	
GCPESTISSPK2_00004	Amount Added:	0.02	Units: mL	Run Reagent

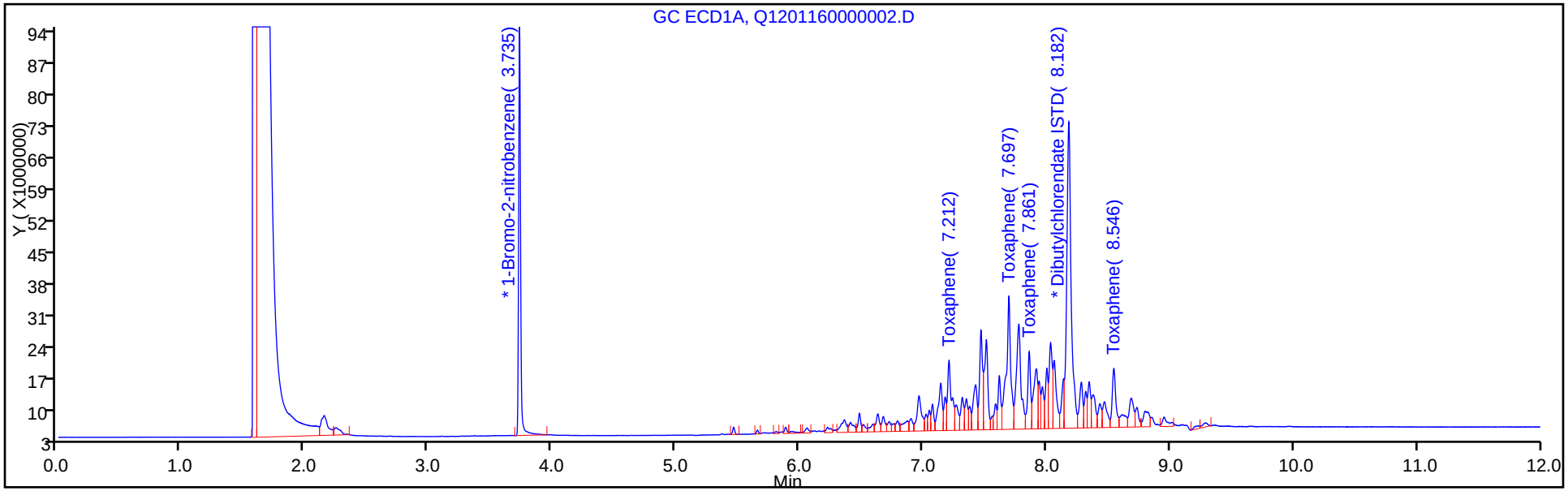
Report Date: 01-Dec-2016 11:52:20 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

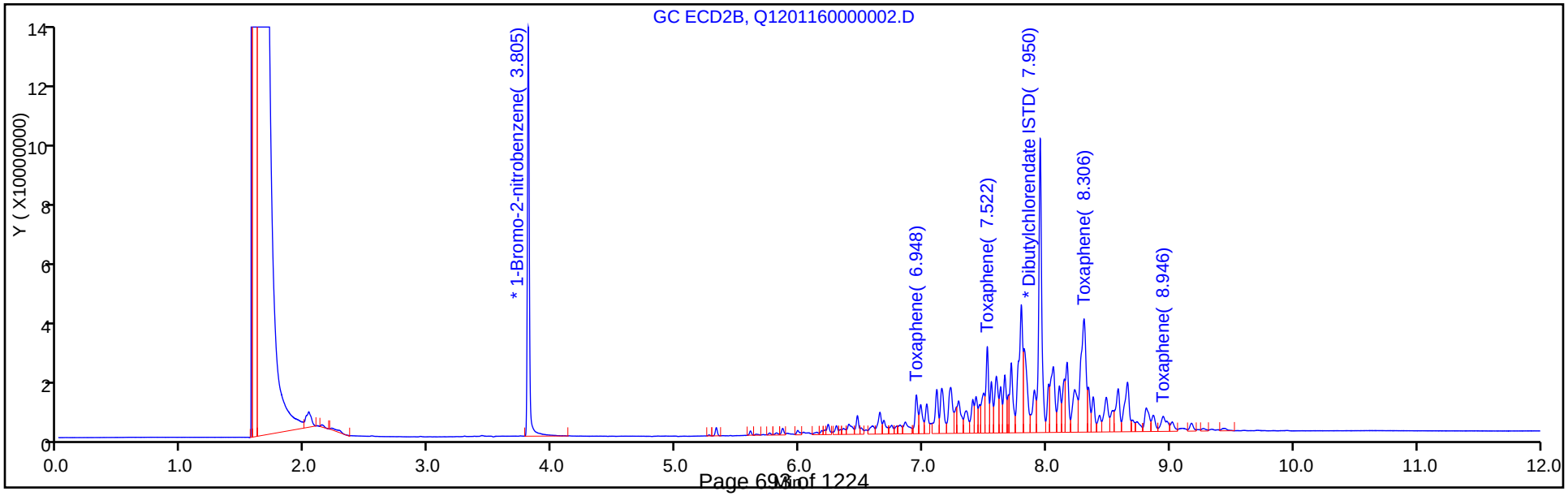
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000002.D

Injection Date:	01-Dec-2016 10:08:27	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



Report Date: 01-Dec-2016 11:52:21 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000002.D

Injection Date: 01-Dec-2016 10:08:27 Instrument ID: CHGC15

Lims ID: CCV

Client ID:

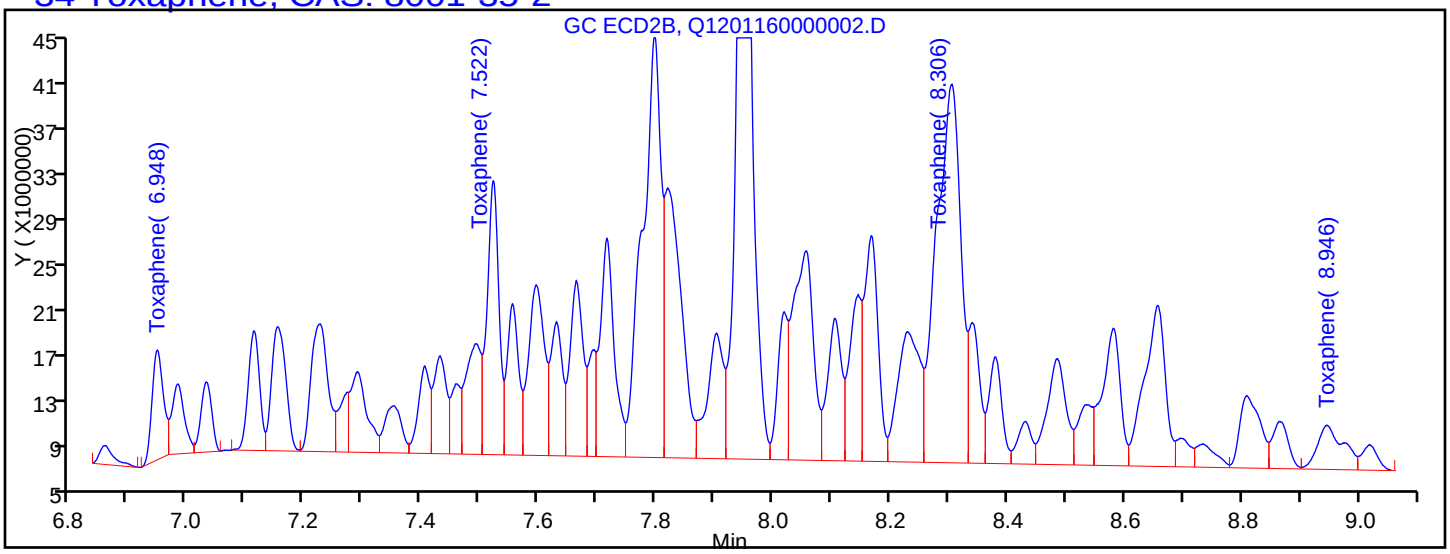
Operator ID: 402331 ALS Bottle#: 2 Worklist Smp#: 2

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: IS PEST_CHGC15 Limit Group: GCS 8081B ICAL with IS

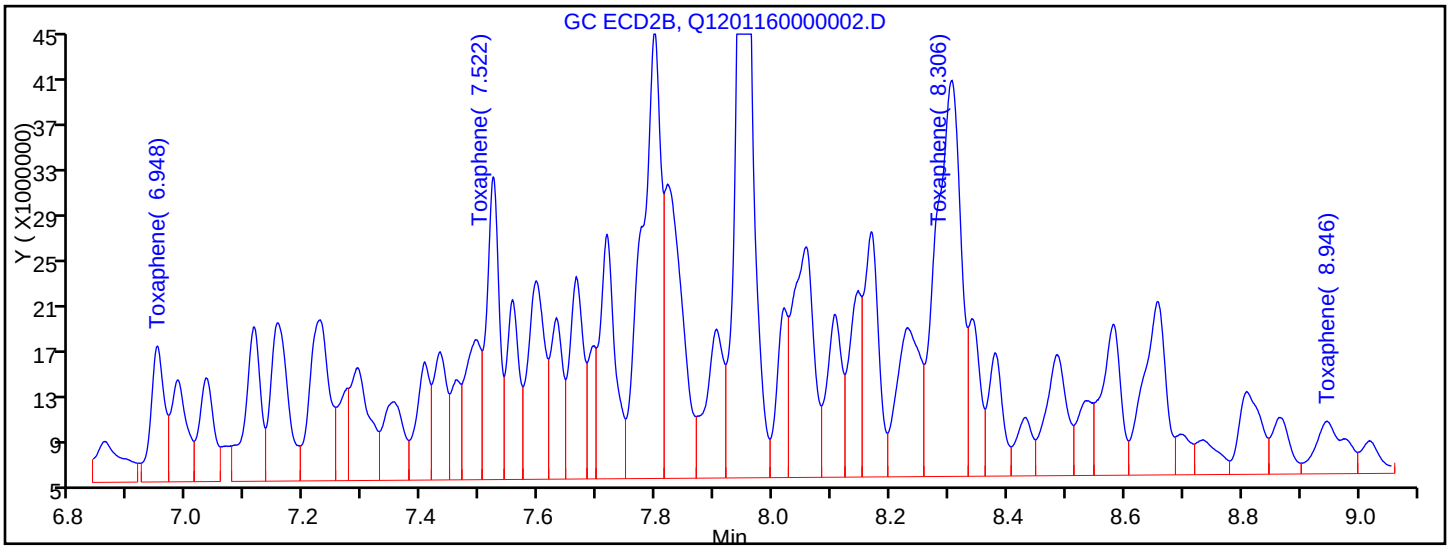
Column: MR-2 (0.53 mm) Detector GC ECD2B

34 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.948	Response = 9579290
7.522	Response = 23922259
8.306	Response = 33072781
8.946	Response = 3865479



Manual Integration Results

6.948	Response = 11876589	M
7.522	Response = 26459419	M
8.306	Response = 34619347	M
8.946	Response = 4602556	M

Reviewer: eppinged, 01-Dec-2016 10:44:33

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCVIS 180-195949/6 Calibration Date: 12/01/2016 11:10

Instrument ID: CHGC15 Calib Start Date: 10/06/2016 13:08

GC Column: MR-1 ID: 0.53(mm) Calib End Date: 10/06/2016 14:25

Lab File ID: Q1201160000006.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
alpha-BHC	Ave	1.731	1.676		0.0242	0.0250	-3.1	20.0
gamma-BHC (Lindane)	Ave	1.492	1.506		0.0252	0.0250	0.9	20.0
beta-BHC	Ave	0.6640	0.6085		0.0229	0.0250	-8.4	20.0
delta-BHC	Ave	1.383	1.442		0.0261	0.0250	4.3	20.0
Heptachlor	Ave	1.245	1.401		0.0281	0.0250	12.5	20.0
Aldrin	Ave	1.251	1.384		0.0277	0.0250	10.6	20.0
Heptachlor epoxide	Ave	1.139	1.211		0.0266	0.0250	6.3	20.0
trans-Chlordane	Ave	1.146	1.226		0.0267	0.0250	7.0	20.0
cis-Chlordane	Ave	1.098	1.162		0.0265	0.0250	5.8	20.0
Endosulfan I	Ave	1.030	1.037		0.0252	0.0250	0.7	20.0
4,4'-DDE	Ave	1.884	1.803		0.0239	0.0250	-4.3	20.0
Dieldrin	Ave	1.884	2.004		0.0266	0.0250	6.4	20.0
Endrin	Ave	1.629	1.657		0.0254	0.0250	1.7	20.0
4,4'-DDD	Ave	1.539	1.605		0.0261	0.0250	4.3	20.0
Endosulfan II	Ave	1.601	1.662		0.0260	0.0250	3.9	20.0
Endrin aldehyde	Ave	1.253	1.195		0.0239	0.0250	-4.6	20.0
4,4'-DDT	Ave	1.279	1.150		0.0225	0.0250	-10.0	20.0
Endosulfan sulfate	Ave	1.434	1.499		0.0261	0.0250	4.5	20.0
Methoxychlor	Ave	0.6325	0.5734		0.0227	0.0250	-9.3	20.0
Endrin ketone	Ave	1.488	1.537		0.0258	0.0250	3.3	20.0
Tetrachloro-m-xylene	Ave	1.269	1.142		0.0225	0.0250	-10.0	20.0
DCB Decachlorobiphenyl (Surr)	Ave	0.7296	0.7319		0.0251	0.0250	0.3	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCVIS 180-195949/6 Calibration Date: 12/01/2016 11:10

Instrument ID: CHGC15 Calib Start Date: 10/06/2016 13:08

GC Column: MR-1 ID: 0.53(mm) Calib End Date: 10/06/2016 14:25

Lab File ID: Q1201160000006.D

Analyte	RT	RT WINDOW	
		FROM	TO
alpha-BHC	5.10	5.09	5.11
gamma-BHC (Lindane)	5.37	5.36	5.38
beta-BHC	5.54	5.53	5.55
delta-BHC	5.74	5.73	5.75
Heptachlor	5.84	5.83	5.85
Aldrin	6.13	6.12	6.14
Heptachlor epoxide	6.49	6.48	6.50
trans-Chlordane	6.71	6.70	6.72
cis-Chlordane	6.77	6.76	6.78
Endosulfan I	6.82	6.81	6.83
4,4'-DDE	6.93	6.92	6.94
Dieldrin	7.06	7.05	7.07
Endrin	7.26	7.25	7.27
4,4'-DDD	7.39	7.38	7.40
Endosulfan II	7.46	7.45	7.47
Endrin aldehyde	7.58	7.57	7.59
4,4'-DDT	7.67	7.66	7.68
Endosulfan sulfate	7.79	7.78	7.80
Methoxychlor	8.11	8.10	8.12
Endrin ketone	8.24	8.23	8.25
Tetrachloro-m-xylene	4.73	4.72	4.74
DCB Decachlorobiphenyl (Surr)	9.96	9.95	9.97

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000006.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 01-Dec-2016 11:10:16 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014572-006
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 01-Dec-2016 11:51:32 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK017

First Level Reviewer: eppinged Date: 01-Dec-2016 11:50:00

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.733	3.733	0.000	92493495H	0.1000	0.1000	
2	3.804	3.804	0.000	127183551H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.734	4.734	0.000	26404452H	0.0250	0.0225	
2	4.647	4.647	0.000	38890410H	0.0250	0.0217	
						RPD = 3.53	
5 alpha-BHC							
1	5.104	5.104	0.000	38756961H	0.0250	0.0242	
2	5.104	5.104	0.000	48312503H	0.0250	0.0211	
						RPD = 13.76	
7 gamma-BHC (Lindane)							
1	5.371	5.371	0.000	34812687H	0.0250	0.0252	
2	5.398	5.398	0.000	50213879H	0.0250	0.0258	
						RPD = 2.21	
8 beta-BHC							
1	5.537	5.537	0.000	14070922H	0.0250	0.0229	
2	5.640	5.640	0.000	21117838H	0.0250	0.0244	
						RPD = 6.10	
10 delta-BHC							
1	5.737	5.737	0.000	33343690H	0.0250	0.0261	
2	5.859	5.859	0.000	44476745H	0.0250	0.0250	
						RPD = 4.28	
11 Heptachlor							
1	5.844	5.844	0.000	32394314H	0.0250	0.0281	
2	5.707	5.707	0.000	42268749H	0.0250	0.0255	
						RPD = 9.90	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
13 Aldrin							
1	6.127	6.127	0.000	32012481H	0.0250	0.0277	
2	5.967	5.967	0.000	45202469H	0.0250	0.0271	
						RPD = 2.19	
16 Heptachlor epoxide							
1	6.488	6.488	0.000	27995053H	0.0250	0.0266	
2	6.409	6.409	0.000	40238503H	0.0250	0.0272	
						RPD = 2.27	
18 gamma-Chlordane							
1	6.706	6.706	0.000	28343484H	0.0250	0.0267	
2	6.630	6.630	0.000	39191249H	0.0250	0.0257	
						RPD = 4.07	
20 alpha-Chlordane							
1	6.773	6.773	0.000	26868908H	0.0250	0.0265	
2	6.690	6.690	0.000	37695835H	0.0250	0.0256	
						RPD = 3.23	
21 Endosulfan I							
1	6.819	6.819	0.000	23985027H	0.0250	0.0252	
2	6.755	6.755	0.000	35902315H	0.0250	0.0262	
						RPD = 3.82	
23 4,4'-DDE							
1	6.926	6.926	0.000	24969281H	0.0250	0.0239	
2	6.834	6.834	0.000	29052691H	0.0250	0.0201	
						RPD = 17.54	
24 Dieldrin							
1	7.059	7.059	0.000	27749892H	0.0250	0.0266	
2	6.996	6.996	0.000	39229553H	0.0250	0.0269	
						RPD = 1.09	
27 Endrin							
1	7.261	7.261	0.000	22936089H	0.0250	0.0254	
2	7.258	7.258	0.000	30800599H	0.0250	0.0255	
						RPD = 0.38	
29 4,4'-DDD							
1	7.386	7.386	0.000	22224012H	0.0250	0.0261	
2	7.346	7.346	0.000	30473458H	0.0250	0.0263	
						RPD = 1.04	
31 Endosulfan II							
1	7.460	7.460	0.000	23014984H	0.0250	0.0260	
2	7.522	7.522	0.000	29025480H	0.0250	0.0242	
						RPD = 7.16	
32 Endrin aldehyde							
1	7.577	7.577	0.000	16546965H	0.0250	0.0239	
2	7.686	7.686	0.000	22894345H	0.0250	0.0235	
						RPD = 1.60	
33 4,4'-DDT							
1	7.665	7.665	0.000	15927516H	0.0250	0.0225	
2	7.585	7.585	0.000	23832210H	0.0250	0.0239	
						RPD = 6.10	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
35 Endosulfan sulfate							
1	7.787	7.787	0.000	20754472H	0.0250	0.0261	
2	7.891	7.891	0.000	27952385H	0.0250	0.0262	
						RPD = 0.08	
36 Methoxychlor							
1	8.108	8.108	0.000	7939603H	0.0250	0.0227	
2	8.116	8.116	0.000	10514735H	0.0250	0.0222	
						RPD = 1.92	
* 44 Dibutylchlorendate ISTD							
1	8.181	8.181	0.000	55382255H	0.1000	0.1000	
2	7.948	7.948	0.000	85271773H	0.1000	0.1000	
37 Endrin ketone							
1	8.242	8.242	0.000	21285639H	0.0250	0.0258	
2	8.432	8.432	0.000	27965827H	0.0250	0.0261	
						RPD = 1.13	
$ 39 DCB Decachlorobiphenyl (Surr)							
1	9.962	9.962	0.000	10133465H	0.0250	0.0251	
2	9.872	9.872	0.000	13703261H	0.0250	0.0230	
						RPD = 8.66	

Reagents:

GCPestL3_00017	Amount Added:	1.00	Units: mL	
GCPESTISSPK2_00004	Amount Added:	0.02	Units: mL	Run Reagent

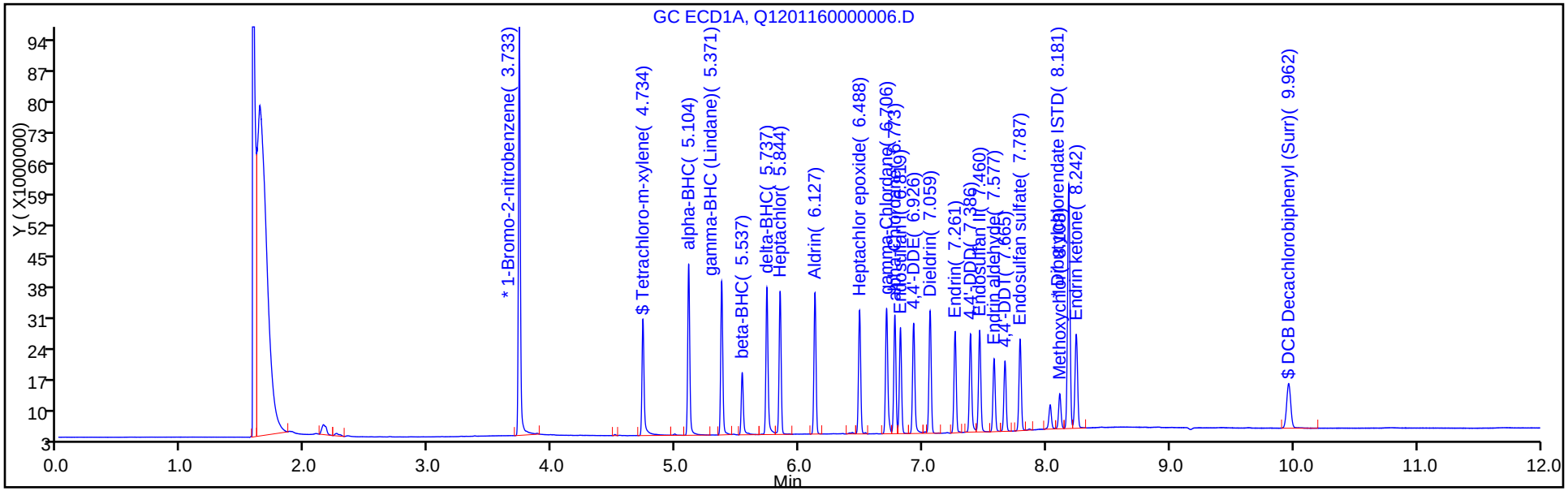
Report Date: 01-Dec-2016 11:51:32 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

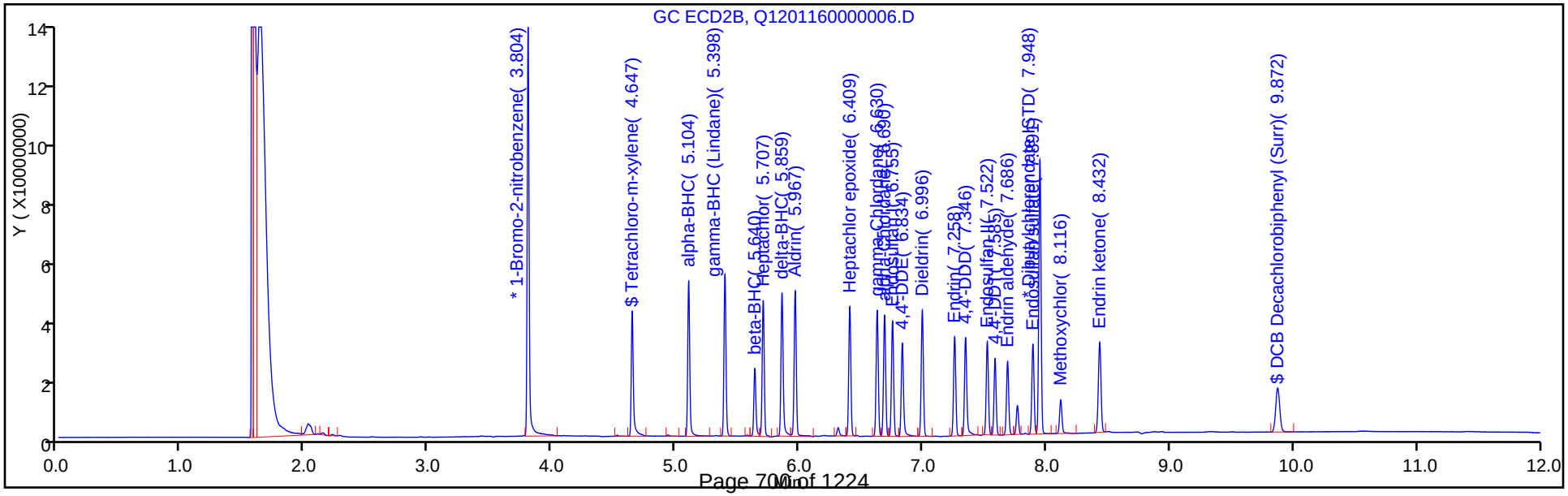
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000006.D

Injection Date:	01-Dec-2016 11:10:16	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	CCVIS			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCVIS 180-195949/6 Calibration Date: 12/01/2016 11:10

Instrument ID: CHGC15 Calib Start Date: 10/06/2016 13:08

GC Column: MR-2 ID: 0.53(mm) Calib End Date: 10/06/2016 14:25

Lab File ID: Q1201160000006.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
alpha-BHC	Ave	1.801	1.519		0.0211	0.0250	-15.6	20.0
gamma-BHC (Lindane)	Ave	1.531	1.579		0.0258	0.0250	3.2	20.0
beta-BHC	Ave	0.6818	0.6642		0.0244	0.0250	-2.6	20.0
Heptachlor	Ave	1.305	1.329		0.0255	0.0250	1.9	20.0
delta-BHC	Ave	1.400	1.399		0.0250	0.0250	-0.0	20.0
Aldrin	Ave	1.314	1.422		0.0271	0.0250	8.2	20.0
Heptachlor epoxide	Ave	1.164	1.266		0.0272	0.0250	8.7	20.0
trans-Chlordane	Ave	1.200	1.233		0.0257	0.0250	2.7	20.0
cis-Chlordane	Ave	1.157	1.186		0.0256	0.0250	2.4	20.0
Endosulfan I	Ave	1.079	1.129		0.0262	0.0250	4.7	20.0
4,4'-DDE	Ave	1.697	1.363		0.0201	0.0250	-19.7	20.0
Dieldrin	Ave	1.711	1.840		0.0269	0.0250	7.5	20.0
Endrin	Ave	1.415	1.445		0.0255	0.0250	2.1	20.0
4,4'-DDD	Ave	1.356	1.429		0.0264	0.0250	5.4	20.0
Endosulfan II	Ave	1.408	1.362		0.0242	0.0250	-3.3	20.0
4,4'-DDT	Ave	1.169	1.118		0.0239	0.0250	-4.4	20.0
Endrin aldehyde	Ave	1.144	1.074		0.0235	0.0250	-6.1	20.0
Endosulfan sulfate	Ave	1.253	1.311		0.0262	0.0250	4.6	20.0
Methoxychlor	Ave	0.5546	0.4932		0.0222	0.0250	-11.1	20.0
Endrin ketone	Ave	1.255	1.312		0.0261	0.0250	4.5	20.0
Tetrachloro-m-xylene	Ave	1.408	1.223		0.0217	0.0250	-13.1	20.0
DCB Decachlorobiphenyl (Surr)	Ave	0.6988	0.6428		0.0230	0.0250	-8.0	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCVIS 180-195949/6 Calibration Date: 12/01/2016 11:10

Instrument ID: CHGC15 Calib Start Date: 10/06/2016 13:08

GC Column: MR-2 ID: 0.53(mm) Calib End Date: 10/06/2016 14:25

Lab File ID: Q1201160000006.D

Analyte	RT	RT WINDOW	
		FROM	TO
alpha-BHC	5.10	5.09	5.11
gamma-BHC (Lindane)	5.40	5.39	5.41
beta-BHC	5.64	5.63	5.65
Heptachlor	5.71	5.70	5.72
delta-BHC	5.86	5.85	5.87
Aldrin	5.97	5.96	5.98
Heptachlor epoxide	6.41	6.40	6.42
trans-Chlordane	6.63	6.62	6.64
cis-Chlordane	6.69	6.68	6.70
Endosulfan I	6.76	6.75	6.77
4,4'-DDE	6.83	6.82	6.84
Dieldrin	7.00	6.99	7.01
Endrin	7.26	7.25	7.27
4,4'-DDD	7.35	7.34	7.36
Endosulfan II	7.52	7.51	7.53
4,4'-DDT	7.59	7.58	7.60
Endrin aldehyde	7.69	7.68	7.70
Endosulfan sulfate	7.89	7.88	7.90
Methoxychlor	8.12	8.11	8.13
Endrin ketone	8.43	8.42	8.44
Tetrachloro-m-xylene	4.65	4.64	4.66
DCB Decachlorobiphenyl (Surr)	9.87	9.86	9.88

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000006.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 01-Dec-2016 11:10:16 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014572-006
Operator ID: 402331 Instrument ID: CHGC15
Sublist: chrom-IS PEST_CHGC15*sub7

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 01-Dec-2016 11:51:32 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK017

First Level Reviewer: eppinged Date: 01-Dec-2016 11:50:00

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.733	3.733	0.000	92493495H	0.1000	0.1000	
2	3.804	3.804	0.000	127183551H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.734	4.734	0.000	26404452H	0.0250	0.0225	
2	4.647	4.647	0.000	38890410H	0.0250	0.0217	
						RPD = 3.53	
5 alpha-BHC							
1	5.104	5.104	0.000	38756961H	0.0250	0.0242	
2	5.104	5.104	0.000	48312503H	0.0250	0.0211	
						RPD = 13.76	
7 gamma-BHC (Lindane)							
1	5.371	5.371	0.000	34812687H	0.0250	0.0252	
2	5.398	5.398	0.000	50213879H	0.0250	0.0258	
						RPD = 2.21	
8 beta-BHC							
1	5.537	5.537	0.000	14070922H	0.0250	0.0229	
2	5.640	5.640	0.000	21117838H	0.0250	0.0244	
						RPD = 6.10	
10 delta-BHC							
1	5.737	5.737	0.000	33343690H	0.0250	0.0261	
2	5.859	5.859	0.000	44476745H	0.0250	0.0250	
						RPD = 4.28	
11 Heptachlor							
1	5.844	5.844	0.000	32394314H	0.0250	0.0281	
2	5.707	5.707	0.000	42268749H	0.0250	0.0255	
						RPD = 9.90	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
13 Aldrin							
1	6.127	6.127	0.000	32012481H	0.0250	0.0277	
2	5.967	5.967	0.000	45202469H	0.0250	0.0271	
						RPD = 2.19	
16 Heptachlor epoxide							
1	6.488	6.488	0.000	27995053H	0.0250	0.0266	
2	6.409	6.409	0.000	40238503H	0.0250	0.0272	
						RPD = 2.27	
18 gamma-Chlordane							
1	6.706	6.706	0.000	28343484H	0.0250	0.0267	
2	6.630	6.630	0.000	39191249H	0.0250	0.0257	
						RPD = 4.07	
20 alpha-Chlordane							
1	6.773	6.773	0.000	26868908H	0.0250	0.0265	
2	6.690	6.690	0.000	37695835H	0.0250	0.0256	
						RPD = 3.23	
21 Endosulfan I							
1	6.819	6.819	0.000	23985027H	0.0250	0.0252	
2	6.755	6.755	0.000	35902315H	0.0250	0.0262	
						RPD = 3.82	
23 4,4'-DDE							
1	6.926	6.926	0.000	24969281H	0.0250	0.0239	
2	6.834	6.834	0.000	29052691H	0.0250	0.0201	
						RPD = 17.54	
24 Dieldrin							
1	7.059	7.059	0.000	27749892H	0.0250	0.0266	
2	6.996	6.996	0.000	39229553H	0.0250	0.0269	
						RPD = 1.09	
27 Endrin							
1	7.261	7.261	0.000	22936089H	0.0250	0.0254	
2	7.258	7.258	0.000	30800599H	0.0250	0.0255	
						RPD = 0.38	
29 4,4'-DDD							
1	7.386	7.386	0.000	22224012H	0.0250	0.0261	
2	7.346	7.346	0.000	30473458H	0.0250	0.0263	
						RPD = 1.04	
31 Endosulfan II							
1	7.460	7.460	0.000	23014984H	0.0250	0.0260	
2	7.522	7.522	0.000	29025480H	0.0250	0.0242	
						RPD = 7.16	
32 Endrin aldehyde							
1	7.577	7.577	0.000	16546965H	0.0250	0.0239	
2	7.686	7.686	0.000	22894345H	0.0250	0.0235	
						RPD = 1.60	
33 4,4'-DDT							
1	7.665	7.665	0.000	15927516H	0.0250	0.0225	
2	7.585	7.585	0.000	23832210H	0.0250	0.0239	
						RPD = 6.10	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
35 Endosulfan sulfate							
1	7.787	7.787	0.000	20754472H	0.0250	0.0261	
2	7.891	7.891	0.000	27952385H	0.0250	0.0262	
						RPD = 0.08	
36 Methoxychlor							
1	8.108	8.108	0.000	7939603H	0.0250	0.0227	
2	8.116	8.116	0.000	10514735H	0.0250	0.0222	
						RPD = 1.92	
* 44 Dibutylchlorendate ISTD							
1	8.181	8.181	0.000	55382255H	0.1000	0.1000	
2	7.948	7.948	0.000	85271773H	0.1000	0.1000	
37 Endrin ketone							
1	8.242	8.242	0.000	21285639H	0.0250	0.0258	
2	8.432	8.432	0.000	27965827H	0.0250	0.0261	
						RPD = 1.13	
$ 39 DCB Decachlorobiphenyl (Surr)							
1	9.962	9.962	0.000	10133465H	0.0250	0.0251	
2	9.872	9.872	0.000	13703261H	0.0250	0.0230	
						RPD = 8.66	

Reagents:

GCPestL3_00017	Amount Added:	1.00	Units: mL	
GCPESTISSPK2_00004	Amount Added:	0.02	Units: mL	Run Reagent

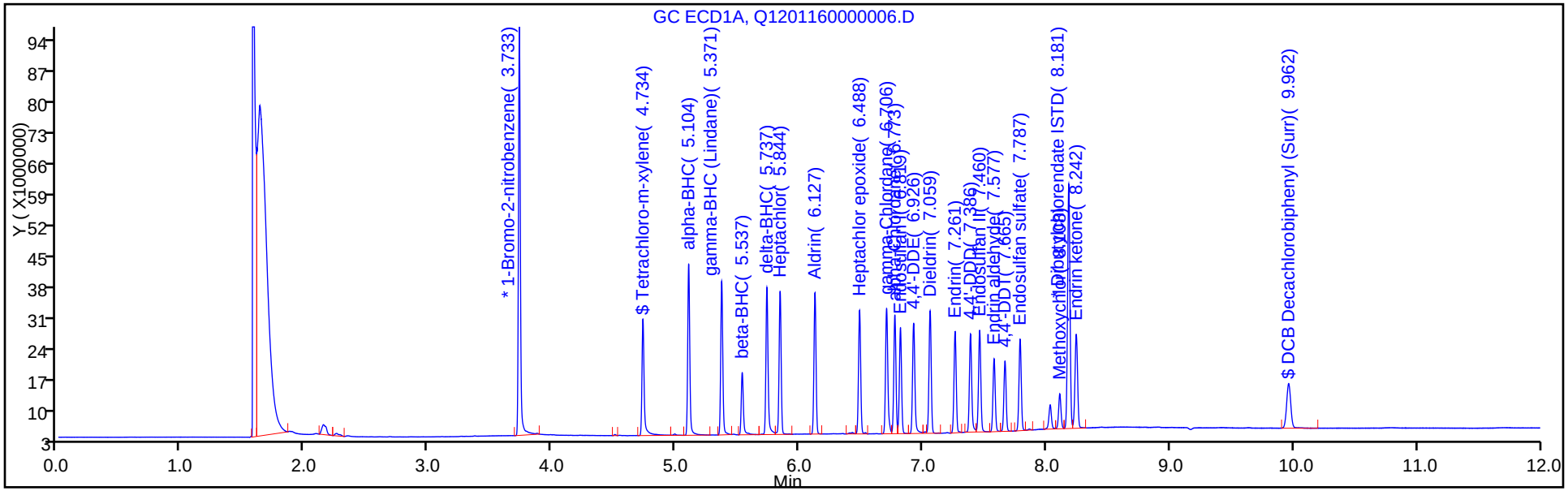
Report Date: 01-Dec-2016 11:51:33 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

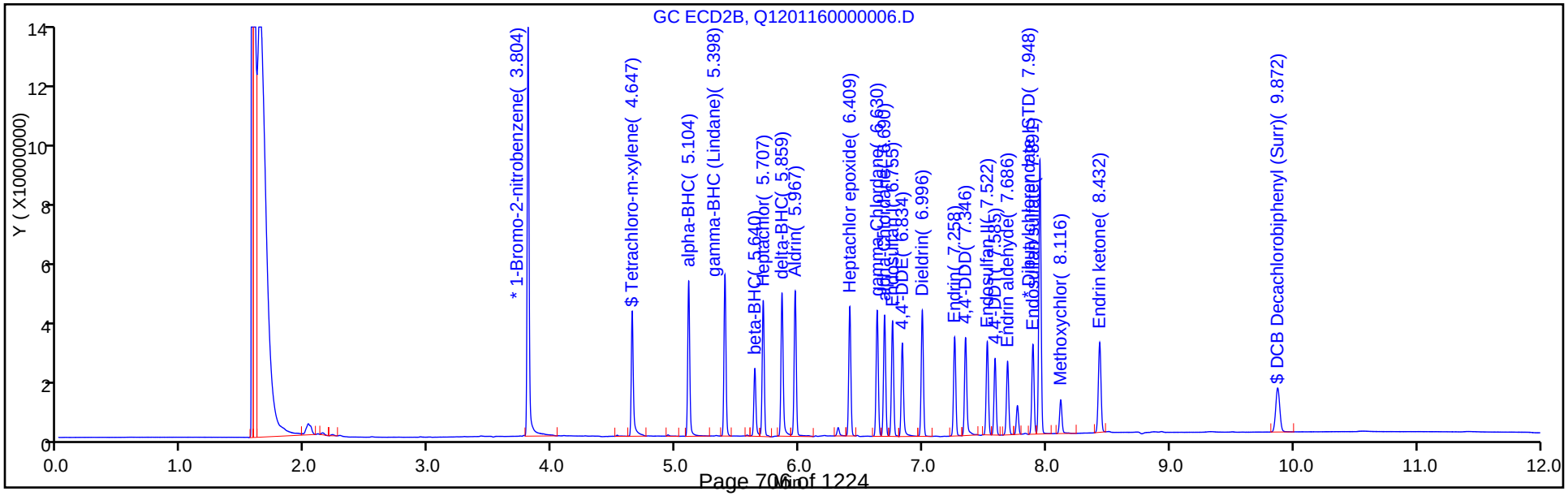
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000006.D

Injection Date:	01-Dec-2016 11:10:16	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	CCVIS			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 180-195769/1-A

Matrix: Solid | Lab File ID: Q1201160000016.D

Analysis Method: 8081B_LL | Date Collected:

Extraction Method: 3541 | Date Extracted: 11/30/2016 04:24

Sample wt/vol: 15.0(g) | Date Analyzed: 12/01/2016 13:44

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: MR-1 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195949 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
309-00-2	Aldrin	0.00000880	U	0.0000833	0.00000880
319-84-6	alpha-BHC	0.0000245	U	0.0000833	0.0000245
319-85-7	beta-BHC	0.0000187	U	0.0000833	0.0000187
319-86-8	delta-BHC	0.0000297	U	0.0000833	0.0000297
58-89-9	gamma-BHC (Lindane)	0.0000172	U	0.0000833	0.0000172
5103-71-9	cis-Chlordane	0.0000134	U	0.0000833	0.0000134
5103-74-2	trans-Chlordane	0.00000650	U	0.0000833	0.00000650
72-54-8	4,4'-DDD	0.00000850	U	0.0000833	0.00000850
72-55-9	4,4'-DDE	0.0000265	U	0.0000833	0.0000265
50-29-3	4,4'-DDT	0.00000850	U	0.0000833	0.00000850
60-57-1	Dieldrin	0.00000790	U	0.0000833	0.00000790
959-98-8	Endosulfan I	0.00000530	U	0.0000833	0.00000530
33213-65-9	Endosulfan II	0.0000255	U	0.0000833	0.0000255
1031-07-8	Endosulfan sulfate	0.0000106	U	0.0000833	0.0000106
72-20-8	Endrin	0.0000243	U	0.0000833	0.0000243
7421-93-4	Endrin aldehyde	0.0000245	U	0.0000833	0.0000245
53494-70-5	Endrin ketone	0.0000278	U	0.0000833	0.0000278
76-44-8	Heptachlor	0.00000720	U	0.0000833	0.00000720
1024-57-3	Heptachlor epoxide	0.0000100	U	0.0000833	0.0000100
72-43-5	Methoxychlor	0.0000242	U	0.0000833	0.0000242
8001-35-2	Toxaphene	0.00274	U	0.00333	0.00274

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	80		32-114
2051-24-3	DCB Decachlorobiphenyl (Surr)	99		26-143

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000016.D
Lims ID: MB 180-195769/1-A
Client ID:
Sample Type: MB
Inject. Date: 01-Dec-2016 13:44:41 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014572-016
Operator ID: 402331 Instrument ID: CHGC15

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 07-Dec-2016 12:29:42 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK013

First Level Reviewer: eppinged Date: 01-Dec-2016 13:59:10

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Hexachlorobutadiene							
1		2.930				ND	
2		2.890					
2 Hexachlorocyclopentadiene							
1		3.496				ND	
2		3.496					
* 43 1-Bromo-2-nitrobenzene							
1	3.732	3.733	-0.001	94153403H	0.1000	0.1000	
2	3.803	3.804	0.000	129450735H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.733	4.734	-0.001	19049269H	0.0200	0.0159	
2	4.646	4.647	-0.001	27643800H	0.0200	0.0152	
						RPD = 5.00	
4 Diallate							
1		4.891				ND	
1		4.982					
2		4.778					
2		4.859					
5 alpha-BHC							
1		5.104				ND	
2		5.104					
6 Hexachlorobenzene							
1		5.139				ND	
2		5.063					
7 gamma-BHC (Lindane)							
1		5.371				ND	
2		5.398					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 beta-BHC							
1		5.537				ND	
2		5.640					
9 Chlordane (technical)							
1		5.669				ND	
1		5.846					
1		6.708					
1		6.778					
2		5.553					
2		5.709					
2		6.634					
2		6.692					
10 delta-BHC							
1		5.737				ND	
2		5.859					
11 Heptachlor							
1		5.844				ND	
2		5.707					
12 DCPA							
1		6.062				ND	
2		5.980					
13 Aldrin							
1		6.127				ND	
2		5.967					
14 Isodrin							
1		6.408				ND	
2		6.314					
15 oxy-Chlordane							
1		6.446				ND	
2		6.314					
16 Heptachlor epoxide							
1		6.488				ND	
2		6.409					
17 2,4'-DDE							
1		6.627				ND	
2		6.555					
18 gamma-Chlordane							
1		6.706				ND	
2		6.630					
19 Chlorobenside							
1		6.730				ND	
2		6.718					
20 alpha-Chlordane							
1		6.773				ND	
2		6.690					
22 trans-Nonachlor							
1		6.780				ND	
2		6.647					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
21 Endosulfan I							
1		6.819				ND	
2		6.755					
23 4,4'-DDE							
1		6.926				ND	
2		6.834					
25 2,4'-DDD							
1		7.019				ND	
2		6.990					
24 Dieldrin							
1		7.059				ND	
2		6.996					
34 Toxaphene							
1		7.212				ND	
1		7.697					
1		7.861					
1		8.546					
2		6.948					
2		7.522					
2		8.306					
2		8.946					
26 Chlorobenzilate							
1		7.235				ND	
2		7.104					
27 Endrin							
1		7.261				ND	
2		7.258					
28 2,4'-DDT							
1		7.295				ND	
2		7.230					
30 cis-Nonachlor							
1		7.354				ND	
2		7.299					
29 4,4'-DDD							
1		7.386				ND	
2		7.346					
31 Endosulfan II							
1		7.460				ND	
2		7.522					
32 Endrin aldehyde							
1		7.577				ND	
2		7.686					
33 4,4'-DDT							
1		7.665				ND	
2		7.585					
35 Endosulfan sulfate							
1		7.787				ND	
2		7.891					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Methoxychlor							
1		8.108				ND	
2		8.116					
* 44 Dibutylchlorendate ISTD							
1	8.181	8.181	0.000	51141271H	0.1000	0.1000	
2	7.948	7.948	0.000	81208509H	0.1000	0.1000	
37 Endrin ketone							
1		8.242				ND	
2		8.432					
38 Mirex							
1		8.748				ND	
2		8.661					
$ 39 DCB Decachlorobiphenyl (Surr)							
1	9.960	9.962	-0.002	7385075H	0.0200	0.0198	
2	9.875	9.872	0.003	10431971H	0.0200	0.0184	
						RPD = 7.38	
40 Dechlorane Plus 1							
1		0.000				ND	
2		0.000					
41 Dechlorane Plus 2							
1		0.000				ND	
2		0.000					
S 42 Dechlorane Plus							
1		0.000				ND	
2		0.000					

Reagents:

GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

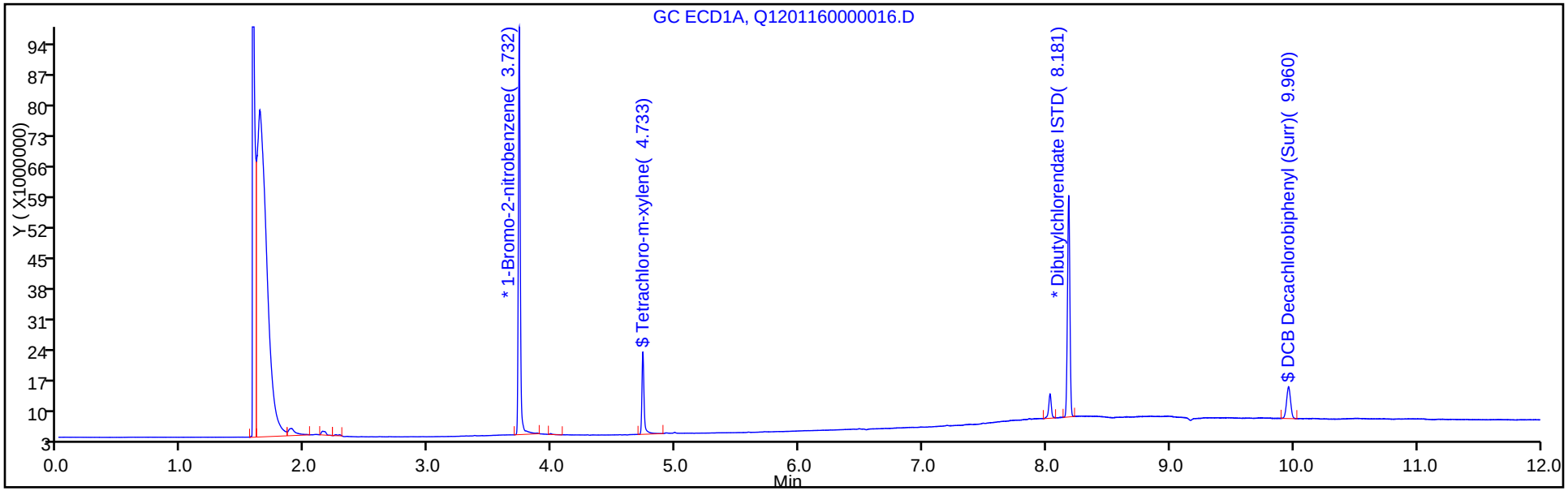
Report Date: 07-Dec-2016 12:30:14 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Pittsburgh

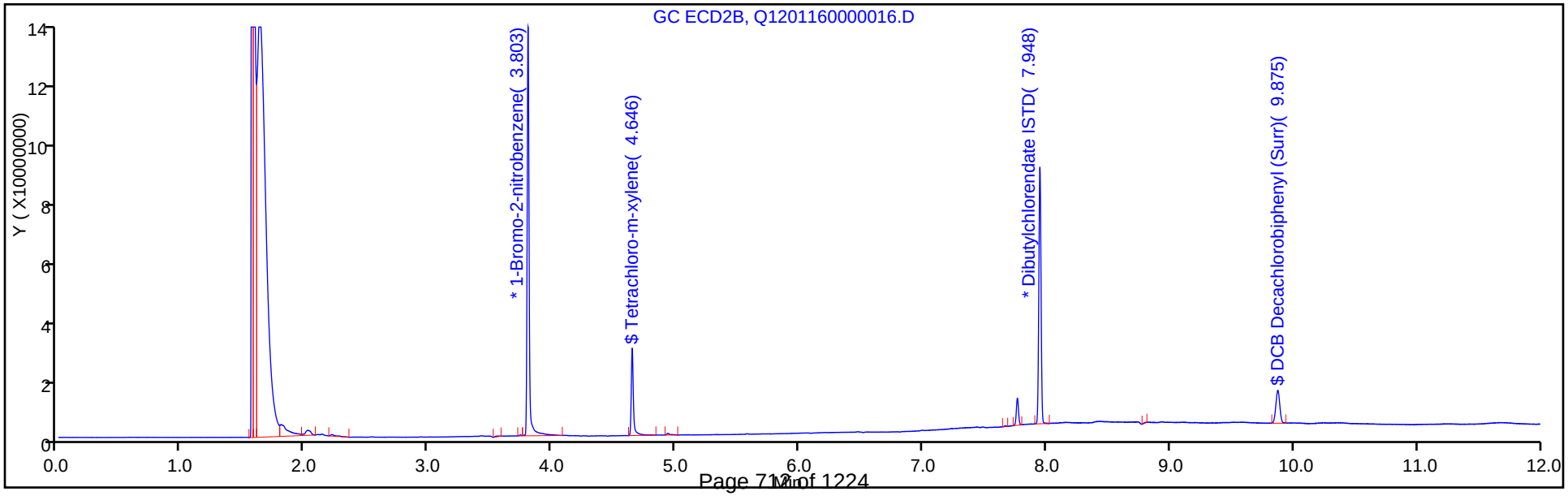
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000016.D

Injection Date:	01-Dec-2016 13:44:41	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	MB 180-195769/1-A			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000016.D				
Lims ID:	MB 180-195769/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	01-Dec-2016 13:44:41	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0014572-016				
Operator ID:	402331	Instrument ID:	CHGC15		
Method:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m				
Limit Group:	GCS 8081B ICAL with IS				
Last Update:	07-Dec-2016 12:29:42	Calib Date:	06-Oct-2016 14:25:55		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D				
Column 1 :	MR-1 (0.53 mm)		Det: GC ECD1A		
Column 2 :	MR-2 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK013				
First Level Reviewer: eppinged		Date:	01-Dec-2016 13:59:10		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.0159	79.72
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.0198	98.96

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.0152	75.83
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.0184	91.91

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 180-195769/1-A

Matrix: Solid | Lab File ID: Q1201160000016.D

Analysis Method: 8081B_LL | Date Collected:

Extraction Method: 3541 | Date Extracted: 11/30/2016 04:24

Sample wt/vol: 15.0(g) | Date Analyzed: 12/01/2016 13:44

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: MR-2 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195949 | Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	76		32-114
2051-24-3	DCB Decachlorobiphenyl (Surr)	92		26-143

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000016.D
Lims ID: MB 180-195769/1-A
Client ID:
Sample Type: MB
Inject. Date: 01-Dec-2016 13:44:41 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014572-016
Operator ID: 402331 Instrument ID: CHGC15

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 07-Dec-2016 12:29:42 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK013

First Level Reviewer: eppinged Date: 01-Dec-2016 13:59:10

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Hexachlorobutadiene							
1		2.930				ND	
2		2.890					
2 Hexachlorocyclopentadiene							
1		3.496				ND	
2		3.496					
* 43 1-Bromo-2-nitrobenzene							
1	3.732	3.733	-0.001	94153403H	0.1000	0.1000	
2	3.803	3.804	0.000	129450735H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.733	4.734	-0.001	19049269H	0.0200	0.0159	
2	4.646	4.647	-0.001	27643800H	0.0200	0.0152	
						RPD = 5.00	
4 Diallate							
1		4.891				ND	
1		4.982					
2		4.778					
2		4.859					
5 alpha-BHC							
1		5.104				ND	
2		5.104					
6 Hexachlorobenzene							
1		5.139				ND	
2		5.063					
7 gamma-BHC (Lindane)							
1		5.371				ND	
2		5.398					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 beta-BHC							
1		5.537				ND	
2		5.640					
9 Chlordane (technical)							
1		5.669				ND	
1		5.846					
1		6.708					
1		6.778					
2		5.553					
2		5.709					
2		6.634					
2		6.692					
10 delta-BHC							
1		5.737				ND	
2		5.859					
11 Heptachlor							
1		5.844				ND	
2		5.707					
12 DCPA							
1		6.062				ND	
2		5.980					
13 Aldrin							
1		6.127				ND	
2		5.967					
14 Isodrin							
1		6.408				ND	
2		6.314					
15 oxy-Chlordane							
1		6.446				ND	
2		6.314					
16 Heptachlor epoxide							
1		6.488				ND	
2		6.409					
17 2,4'-DDE							
1		6.627				ND	
2		6.555					
18 gamma-Chlordane							
1		6.706				ND	
2		6.630					
19 Chlorobenside							
1		6.730				ND	
2		6.718					
20 alpha-Chlordane							
1		6.773				ND	
2		6.690					
22 trans-Nonachlor							
1		6.780				ND	
2		6.647					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
21 Endosulfan I							
1		6.819				ND	
2		6.755					
23 4,4'-DDE							
1		6.926				ND	
2		6.834					
25 2,4'-DDD							
1		7.019				ND	
2		6.990					
24 Dieldrin							
1		7.059				ND	
2		6.996					
34 Toxaphene							
1		7.212				ND	
1		7.697					
1		7.861					
1		8.546					
2		6.948					
2		7.522					
2		8.306					
2		8.946					
26 Chlorobenzilate							
1		7.235				ND	
2		7.104					
27 Endrin							
1		7.261				ND	
2		7.258					
28 2,4'-DDT							
1		7.295				ND	
2		7.230					
30 cis-Nonachlor							
1		7.354				ND	
2		7.299					
29 4,4'-DDD							
1		7.386				ND	
2		7.346					
31 Endosulfan II							
1		7.460				ND	
2		7.522					
32 Endrin aldehyde							
1		7.577				ND	
2		7.686					
33 4,4'-DDT							
1		7.665				ND	
2		7.585					
35 Endosulfan sulfate							
1		7.787				ND	
2		7.891					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Methoxychlor							
1		8.108				ND	
2		8.116					
* 44 Dibutylchlorendate ISTD							
1	8.181	8.181	0.000	51141271H	0.1000	0.1000	
2	7.948	7.948	0.000	81208509H	0.1000	0.1000	
37 Endrin ketone							
1		8.242				ND	
2		8.432					
38 Mirex							
1		8.748				ND	
2		8.661					
$ 39 DCB Decachlorobiphenyl (Surr)							
1	9.960	9.962	-0.002	7385075H	0.0200	0.0198	
2	9.875	9.872	0.003	10431971H	0.0200	0.0184	
						RPD = 7.38	
40 Dechlorane Plus 1							
1		0.000				ND	
2		0.000					
41 Dechlorane Plus 2							
1		0.000				ND	
2		0.000					
S 42 Dechlorane Plus							
1		0.000				ND	
2		0.000					

Reagents:

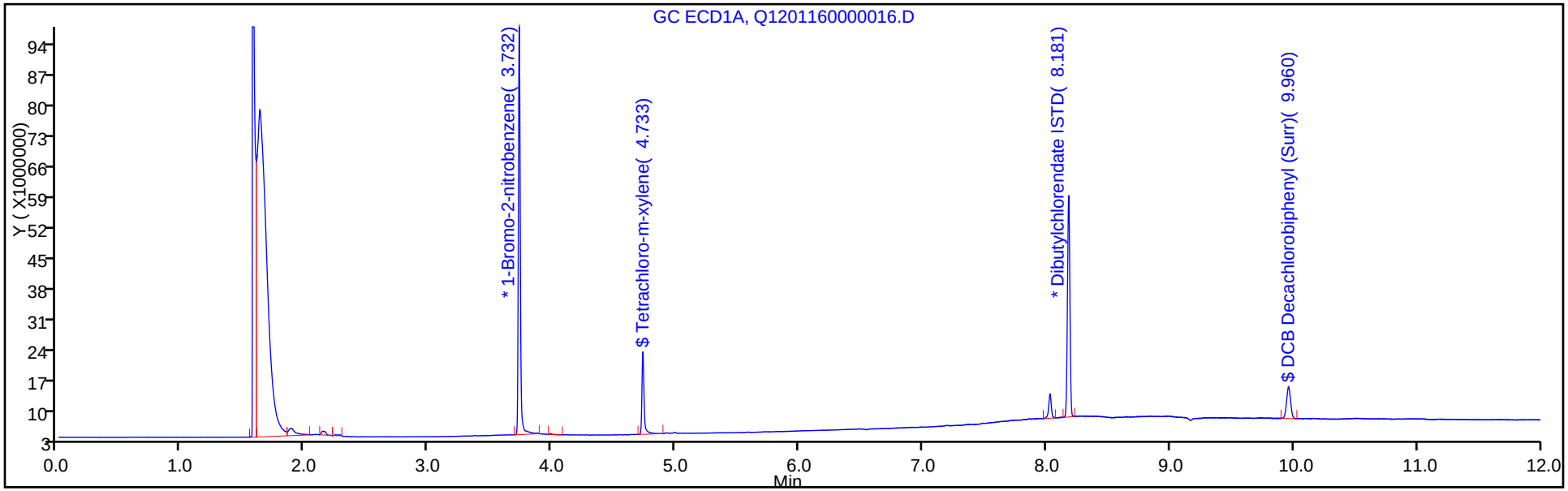
GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

Report Date: 07-Dec-2016 12:30:14 Chrom Revision: 2.2 05-Dec-2016 12:37:22

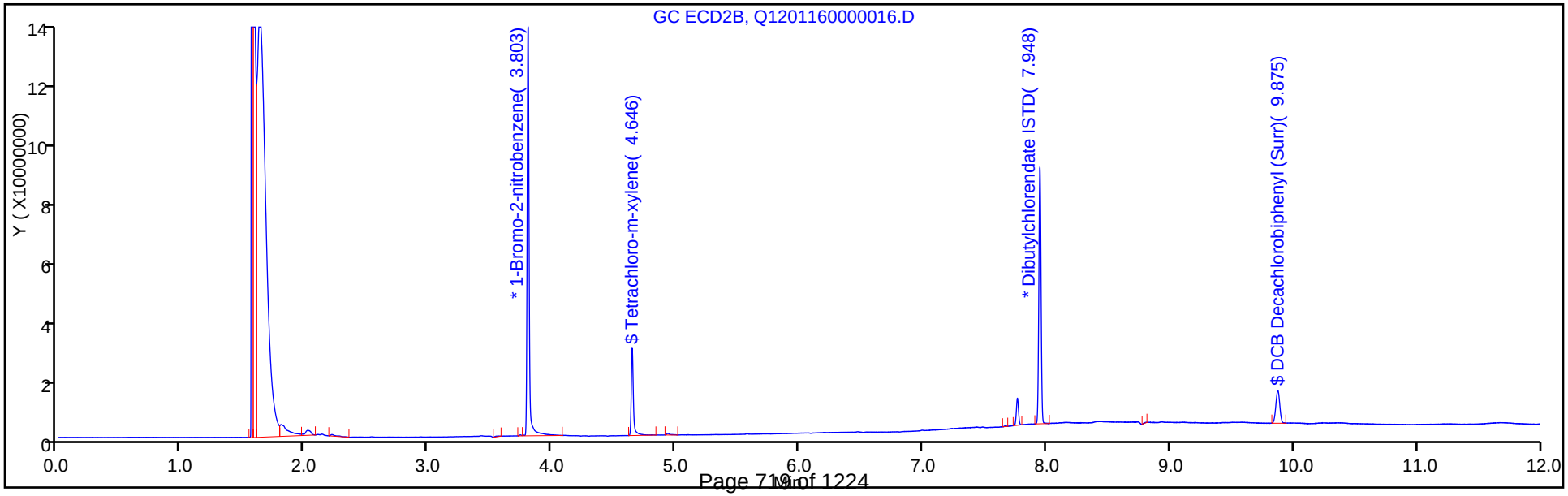
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000016.D				
Injection Date:	01-Dec-2016 13:44:41	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	MB 180-195769/1-A			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000016.D
Lims ID: MB 180-195769/1-A
Client ID:
Sample Type: MB
Inject. Date: 01-Dec-2016 13:44:41 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014572-016
Operator ID: 402331 Instrument ID: CHGC15

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 07-Dec-2016 12:29:42 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK013

First Level Reviewer: eppinged Date: 01-Dec-2016 13:59:10

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.0159	79.72
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.0198	98.96

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.0152	75.83
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.0184	91.91

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-195769/2-A

Matrix: Solid | Lab File ID: Q1201160000026.D

Analysis Method: 8081B_LL | Date Collected:

Extraction Method: 3541 | Date Extracted: 11/30/2016 04:24

Sample wt/vol: 15.0(g) | Date Analyzed: 12/01/2016 16:19

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: MR-1 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195949 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
309-00-2	Aldrin	0.001366		0.0000833	0.00000880
319-84-6	alpha-BHC	0.001256		0.0000833	0.0000245
319-85-7	beta-BHC	0.001220		0.0000833	0.0000187
319-86-8	delta-BHC	0.0007284		0.0000833	0.0000297
58-89-9	gamma-BHC (Lindane)	0.001300		0.0000833	0.0000172
5103-71-9	cis-Chlordane	0.001356		0.0000833	0.0000134
5103-74-2	trans-Chlordane	0.001394		0.0000833	0.00000650
72-54-8	4,4'-DDD	0.001751		0.0000833	0.00000850
72-55-9	4,4'-DDE	0.001434		0.0000833	0.0000265
50-29-3	4,4'-DDT	0.0007379		0.0000833	0.00000850
60-57-1	Dieldrin	0.001539		0.0000833	0.00000790
959-98-8	Endosulfan I	0.001329		0.0000833	0.00000530
33213-65-9	Endosulfan II	0.001407		0.0000833	0.0000255
1031-07-8	Endosulfan sulfate	0.001271		0.0000833	0.0000106
72-20-8	Endrin	0.001437		0.0000833	0.0000243
7421-93-4	Endrin aldehyde	0.001316		0.0000833	0.0000245
53494-70-5	Endrin ketone	0.001301		0.0000833	0.0000278
76-44-8	Heptachlor	0.001367		0.0000833	0.00000720
1024-57-3	Heptachlor epoxide	0.001368		0.0000833	0.0000100
72-43-5	Methoxychlor	0.0008964		0.0000833	0.0000242

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	83		32-114
2051-24-3	DCB Decachlorobiphenyl (Surr)	91		26-143

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000026.D
Lims ID: LCS 180-195769/2-A
Client ID:
Sample Type: LCS
Inject. Date: 01-Dec-2016 16:19:13 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014572-026
Operator ID: 402331 Instrument ID: CHGC15

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 02-Dec-2016 07:31:16 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK011

First Level Reviewer: eppinged Date: 02-Dec-2016 07:31:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.733	3.733	0.000	94230738H	0.1000	0.1000	
2	3.804	3.804	0.000	130410408H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.734	4.734	0.000	19877595H	0.0200	0.0166	
2	4.648	4.647	0.001	27285322H	0.0200	0.0149	
						RPD = 11.20	
5 alpha-BHC							
1	5.105	5.104	0.001	30717041H	0.0250	0.0188	
2	5.105	5.104	0.001	42208763H	0.0250	0.0180	
						RPD = 4.68	
7 gamma-BHC (Lindane)							
1	5.372	5.371	0.001	27404852H	0.0250	0.0195	
2	5.399	5.398	0.001	38393010H	0.0250	0.0192	
						RPD = 1.35	
8 beta-BHC							
1	5.538	5.537	0.001	11445336H	0.0250	0.0183	
2	5.641	5.640	0.001	15841359H	0.0250	0.0178	
						RPD = 2.64	
10 delta-BHC							
1	5.739	5.737	0.002	14236783H	0.0250	0.0109	
2	5.861	5.859	0.002	19010383H	0.0250	0.0104	
						RPD = 4.82	
11 Heptachlor							
1	5.845	5.844	0.001	24055532H	0.0250	0.0205	
2	5.708	5.707	0.001	32891830H	0.0250	0.0193	
						RPD = 5.87	
13 Aldrin							
1	6.127	6.127	0.000	24160239H	0.0250	0.0205	
2	5.967	5.967	0.000	33941645H	0.0250	0.0198	
						RPD = 3.34	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
16 Heptachlor epoxide							
1	6.487	6.488	-0.001	22033109H	0.0250	0.0205	
2	6.409	6.409	0.000	29805728H	0.0250	0.0196	
						RPD = 4.44	
18 gamma-Chlordane							
1	6.707	6.706	0.001	22574573H	0.0250	0.0209	
2	6.631	6.630	0.001	30946471H	0.0250	0.0198	
						RPD = 5.57	
20 alpha-Chlordane							
1	6.774	6.773	0.001	21049894H	0.0250	0.0203	
2	6.691	6.690	0.001	29219184H	0.0250	0.0194	
						RPD = 4.93	
21 Endosulfan I							
1	6.818	6.819	-0.001	19345915H	0.0250	0.0199	
2	6.755	6.755	0.000	27492661H	0.0250	0.0195	
						RPD = 2.02	
23 4,4'-DDE							
1	6.925	6.926	-0.001	20374763H	0.0250	0.0215	
2	6.835	6.834	0.001	28394792H	0.0250	0.0213	
						RPD = 1.12	
24 Dieldrin							
1	7.059	7.059	0.000	21867505H	0.0250	0.0231	
2	6.997	6.996	0.001	30300531H	0.0250	0.0225	
						RPD = 2.49	
27 Endrin							
1	7.261	7.261	0.000	17659298H	0.0250	0.0216	
2	7.259	7.258	0.001	23849585H	0.0250	0.0214	
						RPD = 0.63	
29 4,4'-DDD							
1	7.386	7.386	0.000	20320583H	0.0250	0.0263	
2	7.346	7.346	0.000	27480818H	0.0250	0.0258	
						RPD = 1.92	
31 Endosulfan II							
1	7.461	7.460	0.001	16989215H	0.0250	0.0211	
2	7.522	7.522	0.000	23696517H	0.0250	0.0214	
						RPD = 1.33	
32 Endrin aldehyde							
1	7.577	7.577	0.000	12432890H	0.0250	0.0197	
2	7.687	7.686	0.001	17774194H	0.0250	0.0198	
						RPD = 0.10	
33 4,4'-DDT							
1	7.665	7.665	0.000	7116329H	0.0250	0.0111	
2	7.585	7.585	0.000	10145955H	0.0250	0.0110	
						RPD = 0.31	
35 Endosulfan sulfate							
1	7.787	7.787	0.000	13740798H	0.0250	0.0191	
2	7.892	7.891	0.001	19295637H	0.0250	0.0196	
						RPD = 2.68	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Methoxychlor							
1	8.108	8.108	0.000	4275979H	0.0250	0.0134	
2	8.117	8.116	0.001	6074658H	0.0250	0.0139	
						RPD = 3.52	
* 44 Dibutylchlorendate ISTD							
1	8.181	8.181	0.000	50279423H	0.1000	0.1000	
2	7.948	7.948	0.000	78645250H	0.1000	0.1000	
37 Endrin ketone							
1	8.242	8.242	0.000	14591901H	0.0250	0.0195	
2	8.432	8.432	0.000	20340905H	0.0250	0.0206	
						RPD = 5.48	
$ 39 DCB Decachlorobiphenyl (Surr)							
1	9.962	9.962	0.000	6653506H	0.0200	0.0181	
2	9.875	9.872	0.003	10828673H	0.0200	0.0197	
						RPD = 8.28	

Reagents:

GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

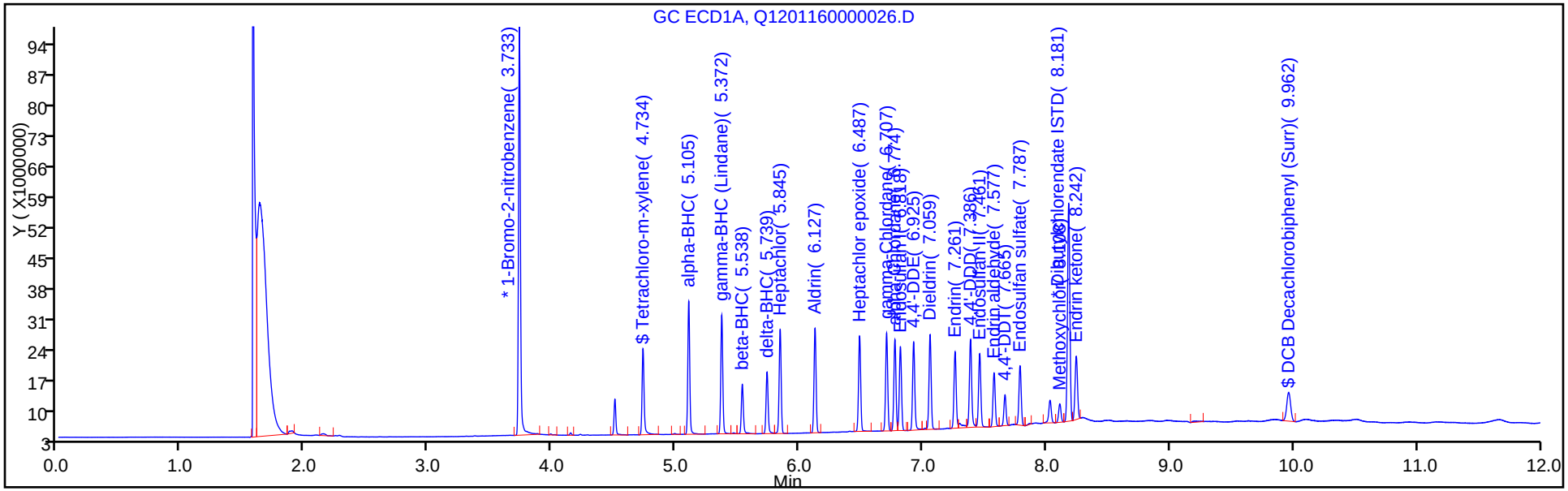
Report Date: 02-Dec-2016 07:31:54 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

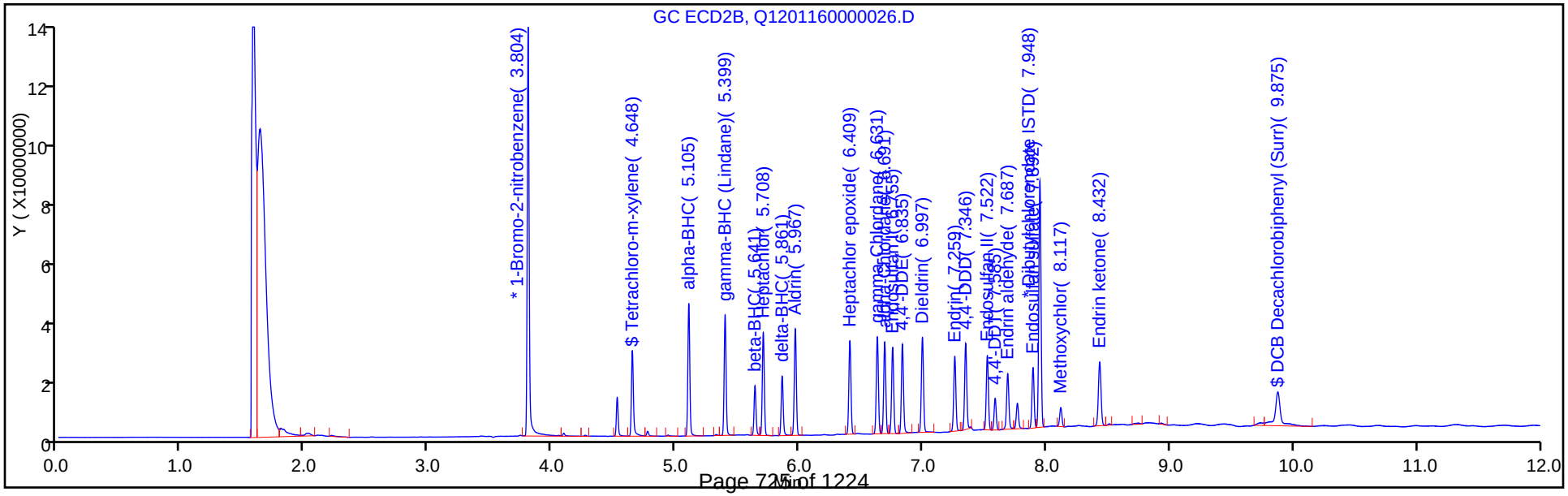
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000026.D

Injection Date:	01-Dec-2016 16:19:13	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	LCS 180-195769/2-A			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000026.D				
Lims ID:	LCS 180-195769/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	01-Dec-2016 16:19:13	ALS Bottle#:	26	Worklist Smp#:	26
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0014572-026				
Operator ID:	402331	Instrument ID:	CHGC15		
Method:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m				
Limit Group:	GCS 8081B ICAL with IS				
Last Update:	02-Dec-2016 07:31:16	Calib Date:	06-Oct-2016 14:25:55		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D				
Column 1 :	MR-1 (0.53 mm)		Det: GC ECD1A		
Column 2 :	MR-2 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK011				
First Level Reviewer: eppinged		Date:	02-Dec-2016 07:31:16		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.0166	83.12
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.0181	90.68

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.0149	74.30
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.0197	98.52

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-195769/2-A

Matrix: Solid | Lab File ID: Q1201160000026.D

Analysis Method: 8081B_LL | Date Collected:

Extraction Method: 3541 | Date Extracted: 11/30/2016 04:24

Sample wt/vol: 15.0(g) | Date Analyzed: 12/01/2016 16:19

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: MR-2 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195949 | Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	74		32-114
2051-24-3	DCB Decachlorobiphenyl (Surr)	99		26-143

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000026.D
Lims ID: LCS 180-195769/2-A
Client ID:
Sample Type: LCS
Inject. Date: 01-Dec-2016 16:19:13 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014572-026
Operator ID: 402331 Instrument ID: CHGC15

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 02-Dec-2016 07:31:16 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK011

First Level Reviewer: eppinged Date: 02-Dec-2016 07:31:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 43 1-Bromo-2-nitrobenzene							
1	3.733	3.733	0.000	94230738H	0.1000	0.1000	
2	3.804	3.804	0.000	130410408H	0.1000	0.1000	
$ 3 Tetrachloro-m-xylene							
1	4.734	4.734	0.000	19877595H	0.0200	0.0166	
2	4.648	4.647	0.001	27285322H	0.0200	0.0149	
						RPD = 11.20	
5 alpha-BHC							
1	5.105	5.104	0.001	30717041H	0.0250	0.0188	
2	5.105	5.104	0.001	42208763H	0.0250	0.0180	
						RPD = 4.68	
7 gamma-BHC (Lindane)							
1	5.372	5.371	0.001	27404852H	0.0250	0.0195	
2	5.399	5.398	0.001	38393010H	0.0250	0.0192	
						RPD = 1.35	
8 beta-BHC							
1	5.538	5.537	0.001	11445336H	0.0250	0.0183	
2	5.641	5.640	0.001	15841359H	0.0250	0.0178	
						RPD = 2.64	
10 delta-BHC							
1	5.739	5.737	0.002	14236783H	0.0250	0.0109	
2	5.861	5.859	0.002	19010383H	0.0250	0.0104	
						RPD = 4.82	
11 Heptachlor							
1	5.845	5.844	0.001	24055532H	0.0250	0.0205	
2	5.708	5.707	0.001	32891830H	0.0250	0.0193	
						RPD = 5.87	
13 Aldrin							
1	6.127	6.127	0.000	24160239H	0.0250	0.0205	
2	5.967	5.967	0.000	33941645H	0.0250	0.0198	
						RPD = 3.34	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
16 Heptachlor epoxide							
1	6.487	6.488	-0.001	22033109H	0.0250	0.0205	
2	6.409	6.409	0.000	29805728H	0.0250	0.0196	
						RPD = 4.44	
18 gamma-Chlordane							
1	6.707	6.706	0.001	22574573H	0.0250	0.0209	
2	6.631	6.630	0.001	30946471H	0.0250	0.0198	
						RPD = 5.57	
20 alpha-Chlordane							
1	6.774	6.773	0.001	21049894H	0.0250	0.0203	
2	6.691	6.690	0.001	29219184H	0.0250	0.0194	
						RPD = 4.93	
21 Endosulfan I							
1	6.818	6.819	-0.001	19345915H	0.0250	0.0199	
2	6.755	6.755	0.000	27492661H	0.0250	0.0195	
						RPD = 2.02	
23 4,4'-DDE							
1	6.925	6.926	-0.001	20374763H	0.0250	0.0215	
2	6.835	6.834	0.001	28394792H	0.0250	0.0213	
						RPD = 1.12	
24 Dieldrin							
1	7.059	7.059	0.000	21867505H	0.0250	0.0231	
2	6.997	6.996	0.001	30300531H	0.0250	0.0225	
						RPD = 2.49	
27 Endrin							
1	7.261	7.261	0.000	17659298H	0.0250	0.0216	
2	7.259	7.258	0.001	23849585H	0.0250	0.0214	
						RPD = 0.63	
29 4,4'-DDD							
1	7.386	7.386	0.000	20320583H	0.0250	0.0263	
2	7.346	7.346	0.000	27480818H	0.0250	0.0258	
						RPD = 1.92	
31 Endosulfan II							
1	7.461	7.460	0.001	16989215H	0.0250	0.0211	
2	7.522	7.522	0.000	23696517H	0.0250	0.0214	
						RPD = 1.33	
32 Endrin aldehyde							
1	7.577	7.577	0.000	12432890H	0.0250	0.0197	
2	7.687	7.686	0.001	17774194H	0.0250	0.0198	
						RPD = 0.10	
33 4,4'-DDT							
1	7.665	7.665	0.000	7116329H	0.0250	0.0111	
2	7.585	7.585	0.000	10145955H	0.0250	0.0110	
						RPD = 0.31	
35 Endosulfan sulfate							
1	7.787	7.787	0.000	13740798H	0.0250	0.0191	
2	7.892	7.891	0.001	19295637H	0.0250	0.0196	
						RPD = 2.68	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Methoxychlor							
1	8.108	8.108	0.000	4275979H	0.0250	0.0134	
2	8.117	8.116	0.001	6074658H	0.0250	0.0139	
						RPD = 3.52	
* 44 Dibutylchlorendate ISTD							
1	8.181	8.181	0.000	50279423H	0.1000	0.1000	
2	7.948	7.948	0.000	78645250H	0.1000	0.1000	
37 Endrin ketone							
1	8.242	8.242	0.000	14591901H	0.0250	0.0195	
2	8.432	8.432	0.000	20340905H	0.0250	0.0206	
						RPD = 5.48	
$ 39 DCB Decachlorobiphenyl (Surr)							
1	9.962	9.962	0.000	6653506H	0.0200	0.0181	
2	9.875	9.872	0.003	10828673H	0.0200	0.0197	
						RPD = 8.28	

Reagents:

GCPESTISSPK2_00004 Amount Added: 0.02 Units: mL Run Reagent

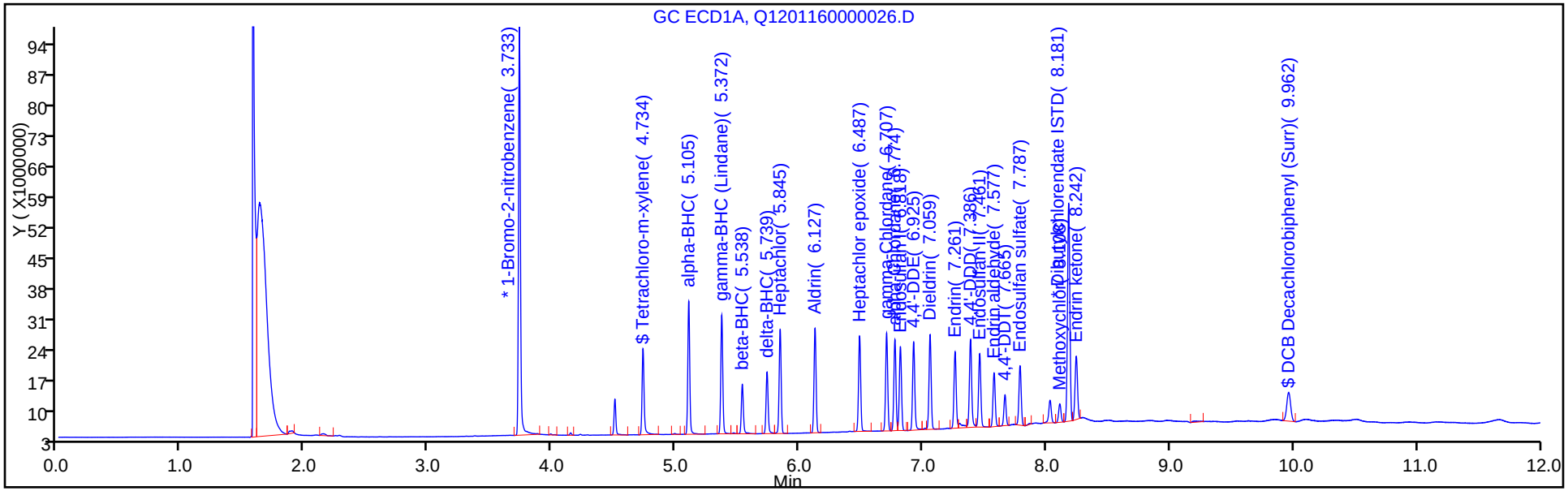
Report Date: 02-Dec-2016 07:31:54 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

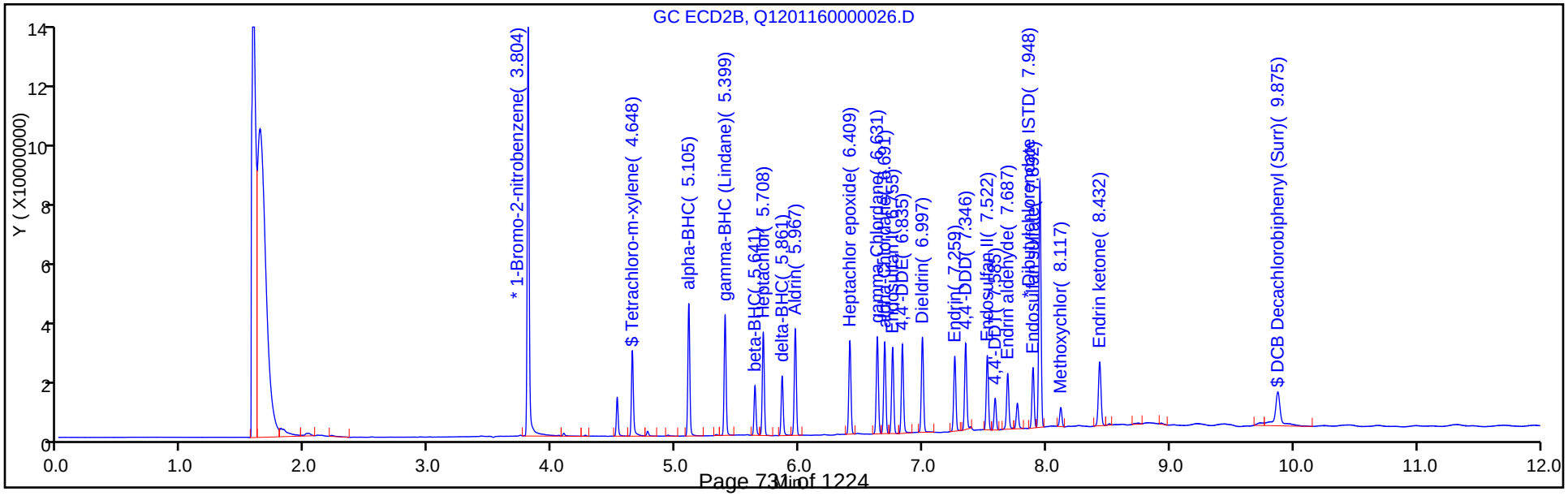
Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000026.D

Injection Date:	01-Dec-2016 16:19:13	Instrument ID:	CHGC15	Operator ID:	402331
Lims ID:	LCS 180-195769/2-A			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	IS PEST_CHGC15	Limit Group:	GCS 8081B ICAL with IS		

Column: MR-1 (0.53 mm)



Column: MR-2 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\Q1201160000026.D
Lims ID: LCS 180-195769/2-A
Client ID:
Sample Type: LCS
Inject. Date: 01-Dec-2016 16:19:13 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014572-026
Operator ID: 402331 Instrument ID: CHGC15

Method: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161201-14572.b\IS PEST_CHGC15.m
Limit Group: GCS 8081B ICAL with IS
Last Update: 02-Dec-2016 07:31:16 Calib Date: 06-Oct-2016 14:25:55
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHGC15\20161006-13765.b\Q100616A0000012.D

Column 1 : MR-1 (0.53 mm) Det: GC ECD1A
Column 2 : MR-2 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK011

First Level Reviewer: eppinged Date: 02-Dec-2016 07:31:16

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.0166	83.12
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.0181	90.68

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Tetrachloro-m-xylene	0.0200	0.0149	74.30
$ 39 DCB Decachlorobiphenyl (Surr)	0.0200	0.0197	98.52

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CHGC15 Start Date: 09/24/2016 09:01

Analysis Batch Number: 189037 End Date: 09/24/2016 20:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
PEM 180-189037/1		09/24/2016 09:01	1		MR-1 0.53(mm)
PEM 180-189037/1		09/24/2016 09:01	1		MR-2 0.53(mm)
IC 180-189037/2		09/24/2016 09:17	1	Q0924160000002.D	MR-1 0.53(mm)
IC 180-189037/2		09/24/2016 09:17	1	Q0924160000002.D	MR-2 0.53(mm)
IC 180-189037/3		09/24/2016 09:32	1	Q0924160000003.D	MR-1 0.53(mm)
IC 180-189037/3		09/24/2016 09:32	1	Q0924160000003.D	MR-2 0.53(mm)
IC 180-189037/4		09/24/2016 09:47	1	Q0924160000004.D	MR-1 0.53(mm)
IC 180-189037/4		09/24/2016 09:47	1	Q0924160000004.D	MR-2 0.53(mm)
IC 180-189037/5		09/24/2016 10:03	1	Q0924160000005.D	MR-1 0.53(mm)
IC 180-189037/5		09/24/2016 10:03	1	Q0924160000005.D	MR-2 0.53(mm)
IC 180-189037/6		09/24/2016 10:18	1	Q0924160000006.D	MR-1 0.53(mm)
IC 180-189037/6		09/24/2016 10:18	1	Q0924160000006.D	MR-2 0.53(mm)
IC 180-189037/7		09/24/2016 10:34	1		MR-1 0.53(mm)
IC 180-189037/7		09/24/2016 10:34	1		MR-2 0.53(mm)
IC 180-189037/8		09/24/2016 10:49	1		MR-1 0.53(mm)
IC 180-189037/8		09/24/2016 10:49	1		MR-2 0.53(mm)
IC 180-189037/9		09/24/2016 11:05	1		MR-1 0.53(mm)
IC 180-189037/9		09/24/2016 11:05	1		MR-2 0.53(mm)
IC 180-189037/10		09/24/2016 11:20	1		MR-1 0.53(mm)
IC 180-189037/10		09/24/2016 11:20	1		MR-2 0.53(mm)
IC 180-189037/11		09/24/2016 11:36	1		MR-1 0.53(mm)
IC 180-189037/11		09/24/2016 11:36	1		MR-2 0.53(mm)
IC 180-189037/12		09/24/2016 11:51	1		MR-1 0.53(mm)
IC 180-189037/12		09/24/2016 11:51	1		MR-2 0.53(mm)
IC 180-189037/13		09/24/2016 12:07	1		MR-1 0.53(mm)
IC 180-189037/13		09/24/2016 12:07	1		MR-2 0.53(mm)
IC 180-189037/14		09/24/2016 12:22	1		MR-1 0.53(mm)
IC 180-189037/14		09/24/2016 12:22	1		MR-2 0.53(mm)
IC 180-189037/15		09/24/2016 12:38	1		MR-1 0.53(mm)
IC 180-189037/15		09/24/2016 12:38	1		MR-2 0.53(mm)
IC 180-189037/16		09/24/2016 12:53	1		MR-1 0.53(mm)
IC 180-189037/16		09/24/2016 12:53	1		MR-2 0.53(mm)
IC 180-189037/17		09/24/2016 13:09	1		MR-1 0.53(mm)
IC 180-189037/17		09/24/2016 13:09	1		MR-2 0.53(mm)
IC 180-189037/18		09/24/2016 13:24	1		MR-1 0.53(mm)
IC 180-189037/18		09/24/2016 13:24	1		MR-2 0.53(mm)
IC 180-189037/19		09/24/2016 13:40	1		MR-1 0.53(mm)
IC 180-189037/19		09/24/2016 13:40	1		MR-2 0.53(mm)
IC 180-189037/20		09/24/2016 13:55	1		MR-1 0.53(mm)
IC 180-189037/20		09/24/2016 13:55	1		MR-2 0.53(mm)
IC 180-189037/21		09/24/2016 14:11	1		MR-1 0.53(mm)

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CHGC15 Start Date: 09/24/2016 09:01

Analysis Batch Number: 189037 End Date: 09/24/2016 20:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 180-189037/21		09/24/2016 14:11	1		MR-2 0.53(mm)
IC 180-189037/22		09/24/2016 14:26	1		MR-1 0.53(mm)
IC 180-189037/22		09/24/2016 14:26	1		MR-2 0.53(mm)
IC 180-189037/23		09/24/2016 14:41	1		MR-1 0.53(mm)
IC 180-189037/23		09/24/2016 14:41	1		MR-2 0.53(mm)
IC 180-189037/24		09/24/2016 14:57	1		MR-1 0.53(mm)
IC 180-189037/24		09/24/2016 14:57	1		MR-2 0.53(mm)
IC 180-189037/25		09/24/2016 15:12	1		MR-1 0.53(mm)
IC 180-189037/25		09/24/2016 15:12	1		MR-2 0.53(mm)
ICIS 180-189037/26		09/24/2016 15:28	1		MR-1 0.53(mm)
ICIS 180-189037/26		09/24/2016 15:28	1		MR-2 0.53(mm)
IC 180-189037/27		09/24/2016 15:43	1		MR-1 0.53(mm)
IC 180-189037/27		09/24/2016 15:43	1		MR-2 0.53(mm)
IC 180-189037/28		09/24/2016 15:59	1		MR-1 0.53(mm)
IC 180-189037/28		09/24/2016 15:59	1		MR-2 0.53(mm)
IC 180-189037/29		09/24/2016 16:14	1		MR-1 0.53(mm)
IC 180-189037/29		09/24/2016 16:14	1		MR-2 0.53(mm)
ICV 180-189037/30		09/24/2016 16:30	1		MR-1 0.53(mm)
ICV 180-189037/30		09/24/2016 16:30	1		MR-2 0.53(mm)
ICV 180-189037/31		09/24/2016 16:45	1		MR-1 0.53(mm)
ICV 180-189037/31		09/24/2016 16:45	1		MR-2 0.53(mm)
ICV 180-189037/32		09/24/2016 17:01	1		MR-1 0.53(mm)
ICV 180-189037/32		09/24/2016 17:01	1		MR-2 0.53(mm)
ICV 180-189037/33		09/24/2016 17:16	1		MR-1 0.53(mm)
ICV 180-189037/33		09/24/2016 17:16	1		MR-2 0.53(mm)
ICV 180-189037/34		09/24/2016 17:32	1		MR-1 0.53(mm)
ICV 180-189037/34		09/24/2016 17:32	1		MR-2 0.53(mm)
PEM 180-189037/35		09/24/2016 17:47	1		MR-1 0.53(mm)
PEM 180-189037/35		09/24/2016 17:47	1		MR-2 0.53(mm)
ZZZZZ		09/24/2016 19:20	1		MR-1 0.53(mm)
ZZZZZ		09/24/2016 19:20	1		MR-2 0.53(mm)
ZZZZZ		09/24/2016 19:36	1		MR-1 0.53(mm)
ZZZZZ		09/24/2016 19:36	1		MR-2 0.53(mm)
ZZZZZ		09/24/2016 19:51	1		MR-1 0.53(mm)
ZZZZZ		09/24/2016 19:51	1		MR-2 0.53(mm)
ZZZZZ		09/24/2016 20:07	1		MR-1 0.53(mm)
ZZZZZ		09/24/2016 20:07	1		MR-2 0.53(mm)
ZZZZZ		09/24/2016 20:22	1		MR-1 0.53(mm)
ZZZZZ		09/24/2016 20:22	1		MR-2 0.53(mm)
ZZZZZ		09/24/2016 20:38	1		MR-1 0.53(mm)
ZZZZZ		09/24/2016 20:38	1		MR-2 0.53(mm)

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CHGC15 Start Date: 10/06/2016 11:35

Analysis Batch Number: 190365 End Date: 10/06/2016 20:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
PEM 180-190365/1		10/06/2016 11:35	1		MR-1 0.53(mm)
PEM 180-190365/1		10/06/2016 11:35	1		MR-2 0.53(mm)
IC 180-190365/2		10/06/2016 11:51	1		MR-1 0.53(mm)
IC 180-190365/2		10/06/2016 11:51	1		MR-2 0.53(mm)
IC 180-190365/3		10/06/2016 12:06	1		MR-1 0.53(mm)
IC 180-190365/3		10/06/2016 12:06	1		MR-2 0.53(mm)
IC 180-190365/4		10/06/2016 12:22	1		MR-1 0.53(mm)
IC 180-190365/4		10/06/2016 12:22	1		MR-2 0.53(mm)
IC 180-190365/5		10/06/2016 12:37	1		MR-1 0.53(mm)
IC 180-190365/5		10/06/2016 12:37	1		MR-2 0.53(mm)
IC 180-190365/6		10/06/2016 12:53	1		MR-1 0.53(mm)
IC 180-190365/6		10/06/2016 12:53	1		MR-2 0.53(mm)
IC 180-190365/7		10/06/2016 13:08	1	Q100616A0000007.D	MR-1 0.53(mm)
IC 180-190365/7		10/06/2016 13:08	1	Q100616A0000007.D	MR-2 0.53(mm)
IC 180-190365/8		10/06/2016 13:24	1	Q100616A0000008.D	MR-1 0.53(mm)
IC 180-190365/8		10/06/2016 13:24	1	Q100616A0000008.D	MR-2 0.53(mm)
ICIS 180-190365/9		10/06/2016 13:39	1	Q100616A0000009.D	MR-1 0.53(mm)
ICIS 180-190365/9		10/06/2016 13:39	1	Q100616A0000009.D	MR-2 0.53(mm)
IC 180-190365/10		10/06/2016 13:55	1	Q100616A0000010.D	MR-1 0.53(mm)
IC 180-190365/10		10/06/2016 13:55	1	Q100616A0000010.D	MR-2 0.53(mm)
IC 180-190365/11		10/06/2016 14:10	1	Q100616A0000011.D	MR-1 0.53(mm)
IC 180-190365/11		10/06/2016 14:10	1	Q100616A0000011.D	MR-2 0.53(mm)
IC 180-190365/12		10/06/2016 14:25	1	Q100616A0000012.D	MR-1 0.53(mm)
IC 180-190365/12		10/06/2016 14:25	1	Q100616A0000012.D	MR-2 0.53(mm)
ICV 180-190365/13		10/06/2016 14:41	1		MR-1 0.53(mm)
ICV 180-190365/13		10/06/2016 14:41	1		MR-2 0.53(mm)
ICV 180-190365/14		10/06/2016 14:56	1		MR-1 0.53(mm)
ICV 180-190365/14		10/06/2016 14:56	1		MR-2 0.53(mm)
CCV 180-190365/15		10/06/2016 15:12	1		MR-1 0.53(mm)
CCV 180-190365/15		10/06/2016 15:12	1		MR-2 0.53(mm)
ZZZZZ		10/06/2016 15:27	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 15:27	1		MR-2 0.53(mm)
ZZZZZ		10/06/2016 15:43	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 15:43	1		MR-2 0.53(mm)
ZZZZZ		10/06/2016 15:58	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 15:58	1		MR-2 0.53(mm)
ZZZZZ		10/06/2016 16:14	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 16:14	1		MR-2 0.53(mm)
ZZZZZ		10/06/2016 16:29	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 16:29	1		MR-2 0.53(mm)

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CHGC15 Start Date: 10/06/2016 11:35

Analysis Batch Number: 190365 End Date: 10/06/2016 20:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		10/06/2016 16:45	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 16:45	1		MR-2 0.53(mm)
ZZZZZ		10/06/2016 17:00	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 17:00	1		MR-2 0.53(mm)
ZZZZZ		10/06/2016 17:16	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 17:16	1		MR-2 0.53(mm)
ZZZZZ		10/06/2016 17:31	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 17:31	1		MR-2 0.53(mm)
ZZZZZ		10/06/2016 17:47	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 17:47	1		MR-2 0.53(mm)
ZZZZZ		10/06/2016 18:02	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 18:02	1		MR-2 0.53(mm)
ZZZZZ		10/06/2016 18:18	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 18:18	1		MR-2 0.53(mm)
ZZZZZ		10/06/2016 18:33	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 18:33	1		MR-2 0.53(mm)
ZZZZZ		10/06/2016 18:49	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 18:49	1		MR-2 0.53(mm)
ZZZZZ		10/06/2016 19:04	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 19:04	1		MR-2 0.53(mm)
ZZZZZ		10/06/2016 19:19	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 19:19	1		MR-2 0.53(mm)
ZZZZZ		10/06/2016 19:35	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 19:35	1		MR-2 0.53(mm)
ZZZZZ		10/06/2016 19:50	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 19:50	1		MR-2 0.53(mm)
ZZZZZ		10/06/2016 20:06	1		MR-1 0.53(mm)
ZZZZZ		10/06/2016 20:06	1		MR-2 0.53(mm)

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CHGC15 Start Date: 12/01/2016 09:53

Analysis Batch Number: 195949 End Date: 12/01/2016 22:14

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
PEM 180-195949/1		12/01/2016 09:53	1	Q1201160000001.D	MR-1 0.53(mm)
PEM 180-195949/1		12/01/2016 09:53	1	Q1201160000001.D	MR-2 0.53(mm)
CCV 180-195949/2		12/01/2016 10:08	1	Q1201160000002.D	MR-1 0.53(mm)
CCV 180-195949/2		12/01/2016 10:08	1	Q1201160000002.D	MR-2 0.53(mm)
CCV 180-195949/3		12/01/2016 10:23	1	Q1201160000003.D	MR-1 0.53(mm)
CCV 180-195949/3		12/01/2016 10:23	1	Q1201160000003.D	MR-2 0.53(mm)
CCV 180-195949/4		12/01/2016 10:39	1	Q1201160000004.D	MR-1 0.53(mm)
CCV 180-195949/4		12/01/2016 10:39	1	Q1201160000004.D	MR-2 0.53(mm)
CCV 180-195949/5		12/01/2016 10:54	1	Q1201160000005.D	MR-1 0.53(mm)
CCV 180-195949/5		12/01/2016 10:54	1	Q1201160000005.D	MR-2 0.53(mm)
CCVIS 180-195949/6		12/01/2016 11:10	1	Q1201160000006.D	MR-1 0.53(mm)
CCVIS 180-195949/6		12/01/2016 11:10	1	Q1201160000006.D	MR-2 0.53(mm)
ZZZZZ		12/01/2016 11:25	20		MR-1 0.53(mm)
ZZZZZ		12/01/2016 11:25	20		MR-2 0.53(mm)
ZZZZZ		12/01/2016 11:41	20		MR-1 0.53(mm)
ZZZZZ		12/01/2016 11:41	20		MR-2 0.53(mm)
MB 180-195769/1-A		12/01/2016 13:44	1	Q1201160000016.D	MR-1 0.53(mm)
MB 180-195769/1-A		12/01/2016 13:44	1	Q1201160000016.D	MR-2 0.53(mm)
ZZZZZ		12/01/2016 14:00	20		MR-1 0.53(mm)
ZZZZZ		12/01/2016 14:00	20		MR-2 0.53(mm)
ZZZZZ		12/01/2016 14:15	20		MR-1 0.53(mm)
ZZZZZ		12/01/2016 14:15	20		MR-2 0.53(mm)
ZZZZZ		12/01/2016 14:31	20		MR-1 0.53(mm)
ZZZZZ		12/01/2016 14:31	20		MR-2 0.53(mm)
ZZZZZ		12/01/2016 14:46	5		MR-1 0.53(mm)
ZZZZZ		12/01/2016 14:46	5		MR-2 0.53(mm)
ZZZZZ		12/01/2016 15:01	5		MR-1 0.53(mm)
ZZZZZ		12/01/2016 15:01	5		MR-2 0.53(mm)
180-61122-1		12/01/2016 15:17	5	Q1201160000022.D	MR-1 0.53(mm)
180-61122-1		12/01/2016 15:17	5	Q1201160000022.D	MR-2 0.53(mm)
180-61122-2		12/01/2016 15:32	5	Q1201160000023.D	MR-1 0.53(mm)
180-61122-2		12/01/2016 15:32	5	Q1201160000023.D	MR-2 0.53(mm)
180-61122-3		12/01/2016 15:48	5	Q1201160000024.D	MR-1 0.53(mm)
180-61122-3		12/01/2016 15:48	5	Q1201160000024.D	MR-2 0.53(mm)
180-61122-4		12/01/2016 16:03	5	Q1201160000025.D	MR-1 0.53(mm)
180-61122-4		12/01/2016 16:03	5	Q1201160000025.D	MR-2 0.53(mm)

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CHGC15 Start Date: 12/01/2016 09:53

Analysis Batch Number: 195949 End Date: 12/01/2016 22:14

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
LCS 180-195769/2-A		12/01/2016 16:19	1	Q1201160000026.D	MR-1 0.53(mm)
LCS 180-195769/2-A		12/01/2016 16:19	1	Q1201160000026.D	MR-2 0.53(mm)
PEM 180-195949/27		12/01/2016 16:34	1		MR-1 0.53(mm)
PEM 180-195949/27		12/01/2016 16:34	1		MR-2 0.53(mm)
CCV 180-195949/28		12/01/2016 16:50	1		MR-1 0.53(mm)
CCV 180-195949/28		12/01/2016 16:50	1		MR-2 0.53(mm)
CCV 180-195949/29		12/01/2016 17:05	1		MR-1 0.53(mm)
CCV 180-195949/29		12/01/2016 17:05	1		MR-2 0.53(mm)
CCVIS 180-195949/30		12/01/2016 17:21	1		MR-1 0.53(mm)
CCVIS 180-195949/30		12/01/2016 17:21	1		MR-2 0.53(mm)
ZZZZZ		12/01/2016 17:36	1		MR-1 0.53(mm)
ZZZZZ		12/01/2016 17:36	1		MR-2 0.53(mm)
ZZZZZ		12/01/2016 17:51	25		MR-1 0.53(mm)
ZZZZZ		12/01/2016 17:51	25		MR-2 0.53(mm)
ZZZZZ		12/01/2016 18:07	25		MR-1 0.53(mm)
ZZZZZ		12/01/2016 18:07	25		MR-2 0.53(mm)
ZZZZZ		12/01/2016 18:22	25		MR-1 0.53(mm)
ZZZZZ		12/01/2016 18:22	25		MR-2 0.53(mm)
ZZZZZ		12/01/2016 18:38	25		MR-1 0.53(mm)
ZZZZZ		12/01/2016 18:38	25		MR-2 0.53(mm)
ZZZZZ		12/01/2016 18:53	25		MR-1 0.53(mm)
ZZZZZ		12/01/2016 18:53	25		MR-2 0.53(mm)
ZZZZZ		12/01/2016 19:09	25		MR-1 0.53(mm)
ZZZZZ		12/01/2016 19:09	25		MR-2 0.53(mm)
ZZZZZ		12/01/2016 19:24	1		MR-1 0.53(mm)
ZZZZZ		12/01/2016 19:24	1		MR-2 0.53(mm)
ZZZZZ		12/01/2016 19:39	5		MR-1 0.53(mm)
ZZZZZ		12/01/2016 19:39	5		MR-2 0.53(mm)
ZZZZZ		12/01/2016 19:55	1		MR-1 0.53(mm)
ZZZZZ		12/01/2016 19:55	1		MR-2 0.53(mm)
ZZZZZ		12/01/2016 20:10	1		MR-1 0.53(mm)
ZZZZZ		12/01/2016 20:10	1		MR-2 0.53(mm)
ZZZZZ		12/01/2016 20:26	1		MR-1 0.53(mm)
ZZZZZ		12/01/2016 20:26	1		MR-2 0.53(mm)
ZZZZZ		12/01/2016 20:41	1		MR-1 0.53(mm)
ZZZZZ		12/01/2016 20:41	1		MR-2 0.53(mm)
ZZZZZ		12/01/2016 20:57	25		MR-1 0.53(mm)
ZZZZZ		12/01/2016 20:57	25		MR-2 0.53(mm)
ZZZZZ		12/01/2016 21:12	1		MR-1 0.53(mm)
ZZZZZ		12/01/2016 21:12	1		MR-2 0.53(mm)
ZZZZZ		12/01/2016 21:28	1		MR-1 0.53(mm)
ZZZZZ		12/01/2016 21:28	1		MR-2 0.53(mm)
ZZZZZ		12/01/2016 21:43	1		MR-1 0.53(mm)
ZZZZZ		12/01/2016 21:43	1		MR-2 0.53(mm)

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CHGC15 Start Date: 12/01/2016 09:53

Analysis Batch Number: 195949 End Date: 12/01/2016 22:14

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		12/01/2016 21:59	1		MR-1 0.53(mm)
ZZZZZ		12/01/2016 21:59	1		MR-2 0.53(mm)
ZZZZZ		12/01/2016 22:14	1		MR-1 0.53(mm)
ZZZZZ		12/01/2016 22:14	1		MR-2 0.53(mm)

PESTICIDES BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Batch Number: 195769 Batch Start Date: 11/30/16 04:24 Batch Analyst: Geehring, Kevin

Batch Method: 3541 Batch End Date: 11/30/16 09:59

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	InitialAmount	OP/PESTPCBRTS 00006	OPPESTMATRIX 00019		
MB 180-195769/1		3541, 8081B LL		1.0 mL	15.0 g	100 uL			
LCS 180-195769/2		3541, 8081B LL		1.0 mL	15.0 g	100 uL	25 uL		
180-61122-A-1	BGSB22-(0.0-0.5) -161122-S	3541, 8081B LL	T	1.0 mL	15.1 g	100 uL			
180-61122-A-2	BGSB22-(1-2) -161122-S	3541, 8081B LL	T	1.0 mL	15.2 g	100 uL			
180-61122-A-3	BGSB10-(0.0-0.5) -161122-S	3541, 8081B LL	T	1.0 mL	15.0 g	100 uL			
180-61122-A-4	BGSB10-(1-2) -161122-S	3541, 8081B LL	T	1.0 mL	15.0 g	100 uL			

Batch Notes	
Balance ID	T0358722
Batch Comment	sox # 2 - 3 - 4
Concentrator ID	bp
Exchange Solvent ID	2142740
Exchange Solvent Name	Hexane
Magnesium Sulfate ID	2144283
N-evap ID	2
Na2SO4 ID	2119020
Person's name who did the prep	kg kg bp
Solvent	Hexane/acetone
Solvent Lot #	2116480
Uncorrected N-evap Temperature	32 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method 8151A

Herbicides (GC) by Method 8151A

FORM II
HERBICIDES SURROGATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): RTX-50 ID: 0.53(mm) GC Column (2): RTX-1701 ID: 0.53(mm)

Client Sample ID	Lab Sample ID	DCPAA1 #	DCPAA2 #
BGSB22-(0.0-0.5) -161122-S	180-61122-1	46	48
BGSB22-(1-2) -161122-S	180-61122-2	45	48
BGSB10-(0.0-0.5) -161122-S	180-61122-3	41	44
BGSB10-(1-2) -161122-S	180-61122-4	47	50
	MB 180-195524/1-A	43	46
	LCS 180-195524/2-A	99	103

	QC LIMITS
DCPAA = 2,4-Dichlorophenylacetic acid	19-122

Column to be used to flag recovery values

FORM II 8151A

FORM III
HERBICIDES LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 1130160000015.D

Lab ID: LCS 180-195524/2-A Client ID:

COMPOUND	SPIKE ADDED (mg/Kg)	LCS CONCENTRATION (mg/Kg)	LCS % REC	QC LIMITS REC	#
2,4,5-T	0.100	0.1277	128	15-114	*
2,4-D	0.400	0.4161	104	10-103	*
Silvex (2,4,5-TP)	0.100	0.1363	136	27-126	*
Dalapon	0.400	0.3055	76	10-123	
2,4-DB	0.400	0.5835	146	15-123	*
Dicamba	0.200	0.1857	93	24-130	
Dichlorprop	0.400	0.4641	116	30-120	
Dinoseb	0.400	0.6901	173	10-150	*
MCPA	40.0	53.07	133	10-132	*
MCPP	40.0	67.02	168	10-150	*

Column to be used to flag recovery and RPD values

FORM III 8151A

FORM IV
HERBICIDES METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: MB 180-195524/1-A

Matrix: Solid Date Extracted: 11/27/2016 09:29

Lab File ID:(1) 1130160000006.D Lab File ID:(2) 1130160000006.D

Date Analyzed:(1) 11/30/2016 14:50 Date Analyzed:(2) 11/30/2016 14:50

Instrument ID:(1) CGC1 Instrument ID:(2) CGC1

GC Column:(1) RTX-50 ID: 0.53(mm) GC Column:(2) RTX-1701 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
BGSB22-(0.0-0.5) -161122-S	180-61122-1	11/30/2016 15:14	11/30/2016 15:14
BGSB22-(1-2)-161122-S	180-61122-2	11/30/2016 15:38	11/30/2016 15:38
BGSB10-(0.0-0.5) -161122-S	180-61122-3	11/30/2016 16:02	11/30/2016 16:02
BGSB10-(1-2)-161122-S	180-61122-4	11/30/2016 16:25	11/30/2016 16:25
	LCS 180-195524/2-A	11/30/2016 18:25	11/30/2016 18:25

FORM VIII
HERBICIDES ANALYTICAL SEQUENCE

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Sample No.: CCVRT 180-195866/1 Date Analyzed: 11/30/2016 14:26

Instrument ID: CGC1 GC Column: RTX-50 ID: 0.53(mm)

Lab File ID (Standard): 1130160000005.D Heated Purge: (Y/N) N

Calibration ID: 32961

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DCPAA RT #		
CONTINUING CALIBRATION SURROGATE				8.41		
UPPER LIMIT				8.44		
LOWER LIMIT				8.38		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 180-195866/1		11/30/2016 14:26	1130160000005.D	8.41		
MB 180-195524/1-A		11/30/2016 14:50	1130160000006.D	8.41		
180-61122-1	BGSB22-(0.0-0.5) -161122-S	11/30/2016 15:14	1130160000007.D	8.41		
180-61122-2	BGSB22-(1-2)-161122-S	11/30/2016 15:38	1130160000008.D	8.41		
180-61122-3	BGSB10-(0.0-0.5) -161122-S	11/30/2016 16:02	1130160000009.D	8.41		
180-61122-4	BGSB10-(1-2)-161122-S	11/30/2016 16:25	1130160000010.D	8.41		
LCS 180-195524/2-A		11/30/2016 18:25	1130160000015.D	8.41		
CCV 180-195866/12		11/30/2016 18:49	1130160000016.D	8.41		
180-61163-C-11-A MS		11/30/2016 21:35	1130160000023.D	8.41		
180-61163-C-11-B MSD		11/30/2016 21:59	1130160000024.D	8.41		
CCV 180-195866/23		11/30/2016 23:10	1130160000027.D	8.41		

DCPAA = 2,4-Dichlorophenylacetic acid

DCPAA RT Limit = ± 0.03 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8151A

FORM VIII
HERBICIDES ANALYTICAL SEQUENCE

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Sample No.: CCVRT 180-195866/1 Date Analyzed: 11/30/2016 14:26

Instrument ID: CGC1 GC Column: RTX-1701 ID: 0.53(mm)

Lab File ID (Standard): 1130160000005.D Heated Purge: (Y/N) N

Calibration ID: 32962

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DCPAA RT #		
CONTINUING CALIBRATION SURROGATE				8.10		
UPPER LIMIT				8.13		
LOWER LIMIT				8.07		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 180-195866/1		11/30/2016 14:26	1130160000005.D	8.10		
MB 180-195524/1-A		11/30/2016 14:50	1130160000006.D	8.10		
180-61122-1	BGSB22-(0.0-0.5) -161122-S	11/30/2016 15:14	1130160000007.D	8.10		
180-61122-2	BGSB22-(1-2)-161122-S	11/30/2016 15:38	1130160000008.D	8.10		
180-61122-3	BGSB10-(0.0-0.5) -161122-S	11/30/2016 16:02	1130160000009.D	8.10		
180-61122-4	BGSB10-(1-2)-161122-S	11/30/2016 16:25	1130160000010.D	8.10		
LCS 180-195524/2-A		11/30/2016 18:25	1130160000015.D	8.10		
CCV 180-195866/12		11/30/2016 18:49	1130160000016.D	8.10		
180-61163-C-11-A MS		11/30/2016 21:35	1130160000023.D	8.10		
180-61163-C-11-B MSD		11/30/2016 21:59	1130160000024.D	8.10		
CCV 180-195866/23		11/30/2016 23:10	1130160000027.D	8.10		

DCPAA = 2,4-Dichlorophenylacetic acid

DCPAA RT Limit = ± 0.03 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8151A

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-195524/2-A

Instrument ID (1): CGC1 Instrument ID (2): CGC1

Date Analyzed (1): 11/30/2016 18:25 Date Analyzed (2): 11/30/2016 18:25

GC Column (1): RTX-50 ID: 0.53(mm) GC Column (2): RTX-1701 ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Dalapon	1		2.38	2.34	2.40	0.3055		11.1
	2		2.46	2.43	2.49	0.3412		
MCPP	1		8.62	8.58	8.64	67.02		25.9
	2		8.52	8.49	8.55	51.66		
Dicamba	1		8.71	8.68	8.74	0.1857		10.5
	2		8.36	8.34	8.40	0.2064		
MCPA	1		9.04	9.01	9.07	53.07		23.3
	2		8.82	8.79	8.85	41.98		
Dichlorprop	1		9.32	9.29	9.35	0.4641		8.5
	2		9.19	9.16	9.22	0.5053		
2,4-D	1		9.82	9.78	9.84	0.4161		21.2
	2		9.58	9.55	9.61	0.5148		
Silvex (2,4,5-TP)	1		10.50	10.47	10.53	0.1363		3.7
	2		10.35	10.32	10.38	0.1414		
2,4,5-T	1		11.05	11.02	11.08	0.1277		11.1
	2		10.80	10.77	10.83	0.1428		
Dinoseb	1		11.30	11.25	11.35	0.6901		19.0
	2		11.85	11.82	11.88	0.8346		
2,4-DB	1		11.43	11.40	11.46	0.5835		2.4
	2		11.23	11.20	11.26	0.5976		

FORM I
HERBICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(0.0-0.5)-161122-S | Lab Sample ID: 180-61122-1

Matrix: Solid | Lab File ID: 1130160000007.D

Analysis Method: 8151A | Date Collected: 11/22/2016 09:35

Extraction Method: 8151A | Date Extracted: 11/27/2016 09:29

Sample wt/vol: 50.0(g) | Date Analyzed: 11/30/2016 15:14

Con. Extract Vol.: 10.0(mL) | Dilution Factor: 20

Injection Volume: 1(uL) | GC Column: RTX-50 ID: 0.53(mm)

% Moisture: 8.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195866 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
93-76-5	2,4,5-T	0.00273	U *	0.0218	0.00273
94-75-7	2,4-D	0.00595	U *	0.0870	0.00595
93-72-1	Silvex (2,4,5-TP)	0.00229	U *	0.0218	0.00229
75-99-0	Dalapon	0.00772	U	0.0979	0.00772
94-82-6	2,4-DB	0.00666	U *	0.0870	0.00666
1918-00-9	Dicamba	0.00521	U	0.0435	0.00521
120-36-5	Dichlorprop	0.0103	U	0.0870	0.0103
88-85-7	Dinoseb	0.00495	U *	0.0131	0.00495
94-74-6	MCPA	1.79	U *	8.70	1.79
93-65-2	MCPP	1.75	U *	8.70	1.75

CAS NO.	SURROGATE	%REC	Q	LIMITS
19719-28-9	2,4-Dichlorophenylacetic acid	46		19-122

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000007.D
Lims ID: 180-61122-A-1-D
Client ID: BGSB22-(0.0-0.5)-161122-S
Sample Type: Client
Inject. Date: 30-Nov-2016 15:14:18 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 20.0000
Sample Info: 180-0014557-003
Operator ID: Instrument ID: CGC1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:36:11 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:24:05

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
1 Dalapon						
1		2.373			ND	
2		2.455				
$ 2 2,4-Dichlorophenylacetic acid						
1	8.407	8.406	0.001	4126955	H 0.0228	
2	8.103	8.101	0.002	5271711	H 0.0238	
					RPD = 4.26	
3 MCPP						
1		8.614			ND	
2		8.520				
4 Dicamba						
1		8.707			ND	
2		8.365				
5 MCPA						
1		9.039			ND	
2		8.824				
6 Dichlorprop						
1		9.321			ND	
2		9.187				
7 2,4-D						
1		9.814			ND	
2		9.577				
9 Silvex (2,4,5-TP)						
1		10.496			ND	
2		10.351				
10 2,4,5-T						
1		11.049			ND	
2		10.797				

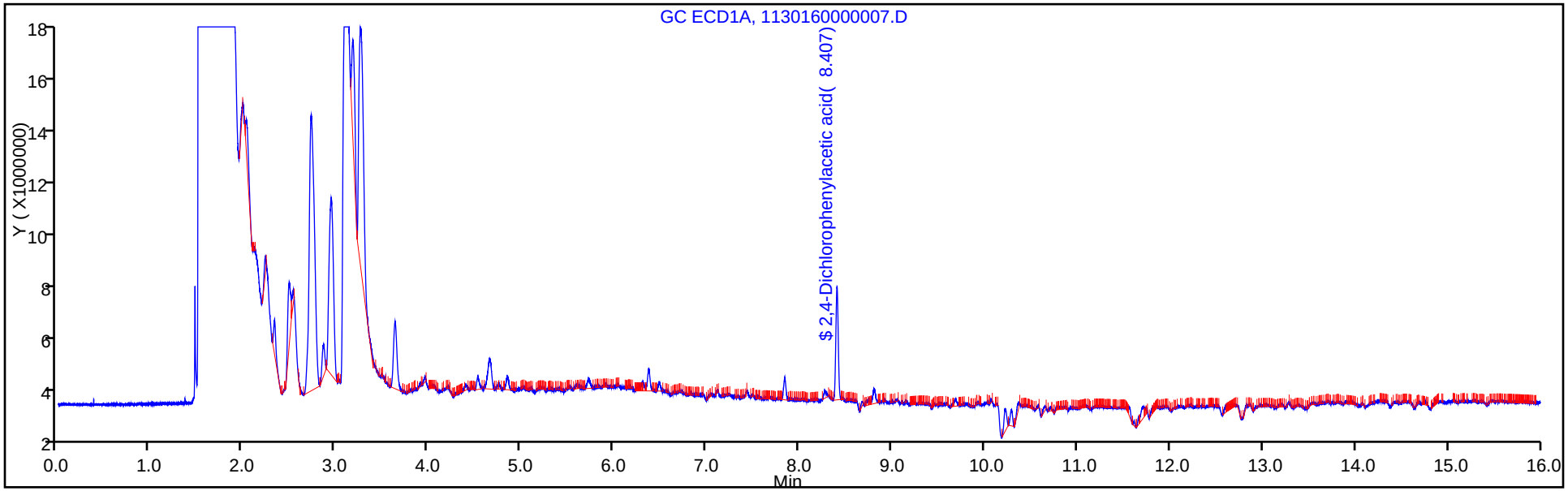
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
11 Dinoseb						
1		11.302			ND	
2		11.852				
12 2,4-DB						
1		11.429			ND	
2		11.228				

Report Date: 01-Dec-2016 10:36:40 Chrom Revision: 2.2 14-Nov-2016 08:15:18

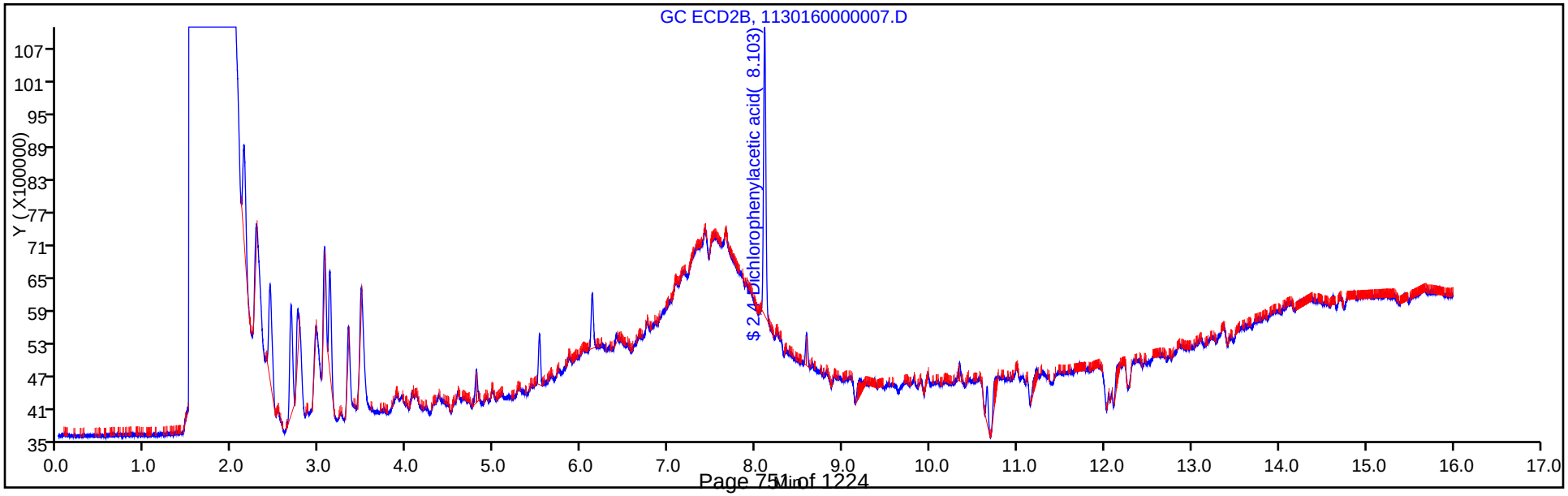
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000007.D				
Injection Date:	30-Nov-2016 15:14:18	Instrument ID:	CGC1	Operator ID:	
Lims ID:	180-61122-A-1-D	Lab Sample ID:	180-61122-1	Worklist Smp#:	3
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	3
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000007.D				
Lims ID:	180-61122-A-1-D				
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Sample Type:	Client				
Inject. Date:	30-Nov-2016 15:14:18	ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	20.0000		
Sample Info:	180-0014557-003				
Operator ID:		Instrument ID:	CGC1		
Method:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m				
Limit Group:	GCS 8151A ICAL				
Last Update:	01-Dec-2016 10:36:11	Calib Date:	24-Sep-2016 13:40:10		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D				
Column 1 :	RTX-50 (0.53 mm)		Det: GC ECD1A		
Column 2 :	RTX-1701 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK010				
First Level Reviewer: oravecj		Date:	01-Dec-2016 10:24:05		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0228	45.67

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0238	47.66

FORM I
HERBICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(0.0-0.5)-161122-S Lab Sample ID: 180-61122-1

Matrix: Solid Lab File ID: 1130160000007.D

Analysis Method: 8151A Date Collected: 11/22/2016 09:35

Extraction Method: 8151A Date Extracted: 11/27/2016 09:29

Sample wt/vol: 50.0(g) Date Analyzed: 11/30/2016 15:14

Con. Extract Vol.: 10.0(mL) Dilution Factor: 20

Injection Volume: 1(uL) GC Column: RTX-1701 ID: 0.53(mm)

% Moisture: 8.1 GPC Cleanup:(Y/N) N

Analysis Batch No.: 195866 Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
19719-28-9	2,4-Dichlorophenylacetic acid	48		19-122

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000007.D
Lims ID: 180-61122-A-1-D
Client ID: BGSB22-(0.0-0.5)-161122-S
Sample Type: Client
Inject. Date: 30-Nov-2016 15:14:18 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 20.0000
Sample Info: 180-0014557-003
Operator ID: Instrument ID: CGC1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:36:11 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:24:05

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
1 Dalapon						
1		2.373			ND	
2		2.455				
$ 2 2,4-Dichlorophenylacetic acid						
1	8.407	8.406	0.001	4126955	H 0.0228	
2	8.103	8.101	0.002	5271711	H 0.0238	
					RPD = 4.26	
3 MCPP						
1		8.614			ND	
2		8.520				
4 Dicamba						
1		8.707			ND	
2		8.365				
5 MCPA						
1		9.039			ND	
2		8.824				
6 Dichlorprop						
1		9.321			ND	
2		9.187				
7 2,4-D						
1		9.814			ND	
2		9.577				
9 Silvex (2,4,5-TP)						
1		10.496			ND	
2		10.351				
10 2,4,5-T						
1		11.049			ND	
2		10.797				

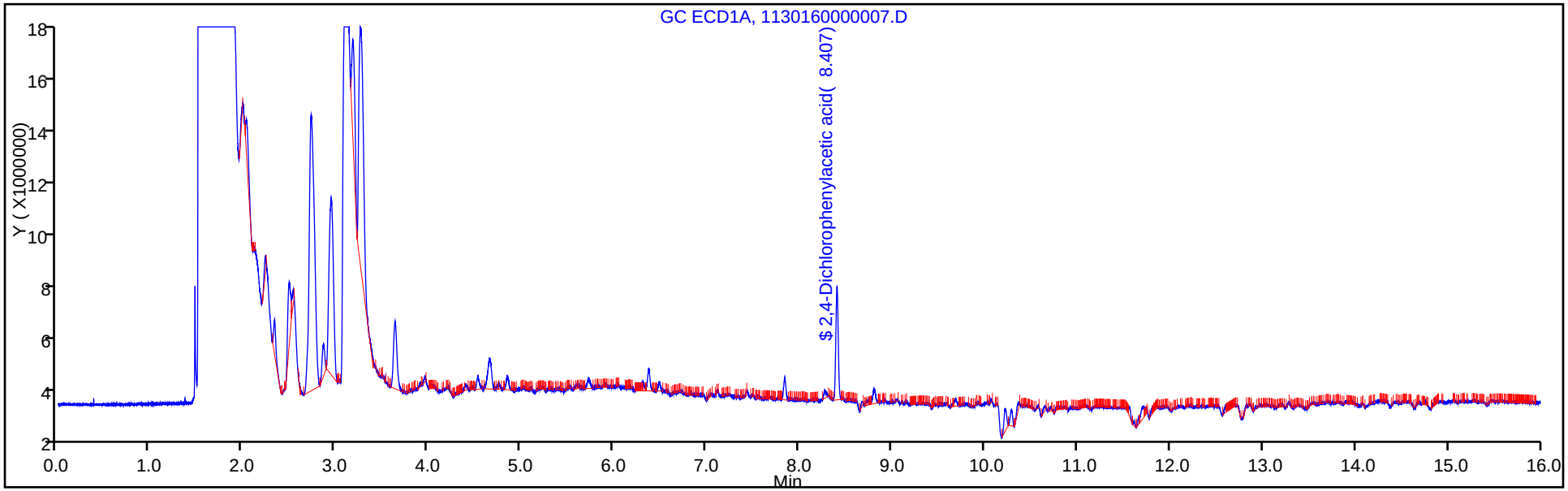
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
11 Dinoseb						
1		11.302			ND	
2		11.852				
12 2,4-DB						
1		11.429			ND	
2		11.228				

Report Date: 01-Dec-2016 10:36:41 Chrom Revision: 2.2 14-Nov-2016 08:15:18

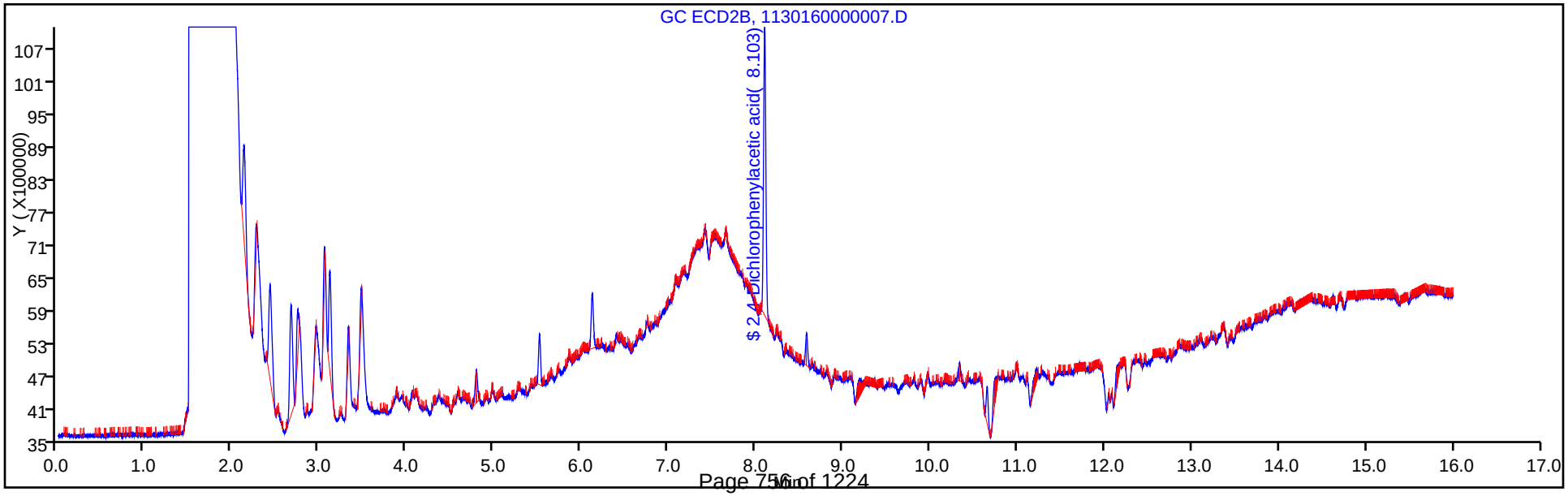
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000007.D				
Injection Date:	30-Nov-2016 15:14:18	Instrument ID:	CGC1	Operator ID:	
Lims ID:	180-61122-A-1-D	Lab Sample ID:	180-61122-1	Worklist Smp#:	3
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	3
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000007.D				
Lims ID:	180-61122-A-1-D				
Client ID:	BGSB22-(0.0-0.5)-161122-S				
Sample Type:	Client				
Inject. Date:	30-Nov-2016 15:14:18	ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	20.0000		
Sample Info:	180-0014557-003				
Operator ID:		Instrument ID:	CGC1		
Method:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m				
Limit Group:	GCS 8151A ICAL				
Last Update:	01-Dec-2016 10:36:11	Calib Date:	24-Sep-2016 13:40:10		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D				
Column 1 :	RTX-50 (0.53 mm)		Det: GC ECD1A		
Column 2 :	RTX-1701 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK010				
First Level Reviewer: oravecj		Date:	01-Dec-2016 10:24:05		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0228	45.67

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0238	47.66

FORM I
HERBICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(1-2)-161122-S | Lab Sample ID: 180-61122-2

Matrix: Solid | Lab File ID: 1130160000008.D

Analysis Method: 8151A | Date Collected: 11/22/2016 09:40

Extraction Method: 8151A | Date Extracted: 11/27/2016 09:29

Sample wt/vol: 50.1(g) | Date Analyzed: 11/30/2016 15:38

Con. Extract Vol.: 10.0(mL) | Dilution Factor: 20

Injection Volume: 1(uL) | GC Column: RTX-50 ID: 0.53(mm)

% Moisture: 19.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195866 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
93-76-5	2,4,5-T	0.00312	U *	0.0249	0.00312
94-75-7	2,4-D	0.00681	U *	0.0995	0.00681
93-72-1	Silvex (2,4,5-TP)	0.00261	U *	0.0249	0.00261
75-99-0	Dalapon	0.00882	U	0.112	0.00882
94-82-6	2,4-DB	0.00761	U *	0.0995	0.00761
1918-00-9	Dicamba	0.00596	U	0.0497	0.00596
120-36-5	Dichlorprop	0.0118	U	0.0995	0.0118
88-85-7	Dinoseb	0.00566	U *	0.0149	0.00566
94-74-6	MCPA	2.05	U *	9.95	2.05
93-65-2	MCPP	2.00	U *	9.95	2.00

CAS NO.	SURROGATE	%REC	Q	LIMITS
19719-28-9	2,4-Dichlorophenylacetic acid	45		19-122

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000008.D
Lims ID: 180-61122-A-2-B
Client ID: BGSB22-(1-2)-161122-S
Sample Type: Client
Inject. Date: 30-Nov-2016 15:38:06 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 20.0000
Sample Info: 180-0014557-004
Operator ID: Instrument ID: CGC1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:36:11 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:24:38

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
1 Dalapon						
1		2.373			ND	
2		2.455				
$ 2 2,4-Dichlorophenylacetic acid						
1	8.406	8.406	0.000	4102820	H 0.0227	
2	8.101	8.101	0.000	5300556	H 0.0240	
					RPD = 5.39	
3 MCPP						
1		8.614			ND	
2		8.520				
4 Dicamba						
1		8.707			ND	
2		8.365				
5 MCPA						
1		9.039			ND	
2		8.824				
6 Dichlorprop						
1		9.321			ND	
2		9.187				
7 2,4-D						
1		9.814			ND	
2		9.577				
9 Silvex (2,4,5-TP)						
1		10.496			ND	
2		10.351				
10 2,4,5-T						
1		11.049			ND	
2		10.797				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
11 Dinoseb						
1		11.302			ND	
2		11.852				
12 2,4-DB						
1		11.429			ND	
2		11.228				

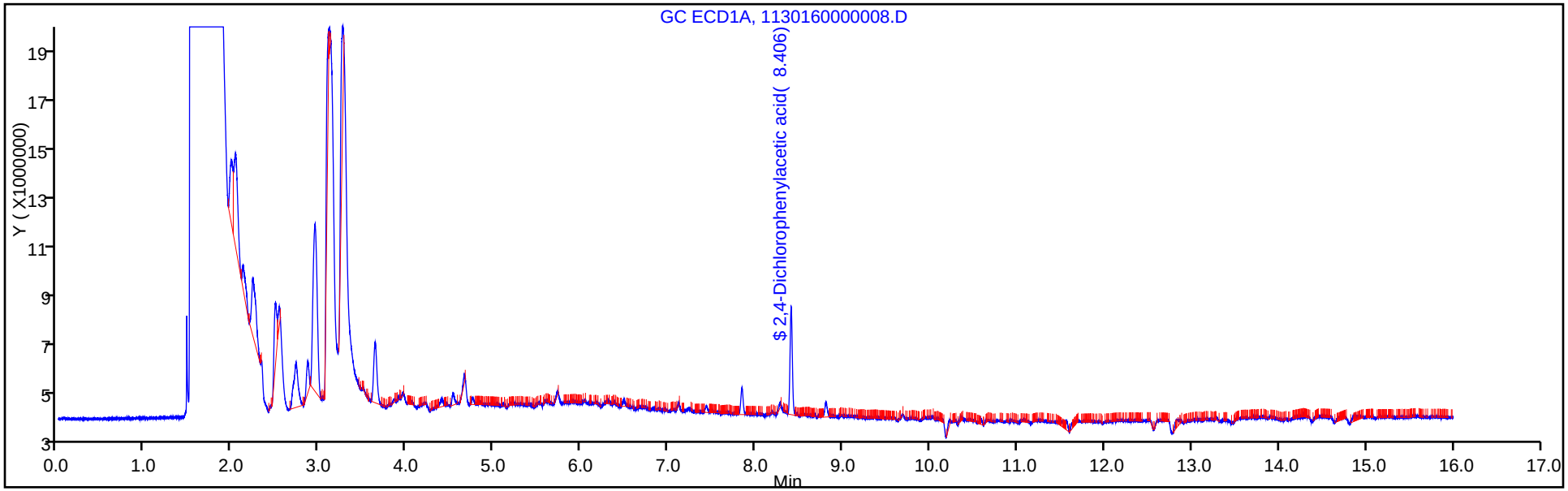
Report Date: 01-Dec-2016 10:36:36 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

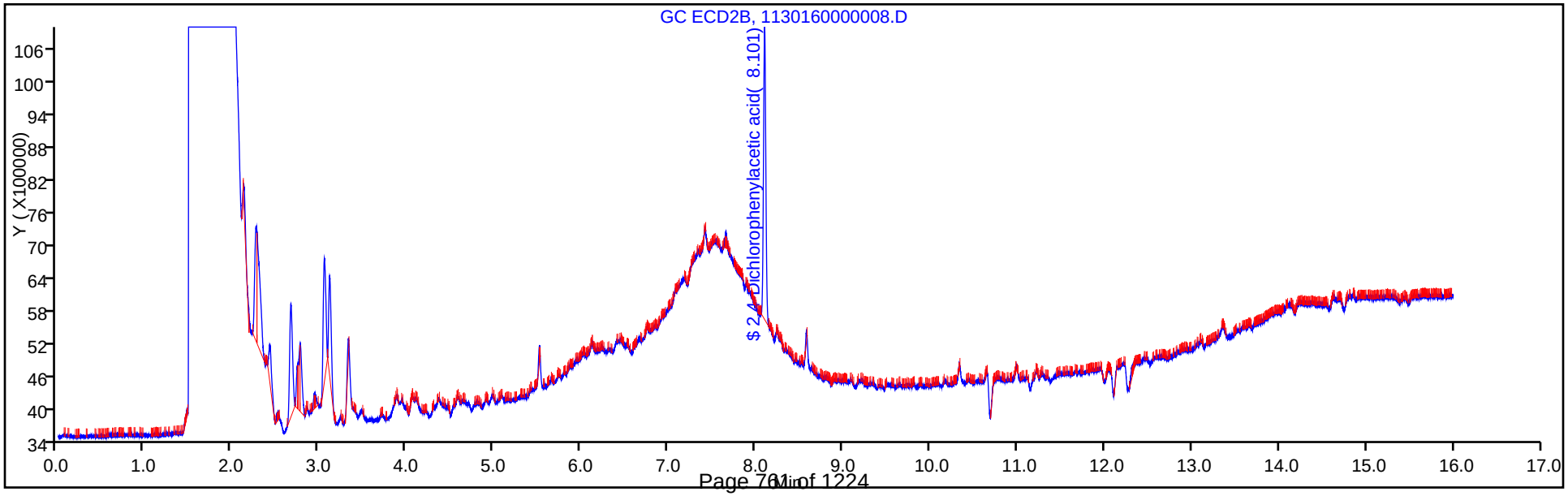
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000008.D

Injection Date:	30-Nov-2016 15:38:06	Instrument ID:	CGC1	Operator ID:	
Lims ID:	180-61122-A-2-B	Lab Sample ID:	180-61122-2	Worklist Smp#:	4
Client ID:	BGSB22-(1-2)-161122-S				
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	4
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000008.D				
Lims ID:	180-61122-A-2-B				
Client ID:	BGSB22-(1-2)-161122-S				
Sample Type:	Client				
Inject. Date:	30-Nov-2016 15:38:06	ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	20.0000		
Sample Info:	180-0014557-004				
Operator ID:		Instrument ID:	CGC1		
Method:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m				
Limit Group:	GCS 8151A ICAL				
Last Update:	01-Dec-2016 10:36:11	Calib Date:	24-Sep-2016 13:40:10		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D				
Column 1 :	RTX-50 (0.53 mm)		Det: GC ECD1A		
Column 2 :	RTX-1701 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK010				
First Level Reviewer: oravecj		Date:	01-Dec-2016 10:24:38		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0227	45.40

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0240	47.92

FORM I
HERBICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB22-(1-2)-161122-S | Lab Sample ID: 180-61122-2

Matrix: Solid | Lab File ID: 1130160000008.D

Analysis Method: 8151A | Date Collected: 11/22/2016 09:40

Extraction Method: 8151A | Date Extracted: 11/27/2016 09:29

Sample wt/vol: 50.1(g) | Date Analyzed: 11/30/2016 15:38

Con. Extract Vol.: 10.0(mL) | Dilution Factor: 20

Injection Volume: 1(uL) | GC Column: RTX-1701 ID: 0.53(mm)

% Moisture: 19.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195866 | Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
19719-28-9	2,4-Dichlorophenylacetic acid	48		19-122

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000008.D
Lims ID: 180-61122-A-2-B
Client ID: BGSB22-(1-2)-161122-S
Sample Type: Client
Inject. Date: 30-Nov-2016 15:38:06 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 20.0000
Sample Info: 180-0014557-004
Operator ID: Instrument ID: CGC1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:36:11 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:24:38

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
1 Dalapon						
1		2.373			ND	
2		2.455				
$ 2 2,4-Dichlorophenylacetic acid						
1	8.406	8.406	0.000	4102820	H 0.0227	
2	8.101	8.101	0.000	5300556	H 0.0240	
					RPD = 5.39	
3 MCPP						
1		8.614			ND	
2		8.520				
4 Dicamba						
1		8.707			ND	
2		8.365				
5 MCPA						
1		9.039			ND	
2		8.824				
6 Dichlorprop						
1		9.321			ND	
2		9.187				
7 2,4-D						
1		9.814			ND	
2		9.577				
9 Silvex (2,4,5-TP)						
1		10.496			ND	
2		10.351				
10 2,4,5-T						
1		11.049			ND	
2		10.797				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
11 Dinoseb						
1		11.302			ND	
2		11.852				
12 2,4-DB						
1		11.429			ND	
2		11.228				

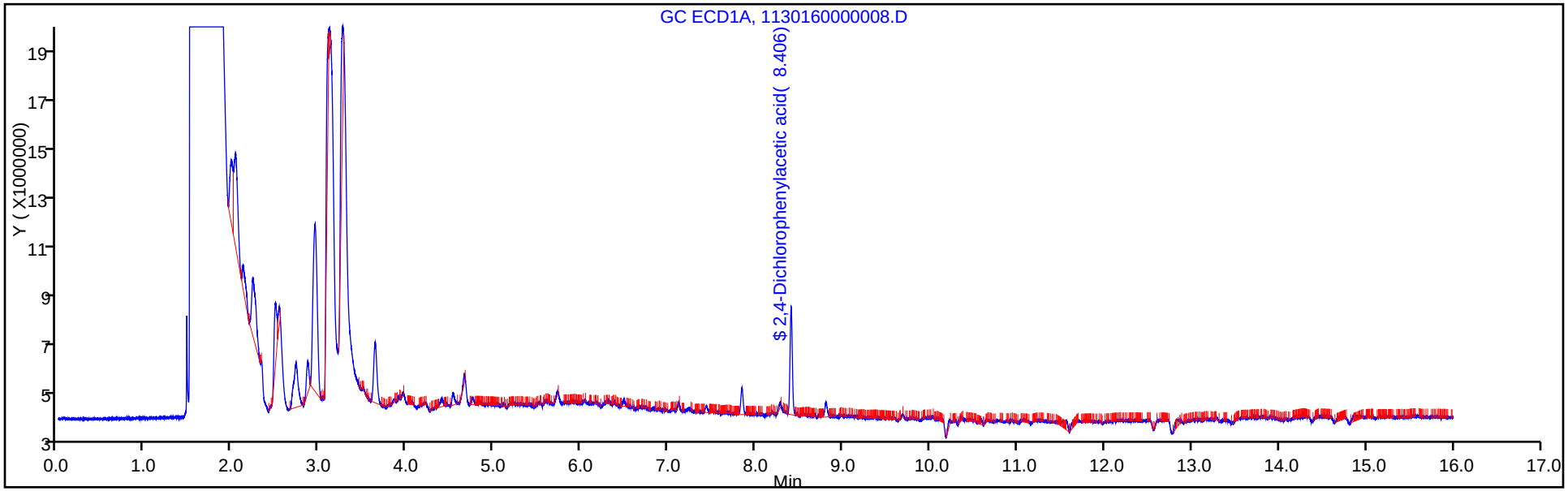
Report Date: 01-Dec-2016 10:36:37 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

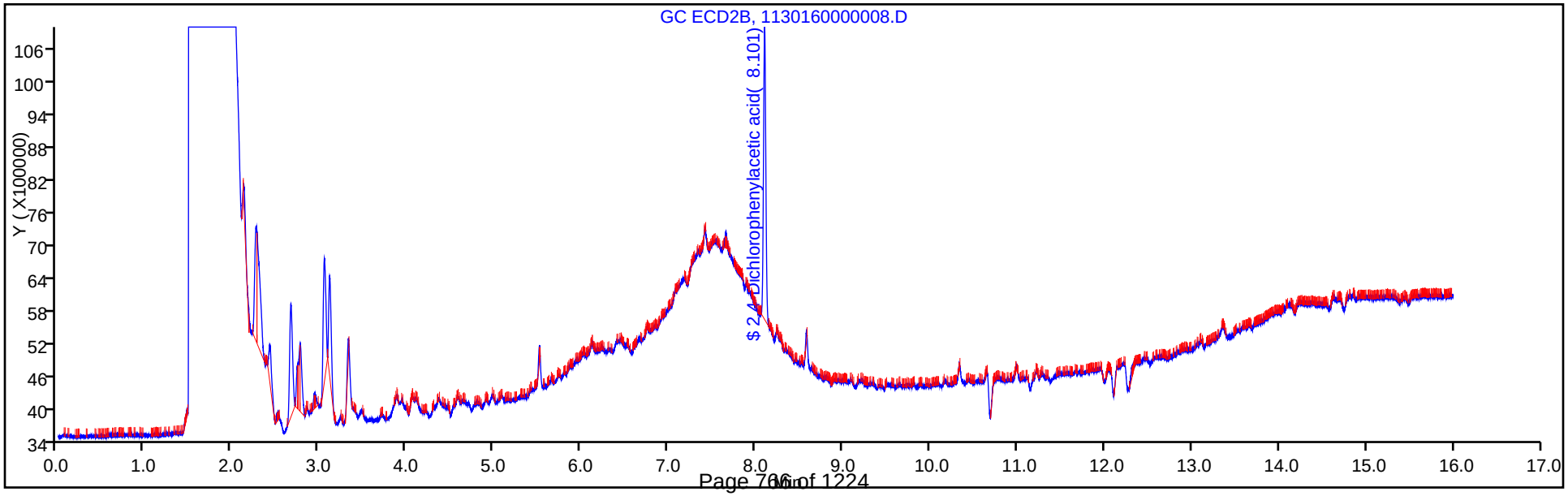
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000008.D

Injection Date:	30-Nov-2016 15:38:06	Instrument ID:	CGC1	Operator ID:	
Lims ID:	180-61122-A-2-B	Lab Sample ID:	180-61122-2	Worklist Smp#:	4
Client ID:	BGSB22-(1-2)-161122-S				
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	4
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000008.D				
Lims ID:	180-61122-A-2-B				
Client ID:	BGSB22-(1-2)-161122-S				
Sample Type:	Client				
Inject. Date:	30-Nov-2016 15:38:06	ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	20.0000		
Sample Info:	180-0014557-004				
Operator ID:		Instrument ID:	CGC1		
Method:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m				
Limit Group:	GCS 8151A ICAL				
Last Update:	01-Dec-2016 10:36:11	Calib Date:	24-Sep-2016 13:40:10		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D				
Column 1 :	RTX-50 (0.53 mm)		Det: GC ECD1A		
Column 2 :	RTX-1701 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK010				
First Level Reviewer: oravecj		Date:	01-Dec-2016 10:24:38		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0227	45.40

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0240	47.92

FORM I
HERBICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB10-(0.0-0.5)-161122-S | Lab Sample ID: 180-61122-3

Matrix: Solid | Lab File ID: 1130160000009.D

Analysis Method: 8151A | Date Collected: 11/22/2016 15:30

Extraction Method: 8151A | Date Extracted: 11/27/2016 09:30

Sample wt/vol: 50.0(g) | Date Analyzed: 11/30/2016 16:02

Con. Extract Vol.: 10.0(mL) | Dilution Factor: 20

Injection Volume: 1(uL) | GC Column: RTX-50 ID: 0.53(mm)

% Moisture: 9.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195866 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
93-76-5	2,4,5-T	0.00276	U *	0.0220	0.00276
94-75-7	2,4-D	0.00603	U *	0.0881	0.00603
93-72-1	Silvex (2,4,5-TP)	0.00232	U *	0.0220	0.00232
75-99-0	Dalapon	0.00782	U	0.0992	0.00782
94-82-6	2,4-DB	0.00675	U *	0.0881	0.00675
1918-00-9	Dicamba	0.00528	U	0.0441	0.00528
120-36-5	Dichlorprop	0.0104	U	0.0881	0.0104
88-85-7	Dinoseb	0.00501	U *	0.0132	0.00501
94-74-6	MCPA	1.82	U *	8.81	1.82
93-65-2	MCPP	1.77	U *	8.81	1.77

CAS NO.	SURROGATE	%REC	Q	LIMITS
19719-28-9	2,4-Dichlorophenylacetic acid	41		19-122

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000009.D
Lims ID: 180-61122-A-3-B
Client ID: BGSB10-(0.0-0.5)-161122-S
Sample Type: Client
Inject. Date: 30-Nov-2016 16:02:01 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 20.0000
Sample Info: 180-0014557-005
Operator ID: Instrument ID: CGC1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:36:11 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:25:11

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
1 Dalapon						
1		2.373			ND	
2		2.455				
$ 2 2,4-Dichlorophenylacetic acid						
1	8.406	8.406	0.000	3746180H	0.0207	
2	8.101	8.101	0.000	4819859H	0.0218	
					RPD = 4.98	
3 MCPP						
1		8.614			ND	
2		8.520				
4 Dicamba						
1		8.707			ND	
2		8.365				
5 MCPA						
1		9.039			ND	
2		8.824				
6 Dichlorprop						
1		9.321			ND	
2		9.187				
7 2,4-D						
1		9.814			ND	
2		9.577				
9 Silvex (2,4,5-TP)						
1		10.496			ND	
2		10.351				
10 2,4,5-T						
1		11.049			ND	
2		10.797				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
11 Dinoseb						
1		11.302			ND	
2		11.852				
12 2,4-DB						
1		11.429			ND	
2		11.228				

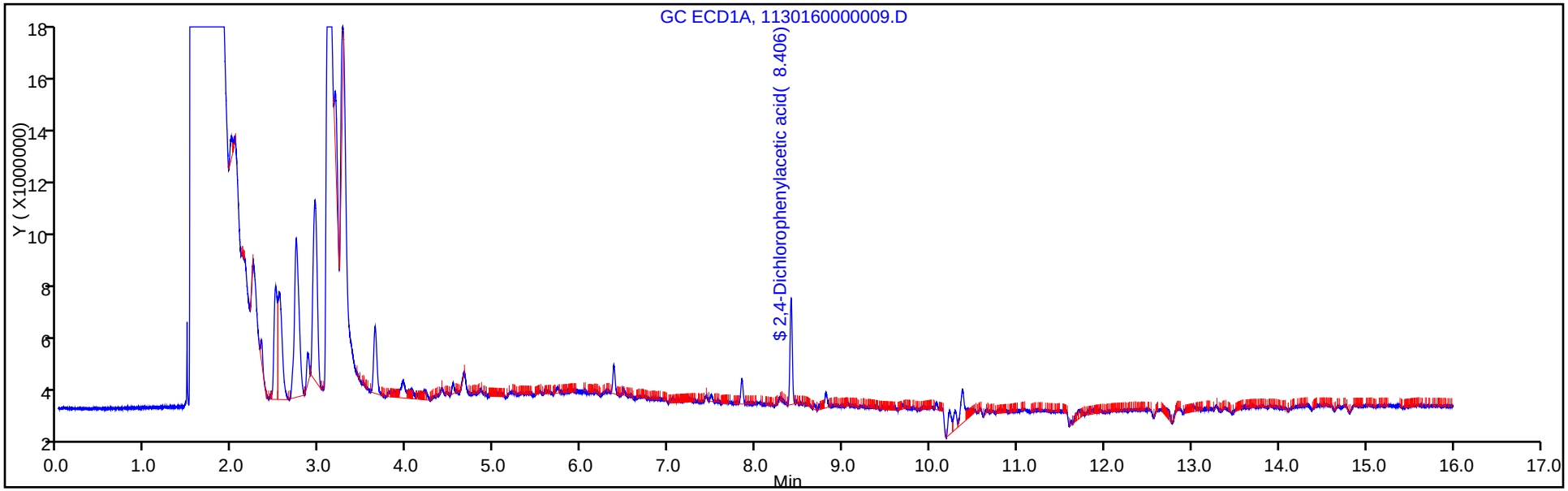
Report Date: 01-Dec-2016 10:36:33 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

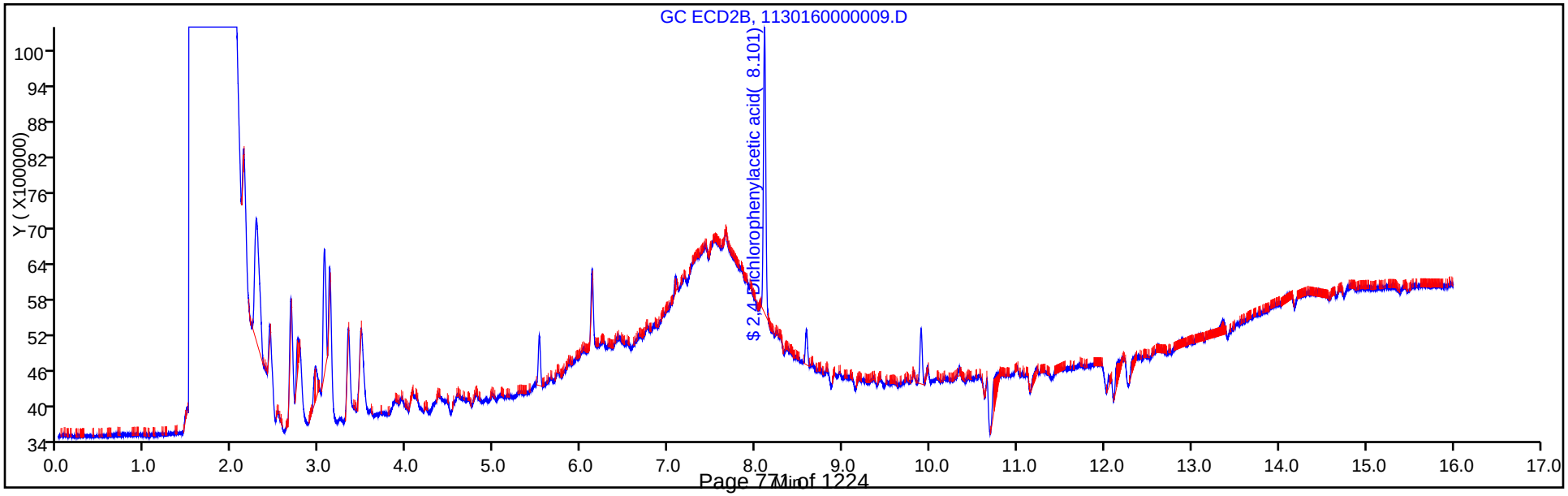
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000009.D

Injection Date:	30-Nov-2016 16:02:01	Instrument ID:	CGC1	Operator ID:	
Lims ID:	180-61122-A-3-B	Lab Sample ID:	180-61122-3	Worklist Smp#:	5
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	5
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000009.D				
Lims ID:	180-61122-A-3-B				
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Sample Type:	Client				
Inject. Date:	30-Nov-2016 16:02:01	ALS Bottle#:	5	Worklist Smp#:	5
Injection Vol:	1.0 ul	Dil. Factor:	20.0000		
Sample Info:	180-0014557-005				
Operator ID:		Instrument ID:	CGC1		
Method:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m				
Limit Group:	GCS 8151A ICAL				
Last Update:	01-Dec-2016 10:36:11	Calib Date:	24-Sep-2016 13:40:10		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D				
Column 1 :	RTX-50 (0.53 mm)		Det: GC ECD1A		
Column 2 :	RTX-1701 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK010				
First Level Reviewer: oravecj		Date:	01-Dec-2016 10:25:11		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0207	41.46

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0218	43.58

FORM I
HERBICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB10-(0.0-0.5)-161122-S Lab Sample ID: 180-61122-3

Matrix: Solid Lab File ID: 1130160000009.D

Analysis Method: 8151A Date Collected: 11/22/2016 15:30

Extraction Method: 8151A Date Extracted: 11/27/2016 09:30

Sample wt/vol: 50.0(g) Date Analyzed: 11/30/2016 16:02

Con. Extract Vol.: 10.0(mL) Dilution Factor: 20

Injection Volume: 1(uL) GC Column: RTX-1701 ID: 0.53(mm)

% Moisture: 9.2 GPC Cleanup:(Y/N) N

Analysis Batch No.: 195866 Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
19719-28-9	2,4-Dichlorophenylacetic acid	44		19-122

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000009.D
Lims ID: 180-61122-A-3-B
Client ID: BGSB10-(0.0-0.5)-161122-S
Sample Type: Client
Inject. Date: 30-Nov-2016 16:02:01 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 20.0000
Sample Info: 180-0014557-005
Operator ID: Instrument ID: CGC1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:36:11 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:25:11

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
1 Dalapon						
1		2.373			ND	
2		2.455				
$ 2 2,4-Dichlorophenylacetic acid						
1	8.406	8.406	0.000	3746180H	0.0207	
2	8.101	8.101	0.000	4819859H	0.0218	
					RPD = 4.98	
3 MCPP						
1		8.614			ND	
2		8.520				
4 Dicamba						
1		8.707			ND	
2		8.365				
5 MCPA						
1		9.039			ND	
2		8.824				
6 Dichlorprop						
1		9.321			ND	
2		9.187				
7 2,4-D						
1		9.814			ND	
2		9.577				
9 Silvex (2,4,5-TP)						
1		10.496			ND	
2		10.351				
10 2,4,5-T						
1		11.049			ND	
2		10.797				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
11 Dinoseb						
1		11.302			ND	
2		11.852				
12 2,4-DB						
1		11.429			ND	
2		11.228				

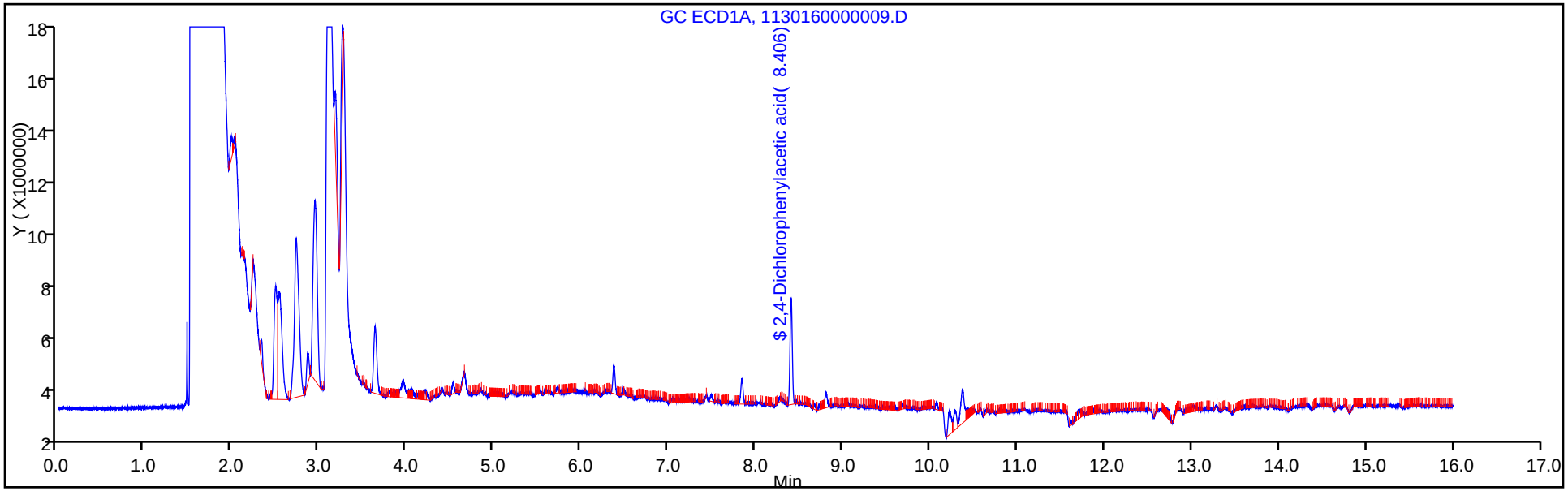
Report Date: 01-Dec-2016 10:36:34 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

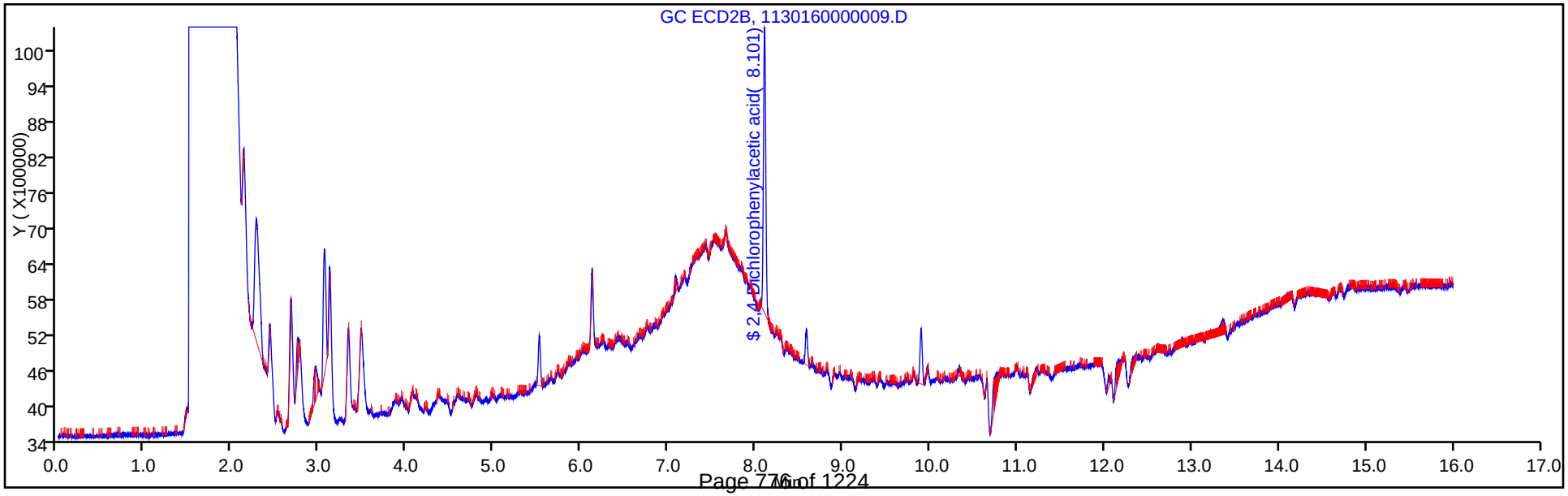
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000009.D

Injection Date:	30-Nov-2016 16:02:01	Instrument ID:	CGC1	Operator ID:	
Lims ID:	180-61122-A-3-B	Lab Sample ID:	180-61122-3	Worklist Smp#:	5
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	5
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000009.D				
Lims ID:	180-61122-A-3-B				
Client ID:	BGSB10-(0.0-0.5)-161122-S				
Sample Type:	Client				
Inject. Date:	30-Nov-2016 16:02:01	ALS Bottle#:	5	Worklist Smp#:	5
Injection Vol:	1.0 ul	Dil. Factor:	20.0000		
Sample Info:	180-0014557-005				
Operator ID:		Instrument ID:	CGC1		
Method:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m				
Limit Group:	GCS 8151A ICAL				
Last Update:	01-Dec-2016 10:36:11	Calib Date:	24-Sep-2016 13:40:10		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D				
Column 1 :	RTX-50 (0.53 mm)		Det: GC ECD1A		
Column 2 :	RTX-1701 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK010				
First Level Reviewer: oravecj		Date:	01-Dec-2016 10:25:11		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0207	41.46

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0218	43.58

FORM I
HERBICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB10-(1-2)-161122-S | Lab Sample ID: 180-61122-4

Matrix: Solid | Lab File ID: 1130160000010.D

Analysis Method: 8151A | Date Collected: 11/22/2016 15:35

Extraction Method: 8151A | Date Extracted: 11/27/2016 09:30

Sample wt/vol: 50.0(g) | Date Analyzed: 11/30/2016 16:25

Con. Extract Vol.: 10.0(mL) | Dilution Factor: 20

Injection Volume: 1(uL) | GC Column: RTX-50 ID: 0.53(mm)

% Moisture: 9.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195866 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
93-76-5	2,4,5-T	0.00276	U *	0.0220	0.00276
94-75-7	2,4-D	0.00603	U *	0.0881	0.00603
93-72-1	Silvex (2,4,5-TP)	0.00231	U *	0.0220	0.00231
75-99-0	Dalapon	0.00781	U	0.0991	0.00781
94-82-6	2,4-DB	0.00674	U *	0.0881	0.00674
1918-00-9	Dicamba	0.00527	U	0.0440	0.00527
120-36-5	Dichlorprop	0.0104	U	0.0881	0.0104
88-85-7	Dinoseb	0.00501	U *	0.0132	0.00501
94-74-6	MCPA	1.81	U *	8.81	1.81
93-65-2	MCPP	1.77	U *	8.81	1.77

CAS NO.	SURROGATE	%REC	Q	LIMITS
19719-28-9	2,4-Dichlorophenylacetic acid	47		19-122

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000010.D
Lims ID: 180-61122-A-4-B
Client ID: BGSB10-(1-2)-161122-S
Sample Type: Client
Inject. Date: 30-Nov-2016 16:25:57 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 20.0000
Sample Info: 180-0014557-006
Operator ID: Instrument ID: CGC1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:36:11 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:25:39

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
1 Dalapon						
1		2.373			ND	
2		2.455				
$ 2 2,4-Dichlorophenylacetic acid						
1	8.406	8.406	0.000	4216978	H 0.0233	
2	8.100	8.101	-0.001	5514541	H 0.0249	
					RPD = 6.61	
3 MCPP						
1		8.614			ND	
2		8.520				
4 Dicamba						
1		8.707			ND	
2		8.365				
5 MCPA						
1		9.039			ND	
2		8.824				
6 Dichlorprop						
1		9.321			ND	
2		9.187				
7 2,4-D						
1		9.814			ND	
2		9.577				
9 Silvex (2,4,5-TP)						
1		10.496			ND	
2		10.351				
10 2,4,5-T						
1		11.049			ND	
2		10.797				

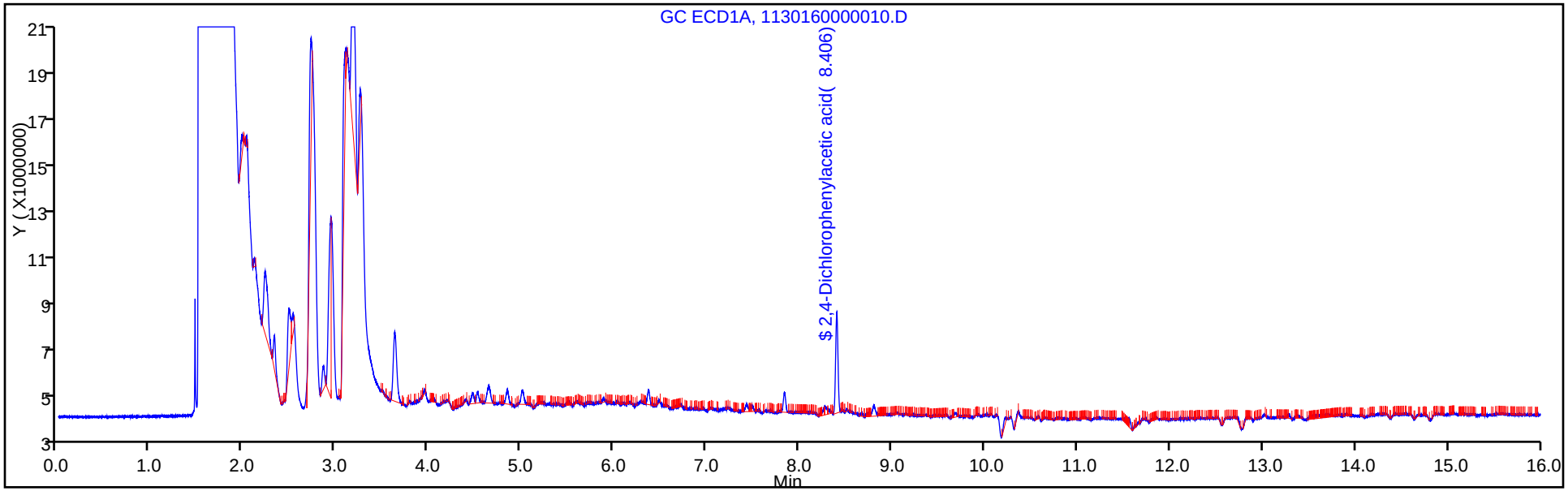
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
11 Dinoseb						
1		11.302			ND	
2		11.852				
12 2,4-DB						
1		11.429			ND	
2		11.228				

Report Date: 01-Dec-2016 10:36:30 Chrom Revision: 2.2 14-Nov-2016 08:15:18

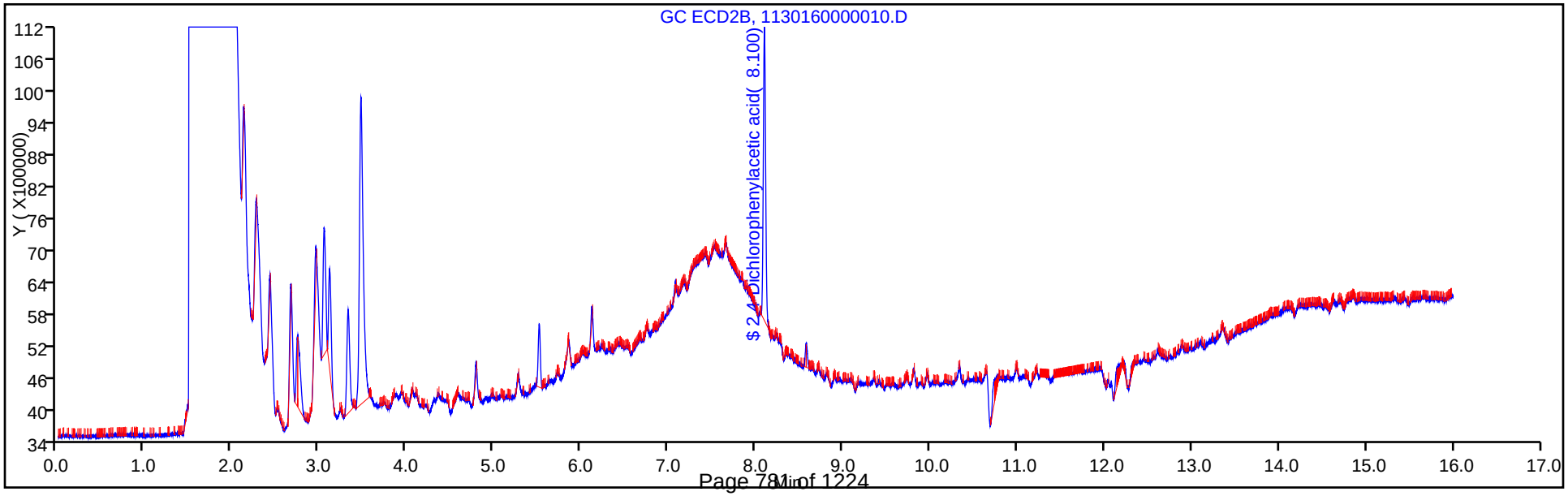
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000010.D				
Injection Date:	30-Nov-2016 16:25:57	Instrument ID:	CGC1	Operator ID:	
Lims ID:	180-61122-A-4-B	Lab Sample ID:	180-61122-4	Worklist Smp#:	6
Client ID:	BGSB10-(1-2)-161122-S				
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	6
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000010.D				
Lims ID:	180-61122-A-4-B				
Client ID:	BGSB10-(1-2)-161122-S				
Sample Type:	Client				
Inject. Date:	30-Nov-2016 16:25:57	ALS Bottle#:	6	Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	20.0000		
Sample Info:	180-0014557-006				
Operator ID:		Instrument ID:	CGC1		
Method:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m				
Limit Group:	GCS 8151A ICAL				
Last Update:	01-Dec-2016 10:36:11	Calib Date:	24-Sep-2016 13:40:10		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D				
Column 1 :	RTX-50 (0.53 mm)		Det: GC ECD1A		
Column 2 :	RTX-1701 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK010				
First Level Reviewer: oravecj		Date:	01-Dec-2016 10:25:39		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0233	46.67

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0249	49.86

FORM I
HERBICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: BGSB10-(1-2)-161122-S | Lab Sample ID: 180-61122-4

Matrix: Solid | Lab File ID: 1130160000010.D

Analysis Method: 8151A | Date Collected: 11/22/2016 15:35

Extraction Method: 8151A | Date Extracted: 11/27/2016 09:30

Sample wt/vol: 50.0(g) | Date Analyzed: 11/30/2016 16:25

Con. Extract Vol.: 10.0(mL) | Dilution Factor: 20

Injection Volume: 1(uL) | GC Column: RTX-1701 ID: 0.53(mm)

% Moisture: 9.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195866 | Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
19719-28-9	2,4-Dichlorophenylacetic acid	50		19-122

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000010.D
Lims ID: 180-61122-A-4-B
Client ID: BGSB10-(1-2)-161122-S
Sample Type: Client
Inject. Date: 30-Nov-2016 16:25:57 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 20.0000
Sample Info: 180-0014557-006
Operator ID: Instrument ID: CGC1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:36:11 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:25:39

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
1 Dalapon						
1		2.373			ND	
2		2.455				
$ 2 2,4-Dichlorophenylacetic acid						
1	8.406	8.406	0.000	4216978	H 0.0233	
2	8.100	8.101	-0.001	5514541	H 0.0249	
					RPD = 6.61	
3 MCPP						
1		8.614			ND	
2		8.520				
4 Dicamba						
1		8.707			ND	
2		8.365				
5 MCPA						
1		9.039			ND	
2		8.824				
6 Dichlorprop						
1		9.321			ND	
2		9.187				
7 2,4-D						
1		9.814			ND	
2		9.577				
9 Silvex (2,4,5-TP)						
1		10.496			ND	
2		10.351				
10 2,4,5-T						
1		11.049			ND	
2		10.797				

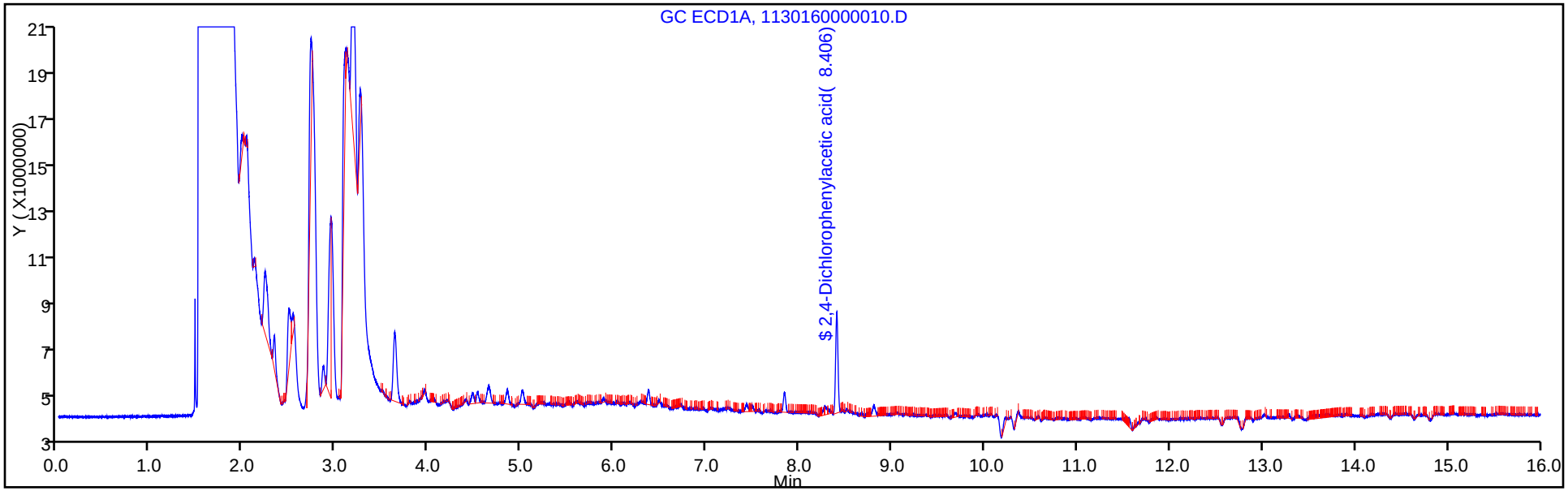
Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Flags
11 Dinoseb						
1		11.302			ND	
2		11.852				
12 2,4-DB						
1		11.429			ND	
2		11.228				

Report Date: 01-Dec-2016 10:36:31 Chrom Revision: 2.2 14-Nov-2016 08:15:18

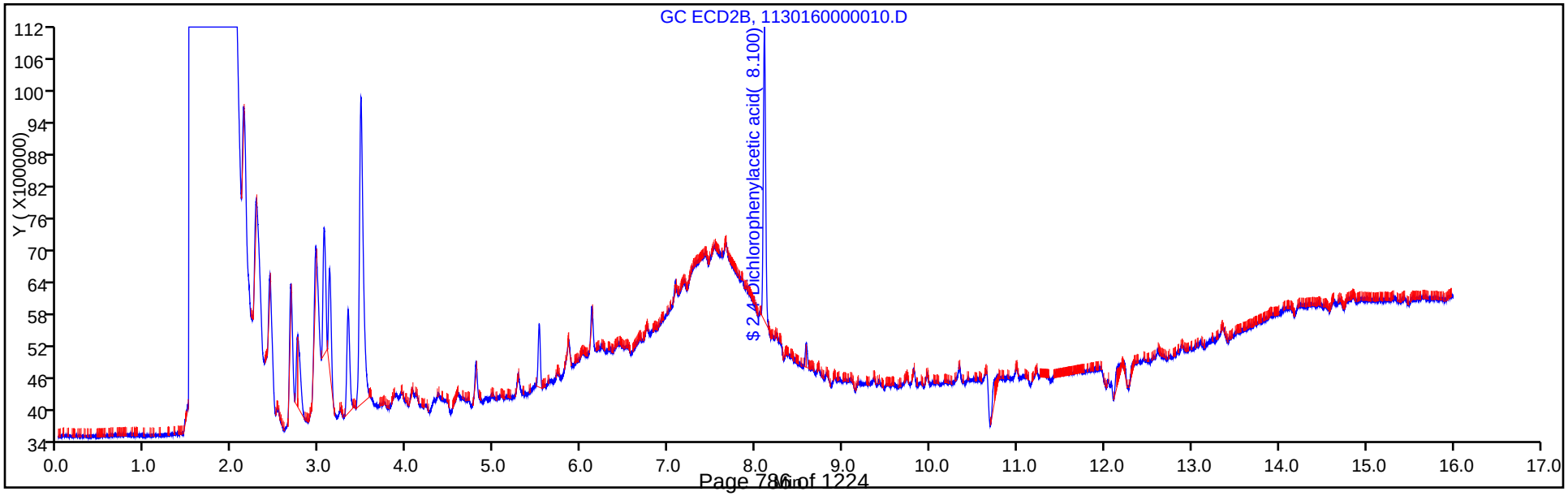
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000010.D				
Injection Date:	30-Nov-2016 16:25:57	Instrument ID:	CGC1	Operator ID:	
Lims ID:	180-61122-A-4-B	Lab Sample ID:	180-61122-4	Worklist Smp#:	6
Client ID:	BGSB10-(1-2)-161122-S				
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	6
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000010.D				
Lims ID:	180-61122-A-4-B				
Client ID:	BGSB10-(1-2)-161122-S				
Sample Type:	Client				
Inject. Date:	30-Nov-2016 16:25:57	ALS Bottle#:	6	Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	20.0000		
Sample Info:	180-0014557-006				
Operator ID:		Instrument ID:	CGC1		
Method:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m				
Limit Group:	GCS 8151A ICAL				
Last Update:	01-Dec-2016 10:36:11	Calib Date:	24-Sep-2016 13:40:10		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D				
Column 1 :	RTX-50 (0.53 mm)		Det: GC ECD1A		
Column 2 :	RTX-1701 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK010				
First Level Reviewer: oravecj		Date:	01-Dec-2016 10:25:39		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0233	46.67

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0249	49.86

FORM VI
HERBICIDES BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189048

SDG No.:

Instrument ID: CGC1 GC Column: RTX-50 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/24/2016 11:16 Calibration End Date: 09/24/2016 13:40 Calibration ID: 32961

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-189048/1	0924160000001.D
Level 2	IC 180-189048/2	0924160000002.D
Level 3	IC 180-189048/3	0924160000003.D
Level 4	ICRT 180-189048/4	0924160000004.D
Level 5	IC 180-189048/5	0924160000005.D
Level 6	IC 180-189048/6	0924160000006.D
Level 7	IC 180-189048/7	0924160000007.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
Dalapon	2.245	2.244	2.248	2.246	2.244	2.244	2.246				2.216 - 2.276	2.245
MCPP	8.421	8.420	8.421	8.421	8.421	8.423	8.422				8.391 - 8.451	8.421
Dicamba	8.510	8.509	8.509	8.509	8.509	8.510	8.510				8.479 - 8.539	8.509
MCPA	+++++	8.846	8.846	8.846	8.847	8.846	8.848				8.816 - 8.876	8.847
Dichlorprop	9.127	9.125	9.126	9.128	9.127	9.127	9.127				9.098 - 9.158	9.127
2,4-D	9.622	9.622	9.622	9.620	9.622	9.622	9.621				9.590 - 9.650	9.622
Pentachlorophenol	10.162	10.163	10.164	10.163	10.162	10.165	10.165				10.133 - 10.193	10.163
Silvex (2,4,5-TP)	10.304	10.304	10.305	10.304	10.304	10.305	10.304				10.274 - 10.334	10.304
2,4,5-T	10.864	10.861	10.859	10.858	10.857	10.857	10.856				10.828 - 10.888	10.859
Dinoseb	11.110	11.111	11.112	11.111	11.110	11.111	11.111				11.061 - 11.161	11.111
2,4-DB	+++++	11.257	11.249	11.244	11.241	11.239	11.237				11.214 - 11.274	11.245
2,4-Dichlorophenylacetic acid	8.208	8.209	8.209	8.209	8.209	8.209	8.208				8.179 - 8.239	8.209

FORM VI
HERBICIDES BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189048

SDG No.:

Instrument ID: CGC1 GC Column: RTX-50 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/24/2016 11:16 Calibration End Date: 09/24/2016 13:40 Calibration ID: 32961

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-189048/1	0924160000001.D
Level 2	IC 180-189048/2	0924160000002.D
Level 3	IC 180-189048/3	0924160000003.D
Level 4	ICRT 180-189048/4	0924160000004.D
Level 5	IC 180-189048/5	0924160000005.D
Level 6	IC 180-189048/6	0924160000006.D
Level 7	IC 180-189048/7	0924160000007.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4		B	M1	M2								
Dalapon	96396000 87657306	94638800 82404375	91664775 81354578	88401300	Ave		88931019.2				6.5		20.0			
MCPP	600361 447082	575044 408388	563070 386462	502879	Ave		497612.299				17.2		20.0			
Dicamba	486310600 429295713	467365500 406524344	460270000 391652381	435084250	Ave		439500398				7.7		20.0			
MCPA	+++++ 661364	941662 614002	871627 575883	752768	Ave		736217.607				19.9		20.0			
Dichlorprop	126265100 106527756	120653300 101741953	117876625 98019338	112252263	Ave		111905191				9.3		20.0			
2,4-D	128657400 124786969	126365950 121881878	130694925 118949944	126271513	Ave		125372654				3.2		20.0			
Pentachlorophenol	1488952400 1409802325	1473487400 1353256713	1471206400 1296282613	1443515400	Ave		1419500464				5.0		20.0			
Silvex (2,4,5-TP)	584516800 565176075	574818200 545663538	588201800 516019744	583811250	Ave		565458201				4.6		20.0			
2,4,5-T	375897200 498273200	414890000 497196975	479950900 498456800	496337150	Ave		465857461				10.7		20.0			
Dinoseb	205088200 208105675	199923850 201529866	215151375 200175508	212090250	Ave		206009246				2.9		20.0			
2,4-DB	+++++ 58343900	35564650 62694591	47576350 66405627	53298163	Lin2	-591263.87	63680969.4							0.9980		0.9900
2,4-Dichlorophenylacetic acid	203402700 172149369	192132400 169791969	186362750 165149978	176059000	Ave		180721167				7.6		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HERBICIDES BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189048

SDG No.:

Instrument ID: CGC1 GC Column: RTX-50 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/24/2016 11:16 Calibration End Date: 09/24/2016 13:40 Calibration ID: 32961

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-189048/1	0924160000001.D
Level 2	IC 180-189048/2	0924160000002.D
Level 3	IC 180-189048/3	0924160000003.D
Level 4	ICRT 180-189048/4	0924160000004.D
Level 5	IC 180-189048/5	0924160000005.D
Level 6	IC 180-189048/6	0924160000006.D
Level 7	IC 180-189048/7	0924160000007.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dalapon	Ave	963960 26369400	1892776 52066930	3666591	7072104	14025169	0.0100 0.320	0.0200 0.640	0.0400	0.0800	0.160
MCPP	Ave	600361 13068431	1150087 24733568	2252280	4023034	7153310	1.00 32.0	2.00 64.0	4.00	8.00	16.0
Dicamba	Ave	2431553 65043895	4673655 125328762	9205400	17403370	34343657	0.00500 0.160	0.0100 0.320	0.0200	0.0400	0.0800
MCPA	Ave	+++++ 19648061	1883324 36856499	3486506	6022144	10581831	+++++ 32.0	2.00 64.0	4.00	8.00	16.0
Dichlorprop	Ave	1262651 32557425	2413066 62732376	4715065	8980181	17044441	0.0100 0.320	0.0200 0.640	0.0400	0.0800	0.160
2,4-D	Ave	1286574 39002201	2527319 76127964	5227797	10101721	19965915	0.0100 0.320	0.0200 0.640	0.0400	0.0800	0.160
Pentachlorophenol	Ave	3722381 108260537	7367437 207405218	14712064	28870308	56392093	0.00250 0.0800	0.00500 0.160	0.0100	0.0200	0.0400
Silvex (2,4,5-TP)	Ave	1461292 43653083	2874091 82563159	5882018	11676225	22607043	0.00250 0.0800	0.00500 0.160	0.0100	0.0200	0.0400
2,4,5-T	Ave	939743 39775758	2074450 79753088	4799509	9926743	19930928	0.00250 0.0800	0.00500 0.160	0.0100	0.0200	0.0400
Dinoseb	Ave	2050882 64489557	3998477 128112325	8606055	16967220	33296908	0.0100 0.320	0.0200 0.640	0.0400	0.0800	0.160
2,4-DB	Lin2	+++++ 20062269	711293 42499601	1903054	4263853	9335024	+++++ 0.320	0.0200 0.640	0.0400	0.0800	0.160
2,4-Dichlorophenylacetic acid	Ave	2034027 54333430	3842648 105695986	7454510	14084720	27543899	0.0100 0.320	0.0200 0.640	0.0400	0.0800	0.160

Curve Type Legend:

Ave = Average by Height
Lin2 = Linear 1/conc^2 by height

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000001.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 24-Sep-2016 11:16:42 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013571-001
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 26-Sep-2016 06:28:32 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK053

First Level Reviewer: oravecj Date: 26-Sep-2016 06:28:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							M
1	2.245	2.246	-0.001	963960H	0.0100	0.0108	M
2	2.327	2.329	-0.002	1230793H	0.0100	0.0116	
						RPD = 6.84	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.208	8.209	-0.001	2034027H	0.0100	0.0113	
2	7.914	7.914	0.000	2356381H	0.0100	0.0107	
						RPD = 5.51	
3 MCPP							
1	8.421	8.421	0.000	600361H	1.00	1.21	
2	8.336	8.335	0.001	426921H	1.00	0.8729	
						RPD = 32.09	
4 Dicamba							
1	8.510	8.509	0.001	2431553H	0.005000	0.005533	
2	8.175	8.175	0.000	3084750H	0.005000	0.005341	
						RPD = 3.53	
5 MCPA							
1	8.845	8.846	-0.001	1043550H	1.00	1.42	
2	8.639	8.638	0.001	974435H	1.00	1.18	
						RPD = 18.07	
6 Dichlorprop							
1	9.127	9.128	-0.001	1262651H	0.0100	0.0113	
2	9.001	9.001	0.000	1614474H	0.0100	0.0113	
						RPD = 0.12	
7 2,4-D							
1	9.622	9.620	0.002	1286574H	0.0100	0.0103	
2	9.394	9.393	0.001	1581067H	0.0100	0.0101	
						RPD = 1.53	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.162	10.163	-0.001	3722381H	0.002500	0.002622	
2	9.621	9.621	0.000	4815292H	0.002500	0.002586	
						RPD = 1.40	
9 Silvex (2,4,5-TP)							
1	10.304	10.304	0.000	1461292H	0.002500	0.002584	
2	10.167	10.167	0.000	1858607H	0.002500	0.002560	
						RPD = 0.93	
10 2,4,5-T							
1	10.864	10.858	0.006	939743H	0.002500	0.002017	
2	10.624	10.616	0.008	1118581H	0.002500	0.001949	
						RPD = 3.42	
11 Dinoseb							
1	11.110	11.111	-0.001	2050882H	0.0100	0.0100	
2	11.672	11.672	0.000	1991735H	0.0100	0.0100	
						RPD = 0.03	
12 2,4-DB							M
1	11.263	11.244	0.019	384919H	0.0100	0.0153	M
2	11.070	11.051	0.019	476352H	0.0100	0.0151	M
						RPD = 1.18	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCHERBCALSL7_00003 Amount Added: 1.00 Units: mL

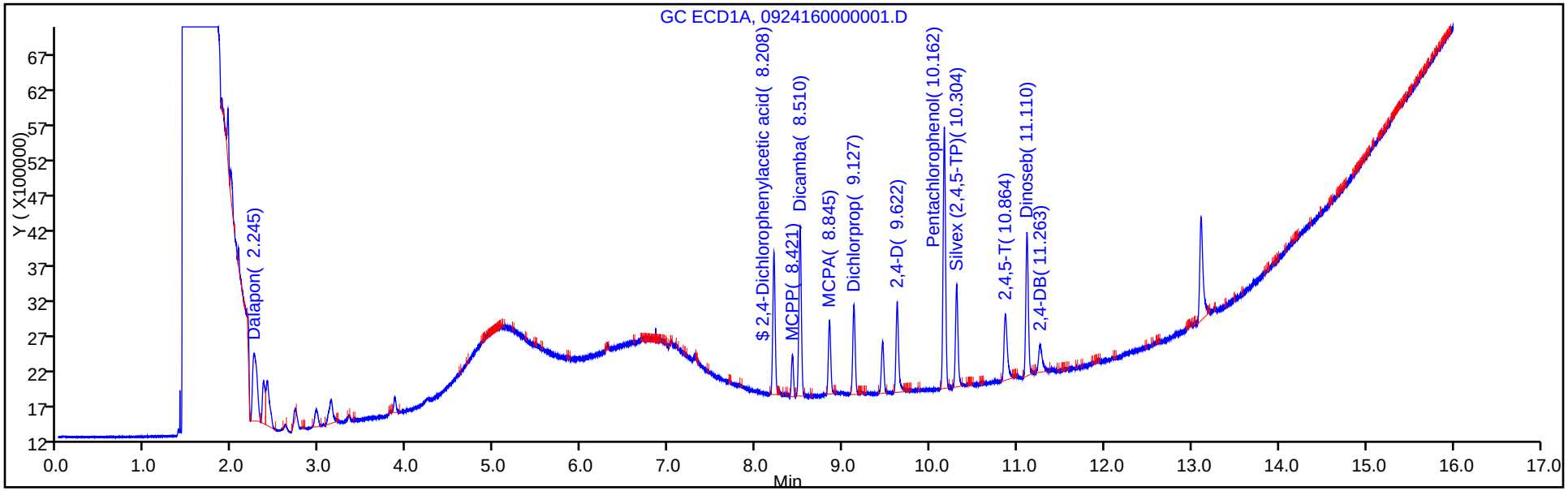
Report Date: 26-Sep-2016 06:28:33 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

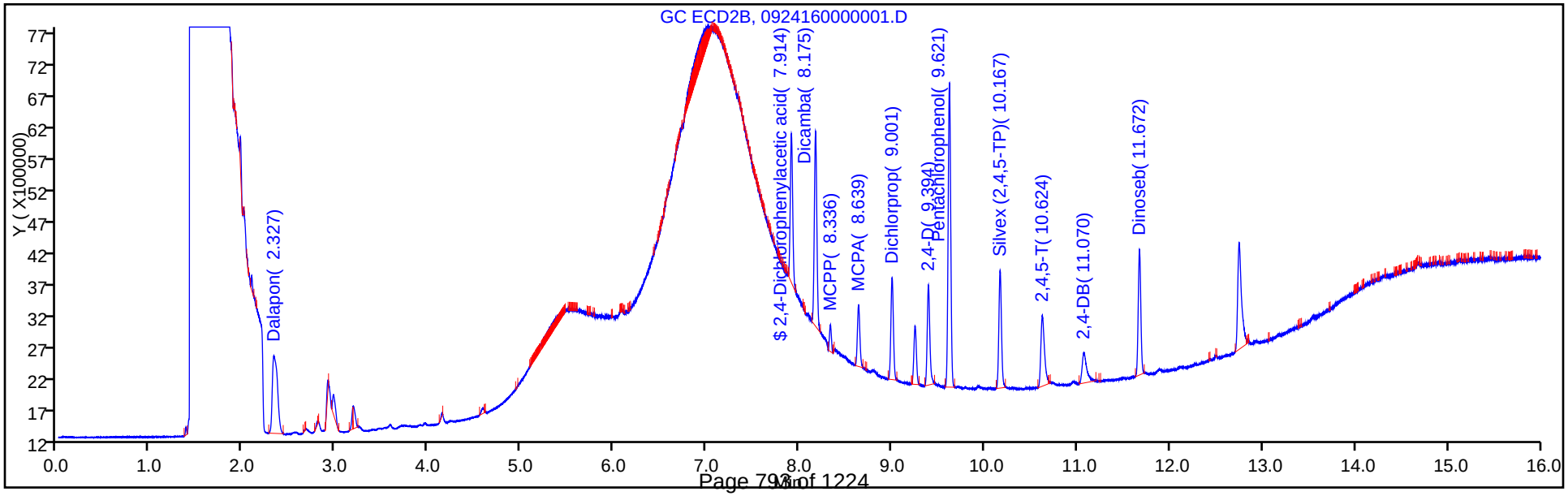
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000001.D

Injection Date:	24-Sep-2016 11:16:42	Instrument ID:	CGC1	Operator ID:	
Lims ID:	IC			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

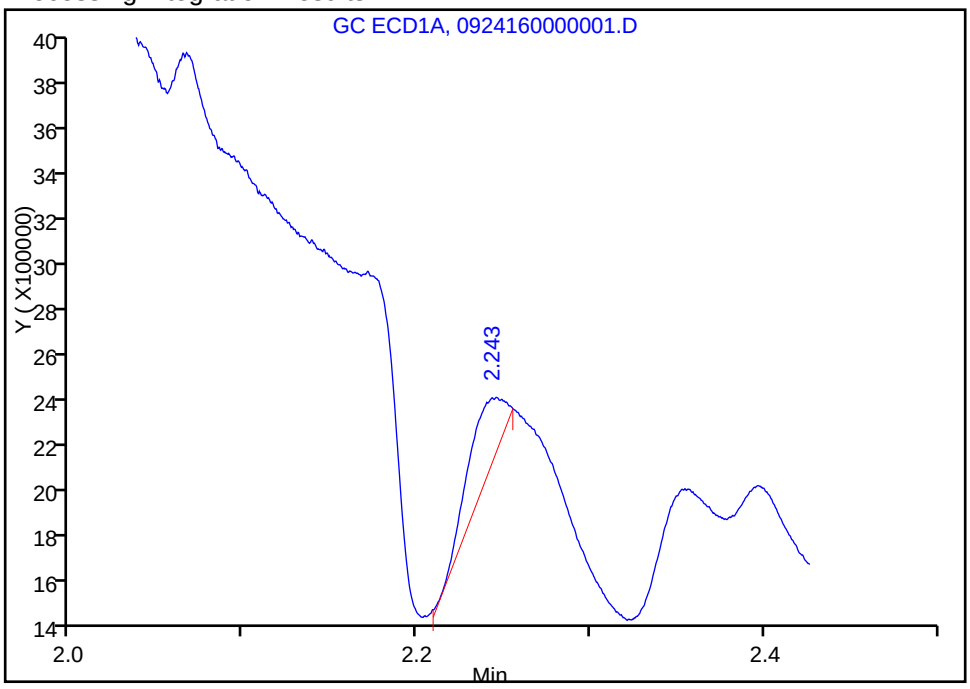
Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000001.D				
Injection Date:	24-Sep-2016 11:16:42	Instrument ID:	CGC1		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		
Column:	RTX-50 (0.53 mm)	Detector	GC ECD1A		

1 Dalapon, CAS: 75-99-0

Signal: 1

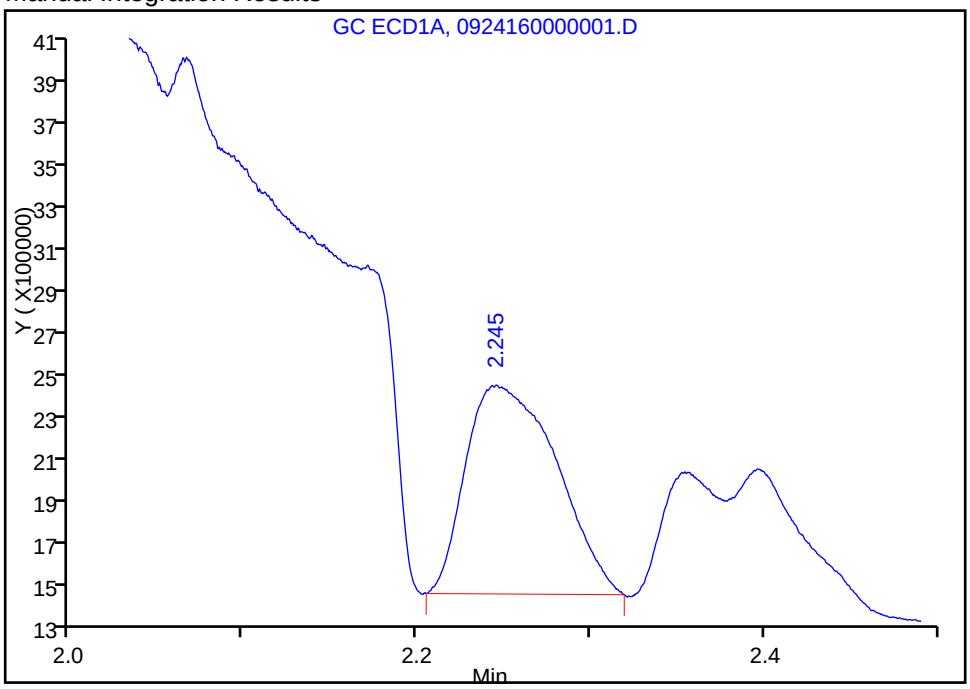
Processing Integration Results

RT: 2.24
Height: 280325
Amount: 0.005328
Amount Units: ng



Manual Integration Results

RT: 2.25
Height: 963960
Amount: 0.010839
Amount Units: ng



Reviewer: oravecj, 26-Sep-2016 06:01:49

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

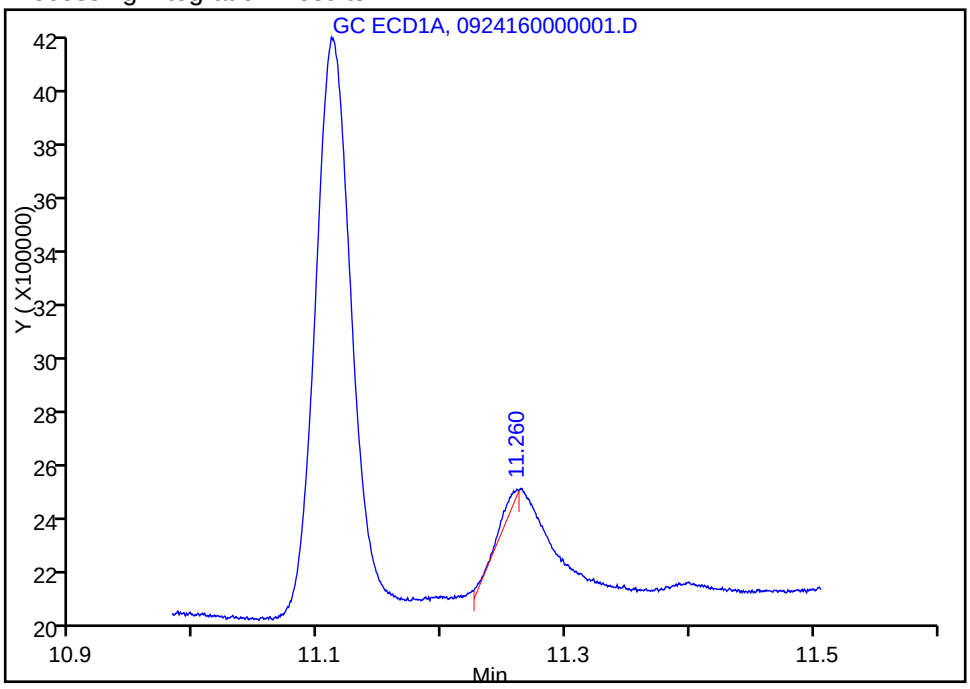
Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000001.D				
Injection Date:	24-Sep-2016 11:16:42	Instrument ID:	CGC1		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		
Column:	RTX-50 (0.53 mm)	Detector	GC ECD1A		

12 2,4-DB, CAS: 94-82-6

Signal: 1

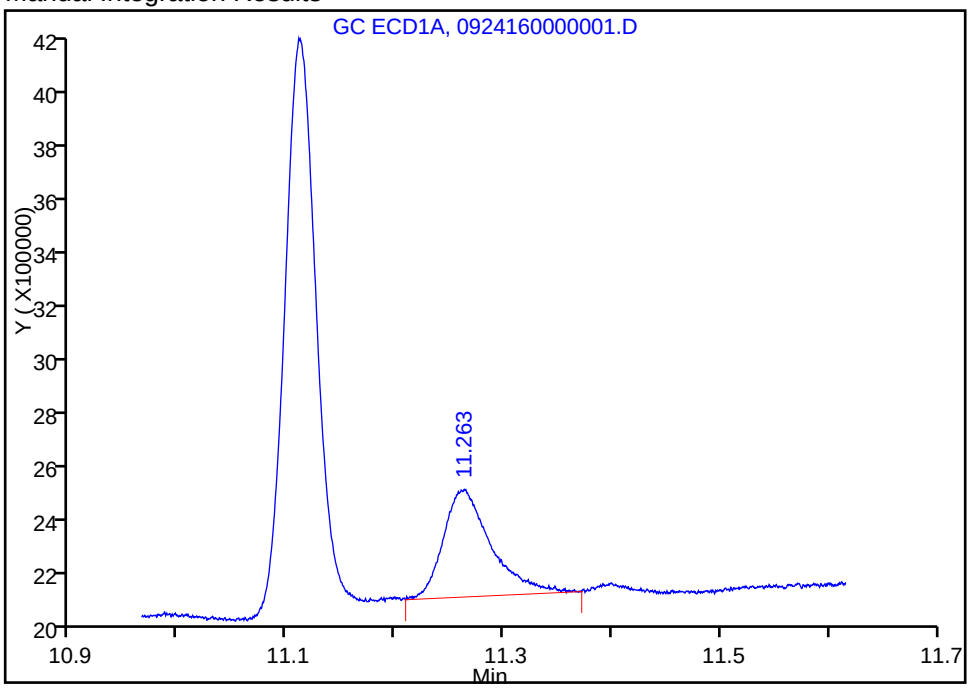
Processing Integration Results

RT: 11.26
Height: 23391
Amount: 0.012500
Amount Units: ng



Manual Integration Results

RT: 11.26
Height: 384919
Amount: 0.015329
Amount Units: ng



Reviewer: oravecj, 26-Sep-2016 06:01:49

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000002.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 24-Sep-2016 11:40:34 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013571-002
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 26-Sep-2016 06:25:25 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK053

First Level Reviewer: oravecj Date: 26-Sep-2016 06:03:00

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							M
1	2.244	2.246	-0.002	1892776H	0.0200	0.0213	
2	2.325	2.329	-0.004	2390322H	0.0200	0.0225	M
						RPD = 5.75	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.209	8.209	0.000	3842648H	0.0200	0.0213	
2	7.913	7.914	-0.001	4578313H	0.0200	0.0207	
						RPD = 2.70	
3 MCPP							
1	8.420	8.421	-0.001	1150087H	2.00	2.31	
2	8.335	8.335	0.000	1006876H	2.00	2.06	
						RPD = 11.56	
4 Dicamba							
1	8.509	8.509	0.000	4673655H	0.0100	0.0106	
2	8.174	8.175	-0.001	6092466H	0.0100	0.0105	
						RPD = 0.81	
5 MCPA							
1	8.846	8.846	0.000	1883324H	2.00	2.56	
2	8.639	8.638	0.001	1841932H	2.00	2.24	
						RPD = 13.46	
6 Dichlorprop							
1	9.125	9.128	-0.003	2413066H	0.0200	0.0216	
2	9.001	9.001	0.000	3065388H	0.0200	0.0214	
						RPD = 0.78	
7 2,4-D							
1	9.622	9.620	0.002	2527319H	0.0200	0.0202	
2	9.393	9.393	0.000	3139694H	0.0200	0.0201	
						RPD = 0.45	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.163	10.163	0.000	7367437H	0.005000	0.005190	
2	9.620	9.621	-0.001	9514112H	0.005000	0.005109	
						RPD = 1.57	
9 Silvex (2,4,5-TP)							
1	10.304	10.304	0.000	2874091H	0.005000	0.005083	
2	10.167	10.167	0.000	3696711H	0.005000	0.005092	
						RPD = 0.19	
10 2,4,5-T							
1	10.861	10.858	0.003	2074450H	0.005000	0.004453	
2	10.621	10.616	0.005	2501714H	0.005000	0.004360	
						RPD = 2.11	
11 Dinoseb							
1	11.111	11.111	0.000	3998477H	0.0200	0.0194	
2	11.671	11.672	-0.001	3937458H	0.0200	0.0197	
						RPD = 1.42	
12 2,4-DB							M
1	11.257	11.244	0.013	711293H	0.0200	0.0205	M
2	11.064	11.051	0.013	919446H	0.0200	0.0208	
						RPD = 1.76	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCHERBCALSL1_00020 Amount Added: 1.00 Units: mL

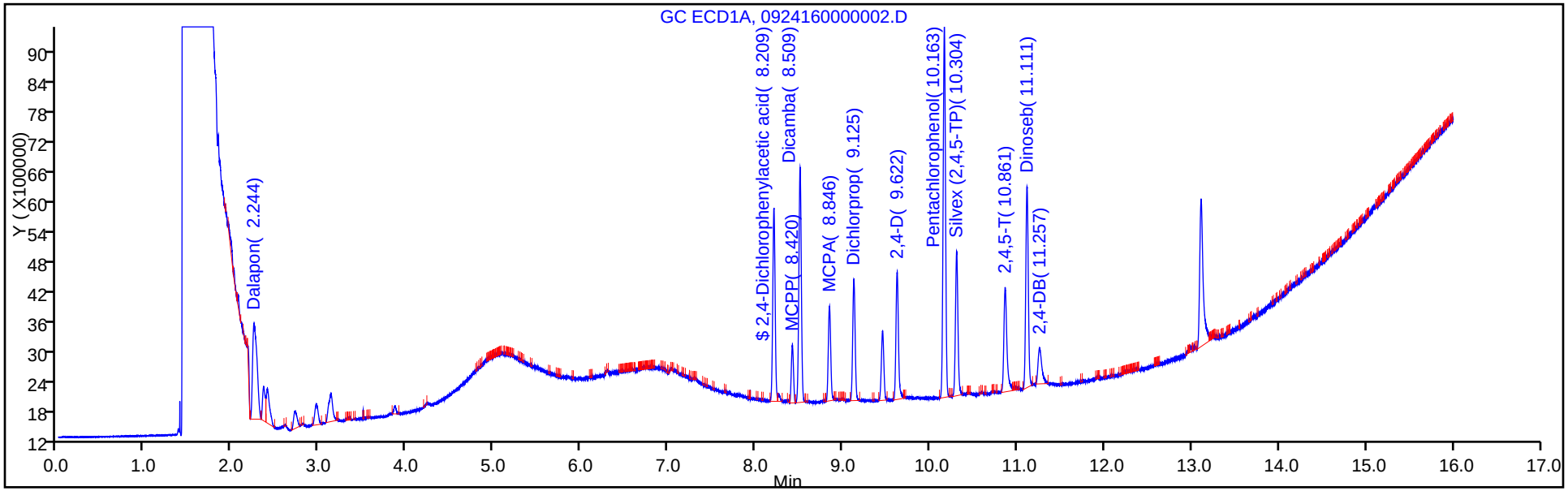
Report Date: 26-Sep-2016 06:25:25 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

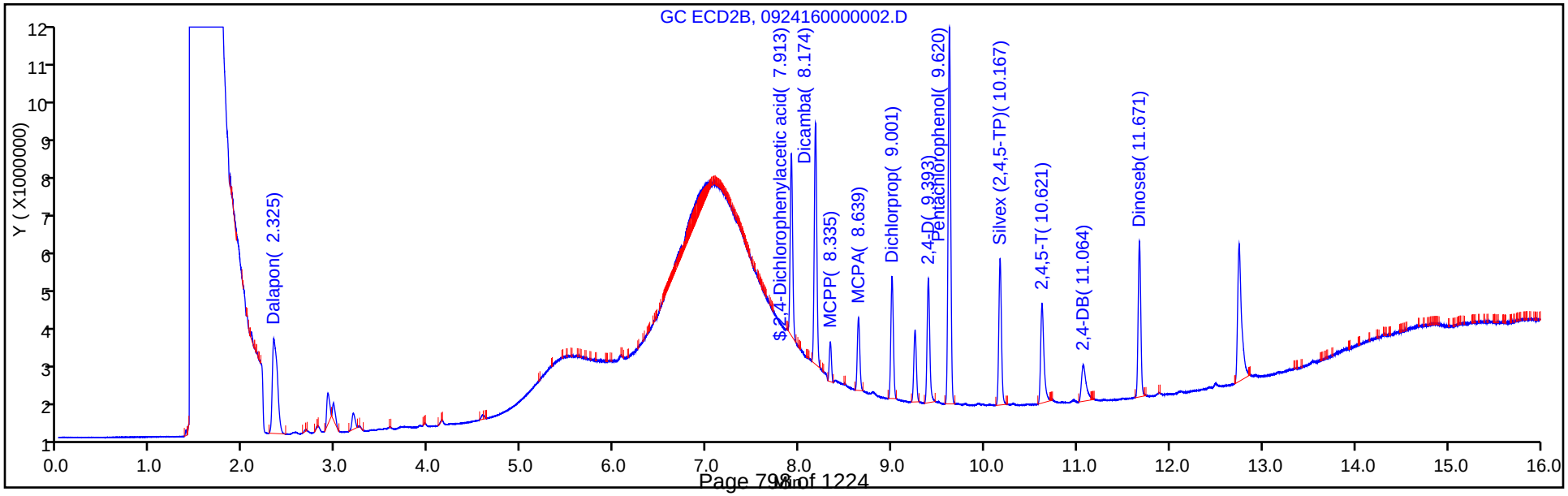
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000002.D

Injection Date:	24-Sep-2016 11:40:34	Instrument ID:	CGC1	Operator ID:	
Lims ID:	IC			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

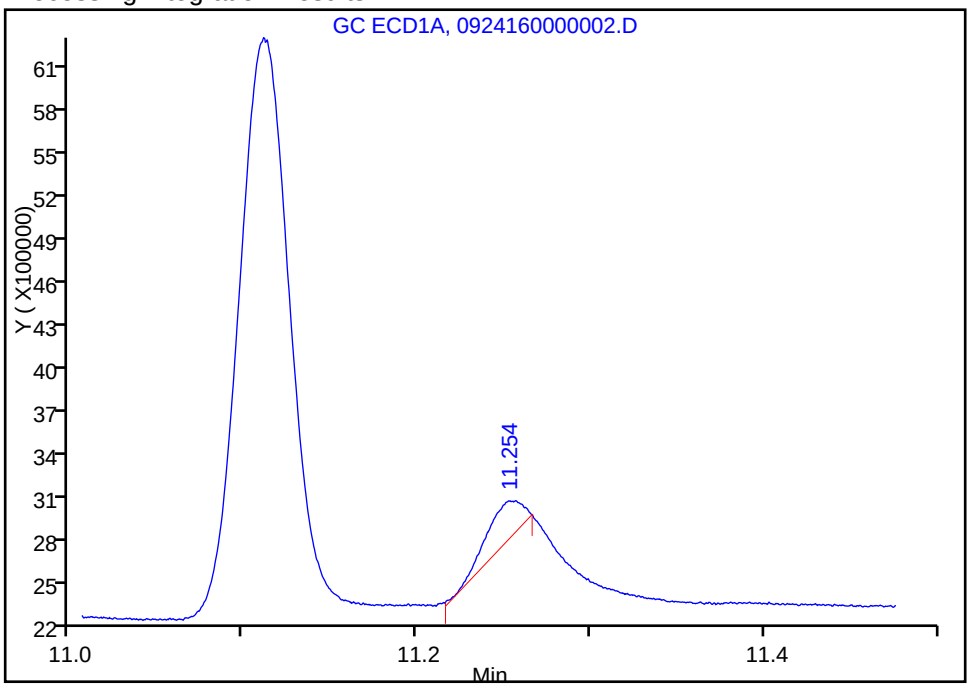
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000002.D
Injection Date: 24-Sep-2016 11:40:34 Instrument ID: CGC1
Lims ID: IC
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: Herbicides_CGC1 Limit Group: GCS 8151A ICAL
Column: RTX-50 (0.53 mm) Detector GC ECD1A

12 2,4-DB, CAS: 94-82-6

Signal: 1

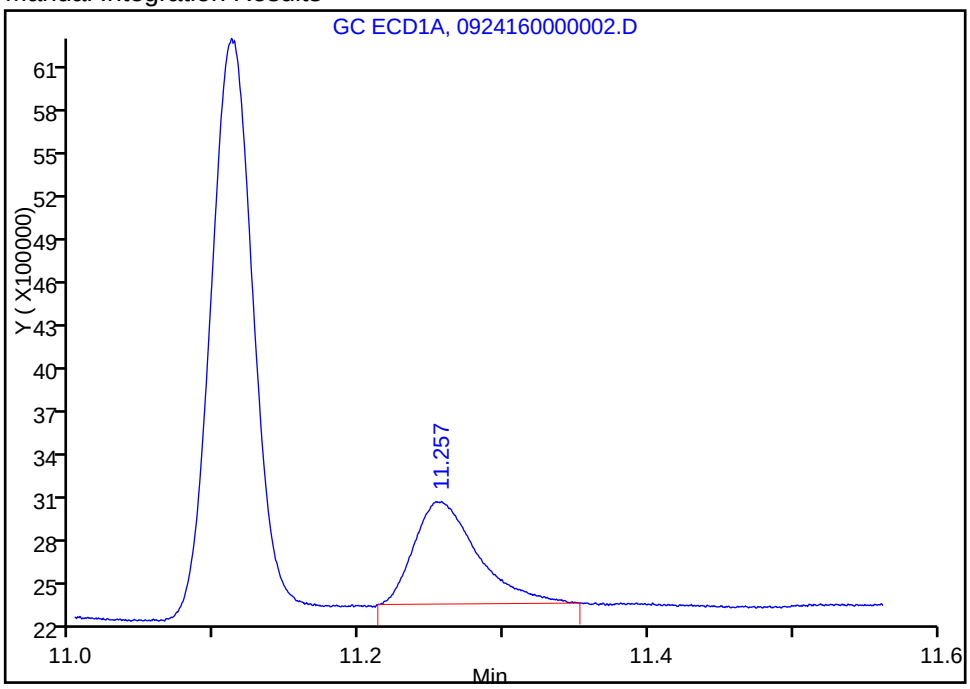
Processing Integration Results

RT: 11.25
Height: 255736
Amount: 0.012957
Amount Units: ng



Manual Integration Results

RT: 11.26
Height: 711293
Amount: 0.020454
Amount Units: ng



Reviewer: oravecj, 26-Sep-2016 06:03:00
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000003.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 24-Sep-2016 12:04:32 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013571-003
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 26-Sep-2016 06:25:22 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK053

First Level Reviewer: oravecj Date: 26-Sep-2016 06:03:36

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							M
1	2.248	2.246	0.002	3666591H	0.0400	0.0412	
2	2.333	2.329	0.004	4392025H	0.0400	0.0414	M
						RPD = 0.46	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.209	8.209	0.000	7454510H	0.0400	0.0412	
2	7.914	7.914	0.000	9023150H	0.0400	0.0408	
						RPD = 1.12	
3 MCPP							
1	8.421	8.421	0.000	2252280H	4.00	4.53	
2	8.335	8.335	0.000	2116758H	4.00	4.33	
						RPD = 4.48	
4 Dicamba							
1	8.509	8.509	0.000	9205400H	0.0200	0.0209	
2	8.175	8.175	0.000	12121572H	0.0200	0.0210	
						RPD = 0.20	
5 MCPA							
1	8.846	8.846	0.000	3486506H	4.00	4.74	
2	8.639	8.638	0.001	3536786H	4.00	4.29	
						RPD = 9.82	
6 Dichlorprop							
1	9.126	9.128	-0.002	4715065H	0.0400	0.0421	
2	9.002	9.001	0.001	6020448H	0.0400	0.0420	
						RPD = 0.26	
7 2,4-D							
1	9.622	9.620	0.002	5227797H	0.0400	0.0417	
2	9.393	9.393	0.000	6591888H	0.0400	0.0421	
						RPD = 1.04	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.164	10.163	0.001	14712064H	0.0100	0.0104	
2	9.621	9.621	0.000	19459044H	0.0100	0.0105	
						RPD = 0.83	
9 Silvex (2,4,5-TP)							
1	10.305	10.304	0.001	5882018H	0.0100	0.0104	
2	10.169	10.167	0.002	7627194H	0.0100	0.0105	
						RPD = 1.00	
10 2,4,5-T							
1	10.859	10.858	0.001	4799509H	0.0100	0.0103	
2	10.618	10.616	0.002	5887144H	0.0100	0.0103	
						RPD = 0.42	
11 Dinoseb							
1	11.112	11.111	0.001	8606055H	0.0400	0.0418	
2	11.672	11.672	0.000	8209312H	0.0400	0.0410	
						RPD = 1.77	
12 2,4-DB							
1	11.249	11.244	0.005	1903054H	0.0400	0.0392	
2	11.059	11.051	0.008	2243284H	0.0400	0.0378	
						RPD = 3.68	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCHERBCALSL2_00019 Amount Added: 1.00 Units: mL

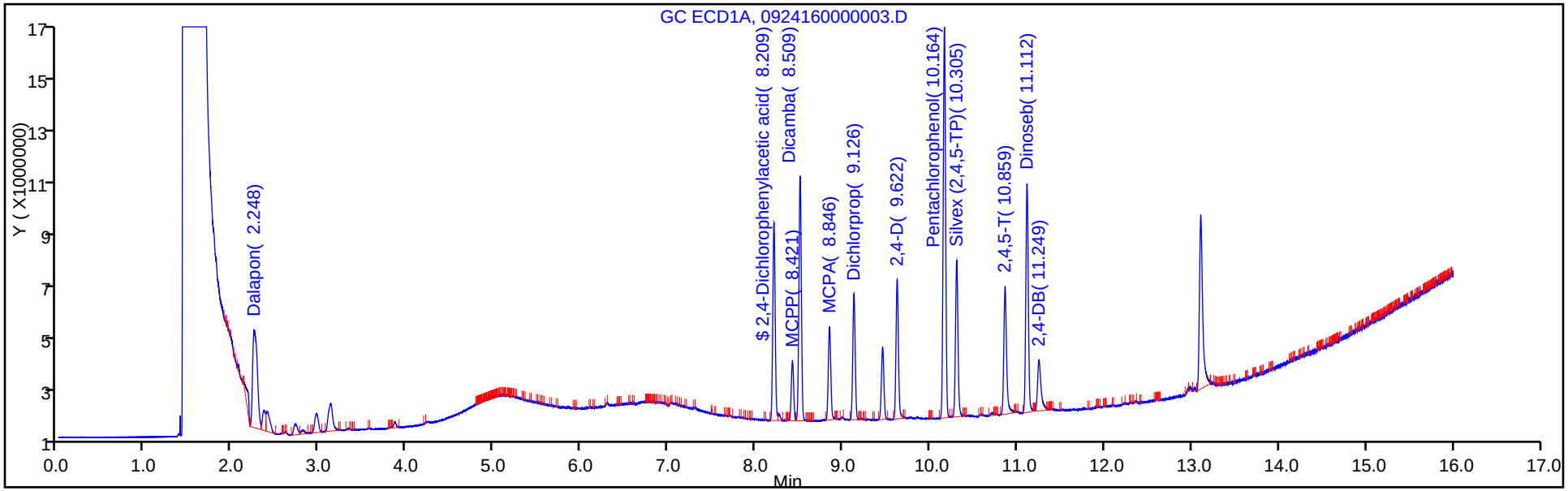
Report Date: 26-Sep-2016 06:25:23 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

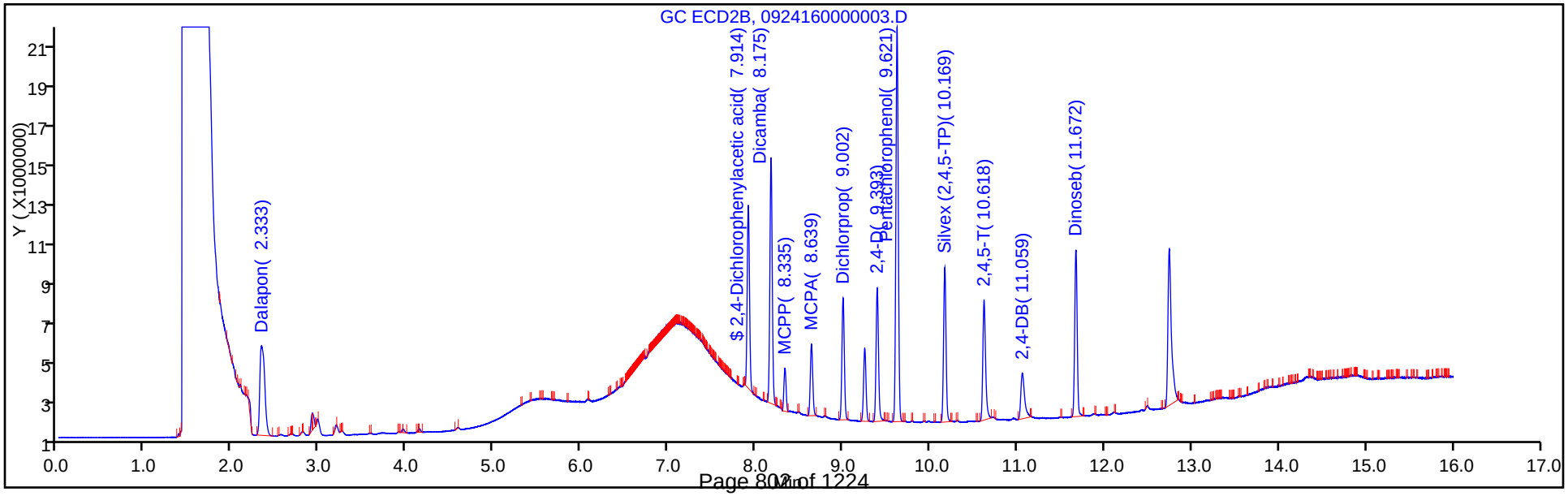
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000003.D

Injection Date:	24-Sep-2016 12:04:32	Instrument ID:	CGC1	Operator ID:	
Lims ID:	IC			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000004.D
Lims ID: ICRT
Client ID:
Sample Type: ICRT Calib Level: 3
Inject. Date: 24-Sep-2016 12:28:26 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013571-004
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 26-Sep-2016 06:25:20 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK053

First Level Reviewer: oravecj Date: 26-Sep-2016 06:04:01

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							
1	2.246	2.246	0.000	7072104H	0.0800	0.0795	
2	2.329	2.329	0.000	8376588H	0.0800	0.0790	
						RPD = 0.66	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.209	8.209	0.000	14084720H	0.0800	0.0779	
2	7.914	7.914	0.000	17378222H	0.0800	0.0786	
						RPD = 0.79	
3 MCPP							
1	8.421	8.421	0.000	4023034H	8.00	8.08	
2	8.335	8.335	0.000	4102498H	8.00	8.39	
						RPD = 3.68	
4 Dicamba							
1	8.509	8.509	0.000	17403370H	0.0400	0.0396	
2	8.175	8.175	0.000	23149492H	0.0400	0.0401	
						RPD = 1.21	
5 MCPA							
1	8.846	8.846	0.000	6022144H	8.00	8.18	
2	8.638	8.638	0.000	6418961H	8.00	7.79	
						RPD = 4.88	
6 Dichlorprop							
1	9.128	9.128	0.000	8980181H	0.0800	0.0802	
2	9.001	9.001	0.000	11405009H	0.0800	0.0796	
						RPD = 0.80	
7 2,4-D							
1	9.620	9.620	0.000	10101721H	0.0800	0.0806	
2	9.393	9.393	0.000	12666443H	0.0800	0.0810	
						RPD = 0.48	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.163	10.163	0.000	28870308H	0.0200	0.0203	
2	9.621	9.621	0.000	38092615H	0.0200	0.0205	
						RPD = 0.58	
9 Silvex (2,4,5-TP)							
1	10.304	10.304	0.000	11676225H	0.0200	0.0206	
2	10.167	10.167	0.000	14902656H	0.0200	0.0205	
						RPD = 0.59	
10 2,4,5-T							
1	10.858	10.858	0.000	9926743H	0.0200	0.0213	
2	10.616	10.616	0.000	12351953H	0.0200	0.0215	
						RPD = 1.02	
11 Dinoseb							
1	11.111	11.111	0.000	16967220H	0.0800	0.0824	
2	11.672	11.672	0.000	16305843H	0.0800	0.0815	
						RPD = 1.02	
12 2,4-DB							
1	11.244	11.244	0.000	4263853H	0.0800	0.0762	
2	11.051	11.051	0.000	5172319H	0.0800	0.0752	
						RPD = 1.34	

Reagents:

GCHERBCALSL3_00021 Amount Added: 1.00 Units: mL

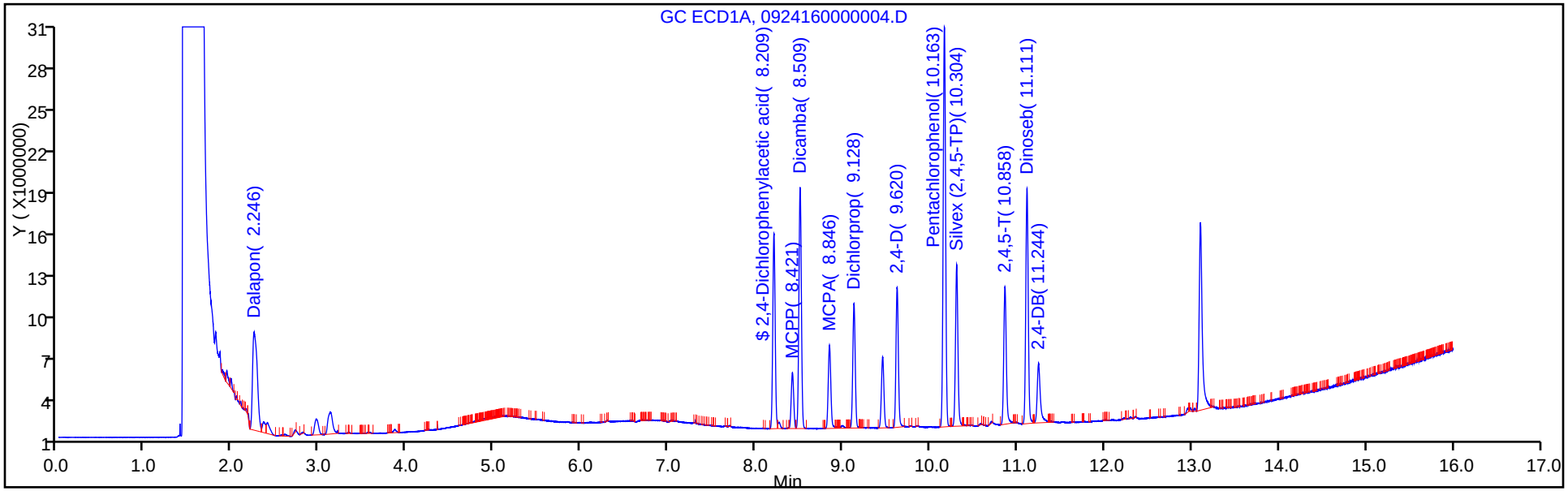
Report Date: 26-Sep-2016 06:25:20 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

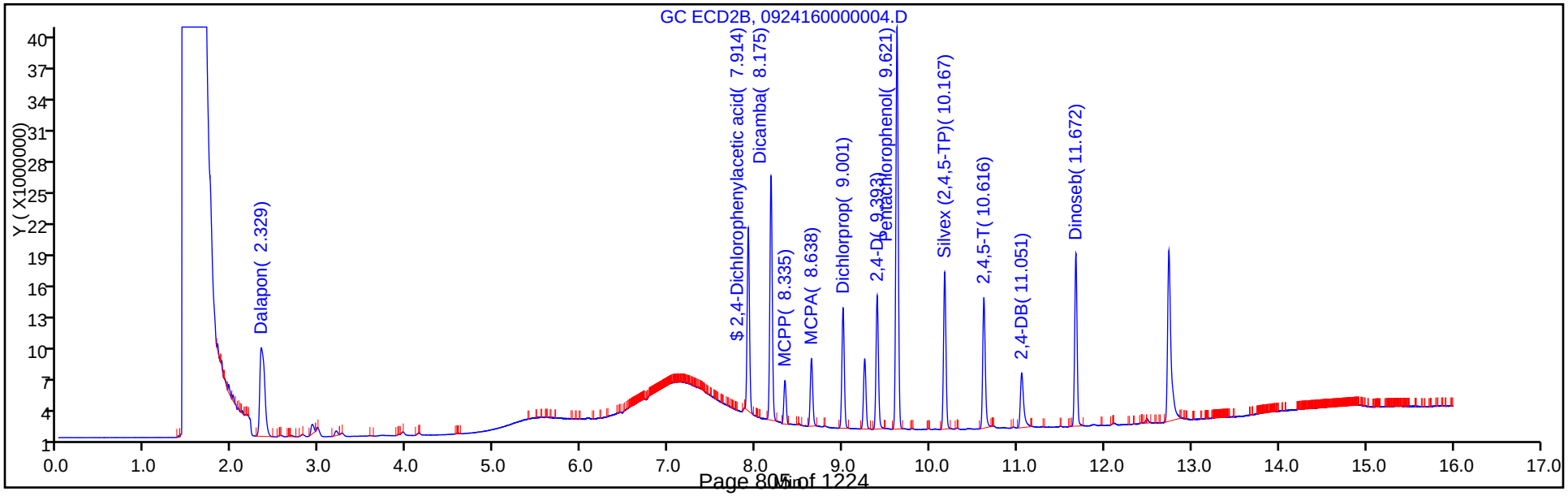
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000004.D

Injection Date:	24-Sep-2016 12:28:26	Instrument ID:	CGC1	Operator ID:	
Lims ID:	ICRT			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000005.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 24-Sep-2016 12:52:18 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013571-005
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 26-Sep-2016 06:25:17 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK053

First Level Reviewer: oravecj Date: 26-Sep-2016 06:04:38

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							M
1	2.244	2.244	0.000	14025169H	0.1600	0.1577	
2	2.328	2.328	0.000	16128319H	0.1600	0.1521	M
						RPD = 3.62	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.209	8.209	0.000	27543899H	0.1600	0.1524	
2	7.914	7.914	0.000	34882922H	0.1600	0.1577	
						RPD = 3.40	
3 MCPP							
1	8.421	8.421	0.000	7153310H	16.0	14.4	
2	8.335	8.335	0.000	8005367H	16.0	16.4	
						RPD = 12.96	
4 Dicamba							
1	8.509	8.509	0.000	34343657H	0.0800	0.0781	
2	8.176	8.176	0.000	45142982H	0.0800	0.0782	
						RPD = 0.02	
5 MCPA							
1	8.847	8.847	0.000	10581831H	16.0	14.4	
2	8.638	8.638	0.000	12118225H	16.0	14.7	
						RPD = 2.29	
6 Dichlorprop							
1	9.127	9.127	0.000	17044441H	0.1600	0.1523	
2	9.001	9.001	0.000	21924799H	0.1600	0.1530	
						RPD = 0.48	
7 2,4-D							
1	9.622	9.622	0.000	19965915H	0.1600	0.1593	
2	9.393	9.393	0.000	24714434H	0.1600	0.1580	
						RPD = 0.81	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.162	10.162	0.000	56392093H	0.0400	0.0397	
2	9.620	9.620	0.000	74068269H	0.0400	0.0398	
						RPD = 0.13	
9 Silvex (2,4,5-TP)							
1	10.304	10.304	0.000	22607043H	0.0400	0.0400	
2	10.168	10.168	0.000	29109925H	0.0400	0.0401	
						RPD = 0.30	
10 2,4,5-T							
1	10.857	10.857	0.000	19930928H	0.0400	0.0428	
2	10.616	10.616	0.000	25124847H	0.0400	0.0438	
						RPD = 2.32	
11 Dinoseb							
1	11.110	11.110	0.000	33296908H	0.1600	0.1616	
2	11.671	11.671	0.000	32238060H	0.1600	0.1612	
						RPD = 0.28	
12 2,4-DB							
1	11.241	11.241	0.000	9335024H	0.1600	0.1559	
2	11.047	11.047	0.000	11615612H	0.1600	0.1577	
						RPD = 1.14	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCHERBCALSL4_00019 Amount Added: 1.00 Units: mL

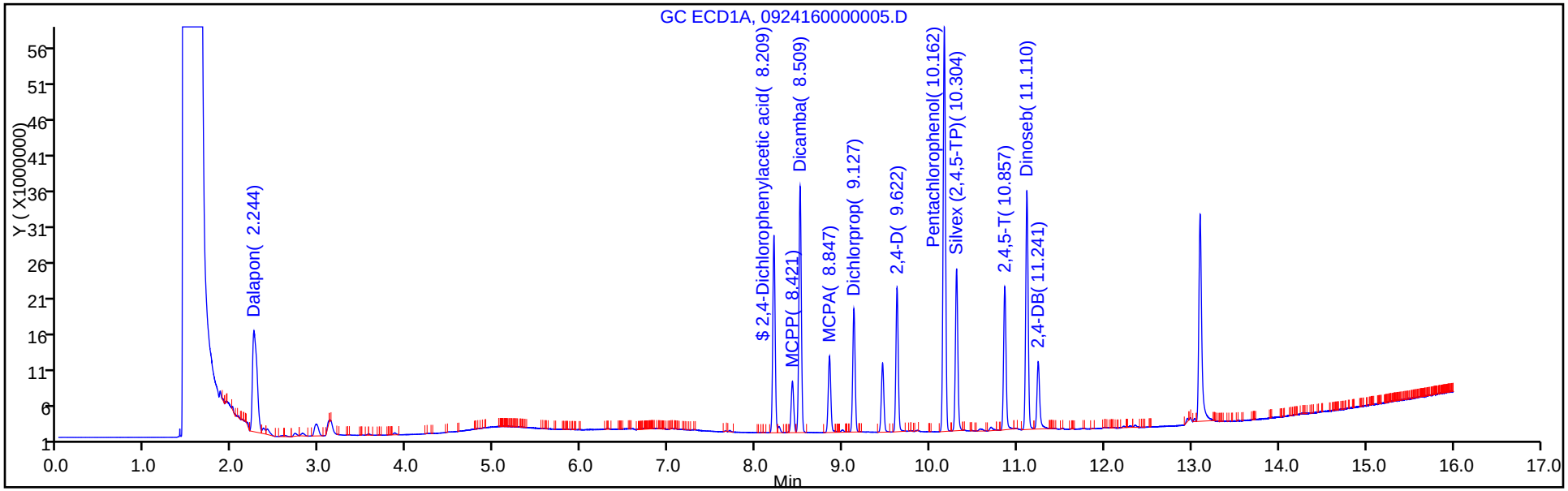
Report Date: 26-Sep-2016 06:25:17 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

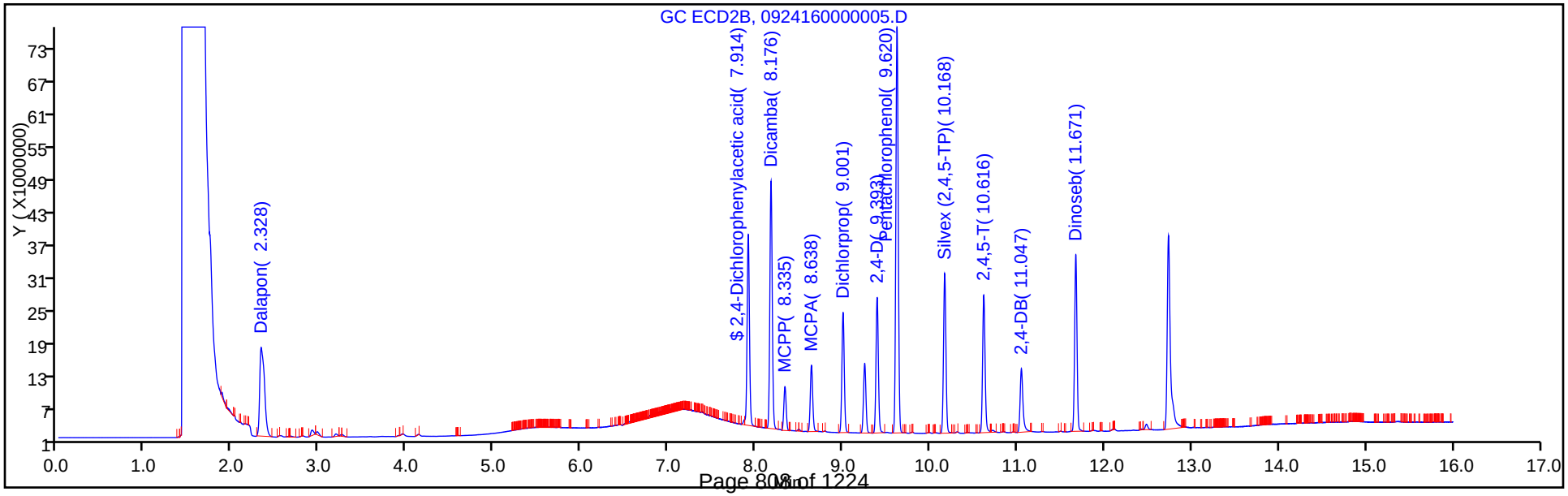
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000005.D

Injection Date:	24-Sep-2016 12:52:18	Instrument ID:	CGC1	Operator ID:	
Lims ID:	IC			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000006.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 24-Sep-2016 13:16:19 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013571-006
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 26-Sep-2016 06:25:14 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK053

First Level Reviewer: oravecj Date: 26-Sep-2016 06:05:29

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							M
1	2.244	2.248	-0.004	26369400H	0.3200	0.2965	
2	2.327	2.334	-0.007	30240184H	0.3200	0.2852	M
						RPD = 3.89	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.209	8.213	-0.004	54333430H	0.3200	0.3006	
2	7.914	7.918	-0.004	68539928H	0.3200	0.3098	
						RPD = 3.01	
3 MCPP							M
1	8.423	8.424	-0.001	13068431H	32.0	26.3	
2	8.336	8.337	-0.001	15412911H	32.0	31.5	M
						RPD = 18.17	
4 Dicamba							M
1	8.510	8.512	-0.002	65043895H	0.1600	0.1480	
2	8.176	8.178	-0.002	87007198H	0.1600	0.1506	M
						RPD = 1.77	
5 MCPA							
1	8.846	8.849	-0.003	19648061H	32.0	26.7	
2	8.640	8.642	-0.002	23061877H	32.0	28.0	
						RPD = 4.76	
6 Dichlorprop							
1	9.127	9.130	-0.003	32557425H	0.3200	0.2909	
2	9.002	9.005	-0.003	41983323H	0.3200	0.2930	
						RPD = 0.72	
7 2,4-D							
1	9.622	9.624	-0.002	39002201H	0.3200	0.3111	
2	9.392	9.395	-0.003	48887189H	0.3200	0.3125	
						RPD = 0.45	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.165	10.167	-0.002	108260537H	0.0800	0.0763	
2	9.621	9.623	-0.002	142305116H	0.0800	0.0764	
						RPD = 0.20	
9 Silvex (2,4,5-TP)							
1	10.305	10.309	-0.004	43653083H	0.0800	0.0772	
2	10.168	10.170	-0.002	55796766H	0.0800	0.0769	
						RPD = 0.44	
10 2,4,5-T							
1	10.857	10.861	-0.004	39775758H	0.0800	0.0854	
2	10.614	10.621	-0.007	49617286H	0.0800	0.0865	
						RPD = 1.27	
11 Dinoseb							
1	11.111	11.114	-0.003	64489557H	0.3200	0.3130	
2	11.672	11.674	-0.002	63104549H	0.3200	0.3155	
						RPD = 0.78	
12 2,4-DB							
1	11.239	11.246	-0.007	20062269H	0.3200	0.3243	
2	11.046	11.053	-0.007	25211812H	0.3200	0.3316	
						RPD = 2.22	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCHERBCALSL5_00019 Amount Added: 1.00 Units: mL

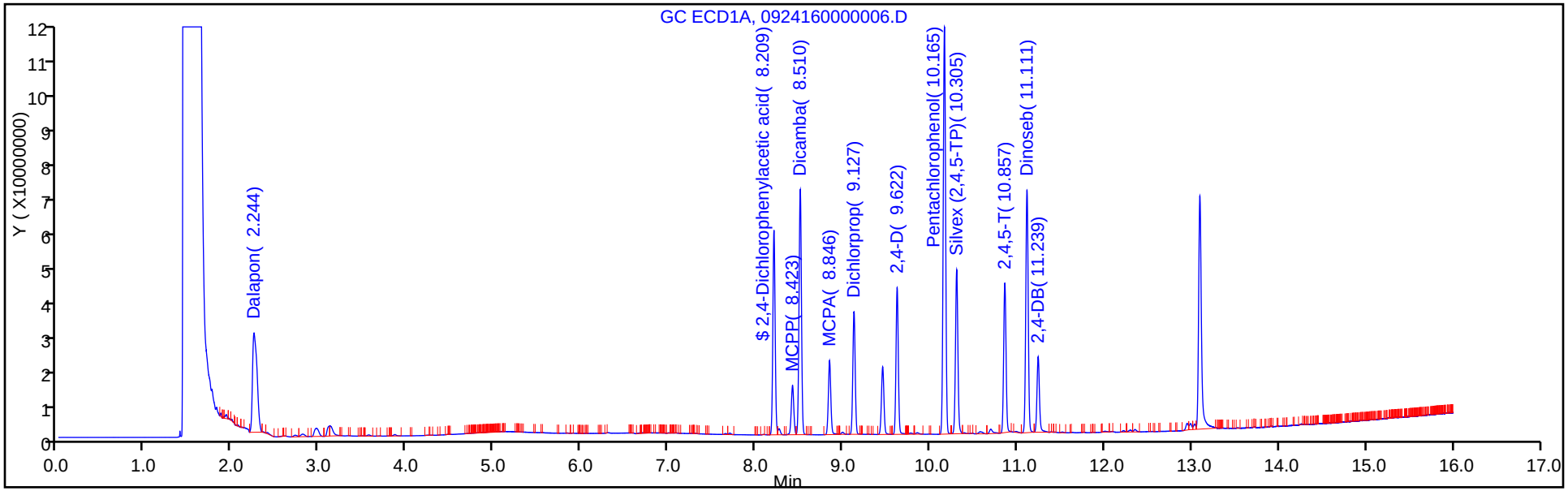
Report Date: 26-Sep-2016 06:25:15 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

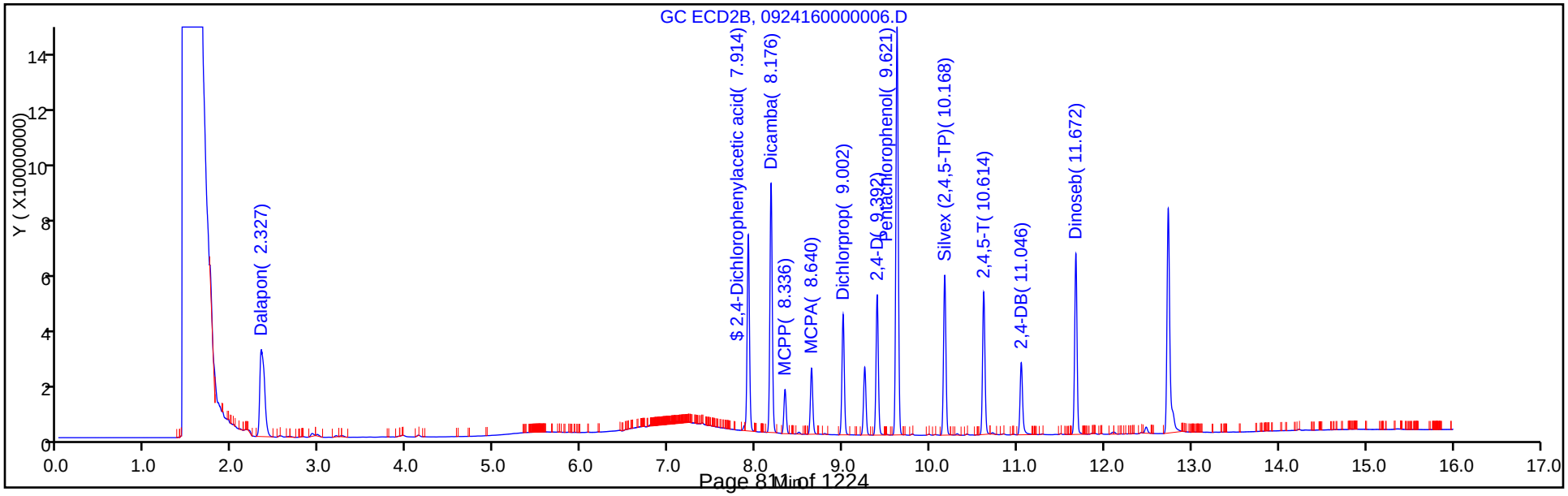
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000006.D

Injection Date:	24-Sep-2016 13:16:19	Instrument ID:	CGC1	Operator ID:	
Lims ID:	IC			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 24-Sep-2016 13:40:10 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013571-007
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 26-Sep-2016 06:25:11 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK053

First Level Reviewer: oravecj Date: 26-Sep-2016 06:05:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							
1	2.246	2.248	-0.002	52066930H	0.6400	0.5855	
2	2.330	2.334	-0.004	57487463H	0.6400	0.5422	
						RPD = 7.68	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.208	8.213	-0.005	105695986H	0.6400	0.5849	
2	7.914	7.918	-0.004	133735776H	0.6400	0.6045	
						RPD = 3.31	
3 MCPP							
1	8.422	8.424	-0.002	24733568H	64.0	49.7	
2	8.336	8.337	-0.001	30043496H	64.0	61.4	
						RPD = 21.09	
4 Dicamba							
1	8.510	8.512	-0.002	125328762H	0.3200	0.2852	
2	8.176	8.178	-0.002	167682899H	0.3200	0.2903	
						RPD = 1.79	
5 MCPA							
1	8.848	8.849	-0.001	36856499H	64.0	50.1	
2	8.639	8.642	-0.003	45304090H	64.0	55.0	
						RPD = 9.37	
6 Dichlorprop							
1	9.127	9.130	-0.003	62732376H	0.6400	0.5606	
2	9.002	9.005	-0.003	81168680H	0.6400	0.5666	
						RPD = 1.06	
7 2,4-D							
1	9.621	9.624	-0.003	76127964H	0.6400	0.6072	
2	9.391	9.395	-0.004	95803537H	0.6400	0.6124	
						RPD = 0.84	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.165	10.167	-0.002	207405218H	0.1600	0.1461	
2	9.620	9.623	-0.003	275920024H	0.1600	0.1482	
						RPD = 1.41	
9 Silvex (2,4,5-TP)							
1	10.304	10.309	-0.005	82563159H	0.1600	0.1460	
2	10.167	10.170	-0.003	106529098H	0.1600	0.1467	
						RPD = 0.50	
10 2,4,5-T							
1	10.856	10.861	-0.005	79753088H	0.1600	0.1712	
2	10.614	10.621	-0.007	98277038H	0.1600	0.1713	
						RPD = 0.04	
11 Dinoseb							
1	11.111	11.114	-0.003	128112325H	0.6400	0.6219	
2	11.671	11.674	-0.003	125634821H	0.6400	0.6281	
						RPD = 1.00	
12 2,4-DB							
1	11.237	11.246	-0.009	42499601H	0.6400	0.6767	
2	11.043	11.053	-0.010	51984937H	0.6400	0.6741	
						RPD = 0.38	

Reagents:

GCHERBCALSL6_00006 Amount Added: 1.00 Units: mL

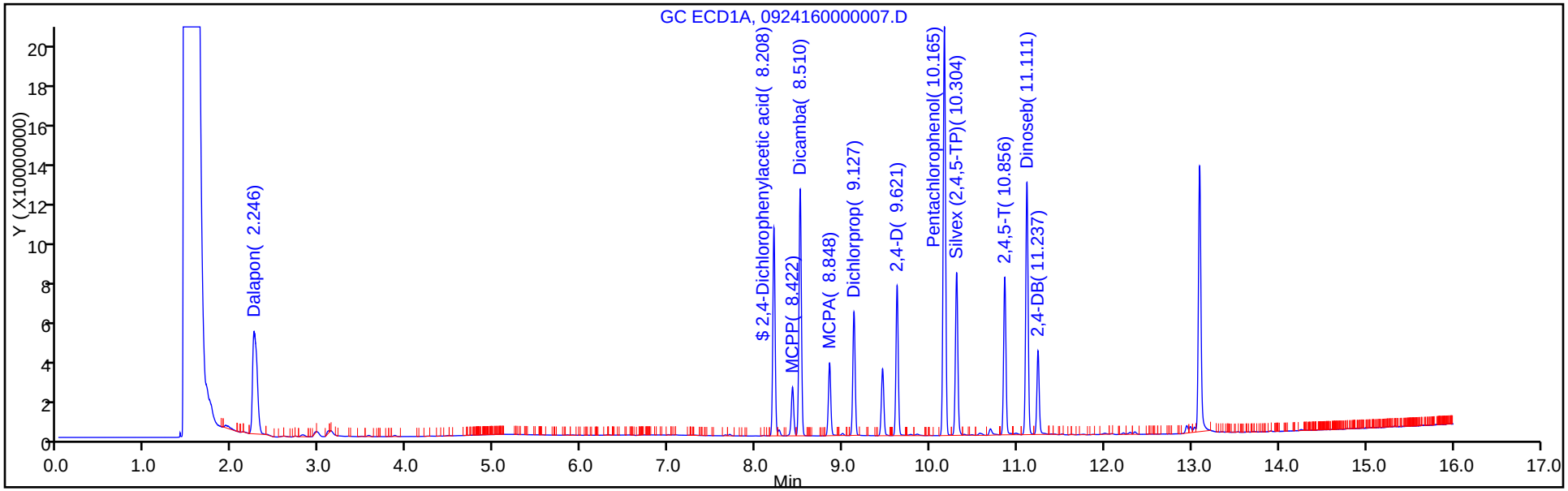
Report Date: 26-Sep-2016 06:25:12 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

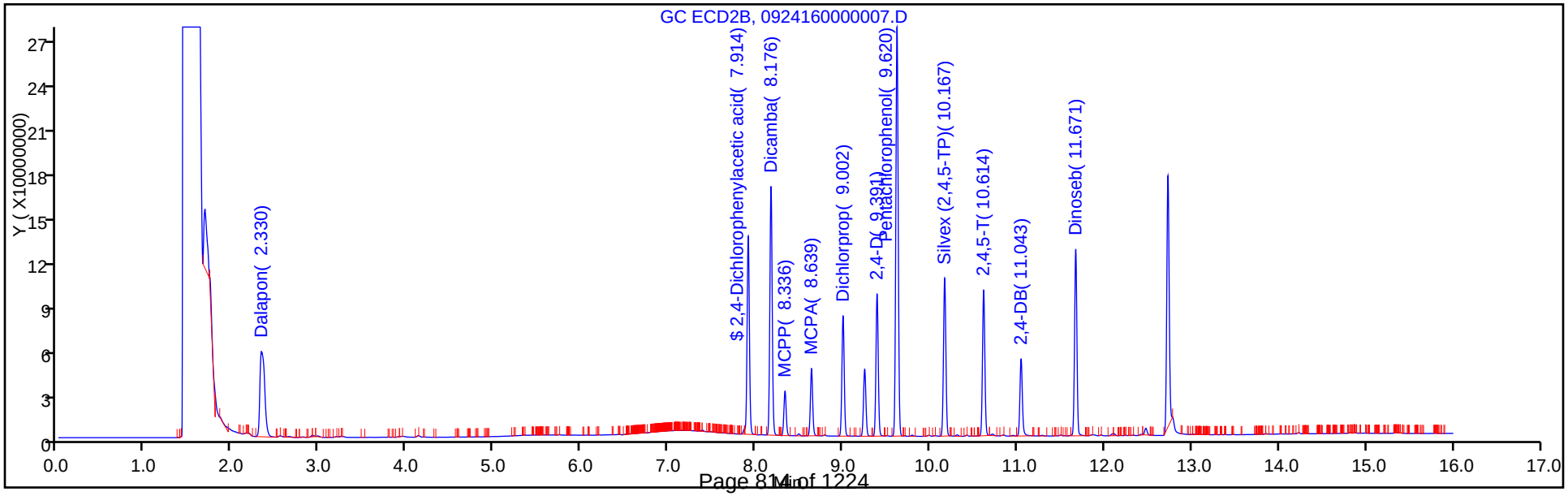
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Injection Date:	24-Sep-2016 13:40:10	Instrument ID:	CGC1	Operator ID:	
Lims ID:	IC			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



FORM VI
HERBICIDES BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189048

SDG No.:

Instrument ID: CGC1 GC Column: RTX-1701 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/24/2016 11:16 Calibration End Date: 09/24/2016 13:40 Calibration ID: 32962

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-189048/1	0924160000001.D
Level 2	IC 180-189048/2	0924160000002.D
Level 3	IC 180-189048/3	0924160000003.D
Level 4	ICRT 180-189048/4	0924160000004.D
Level 5	IC 180-189048/5	0924160000005.D
Level 6	IC 180-189048/6	0924160000006.D
Level 7	IC 180-189048/7	0924160000007.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
Dalapon	2.327	2.325	2.333	2.329	2.328	2.327	2.330				2.299 - 2.359	2.328
Dicamba	8.175	8.174	8.175	8.175	8.176	8.176	8.176				8.145 - 8.205	8.175
MCPP	8.336	8.335	8.335	8.335	8.335	8.336	8.336				8.305 - 8.365	8.335
MCPA	8.639	8.639	8.639	8.638	8.638	8.640	8.639				8.608 - 8.668	8.639
Dichlorprop	9.001	9.001	9.002	9.001	9.001	9.002	9.002				8.971 - 9.031	9.001
2,4-D	9.394	9.393	9.393	9.393	9.393	9.392	9.391				9.363 - 9.423	9.393
Pentachlorophenol	9.621	9.620	9.621	9.621	9.620	9.621	9.620				9.591 - 9.651	9.621
Silvex (2,4,5-TP)	10.167	10.167	10.169	10.167	10.168	10.168	10.167				10.137 - 10.197	10.168
2,4,5-T	10.624	10.621	10.618	10.616	10.616	10.614	10.614				10.586 - 10.646	10.618
2,4-DB	+++++	11.064	11.059	11.051	11.047	11.046	11.043				11.021 - 11.081	11.052
Dinoseb	11.672	11.671	11.672	11.672	11.671	11.672	11.671				11.642 - 11.702	11.672
2,4-Dichlorophenylacetic acid	7.914	7.913	7.914	7.914	7.914	7.914	7.914				7.884 - 7.944	7.914

FORM VI
HERBICIDES BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189048

SDG No.:

Instrument ID: CGC1 GC Column: RTX-1701 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/24/2016 11:16 Calibration End Date: 09/24/2016 13:40 Calibration ID: 32962

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-189048/1	0924160000001.D
Level 2	IC 180-189048/2	0924160000002.D
Level 3	IC 180-189048/3	0924160000003.D
Level 4	ICRT 180-189048/4	0924160000004.D
Level 5	IC 180-189048/5	0924160000005.D
Level 6	IC 180-189048/6	0924160000006.D
Level 7	IC 180-189048/7	0924160000007.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4		B	M1	M2								
Dalapon	123079300 100801994	119516100 94500575	109800625 89824161	104707350	Ave		106032872				11.6		20.0			
Dicamba	616950000 564287275	609246600 543794988	606078600 524009059	578737300	Ave		577586260				6.1		20.0			
MCPP	426921 500335	503438 481653	529190 469430	512812	Ave		489111.326				6.9		20.0			
MCPA	974435 757389	920966 720684	884197 707876	802370	Ave		823988.107				12.6		20.0			
Dichlorprop	161447400 137029994	153269400 131197884	150511200 126826063	142562613	Ave		143263508				8.7		20.0			
2,4-D	158106700 154465213	156984700 152772466	164797200 149693027	158330538	Ave		156449977				3.1		20.0			
Pentachlorophenol	1926116800 1851706725	1902822400 1778813950	1945904400 1724500150	1904630750	Ave		1862070739				4.4		20.0			
Silvex (2,4,5-TP)	743442800 727748125	739342200 697459575	762719400 665806863	745132800	Ave		725950252				4.6		20.0			
2,4,5-T	447432400 628121175	500342800 620216075	588714400 614231488	617597650	Ave		573807998				12.4		20.0			
2,4-DB	+++++ 72597575	45972300 78786913	56082100 81226464	64653988	Lin2	-707778.48	78165213.8							0.9960		0.9900
Dinoseb	199173500 201487875	196872900 197201716	205232800 196304408	203823038	Ave		200013748				1.8		20.0			
2,4-Dichlorophenylacetic acid	235638100 218018263	228915650 214187275	225578750 208962150	217227775	Ave		221218280				4.2		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HERBICIDES BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1 Analy Batch No.: 189048

SDG No.:

Instrument ID: CGC1 GC Column: RTX-1701 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/24/2016 11:16 Calibration End Date: 09/24/2016 13:40 Calibration ID: 32962

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-189048/1	0924160000001.D
Level 2	IC 180-189048/2	0924160000002.D
Level 3	IC 180-189048/3	0924160000003.D
Level 4	ICRT 180-189048/4	0924160000004.D
Level 5	IC 180-189048/5	0924160000005.D
Level 6	IC 180-189048/6	0924160000006.D
Level 7	IC 180-189048/7	0924160000007.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dalapon	Ave	1230793 30240184	2390322 57487463	4392025	8376588	16128319	0.0100 0.320	0.0200 0.640	0.0400	0.0800	0.160
Dicamba	Ave	3084750 87007198	6092466 167682899	12121572	23149492	45142982	0.00500 0.160	0.0100 0.320	0.0200	0.0400	0.0800
MCPP	Ave	426921 15412911	1006876 30043496	2116758	4102498	8005367	1.00 32.0	2.00 64.0	4.00	8.00	16.0
MCPA	Ave	974435 23061877	1841932 45304090	3536786	6418961	12118225	1.00 32.0	2.00 64.0	4.00	8.00	16.0
Dichlorprop	Ave	1614474 41983323	3065388 81168680	6020448	11405009	21924799	0.0100 0.320	0.0200 0.640	0.0400	0.0800	0.160
2,4-D	Ave	1581067 48887189	3139694 95803537	6591888	12666443	24714434	0.0100 0.320	0.0200 0.640	0.0400	0.0800	0.160
Pentachlorophenol	Ave	4815292 142305116	9514112 275920024	19459044	38092615	74068269	0.00250 0.0800	0.00500 0.160	0.0100	0.0200	0.0400
Silvex (2,4,5-TP)	Ave	1858607 55796766	3696711 106529098	7627194	14902656	29109925	0.00250 0.0800	0.00500 0.160	0.0100	0.0200	0.0400
2,4,5-T	Ave	1118581 49617286	2501714 98277038	5887144	12351953	25124847	0.00250 0.0800	0.00500 0.160	0.0100	0.0200	0.0400
2,4-DB	Lin2	+++++ 25211812	919446 51984937	2243284	5172319	11615612	+++++ 0.320	0.0200 0.640	0.0400	0.0800	0.160
Dinoseb	Ave	1991735 63104549	3937458 125634821	8209312	16305843	32238060	0.0100 0.320	0.0200 0.640	0.0400	0.0800	0.160
2,4-Dichlorophenylacetic acid	Ave	2356381 68539928	4578313 133735776	9023150	17378222	34882922	0.0100 0.320	0.0200 0.640	0.0400	0.0800	0.160

Curve Type Legend:

Ave = Average by Height
Lin2 = Linear 1/conc^2 by height

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000001.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 24-Sep-2016 11:16:42 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013571-001
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 26-Sep-2016 06:28:32 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK053

First Level Reviewer: oravecj Date: 26-Sep-2016 06:28:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							M
1	2.245	2.246	-0.001	963960H	0.0100	0.0108	M
2	2.327	2.329	-0.002	1230793H	0.0100	0.0116	
						RPD = 6.84	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.208	8.209	-0.001	2034027H	0.0100	0.0113	
2	7.914	7.914	0.000	2356381H	0.0100	0.0107	
						RPD = 5.51	
3 MCPP							
1	8.421	8.421	0.000	600361H	1.00	1.21	
2	8.336	8.335	0.001	426921H	1.00	0.8729	
						RPD = 32.09	
4 Dicamba							
1	8.510	8.509	0.001	2431553H	0.005000	0.005533	
2	8.175	8.175	0.000	3084750H	0.005000	0.005341	
						RPD = 3.53	
5 MCPA							
1	8.845	8.846	-0.001	1043550H	1.00	1.42	
2	8.639	8.638	0.001	974435H	1.00	1.18	
						RPD = 18.07	
6 Dichlorprop							
1	9.127	9.128	-0.001	1262651H	0.0100	0.0113	
2	9.001	9.001	0.000	1614474H	0.0100	0.0113	
						RPD = 0.12	
7 2,4-D							
1	9.622	9.620	0.002	1286574H	0.0100	0.0103	
2	9.394	9.393	0.001	1581067H	0.0100	0.0101	
						RPD = 1.53	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.162	10.163	-0.001	3722381H	0.002500	0.002622	
2	9.621	9.621	0.000	4815292H	0.002500	0.002586	
						RPD = 1.40	
9 Silvex (2,4,5-TP)							
1	10.304	10.304	0.000	1461292H	0.002500	0.002584	
2	10.167	10.167	0.000	1858607H	0.002500	0.002560	
						RPD = 0.93	
10 2,4,5-T							
1	10.864	10.858	0.006	939743H	0.002500	0.002017	
2	10.624	10.616	0.008	1118581H	0.002500	0.001949	
						RPD = 3.42	
11 Dinoseb							
1	11.110	11.111	-0.001	2050882H	0.0100	0.0100	
2	11.672	11.672	0.000	1991735H	0.0100	0.0100	
						RPD = 0.03	
12 2,4-DB							M
1	11.263	11.244	0.019	384919H	0.0100	0.0153	M
2	11.070	11.051	0.019	476352H	0.0100	0.0151	M
						RPD = 1.18	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCHERBCALSL7_00003 Amount Added: 1.00 Units: mL

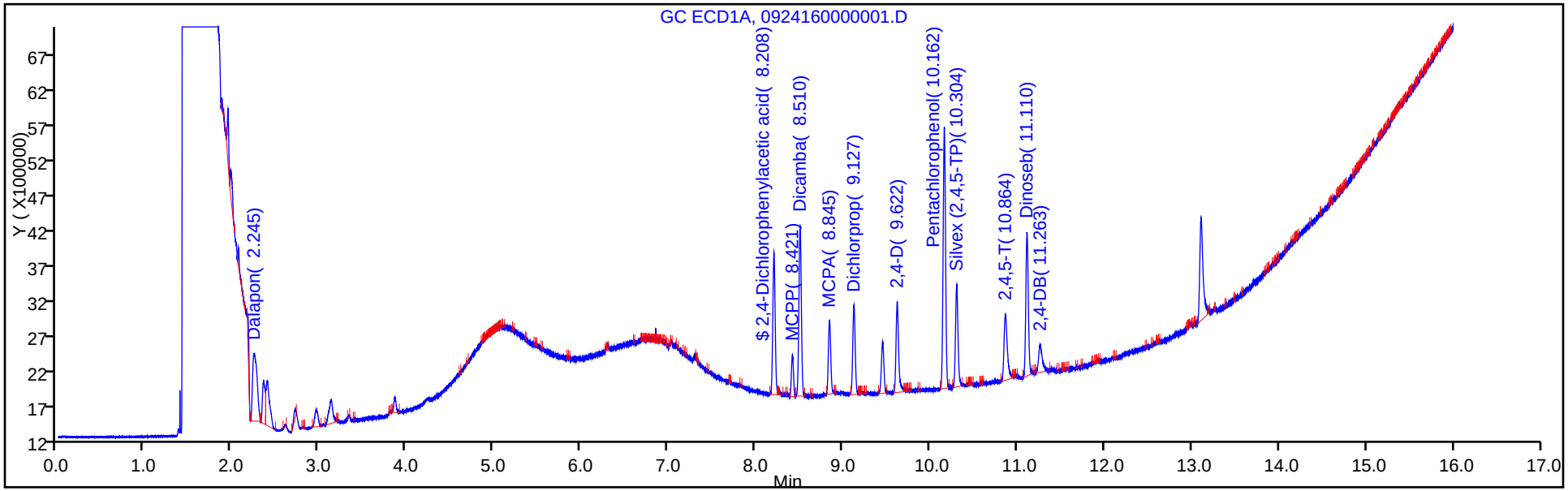
Report Date: 26-Sep-2016 06:28:34 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

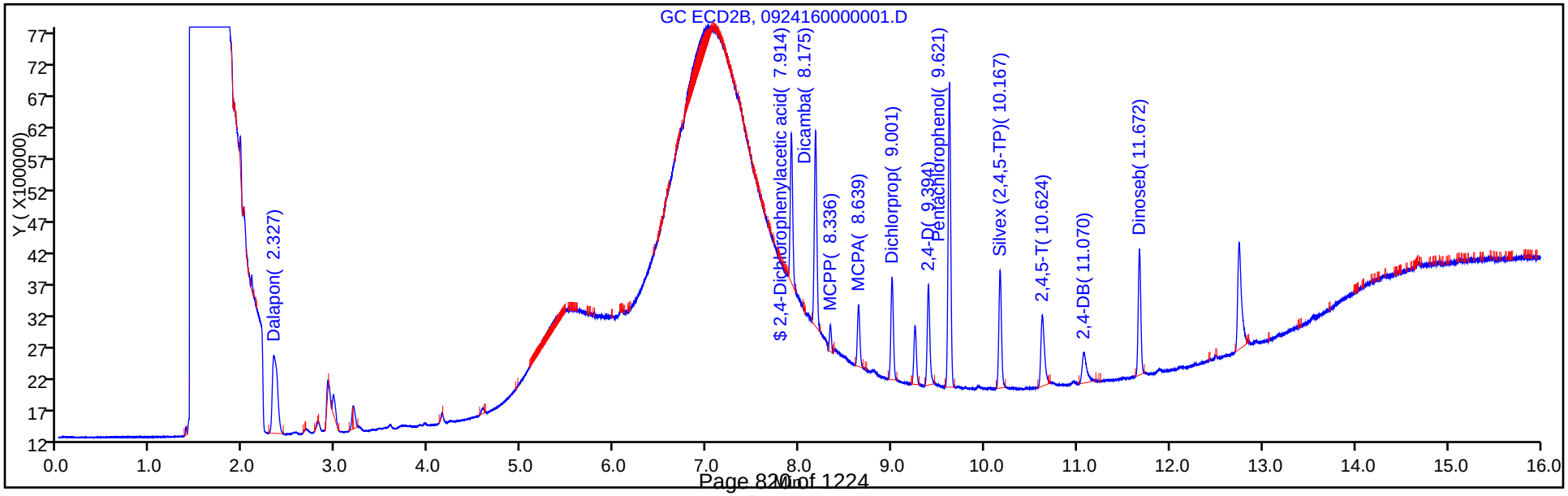
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000001.D

Injection Date:	24-Sep-2016 11:16:42	Instrument ID:	CGC1	Operator ID:	
Lims ID:	IC			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

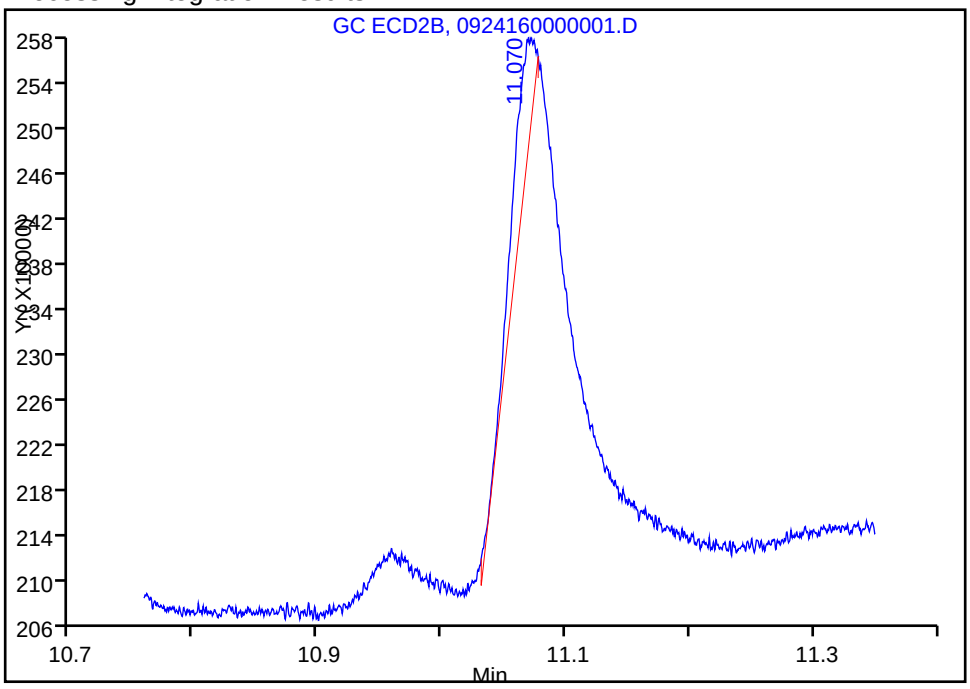
Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000001.D				
Injection Date:	24-Sep-2016 11:16:42	Instrument ID:	CGC1		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		
Column:	RTX-1701 (0.53 mm)	Detector	GC ECD2B		

12 2,4-DB, CAS: 94-82-6

Signal: 2

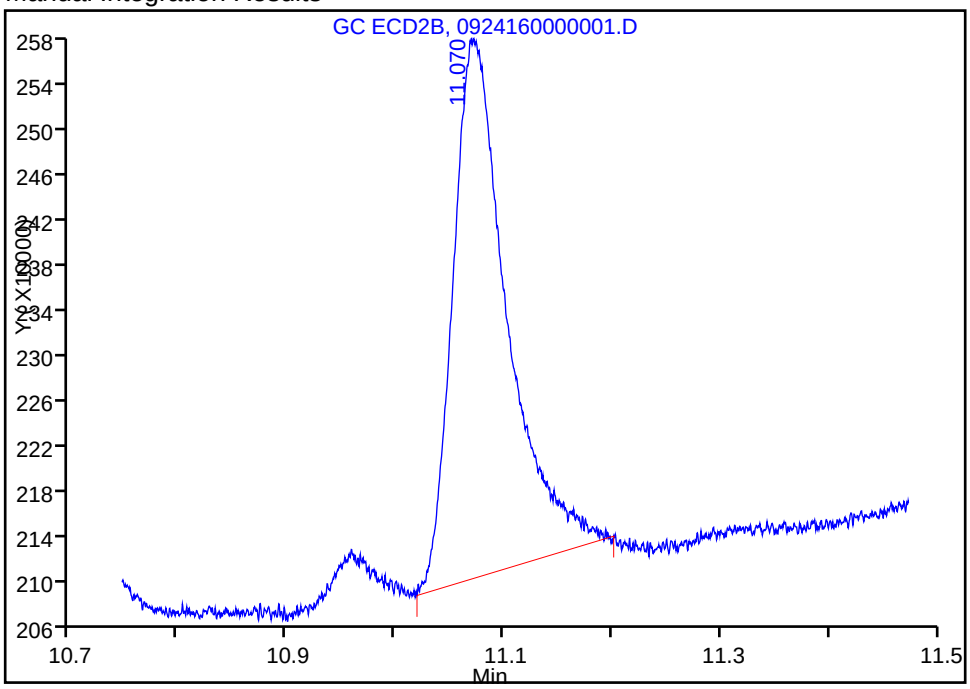
Processing Integration Results

RT: 11.07
Height: 94406
Amount: 0.010050
Amount Units: ng



Manual Integration Results

RT: 11.07
Height: 476352
Amount: 0.015149
Amount Units: ng



Reviewer: oravecj, 26-Sep-2016 06:01:49

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000002.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 24-Sep-2016 11:40:34 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013571-002
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 26-Sep-2016 06:25:25 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK053

First Level Reviewer: oravecj Date: 26-Sep-2016 06:03:00

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							M
1	2.244	2.246	-0.002	1892776H	0.0200	0.0213	
2	2.325	2.329	-0.004	2390322H	0.0200	0.0225	M
						RPD = 5.75	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.209	8.209	0.000	3842648H	0.0200	0.0213	
2	7.913	7.914	-0.001	4578313H	0.0200	0.0207	
						RPD = 2.70	
3 MCPP							
1	8.420	8.421	-0.001	1150087H	2.00	2.31	
2	8.335	8.335	0.000	1006876H	2.00	2.06	
						RPD = 11.56	
4 Dicamba							
1	8.509	8.509	0.000	4673655H	0.0100	0.0106	
2	8.174	8.175	-0.001	6092466H	0.0100	0.0105	
						RPD = 0.81	
5 MCPA							
1	8.846	8.846	0.000	1883324H	2.00	2.56	
2	8.639	8.638	0.001	1841932H	2.00	2.24	
						RPD = 13.46	
6 Dichlorprop							
1	9.125	9.128	-0.003	2413066H	0.0200	0.0216	
2	9.001	9.001	0.000	3065388H	0.0200	0.0214	
						RPD = 0.78	
7 2,4-D							
1	9.622	9.620	0.002	2527319H	0.0200	0.0202	
2	9.393	9.393	0.000	3139694H	0.0200	0.0201	
						RPD = 0.45	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.163	10.163	0.000	7367437H	0.005000	0.005190	
2	9.620	9.621	-0.001	9514112H	0.005000	0.005109	
						RPD = 1.57	
9 Silvex (2,4,5-TP)							
1	10.304	10.304	0.000	2874091H	0.005000	0.005083	
2	10.167	10.167	0.000	3696711H	0.005000	0.005092	
						RPD = 0.19	
10 2,4,5-T							
1	10.861	10.858	0.003	2074450H	0.005000	0.004453	
2	10.621	10.616	0.005	2501714H	0.005000	0.004360	
						RPD = 2.11	
11 Dinoseb							
1	11.111	11.111	0.000	3998477H	0.0200	0.0194	
2	11.671	11.672	-0.001	3937458H	0.0200	0.0197	
						RPD = 1.42	
12 2,4-DB							M
1	11.257	11.244	0.013	711293H	0.0200	0.0205	M
2	11.064	11.051	0.013	919446H	0.0200	0.0208	
						RPD = 1.76	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCHERBCALSL1_00020 Amount Added: 1.00 Units: mL

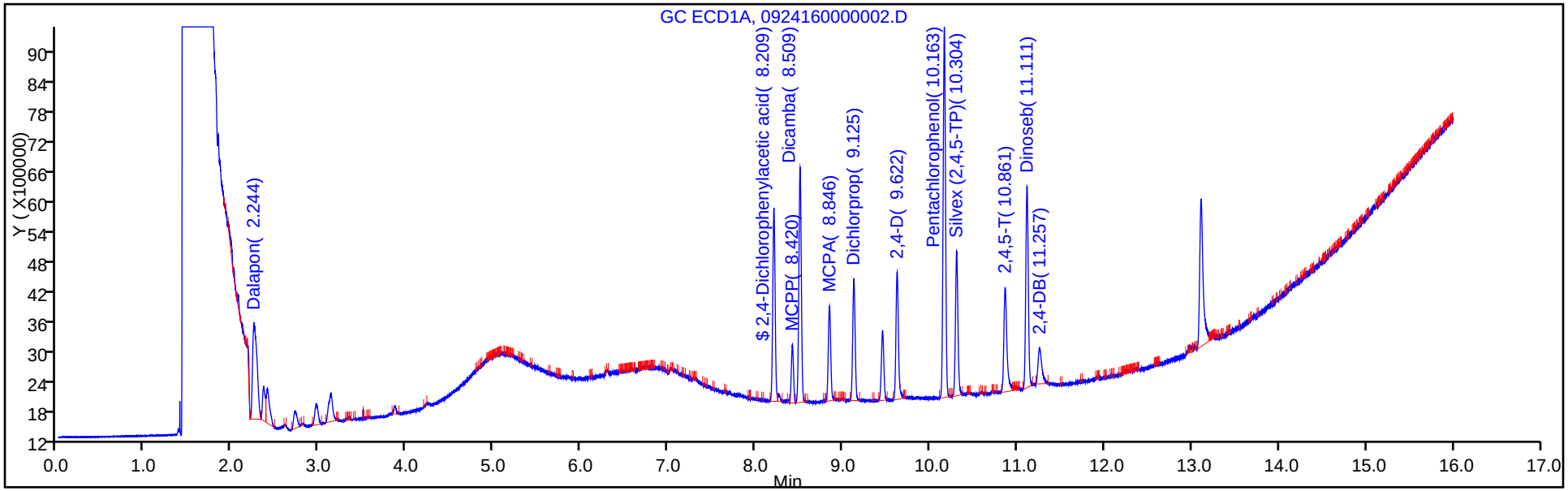
Report Date: 26-Sep-2016 06:25:26 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

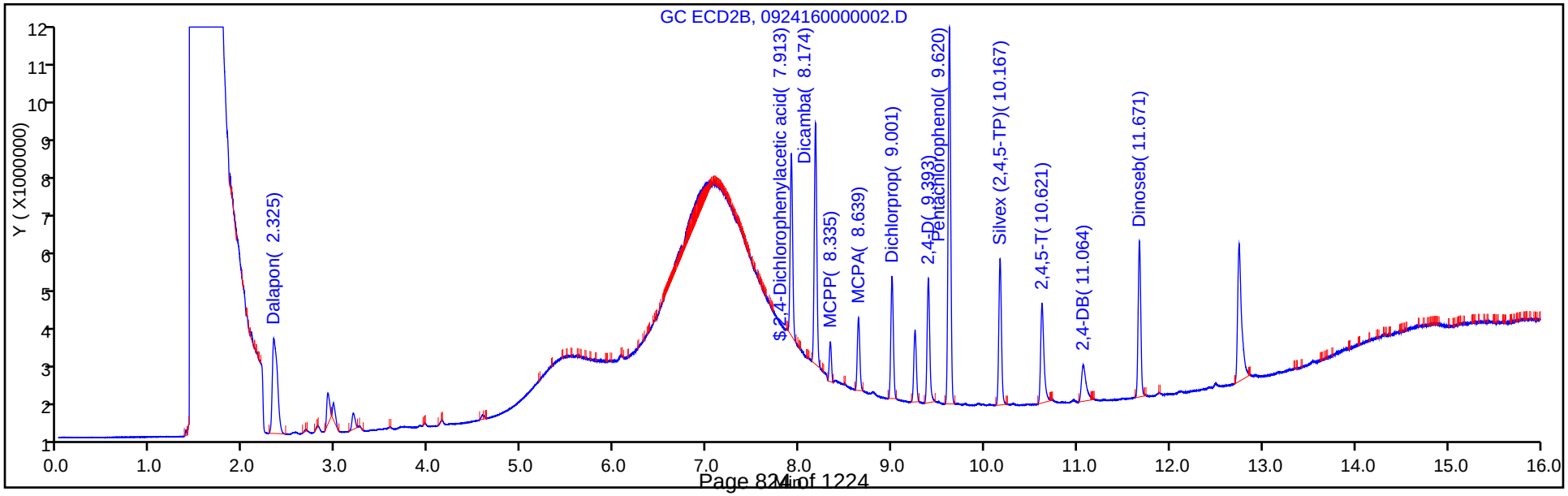
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000002.D

Injection Date:	24-Sep-2016 11:40:34	Instrument ID:	CGC1	Operator ID:	
Lims ID:	IC			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

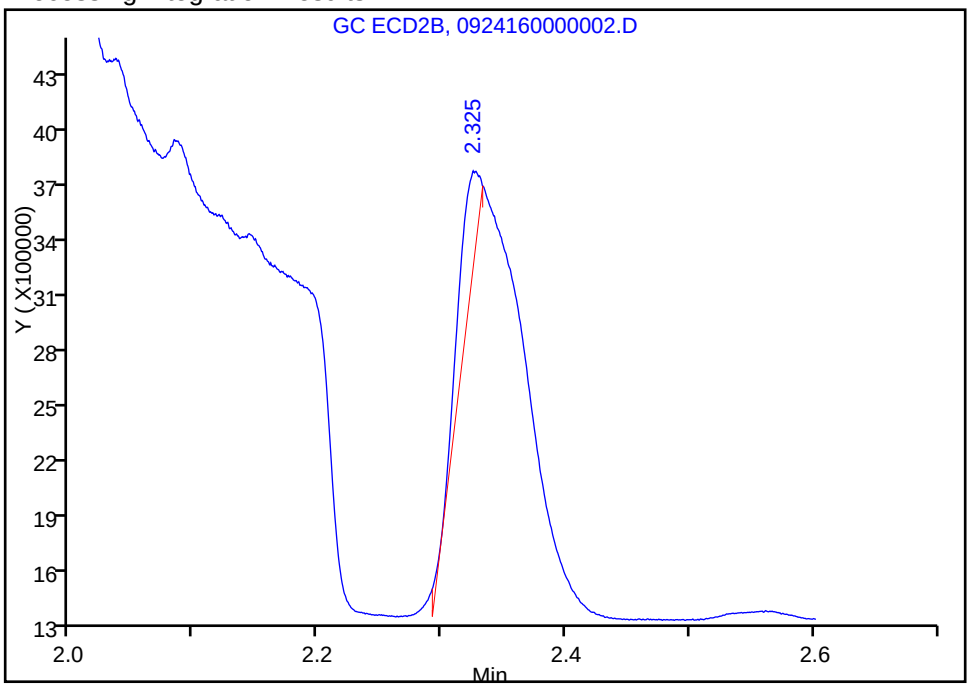
Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000002.D				
Injection Date:	24-Sep-2016 11:40:34	Instrument ID:	CGC1		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		
Column:	RTX-1701 (0.53 mm)	Detector	GC ECD2B		

1 Dalapon, CAS: 75-99-0

Signal: 2

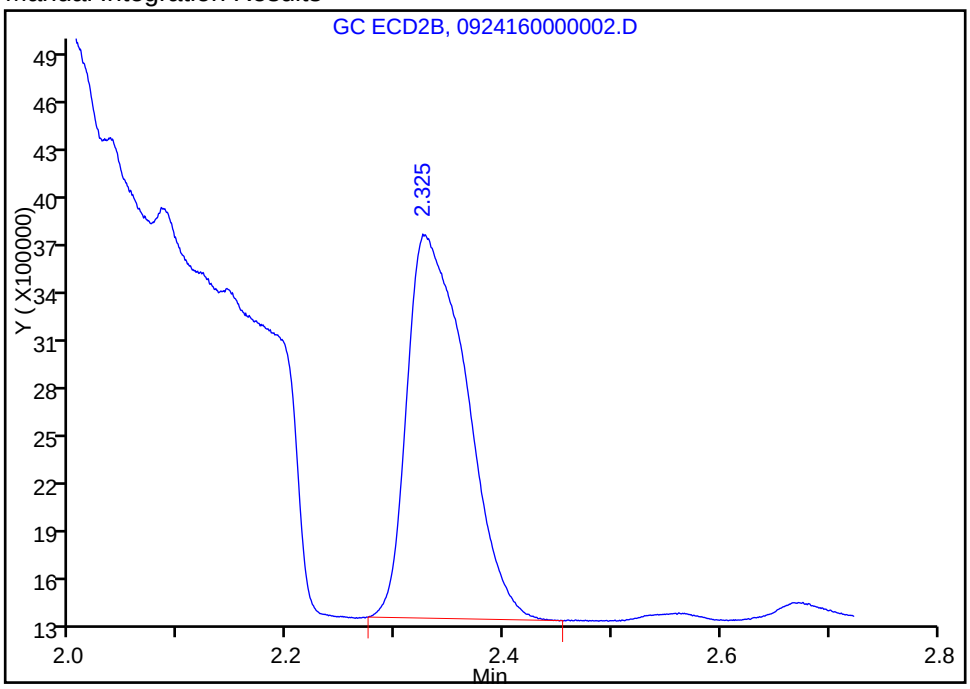
Processing Integration Results

RT: 2.32
Height: 517119
Amount: 0.009149
Amount Units: ng



Manual Integration Results

RT: 2.32
Height: 2390322
Amount: 0.022543
Amount Units: ng



Reviewer: oravecj, 26-Sep-2016 06:03:00

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000003.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 24-Sep-2016 12:04:32 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013571-003
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 26-Sep-2016 06:25:22 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK053

First Level Reviewer: oravecj Date: 26-Sep-2016 06:03:36

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							M
1	2.248	2.246	0.002	3666591H	0.0400	0.0412	
2	2.333	2.329	0.004	4392025H	0.0400	0.0414	M
						RPD = 0.46	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.209	8.209	0.000	7454510H	0.0400	0.0412	
2	7.914	7.914	0.000	9023150H	0.0400	0.0408	
						RPD = 1.12	
3 MCPP							
1	8.421	8.421	0.000	2252280H	4.00	4.53	
2	8.335	8.335	0.000	2116758H	4.00	4.33	
						RPD = 4.48	
4 Dicamba							
1	8.509	8.509	0.000	9205400H	0.0200	0.0209	
2	8.175	8.175	0.000	12121572H	0.0200	0.0210	
						RPD = 0.20	
5 MCPA							
1	8.846	8.846	0.000	3486506H	4.00	4.74	
2	8.639	8.638	0.001	3536786H	4.00	4.29	
						RPD = 9.82	
6 Dichlorprop							
1	9.126	9.128	-0.002	4715065H	0.0400	0.0421	
2	9.002	9.001	0.001	6020448H	0.0400	0.0420	
						RPD = 0.26	
7 2,4-D							
1	9.622	9.620	0.002	5227797H	0.0400	0.0417	
2	9.393	9.393	0.000	6591888H	0.0400	0.0421	
						RPD = 1.04	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.164	10.163	0.001	14712064H	0.0100	0.0104	
2	9.621	9.621	0.000	19459044H	0.0100	0.0105	
						RPD = 0.83	
9 Silvex (2,4,5-TP)							
1	10.305	10.304	0.001	5882018H	0.0100	0.0104	
2	10.169	10.167	0.002	7627194H	0.0100	0.0105	
						RPD = 1.00	
10 2,4,5-T							
1	10.859	10.858	0.001	4799509H	0.0100	0.0103	
2	10.618	10.616	0.002	5887144H	0.0100	0.0103	
						RPD = 0.42	
11 Dinoseb							
1	11.112	11.111	0.001	8606055H	0.0400	0.0418	
2	11.672	11.672	0.000	8209312H	0.0400	0.0410	
						RPD = 1.77	
12 2,4-DB							
1	11.249	11.244	0.005	1903054H	0.0400	0.0392	
2	11.059	11.051	0.008	2243284H	0.0400	0.0378	
						RPD = 3.68	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCHERBCALSL2_00019 Amount Added: 1.00 Units: mL

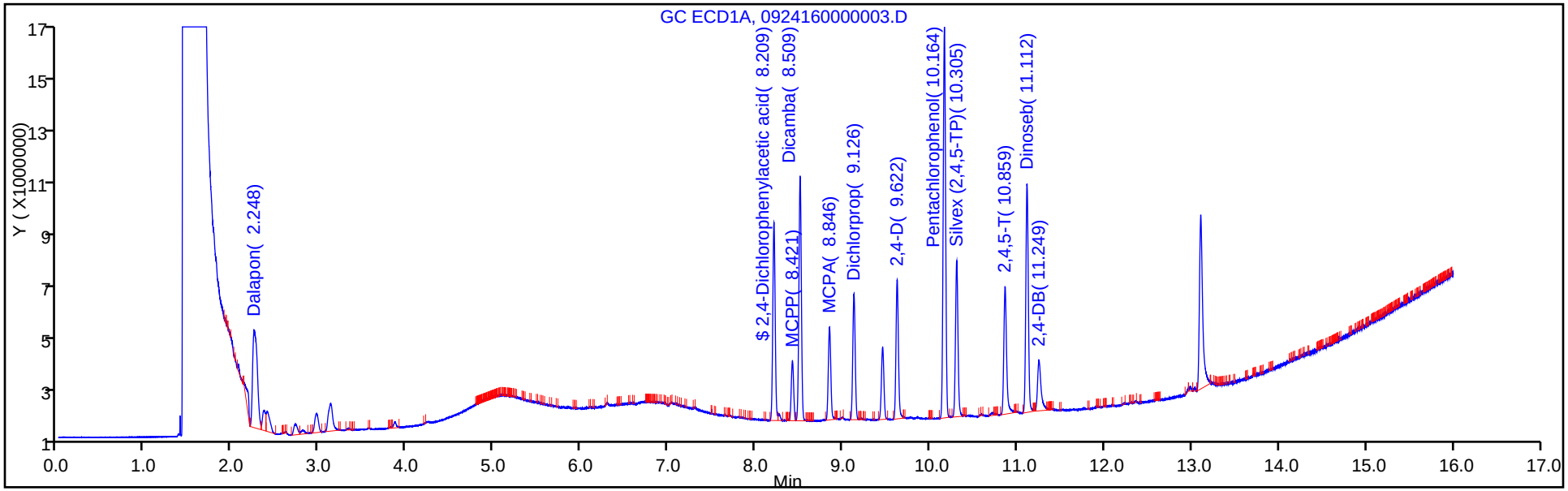
Report Date: 26-Sep-2016 06:25:24 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

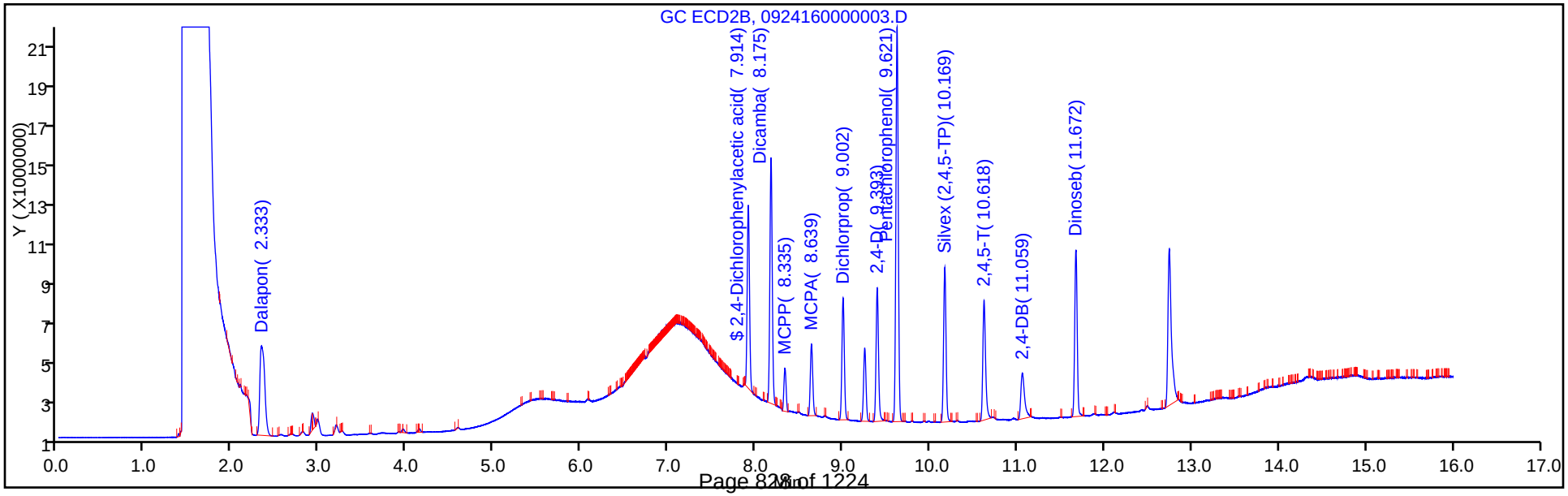
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000003.D

Injection Date:	24-Sep-2016 12:04:32	Instrument ID:	CGC1	Operator ID:	
Lims ID:	IC			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

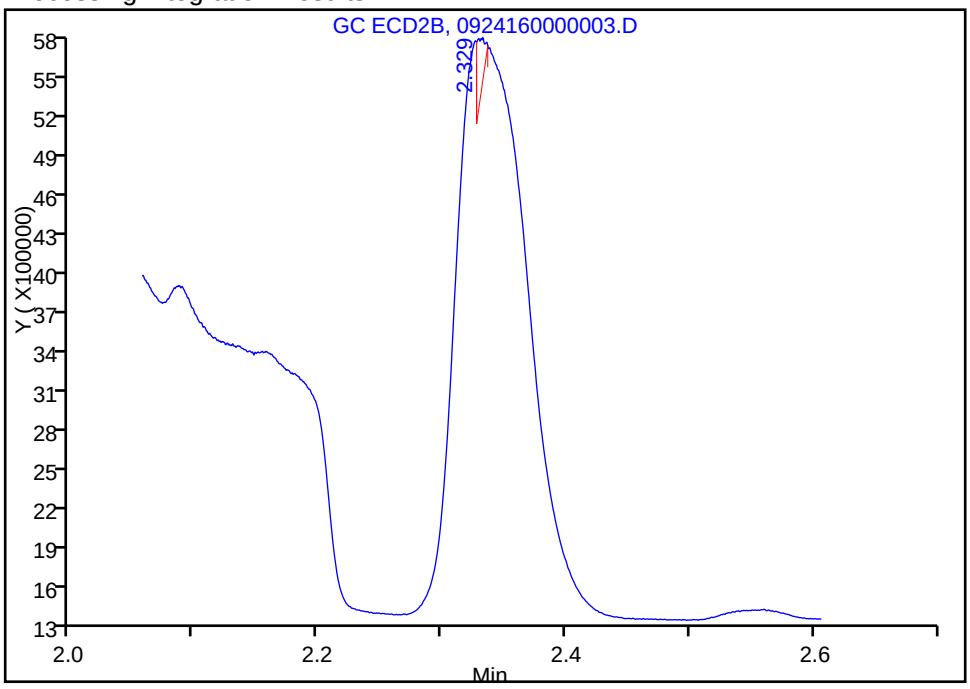
Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000003.D				
Injection Date:	24-Sep-2016 12:04:32	Instrument ID:	CGC1		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		
Column:	RTX-1701 (0.53 mm)	Detector	GC ECD2B		

1 Dalapon, CAS: 75-99-0

Signal: 2

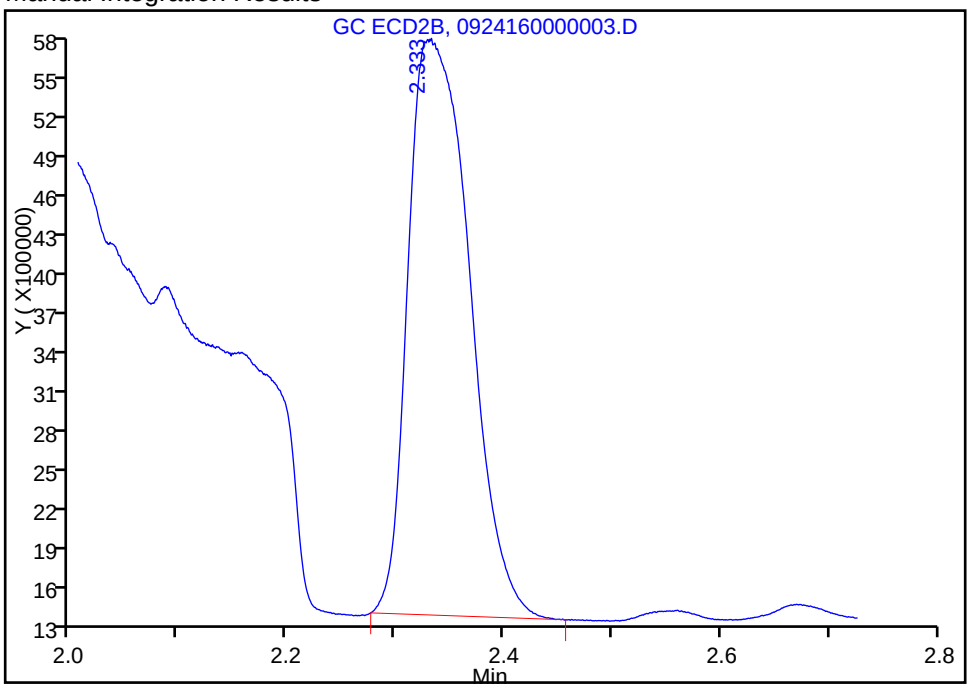
Processing Integration Results

RT: 2.33
Height: 539029
Amount: 0.007711
Amount Units: ng



Manual Integration Results

RT: 2.33
Height: 4392025
Amount: 0.041421
Amount Units: ng



Reviewer: oravecj, 26-Sep-2016 06:03:36

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000004.D
Lims ID: ICRT
Client ID:
Sample Type: ICRT Calib Level: 3
Inject. Date: 24-Sep-2016 12:28:26 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013571-004
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 26-Sep-2016 06:25:20 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK053

First Level Reviewer: oravecj Date: 26-Sep-2016 06:04:01

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							
1	2.246	2.246	0.000	7072104H	0.0800	0.0795	
2	2.329	2.329	0.000	8376588H	0.0800	0.0790	
						RPD = 0.66	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.209	8.209	0.000	14084720H	0.0800	0.0779	
2	7.914	7.914	0.000	17378222H	0.0800	0.0786	
						RPD = 0.79	
3 MCPP							
1	8.421	8.421	0.000	4023034H	8.00	8.08	
2	8.335	8.335	0.000	4102498H	8.00	8.39	
						RPD = 3.68	
4 Dicamba							
1	8.509	8.509	0.000	17403370H	0.0400	0.0396	
2	8.175	8.175	0.000	23149492H	0.0400	0.0401	
						RPD = 1.21	
5 MCPA							
1	8.846	8.846	0.000	6022144H	8.00	8.18	
2	8.638	8.638	0.000	6418961H	8.00	7.79	
						RPD = 4.88	
6 Dichlorprop							
1	9.128	9.128	0.000	8980181H	0.0800	0.0802	
2	9.001	9.001	0.000	11405009H	0.0800	0.0796	
						RPD = 0.80	
7 2,4-D							
1	9.620	9.620	0.000	10101721H	0.0800	0.0806	
2	9.393	9.393	0.000	12666443H	0.0800	0.0810	
						RPD = 0.48	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.163	10.163	0.000	28870308H	0.0200	0.0203	
2	9.621	9.621	0.000	38092615H	0.0200	0.0205	
						RPD = 0.58	
9 Silvex (2,4,5-TP)							
1	10.304	10.304	0.000	11676225H	0.0200	0.0206	
2	10.167	10.167	0.000	14902656H	0.0200	0.0205	
						RPD = 0.59	
10 2,4,5-T							
1	10.858	10.858	0.000	9926743H	0.0200	0.0213	
2	10.616	10.616	0.000	12351953H	0.0200	0.0215	
						RPD = 1.02	
11 Dinoseb							
1	11.111	11.111	0.000	16967220H	0.0800	0.0824	
2	11.672	11.672	0.000	16305843H	0.0800	0.0815	
						RPD = 1.02	
12 2,4-DB							
1	11.244	11.244	0.000	4263853H	0.0800	0.0762	
2	11.051	11.051	0.000	5172319H	0.0800	0.0752	
						RPD = 1.34	

Reagents:

GCHERBCALSL3_00021 Amount Added: 1.00 Units: mL

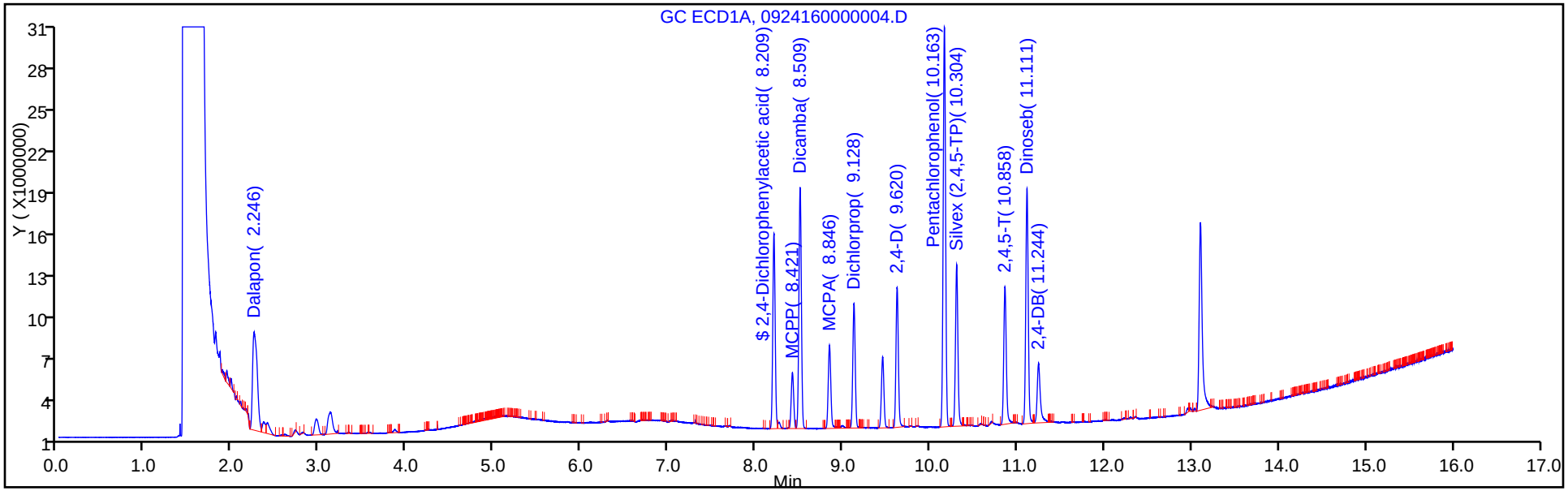
Report Date: 26-Sep-2016 06:25:21 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

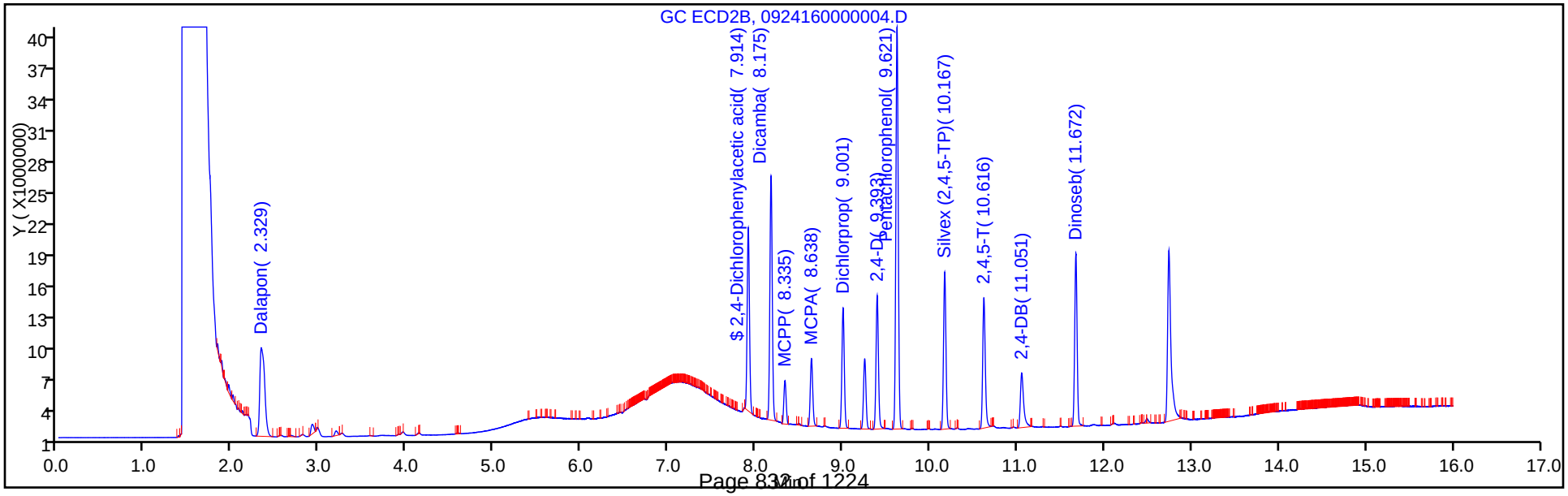
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000004.D

Injection Date:	24-Sep-2016 12:28:26	Instrument ID:	CGC1	Operator ID:	
Lims ID:	ICRT			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000005.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 24-Sep-2016 12:52:18 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013571-005
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 26-Sep-2016 06:25:17 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK053

First Level Reviewer: oravecj Date: 26-Sep-2016 06:04:38

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							M
1	2.244	2.244	0.000	14025169H	0.1600	0.1577	
2	2.328	2.328	0.000	16128319H	0.1600	0.1521	M
						RPD = 3.62	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.209	8.209	0.000	27543899H	0.1600	0.1524	
2	7.914	7.914	0.000	34882922H	0.1600	0.1577	
						RPD = 3.40	
3 MCPP							
1	8.421	8.421	0.000	7153310H	16.0	14.4	
2	8.335	8.335	0.000	8005367H	16.0	16.4	
						RPD = 12.96	
4 Dicamba							
1	8.509	8.509	0.000	34343657H	0.0800	0.0781	
2	8.176	8.176	0.000	45142982H	0.0800	0.0782	
						RPD = 0.02	
5 MCPA							
1	8.847	8.847	0.000	10581831H	16.0	14.4	
2	8.638	8.638	0.000	12118225H	16.0	14.7	
						RPD = 2.29	
6 Dichlorprop							
1	9.127	9.127	0.000	17044441H	0.1600	0.1523	
2	9.001	9.001	0.000	21924799H	0.1600	0.1530	
						RPD = 0.48	
7 2,4-D							
1	9.622	9.622	0.000	19965915H	0.1600	0.1593	
2	9.393	9.393	0.000	24714434H	0.1600	0.1580	
						RPD = 0.81	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.162	10.162	0.000	56392093H	0.0400	0.0397	
2	9.620	9.620	0.000	74068269H	0.0400	0.0398	
						RPD = 0.13	
9 Silvex (2,4,5-TP)							
1	10.304	10.304	0.000	22607043H	0.0400	0.0400	
2	10.168	10.168	0.000	29109925H	0.0400	0.0401	
						RPD = 0.30	
10 2,4,5-T							
1	10.857	10.857	0.000	19930928H	0.0400	0.0428	
2	10.616	10.616	0.000	25124847H	0.0400	0.0438	
						RPD = 2.32	
11 Dinoseb							
1	11.110	11.110	0.000	33296908H	0.1600	0.1616	
2	11.671	11.671	0.000	32238060H	0.1600	0.1612	
						RPD = 0.28	
12 2,4-DB							
1	11.241	11.241	0.000	9335024H	0.1600	0.1559	
2	11.047	11.047	0.000	11615612H	0.1600	0.1577	
						RPD = 1.14	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCHERBCALSL4_00019 Amount Added: 1.00 Units: mL

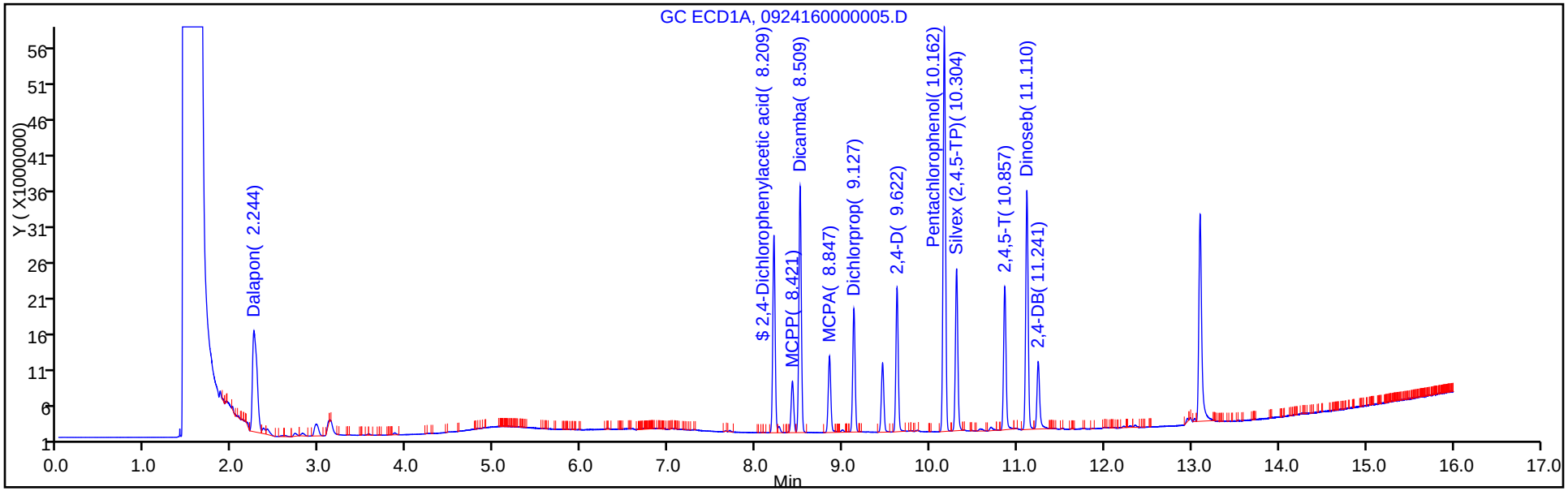
Report Date: 26-Sep-2016 06:25:18 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

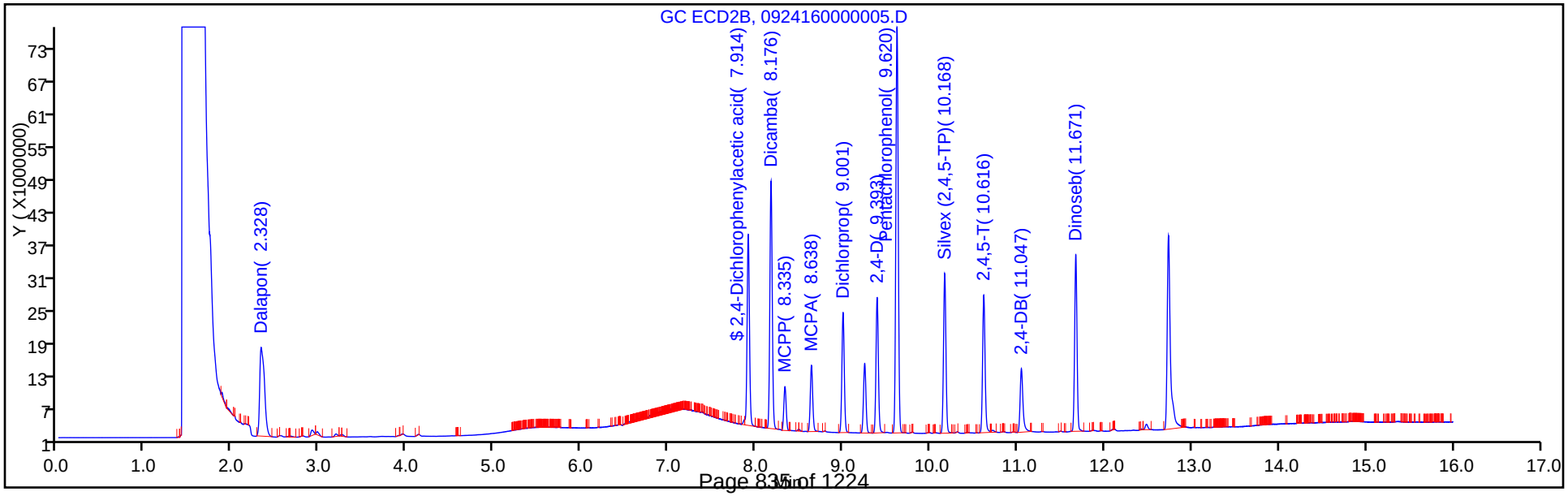
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000005.D

Injection Date:	24-Sep-2016 12:52:18	Instrument ID:	CGC1	Operator ID:	
Lims ID:	IC			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

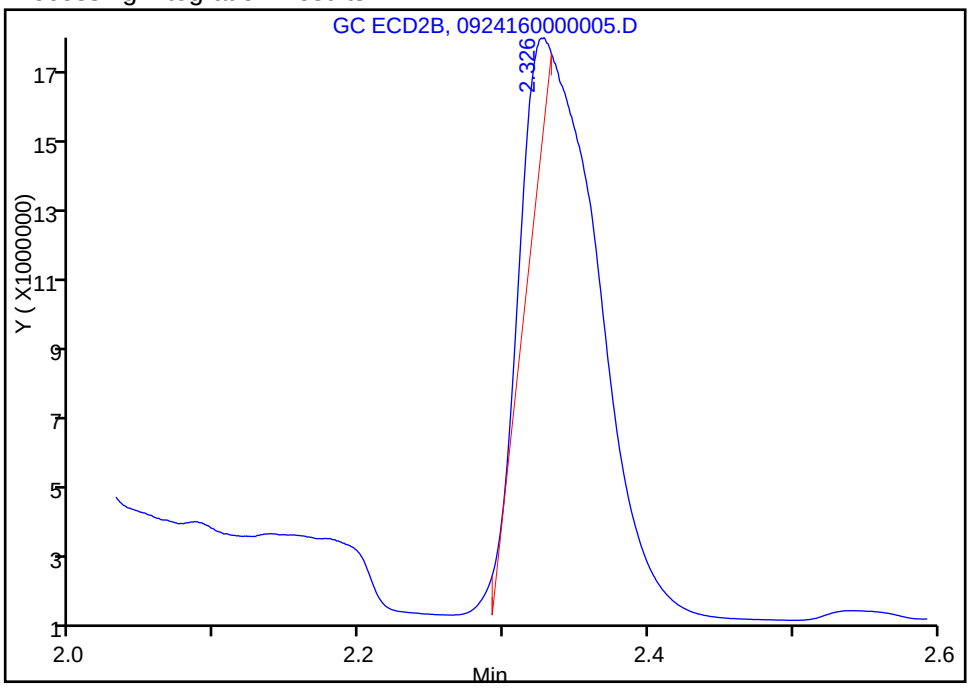
Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000005.D				
Injection Date:	24-Sep-2016 12:52:18	Instrument ID:	CGC1		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	5
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		
Column:	RTX-1701 (0.53 mm)	Detector	GC ECD2B		

1 Dalapon, CAS: 75-99-0

Signal: 2

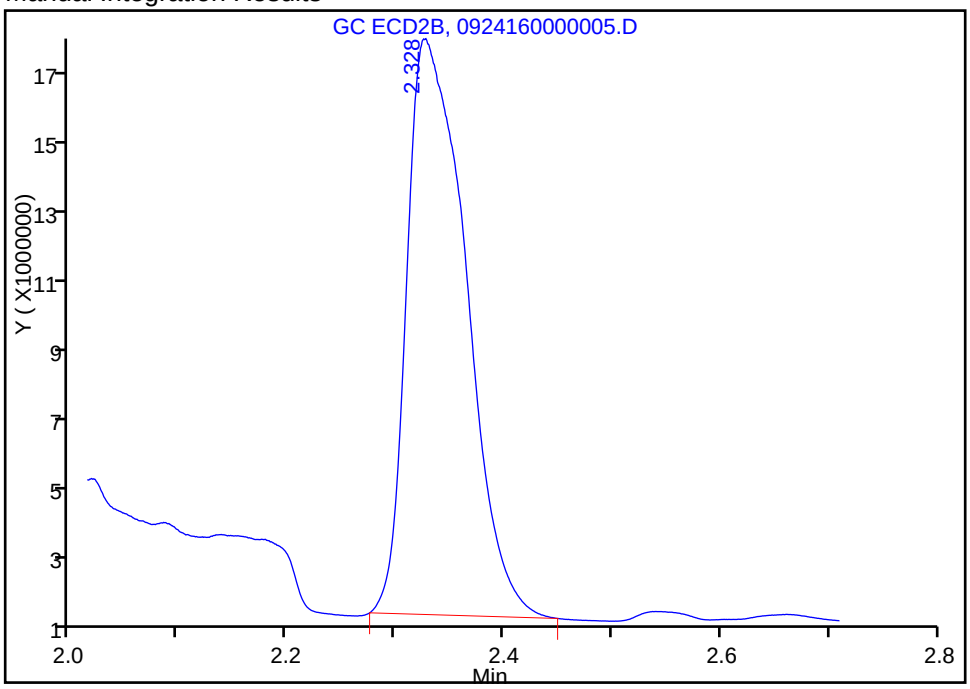
Processing Integration Results

RT: 2.33
Height: 3127996
Amount: 0.037388
Amount Units: ng



Manual Integration Results

RT: 2.33
Height: 16128319
Amount: 0.152107
Amount Units: ng



Reviewer: oravecj, 26-Sep-2016 06:04:38

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000006.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 24-Sep-2016 13:16:19 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013571-006
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 26-Sep-2016 06:25:14 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK053

First Level Reviewer: oravecj Date: 26-Sep-2016 06:05:29

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							M
1	2.244	2.248	-0.004	26369400H	0.3200	0.2965	
2	2.327	2.334	-0.007	30240184H	0.3200	0.2852	M
						RPD = 3.89	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.209	8.213	-0.004	54333430H	0.3200	0.3006	
2	7.914	7.918	-0.004	68539928H	0.3200	0.3098	
						RPD = 3.01	
3 MCPP							M
1	8.423	8.424	-0.001	13068431H	32.0	26.3	
2	8.336	8.337	-0.001	15412911H	32.0	31.5	M
						RPD = 18.17	
4 Dicamba							M
1	8.510	8.512	-0.002	65043895H	0.1600	0.1480	
2	8.176	8.178	-0.002	87007198H	0.1600	0.1506	M
						RPD = 1.77	
5 MCPA							
1	8.846	8.849	-0.003	19648061H	32.0	26.7	
2	8.640	8.642	-0.002	23061877H	32.0	28.0	
						RPD = 4.76	
6 Dichlorprop							
1	9.127	9.130	-0.003	32557425H	0.3200	0.2909	
2	9.002	9.005	-0.003	41983323H	0.3200	0.2930	
						RPD = 0.72	
7 2,4-D							
1	9.622	9.624	-0.002	39002201H	0.3200	0.3111	
2	9.392	9.395	-0.003	48887189H	0.3200	0.3125	
						RPD = 0.45	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.165	10.167	-0.002	108260537H	0.0800	0.0763	
2	9.621	9.623	-0.002	142305116H	0.0800	0.0764	
						RPD = 0.20	
9 Silvex (2,4,5-TP)							
1	10.305	10.309	-0.004	43653083H	0.0800	0.0772	
2	10.168	10.170	-0.002	55796766H	0.0800	0.0769	
						RPD = 0.44	
10 2,4,5-T							
1	10.857	10.861	-0.004	39775758H	0.0800	0.0854	
2	10.614	10.621	-0.007	49617286H	0.0800	0.0865	
						RPD = 1.27	
11 Dinoseb							
1	11.111	11.114	-0.003	64489557H	0.3200	0.3130	
2	11.672	11.674	-0.002	63104549H	0.3200	0.3155	
						RPD = 0.78	
12 2,4-DB							
1	11.239	11.246	-0.007	20062269H	0.3200	0.3243	
2	11.046	11.053	-0.007	25211812H	0.3200	0.3316	
						RPD = 2.22	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCHERBCALSL5_00019 Amount Added: 1.00 Units: mL

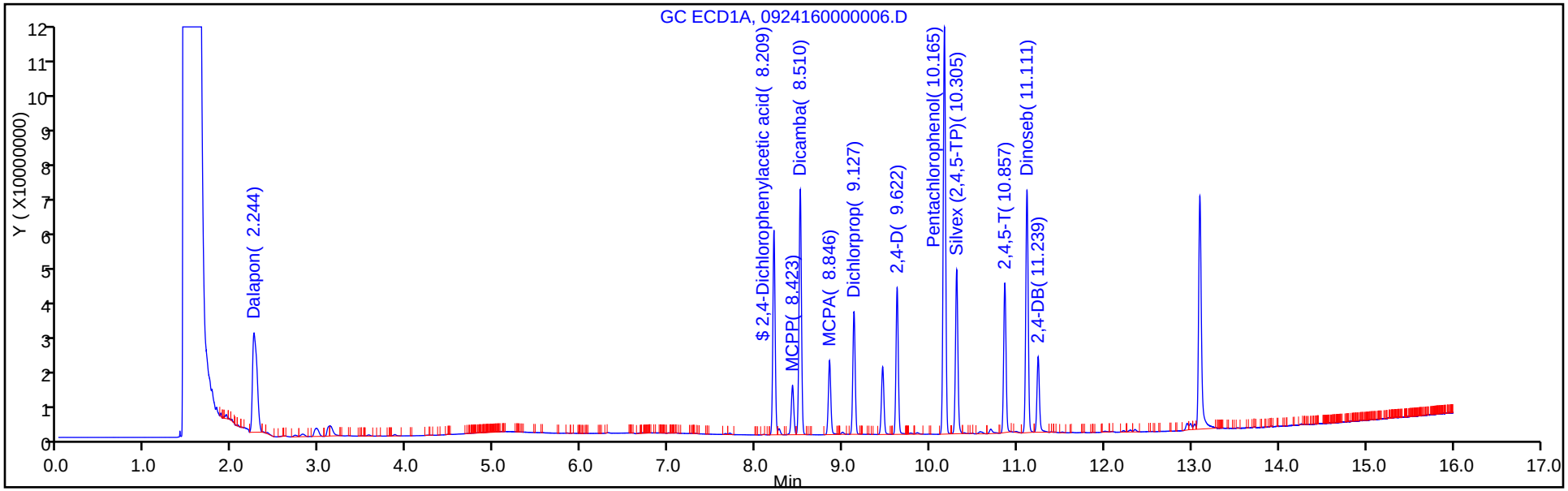
Report Date: 26-Sep-2016 06:25:15 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

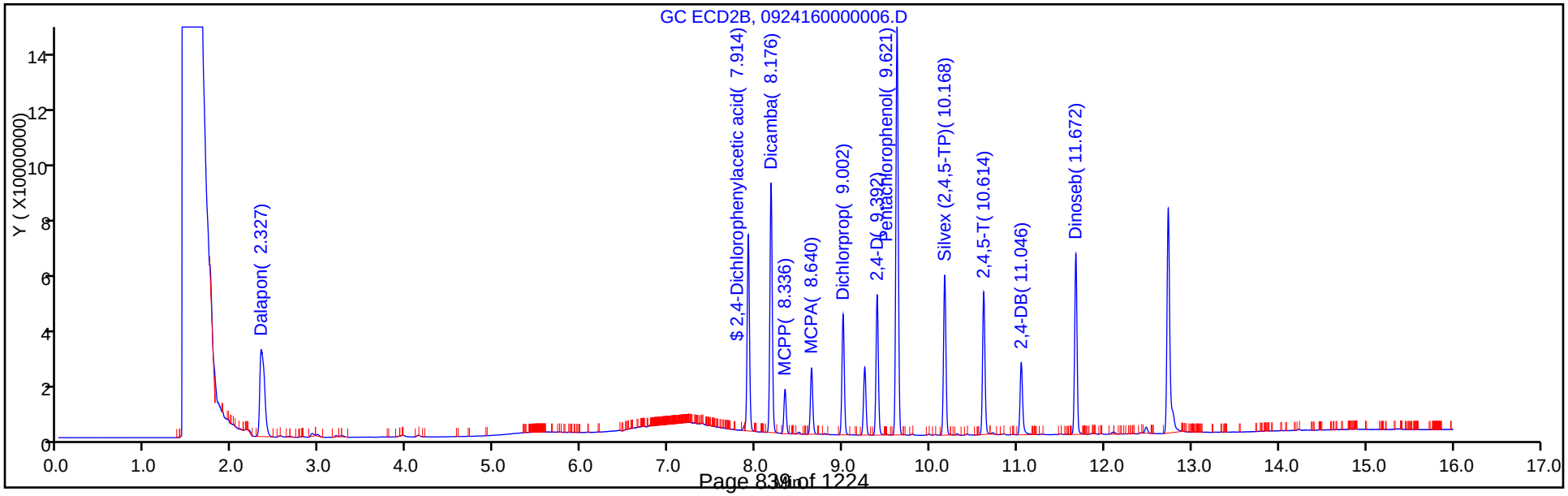
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000006.D

Injection Date:	24-Sep-2016 13:16:19	Instrument ID:	CGC1	Operator ID:	
Lims ID:	IC			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

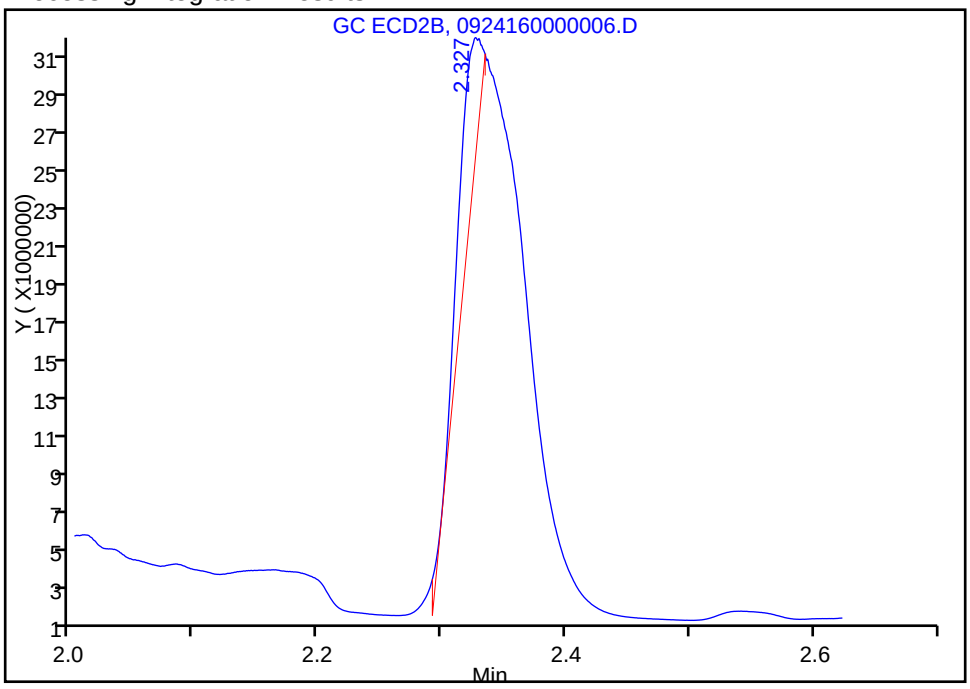
Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000006.D				
Injection Date:	24-Sep-2016 13:16:19	Instrument ID:	CGC1		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		
Column:	RTX-1701 (0.53 mm)	Detector	GC ECD2B		

1 Dalapon, CAS: 75-99-0

Signal: 2

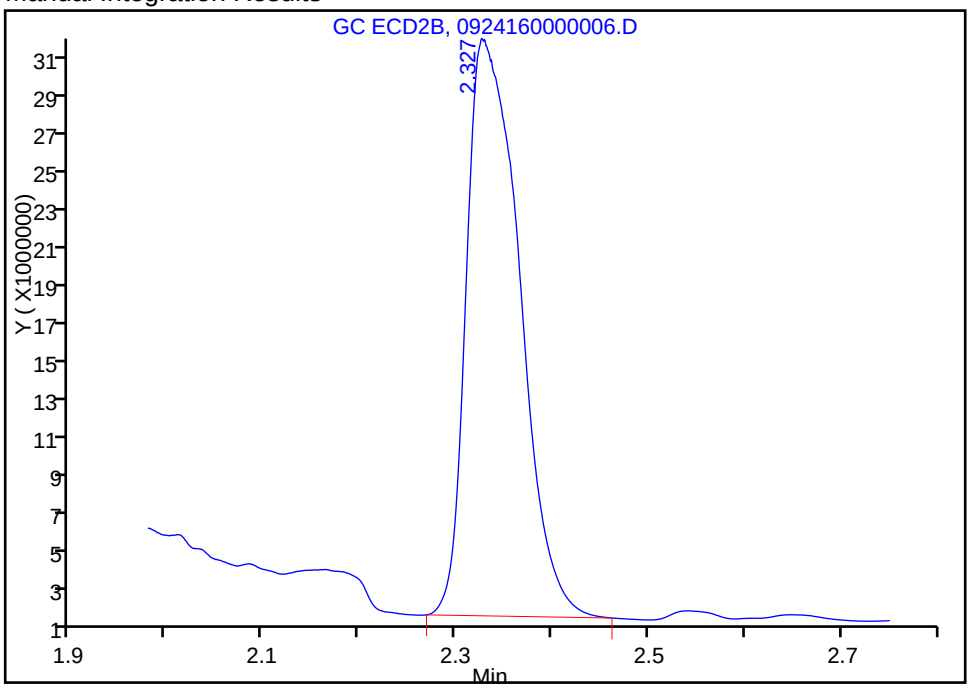
Processing Integration Results

RT: 2.33
Height: 6134171
Amount: 0.064386
Amount Units: ng



Manual Integration Results

RT: 2.33
Height: 30240184
Amount: 0.285196
Amount Units: ng



Reviewer: oravecj, 26-Sep-2016 06:05:29

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

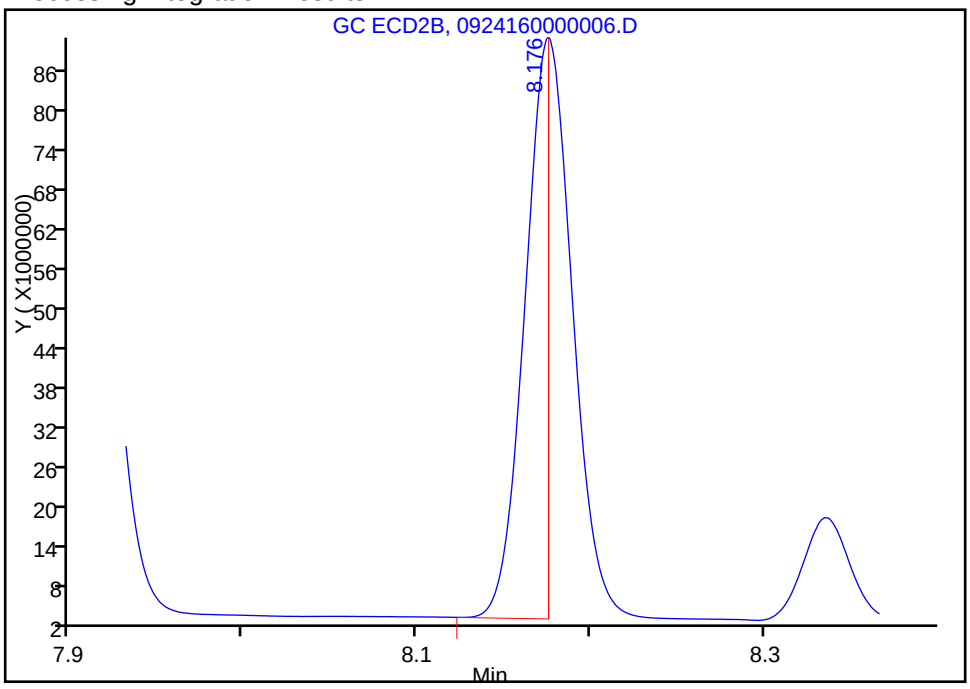
Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000006.D				
Injection Date:	24-Sep-2016 13:16:19	Instrument ID:	CGC1		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		
Column:	RTX-1701 (0.53 mm)	Detector	GC ECD2B		

4 Dicamba, CAS: 1918-00-9

Signal: 2

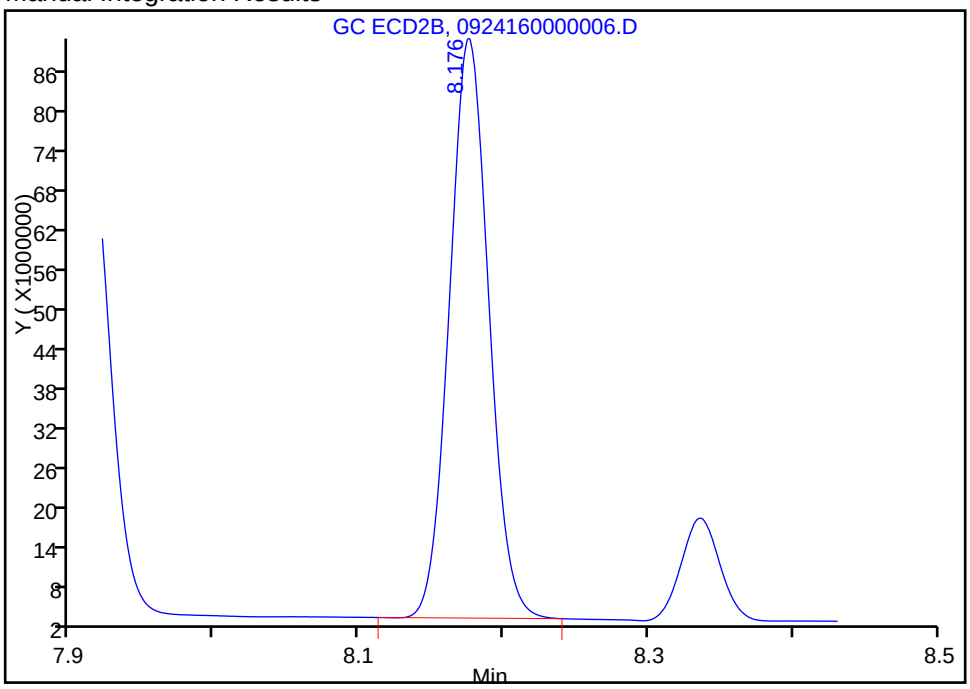
Processing Integration Results

RT: 8.18
Height: 87201088
Amount: 0.150930
Amount Units: ng



Manual Integration Results

RT: 8.18
Height: 87007198
Amount: 0.150639
Amount Units: ng



Reviewer: oravecj, 26-Sep-2016 06:05:29

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

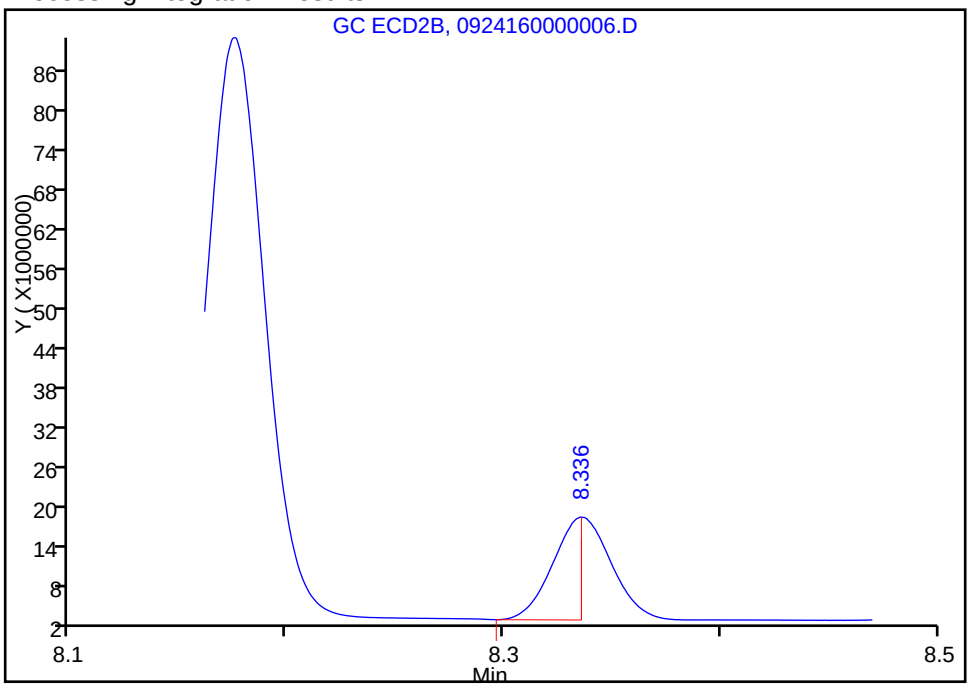
Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000006.D				
Injection Date:	24-Sep-2016 13:16:19	Instrument ID:	CGC1		
Lims ID:	IC				
Client ID:					
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		
Column:	RTX-1701 (0.53 mm)	Detector	GC ECD2B		

3 MCPP, CAS: 93-65-2

Signal: 2

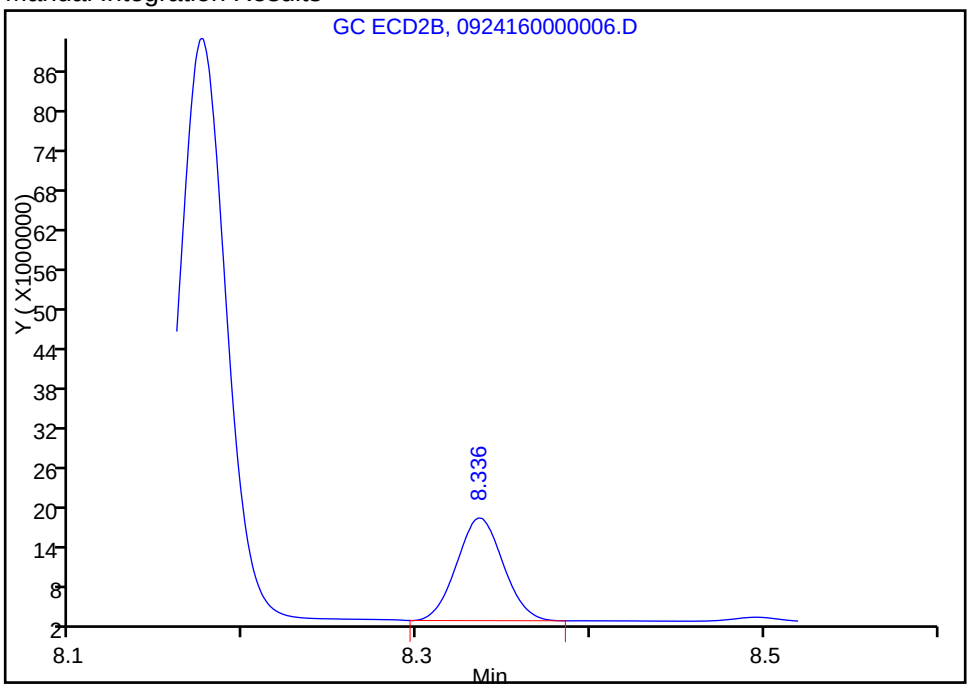
Processing Integration Results

RT: 8.34
Height: 15447616
Amount: 31.573025
Amount Units: ng



Manual Integration Results

RT: 8.34
Height: 15412911
Amount: 31.512071
Amount Units: ng



Reviewer: oravecj, 26-Sep-2016 06:05:29

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 24-Sep-2016 13:40:10 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0013571-007
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 26-Sep-2016 06:25:11 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK053

First Level Reviewer: oravecj Date: 26-Sep-2016 06:05:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							
1	2.246	2.248	-0.002	52066930H	0.6400	0.5855	
2	2.330	2.334	-0.004	57487463H	0.6400	0.5422	
						RPD = 7.68	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.208	8.213	-0.005	105695986H	0.6400	0.5849	
2	7.914	7.918	-0.004	133735776H	0.6400	0.6045	
						RPD = 3.31	
3 MCPP							
1	8.422	8.424	-0.002	24733568H	64.0	49.7	
2	8.336	8.337	-0.001	30043496H	64.0	61.4	
						RPD = 21.09	
4 Dicamba							
1	8.510	8.512	-0.002	125328762H	0.3200	0.2852	
2	8.176	8.178	-0.002	167682899H	0.3200	0.2903	
						RPD = 1.79	
5 MCPA							
1	8.848	8.849	-0.001	36856499H	64.0	50.1	
2	8.639	8.642	-0.003	45304090H	64.0	55.0	
						RPD = 9.37	
6 Dichlorprop							
1	9.127	9.130	-0.003	62732376H	0.6400	0.5606	
2	9.002	9.005	-0.003	81168680H	0.6400	0.5666	
						RPD = 1.06	
7 2,4-D							
1	9.621	9.624	-0.003	76127964H	0.6400	0.6072	
2	9.391	9.395	-0.004	95803537H	0.6400	0.6124	
						RPD = 0.84	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.165	10.167	-0.002	207405218H	0.1600	0.1461	
2	9.620	9.623	-0.003	275920024H	0.1600	0.1482	
						RPD = 1.41	
9 Silvex (2,4,5-TP)							
1	10.304	10.309	-0.005	82563159H	0.1600	0.1460	
2	10.167	10.170	-0.003	106529098H	0.1600	0.1467	
						RPD = 0.50	
10 2,4,5-T							
1	10.856	10.861	-0.005	79753088H	0.1600	0.1712	
2	10.614	10.621	-0.007	98277038H	0.1600	0.1713	
						RPD = 0.04	
11 Dinoseb							
1	11.111	11.114	-0.003	128112325H	0.6400	0.6219	
2	11.671	11.674	-0.003	125634821H	0.6400	0.6281	
						RPD = 1.00	
12 2,4-DB							
1	11.237	11.246	-0.009	42499601H	0.6400	0.6767	
2	11.043	11.053	-0.010	51984937H	0.6400	0.6741	
						RPD = 0.38	

Reagents:

GCHERBCALSL6_00006 Amount Added: 1.00 Units: mL

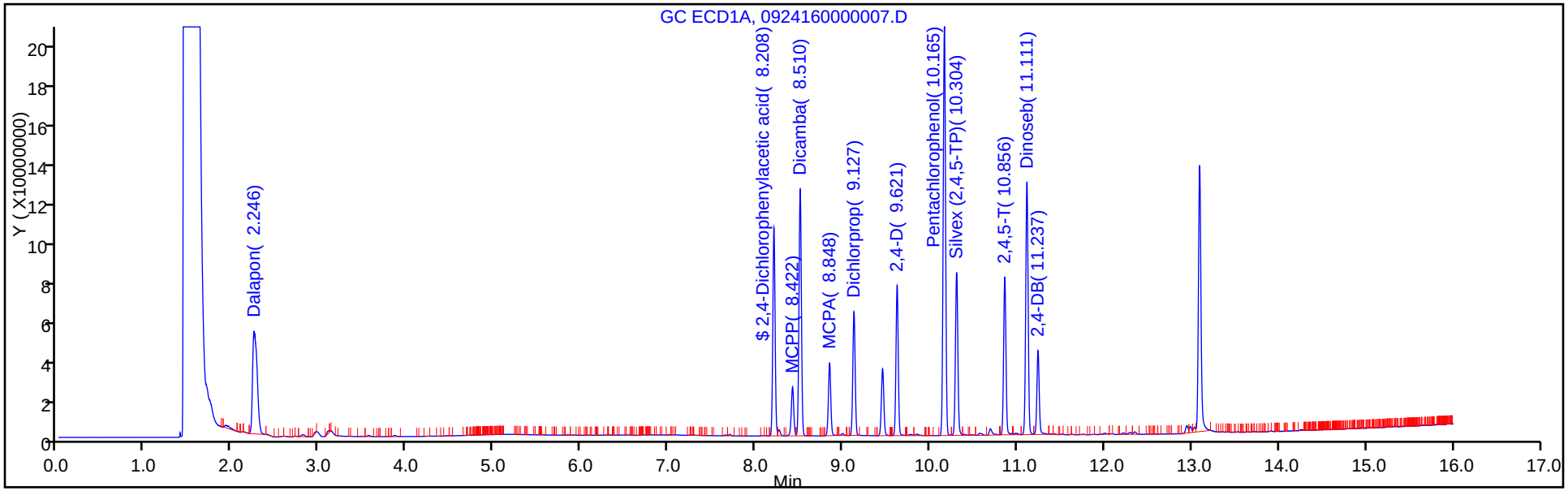
Report Date: 26-Sep-2016 06:25:13 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Pittsburgh

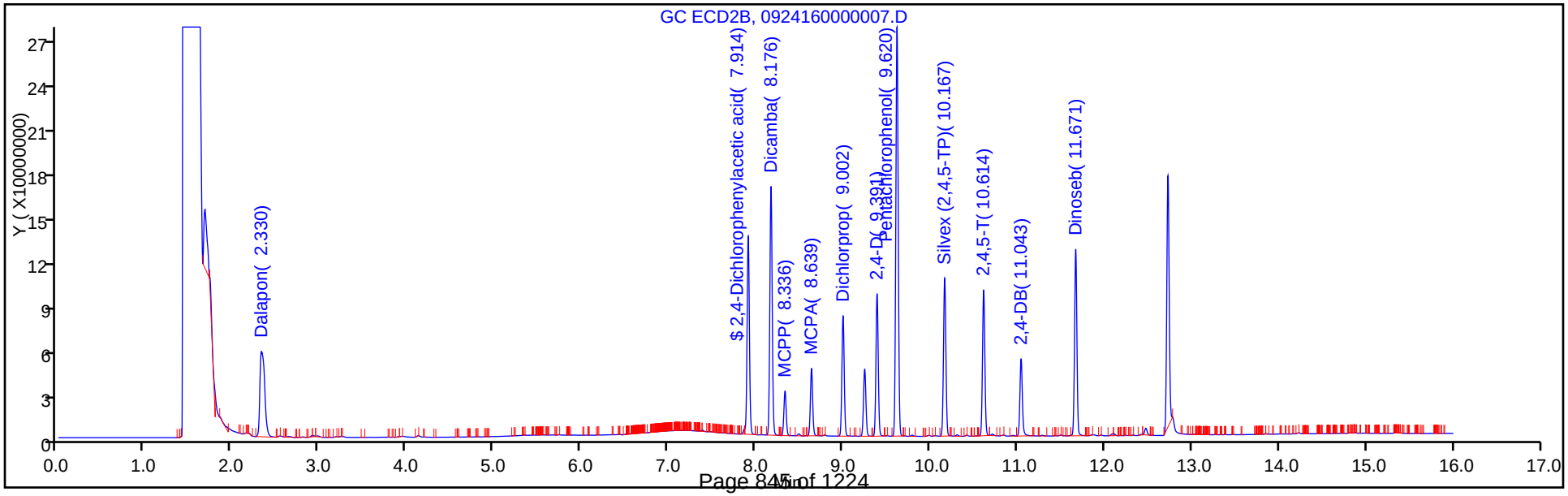
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Injection Date:	24-Sep-2016 13:40:10	Instrument ID:	CGC1	Operator ID:	
Lims ID:	IC			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



FORM VII
HERBICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCVRT 180-195866/1 Calibration Date: 11/30/2016 14:26

Instrument ID: CGC1 Calib Start Date: 09/24/2016 11:16

GC Column: RTX-50 ID: 0.53(mm) Calib End Date: 09/24/2016 13:40

Lab File ID: 1130160000005.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dalapon	Ave	88931019	93824938		0.0844	0.0800	5.5	15.0
MCPP	Ave	497612	680384		10.9	8.00	36.7*	15.0
Dicamba	Ave	439500398	382625750		0.0348	0.0400	-12.9	15.0
MCPA	Ave	736218	849517		9.23	8.00	15.4*	15.0
Dichlorprop	Ave	111905191	97547225		0.0697	0.0800	-12.8	15.0
2,4-D	Ave	125372654	113541200		0.0725	0.0800	-9.4	15.0
Pentachlorophenol	Ave	1419500464	1314896050		0.0185	0.0200	-7.4	15.0
Silvex (2,4,5-TP)	Ave	565458201	505070450		0.0179	0.0200	-10.7	15.0
2,4,5-T	Ave	465857461	636414950		0.0273	0.0200	36.6*	15.0
Dinoseb	Ave	206009246	205679625		0.0799	0.0800	-0.2	15.0
2,4-DB	Lin2		47687650		0.0692	0.0800	-13.5	15.0
2,4-Dichlorophenylacetic acid	Ave	180721167	166147375		0.0736	0.0800	-8.1	15.0

FORM VII
HERBICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCVRT 180-195866/1 Calibration Date: 11/30/2016 14:26

Instrument ID: CGC1 Calib Start Date: 09/24/2016 11:16

GC Column: RTX-50 ID: 0.53(mm) Calib End Date: 09/24/2016 13:40

Lab File ID: 1130160000005.D

Analyte	RT	RT WINDOW	
		FROM	TO
Dalapon	2.37	2.34	2.40
MCPP	8.62	8.59	8.65
Dicamba	8.71	8.68	8.74
MCPA	9.04	9.01	9.07
Dichlorprop	9.32	9.29	9.35
2,4-D	9.82	9.79	9.85
Pentachlorophenol	10.37	10.34	10.40
Silvex (2,4,5-TP)	10.50	10.47	10.53
2,4,5-T	11.05	11.02	11.08
Dinoseb	11.30	11.25	11.35
2,4-DB	11.43	11.40	11.46
2,4-Dichlorophenylacetic acid	8.41	8.38	8.44

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000005.D
Lims ID: CCVRT
Client ID:
Sample Type: CCVRT
Inject. Date: 30-Nov-2016 14:26:28 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014557-001
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:36:47 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:23:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							
1	2.371	2.371	0.000	7505995H	0.0800	0.0844	
2	2.451	2.451	0.000	8714776H	0.0800	0.0822	
						RPD = 2.66	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.406	8.406	0.000	13291790H	0.0800	0.0735	
2	8.101	8.101	0.000	15736068H	0.0800	0.0711	
						RPD = 3.34	
3 MCPP							
1	8.615	8.615	0.000	5443072H	8.00	10.9	
2	8.521	8.521	0.000	3806376H	8.00	7.78	
						RPD = 33.72	
4 Dicamba							
1	8.708	8.708	0.000	15305030H	0.0400	0.0348	
2	8.364	8.364	0.000	20923518H	0.0400	0.0362	
						RPD = 3.95	
5 MCPA							
1	9.040	9.040	0.000	6796138H	8.00	9.23	
2	8.824	8.824	0.000	5918533H	8.00	7.18	
						RPD = 24.96	
6 Dichlorprop							
1	9.322	9.322	0.000	7803778H	0.0800	0.0697	
2	9.187	9.187	0.000	11002322H	0.0800	0.0768	
						RPD = 9.64	
7 2,4-D							
1	9.816	9.816	0.000	9083296H	0.0800	0.0725	
2	9.577	9.577	0.000	11601505H	0.0800	0.0742	
						RPD = 2.33	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.368	10.368	0.000	26297921H	0.0200	0.0185	
2	9.816	9.816	0.000	39360695H	0.0200	0.0211	
						RPD = 13.17	
9 Silvex (2,4,5-TP)							
1	10.499	10.499	0.000	10101409H	0.0200	0.0179	
2	10.352	10.352	0.000	14227666H	0.0200	0.0196	
						RPD = 9.26	
10 2,4,5-T							M
1	11.048	11.048	0.000	12728299H	0.0200	0.0273	
2	10.798	10.798	0.000	11793741H	0.0200	0.0206	M
						RPD = 28.28	
11 Dinoseb							
1	11.303	11.303	0.000	16454370H	0.0800	0.0799	
2	11.855	11.855	0.000	20267285H	0.0800	0.1013	
						RPD = 23.68	
12 2,4-DB							
1	11.432	11.432	0.000	3815012H	0.0800	0.0692	
2	11.230	11.230	0.000	4879268H	0.0800	0.0715	
						RPD = 3.25	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCHERBCALSL3_00021 Amount Added: 1.00 Units: mL

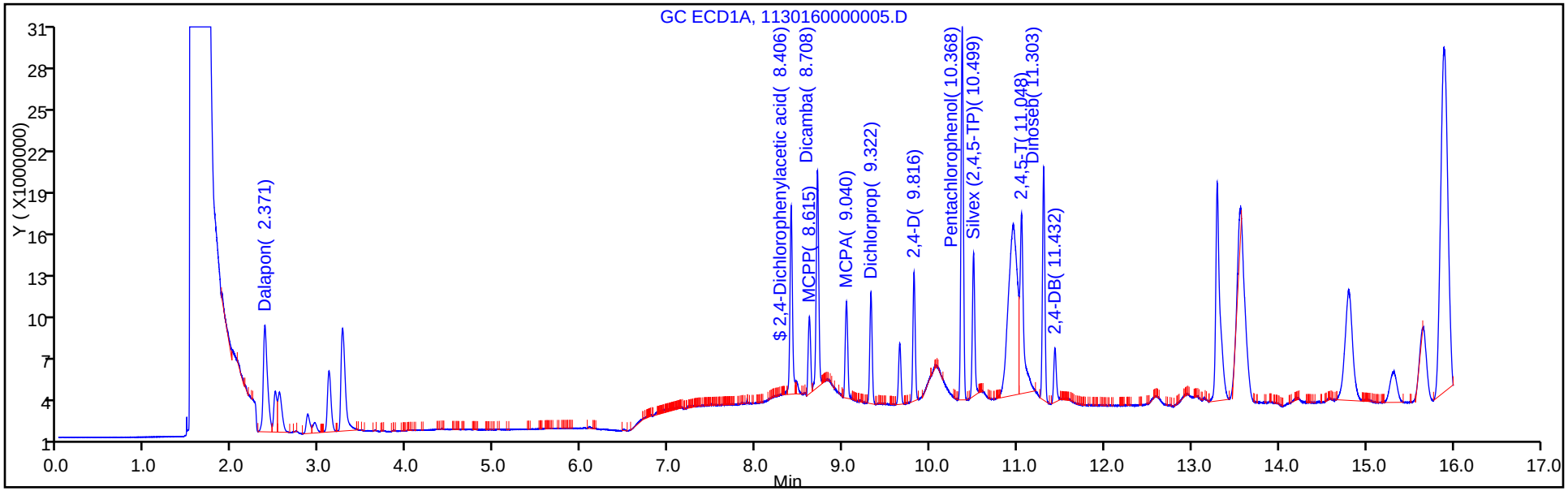
Report Date: 01-Dec-2016 10:36:47 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

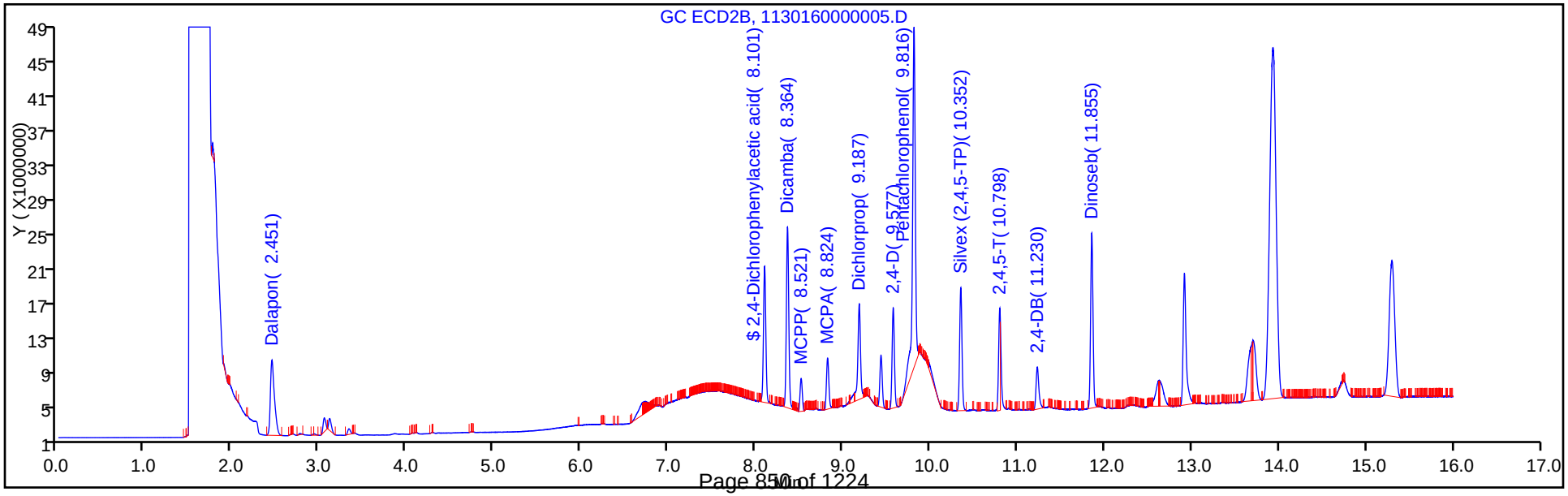
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000005.D

Injection Date:	30-Nov-2016 14:26:28	Instrument ID:	CGC1	Operator ID:	
Lims ID:	CCVRT			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



FORM VII
HERBICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCVRT 180-195866/1 Calibration Date: 11/30/2016 14:26

Instrument ID: CGC1 Calib Start Date: 09/24/2016 11:16

GC Column: RTX-1701 ID: 0.53(mm) Calib End Date: 09/24/2016 13:40

Lab File ID: 1130160000005.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dalapon	Ave	106032872	108934700		0.0822	0.0800	2.7	15.0
Dicamba	Ave	577586260	523087950		0.0362	0.0400	-9.4	15.0
MCPP	Ave	489111	475797		7.78	8.00	-2.7	15.0
MCPA	Ave	823988	739817		7.18	8.00	-10.2	15.0
Dichlorprop	Ave	143263508	137529025		0.0768	0.0800	-4.0	15.0
2,4-D	Ave	156449977	145018813		0.0742	0.0800	-7.3	15.0
Pentachlorophenol	Ave	1862070739	1968034750		0.0211	0.0200	5.7	15.0
Silvex (2,4,5-TP)	Ave	725950252	711383300		0.0196	0.0200	-2.0	15.0
2,4,5-T	Ave	573807998	589687050		0.0206	0.0200	2.8	15.0
2,4-DB	Lin2		60990850		0.0715	0.0800	-10.7	15.0
Dinoseb	Ave	200013748	253341063		0.101	0.0800	26.7*	15.0
2,4-Dichlorophenylacetic acid	Ave	221218280	196700850		0.0711	0.0800	-11.1	15.0

FORM VII
HERBICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCVRT 180-195866/1 Calibration Date: 11/30/2016 14:26

Instrument ID: CGC1 Calib Start Date: 09/24/2016 11:16

GC Column: RTX-1701 ID: 0.53(mm) Calib End Date: 09/24/2016 13:40

Lab File ID: 1130160000005.D

Analyte	RT	RT WINDOW	
		FROM	TO
Dalapon	2.45	2.42	2.48
Dicamba	8.36	8.33	8.39
MCPP	8.52	8.49	8.55
MCPA	8.82	8.79	8.85
Dichlorprop	9.19	9.16	9.22
2,4-D	9.58	9.55	9.61
Pentachlorophenol	9.82	9.79	9.85
Silvex (2,4,5-TP)	10.35	10.32	10.38
2,4,5-T	10.80	10.77	10.83
2,4-DB	11.23	11.20	11.26
Dinoseb	11.86	11.83	11.89
2,4-Dichlorophenylacetic acid	8.10	8.07	8.13

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000005.D
Lims ID: CCVRT
Client ID:
Sample Type: CCVRT
Inject. Date: 30-Nov-2016 14:26:28 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014557-001
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:36:47 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:23:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							
1	2.371	2.371	0.000	7505995H	0.0800	0.0844	
2	2.451	2.451	0.000	8714776H	0.0800	0.0822	
						RPD = 2.66	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.406	8.406	0.000	13291790H	0.0800	0.0735	
2	8.101	8.101	0.000	15736068H	0.0800	0.0711	
						RPD = 3.34	
3 MCPP							
1	8.615	8.615	0.000	5443072H	8.00	10.9	
2	8.521	8.521	0.000	3806376H	8.00	7.78	
						RPD = 33.72	
4 Dicamba							
1	8.708	8.708	0.000	15305030H	0.0400	0.0348	
2	8.364	8.364	0.000	20923518H	0.0400	0.0362	
						RPD = 3.95	
5 MCPA							
1	9.040	9.040	0.000	6796138H	8.00	9.23	
2	8.824	8.824	0.000	5918533H	8.00	7.18	
						RPD = 24.96	
6 Dichlorprop							
1	9.322	9.322	0.000	7803778H	0.0800	0.0697	
2	9.187	9.187	0.000	11002322H	0.0800	0.0768	
						RPD = 9.64	
7 2,4-D							
1	9.816	9.816	0.000	9083296H	0.0800	0.0725	
2	9.577	9.577	0.000	11601505H	0.0800	0.0742	
						RPD = 2.33	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.368	10.368	0.000	26297921H	0.0200	0.0185	
2	9.816	9.816	0.000	39360695H	0.0200	0.0211	
						RPD = 13.17	
9 Silvex (2,4,5-TP)							
1	10.499	10.499	0.000	10101409H	0.0200	0.0179	
2	10.352	10.352	0.000	14227666H	0.0200	0.0196	
						RPD = 9.26	
10 2,4,5-T							M
1	11.048	11.048	0.000	12728299H	0.0200	0.0273	
2	10.798	10.798	0.000	11793741H	0.0200	0.0206	M
						RPD = 28.28	
11 Dinoseb							
1	11.303	11.303	0.000	16454370H	0.0800	0.0799	
2	11.855	11.855	0.000	20267285H	0.0800	0.1013	
						RPD = 23.68	
12 2,4-DB							
1	11.432	11.432	0.000	3815012H	0.0800	0.0692	
2	11.230	11.230	0.000	4879268H	0.0800	0.0715	
						RPD = 3.25	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCHERBCALSL3_00021 Amount Added: 1.00 Units: mL

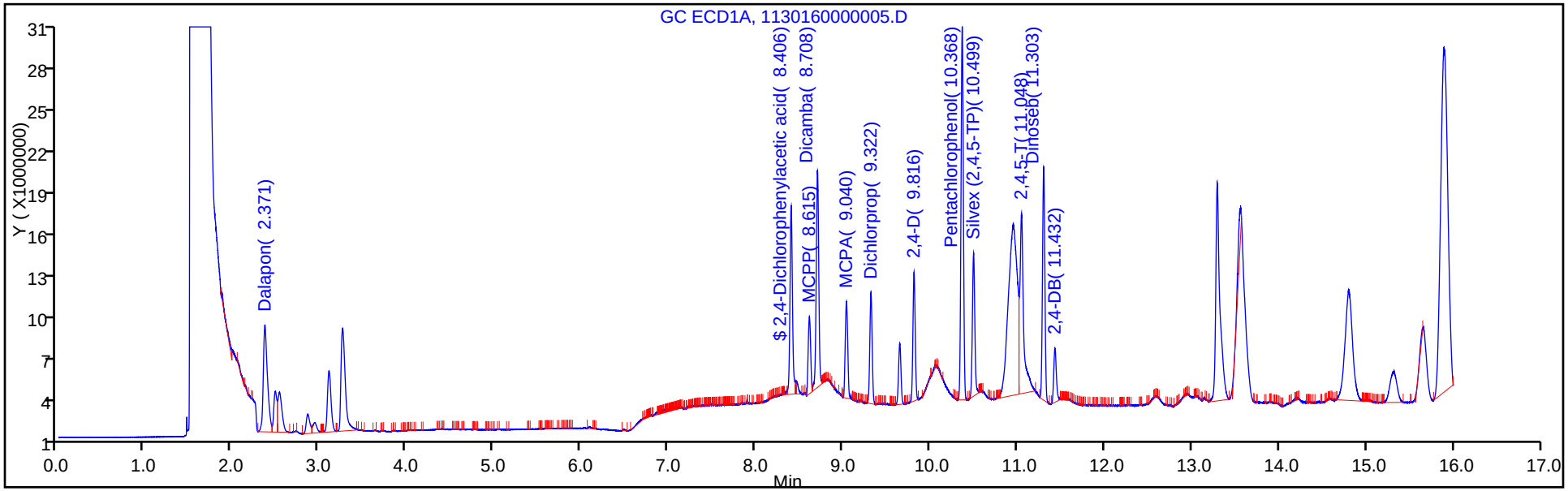
Report Date: 01-Dec-2016 10:36:48 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

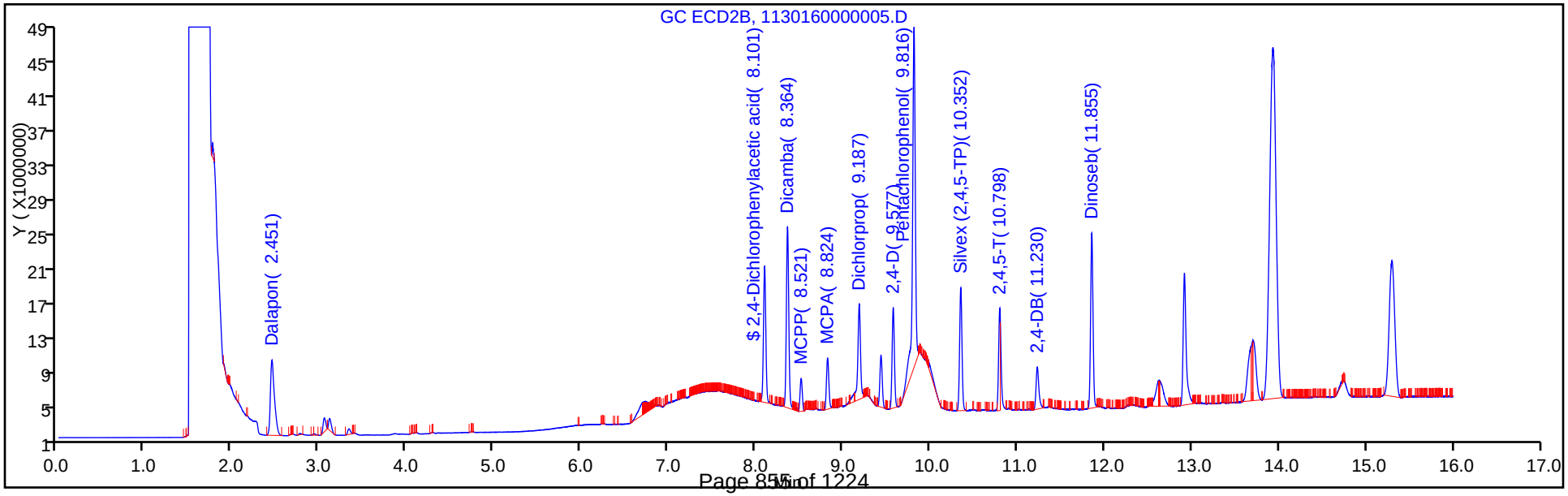
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000005.D

Injection Date:	30-Nov-2016 14:26:28	Instrument ID:	CGC1	Operator ID:	
Lims ID:	CCVRT			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

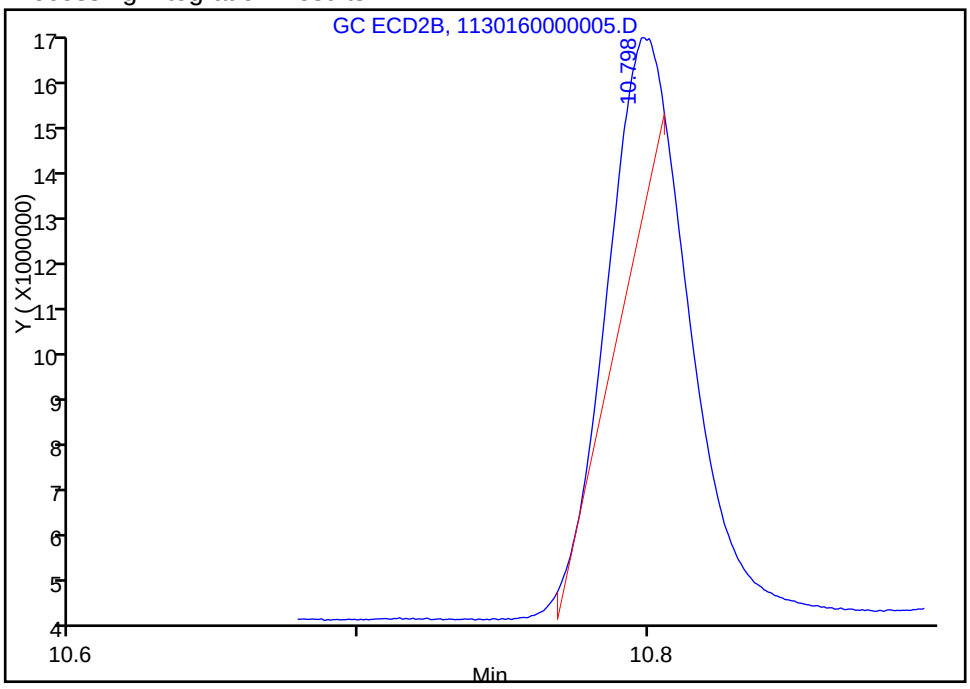
Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000005.D				
Injection Date:	30-Nov-2016 14:26:28	Instrument ID:	CGC1		
Lims ID:	CCVRT				
Client ID:					
Operator ID:		ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		
Column:	RTX-1701 (0.53 mm)	Detector	GC ECD2B		

10 2,4,5-T, CAS: 93-76-5

Signal: 2

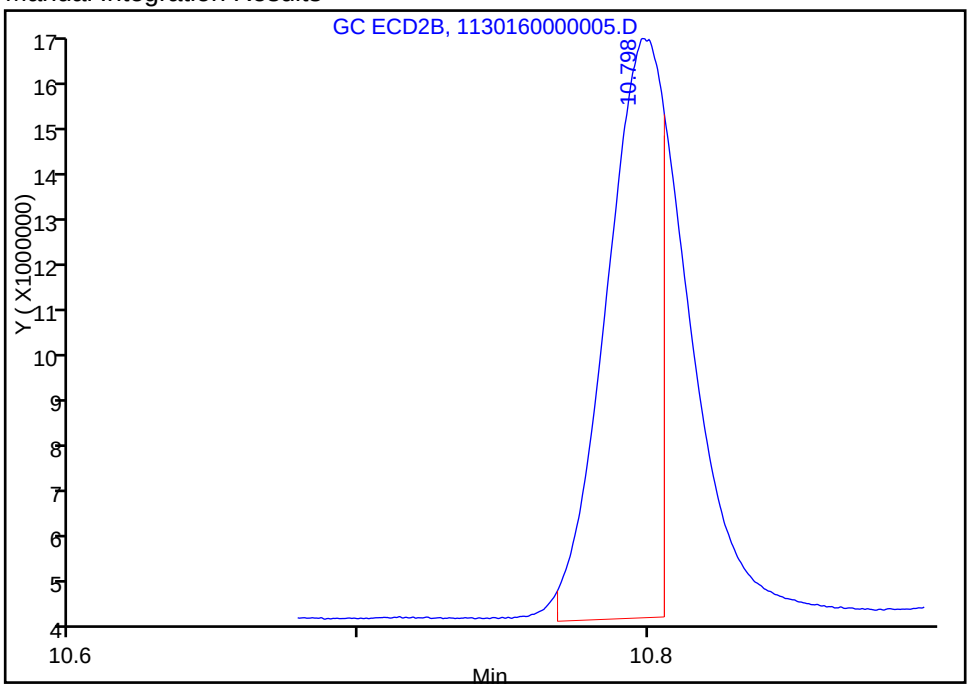
Processing Integration Results

RT: 10.80
Height: 3666846
Amount: 0.006390
Amount Units: ng



Manual Integration Results

RT: 10.80
Height: 11793741
Amount: 0.020553
Amount Units: ng



Reviewer: oravecj, 01-Dec-2016 10:23:09

Audit Action: Assigned New Baseline Audit Reason: Split Peak

FORM VII
HERBICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCV 180-195866/12 Calibration Date: 11/30/2016 18:49

Instrument ID: CGC1 Calib Start Date: 09/24/2016 11:16

GC Column: RTX-50 ID: 0.53(mm) Calib End Date: 09/24/2016 13:40

Lab File ID: 1130160000016.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dalapon	Ave	88931019	89999950		0.0810	0.0800	1.2	15.0
MCPP	Ave	497612	721986		11.6	8.00	45.1*	15.0
Dicamba	Ave	439500398	393585475		0.0358	0.0400	-10.4	15.0
MCPA	Ave	736218	897663		9.75	8.00	21.9*	15.0
Dichlorprop	Ave	111905191	103112763		0.0737	0.0800	-7.9	15.0
2,4-D	Ave	125372654	120886338		0.0771	0.0800	-3.6	15.0
Pentachlorophenol	Ave	1419500464	1356154600		0.0191	0.0200	-4.5	15.0
Silvex (2,4,5-TP)	Ave	565458201	536300800		0.0190	0.0200	-5.2	15.0
2,4,5-T	Ave	465857461	483397500		0.0208	0.0200	3.8	15.0
Dinoseb	Ave	206009246	218325550		0.0848	0.0800	6.0	15.0
2,4-DB	Lin2		51845413		0.0744	0.0800	-7.0	15.0
2,4-Dichlorophenylacetic acid	Ave	180721167	166244675		0.0736	0.0800	-8.0	15.0

FORM VII
HERBICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCV 180-195866/12 Calibration Date: 11/30/2016 18:49

Instrument ID: CGC1 Calib Start Date: 09/24/2016 11:16

GC Column: RTX-50 ID: 0.53(mm) Calib End Date: 09/24/2016 13:40

Lab File ID: 1130160000016.D

Analyte	RT	RT WINDOW	
		FROM	TO
Dalapon	2.37	2.34	2.40
MCPP	8.61	8.58	8.64
Dicamba	8.71	8.68	8.74
MCPA	9.04	9.01	9.07
Dichlorprop	9.32	9.29	9.35
2,4-D	9.81	9.78	9.84
Pentachlorophenol	10.37	10.34	10.40
Silvex (2,4,5-TP)	10.50	10.47	10.53
2,4,5-T	11.05	11.02	11.08
Dinoseb	11.30	11.25	11.35
2,4-DB	11.43	11.40	11.46
2,4-Dichlorophenylacetic acid	8.41	8.38	8.44

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000016.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 30-Nov-2016 18:49:19 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014557-012
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:36:11 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:28:54

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							M
1	2.373	2.373	0.000	7199996H	0.0800	0.0810	M
2	2.455	2.455	0.000	8562049H	0.0800	0.0807	
						RPD = 0.26	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.406	8.406	0.000	13299574H	0.0800	0.0736	
2	8.101	8.101	0.000	16794230H	0.0800	0.0759	
						RPD = 3.11	
3 MCPP							
1	8.614	8.614	0.000	5775887H	8.00	11.6	
2	8.520	8.520	0.000	3675973H	8.00	7.52	
						RPD = 42.79	
4 Dicamba							
1	8.707	8.707	0.000	15743419H	0.0400	0.0358	
2	8.365	8.365	0.000	22413495H	0.0400	0.0388	
						RPD = 8.00	
5 MCPA							
1	9.039	9.039	0.000	7181302H	8.00	9.75	
2	8.824	8.824	0.000	5788627H	8.00	7.03	
						RPD = 32.53	
6 Dichlorprop							
1	9.321	9.321	0.000	8249021H	0.0800	0.0737	
2	9.187	9.187	0.000	11118335H	0.0800	0.0776	
						RPD = 5.15	
7 2,4-D							
1	9.814	9.814	0.000	9670907H	0.0800	0.0771	
2	9.577	9.577	0.000	12976564H	0.0800	0.0829	
						RPD = 7.25	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.367	10.367	0.000	27123092H	0.0200	0.0191	
2	9.814	9.814	0.000	38755079H	0.0200	0.0208	
						RPD = 8.54	
9 Silvex (2,4,5-TP)							
1	10.496	10.496	0.000	10726016H	0.0200	0.0190	
2	10.351	10.351	0.000	15352509H	0.0200	0.0211	
						RPD = 10.87	
10 2,4,5-T							
1	11.049	11.049	0.000	9667950H	0.0200	0.0208	
2	10.797	10.797	0.000	12919446H	0.0200	0.0225	
						RPD = 8.15	
11 Dinoseb							
1	11.302	11.302	0.000	17466044H	0.0800	0.0848	
2	11.852	11.852	0.000	20362691H	0.0800	0.1018	
						RPD = 18.25	
12 2,4-DB							
1	11.429	11.429	0.000	4147633H	0.0800	0.0744	
2	11.228	11.228	0.000	5563751H	0.0800	0.0802	
						RPD = 7.52	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCHERBCALSL3_00021 Amount Added: 1.00 Units: mL

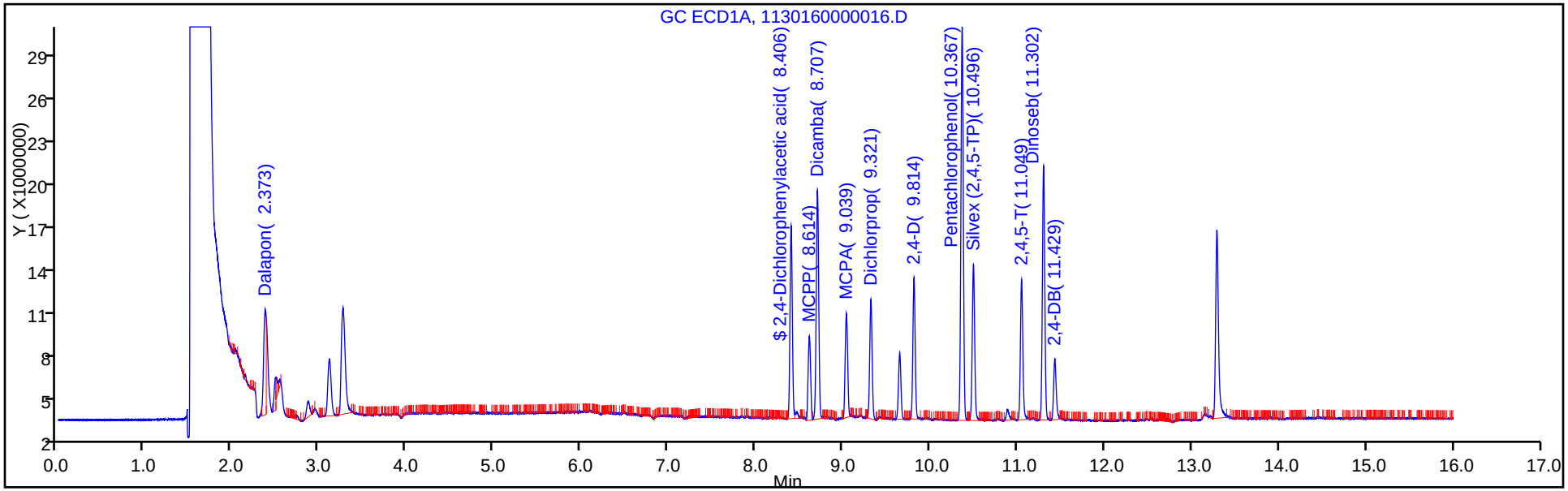
Report Date: 01-Dec-2016 10:36:11 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

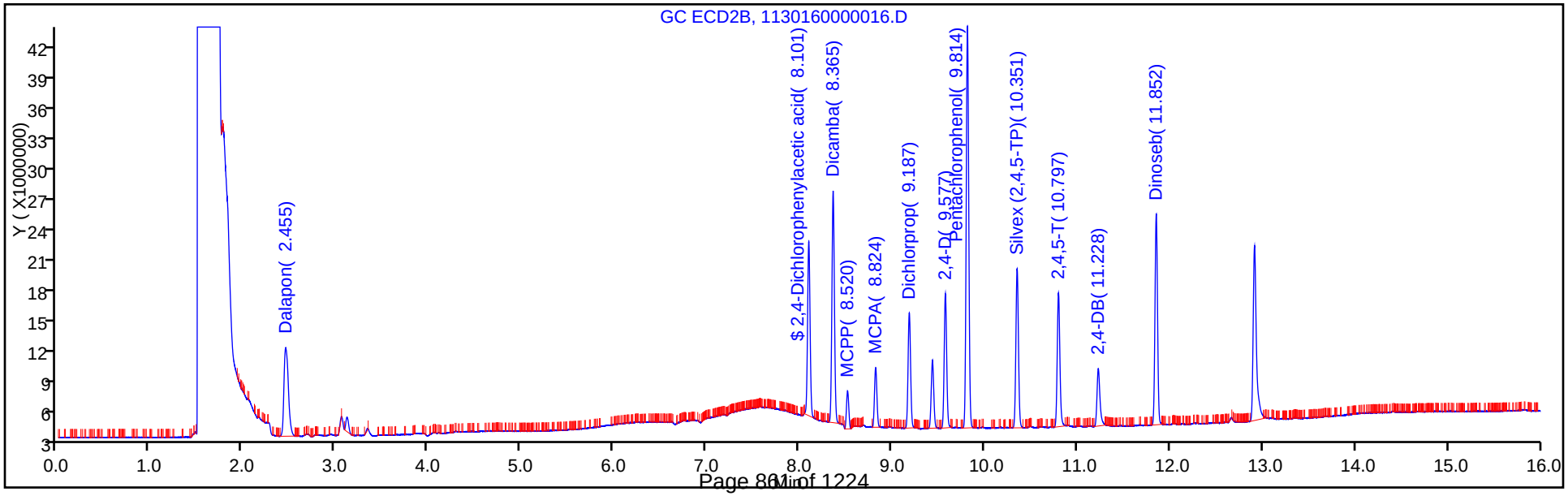
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000016.D

Injection Date:	30-Nov-2016 18:49:19	Instrument ID:	CGC1	Operator ID:	
Lims ID:	CCV			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

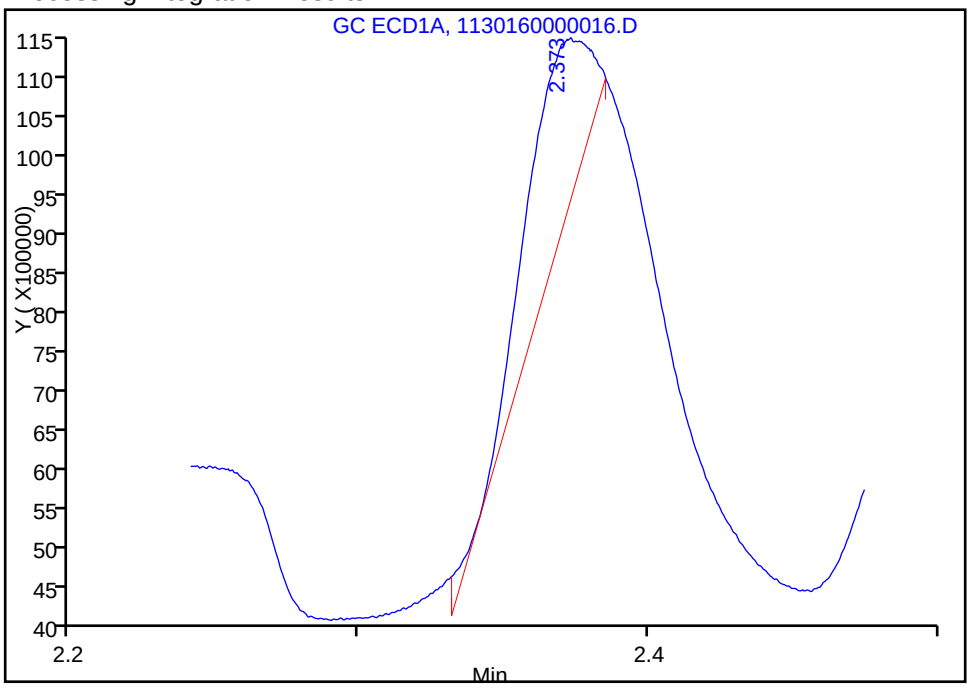
Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000016.D				
Injection Date:	30-Nov-2016 18:49:19	Instrument ID:	CGC1		
Lims ID:	CCV				
Client ID:					
Operator ID:		ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		
Column:	RTX-50 (0.53 mm)	Detector	GC ECD1A		

1 Dalapon, CAS: 75-99-0

Signal: 1

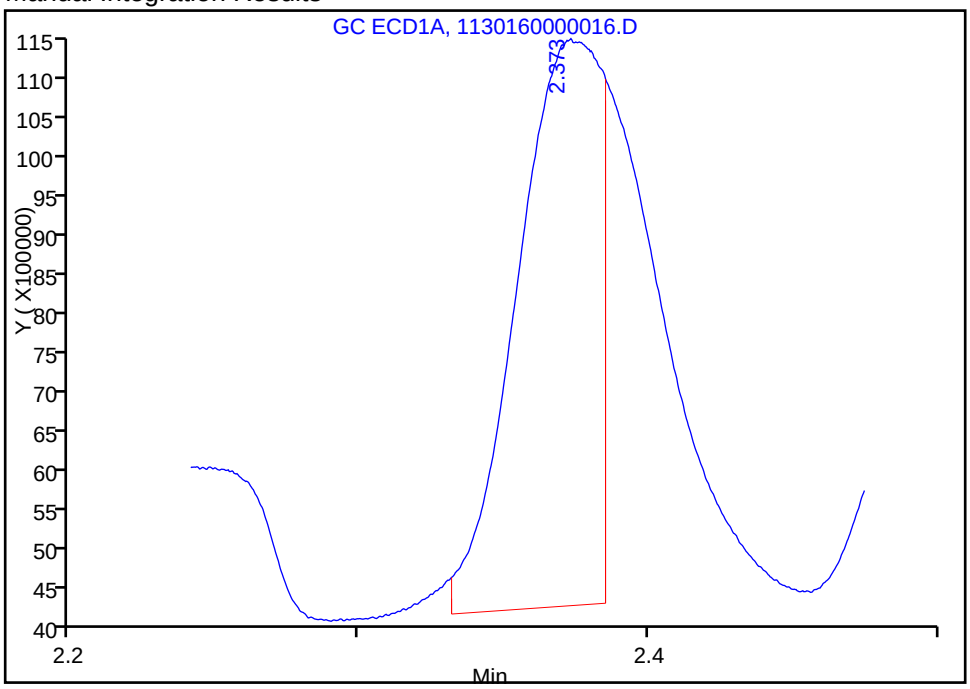
Processing Integration Results

RT: 2.37
Height: 2049792
Amount: 0.023049
Amount Units: ng



Manual Integration Results

RT: 2.37
Height: 7199996
Amount: 0.080962
Amount Units: ng



Reviewer: oravecj, 01-Dec-2016 10:28:54

Audit Action: Assigned New Baseline Audit Reason: Split Peak

FORM VII
HERBICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCV 180-195866/12 Calibration Date: 11/30/2016 18:49

Instrument ID: CGC1 Calib Start Date: 09/24/2016 11:16

GC Column: RTX-1701 ID: 0.53(mm) Calib End Date: 09/24/2016 13:40

Lab File ID: 1130160000016.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dalapon	Ave	106032872	107025613		0.0808	0.0800	0.9	15.0
Dicamba	Ave	577586260	560337375		0.0388	0.0400	-3.0	15.0
MCPP	Ave	489111	459497		7.52	8.00	-6.1	15.0
MCPA	Ave	823988	723578		7.03	8.00	-12.2	15.0
Dichlorprop	Ave	143263508	138979188		0.0776	0.0800	-3.0	15.0
2,4-D	Ave	156449977	162207050		0.0829	0.0800	3.7	15.0
Pentachlorophenol	Ave	1862070739	1937753950		0.0208	0.0200	4.1	15.0
Silvex (2,4,5-TP)	Ave	725950252	767625450		0.0212	0.0200	5.7	15.0
2,4,5-T	Ave	573807998	645972300		0.0225	0.0200	12.6	15.0
2,4-DB	Lin2		69546888		0.0802	0.0800	0.3	15.0
Dinoseb	Ave	200013748	254533638		0.102	0.0800	27.3*	15.0
2,4-Dichlorophenylacetic acid	Ave	221218280	209927875		0.0759	0.0800	-5.1	15.0

FORM VII
HERBICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCV 180-195866/12 Calibration Date: 11/30/2016 18:49

Instrument ID: CGC1 Calib Start Date: 09/24/2016 11:16

GC Column: RTX-1701 ID: 0.53(mm) Calib End Date: 09/24/2016 13:40

Lab File ID: 1130160000016.D

Analyte	RT	RT WINDOW	
		FROM	TO
Dalapon	2.46	2.43	2.49
Dicamba	8.37	8.34	8.40
MCPP	8.52	8.49	8.55
MCPA	8.82	8.79	8.85
Dichlorprop	9.19	9.16	9.22
2,4-D	9.58	9.55	9.61
Pentachlorophenol	9.81	9.78	9.84
Silvex (2,4,5-TP)	10.35	10.32	10.38
2,4,5-T	10.80	10.77	10.83
2,4-DB	11.23	11.20	11.26
Dinoseb	11.85	11.82	11.88
2,4-Dichlorophenylacetic acid	8.10	8.07	8.13

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000016.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 30-Nov-2016 18:49:19 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014557-012
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:36:11 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:28:54

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							M
1	2.373	2.373	0.000	7199996H	0.0800	0.0810	M
2	2.455	2.455	0.000	8562049H	0.0800	0.0807	
						RPD = 0.26	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.406	8.406	0.000	13299574H	0.0800	0.0736	
2	8.101	8.101	0.000	16794230H	0.0800	0.0759	
						RPD = 3.11	
3 MCPP							
1	8.614	8.614	0.000	5775887H	8.00	11.6	
2	8.520	8.520	0.000	3675973H	8.00	7.52	
						RPD = 42.79	
4 Dicamba							
1	8.707	8.707	0.000	15743419H	0.0400	0.0358	
2	8.365	8.365	0.000	22413495H	0.0400	0.0388	
						RPD = 8.00	
5 MCPA							
1	9.039	9.039	0.000	7181302H	8.00	9.75	
2	8.824	8.824	0.000	5788627H	8.00	7.03	
						RPD = 32.53	
6 Dichlorprop							
1	9.321	9.321	0.000	8249021H	0.0800	0.0737	
2	9.187	9.187	0.000	11118335H	0.0800	0.0776	
						RPD = 5.15	
7 2,4-D							
1	9.814	9.814	0.000	9670907H	0.0800	0.0771	
2	9.577	9.577	0.000	12976564H	0.0800	0.0829	
						RPD = 7.25	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.367	10.367	0.000	27123092H	0.0200	0.0191	
2	9.814	9.814	0.000	38755079H	0.0200	0.0208	
						RPD = 8.54	
9 Silvex (2,4,5-TP)							
1	10.496	10.496	0.000	10726016H	0.0200	0.0190	
2	10.351	10.351	0.000	15352509H	0.0200	0.0211	
						RPD = 10.87	
10 2,4,5-T							
1	11.049	11.049	0.000	9667950H	0.0200	0.0208	
2	10.797	10.797	0.000	12919446H	0.0200	0.0225	
						RPD = 8.15	
11 Dinoseb							
1	11.302	11.302	0.000	17466044H	0.0800	0.0848	
2	11.852	11.852	0.000	20362691H	0.0800	0.1018	
						RPD = 18.25	
12 2,4-DB							
1	11.429	11.429	0.000	4147633H	0.0800	0.0744	
2	11.228	11.228	0.000	5563751H	0.0800	0.0802	
						RPD = 7.52	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCHERBCALSL3_00021 Amount Added: 1.00 Units: mL

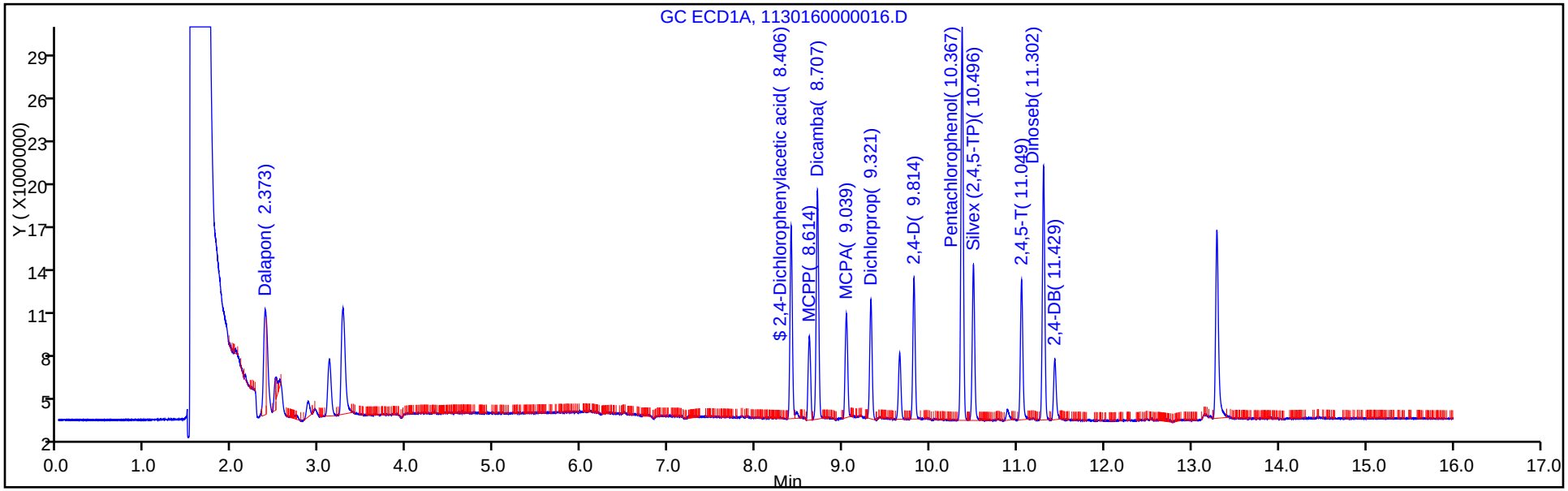
Report Date: 01-Dec-2016 10:36:12 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

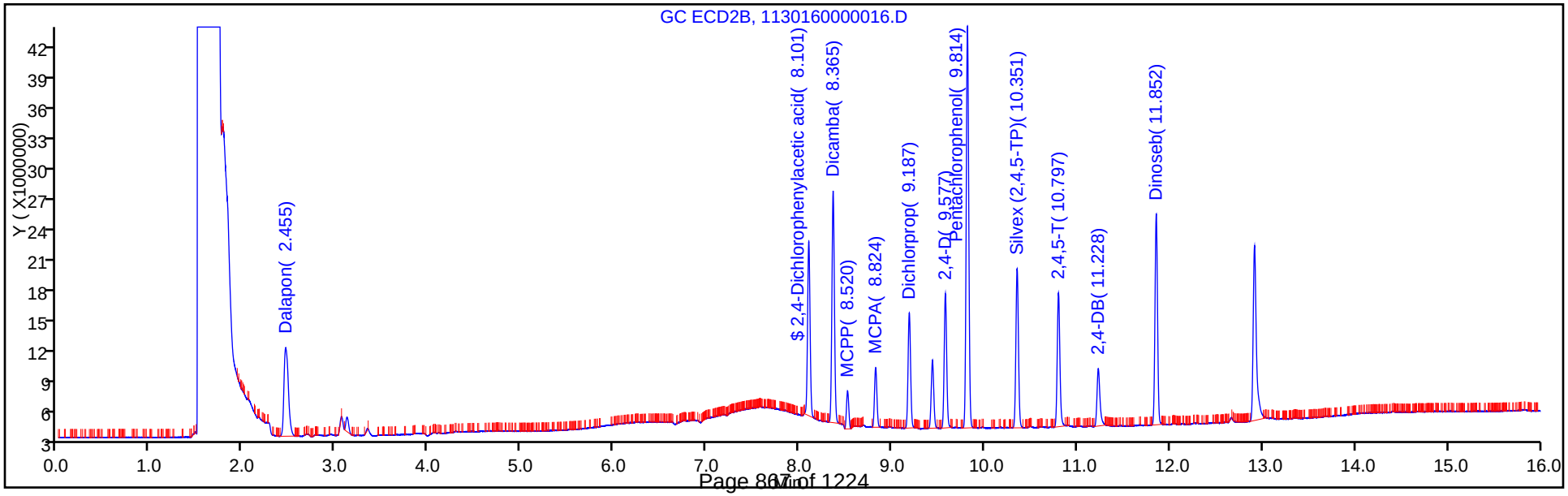
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000016.D

Injection Date:	30-Nov-2016 18:49:19	Instrument ID:	CGC1	Operator ID:	
Lims ID:	CCV			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



FORM VII
HERBICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCV 180-195866/23 Calibration Date: 11/30/2016 23:10

Instrument ID: CGC1 Calib Start Date: 09/24/2016 11:16

GC Column: RTX-50 ID: 0.53(mm) Calib End Date: 09/24/2016 13:40

Lab File ID: 1130160000027.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dalapon	Ave	88931019	86584500		0.0779	0.0800	-2.6	15.0
MCPP	Ave	497612	743482		12.0	8.00	49.4*	15.0
Dicamba	Ave	439500398	380468350		0.0346	0.0400	-13.4	15.0
MCPA	Ave	736218	916330		9.96	8.00	24.5*	15.0
Dichlorprop	Ave	111905191	98339300		0.0703	0.0800	-12.1	15.0
2,4-D	Ave	125372654	115198263		0.0735	0.0800	-8.1	15.0
Pentachlorophenol	Ave	1419500464	1279195600		0.0180	0.0200	-9.9	15.0
Silvex (2,4,5-TP)	Ave	565458201	504696550		0.0179	0.0200	-10.7	15.0
2,4,5-T	Ave	465857461	457433400		0.0196	0.0200	-1.8	15.0
Dinoseb	Ave	206009246	204108600		0.0793	0.0800	-0.9	15.0
2,4-DB	Lin2		49732050		0.0718	0.0800	-10.3	15.0
2,4-Dichlorophenylacetic acid	Ave	180721167	157699638		0.0698	0.0800	-12.7	15.0

FORM VII
HERBICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCV 180-195866/23 Calibration Date: 11/30/2016 23:10

Instrument ID: CGC1 Calib Start Date: 09/24/2016 11:16

GC Column: RTX-50 ID: 0.53(mm) Calib End Date: 09/24/2016 13:40

Lab File ID: 1130160000027.D

Analyte	RT	RT WINDOW	
		FROM	TO
Dalapon	2.37	2.34	2.40
MCPP	8.62	8.59	8.65
Dicamba	8.71	8.68	8.74
MCPA	9.04	9.01	9.07
Dichlorprop	9.32	9.29	9.35
2,4-D	9.82	9.79	9.85
Pentachlorophenol	10.37	10.34	10.40
Silvex (2,4,5-TP)	10.50	10.47	10.53
2,4,5-T	11.05	11.02	11.08
Dinoseb	11.30	11.25	11.35
2,4-DB	11.43	11.40	11.46
2,4-Dichlorophenylacetic acid	8.41	8.38	8.44

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000027.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 30-Nov-2016 23:10:39 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014557-023
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:35:38 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:33:45

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							M
1	2.368	2.368	0.000	6926760H	0.0800	0.0779	M
2	2.449	2.449	0.000	8297567H	0.0800	0.0783	M
						RPD = 0.47	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.406	8.406	0.000	12615971H	0.0800	0.0698	
2	8.102	8.102	0.000	16348731H	0.0800	0.0739	
						RPD = 5.70	
3 MCPP							
1	8.615	8.615	0.000	5947854H	8.00	12.0	
2	8.521	8.521	0.000	3502907H	8.00	7.16	
						RPD = 50.13	
4 Dicamba							
1	8.709	8.709	0.000	15218734H	0.0400	0.0346	
2	8.365	8.365	0.000	21332126H	0.0400	0.0369	
						RPD = 6.44	
5 MCPA							
1	9.040	9.040	0.000	7330640H	8.00	9.96	
2	8.825	8.825	0.000	5522398H	8.00	6.70	
						RPD = 39.08	
6 Dichlorprop							
1	9.322	9.322	0.000	7867144H	0.0800	0.0703	
2	9.187	9.187	0.000	10782872H	0.0800	0.0753	
						RPD = 6.82	
7 2,4-D							
1	9.816	9.816	0.000	9215861H	0.0800	0.0735	
2	9.576	9.576	0.000	12507577H	0.0800	0.0799	
						RPD = 8.39	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.367	10.367	0.000	25583912H	0.0200	0.0180	
2	9.815	9.815	0.000	37246344H	0.0200	0.0200	
						RPD = 10.41	
9 Silvex (2,4,5-TP)							
1	10.498	10.498	0.000	10093931H	0.0200	0.0179	
2	10.351	10.351	0.000	14778304H	0.0200	0.0204	
						RPD = 13.12	
10 2,4,5-T							
1	11.049	11.049	0.000	9148668H	0.0200	0.0196	
2	10.798	10.798	0.000	12465153H	0.0200	0.0217	
						RPD = 10.08	
11 Dinoseb							
1	11.301	11.301	0.000	16328688H	0.0800	0.0793	
2	11.854	11.854	0.000	19350572H	0.0800	0.0967	
						RPD = 19.87	
12 2,4-DB							
1	11.430	11.430	0.000	3978564H	0.0800	0.0718	
2	11.229	11.229	0.000	5352437H	0.0800	0.0775	
						RPD = 7.73	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCHERBCALSL3_00021 Amount Added: 1.00 Units: mL

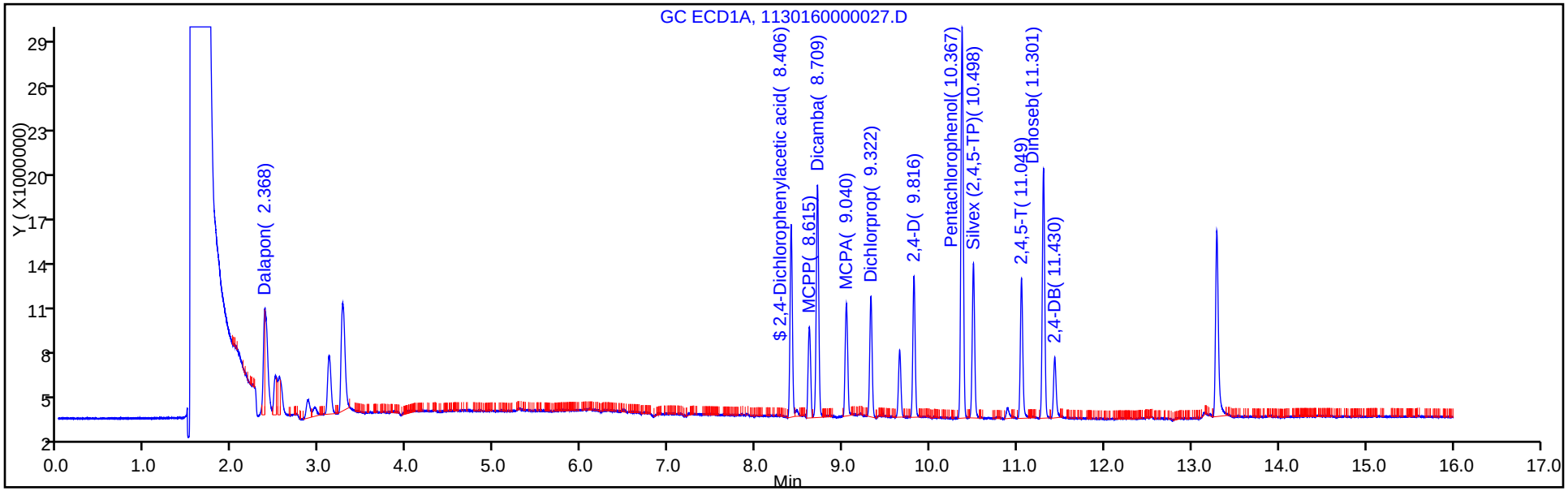
Report Date: 01-Dec-2016 10:35:38 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

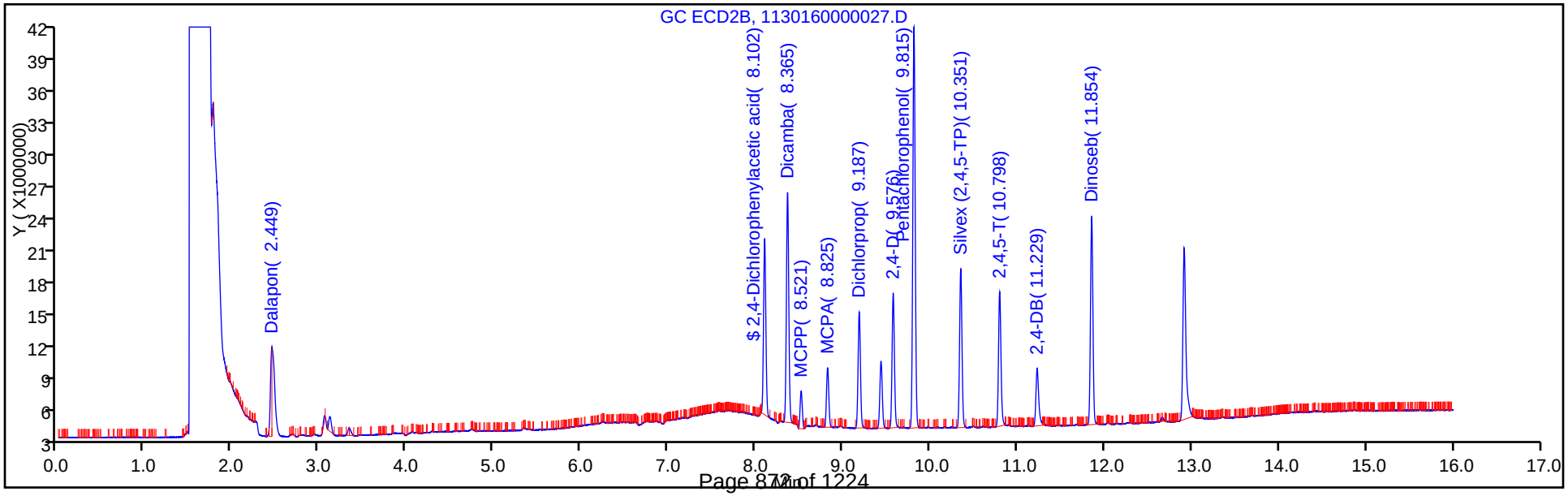
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000027.D

Injection Date:	30-Nov-2016 23:10:39	Instrument ID:	CGC1	Operator ID:	
Lims ID:	CCV			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

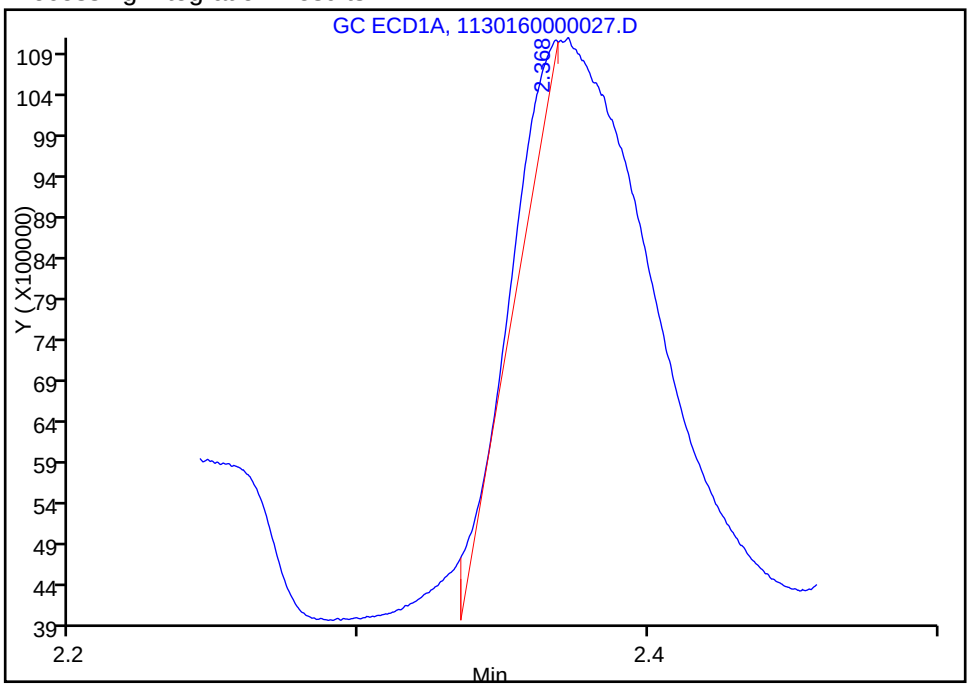
Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000027.D				
Injection Date:	30-Nov-2016 23:10:39	Instrument ID:	CGC1		
Lims ID:	CCV				
Client ID:					
Operator ID:		ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		
Column:	RTX-50 (0.53 mm)	Detector	GC ECD1A		

1 Dalapon, CAS: 75-99-0

Signal: 1

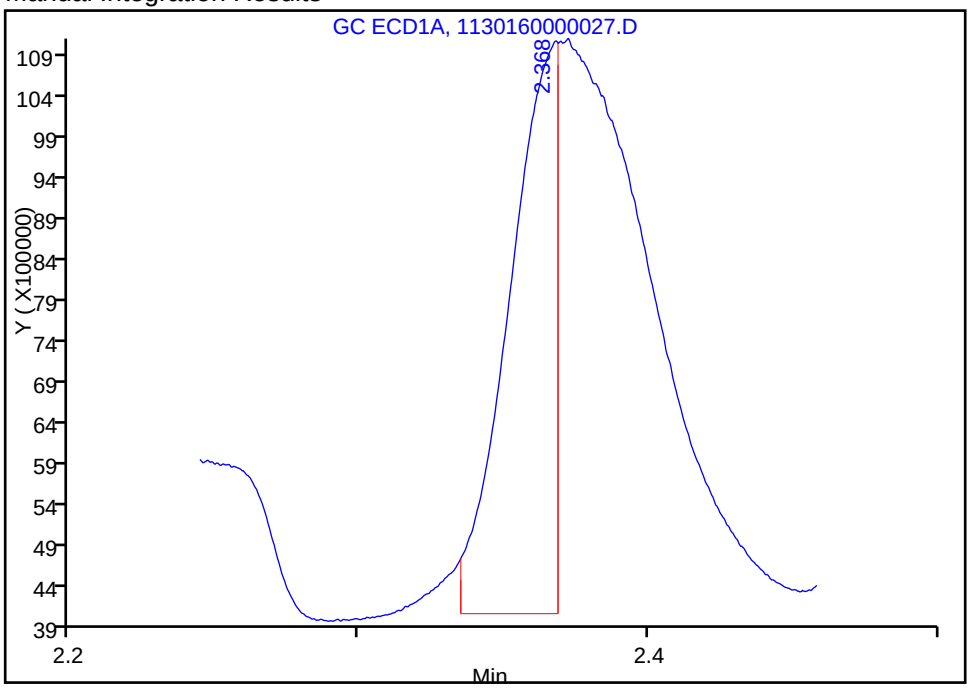
Processing Integration Results

RT: 2.37
Height: 168140
Amount: 0.001891
Amount Units: ng



Manual Integration Results

RT: 2.37
Height: 6926760
Amount: 0.077889
Amount Units: ng



Reviewer: oravecj, 01-Dec-2016 10:33:45

Audit Action: Assigned New Baseline Audit Reason: Split Peak

FORM VII
HERBICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCV 180-195866/23 Calibration Date: 11/30/2016 23:10

Instrument ID: CGC1 Calib Start Date: 09/24/2016 11:16

GC Column: RTX-1701 ID: 0.53(mm) Calib End Date: 09/24/2016 13:40

Lab File ID: 1130160000027.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dalapon	Ave	106032872	103719588		0.0783	0.0800	-2.2	15.0
Dicamba	Ave	577586260	533303150		0.0369	0.0400	-7.7	15.0
MCPP	Ave	489111	437863		7.16	8.00	-10.5	15.0
MCPA	Ave	823988	690300		6.70	8.00	-16.2*	15.0
Dichlorprop	Ave	143263508	134785900		0.0753	0.0800	-5.9	15.0
2,4-D	Ave	156449977	156344713		0.0800	0.0800	-0.0	15.0
Pentachlorophenol	Ave	1862070739	1862317200		0.0200	0.0200	0.0	15.0
Silvex (2,4,5-TP)	Ave	725950252	738915200		0.0204	0.0200	1.8	15.0
2,4,5-T	Ave	573807998	623257650		0.0217	0.0200	8.6	15.0
2,4-DB	Lin2		66905463		0.0775	0.0800	-3.1	15.0
Dinoseb	Ave	200013748	241882150		0.0968	0.0800	20.9*	15.0
2,4-Dichlorophenylacetic acid	Ave	221218280	204359138		0.0739	0.0800	-7.6	15.0

FORM VII
HERBICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: CCV 180-195866/23 Calibration Date: 11/30/2016 23:10

Instrument ID: CGC1 Calib Start Date: 09/24/2016 11:16

GC Column: RTX-1701 ID: 0.53(mm) Calib End Date: 09/24/2016 13:40

Lab File ID: 1130160000027.D

Analyte	RT	RT WINDOW	
		FROM	TO
Dalapon	2.45	2.42	2.48
Dicamba	8.37	8.34	8.40
MCPP	8.52	8.49	8.55
MCPA	8.83	8.80	8.86
Dichlorprop	9.19	9.16	9.22
2,4-D	9.58	9.55	9.61
Pentachlorophenol	9.82	9.79	9.85
Silvex (2,4,5-TP)	10.35	10.32	10.38
2,4,5-T	10.80	10.77	10.83
2,4-DB	11.23	11.20	11.26
Dinoseb	11.85	11.82	11.88
2,4-Dichlorophenylacetic acid	8.10	8.07	8.13

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000027.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 30-Nov-2016 23:10:39 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 180-0014557-023
Operator ID: Instrument ID: CGC1
Sublist: chrom-Herbicides_CGC1*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:35:38 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:33:45

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							M
1	2.368	2.368	0.000	6926760H	0.0800	0.0779	M
2	2.449	2.449	0.000	8297567H	0.0800	0.0783	M
						RPD = 0.47	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.406	8.406	0.000	12615971H	0.0800	0.0698	
2	8.102	8.102	0.000	16348731H	0.0800	0.0739	
						RPD = 5.70	
3 MCPP							
1	8.615	8.615	0.000	5947854H	8.00	12.0	
2	8.521	8.521	0.000	3502907H	8.00	7.16	
						RPD = 50.13	
4 Dicamba							
1	8.709	8.709	0.000	15218734H	0.0400	0.0346	
2	8.365	8.365	0.000	21332126H	0.0400	0.0369	
						RPD = 6.44	
5 MCPA							
1	9.040	9.040	0.000	7330640H	8.00	9.96	
2	8.825	8.825	0.000	5522398H	8.00	6.70	
						RPD = 39.08	
6 Dichlorprop							
1	9.322	9.322	0.000	7867144H	0.0800	0.0703	
2	9.187	9.187	0.000	10782872H	0.0800	0.0753	
						RPD = 6.82	
7 2,4-D							
1	9.816	9.816	0.000	9215861H	0.0800	0.0735	
2	9.576	9.576	0.000	12507577H	0.0800	0.0799	
						RPD = 8.39	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.367	10.367	0.000	25583912H	0.0200	0.0180	
2	9.815	9.815	0.000	37246344H	0.0200	0.0200	
						RPD = 10.41	
9 Silvex (2,4,5-TP)							
1	10.498	10.498	0.000	10093931H	0.0200	0.0179	
2	10.351	10.351	0.000	14778304H	0.0200	0.0204	
						RPD = 13.12	
10 2,4,5-T							
1	11.049	11.049	0.000	9148668H	0.0200	0.0196	
2	10.798	10.798	0.000	12465153H	0.0200	0.0217	
						RPD = 10.08	
11 Dinoseb							
1	11.301	11.301	0.000	16328688H	0.0800	0.0793	
2	11.854	11.854	0.000	19350572H	0.0800	0.0967	
						RPD = 19.87	
12 2,4-DB							
1	11.430	11.430	0.000	3978564H	0.0800	0.0718	
2	11.229	11.229	0.000	5352437H	0.0800	0.0775	
						RPD = 7.73	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

GCHERBCALSL3_00021 Amount Added: 1.00 Units: mL

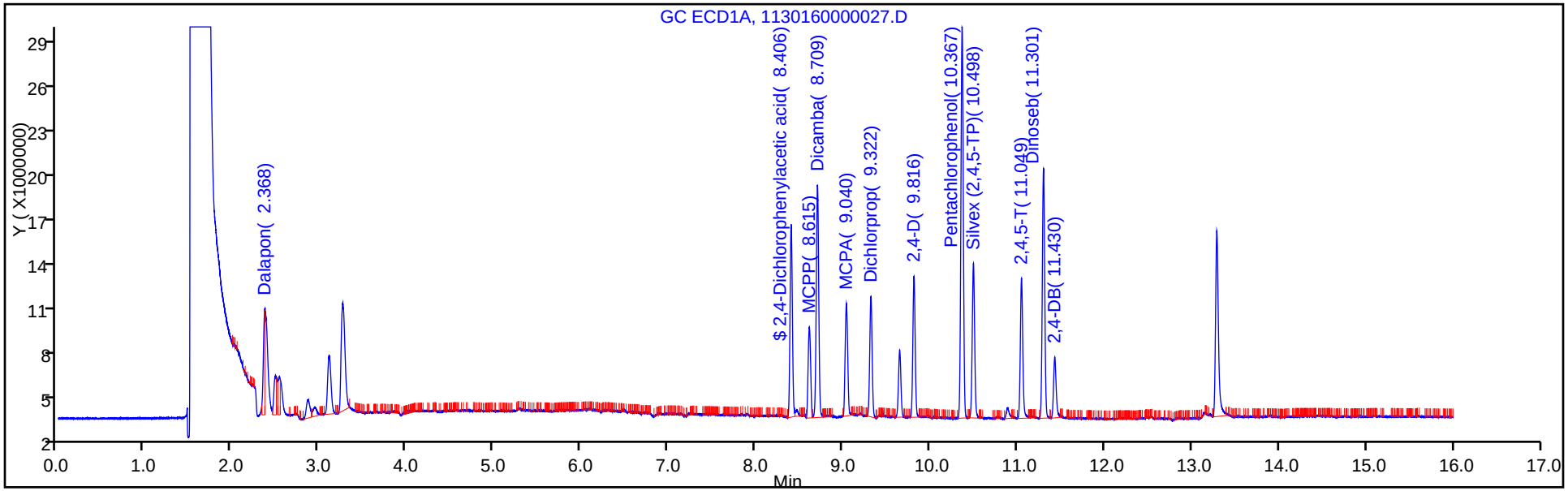
Report Date: 01-Dec-2016 10:35:39 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

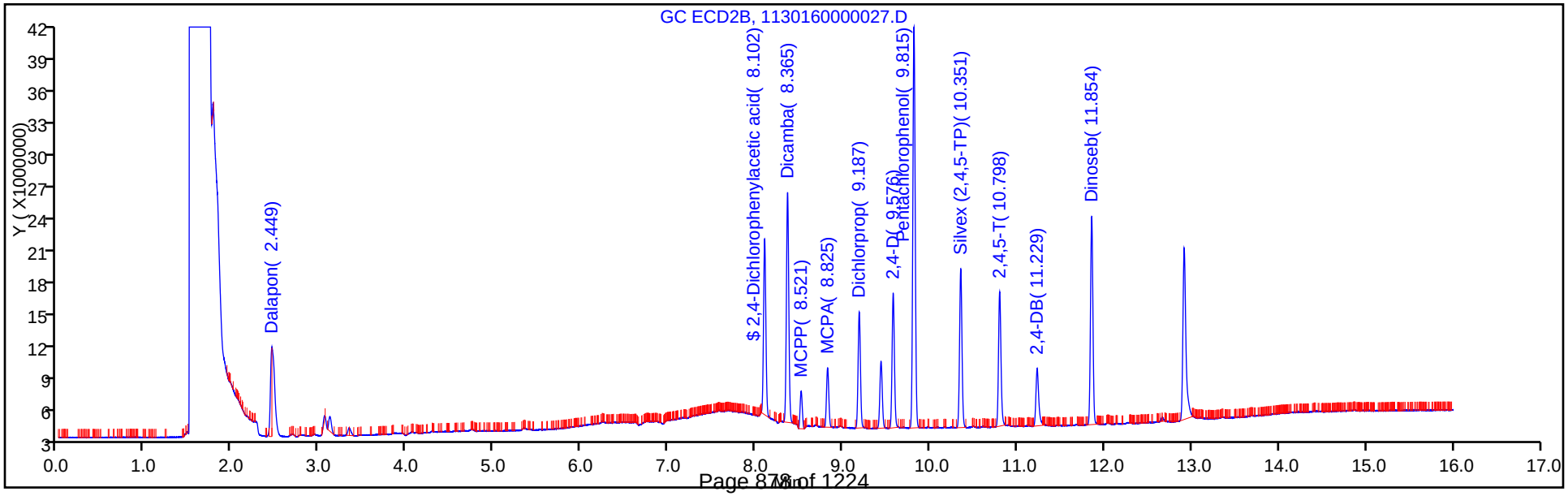
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000027.D

Injection Date:	30-Nov-2016 23:10:39	Instrument ID:	CGC1	Operator ID:	
Lims ID:	CCV			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

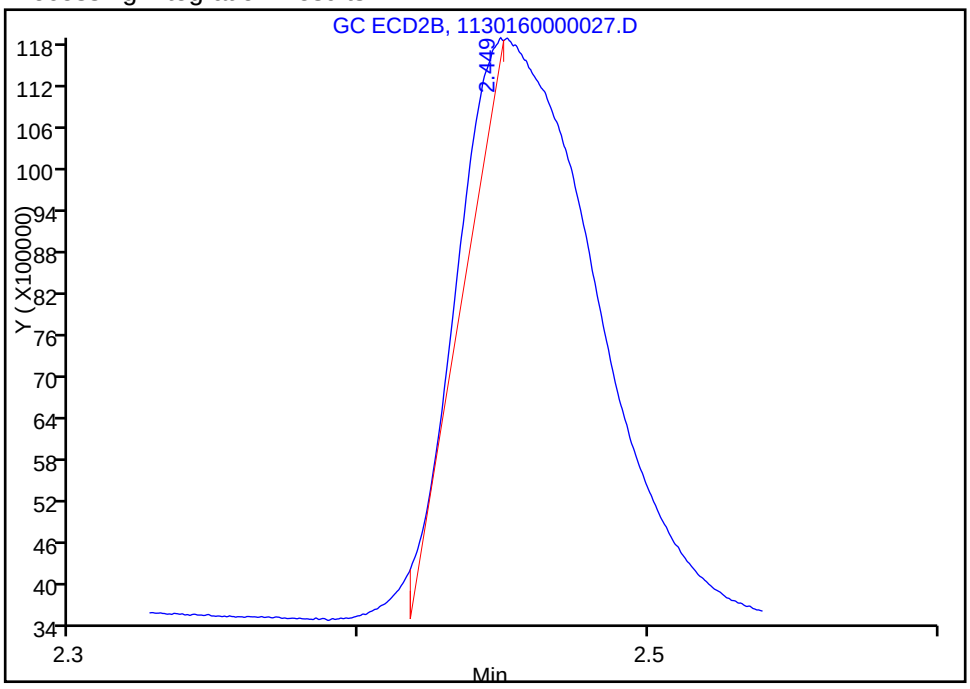
Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000027.D				
Injection Date:	30-Nov-2016 23:10:39	Instrument ID:	CGC1		
Lims ID:	CCV				
Client ID:					
Operator ID:		ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		
Column:	RTX-1701 (0.53 mm)	Detector	GC ECD2B		

1 Dalapon, CAS: 75-99-0

Signal: 2

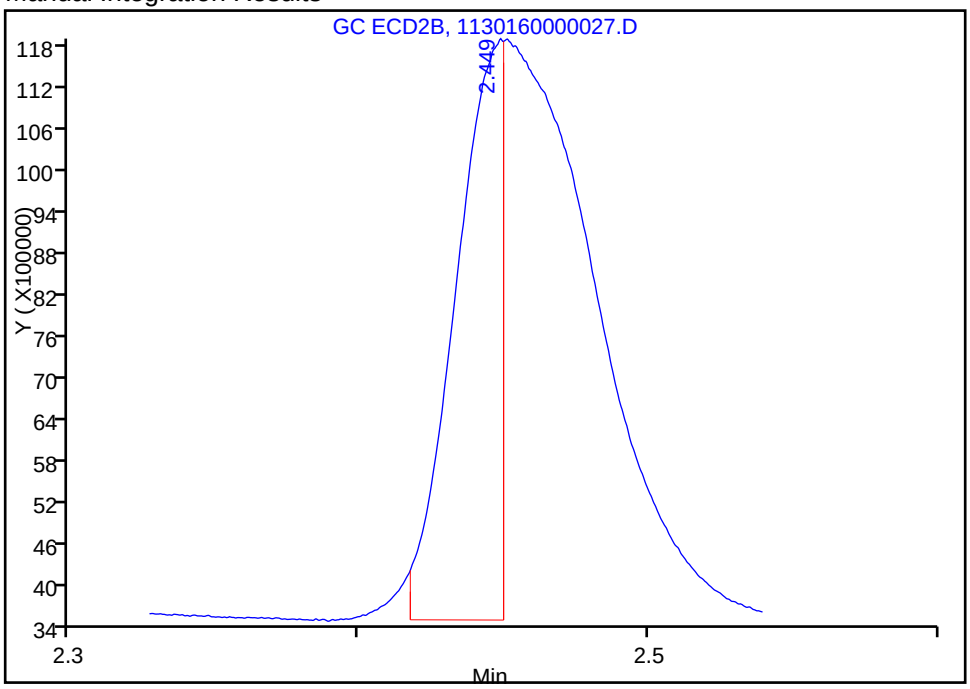
Processing Integration Results

RT: 2.45
Height: 294742
Amount: 0.002780
Amount Units: ng



Manual Integration Results

RT: 2.45
Height: 8297567
Amount: 0.078255
Amount Units: ng



Reviewer: oravecj, 01-Dec-2016 10:33:45

Audit Action: Assigned New Baseline Audit Reason: Split Peak

FORM I
HERBICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 180-195524/1-A

Matrix: Solid | Lab File ID: 1130160000006.D

Analysis Method: 8151A | Date Collected:

Extraction Method: 8151A | Date Extracted: 11/27/2016 09:29

Sample wt/vol: 50.0(g) | Date Analyzed: 11/30/2016 14:50

Con. Extract Vol.: 10.0(mL) | Dilution Factor: 20

Injection Volume: 1(uL) | GC Column: RTX-50 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195866 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
93-76-5	2,4,5-T	0.00251	U	0.0200	0.00251
94-75-7	2,4-D	0.00547	U	0.0800	0.00547
93-72-1	Silvex (2,4,5-TP)	0.00210	U	0.0200	0.00210
75-99-0	Dalapon	0.00710	U	0.0900	0.00710
94-82-6	2,4-DB	0.00612	U	0.0800	0.00612
1918-00-9	Dicamba	0.00479	U	0.0400	0.00479
120-36-5	Dichlorprop	0.00948	U	0.0800	0.00948
88-85-7	Dinoseb	0.00455	U	0.0120	0.00455
94-74-6	MCPA	1.65	U	8.00	1.65
93-65-2	MCPP	1.61	U	8.00	1.61

CAS NO.	SURROGATE	%REC	Q	LIMITS
19719-28-9	2,4-Dichlorophenylacetic acid	43		19-122

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000006.D
Lims ID: MB 180-195524/1-A
Client ID:
Sample Type: MB
Inject. Date: 30-Nov-2016 14:50:24 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 20.0000
Sample Info: 180-0014557-002
Operator ID: Instrument ID: CGC1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:36:11 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:23:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							
1		2.373				ND	
2		2.455					
$ 2 2,4-Dichlorophenylacetic acid							
1	8.407	8.406	0.001	3878133H	0.0500	0.0215	
2	8.101	8.101	0.000	5037603H	0.0500	0.0228	
						RPD = 5.94	
3 MCPP							
1		8.614				ND	
2		8.520					
4 Dicamba							
1		8.707				ND	
2		8.365					
5 MCPA							
1		9.039				ND	
2		8.824					
6 Dichlorprop							
1		9.321				ND	
2		9.187					
7 2,4-D							
1		9.814				ND	
2		9.577					
8 Pentachlorophenol							
1		10.367				ND	
2		9.814					
9 Silvex (2,4,5-TP)							
1		10.496				ND	
2		10.351					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
10 2,4,5-T							
1		11.049				ND	
2		10.797					
11 Dinoseb							
1		11.302				ND	
2		11.852					
12 2,4-DB							
1		11.429				ND	
2		11.228					

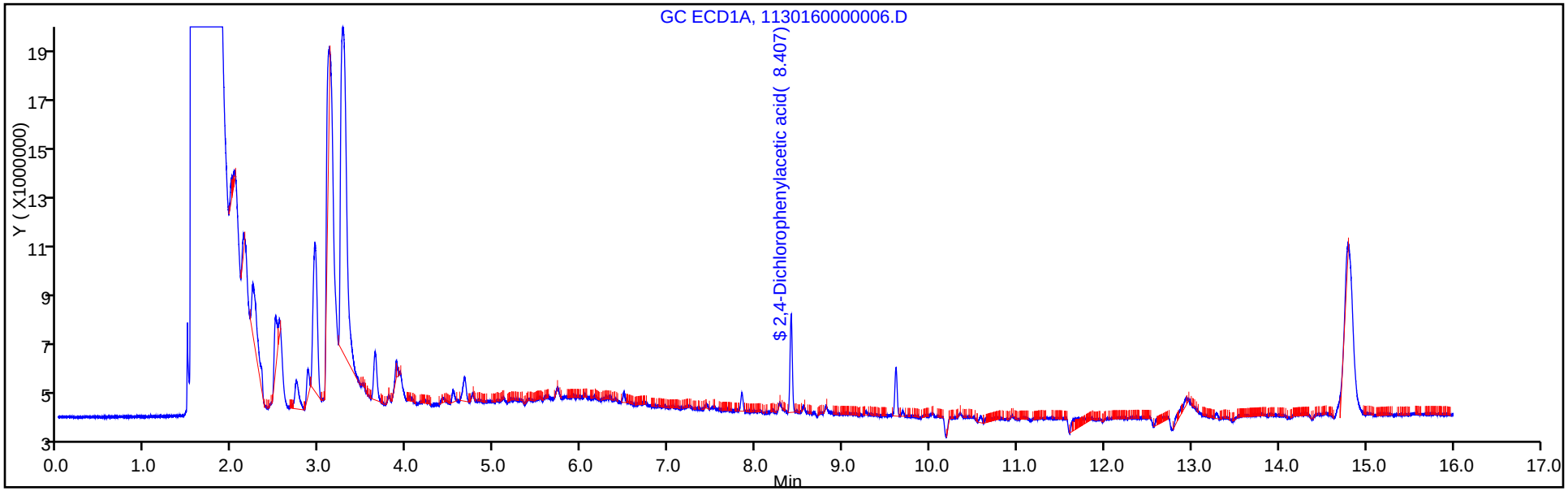
Report Date: 01-Dec-2016 10:36:44 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

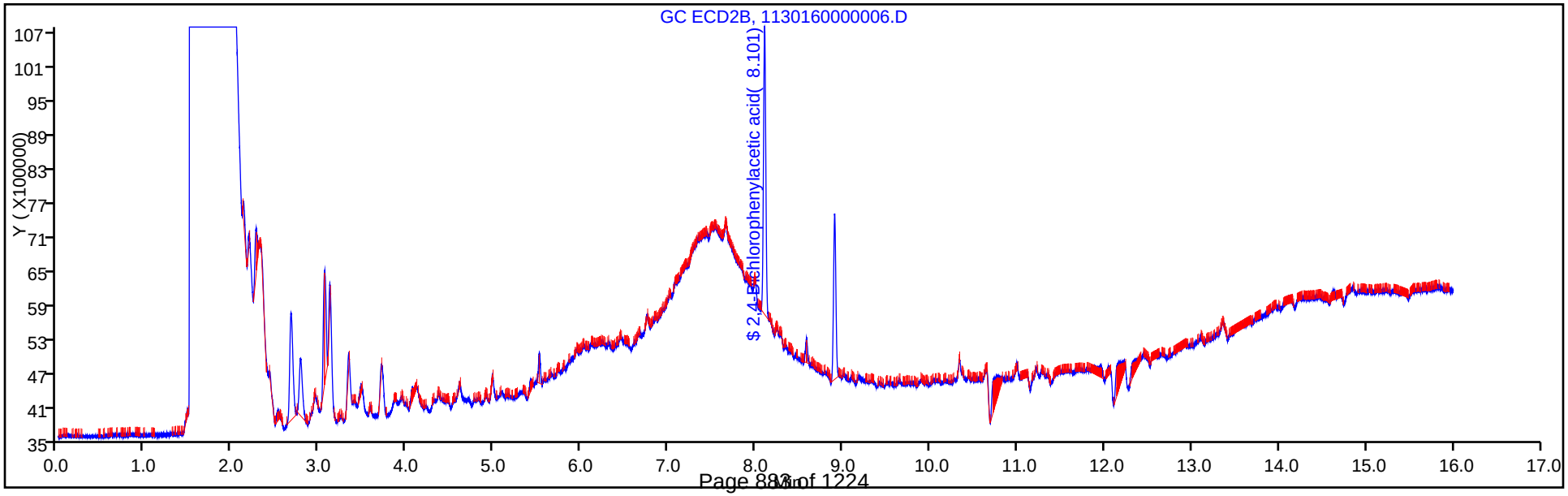
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000006.D

Injection Date:	30-Nov-2016 14:50:24	Instrument ID:	CGC1	Operator ID:	
Lims ID:	MB 180-195524/1-A			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	2
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000006.D
Lims ID: MB 180-195524/1-A
Client ID:
Sample Type: MB
Inject. Date: 30-Nov-2016 14:50:24 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 20.0000
Sample Info: 180-0014557-002
Operator ID: Instrument ID: CGC1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:36:11 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:23:30

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0215	42.92

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0228	45.54

FORM I
HERBICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 180-195524/1-A

Matrix: Solid | Lab File ID: 1130160000006.D

Analysis Method: 8151A | Date Collected:

Extraction Method: 8151A | Date Extracted: 11/27/2016 09:29

Sample wt/vol: 50.0(g) | Date Analyzed: 11/30/2016 14:50

Con. Extract Vol.: 10.0(mL) | Dilution Factor: 20

Injection Volume: 1(uL) | GC Column: RTX-1701 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195866 | Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
19719-28-9	2,4-Dichlorophenylacetic acid	46		19-122

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000006.D
Lims ID: MB 180-195524/1-A
Client ID:
Sample Type: MB
Inject. Date: 30-Nov-2016 14:50:24 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 20.0000
Sample Info: 180-0014557-002
Operator ID: Instrument ID: CGC1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:36:11 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:23:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							
1		2.373				ND	
2		2.455					
$ 2 2,4-Dichlorophenylacetic acid							
1	8.407	8.406	0.001	3878133H	0.0500	0.0215	
2	8.101	8.101	0.000	5037603H	0.0500	0.0228	
						RPD = 5.94	
3 MCPP							
1		8.614				ND	
2		8.520					
4 Dicamba							
1		8.707				ND	
2		8.365					
5 MCPA							
1		9.039				ND	
2		8.824					
6 Dichlorprop							
1		9.321				ND	
2		9.187					
7 2,4-D							
1		9.814				ND	
2		9.577					
8 Pentachlorophenol							
1		10.367				ND	
2		9.814					
9 Silvex (2,4,5-TP)							
1		10.496				ND	
2		10.351					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
10 2,4,5-T							
1		11.049				ND	
2		10.797					
11 Dinoseb							
1		11.302				ND	
2		11.852					
12 2,4-DB							
1		11.429				ND	
2		11.228					

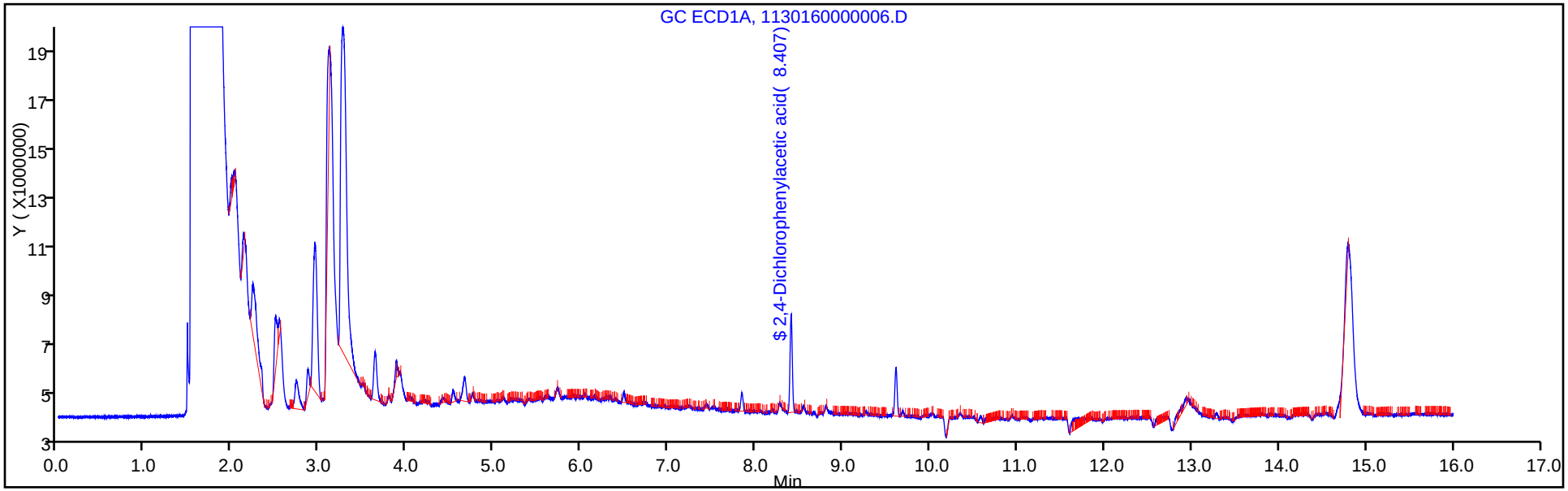
Report Date: 01-Dec-2016 10:36:46 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

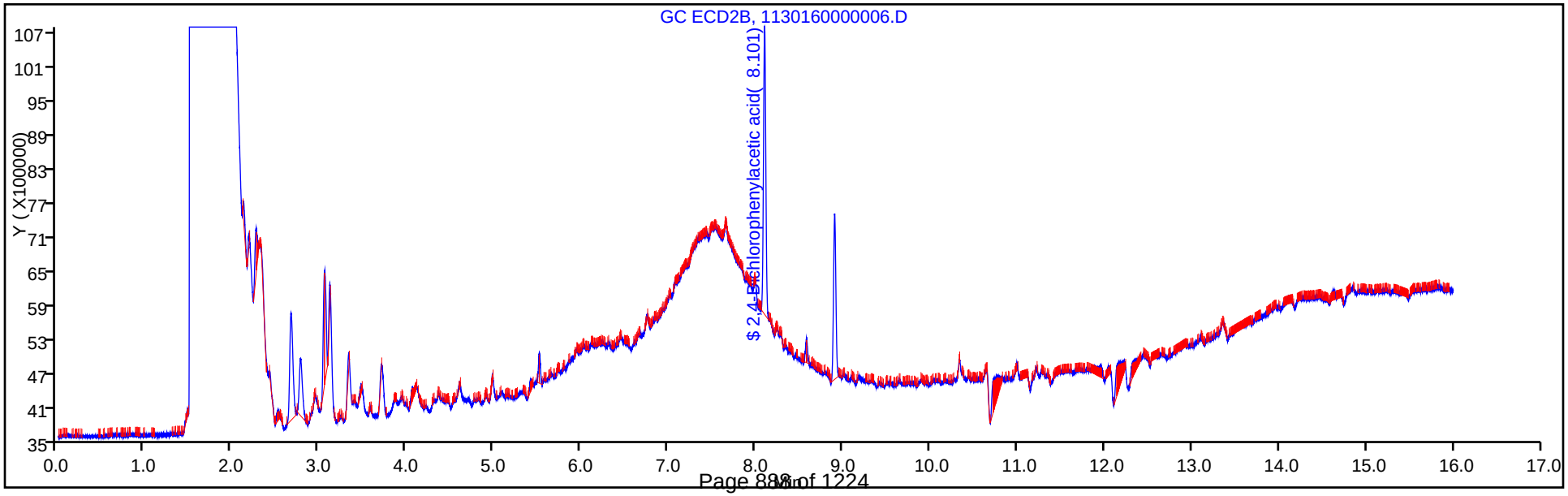
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000006.D

Injection Date:	30-Nov-2016 14:50:24	Instrument ID:	CGC1	Operator ID:	
Lims ID:	MB 180-195524/1-A			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	2
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000006.D
Lims ID: MB 180-195524/1-A
Client ID:
Sample Type: MB
Inject. Date: 30-Nov-2016 14:50:24 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 20.0000
Sample Info: 180-0014557-002
Operator ID: Instrument ID: CGC1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:36:11 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:23:30

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0215	42.92

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0228	45.54

FORM I
HERBICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-195524/2-A

Matrix: Solid | Lab File ID: 1130160000015.D

Analysis Method: 8151A | Date Collected:

Extraction Method: 8151A | Date Extracted: 11/27/2016 09:29

Sample wt/vol: 50.0(g) | Date Analyzed: 11/30/2016 18:25

Con. Extract Vol.: 10.0(mL) | Dilution Factor: 20

Injection Volume: 1(uL) | GC Column: RTX-50 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195866 | Units: mg/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
93-76-5	2,4,5-T	0.1277		0.0200	0.00251
94-75-7	2,4-D	0.4161		0.0800	0.00547
93-72-1	Silvex (2,4,5-TP)	0.1363		0.0200	0.00210
75-99-0	Dalapon	0.3055		0.0900	0.00710
94-82-6	2,4-DB	0.5835		0.0800	0.00612
1918-00-9	Dicamba	0.1857		0.0400	0.00479
120-36-5	Dichlorprop	0.4641		0.0800	0.00948
88-85-7	Dinoseb	0.6901		0.0120	0.00455
94-74-6	MCPA	53.07		8.00	1.65
93-65-2	MCPP	67.02		8.00	1.61

CAS NO.	SURROGATE	%REC	Q	LIMITS
19719-28-9	2,4-Dichlorophenylacetic acid	99		19-122

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000015.D
Lims ID: LCS 180-195524/2-A
Client ID:
Sample Type: LCS
Inject. Date: 30-Nov-2016 18:25:31 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 20.0000
Sample Info: 180-0014557-011
Operator ID: Instrument ID: CGC1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:36:11 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:27:39

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							M
1	2.375	2.373	0.002	6791770H	0.1000	0.0764	
2	2.456	2.455	0.001	9045721H	0.1000	0.0853	M
						RPD = 11.06	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.406	8.406	0.000	8956089H	0.0500	0.0496	
2	8.101	8.101	0.000	11426909H	0.0500	0.0517	
						RPD = 4.14	
3 MCPP							
1	8.616	8.614	0.002	8337404H	10.0	16.8	
2	8.522	8.520	0.002	6316693H	10.0	12.9	
						RPD = 25.89	
4 Dicamba							
1	8.708	8.707	0.001	20406573H	0.0500	0.0464	
2	8.364	8.365	-0.001	29799335H	0.0500	0.0516	
						RPD = 10.53	
5 MCPA							
1	9.041	9.039	0.002	9768209H	10.0	13.3	
2	8.823	8.824	-0.001	8647120H	10.0	10.5	
						RPD = 23.35	
6 Dichlorprop							
1	9.322	9.321	0.001	12985113H	0.1000	0.1160	
2	9.186	9.187	-0.001	18096305H	0.1000	0.1263	
						RPD = 8.48	
7 2,4-D							
1	9.816	9.814	0.002	13040803H	0.1000	0.1040	
2	9.576	9.577	-0.001	20134656H	0.1000	0.1287	
						RPD = 21.21	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.368	10.367	0.001	57375513H	0.0250	0.0404	
2	9.815	9.814	0.001	81884427H	0.0250	0.0440	
						RPD = 8.43	
9 Silvex (2,4,5-TP)							
1	10.497	10.496	0.001	19272519H	0.0250	0.0341	
2	10.351	10.351	0.000	25665780H	0.0250	0.0354	
						RPD = 3.66	
10 2,4,5-T							
1	11.049	11.049	0.000	14875885H	0.0250	0.0319	
2	10.796	10.797	-0.001	20477981H	0.0250	0.0357	
						RPD = 11.11	
11 Dinoseb							
1	11.303	11.302	0.001	35542431H	0.1000	0.1725	
2	11.854	11.852	0.002	41731825H	0.1000	0.2086	
						RPD = 18.95	
12 2,4-DB							
1	11.428	11.429	-0.001	8698269H	0.1000	0.1459	
2	11.225	11.228	-0.003	10969155H	0.1000	0.1494	
						RPD = 2.38	

QC Flag Legend

Review Flags

M - Manually Integrated

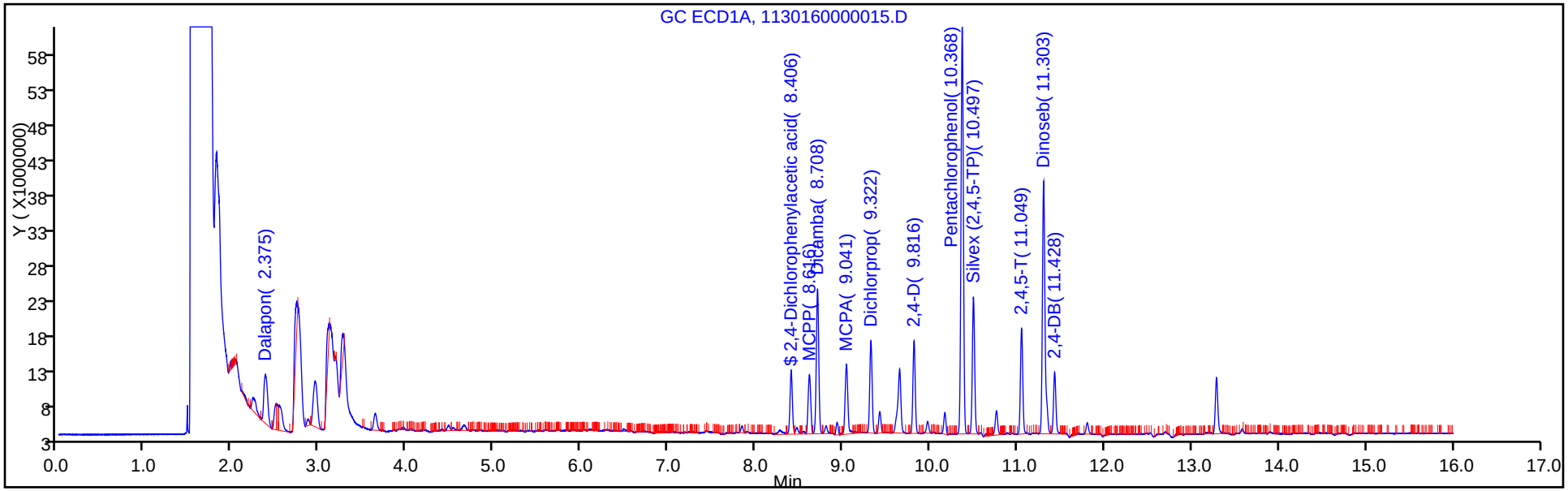
Report Date: 01-Dec-2016 10:36:15 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

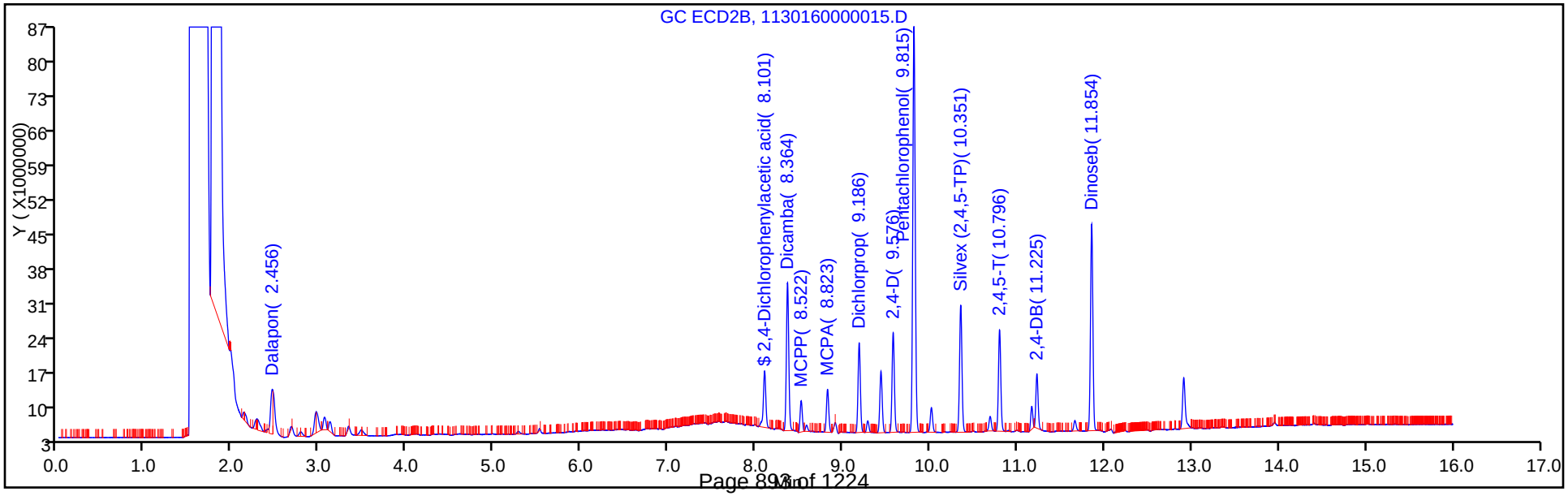
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000015.D

Injection Date:	30-Nov-2016 18:25:31	Instrument ID:	CGC1	Operator ID:	
Lims ID:	LCS 180-195524/2-A			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	11
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000015.D				
Lims ID:	LCS 180-195524/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	30-Nov-2016 18:25:31	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	20.0000		
Sample Info:	180-0014557-011				
Operator ID:		Instrument ID:	CGC1		
Method:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m				
Limit Group:	GCS 8151A ICAL				
Last Update:	01-Dec-2016 10:36:11	Calib Date:	24-Sep-2016 13:40:10		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D				
Column 1 :	RTX-50 (0.53 mm)		Det: GC ECD1A		
Column 2 :	RTX-1701 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK010				
First Level Reviewer: oravecj		Date:	01-Dec-2016 10:27:39		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0496	99.12

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0517	103.31

FORM I
HERBICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-195524/2-A

Matrix: Solid | Lab File ID: 1130160000015.D

Analysis Method: 8151A | Date Collected:

Extraction Method: 8151A | Date Extracted: 11/27/2016 09:29

Sample wt/vol: 50.0(g) | Date Analyzed: 11/30/2016 18:25

Con. Extract Vol.: 10.0(mL) | Dilution Factor: 20

Injection Volume: 1(uL) | GC Column: RTX-1701 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 195866 | Units: mg/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
19719-28-9	2,4-Dichlorophenylacetic acid	103		19-122

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000015.D
Lims ID: LCS 180-195524/2-A
Client ID:
Sample Type: LCS
Inject. Date: 30-Nov-2016 18:25:31 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 20.0000
Sample Info: 180-0014557-011
Operator ID: Instrument ID: CGC1

Method: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m
Limit Group: GCS 8151A ICAL
Last Update: 01-Dec-2016 10:36:11 Calib Date: 24-Sep-2016 13:40:10
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D

Column 1 : RTX-50 (0.53 mm) Det: GC ECD1A
Column 2 : RTX-1701 (0.53 mm) Det: GC ECD2B
Process Host: XAWRK010

First Level Reviewer: oravecj Date: 01-Dec-2016 10:27:39

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
1 Dalapon							M
1	2.375	2.373	0.002	6791770H	0.1000	0.0764	
2	2.456	2.455	0.001	9045721H	0.1000	0.0853	M
						RPD = 11.06	
$ 2 2,4-Dichlorophenylacetic acid							
1	8.406	8.406	0.000	8956089H	0.0500	0.0496	
2	8.101	8.101	0.000	11426909H	0.0500	0.0517	
						RPD = 4.14	
3 MCPP							
1	8.616	8.614	0.002	8337404H	10.0	16.8	
2	8.522	8.520	0.002	6316693H	10.0	12.9	
						RPD = 25.89	
4 Dicamba							
1	8.708	8.707	0.001	20406573H	0.0500	0.0464	
2	8.364	8.365	-0.001	29799335H	0.0500	0.0516	
						RPD = 10.53	
5 MCPA							
1	9.041	9.039	0.002	9768209H	10.0	13.3	
2	8.823	8.824	-0.001	8647120H	10.0	10.5	
						RPD = 23.35	
6 Dichlorprop							
1	9.322	9.321	0.001	12985113H	0.1000	0.1160	
2	9.186	9.187	-0.001	18096305H	0.1000	0.1263	
						RPD = 8.48	
7 2,4-D							
1	9.816	9.814	0.002	13040803H	0.1000	0.1040	
2	9.576	9.577	-0.001	20134656H	0.1000	0.1287	
						RPD = 21.21	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
8 Pentachlorophenol							
1	10.368	10.367	0.001	57375513H	0.0250	0.0404	
2	9.815	9.814	0.001	81884427H	0.0250	0.0440	
						RPD = 8.43	
9 Silvex (2,4,5-TP)							
1	10.497	10.496	0.001	19272519H	0.0250	0.0341	
2	10.351	10.351	0.000	25665780H	0.0250	0.0354	
						RPD = 3.66	
10 2,4,5-T							
1	11.049	11.049	0.000	14875885H	0.0250	0.0319	
2	10.796	10.797	-0.001	20477981H	0.0250	0.0357	
						RPD = 11.11	
11 Dinoseb							
1	11.303	11.302	0.001	35542431H	0.1000	0.1725	
2	11.854	11.852	0.002	41731825H	0.1000	0.2086	
						RPD = 18.95	
12 2,4-DB							
1	11.428	11.429	-0.001	8698269H	0.1000	0.1459	
2	11.225	11.228	-0.003	10969155H	0.1000	0.1494	
						RPD = 2.38	

QC Flag Legend

Review Flags

M - Manually Integrated

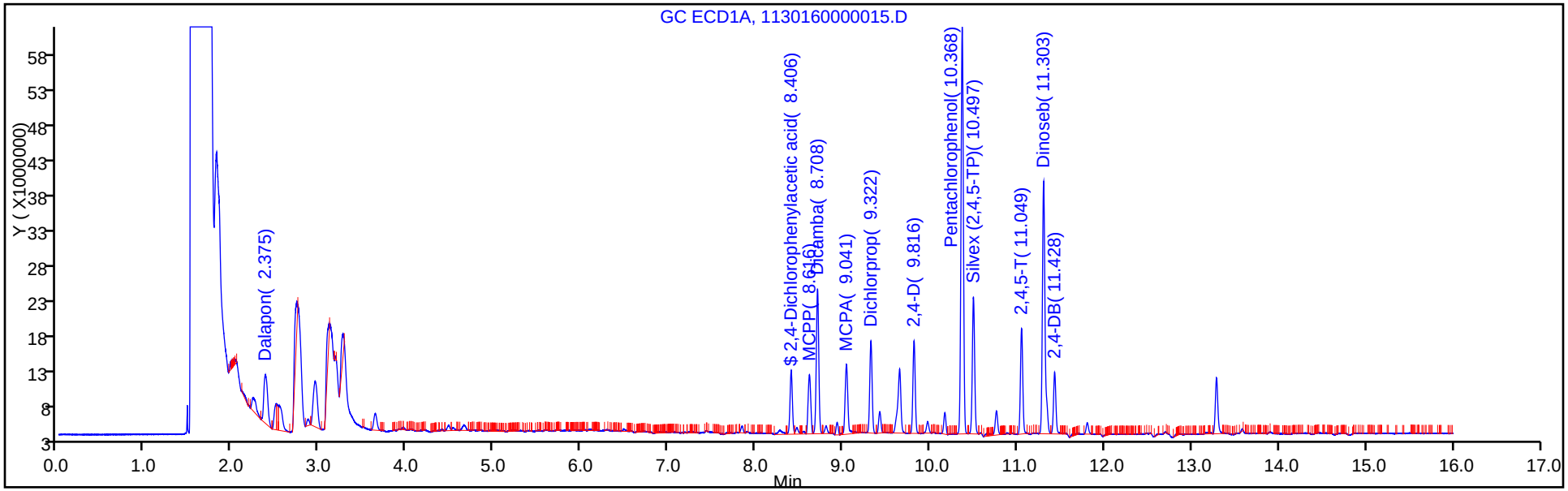
Report Date: 01-Dec-2016 10:36:16 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Pittsburgh

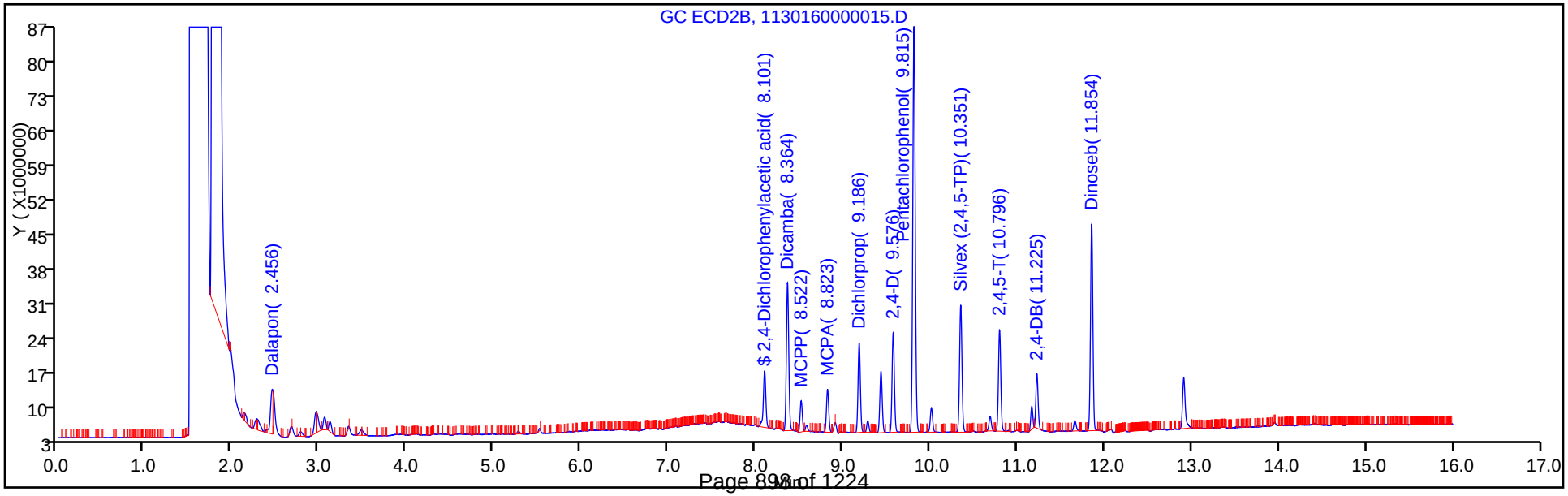
Data File: \\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000015.D

Injection Date:	30-Nov-2016 18:25:31	Instrument ID:	CGC1	Operator ID:	
Lims ID:	LCS 180-195524/2-A			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	20.0000	ALS Bottle#:	11
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		

Column: RTX-50 (0.53 mm)



Column: RTX-1701 (0.53 mm)



TestAmerica Pittsburgh
Recovery Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000015.D				
Lims ID:	LCS 180-195524/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	30-Nov-2016 18:25:31	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	20.0000		
Sample Info:	180-0014557-011				
Operator ID:		Instrument ID:	CGC1		
Method:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\Herbicides_CGC1.m				
Limit Group:	GCS 8151A ICAL				
Last Update:	01-Dec-2016 10:36:11	Calib Date:	24-Sep-2016 13:40:10		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20160924-13571.b\0924160000007.D				
Column 1 :	RTX-50 (0.53 mm)		Det: GC ECD1A		
Column 2 :	RTX-1701 (0.53 mm)		Det: GC ECD2B		
Process Host:	XAWRK010				
First Level Reviewer: oravecj		Date:	01-Dec-2016 10:27:39		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0496	99.12

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 2,4-Dichlorophenylacetic acid	1.00	0.0517	103.31

Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

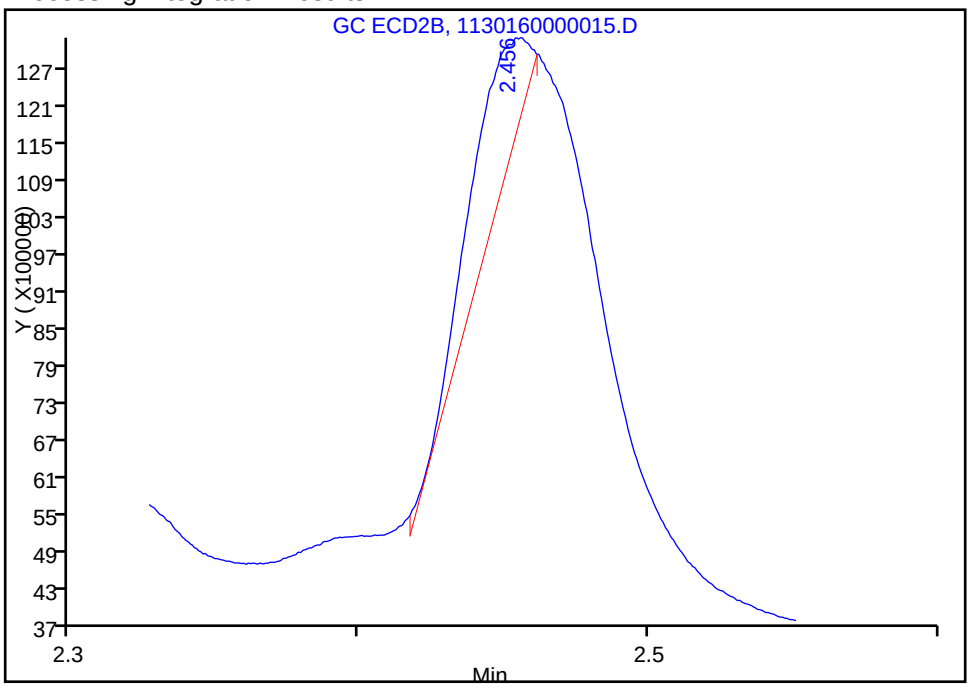
Data File:	\\ChromNA\Pittsburgh\ChromData\CGC1\20161130-14557.b\1130160000015.D				
Injection Date:	30-Nov-2016 18:25:31	Instrument ID:	CGC1		
Lims ID:	LCS 180-195524/2-A				
Client ID:					
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	20.0000		
Method:	Herbicides_CGC1	Limit Group:	GCS 8151A ICAL		
Column:	RTX-1701 (0.53 mm)	Detector	GC ECD2B		

1 Dalapon, CAS: 75-99-0

Signal: 2

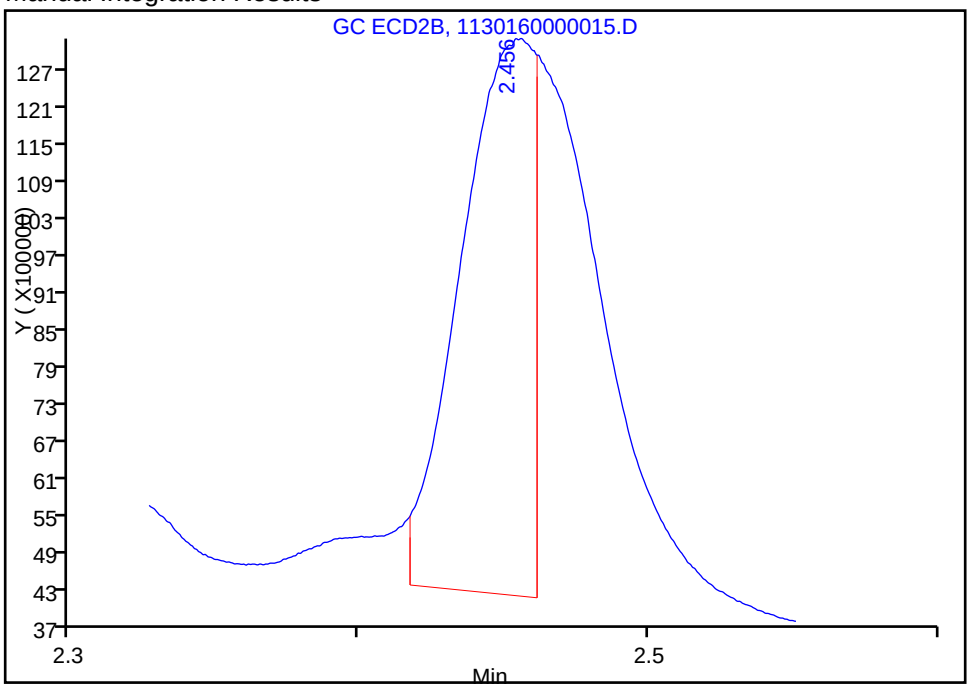
Processing Integration Results

RT: 2.46
Height: 1217793
Amount: 0.011485
Amount Units: ng



Manual Integration Results

RT: 2.46
Height: 9045721
Amount: 0.085311
Amount Units: ng



Reviewer: oravecj, 01-Dec-2016 10:27:39

Audit Action: Assigned New Baseline Audit Reason: Split Peak

HERBICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CGC1 Start Date: 09/24/2016 11:16

Analysis Batch Number: 189048 End Date: 09/26/2016 06:46

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 180-189048/1		09/24/2016 11:16	1	0924160000001.D	RTX-50 0.53(mm)
IC 180-189048/1		09/24/2016 11:16	1	0924160000001.D	RTX-1701 0.53(mm)
IC 180-189048/2		09/24/2016 11:40	1	0924160000002.D	RTX-50 0.53(mm)
IC 180-189048/2		09/24/2016 11:40	1	0924160000002.D	RTX-1701 0.53(mm)
IC 180-189048/3		09/24/2016 12:04	1	0924160000003.D	RTX-50 0.53(mm)
IC 180-189048/3		09/24/2016 12:04	1	0924160000003.D	RTX-1701 0.53(mm)
ICRT 180-189048/4		09/24/2016 12:28	1	0924160000004.D	RTX-50 0.53(mm)
ICRT 180-189048/4		09/24/2016 12:28	1	0924160000004.D	RTX-1701 0.53(mm)
IC 180-189048/5		09/24/2016 12:52	1	0924160000005.D	RTX-50 0.53(mm)
IC 180-189048/5		09/24/2016 12:52	1	0924160000005.D	RTX-1701 0.53(mm)
IC 180-189048/6		09/24/2016 13:16	1	0924160000006.D	RTX-50 0.53(mm)
IC 180-189048/6		09/24/2016 13:16	1	0924160000006.D	RTX-1701 0.53(mm)
IC 180-189048/7		09/24/2016 13:40	1	0924160000007.D	RTX-50 0.53(mm)
IC 180-189048/7		09/24/2016 13:40	1	0924160000007.D	RTX-1701 0.53(mm)
RINSE 180-189048/8		09/24/2016 14:03	1		RTX-50 0.53(mm)
RINSE 180-189048/8		09/24/2016 14:03	1		RTX-1701 0.53(mm)
ZZZZZ		09/24/2016 14:27	20		RTX-50 0.53(mm)
ZZZZZ		09/24/2016 14:27	20		RTX-1701 0.53(mm)
ZZZZZ		09/24/2016 14:51	20		RTX-50 0.53(mm)
ZZZZZ		09/24/2016 14:51	20		RTX-1701 0.53(mm)
ZZZZZ		09/24/2016 15:15	20		RTX-50 0.53(mm)
ZZZZZ		09/24/2016 15:15	20		RTX-1701 0.53(mm)
ZZZZZ		09/24/2016 15:40	20		RTX-50 0.53(mm)
ZZZZZ		09/24/2016 15:40	20		RTX-1701 0.53(mm)
ZZZZZ		09/24/2016 16:04	20		RTX-50 0.53(mm)
ZZZZZ		09/24/2016 16:04	20		RTX-1701 0.53(mm)
CCV 180-189048/14		09/24/2016 16:28	1		RTX-50 0.53(mm)
CCV 180-189048/14		09/24/2016 16:28	1		RTX-1701 0.53(mm)
ICV 180-189048/15		09/26/2016 06:46	1		RTX-50 0.53(mm)
ICV 180-189048/15		09/26/2016 06:46	1		RTX-1701 0.53(mm)

HERBICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CGC1 Start Date: 11/30/2016 14:26

Analysis Batch Number: 195866 End Date: 12/01/2016 00:45

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 180-195866/1		11/30/2016 14:26	1	1130160000005.D	RTX-50 0.53(mm)
CCVRT 180-195866/1		11/30/2016 14:26	1	1130160000005.D	RTX-1701 0.53(mm)
MB 180-195524/1-A		11/30/2016 14:50	20	1130160000006.D	RTX-50 0.53(mm)
MB 180-195524/1-A		11/30/2016 14:50	20	1130160000006.D	RTX-1701 0.53(mm)
180-61122-1		11/30/2016 15:14	20	1130160000007.D	RTX-50 0.53(mm)
180-61122-1		11/30/2016 15:14	20	1130160000007.D	RTX-1701 0.53(mm)
180-61122-2		11/30/2016 15:38	20	1130160000008.D	RTX-50 0.53(mm)
180-61122-2		11/30/2016 15:38	20	1130160000008.D	RTX-1701 0.53(mm)
180-61122-3		11/30/2016 16:02	20	1130160000009.D	RTX-50 0.53(mm)
180-61122-3		11/30/2016 16:02	20	1130160000009.D	RTX-1701 0.53(mm)
180-61122-4		11/30/2016 16:25	20	1130160000010.D	RTX-50 0.53(mm)
180-61122-4		11/30/2016 16:25	20	1130160000010.D	RTX-1701 0.53(mm)
ZZZZZ		11/30/2016 16:49	20		RTX-50 0.53(mm)
ZZZZZ		11/30/2016 16:49	20		RTX-1701 0.53(mm)
ZZZZZ		11/30/2016 17:13	20		RTX-50 0.53(mm)
ZZZZZ		11/30/2016 17:13	20		RTX-1701 0.53(mm)
ZZZZZ		11/30/2016 17:37	20		RTX-50 0.53(mm)
ZZZZZ		11/30/2016 17:37	20		RTX-1701 0.53(mm)
ZZZZZ		11/30/2016 18:01	20		RTX-50 0.53(mm)
ZZZZZ		11/30/2016 18:01	20		RTX-1701 0.53(mm)
LCS 180-195524/2-A		11/30/2016 18:25	20	1130160000015.D	RTX-50 0.53(mm)
LCS 180-195524/2-A		11/30/2016 18:25	20	1130160000015.D	RTX-1701 0.53(mm)
CCV 180-195866/12		11/30/2016 18:49	1	1130160000016.D	RTX-50 0.53(mm)
CCV 180-195866/12		11/30/2016 18:49	1	1130160000016.D	RTX-1701 0.53(mm)
ZZZZZ		11/30/2016 19:13	20		RTX-50 0.53(mm)
ZZZZZ		11/30/2016 19:13	20		RTX-1701 0.53(mm)
ZZZZZ		11/30/2016 19:37	20		RTX-50 0.53(mm)
ZZZZZ		11/30/2016 19:37	20		RTX-1701 0.53(mm)
ZZZZZ		11/30/2016 20:00	20		RTX-50 0.53(mm)
ZZZZZ		11/30/2016 20:00	20		RTX-1701 0.53(mm)
ZZZZZ		11/30/2016 20:24	20		RTX-50 0.53(mm)
ZZZZZ		11/30/2016 20:24	20		RTX-1701 0.53(mm)
ZZZZZ		11/30/2016 20:48	20		RTX-50 0.53(mm)
ZZZZZ		11/30/2016 20:48	20		RTX-1701 0.53(mm)
ZZZZZ		11/30/2016 21:12	20		RTX-50 0.53(mm)
ZZZZZ		11/30/2016 21:12	20		RTX-1701 0.53(mm)
180-61163-C-11-A MS		11/30/2016 21:35	20	1130160000023.D	RTX-50 0.53(mm)
180-61163-C-11-A MS		11/30/2016 21:35	20	1130160000023.D	RTX-1701 0.53(mm)
180-61163-C-11-B MSD		11/30/2016 21:59	20	1130160000024.D	RTX-50 0.53(mm)
180-61163-C-11-B MSD		11/30/2016 21:59	20	1130160000024.D	RTX-1701 0.53(mm)
ZZZZZ		11/30/2016 22:23	20		RTX-50 0.53(mm)
ZZZZZ		11/30/2016 22:23	20		RTX-1701 0.53(mm)
ZZZZZ		11/30/2016 22:46	20		RTX-50 0.53(mm)
ZZZZZ		11/30/2016 22:46	20		RTX-1701 0.53(mm)
CCV 180-195866/23		11/30/2016 23:10	1	1130160000027.D	RTX-50 0.53(mm)

8151A

HERBICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: CGC1 Start Date: 11/30/2016 14:26

Analysis Batch Number: 195866 End Date: 12/01/2016 00:45

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 180-195866/23		11/30/2016 23:10	1	1130160000027.D	RTX-1701 0.53(mm)
ZZZZZ		11/30/2016 23:34	20		RTX-50 0.53(mm)
ZZZZZ		11/30/2016 23:34	20		RTX-1701 0.53(mm)
ZZZZZ		11/30/2016 23:57	20		RTX-50 0.53(mm)
ZZZZZ		11/30/2016 23:57	20		RTX-1701 0.53(mm)
ZZZZZ		12/01/2016 00:21	20		RTX-50 0.53(mm)
ZZZZZ		12/01/2016 00:21	20		RTX-1701 0.53(mm)
CCV 180-195866/27		12/01/2016 00:45	1		RTX-50 0.53(mm)
CCV 180-195866/27		12/01/2016 00:45	1		RTX-1701 0.53(mm)

HERBICIDES BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Batch Number: 195524 Batch Start Date: 11/27/16 09:29 Batch Analyst: Lonzo, Michael A

Batch Method: 8151A Batch End Date: 11/30/16 09:05

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Herb(RTS)spk 00006	OPHERBRTSSURR 00006		
MB 180-195524/1		8151A, 8151A		50.0 g	10.0 mL		1 mL		
LCS 180-195524/2		8151A, 8151A		50.0 g	10.0 mL	1 mL	1 mL		
180-61163-C-11 MS		8151A, 8151A	T	50.0 g	10.0 mL	1 mL	1 mL		
180-61163-C-11 MSD		8151A, 8151A	T	50.0 g	10.0 mL	1 mL	1 mL		
180-61122-A-1	BGSB22-(0.0-0.5) -161122-S	8151A, 8151A	T	50.0 g	10.0 mL		1 mL		
180-61122-A-2	BGSB22-(1-2) -161122-S	8151A, 8151A	T	50.1 g	10.0 mL		1 mL		
180-61122-A-3	BGSB10-(0.0-0.5) -161122-S	8151A, 8151A	T	50.0 g	10.0 mL		1 mL		
180-61122-A-4	BGSB10-(1-2) -161122-S	8151A, 8151A	T	50.0 g	10.0 mL		1 mL		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HERBICIDES BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Batch Number: 195524 Batch Start Date: 11/27/16 09:29 Batch Analyst: Lonzo, Michael A

Batch Method: 8151A Batch End Date: 11/30/16 09:05

Batch Notes	
1:1 Sulfuric + Water Lot ID	2091553
Acidic Sodium Sulfate ID	2091555
Diethyl Ether ID	2128606
Filter Paper ID	9712603
Sulfuric Acid Lot Number	2091553
Hexane ID	2115151
Potassium Hydroxide ID	1812929
MeCL2 ID	2127470
MeCl2 / Acetone ID	1979290
N-evap ID	1
N-evap Temperature	21 Degrees C
Na2SO4 ID	2119020
Nominal Amount Used	50.0g g
pH Paper ID	Ph paper HC581117
Prep Solvent Volume Used	110
Silicic Acid ID	2002881
Sufficient volume for MS/MSD?	yes
TMSDM ID	2112533
Uncorrected N-evap Temperature	21 Degrees C
Uncorrected Temperature	55 Degrees C
Vendor of Reagent used	JT Baker
Water Bath Temperature	55 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-61122-1

SDG No.:

Project: U.S. Oil Recovery Superfund Site

Client Sample ID	Lab Sample ID
BGSB22-(0.0-0.5)-161122-S	180-61122-1
BGSB22-(1-2)-161122-S	180-61122-2
BGSB10-(0.0-0.5)-161122-S	180-61122-3
BGSB10-(1-2)-161122-S	180-61122-4

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: BGSB22-(0.0-0.5)-161122-S
Lab Sample ID: 180-61122-1
Lab Name: TestAmerica Pittsburgh
Job No.: 180-61122-1
SDG ID.:
Matrix: Solid
Date Sampled: 11/22/2016 09:35
Reporting Basis: DRY
Date Received: 11/23/2016 09:30
% Solids: 91.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	0.0592	0.106	0.00866	mg/Kg	J		1	6020A
7429-90-5	Aluminum	5750	3.17	0.609	mg/Kg			1	6020A
7440-38-2	Arsenic	3.01	0.106	0.0152	mg/Kg		F1	1	6020A
7440-42-8	Boron	3.01	2.11	0.337	mg/Kg			1	6020A
7440-39-3	Barium	140	1.06	0.0156	mg/Kg		F1	1	6020A
7440-41-7	Beryllium	0.430	0.106	0.00792	mg/Kg			1	6020A
7440-43-9	Cadmium	0.294	0.106	0.0137	mg/Kg			1	6020A
7440-48-4	Cobalt	7.81	0.0528	0.00264	mg/Kg			1	6020A
7440-47-3	Chromium	7.50	0.211	0.0551	mg/Kg			1	6020A
7440-50-8	Copper	10.1	0.211	0.0550	mg/Kg			1	6020A
7439-96-5	Manganese	404	0.528	0.0375	mg/Kg			1	6020A
7440-02-0	Nickel	6.57	0.106	0.0411	mg/Kg			1	6020A
7439-92-1	Lead	67.5	0.106	0.00961	mg/Kg			1	6020A
7440-36-0	Antimony	0.379	0.211	0.0303	mg/Kg		F1	1	6020A
7782-49-2	Selenium	0.512	0.528	0.0467	mg/Kg	J		1	6020A
7440-62-2	Vanadium	17.9	0.106	0.0739	mg/Kg			1	6020A
7440-66-6	Zinc	110	0.528	0.204	mg/Kg		F1	1	6020A
7440-28-0	Thallium	0.0623	0.106	0.00275	mg/Kg	J		1	6020A
7439-97-6	Mercury	0.0660	0.0359	0.00804	mg/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: BGSB22-(1-2)-161122-S
Lab Sample ID: 180-61122-2
Lab Name: TestAmerica Pittsburgh
Job No.: 180-61122-1
SDG ID.:
Matrix: Solid
Date Sampled: 11/22/2016 09:40
Reporting Basis: DRY
Date Received: 11/23/2016 09:30
% Solids: 80.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	0.0529	0.106	0.00873	mg/Kg	J		1	6020A
7429-90-5	Aluminum	24800	3.19	0.614	mg/Kg			1	6020A
7440-38-2	Arsenic	11.2	0.106	0.0153	mg/Kg			1	6020A
7440-42-8	Boron	7.36	2.13	0.339	mg/Kg			1	6020A
7440-39-3	Barium	486	1.06	0.0158	mg/Kg			1	6020A
7440-41-7	Beryllium	2.48	0.106	0.00799	mg/Kg			1	6020A
7440-43-9	Cadmium	0.425	0.106	0.0138	mg/Kg			1	6020A
7440-48-4	Cobalt	97.5	0.0532	0.00266	mg/Kg			1	6020A
7440-47-3	Chromium	26.4	0.213	0.0556	mg/Kg			1	6020A
7440-50-8	Copper	18.5	0.213	0.0555	mg/Kg			1	6020A
7439-96-5	Manganese	7470	5.32	0.378	mg/Kg			10	6020A
7440-02-0	Nickel	95.6	0.106	0.0414	mg/Kg			1	6020A
7439-92-1	Lead	107	0.106	0.00969	mg/Kg			1	6020A
7440-36-0	Antimony	0.419	0.213	0.0306	mg/Kg			1	6020A
7782-49-2	Selenium	2.60	0.532	0.0471	mg/Kg			1	6020A
7440-62-2	Vanadium	99.6	0.106	0.0745	mg/Kg			1	6020A
7440-66-6	Zinc	37.1	0.532	0.206	mg/Kg			1	6020A
7440-28-0	Thallium	0.325	0.106	0.00277	mg/Kg			1	6020A
7439-97-6	Mercury	0.00927	0.0404	0.00906	mg/Kg	J		1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: BGSB10-(0.0-0.5)-161122-S
Lab Sample ID: 180-61122-3
Lab Name: TestAmerica Pittsburgh
Job No.: 180-61122-1
SDG ID.:
Matrix: Solid
Date Sampled: 11/22/2016 15:30
Reporting Basis: DRY
Date Received: 11/23/2016 09:30
% Solids: 90.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	0.0945	0.0874	0.00717	mg/Kg			1	6020A
7429-90-5	Aluminum	9360	2.62	0.504	mg/Kg			1	6020A
7440-38-2	Arsenic	2.94	0.0874	0.0126	mg/Kg			1	6020A
7440-42-8	Boron	5.83	1.75	0.279	mg/Kg			1	6020A
7440-39-3	Barium	109	0.874	0.0129	mg/Kg			1	6020A
7440-41-7	Beryllium	0.608	0.0874	0.00656	mg/Kg			1	6020A
7440-43-9	Cadmium	0.204	0.0874	0.0114	mg/Kg			1	6020A
7440-48-4	Cobalt	5.56	0.0437	0.00219	mg/Kg			1	6020A
7440-47-3	Chromium	14.3	0.175	0.0456	mg/Kg			1	6020A
7440-50-8	Copper	13.0	0.175	0.0456	mg/Kg			1	6020A
7439-96-5	Manganese	215	0.437	0.0310	mg/Kg			1	6020A
7440-02-0	Nickel	10.2	0.0874	0.0340	mg/Kg			1	6020A
7439-92-1	Lead	40.5	0.0874	0.00796	mg/Kg			1	6020A
7440-36-0	Antimony	0.410	0.175	0.0251	mg/Kg			1	6020A
7782-49-2	Selenium	0.482	0.437	0.0386	mg/Kg			1	6020A
7440-62-2	Vanadium	19.0	0.0874	0.0612	mg/Kg			1	6020A
7440-66-6	Zinc	82.5	0.437	0.169	mg/Kg			1	6020A
7440-28-0	Thallium	0.0915	0.0874	0.00227	mg/Kg			1	6020A
7439-97-6	Mercury	0.0294	0.0358	0.00801	mg/Kg	J		1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: BGSB10-(1-2)-161122-S
Lab Sample ID: 180-61122-4
Lab Name: TestAmerica Pittsburgh
Job No.: 180-61122-1
SDG ID.:
Matrix: Solid
Date Sampled: 11/22/2016 15:35
Reporting Basis: DRY
Date Received: 11/23/2016 09:30
% Solids: 90.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	0.384	0.109	0.00894	mg/Kg			1	6020A
7429-90-5	Aluminum	9720	3.27	0.629	mg/Kg			1	6020A
7440-38-2	Arsenic	2.72	0.109	0.0157	mg/Kg			1	6020A
7440-42-8	Boron	6.22	2.18	0.347	mg/Kg			1	6020A
7440-39-3	Barium	110	1.09	0.0161	mg/Kg			1	6020A
7440-41-7	Beryllium	0.615	0.109	0.00818	mg/Kg			1	6020A
7440-43-9	Cadmium	0.306	0.109	0.0142	mg/Kg			1	6020A
7440-48-4	Cobalt	4.65	0.0545	0.00273	mg/Kg			1	6020A
7440-47-3	Chromium	14.4	0.218	0.0569	mg/Kg			1	6020A
7440-50-8	Copper	10.6	0.218	0.0568	mg/Kg			1	6020A
7439-96-5	Manganese	217	0.545	0.0387	mg/Kg			1	6020A
7440-02-0	Nickel	10.0	0.109	0.0424	mg/Kg			1	6020A
7439-92-1	Lead	89.5	0.109	0.00992	mg/Kg			1	6020A
7440-36-0	Antimony	0.473	0.218	0.0313	mg/Kg			1	6020A
7782-49-2	Selenium	0.290	0.545	0.0482	mg/Kg	J		1	6020A
7440-62-2	Vanadium	17.8	0.109	0.0763	mg/Kg			1	6020A
7440-66-6	Zinc	76.9	0.545	0.211	mg/Kg			1	6020A
7440-28-0	Thallium	0.0944	0.109	0.00283	mg/Kg	J		1	6020A
7439-97-6	Mercury	0.0711	0.0307	0.00688	mg/Kg			1	7471B

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

ICV Source: MICVX_00050 Concentration Units: ug/L

CCV Source: MCCV1X_00093

Analyte	ICV 180-196391/5 12/05/2016 12:16				CCV 180-196391/10 12/05/2016 12:42				CCV 180-196391/70 12/05/2016 17:51			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	416.4		400	104	546.8		500	109	514.7		500	103
Antimony	83.24		80.0	104	102.0		100	102	101.4		100	101
Arsenic	80.03		80.0	100	101.6		100	102	102.5		100	103
Barium	80.33		80.0	100	101.0		100	101	100.5		100	100
Beryllium	82.53		80.0	103	103.5		100	104	101.9		100	102
Boron	83.99		80.0	105	103.3		100	103	100.1		100	100
Cadmium	81.25		80.0	102	100.1		100	100	99.41		100	99
Chromium	80.25		80.0	100	99.83		100	100	99.85		100	100
Cobalt	79.96		80.0	100	101.7		100	102	103.4		100	103
Copper	82.02		80.0	103	101.5		100	101	104.2		100	104
Lead	80.08		80.0	100	99.12		100	99	99.14		100	99
Manganese	403.0		400	101	500.2		500	100	500.6		500	100
Nickel	80.36		80.0	100	101.0		100	101	100.9		100	101
Selenium	81.75		80.0	102	103.8		100	104	103.3		100	103
Silver	81.34		80.0	102	97.93		100	98	101.2		100	101
Thallium	82.84		80.0	104	99.32		100	99	99.49		100	99
Vanadium	78.86		80.0	99	100.2		100	100	97.58		100	98
Zinc	79.61		80.0	100	99.75		100	100	101.1		100	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

ICV Source: MICVX_00050 Concentration Units: ug/L

CCV Source: MCCV1X_00093

Analyte	CCV 180-196391/81 12/05/2016 18:53				CCV 180-196391/93 12/05/2016 19:58							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	534.7		500	107	548.4		500	110				
Antimony	100.5		100	100	102.7		100	103				
Arsenic	99.19		100	99	104.1		100	104				
Barium	101.5		100	101	101.9		100	102				
Beryllium	102.3		100	102	102.8		100	103				
Boron	100.3		100	100	102.5		100	102				
Cadmium	96.88		100	97	96.31		100	96				
Chromium	97.70		100	98	101.8		100	102				
Cobalt	101.1		100	101	104.4		100	104				
Copper	100.2		100	100	102.6		100	103				
Lead	98.02		100	98	98.79		100	99				
Manganese	483.1		500	97	487.8		500	98				
Nickel	101.0		100	101	103.4		100	103				
Selenium	95.95		100	96	102.9		100	103				
Silver	98.61		100	99	97.88		100	98				
Thallium	98.50		100	98	98.40		100	98				
Vanadium	97.50		100	98	102.2		100	102				
Zinc	96.96		100	97	100.9		100	101				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

ICV Source: MICVX_00050 Concentration Units: ug/L

CCV Source: MCCV1X_00093

Analyte	ICV 180-196495/5 12/06/2016 09:23				CCV 180-196495/10 12/06/2016 09:49				CCV 180-196495/46 12/06/2016 12:52			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Manganese	404.7		400	101	486.5		500	97	502.1		500	100
Aluminum	424.0		400	106	547.6		500	110	512.0		500	102
Antimony	83.31		80.0	104	101.7		100	102	101.0		100	101
Arsenic	80.16		80.0	100	100.2		100	100	98.24		100	98
Barium	80.49		80.0	101	100.3		100	100	98.74		100	99
Beryllium	85.32		80.0	107	106.1		100	106	102.8		100	103
Boron	85.45		80.0	107	104.7		100	105	100.4		100	100
Cadmium	80.59		80.0	101	99.53		100	100	99.00		100	99
Chromium	83.05		80.0	104	97.26		100	97	98.23		100	98
Cobalt	81.20		80.0	101	97.88		100	98	97.98		100	98
Copper	82.84		80.0	104	100.5		100	100	101.6		100	102
Lead	80.17		80.0	100	99.48		100	99	98.29		100	98
Nickel	80.63		80.0	101	99.45		100	99	100.0		100	100
Selenium	81.83		80.0	102	99.94		100	100	98.32		100	98
Silver	81.70		80.0	102	96.62		100	97	97.32		100	97
Thallium	83.10		80.0	104	100.0		100	100	98.47		100	98
Vanadium	81.83		80.0	102	98.36		100	98	97.48		100	97
Zinc	83.60		80.0	104	103.2		100	103	100.9		100	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

ICV Source: MICVX_00050 Concentration Units: ug/L

CCV Source: MCCV1X_00093

Analyte	CCV 180-196495/58 12/06/2016 13:57											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Manganese	501.2		500	100								
Aluminum	528.6		500	106								
Antimony	100.2		100	100								
Arsenic	98.78		100	99								
Barium	101.2		100	101								
Beryllium	105.6		100	106								
Boron	101.4		100	101								
Cadmium	98.02		100	98								
Chromium	102.0		100	102								
Cobalt	103.8		100	104								
Copper	103.3		100	103								
Lead	98.36		100	98								
Nickel	103.6		100	104								
Selenium	96.24		100	96								
Silver	97.90		100	98								
Thallium	99.09		100	99								
Vanadium	101.9		100	102								
Zinc	102.2		100	102								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

ICV Source: MHgWorkingicv_01402 Concentration Units: ug/L

CCV Source: MHgworkingCal_01435

Analyte	ICV 180-196009/7-A 12/02/2016 06:35				CCV 180-196009/10-A 12/02/2016 06:41				CCV 180-196009/10-A 12/02/2016 07:54			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.517		2.50	101	5.003		5.00	100	5.051		5.00	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

ICV Source: MHgWorkingicv_01402 Concentration Units: ug/L

CCV Source: MHgworkingCal_01435

Analyte	CCV 180-196009/10-A 12/02/2016 08:21				CCV 180-196009/10-A 12/02/2016 08:47				CCV 180-196009/10-A 12/02/2016 09:12			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.883		5.00	98	4.977		5.00	100	5.048		5.00	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Method: 6020A Instrument ID: X

Lab Sample ID: CRI 180-196391/7 Concentration Units: ug/L

CRQL Check Standard Source: MCRIX_00087

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver	1.00	1.066		107	70-130
Aluminum	30.0	31.01		103	70-130
Arsenic	1.00	1.044		104	70-130
Boron	20.0	20.43		102	70-130
Barium	10.0	10.22		102	70-130
Beryllium	1.00	1.142		114	70-130
Cadmium	1.00	1.058		106	70-130
Cobalt	0.500	0.5893		118	70-130
Chromium	2.00	1.893	J	95	70-130
Copper	2.00	2.389		119	70-130
Manganese	5.00	5.296		106	70-130
Nickel	1.00	1.112		111	70-130
Lead	1.00	1.039		104	70-130
Antimony	2.00	2.129		106	70-130
Selenium	5.00	5.032		101	70-130
Vanadium	1.00	0.8460	J	85	70-130
Zinc	5.00	5.778		116	70-130
Thallium	1.00	1.072		107	70-130

Lab Sample ID: CRI 180-196495/7 Concentration Units: ug/L

CRQL Check Standard Source: MCRIX_00087

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver	1.00	1.171		117	70-130
Aluminum	30.0	35.39		118	70-130
Arsenic	1.00	1.094		109	70-130
Boron	20.0	20.99		105	70-130
Barium	10.0	10.28		103	70-130
Beryllium	1.00	1.104		110	70-130
Cadmium	1.00	1.002		100	70-130
Cobalt	0.500	0.5427		109	70-130
Chromium	2.00	2.102		105	70-130
Copper	2.00	2.034		102	70-130
Manganese	5.00	5.897		118	70-130
Nickel	1.00	1.042		104	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Method: 6020A Instrument ID: X

Lab Sample ID: CRI 180-196495/7 Concentration Units: ug/L

CRQL Check Standard Source: MCRIX_00087

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Lead	1.00	1.104		110	70-130
Antimony	2.00	2.106		105	70-130
Selenium	5.00	5.185		104	70-130
Vanadium	1.00	1.067		107	70-130
Zinc	5.00	5.483		110	70-130
Thallium	1.00	1.064		106	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Method: 7471B Instrument ID: K

Lab Sample ID: CRA 180-196009/9-A Concentration Units: ug/L

CRQL Check Standard Source: MHgworkingCal_01435

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.1909	J	95	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 180-196391/6 12/05/2016 12:21		CCB1 180-196391/11 12/05/2016 12:47		CCB6 180-196391/71 12/05/2016 17:57		CCB7 180-196391/82 12/05/2016 18:58	
		Found	C	Found	C	Found	C	Found	C
Aluminum	30.0	7.18	U	7.18	U	7.18	U	10.60	J
Antimony	2.00	0.2160	J	0.3960	J	0.3190	J	0.3750	J
Arsenic	1.00	0.1700	J	0.1650	J	0.1290	J	0.1420	J
Barium	10.0	0.270	U	0.2730	J	0.270	U	0.3370	J
Beryllium	1.00	0.1660	J	0.1710	J	0.1060	J	0.1870	J
Boron	20.0	3.39	U	3.39	U	3.39	U	3.39	U
Cadmium	1.00	0.152	U	0.152	U	0.152	U	0.152	U
Chromium	2.00	0.339	U	0.339	U	0.339	U	0.339	U
Cobalt	0.500	0.1760	J	0.1150	J	0.1930	J	0.1490	J
Copper	2.00	0.4840	J	0.454	U	0.454	U	0.4570	J
Lead	1.00	0.1370	J	0.1390	J	0.1240	J	0.1700	J
Manganese	5.00	1.484	J	1.491	J	1.039	J	1.917	J
Nickel	1.00	0.5550	J	0.416	U	0.416	U	0.416	U
Selenium	5.00	0.348	U	0.348	U	0.348	U	0.348	U
Silver	1.00	0.114	U	0.114	U	0.114	U	0.114	U
Thallium	1.00	0.1190	J	0.1370	J	0.09400	J	0.1240	J
Vanadium	1.00	0.297	U	0.297	U	0.297	U	0.297	U
Zinc	5.00	3.476	J	3.210	J	2.491	J	2.560	J

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB8 180-196391/94 12/05/2016 20:03							
		Found	C	Found	C	Found	C	Found	C
Aluminum	30.0	7.18	U						
Antimony	2.00	0.3950	J						
Arsenic	1.00	0.118	U						
Barium	10.0	0.270	U						
Beryllium	1.00	0.102	U						
Boron	20.0	3.39	U						
Cadmium	1.00	0.152	U						
Chromium	2.00	0.339	U						
Cobalt	0.500	0.04100	J						
Copper	2.00	0.454	U						
Lead	1.00	0.0675	U						
Manganese	5.00	0.368	U						
Nickel	1.00	0.416	U						
Selenium	5.00	0.348	U						
Silver	1.00	0.114	U						
Thallium	1.00	0.0360	U						
Vanadium	1.00	0.297	U						
Zinc	5.00	2.24	U						

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 180-196495/6 12/06/2016 09:29		CCB1 180-196495/11 12/06/2016 09:54		CCB4 180-196495/47 12/06/2016 12:57		CCB5 180-196495/59 12/06/2016 14:03	
		Found	C	Found	C	Found	C	Found	C
Manganese	5.00	0.3890	J	0.4250	J	1.682	J	2.006	J
Aluminum	30.0	7.18	U	7.18	U	7.18	U	7.18	U
Antimony	2.00	0.1050	J	0.2750	J	0.2280	J	0.2220	J
Arsenic	1.00	0.1510	J	0.118	U	0.118	U	0.1250	J
Barium	10.0	0.270	U	0.270	U	0.270	U	0.270	U
Beryllium	1.00	0.1610	J	0.1170	J	0.102	U	0.102	U
Boron	20.0	3.39	U	3.39	U	3.39	U	3.39	U
Cadmium	1.00	0.152	U	0.152	U	0.152	U	0.152	U
Chromium	2.00	0.339	U	0.339	U	0.339	U	0.339	U
Cobalt	0.500	0.1000	J	0.05800	J	0.08000	J	0.08900	J
Copper	2.00	0.454	U	0.454	U	0.454	U	0.454	U
Lead	1.00	0.0675	U	0.0675	U	0.0675	U	0.09700	J
Nickel	1.00	0.416	U	0.416	U	0.416	U	0.416	U
Selenium	5.00	0.348	U	0.348	U	0.348	U	0.348	U
Silver	1.00	0.114	U	0.114	U	0.114	U	0.114	U
Thallium	1.00	0.05400	J	0.07700	J	0.05200	J	0.06700	J
Vanadium	1.00	0.297	U	0.297	U	0.297	U	0.297	U
Zinc	5.00	2.24	U	2.24	U	2.24	U	2.24	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 180-196009/8-A 12/02/2016 06:37		CCB 180-196009/11-A 12/02/2016 06:43		CCB 180-196009/11-A 12/02/2016 07:56		CCB 180-196009/11-A 12/02/2016 08:23	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.200	0.0521	U	0.0521	U	0.0521	U	0.0521	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 180-196009/11-A 12/02/2016 08:49		CCB 180-196009/11-A 12/02/2016 09:14					
		Found	C	Found	C	Found	C	Found	C
Mercury	0.200	0.0521	U	0.0521	U				

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Concentration Units: mg/Kg Lab Sample ID: MB 180-195582/1-A

Instrument Code: X Batch No.: 196391

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	0.00820	U		6020A
7429-90-5	Aluminum	0.577	U		6020A
7440-38-2	Arsenic	0.0144	U		6020A
7440-42-8	Boron	0.319	U		6020A
7440-39-3	Barium	0.0148	U		6020A
7440-41-7	Beryllium	0.00750	U		6020A
7440-43-9	Cadmium	0.0130	U		6020A
7440-48-4	Cobalt	0.00250	U		6020A
7440-47-3	Chromium	0.0522	U		6020A
7440-50-8	Copper	0.0521	U		6020A
7439-96-5	Manganese	0.0355	U		6020A
7440-02-0	Nickel	0.0389	U		6020A
7439-92-1	Lead	0.00910	U		6020A
7440-36-0	Antimony	0.0287	U		6020A
7782-49-2	Selenium	0.0442	U		6020A
7440-62-2	Vanadium	0.0700	U		6020A
7440-66-6	Zinc	0.194	U		6020A
7440-28-0	Thallium	0.00260	U		6020A

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Concentration Units: mg/Kg Lab Sample ID: MB 180-195631/1-A

Instrument Code: K Batch No.: 196111

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.00739	U		7471B

FORM III-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: ICSA 180-196391/8 Instrument ID: X

Lab File ID: X61205A.xml ICS Source: MICSAX_00087

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**100000**	**100800**	**101**
Antimony		**0.0930**	
Arsenic		**0.123**	
Barium		**0.256**	
Beryllium		**0.0930**	
Boron		**1.09**	
Cadmium		**0.777**	
Chromium		**1.47**	
Cobalt		**0.111**	
Copper		**1.88**	
Lead		**0.259**	
Manganese		**3.05**	
Nickel		**0.363**	
Selenium		**0.350**	
Silver		**0.0780**	
Thallium		**0.0420**	
Vanadium		**0.111**	
Zinc		**1.94**	
Calcium	*100000*	*100600*	*101*
Iron	*100000*	*100900*	*101*
Magnesium	*100000*	*102000*	*102*
Molybdenum	*2000*	*2186*	*109*
Potassium	*100000*	*99250*	*99*
Silicon		*15.2*	
Sodium	*100000*	*100200*	*100*
Strontium		*0.889*	
Tin		*0.211*	
Titanium	*2000*	*2199*	*110*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: ICSAB 180-196391/9 Instrument ID: X

Lab File ID: X61205A.xml ICS Source: MICSABX_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Aluminum	**100000**	**102933**	**103**
Antimony	**20.0**	**21.2**	**106**
Arsenic	**20.0**	**21.3**	**106**
Barium	**20.0**	**19.8**	**99**
Beryllium	**20.0**	**21.7**	**108**
Boron	**50.0**	**53.3**	**107**
Cadmium	**20.0**	**21.1**	**106**
Chromium	**20.0**	**21.6**	**108**
Cobalt	**20.0**	**20.6**	**103**
Copper	**20.0**	**21.4**	**107**
Lead	**20.0**	**20.9**	**104**
Manganese	**22.0**	**23.1**	**105**
Nickel	**20.0**	**20.8**	**104**
Selenium	**50.0**	**55.1**	**110**
Silver	**20.0**	**20.4**	**102**
Thallium	**20.0**	**20.5**	**102**
Vanadium	**20.0**	**20.6**	**103**
Zinc	**25.0**	**23.4**	**93**
Calcium	*100000*	*103267*	*103*
Iron	*100000*	*101500*	*102*
Magnesium	*100000*	*103700*	*104*
Molybdenum	*2000*	*2188*	*109*
Potassium	*100000*	*100967*	*101*
Silicon	*500*	*532*	*106*
Sodium	*100000*	*101967*	*102*
Strontium	*25.0*	*21.7*	*87*
Tin	*100*	*107*	*107*
Titanium	*2000*	*2206*	*110*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: ICSA 180-196495/8 Instrument ID: X

Lab File ID: X61206A.xml ICS Source: MICSAX_00087

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Manganese		**3.18**	
Aluminum	*100000*	*102400*	*102*
Antimony		*0.145*	
Arsenic		*0.198*	
Barium		*0.106*	
Beryllium		*0.0810*	
Boron		*5.03*	
Cadmium		*0.831*	
Calcium	*100000*	*100400*	*100*
Chromium		*1.37*	
Cobalt		*0.0840*	
Copper		*1.06*	
Iron	*100000*	*101200*	*101*
Lead		*0.298*	
Magnesium	*100000*	*100300*	*100*
Molybdenum	*2000*	*2107*	*105*
Nickel		*0.256*	
Potassium	*100000*	*96390*	*96*
Selenium		*0.272*	
Silicon		*19.9*	
Silver		*0.0880*	
Sodium	*100000*	*99090*	*99*
Strontium		*0.863*	
Thallium		*0.0420*	
Tin		*0.390*	
Titanium	*2000*	*2181*	*109*
Vanadium		*-0.262*	
Zinc		*1.35*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Lab Sample ID: ICSAB 180-196495/9 Instrument ID: X

Lab File ID: X61206A.xml ICS Source: MICSABX_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Manganese	**22.0**	**23.0**	**105**
Aluminum	*100000*	*102333*	*102*
Antimony	*20.0*	*20.8*	*104*
Arsenic	*20.0*	*20.3*	*102*
Barium	*20.0*	*20.7*	*104*
Beryllium	*20.0*	*21.5*	*108*
Boron	*50.0*	*52.3*	*105*
Cadmium	*20.0*	*21.1*	*105*
Calcium	*100000*	*100933*	*101*
Chromium	*20.0*	*22.1*	*110*
Cobalt	*20.0*	*20.4*	*102*
Copper	*20.0*	*21.9*	*110*
Iron	*100000*	*100933*	*101*
Lead	*20.0*	*20.7*	*104*
Magnesium	*100000*	*100563*	*101*
Molybdenum	*2000*	*2148*	*107*
Nickel	*20.0*	*19.4*	*97*
Potassium	*100000*	*97427*	*97*
Selenium	*50.0*	*51.2*	*102*
Silicon	*500*	*535*	*107*
Silver	*20.0*	*20.2*	*101*
Sodium	*100000*	*99107*	*99*
Strontium	*25.0*	*20.1*	*80*
Thallium	*20.0*	*20.3*	*101*
Tin	*100*	*103*	*103*
Titanium	*2000*	*2192*	*110*
Vanadium	*20.0*	*20.0*	*100*
Zinc	*25.0*	*23.7*	*95*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: BGSB22-(0.0-0.5)-161122-S MS
Lab ID: 180-61122-1 MS
Lab Name: TestAmerica Pittsburgh
Job No.: 180-61122-1
SDG No.:
Matrix: Solid
Concentration Units: mg/Kg
% Solids: 91.9

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Silver	4.651		0.0592	J	5.28	87	75-125		6020A
Aluminum	11670		5750		211	2804	75-125	4	6020A
Arsenic	5.740		3.01		4.22	65	75-125	F1	6020A
Boron	101.1		3.01		106	93	75-125		6020A
Barium	258.7		140		211	56	75-125	F1	6020A
Beryllium	5.212		0.430		5.28	91	75-125		6020A
Cadmium	5.003		0.294		5.28	89	75-125		6020A
Cobalt	47.51		7.81		52.8	75	75-125		6020A
Chromium	28.69		7.50		21.1	100	75-125		6020A
Copper	32.61		10.1		26.4	85	75-125		6020A
Manganese	141.8		404		52.8	-496	75-125	4	6020A
Nickel	51.45		6.57		52.8	85	75-125		6020A
Lead	63.93		67.5		2.11	-169	75-125	4	6020A
Antimony	38.56		0.379		52.8	72	75-125	F1	6020A
Selenium	1.408		0.512	J	1.06	85	75-125		6020A
Vanadium	59.28		17.9		52.8	78	75-125		6020A
Zinc	146.8		110		52.8	69	75-125	F1	6020A
Thallium	4.793		0.0623	J	5.28	90	75-125		6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.
Note - Results and Reporting Limits have been adjusted for dry weight.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 180-61116-A-141-B MS ^100

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.: _____

Matrix: Solid Concentration Units: mg/Kg

% Solids: 85.0

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	43.20		54.3		0.176	-6335	80-120	4	7471B

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.
Note - Results and Reporting Limits have been adjusted for dry weight.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: BGSB22-(0.0-0.5)-161122-S MSD
Lab ID: 180-61122-1 MSD
Lab Name: TestAmerica Pittsburgh
Job No.: 180-61122-1
SDG No.:
Matrix: Solid
Concentration Units: mg/Kg
% Solids: 91.9

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Silver	4.863		5.49	87	75-125	4	20		6020A
Aluminum	12370		220	3014	75-125	6	20	4	6020A
Arsenic	5.669		4.39	61	75-125	1	20	F1	6020A
Boron	103.7		110	92	75-125	3	20		6020A
Barium	271.6		220	60	75-125	5	20	F1	6020A
Beryllium	5.400		5.49	90	75-125	4	20		6020A
Cadmium	5.253		5.49	90	75-125	5	20		6020A
Cobalt	49.37		54.9	76	75-125	4	20		6020A
Chromium	29.49		22.0	100	75-125	3	20		6020A
Copper	33.88		27.5	87	75-125	4	20		6020A
Manganese	146.5		54.9	-468	75-125	3	20	4	6020A
Nickel	53.25		54.9	85	75-125	3	20		6020A
Lead	62.97		2.20	-206	75-125	2	20	4	6020A
Antimony	40.39		54.9	73	75-125	5	20	F1	6020A
Selenium	1.378		1.10	79	75-125	2	20		6020A
Vanadium	60.61		54.9	78	75-125	2	20		6020A
Zinc	152.8		54.9	77	75-125	4	20		6020A
Thallium	5.019		5.49	90	75-125	5	20		6020A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.
Note - Results and Reporting Limits have been adjusted for dry weight.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: | Lab ID: 180-61116-A-141-C MSD ^100

Lab Name: TestAmerica Pittsburgh | Job No.: 180-61122-1

SDG No.:

Matrix: Solid | Concentration Units: mg/Kg

% Solids: 85.0

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	48.64		0.190	-2995	80-120	12	20	4	7471B

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.
Note - Results and Reporting Limits have been adjusted for dry weight.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS

Client ID: BGSB22-(0.0-0.5)-161122-S PDS Lab ID: 180-61122-1 PDS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Matrix: Solid Concentration Units: mg/Kg

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Silver	5.301		0.0592	J	5.28	99	75-125		6020A
Aluminum	5804		5750		211	NC	75-125		6020A
Arsenic	7.144		3.01		4.22	98	75-125		6020A
Boron	112.9		3.01		106	104	75-125		6020A
Barium	348.3		140		211	99	75-125		6020A
Beryllium	5.857		0.430		5.28	103	75-125		6020A
Cadmium	5.738		0.294		5.28	103	75-125		6020A
Cobalt	58.90		7.81		52.8	97	75-125		6020A
Chromium	26.70		7.50		21.1	91	75-125		6020A
Copper	35.59		10.1		26.4	97	75-125		6020A
Manganese	434.9		404		52.8	59	75-125	W	6020A
Nickel	57.65		6.57		52.8	97	75-125		6020A
Lead	68.78		67.5		2.11	NC	75-125		6020A
Antimony	56.52		0.379		52.8	106	75-125		6020A
Selenium	1.500		0.512	J	1.06	94	75-125		6020A
Vanadium	66.06		17.9		52.8	91	75-125		6020A
Zinc	152.7		110		52.8	80	75-125		6020A
Thallium	5.616		0.0623	J	5.28	105	75-125		6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.
Note - Results and Reporting Limits have been adjusted for dry weight.

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 180-195582/2-A

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

Sample Matrix: Solid LCS Source: MTAPITTICPMS_00025

Analyte	Solid(mg/Kg)							
	True	Found	C	%R	Limits		Q	Method
Silver	5.00	4.962		99	80	120		6020A
Aluminum	200	195.6		98	80	120		6020A
Arsenic	4.00	3.849		96	80	120		6020A
Boron	100	99.29		99	80	120		6020A
Barium	200	194.3		97	80	120		6020A
Beryllium	5.00	4.816		96	80	120		6020A
Cadmium	5.00	4.980		100	80	120		6020A
Cobalt	50.0	48.52		97	80	120		6020A
Chromium	20.0	19.01		95	80	120		6020A
Copper	25.0	25.10		100	80	120		6020A
Manganese	50.0	51.11		102	80	120		6020A
Nickel	50.0	49.30		99	80	120		6020A
Lead	2.00	2.028		101	80	120		6020A
Antimony	50.0	50.01		100	80	120		6020A
Selenium	1.00	1.076		108	80	120		6020A
Vanadium	50.0	46.53		93	80	120		6020A
Zinc	50.0	46.93		94	80	120		6020A
Thallium	5.00	5.077		102	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 180-195631/2-A

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

Sample Matrix: Solid LCS Source: MHgworkingCal_01435

Analyte	Solid(mg/Kg)							
	True	Found	C	%R	Limits		Q	Method
Mercury	0.417	0.3331		80	80	120		7471B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS

Lab ID: 180-61122-1

SDG No:

Lab Name: TestAmerica Pittsburgh Job No: 180-61122-1

Matrix: Solid Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Silver	0.0592	J	0.08079	J	NC		6020A
Aluminum	5750		5972		3.9		6020A
Arsenic	3.01		3.052		1.4		6020A
Boron	3.01		2.661	J	NC		6020A
Barium	140		145.3		3.8		6020A
Beryllium	0.430		0.3775	J	12	V	6020A
Cadmium	0.294		0.3221	J	NC		6020A
Cobalt	7.81		7.925		1.5		6020A
Chromium	7.50		7.487		0.21		6020A
Copper	10.1		10.38		2.7		6020A
Manganese	404		410.5		1.7		6020A
Nickel	6.57		6.257		4.7		6020A
Lead	67.5		66.00		2.2		6020A
Antimony	0.379		0.3744	J	NC		6020A
Selenium	0.512	J	0.4229	J	NC		6020A
Vanadium	17.9		18.32		2.4		6020A
Zinc	110		109.6		0.67		6020A
Thallium	0.0623	J	0.07603	J	NC		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-61122-1

SDG Number:

Matrix: Solid Instrument ID: X

Method: 6020A MDL Date: 06/15/2016 11:54

Prep Method: 3050B

Analyte	Wavelength/ Mass	RL (mg/Kg)	MDL (mg/Kg)
Aluminum	27	3	0.5768
Antimony	121	0.2	0.0287
Arsenic	75	0.1	0.0144
Barium	137	1	0.0148
Beryllium	9	0.1	0.0075
Boron	11	2	0.3188
Cadmium	111	0.1	0.013
Chromium	52	0.2	0.0522
Cobalt	59	0.05	0.0025
Copper	65	0.2	0.0521
Lead	208	0.1	0.0091
Manganese	55	0.5	0.0355
Nickel	60	0.1	0.0389
Selenium	82	0.5	0.0442
Silver	107	0.1	0.0082
Thallium	205	0.1	0.0026
Vanadium	51	0.1	0.07
Zinc	66	0.5	0.1936

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-61122-1

SDG Number:

Matrix: Solid Instrument ID: X

Method: 6020A XMDL Date: 06/15/2016 11:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum	27	30	7.184
Antimony	121	2	0.0213
Arsenic	75	1	0.1182
Barium	137	10	0.2698
Beryllium	9	1	0.1023
Boron	11	20	3.393
Cadmium	111	1	0.1516
Chromium	52	2	0.3386
Cobalt	59	0.5	0.0218
Copper	65	2	0.4544
Lead	208	1	0.0675
Manganese	55	5	0.368
Nickel	60	1	0.4163
Selenium	82	5	0.3477
Silver	107	1	0.114
Thallium	205	1	0.036
Vanadium	51	1	0.2965
Zinc	66	5	2.236

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-61122-1

SDG Number:

Matrix: Solid Instrument ID: K

Method: 7471B MDL Date: 02/10/2016 13:20

Prep Method: 7471B

Analyte	Wavelength/ Mass	RL (mg/Kg)	MDL (mg/Kg)
Mercury	253.7	0.033	0.00739

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-61122-1

SDG Number:

Matrix: Solid Instrument ID: K

Method: 7471B XMDL Date: 02/10/2016 13:22

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.0521

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Pittsburgh Job No: 180-61122-1

SDG No.:

Instrument ID: X Date: 03/14/2011 22:35

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Silver		2500	6020A
Aluminum		450000	6020A
Arsenic		4500	6020A
Boron		9000	6020A
Barium		13500	6020A
Beryllium		9000	6020A
Cadmium		13500	6020A
Cobalt		13500	6020A
Chromium		13500	6020A
Copper		20000	6020A
Manganese		25000	6020A
Nickel		13500	6020A
Lead		20000	6020A
Antimony		13500	6020A
Selenium		4500	6020A
Vanadium		13500	6020A
Zinc		25000	6020A
Thallium		13500	6020A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Prep Method: 3050B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight (g)	Initial Volume	Final Volume (mL)
MB 180-195582/1-A	11/28/2016 07:42	195582	1.00		100
LCS 180-195582/2-A	11/28/2016 07:42	195582	1.00		100
180-61122-1	11/28/2016 07:42	195582	1.03		100
180-61122-1 MS	11/28/2016 07:42	195582	1.03		100
180-61122-1 MSD	11/28/2016 07:42	195582	0.99		100
180-61122-2	11/28/2016 07:42	195582	1.17		100
180-61122-3	11/28/2016 07:42	195582	1.26		100
180-61122-4	11/28/2016 07:42	195582	1.01		100

FORM XII-IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Prep Method: 7471B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight (g)	Initial Volume	Final Volume (mL)
MB 180-195631/1-A	11/28/2016 12:49	195631	0.60		100
LCS 180-195631/2-A	11/28/2016 12:49	195631	0.60		100
180-61116-A-141-B MS ^100	11/28/2016 12:49	195631	0.67		100
180-61116-A-141-C MSD ^100	11/28/2016 12:49	195631	0.62		100
180-61122-1	11/28/2016 12:49	195631	0.60		100
180-61122-2	11/28/2016 12:49	195631	0.61		100
180-61122-3	11/28/2016 12:49	195631	0.61		100
180-61122-4	11/28/2016 12:49	195631	0.71		100

FORM XII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: X Analysis Method: 6020A

Start Date: 12/05/2016 06:59 End Date: 12/05/2016 23:37

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	Al	As	B	Ba	Be	Cd	Co	Cr	Cu	Mn	Ni	Pb	Sb	Se	Tl	V	Zn								
ITUNE 180-196391/1			06:59																									
STD1 180-196391/2 IC	1		12:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STD2 180-196391/3 IC	1		12:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STD3 180-196391/4 IC	1		12:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICV 180-196391/5	1		12:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICB 180-196391/6	1		12:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CRI 180-196391/7	1		12:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICSA 180-196391/8	1		12:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICSAB 180-196391/9	1		12:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCV 180-196391/10	1		12:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCB1 180-196391/11	1		12:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ZZZZZZ			12:52																									
ZZZZZZ			12:57																									
ZZZZZZ			13:02																									
ZZZZZZ			13:07																									
ZZZZZZ			13:12																									
ZZZZZZ			13:17																									
ZZZZZZ			13:22																									
ZZZZZZ			13:28																									
ZZZZZZ			13:33																									
ZZZZZZ			13:38																									
CCV 180-196391/22			13:43																									
CCB2 180-196391/23			13:48																									
ZZZZZZ			13:53																									
ZZZZZZ			13:58																									
ZZZZZZ			14:03																									
ZZZZZZ			14:08																									
ZZZZZZ			14:13																									
ZZZZZZ			14:18																									
ZZZZZZ			14:24																									
ZZZZZZ			14:29																									
ZZZZZZ			14:34																									
ZZZZZZ			14:39																									
CCV 180-196391/34			14:44																									
CCB3 180-196391/35			14:49																									
ZZZZZZ			14:54																									
ZZZZZZ			14:59																									
ZZZZZZ			15:04																									
ZZZZZZ			15:10																									
ZZZZZZ			15:15																									
ZZZZZZ			15:20																									
ZZZZZZ			15:25																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: X Analysis Method: 6020A

Start Date: 12/05/2016 06:59 End Date: 12/05/2016 23:37

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	Al	As	B	Ba	Be	Cd	Co	Cr	Cu	Mn	Ni	Pb	Sb	Se	Tl	V	Zn								
ZZZZZZ			15:30																									
ZZZZZZ			15:35																									
ZZZZZZ			15:44																									
CCV 180-196391/46			15:49																									
CCB4 180-196391/47			15:54																									
ZZZZZZ			15:59																									
ZZZZZZ			16:04																									
ZZZZZZ			16:09																									
ZZZZZZ			16:14																									
ZZZZZZ			16:20																									
ZZZZZZ			16:25																									
ZZZZZZ			16:30																									
ZZZZZZ			16:35																									
ZZZZZZ			16:40																									
ZZZZZZ			16:45																									
CCV 180-196391/58			16:50																									
CCB5 180-196391/59			16:55																									
ZZZZZZ			17:00																									
ZZZZZZ			17:05																									
ZZZZZZ			17:11																									
ZZZZZZ			17:16																									
ZZZZZZ			17:21																									
ZZZZZZ			17:26																									
ZZZZZZ			17:31																									
ZZZZZZ			17:36																									
ZZZZZZ			17:41																									
ZZZZZZ			17:46																									
CCV 180-196391/70	1		17:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB6 180-196391/71	1		17:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
MB 180-195582/1-A	1	T	18:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
LCS 180-195582/2-A	1	T	18:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
180-61122-1	1	T	18:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
180-61122-1 SD	5	T	18:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
180-61122-1 MS	1	T	18:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
180-61122-1 MSD	1	T	18:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
180-61122-1 PDS	1	T	18:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
180-61122-2	1	T	18:42	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X						
180-61122-3	1	T	18:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 180-196391/81	1		18:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB7 180-196391/82	1		18:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
180-61122-4	1	T	19:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			19:08																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: X Analysis Method: 6020A

Start Date: 12/05/2016 06:59 End Date: 12/05/2016 23:37

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	Al	As	B	Ba	Be	Cd	Co	Cr	Cu	Mn	Ni	Pb	Sb	Se	Tl	V	Zn								
ZZZZZZ			19:17																									
ZZZZZZ			19:22																									
ZZZZZZ			19:27																									
ZZZZZZ			19:32																									
ZZZZZZ			19:37																									
ZZZZZZ			19:42																									
ZZZZZZ			19:47																									
ZZZZZZ			19:53																									
CCV 180-196391/93	1		19:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCB8 180-196391/94	1		20:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ZZZZZZ			20:08																									
ZZZZZZ			20:13																									
ZZZZZZ			20:18																									
ZZZZZZ			20:23																									
ZZZZZZ			20:28																									
ZZZZZZ			20:33																									
ZZZZZZ			20:38																									
ZZZZZZ			20:43																									
ZZZZZZ			20:48																									
CCV 180-196391/104			20:53																									
CCB9 180-196391/105			20:59																									
ZZZZZZ			21:04																									
ZZZZZZ			21:09																									
ZZZZZZ			21:14																									
ZZZZZZ			21:19																									
CRI 180-196391/110			21:33																									
CCV 180-196391/111			21:38																									
CCB10 180-196391/112			21:43																									
ZZZZZZ			21:50																									
ZZZZZZ			21:55																									
ZZZZZZ			22:00																									
ZZZZZZ			22:05																									
ZZZZZZ			22:11																									
ZZZZZZ			22:16																									
ZZZZZZ			22:21																									
ZZZZZZ			22:26																									
ZZZZZZ			22:31																									
ZZZZZZ			22:36																									
CCV 180-196391/123			22:41																									
CCB11 180-196391/124			22:46																									
ZZZZZZ			22:51																									
ZZZZZZ			22:56																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: X Analysis Method: 6020A

Start Date: 12/05/2016 06:59 End Date: 12/05/2016 23:37

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	Al	As	B	Ba	Be	Cd	Co	Cr	Cu	Mn	Ni	Pb	Sb	Se	Tl	V	Zn									
ZZZZZZ			23:02																											
ZZZZZZ			23:07																											
ZZZZZZ			23:12																											
ZZZZZZ			23:17																											
CRI 180-196391/131			23:27																											
CCV 180-196391/132			23:32																											
CCB12 180-196391/133			23:37																											

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: X Analysis Method: 6020A

Start Date: 12/06/2016 07:28 End Date: 12/06/2016 18:47

Lab Sample Id	D/F	Type	Time	Analytes
				Mn
ITUNE 180-196495/1			07:28	
STD1 180-196495/2 IC	1		09:08	X
STD2 180-196495/3 IC	1		09:13	X
STD3 180-196495/4 IC	1		09:18	X
ICV 180-196495/5	1		09:23	X
ICB 180-196495/6	1		09:29	X
CRI 180-196495/7	1		09:34	X
ICSA 180-196495/8	1		09:39	X
ICSAB 180-196495/9	1		09:44	X
CCV 180-196495/10	1		09:49	X
CCB1 180-196495/11	1		09:54	X
ZZZZZZ			09:59	
ZZZZZZ			10:04	
ZZZZZZ			10:09	
ZZZZZZ			10:14	
ZZZZZZ			10:20	
ZZZZZZ			10:25	
ZZZZZZ			10:30	
ZZZZZZ			10:35	
ZZZZZZ			10:40	
ZZZZZZ			10:45	
CCV 180-196495/22			10:50	
CCB2 180-196495/23			10:55	
ZZZZZZ			11:00	
ZZZZZZ			11:05	
ZZZZZZ			11:11	
ZZZZZZ			11:16	
ZZZZZZ			11:21	
ZZZZZZ			11:26	
ZZZZZZ			11:31	
ZZZZZZ			11:36	
ZZZZZZ			11:41	
ZZZZZZ			11:46	
CCV 180-196495/34			11:51	
CCB3 180-196495/35			11:56	
ZZZZZZ			12:01	
ZZZZZZ			12:06	
ZZZZZZ			12:12	
ZZZZZZ			12:17	
ZZZZZZ			12:22	
ZZZZZZ			12:27	
ZZZZZZ			12:32	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: X Analysis Method: 6020A

Start Date: 12/06/2016 07:28 End Date: 12/06/2016 18:47

Lab Sample Id	D/F	Type	Time	Analytes
				Mn
ZZZZZZ			12:37	
ZZZZZZ			12:42	
ZZZZZZ			12:47	
CCV 180-196495/46	1		12:52	X
CCB4 180-196495/47	1		12:57	X
ZZZZZZ			13:03	
ZZZZZZ			13:08	
ZZZZZZ			13:13	
180-61122-2	10	T	13:18	X
ZZZZZZ			13:27	
ZZZZZZ			13:32	
ZZZZZZ			13:37	
ZZZZZZ			13:42	
ZZZZZZ			13:47	
ZZZZZZ			13:52	
CCV 180-196495/58	1		13:57	X
CCB5 180-196495/59	1		14:03	X
ZZZZZZ			14:08	
ZZZZZZ			14:13	
ZZZZZZ			14:18	
ZZZZZZ			14:23	
ZZZZZZ			14:28	
ZZZZZZ			14:33	
ZZZZZZ			14:38	
ZZZZZZ			14:44	
ZZZZZZ			14:49	
ZZZZZZ			14:54	
CCV 180-196495/70			14:59	
CCB6 180-196495/71			15:04	
ZZZZZZ			15:09	
ZZZZZZ			15:14	
ZZZZZZ			15:19	
ZZZZZZ			15:24	
ZZZZZZ			15:30	
ZZZZZZ			15:35	
CCV 180-196495/78			15:43	
CCB7 180-196495/79			15:48	
ZZZZZZ			15:53	
ZZZZZZ			15:59	
ZZZZZZ			16:04	
ZZZZZZ			16:09	
ZZZZZZ			16:14	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: X Analysis Method: 6020A

Start Date: 12/06/2016 07:28 End Date: 12/06/2016 18:47

Lab Sample Id	D/F	Type	Time	Analytes																								
				Mn																								
ZZZZZZ			16:24																									
ZZZZZZ			16:28																									
ZZZZZZ			16:33																									
ZZZZZZ			16:38																									
ZZZZZZ			16:44																									
CCV 180-196495/90			16:51																									
CCB8 180-196495/91			16:56																									
ZZZZZZ			17:01																									
ZZZZZZ			17:06																									
ZZZZZZ			17:12																									
ZZZZZZ			17:17																									
ZZZZZZ			17:22																									
ZZZZZZ			17:27																									
ZZZZZZ			17:32																									
ZZZZZZ			17:37																									
ZZZZZZ			17:42																									
CCV 180-196495/101			17:51																									
CCB9 180-196495/102			17:56																									
ZZZZZZ			18:01																									
ZZZZZZ			18:07																									
ZZZZZZ			18:12																									
ZZZZZZ			18:17																									
ZZZZZZ			18:22																									
CRI 180-196495/108			18:32																									
CRI 180-196495/109			18:37																									
CCV 180-196495/110			18:42																									
CCB10 180-196495/111			18:47																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: K Analysis Method: 7471B

Start Date: 12/02/2016 06:23 End Date: 12/02/2016 09:48

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
IC 180-196009/1-A			06:23	X																								
IC 180-196009/2-A			06:25	X																								
IC 180-196009/3-A			06:27	X																								
IC 180-196009/4-A			06:29	X																								
IC 180-196009/5-A			06:31	X																								
IC 180-196009/6-A			06:33	X																								
ICV 180-196009/7-A	1		06:35	X																								
ICB 180-196009/8-A	1		06:37	X																								
CRA 180-196009/9-A	1		06:39	X																								
CCV 180-196009/10-A	1		06:41	X																								
CCB 180-196009/11-A	1		06:43	X																								
ZZZZZZ			06:45																									
ZZZZZZ			06:47																									
ZZZZZZ			06:49																									
ZZZZZZ			06:51																									
ZZZZZZ			06:53																									
ZZZZZZ			06:55																									
ZZZZZZ			06:57																									
ZZZZZZ			07:00																									
ZZZZZZ			07:02																									
ZZZZZZ			07:04																									
CCV 180-196009/10-A			07:06																									
CCB 180-196009/11-A			07:08																									
ZZZZZZ			07:10																									
ZZZZZZ			07:12																									
ZZZZZZ			07:14																									
ZZZZZZ			07:16																									
ZZZZZZ			07:18																									
ZZZZZZ			07:20																									
ZZZZZZ			07:22																									
ZZZZZZ			07:24																									
ZZZZZZ			07:26																									
ZZZZZZ			07:28																									
CCV 180-196009/10-A			07:30																									
CCB 180-196009/11-A			07:32																									
ZZZZZZ			07:34																									
ZZZZZZ			07:36																									
ZZZZZZ			07:38																									
ZZZZZZ			07:40																									
ZZZZZZ			07:42																									
ZZZZZZ			07:44																									
ZZZZZZ			07:46																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: K Analysis Method: 7471B

Start Date: 12/02/2016 06:23 End Date: 12/02/2016 09:48

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
ZZZZZZ			07:48	
ZZZZZZ			07:50	
ZZZZZZ			07:52	
CCV 180-196009/10-A	1		07:54	X
CCB 180-196009/11-A	1		07:56	X
ZZZZZZ			07:59	
ZZZZZZ			08:01	
MB 180-195631/1-A	1	T	08:03	X
LCS 180-195631/2-A	1	T	08:05	X
ZZZZZZ			08:07	
ZZZZZZ			08:08	
ZZZZZZ			08:11	
ZZZZZZ			08:14	
ZZZZZZ			08:17	
ZZZZZZ			08:18	
CCV 180-196009/10-A	1		08:21	X
CCB 180-196009/11-A	1		08:23	X
ZZZZZZ			08:26	
ZZZZZZ			08:27	
ZZZZZZ			08:30	
ZZZZZZ			08:33	
ZZZZZZ			08:35	
180-61122-1	1	T	08:37	X
180-61122-2	1	T	08:39	X
ZZZZZZ			08:41	
180-61116-A-141-B MS ^100	100	T	08:43	X
180-61116-A-141-C MSD ^100	100	T	08:45	X
CCV 180-196009/10-A	1		08:47	X
CCB 180-196009/11-A	1		08:49	X
ZZZZZZ			08:51	
ZZZZZZ			08:53	
ZZZZZZ			08:55	
ZZZZZZ			08:57	
180-61122-3	1	T	08:59	X
180-61122-4	1	T	09:01	X
ZZZZZZ			09:03	
ZZZZZZ			09:05	
ZZZZZZ			09:07	
ZZZZZZ			09:10	
CCV 180-196009/10-A	1		09:12	X
CCB 180-196009/11-A	1		09:14	X
ZZZZZZ			09:16	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: K Analysis Method: 7471B

Start Date: 12/02/2016 06:23 End Date: 12/02/2016 09:48

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
ZZZZZZ			09:18																									
ZZZZZZ			09:20																									
ZZZZZZ			09:22																									
ZZZZZZ			09:24																									
ZZZZZZ			09:26																									
ZZZZZZ			09:28																									
ZZZZZZ			09:30																									
ZZZZZZ			09:32																									
ZZZZZZ			09:34																									
CCV 180-196009/10-A			09:36																									
CCB 180-196009/11-A			09:38																									
ZZZZZZ			09:40																									
ZZZZZZ			09:42																									
ZZZZZZ			09:44																									
CCV 180-196009/10-A			09:46																									
CCB 180-196009/11-A			09:48																									

Prep Types:
T = Total/NA

FORM XIII-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

ICP-MS Instrument ID: X Start Date: 12/05/2016 End Date: 12/05/2016

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc	Q	Element Y-89	Q	Element Rh-103	Q	Element In	Q
STD1 180-196391/2 I	12:01	100		100		100		100		100	
STD2 180-196391/3 I	12:06	94		95		99		92		93	
STD3 180-196391/4 I	12:11	98		96		98		97		97	
ICV 180-196391/5	12:16	95		96		103		95		96	
ICB 180-196391/6	12:21	102		102		104		103		102	
CRI 180-196391/7	12:26	102		109		108		102		102	
ICSA 180-196391/8	12:32	89		92		97		88		92	
ICSAB 180-196391/9	12:37	90		95		99		91		94	
CCV 180-196391/10	12:42	99		103		107		101		102	
CCB1 180-196391/11	12:47	106		108		111		108		108	
CCV 180-196391/70	17:51	83		83		86		85		83	
CCB6 180-196391/71	17:57	94		90		92		93		90	
MB 180-195582/1-A	18:07	87		83		82		84		81	
LCS 180-195582/2-A	18:12	86		82		80		79		78	
180-61122-1	18:17	85		85				82		80	
180-61122-1 SD	18:22	90		90		99		91		89	
180-61122-1 MS	18:27	84		88				81		79	
180-61122-1 MSD	18:32	87		90				81		79	
180-61122-1 PDS	18:37	86		88				81		79	
180-61122-2	18:42	93		106				86		86	
180-61122-3	18:48	83		88				79		80	
CCV 180-196391/81	18:53	94		95		100		92		91	
CCB7 180-196391/82	18:58	100		97		102		100		98	
180-61122-4	19:03	85		88		132		80		80	
CCV 180-196391/93	19:58	86		84		88		84		85	
CCB8 180-196391/94	20:03	92		88		93		92		92	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

ICP-MS Instrument ID: X Start Date: 12/05/2016 End Date: 12/05/2016

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD1 180-196391/2 I	12:01	100		100		100					
STD2 180-196391/3 I	12:06	94		95		89					
STD3 180-196391/4 I	12:11	97		96		96					
ICV 180-196391/5	12:16	98		96		94					
ICB 180-196391/6	12:21	103		100		101					
CRI 180-196391/7	12:26	101		99		99					
ICSA 180-196391/8	12:32	94		94		87					
ICSAB 180-196391/9	12:37	96		95		89					
CCV 180-196391/10	12:42	101		100		94					
CCB1 180-196391/11	12:47	104		102		100					
CCV 180-196391/70	17:51	88		87		84					
CCB6 180-196391/71	17:57	92		91		91					
MB 180-195582/1-A	18:07	88		88		89					
LCS 180-195582/2-A	18:12	87		86		83					
180-61122-1	18:17	92		91		84					
180-61122-1 SD	18:22	95		93		91					
180-61122-1 MS	18:27	92		91		82					
180-61122-1 MSD	18:32	91		90		81					
180-61122-1 PDS	18:37	92		91		80					
180-61122-2	18:42	120		112		75					
180-61122-3	18:48	93		92		80					
CCV 180-196391/81	18:53	91		89		84					
CCB7 180-196391/82	18:58	95		93		91					
180-61122-4	19:03	93		91		82					
CCV 180-196391/93	19:58	87		86		83					
CCB8 180-196391/94	20:03	91		90		90					

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

ICP-MS Instrument ID: X Start Date: 12/06/2016 End Date: 12/06/2016

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc	Q	Element Y-89	Q	Element Rh-103	Q	Element In	Q
STD1 180-196495/2 I	09:08	100		100		100		100		100	
STD2 180-196495/3 I	09:13	95		95		94		90		92	
STD3 180-196495/4 I	09:18	97		94		93		95		94	
ICV 180-196495/5	09:23	92		93		96		91		92	
ICB 180-196495/6	09:29	99		98		98		99		98	
CRI 180-196495/7	09:34	99		105		96		97		97	
ICSA 180-196495/8	09:39	84		83		87		82		85	
ICSAB 180-196495/9	09:44	85		86		86		82		85	
CCV 180-196495/10	09:49	89		94		89		88		89	
CCB1 180-196495/11	09:54	94		95		94		94		94	
CCV 180-196495/46	12:52	76		76		74		76		76	
CCB4 180-196495/47	12:57	80		79		79		82		81	
180-61122-2	13:18	77		77		99		79		77	
CCV 180-196495/58	13:57										
CCB5 180-196495/59	14:03	76				70		71		72	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

ICP-MS Instrument ID: X Start Date: 12/06/2016 End Date: 12/06/2016

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD1 180-196495/2 I	09:08	100		100		100					
STD2 180-196495/3 I	09:13	94		94		89					
STD3 180-196495/4 I	09:18	96		97		97					
ICV 180-196495/5	09:23	94		94		92					
ICB 180-196495/6	09:29	100		98		100					
CRI 180-196495/7	09:34	98		99		100					
ICSA 180-196495/8	09:39	90		91		87					
ICSAB 180-196495/9	09:44	90		90		87					
CCV 180-196495/10	09:49	94		93		91					
CCB1 180-196495/11	09:54	97		98		99					
CCV 180-196495/46	12:52	85		86		87					
CCB4 180-196495/47	12:57	90		90		96					
180-61122-2	13:18	91		91		90					
CCV 180-196495/58	13:57	76		76		77					
CCB5 180-196495/59	14:03	77		77		81					

METALS BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Batch Number: 195582 Batch Start Date: 11/22/16 08:00 Batch Analyst: Rosenbaum, Ron

Batch Method: 3050B Batch End Date: 11/28/16 09:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	InitialAmount	FinalAmount	MTAPITTICPMS 00025	MTAPITTMSA 00032	MTAPITTMSC 00038
MB 180-195582/1		3050B, 6020A		CALC NOT SET TO RUN	1.00 g	100 mL			
LCS 180-195582/2		3050B, 6020A		CALC NOT SET TO RUN	1.00 g	100 mL	1 mL	1 mL	1 mL
180-61122-A-1	BGSB22-(0.0-0.5) -161122-S	3050B, 6020A	T	CALC NOT SET TO RUN	1.03 g	100 mL			
180-61122-A-1 MS	BGSB22-(0.0-0.5) -161122-S	3050B, 6020A	T	CALC NOT SET TO RUN	1.03 g	100 mL	1 mL	1 mL	1 mL
180-61122-A-1 MSD	BGSB22-(0.0-0.5) -161122-S	3050B, 6020A	T	CALC NOT SET TO RUN	0.99 g	100 mL	1 mL	1 mL	1 mL
180-61122-A-2	BGSB22-(1-2) -161122-S	3050B, 6020A	T	CALC NOT SET TO RUN	1.17 g	100 mL			
180-61122-A-3	BGSB10-(0.0-0.5) -161122-S	3050B, 6020A	T	CALC NOT SET TO RUN	1.26 g	100 mL			
180-61122-A-4	BGSB10-(1-2) -161122-S	3050B, 6020A	T	CALC NOT SET TO RUN	1.01 g	100 mL			

Batch Notes	
Balance ID	P1856710
Batch Comment	METALS B3
Blank Soil Lot Number	1736518
Filter Paper ID	FISHER 9656618
Hydrogen Peroxide ID	10ml 2101838
Lot # of hydrochloric acid	10ml 2120007
Logbook ID for diluted Nitric	10ml 2152083
Lot # of Nitric Acid	5ml 2142224
Hot Block ID	HB10
Nominal Amount Used	1g g
Pipette ID	J1102764U
Analyst ID - Reagent Drop Witness	RJR
Perform Calculation (0=No, 1=Yes)	0
Thermometer ID	311347 CF0.0 B2
Digestion Tube/Cup ID	ENVEXPRESS 1512329
Uncorrected Temperature	95C Celsius

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Batch Number: 195582 Batch Start Date: 11/22/16 08:00 Batch Analyst: Rosenbaum, Ron

Batch Method: 3050B Batch End Date: 11/28/16 09:30

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Batch Number: 195631 Batch Start Date: 12/01/16 12:20 Batch Analyst: Reichenbach, Emilie V

Batch Method: 7471B Batch End Date: 12/01/16 13:05

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MHgworkingCal 01435			
MB 180-195631/1		7471B, 7471B		0.60 g	100 mL				
LCS 180-195631/2		7471B, 7471B		0.60 g	100 mL	2.5 mL			
180-61116-A-141 MS		7471B, 7471B	T	0.67 g	100 mL	1 mL			
180-61116-A-141 MSD		7471B, 7471B	T	0.62 g	100 mL	1 mL			
180-61122-A-1	BGSB22-(0.0-0.5) -161122-S	7471B, 7471B	T	0.60 g	100 mL				
180-61122-A-2	BGSB22-(1-2) -161122-S	7471B, 7471B	T	0.61 g	100 mL				
180-61122-A-3	BGSB10-(0.0-0.5) -161122-S	7471B, 7471B	T	0.61 g	100 mL				
180-61122-A-4	BGSB10-(1-2) -161122-S	7471B, 7471B	T	0.71 g	100 mL				

Batch Notes	
Hydroxylamine Hydrochloride ID	6ML 2161458 HG-DISP-C6
Aqua Regia ID	5ML 2164532
Balance ID	B508632873
Batch Comment	HG-DISP-05C4676
Blank Soil Lot Number	1736518
Hot Block ID	HB3
Potassium Persulfate ID	8ML 2162469 HG-DISP-KS4
Potassium Permanganate ID	15ML 2162467 HG-DISP-KMNO4
Pipette ID	B614292745
Stannous Chloride ID	2162473
Analyst ID - Spike Witness Analyst	EVR
Thermometer ID	IP33-14 0.0 E2 95C
Digestion Tube/Cup ID	ENVEXPRESS 1605323

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Batch Number: 196009 Batch Start Date: 12/01/16 12:10 Batch Analyst: Reichenbach, Emilie V

Batch Method: 7470A Batch End Date: 12/01/16 12:55

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MHgworkingCal 01435	MHgWorkingicv 01402		
ICV 180-196009/7		7470A, 7471B		100 mL	100 mL		2.5 mL		
ICB 180-196009/8		7470A, 7471B		100 mL	100 mL				
CRA 180-196009/9		7470A, 7471B		100 mL	100 mL	0.2 mL			
CCV 180-196009/10		7470A, 7471B		100 mL	100 mL	5 mL			
CCB 180-196009/11		7470A, 7471B		100 mL	100 mL				

Batch Notes	
Hydroxylamine Hydrochloride ID	6ML 2161458 HG-DISP-C6
Batch Comment	HG-DISP-05C4676 +5ML 2164532
Hot Block ID	HB1
Potassium Persulfate ID	8ML 2162469 HG-DISP-KS4
Potassium Permanganate ID	15ML 2162467 HG-DISP-KMNO4
Pipette ID	B614292745
Stannous Chloride ID	2162473
Analyst ID - Spike Witness Analyst	EVR
Temperature	95C
Thermometer ID	IP30-14 0.0 E95C22
Digestion Tube/Cup ID	ENVEXPRESS 1605323

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Dilution Corrected Concentrations

STD1 2120847 12/5/2016 12:01:16 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:21	100.858%	-0.005	-0.300	-0.174	0.000	0.251	-0.285	-0.104
2	12:00:30	98.635%	0.003	0.245	0.053	0.000	-0.635	-0.086	0.184
3	12:00:40	100.506%	0.002	0.055	0.121	0.000	0.384	0.371	-0.080
x		100.000%	-0.000	-0.000	0.000	0.000	0.000	0.000	-0.000
σ		1.195%	0.004	0.277	0.155	0.000	0.554	0.336	0.160
%RSD		1.195	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:21	-0.101	0.497	0.000	0.023	7.359	0.700	100.093%	0.093
2	12:00:30	-0.103	-0.654	0.000	-0.213	11.710	2.841	99.703%	-0.035
3	12:00:40	0.204	0.157	0.000	0.190	-19.070	-3.542	100.204%	-0.058
x		-0.000	0.000	0.000	-0.000	-0.000	0.000	100.000%	0.000
σ		0.177	0.591	0.000	0.202	16.660	3.249	0.263%	0.082
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.263	0.000

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:21	0.041	-0.000	-0.004	-0.027	-1.226	0.006	-0.058	0.094
2	12:00:30	0.007	-0.007	0.009	-0.012	-1.226	-0.003	-0.024	-0.041
3	12:00:40	-0.048	0.007	-0.005	0.039	2.451	-0.003	0.082	-0.053
x		-0.000	0.000	-0.000	0.000	-0.000	0.000	0.000	0.000
σ		0.045	0.007	0.008	0.034	2.123	0.005	0.073	0.082
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:21	-0.089	-0.057	0.073	0.004	-0.125	-1.587	0.000	-0.007
2	12:00:30	0.031	0.111	-0.037	0.004	-0.245	0.787	0.000	-0.007
3	12:00:40	0.058	-0.054	-0.036	-0.007	0.370	0.800	0.000	0.015
x		-0.000	-0.000	0.000	-0.000	-0.000	0.000	0.000	0.000
σ		0.078	0.096	0.063	0.006	0.326	1.374	0.000	0.013
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:21	100.691%	-0.016	-0.000	100.104%	0.018	0.008	0.000	-0.000
2	12:00:30	101.316%	-0.001	-0.001	100.418%	-0.011	-0.008	-0.000	-0.008
3	12:00:40	97.993%	0.017	0.001	99.478%	-0.007	0.000	-0.000	0.008
x		100.000%	-0.000	0.000	100.000%	-0.000	-0.000	-0.000	-0.000
σ		1.766%	0.016	0.001	0.479%	0.016	0.008	0.000	0.008
%RSD		1.766	0.000	0.000	0.479	0.000	0.000	0.000	0.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:21	101.050%	-0.006	-0.003	-0.003	-0.014	-0.000	100.470%	99.422%
2	12:00:30	100.014%	-0.024	0.025	0.006	-0.014	-0.000	99.875%	101.101%
3	12:00:40	98.936%	0.030	-0.022	-0.002	0.028	-0.000	99.655%	99.478%
x		100.000%	-0.000	0.000	0.000	0.000	-0.000	100.000%	100.000%
σ		1.057%	0.027	0.023	0.005	0.024	0.000	0.422%	0.954%
%RSD		1.057	0.000	0.000	0.000	0.000	0.000	0.422	0.954

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:21	0.001	0.001	-0.000	0.006	-0.004	100.655%
2	12:00:30	-0.010	-0.002	0.010	-0.001	0.005	100.119%
3	12:00:40	0.010	0.001	-0.010	-0.005	-0.001	99.227%
x		0.000	0.000	0.000	-0.000	-0.000	100.000%
σ		0.010	0.002	0.010	0.006	0.005	0.721%
%RSD		0.000	0.000	0.000	0.000	0.000	0.721

STD2 2149583 12/5/2016 12:06:29 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:33	93.154%	202.800	1.195	0.523	0.000	100600.000	100400.000	100200.000
2	12:05:42	93.599%	198.200	-0.285	0.642	0.000	99780.000	99700.000	100100.000
3	12:05:51	94.730%	199.100	1.025	0.347	0.000	99660.000	99880.000	99680.000
x		93.828%	200.000	0.645	0.504	0.000	100000.000	100000.000	100000.000
σ		0.812%	2.429	0.810	0.149	0.000	490.800	380.900	287.500
%RSD		0.866	1.214	125.500	29.460	0.000	0.491	0.381	0.288

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:33	1005.000	-2.309	0.000	99940.000	99830.000	100100.000	95.296%	0.525
2	12:05:42	997.300	-3.391	0.000	99990.000	100000.000	99760.000	94.826%	0.187
3	12:05:51	997.900	-0.917	0.000	100100.000	100200.000	100200.000	94.899%	0.369
x		1000.000	-2.206	0.000	100000.000	100000.000	100000.000	95.007%	0.360
σ		4.179	1.240	0.000	69.600	165.600	212.600	0.253%	0.169
%RSD		0.418	56.230	0.000	0.070	0.166	0.213	0.266	46.930

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:33	198.800	197.600	995.100	49580.000	49700.000	197.800	194.600	198.200
2	12:05:42	201.100	199.700	1002.000	49510.000	49820.000	198.200	200.900	197.100
3	12:05:51	200.100	202.700	1003.000	50900.000	50480.000	204.000	204.400	204.800
x		200.000	200.000	1000.000	50000.000	50000.000	200.000	200.000	200.000
σ		1.159	2.548	4.263	784.000	423.700	3.472	4.973	4.155
%RSD		0.579	1.274	0.426	1.568	0.847	1.736	2.486	2.077

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:33	198.000	193.000	198.200	197.400	197.700	195.100	0.000	199.300
2	12:05:42	198.900	202.900	193.400	198.100	199.500	191.600	0.000	196.000
3	12:05:51	203.000	204.100	208.500	204.600	202.800	213.200	0.000	204.700
x		200.000	200.000	200.000	200.000	200.000	200.000	0.000	200.000
σ		2.670	6.086	7.701	3.996	2.597	11.580	0.000	4.399
%RSD		1.335	3.043	3.851	1.998	1.298	5.792	0.000	2.199

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:33	98.905%	0.273	0.195	91.947%	197.700	198.600	198.600	197.000
2	12:05:42	99.493%	0.241	0.215	91.360%	196.900	195.900	195.400	198.400
3	12:05:51	97.224%	0.262	0.122	91.073%	205.400	205.500	205.900	204.600
x		98.541%	0.259	0.177	91.460%	200.000	200.000	200.000	200.000
σ		1.177%	0.016	0.049	0.446%	4.678	4.919	5.392	4.080
%RSD		1.195	6.233	27.530	0.487	2.339	2.460	2.696	2.040

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:33	93.907%	0.056	0.165	0.221	193.600	197.200	95.372%	95.378%
2	12:05:42	93.513%	0.177	0.273	0.240	199.100	195.500	95.179%	95.750%
3	12:05:51	92.553%	-0.039	0.292	0.343	207.300	207.300	92.412%	93.657%
x		93.324%	0.064	0.243	0.268	200.000	200.000	94.321%	94.928%
σ		0.696%	0.108	0.068	0.066	6.925	6.378	1.656%	1.117%
%RSD		0.746	167.800	28.080	24.460	3.463	3.189	1.756	1.176

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:33	198.400	198.200	197.100	197.900	197.100	88.782%
2	12:05:42	196.300	197.900	198.400	197.500	198.300	88.969%
3	12:05:51	205.300	204.000	204.500	204.500	204.600	88.246%
x		200.000	200.000	200.000	200.000	200.000	88.666%
σ		4.740	3.432	3.911	3.928	4.001	0.376%
%RSD		2.370	1.716	1.955	1.964	2.000	0.424

STD3 2149585 12/5/2016 12:11:34 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:38	98.582%	0.647	199.400	198.900	0.000	209.400	105.100	109.700
2	12:10:48	98.780%	0.615	196.900	199.200	0.000	206.500	106.700	107.300
3	12:10:57	96.916%	0.742	203.800	201.900	0.000	206.900	104.000	105.200
x		98.093%	0.668	200.000	200.000	0.000	207.600	105.300	107.400
σ		1.024%	0.066	3.511	1.634	0.000	1.542	1.355	2.277
%RSD		1.044	9.841	1.756	0.817	0.000	0.743	1.287	2.121
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:38	14.120	10040.000	0.000	134.900	131.600	216.800	96.516%	200.900
2	12:10:48	13.480	10060.000	0.000	129.800	137.100	205.900	96.202%	199.300
3	12:10:57	13.200	9901.000	0.000	129.500	133.800	227.200	95.679%	199.800
x		13.600	10000.000	0.000	131.400	134.200	216.700	96.132%	200.000
σ		0.474	86.440	0.000	3.061	2.756	10.670	0.423%	0.806
%RSD		3.481	0.864	0.000	2.329	2.055	4.924	0.440	0.403
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:38	0.235	0.411	0.874	52.210	51.540	0.214	0.408	2.593
2	12:10:48	0.082	0.271	0.845	52.800	58.290	0.254	0.775	2.583
3	12:10:57	0.297	0.377	0.811	46.560	48.200	0.159	0.557	2.451
x		0.205	0.353	0.843	50.520	52.680	0.209	0.580	2.542
σ		0.110	0.073	0.031	3.446	5.140	0.048	0.184	0.079
%RSD		53.930	20.690	3.717	6.820	9.757	22.880	31.780	3.116
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:38	1.949	2.250	0.958	0.545	0.617	1.813	0.000	0.428
2	12:10:48	2.324	1.578	2.699	0.482	1.131	1.582	0.000	0.360
3	12:10:57	1.742	1.354	2.122	0.444	0.749	-0.164	0.000	0.520
x		2.005	1.727	1.927	0.490	0.832	1.077	0.000	0.436
σ		0.295	0.466	0.887	0.051	0.267	1.081	0.000	0.081
%RSD		14.710	26.990	46.030	10.450	32.100	100.400	0.000	18.500
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:38	98.878%	198.900	197.400	96.734%	0.270	0.174	0.299	4.314
2	12:10:48	96.864%	199.400	200.300	96.406%	0.253	0.208	0.576	4.189
3	12:10:57	97.993%	201.800	202.400	97.235%	0.290	0.229	0.298	4.188
x		97.912%	200.000	200.000	96.792%	0.271	0.203	0.391	4.230
σ		1.009%	1.544	2.517	0.417%	0.018	0.028	0.160	0.072
%RSD		1.031	0.772	1.258	0.431	6.778	13.690	40.960	1.709
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:38	96.888%	199.100	201.000	200.700	0.202	0.756	97.058%	96.558%
2	12:10:48	97.294%	200.800	200.000	198.400	0.374	0.711	96.344%	96.335%
3	12:10:57	97.223%	200.100	199.000	200.900	0.544	0.502	97.546%	95.970%
x		97.135%	200.000	200.000	200.000	0.373	0.656	96.983%	96.288%
σ		0.217%	0.836	0.960	1.401	0.171	0.136	0.604%	0.297%
%RSD		0.223	0.418	0.480	0.700	45.880	20.670	0.623	0.308
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:10:38	0.182	0.170	0.186	0.301	0.217	95.808%		
2	12:10:48	0.187	0.203	0.215	0.163	0.189	96.283%		
3	12:10:57	0.204	0.209	0.171	0.211	0.210	96.555%		
x		0.191	0.194	0.191	0.225	0.205	96.216%		
σ		0.012	0.021	0.023	0.070	0.014	0.378%		
%RSD		6.128	10.980	11.960	31.180	6.989	0.393		

ICV 2136053 12/5/2016 12:16:42 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:44	95.647%	82.170	84.170	81.960	0.000	40210.000	40940.000	40730.000
2	12:15:54	92.924%	83.980	86.390	86.440	0.000	39940.000	40270.000	40350.000
3	12:16:03	95.070%	81.440	83.950	83.580	0.000	39720.000	40020.000	39990.000
x		94.547%	103.163%	106.049%	104.990%	0.000	99.893%	101.030%	100.892%
σ		1.435%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.518	1.588	1.590	2.701	0.000	0.622	1.180	0.917
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:44	420.400	4386.000	0.000	40400.000	40790.000	39580.000	96.130%	83.810
2	12:15:54	415.700	4349.000	0.000	40450.000	40280.000	39290.000	96.162%	85.290
3	12:16:03	413.200	4355.000	0.000	40490.000	39970.000	38930.000	96.277%	84.240
x		104.113%	109.084%	0.000	101.121%	100.871%	98.167%	96.190%	105.555%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.077%	n/a
%RSD		0.875	0.449	0.000	0.116	1.031	0.824	0.080	0.901
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:44	81.690	80.430	404.800	19510.000	19270.000	80.580	79.460	83.490
2	12:15:54	77.110	80.870	403.800	19520.000	19930.000	79.320	79.170	80.330
3	12:16:03	77.790	79.440	400.500	19380.000	19580.000	79.970	82.460	82.230
x		98.578%	100.307%	100.761%	97.360%	97.952%	99.947%	100.457%	102.521%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		3.138	0.910	0.563	0.406	1.688	0.785	2.264	1.937
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:44	80.230	80.270	87.390	80.300	77.670	85.810	0.000	80.830
2	12:15:54	82.390	80.200	82.760	79.150	81.730	73.590	0.000	77.530
3	12:16:03	83.430	78.370	80.500	80.630	85.850	81.640	0.000	76.090
x		102.520%	99.516%	104.436%	100.033%	102.185%	100.435%	0.000	97.684%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.991	1.349	4.206	0.973	5.002	7.727	0.000	3.107
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:44	102.313%	83.860	85.450	94.637%	81.270	82.160	81.680	81.940
2	12:15:54	103.543%	81.920	84.990	94.955%	80.290	79.720	80.930	80.610
3	12:16:03	103.739%	80.940	84.540	94.663%	82.450	83.280	81.130	81.870
x		103.198%	102.801%	106.244%	94.752%	101.668%	102.145%	101.557%	101.839%
σ		0.773%	n/a	n/a	0.176%	n/a	n/a	n/a	n/a
%RSD		0.749	1.804	0.541	0.186	1.327	2.227	0.479	0.914
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:44	95.639%	82.430	83.470	84.470	80.920	81.910	96.882%	95.359%
2	12:15:54	96.933%	80.530	83.260	81.800	80.100	78.750	98.176%	97.095%
3	12:16:03	96.375%	83.140	82.990	82.290	78.160	80.330	98.042%	96.068%
x		96.315%	102.542%	104.052%	103.564%	99.659%	100.412%	97.700%	96.174%
σ		0.649%	n/a	n/a	n/a	n/a	n/a	0.712%	0.873%
%RSD		0.674	1.642	0.291	1.716	1.773	1.967	0.729	0.907
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:15:44	82.320	82.560	81.140	79.700	80.180	93.265%		
2	12:15:54	82.740	82.500	80.870	79.850	79.970	93.534%		
3	12:16:03	83.830	83.460	81.250	78.570	80.100	93.602%		
x		103.703%	103.548%	101.360%	99.215%	100.102%	93.467%		
σ		n/a	n/a	n/a	n/a	n/a	0.178%		
%RSD		0.943	0.647	0.241	0.879	0.131	0.190		

ICB 12/5/2016 12:21:50 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:20:52	102.262%	0.162	0.411	0.530	0.000	79.950	68.810	71.210
2	12:21:02	101.821%	0.199	0.612	0.286	0.000	78.510	68.510	71.970
3	12:21:12	102.143%	0.138	1.219	0.564	0.000	77.880	66.670	66.160
x		102.075%	0.166	0.747	0.460	0.000	78.780	68.000	69.780
σ		0.228%	0.031	0.421	0.152	0.000	1.060	1.156	3.159
%RSD		0.223	18.380	56.340	32.970	0.000	1.346	1.700	4.527
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:20:52	6.662	6.197	0.000	101.000	154.700	106.800	101.482%	0.130
2	12:21:02	6.528	8.772	0.000	98.660	117.600	111.800	101.599%	0.257
3	12:21:12	6.577	5.308	0.000	93.280	120.800	110.400	101.841%	0.277
x		6.589	6.759	0.000	97.630	131.000	109.700	101.641%	0.221
σ		0.068	1.799	0.000	3.938	20.520	2.595	0.183%	0.080
%RSD		1.025	26.620	0.000	4.033	15.660	2.366	0.180	36.060
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:20:52	0.120	0.177	1.532	38.240	56.040	0.176	0.725	0.630
2	12:21:02	0.142	0.163	1.428	36.500	39.410	0.159	0.522	0.585
3	12:21:12	0.252	0.197	1.492	36.830	41.610	0.193	0.417	0.449
x		0.171	0.179	1.484	37.190	45.690	0.176	0.555	0.555
σ		0.071	0.017	0.052	0.926	9.036	0.017	0.157	0.094
%RSD		41.370	9.741	3.531	2.490	19.780	9.924	28.210	17.020
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:20:52	0.429	3.844	3.999	0.136	0.216	-0.616	0.000	0.395
2	12:21:02	0.455	3.117	3.196	0.193	-0.013	1.018	0.000	0.461
3	12:21:12	0.569	3.465	3.334	0.181	0.100	0.104	0.000	0.353
x		0.484	3.476	3.509	0.170	0.101	0.169	0.000	0.403
σ		0.074	0.364	0.430	0.030	0.115	0.819	0.000	0.054
%RSD		15.380	10.460	12.240	17.600	114.000	485.500	0.000	13.490
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:20:52	104.534%	0.345	0.487	103.411%	0.109	0.114	0.040	0.168
2	12:21:02	103.527%	0.406	0.455	103.114%	0.101	0.085	0.081	0.097
3	12:21:12	104.619%	0.591	0.443	103.641%	0.097	0.117	0.020	0.128
x		104.227%	0.447	0.462	103.388%	0.102	0.105	0.047	0.131
σ		0.608%	0.128	0.023	0.264%	0.006	0.017	0.031	0.036
%RSD		0.583	28.640	4.907	0.256	6.101	16.470	65.780	27.540
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:20:52	102.108%	0.181	0.258	0.192	0.436	0.174	102.090%	99.678%
2	12:21:02	101.668%	0.413	0.213	0.217	0.190	0.412	103.379%	99.724%
3	12:21:12	102.740%	0.268	0.178	0.207	0.352	0.173	102.545%	100.819%
x		102.172%	0.288	0.216	0.205	0.326	0.253	102.671%	100.074%
σ		0.539%	0.117	0.040	0.012	0.125	0.137	0.654%	0.646%
%RSD		0.528	40.760	18.530	6.085	38.390	54.340	0.637	0.646
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:20:52	0.108	0.106	0.145	0.156	0.134	99.998%		
2	12:21:02	0.139	0.105	0.150	0.173	0.134	100.724%		
3	12:21:12	0.110	0.145	0.130	0.170	0.143	100.675%		
x		0.119	0.119	0.142	0.166	0.137	100.466%		
σ		0.017	0.023	0.010	0.009	0.005	0.405%		
%RSD		14.180	19.360	7.147	5.395	3.627	0.404		

CRI 2136054 12/5/2016 12:26:55 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:00	101.084%	1.210	20.650	21.570	0.000	505.000	517.000	528.400
2	12:26:09	102.437%	1.163	21.660	20.120	0.000	529.300	534.900	538.900
3	12:26:19	103.239%	1.053	20.190	19.590	0.000	507.800	524.600	528.300
x		102.253%	114.196%	416.635%	408.555%	0.000	642.576%	525.482%	531.883%
σ		1.089%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.065	7.049	3.614	5.014	0.000	2.587	1.711	1.149
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:00	30.970	543.100	0.000	522.700	585.000	512.500	109.902%	4.912
2	12:26:09	31.290	541.000	0.000	551.100	554.000	526.500	106.735%	4.764
3	12:26:19	30.770	532.100	0.000	527.900	519.700	499.900	109.480%	4.754
x		103.359%	107.746%	0.000	533.909%	552.908%	512.998%	108.706%	96.203%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.720%	n/a
%RSD		0.840	1.079	0.000	2.834	5.907	2.597	1.582	1.832
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:00	0.843	2.091	5.199	56.760	66.730	0.516	1.122	2.177
2	12:26:09	0.715	1.899	5.385	61.480	67.400	0.573	1.054	2.315
3	12:26:19	0.980	1.690	5.303	56.820	76.000	0.679	1.160	2.086
x		84.577%	94.670%	105.914%	116.713%	140.088%	117.849%	111.201%	109.631%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		15.670	10.590	1.766	4.642	7.376	13.980	4.793	5.259
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:00	2.105	5.497	6.534	0.995	4.834	4.191	0.000	5.501
2	12:26:09	2.478	6.038	5.336	1.115	5.285	6.427	0.000	5.455
3	12:26:19	2.584	5.800	5.304	1.022	4.976	2.418	0.000	5.407
x		119.443%	115.568%	114.497%	104.379%	100.636%	86.908%	0.000	109.091%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		10.540	4.687	12.250	6.039	4.587	46.240	0.000	0.863
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:00	108.647%	5.219	5.213	102.669%	0.973	1.169	1.023	1.175
2	12:26:09	106.626%	5.354	5.184	101.763%	1.099	1.134	1.041	1.346
3	12:26:19	107.943%	5.352	5.468	102.096%	1.125	1.097	1.109	1.146
x		107.739%	106.167%	105.764%	102.176%	106.579%	113.307%	105.739%	122.238%
σ		1.025%	n/a	n/a	0.458%	n/a	n/a	n/a	n/a
%RSD		0.952	1.459	2.951	0.449	7.647	3.196	4.283	8.818
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:00	103.395%	5.266	1.906	2.056	10.920	10.150	101.349%	99.343%
2	12:26:09	101.209%	4.958	2.210	2.196	10.530	9.990	100.143%	99.689%
3	12:26:19	100.116%	4.706	2.272	2.076	11.020	10.520	99.908%	98.873%
x		101.573%	99.536%	106.467%	105.472%	108.221%	102.213%	100.467%	99.302%
σ		1.670%	n/a	n/a	n/a	n/a	n/a	0.773%	0.410%
%RSD		1.644	5.640	9.210	3.605	2.403	2.671	0.770	0.412
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:26:00	1.031	1.053	1.034	1.077	1.009	98.758%		
2	12:26:09	1.076	1.065	1.089	0.998	1.079	98.542%		
3	12:26:19	0.986	1.098	1.067	0.919	1.030	99.460%		
x		103.078%	107.231%	106.346%	99.810%	103.942%	98.920%		
σ		n/a	n/a	n/a	n/a	n/a	0.480%		
%RSD		4.367	2.153	2.612	7.917	3.449	0.486		

ICSA 2136055 12/5/2016 12:32:03 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:05	89.292%	0.099	0.700	1.072	0.000	100600.000	102700.000	102400.000
2	12:31:15	88.319%	0.101	1.525	1.407	0.000	100500.000	101900.000	102100.000
3	12:31:24	89.118%	0.079	0.837	0.778	0.000	99630.000	100900.000	101700.000
x		88.910%	0.093	1.021	1.085	0.000	100200.000	101800.000	102000.000
σ		0.519%	0.012	0.442	0.315	0.000	522.200	913.900	344.900
%RSD		0.584	13.180	43.300	28.980	0.000	0.521	0.898	0.338

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:05	101200.000	16.650	0.000	99190.000	102200.000	100500.000	92.348%	2204.000
2	12:31:15	100700.000	15.290	0.000	99370.000	102300.000	100800.000	92.277%	2203.000
3	12:31:24	100500.000	13.580	0.000	99210.000	101800.000	100600.000	92.608%	2190.000
x		100800.000	15.170	0.000	99250.000	102100.000	100600.000	92.411%	2199.000
σ		330.900	1.536	0.000	98.050	277.200	142.200	0.174%	7.530
%RSD		0.328	10.120	0.000	0.099	0.271	0.141	0.188	0.342

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:05	0.041	1.370	2.971	100300.000	101600.000	0.105	0.353	1.661
2	12:31:15	-0.084	1.453	3.050	100700.000	101000.000	0.095	0.388	1.337
3	12:31:24	0.375	1.588	3.123	101600.000	101700.000	0.134	0.350	1.819
x		0.111	1.470	3.048	100900.000	101500.000	0.111	0.363	1.606
σ		0.238	0.110	0.077	675.700	403.800	0.020	0.021	0.246
%RSD		214.900	7.492	2.510	0.670	0.398	18.120	5.829	15.300

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:05	1.515	1.766	1.370	0.140	0.144	2.129	0.000	0.961
2	12:31:15	2.351	2.289	1.881	0.066	0.264	0.811	0.000	0.902
3	12:31:24	1.759	1.750	2.459	0.162	0.641	-0.689	0.000	0.804
x		1.875	1.935	1.903	0.123	0.350	0.750	0.000	0.889
σ		0.430	0.307	0.545	0.051	0.260	1.410	0.000	0.079
%RSD		22.960	15.860	28.630	41.170	74.210	188.000	0.000	8.941

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:05	95.709%	2103.000	2194.000	87.557%	0.059	0.087	0.763	0.611
2	12:31:15	97.193%	2091.000	2178.000	87.799%	0.095	0.035	0.844	0.743
3	12:31:24	97.023%	2104.000	2186.000	89.018%	0.080	0.085	0.725	0.659
x		96.642%	2099.000	2186.000	88.125%	0.078	0.069	0.777	0.671
σ		0.812%	7.019	8.120	0.783%	0.018	0.030	0.061	0.067
%RSD		0.840	0.334	0.372	0.888	23.390	42.880	7.838	9.942

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:05	90.430%	0.292	0.042	0.103	0.306	0.364	92.305%	92.869%
2	12:31:15	92.230%	0.105	0.119	0.082	0.526	0.191	93.701%	93.689%
3	12:31:24	92.571%	0.236	0.118	0.090	0.209	0.213	95.055%	94.412%
x		91.744%	0.211	0.093	0.092	0.347	0.256	93.687%	93.657%
σ		1.150%	0.096	0.044	0.011	0.162	0.094	1.375%	0.772%
%RSD		1.254	45.470	47.860	11.460	46.750	36.860	1.468	0.824

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:05	0.055	0.039	0.293	0.236	0.257	86.424%
2	12:31:15	0.032	0.040	0.294	0.209	0.249	87.282%
3	12:31:24	0.045	0.047	0.259	0.254	0.271	87.678%
x		0.044	0.042	0.282	0.233	0.259	87.128%
σ		0.012	0.005	0.020	0.023	0.011	0.641%
%RSD		26.350	10.890	7.087	9.690	4.361	0.736

ICSAB 2136056 12/5/2016 12:37:08 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:12	89.229%	21.360	54.250	53.110	0.000	102000.000	103700.000	104300.000
2	12:36:22	90.142%	21.760	53.290	53.350	0.000	102300.000	103900.000	103600.000
3	12:36:31	89.083%	21.880	55.700	53.520	0.000	101600.000	102900.000	103200.000
x		89.485%	108.334%	108.825%	106.648%	0.000	101.959%	103.518%	103.719%
σ		0.574%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.642	1.243	2.234	0.385	0.000	0.353	0.501	0.526

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:12	103300.000	532.200	0.000	101400.000	103000.000	103400.000	95.428%	2206.000
2	12:36:22	102800.000	531.300	0.000	100800.000	102000.000	103200.000	95.725%	2206.000
3	12:36:31	102700.000	533.900	0.000	100700.000	102700.000	103200.000	95.197%	2206.000
x		102.939%	106.495%	0.000	100.958%	102.538%	103.274%	95.450%	110.301%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.265%	n/a
%RSD		0.335	0.246	0.000	0.389	0.491	0.102	0.277	0.010

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:12	20.750	21.280	23.080	100700.000	100600.000	20.950	19.670	22.110
2	12:36:22	21.110	21.450	22.980	101100.000	101300.000	20.720	21.830	22.480
3	12:36:31	20.080	22.060	23.280	102700.000	102000.000	20.110	21.030	21.220
x		103.245%	107.992%	115.560%	101.499%	101.300%	102.962%	104.217%	109.683%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.535	1.909	0.663	1.025	0.680	2.118	5.257	2.936

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:12	22.090	21.580	24.350	21.630	57.650	51.670	0.000	21.600
2	12:36:22	20.840	23.540	22.310	21.500	51.530	55.260	0.000	21.270
3	12:36:31	21.160	24.950	21.080	20.740	55.980	57.010	0.000	22.100
x		106.818%	93.421%	90.318%	106.450%	110.109%	109.287%	0.000	108.285%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		3.050	7.254	7.324	2.240	5.744	4.982	0.000	1.940

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:12	98.666%	2100.000	2180.000	91.319%	19.910	20.460	20.370	22.760
2	12:36:22	99.090%	2079.000	2179.000	91.540%	20.370	20.230	20.870	23.330
3	12:36:31	97.770%	2122.000	2206.000	90.663%	20.820	20.960	22.190	24.110
x		98.509%	105.004%	109.414%	91.174%	101.824%	102.731%	105.711%	116.992%
σ		0.674%	n/a	n/a	0.456%	n/a	n/a	n/a	n/a
%RSD		0.684	1.024	0.717	0.500	2.240	1.818	4.466	2.909

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:12	93.958%	105.200	20.870	20.350	20.300	19.590	95.523%	93.938%
2	12:36:22	94.230%	105.200	21.220	21.450	20.730	20.800	97.111%	95.366%
3	12:36:31	92.576%	109.300	21.470	21.830	22.770	19.140	95.621%	94.446%
x		93.588%	106.612%	105.930%	106.038%	106.333%	99.227%	96.085%	94.584%
σ		0.887%	n/a	n/a	n/a	n/a	n/a	0.890%	0.724%
%RSD		0.947	2.223	1.419	3.629	6.208	4.319	0.926	0.766

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:12	20.260	20.440	21.020	20.750	20.830	88.379%
2	12:36:22	20.110	20.450	20.570	21.000	20.890	88.200%
3	12:36:31	20.220	20.480	20.850	21.090	20.850	90.045%
x		100.968%	102.284%	104.069%	104.734%	104.295%	88.875%
σ		n/a	n/a	n/a	n/a	n/a	1.017%
%RSD		0.386	0.112	1.070	0.855	0.154	1.145

CCV 2136057 12/5/2016 12:42:13 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:41:18	99.741%	103.300	101.100	101.800	0.000	50310.000	50850.000	50760.000
2	12:41:28	98.055%	103.400	104.300	104.200	0.000	50060.000	50550.000	50690.000
3	12:41:37	98.783%	103.900	103.200	103.800	0.000	50230.000	50470.000	50750.000
x		98.860%	103.527%	102.866%	103.244%	0.000	100.401%	101.246%	101.468%
σ		0.846%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.856	0.317	1.580	1.262	0.000	0.256	0.398	0.077
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:41:18	547.200	5396.000	0.000	49980.000	50390.000	49710.000	102.836%	107.400
2	12:41:28	548.200	5410.000	0.000	49680.000	50320.000	49360.000	103.164%	106.200
3	12:41:37	545.100	5406.000	0.000	49810.000	50660.000	49500.000	103.635%	105.500
x		109.368%	108.078%	0.000	99.646%	100.916%	99.044%	103.212%	106.399%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.401%	n/a
%RSD		0.287	0.130	0.000	0.311	0.354	0.363	0.389	0.911
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:41:18	97.270	101.600	500.900	25050.000	24920.000	101.900	99.900	101.600
2	12:41:28	100.100	98.810	498.200	25160.000	24940.000	102.200	99.320	101.200
3	12:41:37	103.100	99.090	501.400	25240.000	25310.000	100.900	103.800	101.900
x		100.156%	99.839%	100.029%	100.592%	100.219%	101.658%	101.015%	101.565%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.904	1.548	0.342	0.365	0.870	0.701	2.424	0.313
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:41:18	101.000	102.900	103.300	100.300	99.050	104.000	0.000	103.500
2	12:41:28	103.300	95.440	99.650	102.700	107.300	92.420	0.000	103.500
3	12:41:37	100.100	100.900	105.900	101.900	104.900	98.990	0.000	104.100
x		101.464%	99.751%	102.935%	101.629%	103.760%	98.467%	0.000	103.716%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.645	3.873	3.031	1.222	4.092	5.894	0.000	0.333
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:41:18	106.215%	108.400	107.900	100.571%	97.300	97.620	100.500	99.710
2	12:41:28	106.099%	104.900	108.500	100.744%	98.900	97.230	99.930	101.100
3	12:41:37	107.080%	102.200	106.400	100.853%	97.580	97.460	99.840	102.500
x		106.465%	105.164%	107.592%	100.723%	97.930%	97.435%	100.102%	101.129%
σ		0.536%	n/a	n/a	0.142%	n/a	n/a	n/a	n/a
%RSD		0.503	2.994	1.025	0.141	0.871	0.202	0.378	1.391
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:41:18	100.886%	102.200	100.200	101.100	100.200	102.300	100.358%	98.985%
2	12:41:28	101.631%	100.200	103.500	103.300	102.500	100.900	100.262%	99.643%
3	12:41:37	102.581%	100.500	102.300	102.900	102.100	99.910	101.044%	100.522%
x		101.699%	100.967%	101.994%	102.425%	101.603%	101.026%	100.554%	99.716%
σ		0.850%	n/a	n/a	n/a	n/a	n/a	0.426%	0.771%
%RSD		0.835	1.078	1.617	1.122	1.171	1.167	0.424	0.773
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:41:18	99.790	99.230	98.400	100.800	99.250	93.092%		
2	12:41:28	99.340	99.170	98.810	99.270	98.830	93.376%		
3	12:41:37	99.590	99.570	100.600	98.450	99.290	94.098%		
x		99.575%	99.327%	99.277%	99.497%	99.123%	93.522%		
σ		n/a	n/a	n/a	n/a	n/a	0.519%		
%RSD		0.228	0.218	1.189	1.180	0.255	0.555		

CCB1 12/5/2016 12:47:18 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:24	106.428%	0.170	0.627	0.124	0.000	81.140	75.610	74.560
2	12:46:33	106.456%	0.170	0.627	0.404	0.000	82.840	77.190	75.260
3	12:46:43	105.366%	0.173	0.277	0.182	0.000	83.870	73.650	76.290
x		106.084%	0.171	0.511	0.237	0.000	82.620	75.480	75.370
σ		0.622%	0.001	0.202	0.148	0.000	1.378	1.774	0.873
%RSD		0.586	0.812	39.540	62.570	0.000	1.668	2.350	1.158
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:24	6.500	1.020	0.000	104.600	175.200	116.700	108.045%	0.240
2	12:46:33	6.845	-0.513	0.000	106.200	196.000	121.400	107.708%	0.342
3	12:46:43	6.490	0.260	0.000	108.300	189.400	113.100	107.350%	0.304
x		6.611	0.256	0.000	106.400	186.900	117.100	107.701%	0.296
σ		0.202	0.767	0.000	1.851	10.650	4.167	0.347%	0.052
%RSD		3.054	299.800	0.000	1.740	5.701	3.559	0.322	17.490
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:24	0.166	0.158	1.465	46.670	52.490	0.089	0.133	0.450
2	12:46:33	0.148	0.198	1.498	44.480	41.420	0.115	0.390	0.406
3	12:46:43	0.123	0.206	1.511	41.870	43.940	0.141	0.393	0.558
x		0.146	0.187	1.491	44.340	45.950	0.115	0.305	0.472
σ		0.022	0.026	0.024	2.401	5.800	0.026	0.149	0.078
%RSD		14.860	13.840	1.595	5.414	12.620	22.480	48.830	16.550
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:24	0.483	3.425	4.406	0.209	-0.038	-0.108	0.000	0.330
2	12:46:33	0.440	2.739	4.435	0.095	0.071	0.742	0.000	0.369
3	12:46:43	0.423	3.466	4.205	0.191	0.847	-1.431	0.000	0.325
x		0.449	3.210	4.349	0.165	0.293	-0.266	0.000	0.341
σ		0.031	0.408	0.126	0.061	0.483	1.095	0.000	0.024
%RSD		6.936	12.710	2.887	37.270	164.500	412.300	0.000	7.076
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:24	111.922%	1.255	1.455	107.740%	0.134	0.096	0.231	0.122
2	12:46:33	111.652%	1.282	1.184	108.043%	0.080	0.122	0.076	0.241
3	12:46:43	110.156%	0.987	1.287	108.290%	0.118	0.153	0.115	0.128
x		111.243%	1.175	1.309	108.024%	0.111	0.124	0.141	0.164
σ		0.951%	0.163	0.137	0.275%	0.028	0.029	0.080	0.067
%RSD		0.855	13.880	10.460	0.255	25.020	23.230	57.210	41.000
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:24	107.589%	0.465	0.387	0.431	0.224	0.253	102.765%	101.124%
2	12:46:33	108.833%	0.288	0.456	0.318	0.104	0.293	103.649%	102.382%
3	12:46:43	108.255%	0.290	0.346	0.396	0.536	0.272	104.338%	101.989%
x		108.226%	0.348	0.396	0.382	0.288	0.273	103.584%	101.832%
σ		0.623%	0.102	0.055	0.058	0.223	0.020	0.789%	0.644%
%RSD		0.575	29.250	13.990	15.210	77.440	7.215	0.761	0.632
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:46:24	0.144	0.122	0.164	0.145	0.152	100.388%		
2	12:46:33	0.108	0.150	0.154	0.137	0.140	100.234%		
3	12:46:43	0.153	0.139	0.092	0.123	0.124	100.319%		
x		0.135	0.137	0.136	0.135	0.139	100.314%		
σ		0.024	0.014	0.039	0.011	0.014	0.077%		
%RSD		17.730	10.300	28.640	8.251	10.010	0.076		

MB 12/5/2016 12:52:26 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:51:29	106.313%	0.004	0.298	-0.300	0.000	1.490	8.389	8.077
2	12:51:39	106.046%	0.062	0.044	-0.312	0.000	-1.301	6.504	6.546
3	12:51:48	106.214%	-0.008	0.263	-0.177	0.000	-0.018	7.551	7.059
x		106.191%	0.019	0.201	-0.263	0.000	0.057	7.482	7.227
σ		0.135%	0.037	0.138	0.075	0.000	1.397	0.945	0.779
%RSD		0.127	193.100	68.430	28.380	0.000	2450.000	12.620	10.780

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:51:29	2.291	-6.635	0.000	29.300	58.010	6.039	108.424%	0.158
2	12:51:39	2.370	-3.751	0.000	22.390	72.300	3.106	108.780%	-0.082
3	12:51:48	2.235	-6.806	0.000	26.930	49.010	2.133	108.706%	0.216
x		2.299	-5.731	0.000	26.210	59.780	3.759	108.637%	0.098
σ		0.068	1.717	0.000	3.508	11.750	2.033	0.188%	0.158
%RSD		2.966	29.950	0.000	13.380	19.650	54.080	0.173	162.300

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:51:29	0.003	0.005	0.045	4.634	4.370	-0.003	-0.026	-0.000
2	12:51:39	-0.022	-0.008	0.059	4.781	7.749	-0.003	-0.026	0.000
3	12:51:48	-0.028	-0.002	0.015	4.332	-0.112	0.022	0.069	0.033
x		-0.016	-0.002	0.040	4.582	4.002	0.005	0.005	0.011
σ		0.017	0.007	0.022	0.229	3.944	0.014	0.055	0.019
%RSD		106.100	372.400	56.110	4.995	98.540	272.700	1037.000	170.600

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:51:29	0.108	-0.237	0.109	0.011	0.401	0.519	0.000	0.012
2	12:51:39	-0.002	0.309	0.515	-0.020	-0.254	-0.347	0.000	0.012
3	12:51:48	-0.025	0.069	0.273	0.011	-0.148	0.340	0.000	0.012
x		0.027	0.047	0.299	0.001	-0.000	0.171	0.000	0.012
σ		0.071	0.274	0.204	0.018	0.351	0.457	0.000	0.000
%RSD		265.000	578.900	68.260	2799.000	359100.000	267.600	0.000	2.400

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:51:29	110.824%	0.472	0.504	108.970%	0.027	0.022	-0.000	-0.008
2	12:51:39	108.840%	0.479	0.469	108.458%	0.027	-0.002	-0.000	-0.008
3	12:51:48	112.209%	0.345	0.527	108.872%	0.027	0.014	0.019	0.015
x		110.624%	0.432	0.500	108.767%	0.027	0.011	0.006	-0.001
σ		1.693%	0.075	0.029	0.272%	0.000	0.012	0.011	0.013
%RSD		1.530	17.450	5.796	0.250	0.206	104.600	173.500	2070.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:51:29	106.938%	0.105	0.138	0.041	0.026	-0.000	104.039%	102.205%
2	12:51:39	107.846%	-0.021	0.043	0.095	-0.014	0.021	104.199%	102.342%
3	12:51:48	107.892%	0.008	0.055	0.072	-0.014	-0.000	104.144%	101.912%
x		107.559%	0.031	0.079	0.069	-0.001	0.007	104.127%	102.153%
σ		0.538%	0.066	0.052	0.027	0.023	0.012	0.081%	0.220%
%RSD		0.500	215.600	65.440	38.920	2712.000	173.200	0.078	0.215

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:51:29	-0.002	0.010	-0.013	0.002	-0.005	100.236%
2	12:51:39	0.001	0.015	-0.007	-0.001	-0.007	101.375%
3	12:51:48	0.012	0.010	-0.000	-0.001	-0.005	101.166%
x		0.004	0.012	-0.007	-0.000	-0.006	100.926%
σ		0.007	0.003	0.006	0.002	0.001	0.607%
%RSD		209.300	26.610	98.010	4188.000	16.640	0.601

LCS 12/5/2016 12:57:29 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:32	98.156%	52.010	995.000	1009.000	0.000	48220.000	48760.000	48760.000
2	12:56:42	98.226%	50.400	972.000	972.200	0.000	47840.000	48090.000	48430.000
3	12:56:52	98.681%	49.830	977.900	974.100	0.000	47800.000	48140.000	48350.000
x		98.354%	50.750	981.700	985.000	0.000	47950.000	48330.000	48510.000
σ		0.285%	1.134	11.930	20.510	0.000	229.300	377.800	215.200
%RSD		0.290	2.235	1.216	2.083	0.000	0.478	0.782	0.444
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:32	1984.000	10400.000	0.000	48790.000	48970.000	47890.000	104.965%	953.000
2	12:56:42	1965.000	10310.000	0.000	48860.000	48670.000	47590.000	103.619%	956.700
3	12:56:52	1949.000	10220.000	0.000	48880.000	49190.000	47700.000	103.134%	958.800
x		1966.000	10310.000	0.000	48840.000	48940.000	47730.000	103.906%	956.200
σ		17.420	88.890	0.000	46.070	264.200	151.900	0.949%	2.945
%RSD		0.886	0.862	0.000	0.094	0.540	0.318	0.913	0.308
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:32	455.200	181.600	477.300	875.700	1001.000	472.500	472.600	241.700
2	12:56:42	459.800	184.300	482.200	882.900	843.400	479.100	478.700	242.500
3	12:56:52	463.800	184.300	480.200	870.100	928.800	469.000	468.400	242.900
x		459.600	183.400	479.900	876.300	924.200	473.500	473.200	242.400
σ		4.332	1.514	2.461	6.416	78.700	5.148	5.202	0.624
%RSD		0.943	0.825	0.513	0.732	8.515	1.087	1.099	0.257
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:32	245.100	470.100	458.200	38.630	8.920	11.760	0.000	982.400
2	12:56:42	245.200	468.900	454.800	38.680	8.352	10.270	0.000	981.000
3	12:56:52	240.100	486.500	472.500	39.320	10.480	12.910	0.000	960.900
x		243.500	475.200	461.800	38.880	9.251	11.650	0.000	974.800
σ		2.922	9.879	9.406	0.386	1.102	1.324	0.000	12.060
%RSD		1.200	2.079	2.037	0.993	11.910	11.370	0.000	1.237
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:32	101.767%	1030.000	1051.000	97.613%	49.610	48.630	51.100	88.540
2	12:56:42	100.060%	1033.000	1065.000	97.659%	47.710	48.910	50.550	87.300
3	12:56:52	100.473%	1020.000	1059.000	96.714%	48.080	47.460	50.230	86.590
x		100.767%	1028.000	1058.000	97.329%	48.460	48.330	50.630	87.480
σ		0.890%	6.508	6.975	0.532%	1.008	0.771	0.443	0.986
%RSD		0.884	0.633	0.659	0.547	2.081	1.594	0.876	1.127
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:32	96.577%	2007.000	500.900	500.500	1934.000	1941.000	100.257%	97.957%
2	12:56:42	98.010%	1970.000	490.000	498.300	1927.000	1929.000	100.905%	99.964%
3	12:56:52	97.337%	1986.000	493.500	494.400	1929.000	1927.000	100.950%	99.882%
x		97.308%	1988.000	494.800	497.700	1930.000	1933.000	100.704%	99.268%
σ		0.717%	18.960	5.578	3.115	3.764	7.484	0.388%	1.135%
%RSD		0.737	0.954	1.127	0.626	0.195	0.387	0.385	1.144
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:56:32	48.620	48.010	19.590	19.390	19.360	94.492%		
2	12:56:42	47.590	47.880	18.700	19.090	18.730	96.195%		
3	12:56:52	47.460	47.530	19.200	18.970	19.090	96.060%		
x		47.890	47.800	19.160	19.150	19.060	95.582%		
σ		0.633	0.248	0.446	0.217	0.315	0.947%		
%RSD		1.321	0.520	2.325	1.131	1.655	0.990		

LCSD 12/5/2016 1:02:39 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:01:42	96.188%	51.110	987.500	1004.000	0.000	48650.000	49080.000	49460.000
2	13:01:52	95.784%	52.140	998.100	995.100	0.000	48970.000	49430.000	49590.000
3	13:02:01	96.032%	50.500	983.800	981.800	0.000	48850.000	49660.000	49680.000
x		96.001%	51.250	989.800	993.600	0.000	48820.000	49390.000	49580.000
σ		0.204%	0.825	7.420	11.230	0.000	163.000	293.100	114.500
%RSD		0.212	1.609	0.750	1.130	0.000	0.334	0.594	0.231
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:01:42	1976.000	10310.000	0.000	48930.000	49360.000	47980.000	101.722%	963.900
2	13:01:52	1994.000	10300.000	0.000	49420.000	50290.000	48240.000	101.063%	973.800
3	13:02:01	1984.000	10100.000	0.000	49220.000	49370.000	47780.000	100.774%	964.500
x		1985.000	10230.000	0.000	49190.000	49680.000	48000.000	101.186%	967.400
σ		9.388	118.400	0.000	247.200	532.800	232.500	0.486%	5.562
%RSD		0.473	1.157	0.000	0.503	1.073	0.484	0.480	0.575
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:01:42	469.200	187.400	484.500	875.100	1034.000	472.300	474.000	242.000
2	13:01:52	466.900	183.900	484.600	882.200	938.400	479.500	487.300	240.600
3	13:02:01	471.100	185.100	484.900	886.500	892.000	480.500	469.600	240.600
x		469.100	185.500	484.700	881.300	954.800	477.400	477.000	241.100
σ		2.075	1.800	0.173	5.722	72.420	4.486	9.226	0.815
%RSD		0.442	0.970	0.036	0.649	7.585	0.940	1.934	0.338
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:01:42	245.700	480.600	465.700	39.140	10.300	13.960	0.000	972.800
2	13:01:52	237.200	476.600	461.700	40.230	8.006	9.707	0.000	970.900
3	13:02:01	239.500	482.500	468.600	37.610	11.160	12.100	0.000	947.800
x		240.800	479.900	465.300	38.990	9.823	11.920	0.000	963.900
σ		4.404	3.036	3.445	1.314	1.632	2.132	0.000	13.950
%RSD		1.829	0.633	0.740	3.369	16.610	17.890	0.000	1.447
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:01:42	100.198%	1029.000	1065.000	96.410%	47.060	47.580	49.570	87.860
2	13:01:52	100.685%	1017.000	1052.000	96.562%	47.690	47.860	49.930	86.230
3	13:02:01	101.613%	1008.000	1051.000	96.056%	48.360	48.400	48.960	88.280
x		100.832%	1018.000	1056.000	96.342%	47.700	47.950	49.480	87.460
σ		0.719%	10.550	7.823	0.260%	0.651	0.419	0.493	1.081
%RSD		0.713	1.036	0.741	0.269	1.364	0.873	0.996	1.236
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:01:42	96.480%	1986.000	497.500	494.600	1913.000	1932.000	98.702%	97.434%
2	13:01:52	96.346%	2002.000	499.100	498.200	1924.000	1938.000	98.673%	97.709%
3	13:02:01	95.483%	1999.000	502.600	502.300	1911.000	1931.000	99.631%	98.183%
x		96.103%	1996.000	499.700	498.400	1916.000	1934.000	99.002%	97.775%
σ		0.541%	8.067	2.618	3.868	7.068	4.226	0.545%	0.379%
%RSD		0.563	0.404	0.524	0.776	0.369	0.219	0.551	0.387
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:01:42	47.610	47.480	18.940	19.020	18.830	94.978%		
2	13:01:52	47.780	48.030	19.470	19.900	19.360	95.008%		
3	13:02:01	48.520	48.140	18.720	18.600	18.720	94.868%		
x		47.970	47.890	19.040	19.170	18.970	94.951%		
σ		0.482	0.352	0.387	0.661	0.342	0.074%		
%RSD		1.005	0.734	2.030	3.449	1.804	0.078		

180-61366-A-1 12/5/2016 1:07:42 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:06:48	97.027%	0.180	704.200	691.600	0.000	123100.000	43920.000	44160.000
2	13:06:57	94.897%	0.076	716.700	714.700	0.000	123800.000	44180.000	44460.000
3	13:07:07	96.231%	0.182	711.600	710.500	0.000	124000.000	44460.000	44600.000
x		96.052%	0.146	710.800	705.600	0.000	123600.000	44180.000	44410.000
σ		1.076%	0.061	6.241	12.320	0.000	480.600	270.300	223.400
%RSD		1.121	41.390	0.878	1.746	0.000	0.389	0.612	0.503

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:06:48	16.850	677.400	0.000	498.300	7731.000	7010.000	99.762%	216.500
2	13:06:57	18.340	671.100	0.000	498.100	7827.000	7050.000	99.586%	220.800
3	13:07:07	18.710	679.700	0.000	496.000	7679.000	7087.000	99.764%	216.100
x		17.970	676.100	0.000	497.500	7746.000	7049.000	99.704%	217.800
σ		0.987	4.484	0.000	1.255	74.960	38.880	0.102%	2.634
%RSD		5.492	0.663	0.000	0.252	0.968	0.552	0.103	1.210

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:06:48	6.760	0.152	125.100	13.990	9.749	0.904	10.160	0.685
2	13:06:57	5.569	0.173	124.800	12.440	17.030	0.910	11.200	0.547
3	13:07:07	5.790	0.159	124.400	14.130	17.100	1.034	11.090	0.478
x		6.040	0.161	124.800	13.520	14.630	0.949	10.820	0.570
σ		0.633	0.011	0.367	0.940	4.224	0.074	0.575	0.106
%RSD		10.480	6.791	0.294	6.954	28.880	7.760	5.315	18.520

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:06:48	0.539	2.601	4.043	170.000	-0.245	1.283	0.000	467.700
2	13:06:57	0.681	2.418	3.075	168.300	0.110	-5.083	0.000	461.800
3	13:07:07	0.517	2.697	3.398	174.500	0.358	-0.153	0.000	466.200
x		0.579	2.572	3.505	170.900	0.075	-1.318	0.000	465.200
σ		0.089	0.142	0.493	3.206	0.303	3.339	0.000	3.086
%RSD		15.300	5.503	14.060	1.876	406.300	253.400	0.000	0.663

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:06:48	100.993%	9.682	9.498	98.779%	0.035	0.017	0.063	0.067
2	13:06:57	102.276%	8.869	8.730	98.213%	0.044	0.026	-0.000	0.050
3	13:07:07	100.193%	8.806	8.824	98.622%	0.035	0.048	0.064	0.110
x		101.154%	9.119	9.017	98.538%	0.038	0.030	0.042	0.076
σ		1.051%	0.489	0.419	0.292%	0.005	0.016	0.037	0.031
%RSD		1.039	5.361	4.649	0.297	12.780	51.160	86.650	40.550

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:06:48	97.557%	3.408	3.890	3.765	62.190	59.970	99.430%	100.756%
2	13:06:57	98.099%	3.226	3.998	3.761	57.590	63.860	102.411%	100.496%
3	13:07:07	96.958%	3.109	3.525	3.992	61.870	62.570	101.376%	100.508%
x		97.538%	3.248	3.804	3.839	60.550	62.130	101.072%	100.587%
σ		0.571%	0.150	0.248	0.133	2.567	1.982	1.513%	0.147%
%RSD		0.585	4.630	6.520	3.451	4.239	3.190	1.497	0.146

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:06:48	0.078	0.059	0.045	0.053	0.041	95.186%
2	13:06:57	0.066	0.059	0.035	0.049	0.035	95.692%
3	13:07:07	0.058	0.068	0.055	0.041	0.050	95.419%
x		0.067	0.062	0.045	0.048	0.042	95.432%
σ		0.010	0.005	0.010	0.006	0.008	0.253%
%RSD		15.500	8.745	22.910	12.370	18.000	0.265

180-61366-A-2 12/5/2016 1:12:47 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:51	101.212%	0.037	61.510	60.990	0.000	113400.000	47760.000	47980.000
2	13:12:01	101.177%	0.128	62.270	63.410	0.000	114100.000	47840.000	48050.000
3	13:12:10	100.634%	0.190	66.440	64.610	0.000	113400.000	47520.000	48060.000
x		101.008%	0.118	63.410	63.000	0.000	113600.000	47710.000	48030.000
σ		0.324%	0.077	2.651	1.844	0.000	404.700	166.400	42.270
%RSD		0.320	64.720	4.180	2.927	0.000	0.356	0.349	0.088
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:51	37.170	288.700	0.000	56.630	2037.000	1825.000	104.600%	259.800
2	13:12:01	37.980	287.500	0.000	69.900	2112.000	1817.000	102.441%	252.800
3	13:12:10	36.150	292.000	0.000	63.320	2072.000	1841.000	103.606%	257.800
x		37.100	289.400	0.000	63.280	2074.000	1828.000	103.549%	256.800
σ		0.921	2.351	0.000	6.636	37.490	12.000	1.081%	3.600
%RSD		2.481	0.812	0.000	10.490	1.808	0.657	1.044	1.402
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:51	3.203	0.131	48.420	25.590	36.310	0.756	9.790	0.397
2	13:12:01	3.102	0.119	49.060	31.000	26.230	0.697	8.930	0.284
3	13:12:10	2.939	0.097	49.270	23.730	18.870	0.752	8.947	0.305
x		3.081	0.116	48.920	26.770	27.140	0.735	9.222	0.329
σ		0.133	0.017	0.444	3.776	8.756	0.033	0.491	0.060
%RSD		4.316	14.790	0.909	14.100	32.270	4.496	5.329	18.310
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:51	0.425	4.346	4.913	35.530	-0.014	1.020	0.000	131.900
2	13:12:01	0.219	5.454	3.797	36.240	0.109	1.518	0.000	132.900
3	13:12:10	0.499	4.047	3.286	35.650	-0.130	-0.386	0.000	127.800
x		0.381	4.616	3.999	35.800	-0.011	0.717	0.000	130.900
σ		0.145	0.742	0.832	0.380	0.119	0.988	0.000	2.712
%RSD		38.040	16.060	20.810	1.062	1042.000	137.600	0.000	2.073
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:51	102.599%	2.823	2.527	100.691%	0.010	-0.004	0.021	0.033
2	13:12:01	101.703%	2.763	2.588	100.683%	0.010	-0.004	-0.000	0.049
3	13:12:10	102.308%	2.785	2.576	100.519%	0.018	0.004	-0.000	0.049
x		102.203%	2.791	2.564	100.631%	0.012	-0.001	0.007	0.044
σ		0.457%	0.030	0.033	0.097%	0.005	0.005	0.012	0.009
%RSD		0.447	1.087	1.270	0.096	38.400	344.500	173.500	21.270
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:51	98.986%	1.141	1.020	0.859	41.590	42.150	101.679%	100.510%
2	13:12:01	99.562%	1.470	1.033	0.837	42.380	40.800	102.765%	101.419%
3	13:12:10	99.784%	1.037	0.936	0.925	41.700	41.650	103.460%	101.908%
x		99.444%	1.216	0.996	0.874	41.890	41.530	102.635%	101.279%
σ		0.412%	0.226	0.052	0.046	0.426	0.684	0.898%	0.709%
%RSD		0.414	18.580	5.245	5.260	1.017	1.647	0.875	0.700
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:11:51	0.045	0.045	0.014	0.007	0.015	96.331%		
2	13:12:01	0.025	0.035	0.000	0.022	0.013	96.490%		
3	13:12:10	0.030	0.033	0.007	0.006	0.002	97.794%		
x		0.033	0.038	0.007	0.012	0.010	96.872%		
σ		0.011	0.006	0.007	0.009	0.007	0.803%		
%RSD		32.040	15.880	94.920	75.680	66.440	0.829		

180-61366-A-3 12/5/2016 1:17:52 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:16:57	100.405%	0.069	585.800	590.600	0.000	117800.000	46540.000	47010.000
2	13:17:06	101.214%	0.031	578.200	585.800	0.000	118200.000	46760.000	47150.000
3	13:17:16	100.844%	0.050	589.900	589.000	0.000	118600.000	46740.000	47310.000
x		100.821%	0.050	584.700	588.500	0.000	118200.000	46680.000	47160.000
σ		0.405%	0.019	5.942	2.461	0.000	400.000	120.500	151.900
%RSD		0.402	37.290	1.016	0.418	0.000	0.338	0.258	0.322
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:16:57	9.848	417.800	0.000	186.000	7801.000	6926.000	105.586%	206.400
2	13:17:06	9.855	421.800	0.000	179.600	7753.000	6916.000	105.146%	210.100
3	13:17:16	10.580	413.100	0.000	178.300	7447.000	6902.000	105.542%	211.000
x		10.100	417.600	0.000	181.300	7667.000	6915.000	105.425%	209.200
σ		0.423	4.368	0.000	4.106	192.100	12.410	0.242%	2.428
%RSD		4.189	1.046	0.000	2.265	2.505	0.180	0.230	1.161
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:16:57	3.653	0.047	82.410	19.320	17.390	0.435	2.309	0.075
2	13:17:06	3.455	0.034	81.880	19.590	24.530	0.341	1.855	0.124
3	13:17:16	3.569	0.054	81.340	18.770	31.350	0.321	1.475	0.110
x		3.559	0.045	81.880	19.230	24.420	0.365	1.880	0.103
σ		0.099	0.010	0.536	0.418	6.981	0.061	0.418	0.025
%RSD		2.788	23.070	0.655	2.175	28.580	16.660	22.220	24.430
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:16:57	0.119	1.189	0.142	15.510	-0.248	-0.380	0.000	376.500
2	13:17:06	0.144	1.078	1.635	16.220	-0.247	0.780	0.000	378.800
3	13:17:16	0.258	1.472	1.357	15.990	0.681	0.533	0.000	374.900
x		0.174	1.246	1.045	15.910	0.062	0.311	0.000	376.700
σ		0.074	0.203	0.794	0.365	0.536	0.611	0.000	1.970
%RSD		42.750	16.320	76.040	2.292	866.700	196.300	0.000	0.523
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:16:57	103.076%	1.880	1.887	100.862%	0.005	-0.008	0.021	-0.000
2	13:17:06	102.011%	1.662	1.910	101.677%	0.017	-0.017	0.020	0.016
3	13:17:16	103.219%	1.468	1.607	102.323%	0.001	0.016	-0.000	0.057
x		102.769%	1.670	1.801	101.621%	0.008	-0.003	0.014	0.024
σ		0.660%	0.206	0.169	0.732%	0.008	0.017	0.012	0.029
%RSD		0.643	12.320	9.380	0.720	105.300	569.900	86.660	120.700
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:16:57	100.369%	0.695	0.540	0.548	62.810	64.960	104.534%	102.145%
2	13:17:06	101.106%	0.517	0.727	0.586	66.300	64.730	104.429%	102.847%
3	13:17:16	100.661%	0.409	0.591	0.514	66.740	65.180	104.144%	103.336%
x		100.712%	0.540	0.619	0.549	65.280	64.960	104.369%	102.776%
σ		0.371%	0.144	0.097	0.036	2.152	0.225	0.202%	0.599%
%RSD		0.368	26.690	15.590	6.494	3.297	0.346	0.193	0.582
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:16:57	0.016	0.018	-0.003	0.014	0.002	97.901%		
2	13:17:06	0.001	0.008	-0.003	0.032	0.013	99.286%		
3	13:17:16	0.018	0.006	0.007	0.021	0.007	99.287%		
x		0.011	0.011	0.000	0.022	0.007	98.825%		
σ		0.009	0.007	0.006	0.009	0.005	0.800%		
%RSD		80.100	63.820	4147.000	40.990	77.520	0.809		

180-61366-A-4 12/5/2016 1:22:55 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:22:00	102.424%	0.054	57.160	57.140	0.000	112300.000	47340.000	47770.000
2	13:22:09	101.761%	0.043	55.390	57.480	0.000	112000.000	47790.000	47810.000
3	13:22:19	101.674%	0.031	57.410	56.160	0.000	113400.000	47850.000	48040.000
x		101.953%	0.043	56.650	56.930	0.000	112600.000	47660.000	47880.000
σ		0.410%	0.012	1.101	0.684	0.000	723.500	277.700	144.400
%RSD		0.402	27.150	1.944	1.202	0.000	0.643	0.583	0.302

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:22:00	14.880	228.500	0.000	25.490	1487.000	1282.000	106.615%	253.200
2	13:22:09	15.330	230.700	0.000	29.130	1586.000	1273.000	106.859%	254.000
3	13:22:19	15.030	225.900	0.000	32.130	1546.000	1273.000	106.167%	249.800
x		15.080	228.400	0.000	28.920	1540.000	1276.000	106.547%	252.300
σ		0.234	2.430	0.000	3.325	49.990	5.496	0.351%	2.221
%RSD		1.548	1.064	0.000	11.500	3.247	0.431	0.329	0.880

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:22:00	1.495	0.039	34.300	15.860	13.730	0.308	1.721	0.085
2	13:22:09	1.638	0.060	34.260	11.580	7.946	0.273	1.518	0.107
3	13:22:19	1.069	0.019	34.430	12.030	14.910	0.326	2.021	0.155
x		1.400	0.039	34.330	13.160	12.200	0.302	1.753	0.116
σ		0.296	0.020	0.093	2.353	3.727	0.027	0.253	0.036
%RSD		21.160	51.230	0.272	17.890	30.560	8.992	14.430	31.010

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:22:00	-0.022	2.211	1.390	5.081	-0.250	1.243	0.000	99.470
2	13:22:09	-0.068	3.197	2.215	4.804	-0.022	0.293	0.000	99.520
3	13:22:19	0.093	2.572	1.649	4.734	0.550	0.293	0.000	99.480
x		0.001	2.660	1.751	4.873	0.093	0.610	0.000	99.490
σ		0.083	0.499	0.422	0.184	0.412	0.549	0.000	0.024
%RSD		6726.000	18.750	24.080	3.769	444.800	90.070	0.000	0.024

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:22:00	104.704%	0.580	0.612	102.217%	0.005	-0.009	0.041	-0.008
2	13:22:09	105.404%	0.651	0.464	102.069%	0.013	-0.021	-0.000	-0.000
3	13:22:19	105.160%	0.655	0.711	101.275%	-0.003	-0.017	-0.000	-0.008
x		105.089%	0.629	0.596	101.854%	0.005	-0.015	0.014	-0.006
σ		0.355%	0.042	0.124	0.506%	0.008	0.006	0.024	0.005
%RSD		0.338	6.659	20.860	0.497	153.200	41.020	173.300	84.830

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:22:00	100.193%	0.361	0.236	0.261	55.680	54.870	104.665%	103.436%
2	13:22:09	100.929%	0.407	0.240	0.332	57.830	57.420	104.924%	103.910%
3	13:22:19	100.709%	0.460	0.255	0.309	57.880	54.710	103.532%	103.119%
x		100.610%	0.409	0.244	0.301	57.130	55.670	104.374%	103.488%
σ		0.378%	0.049	0.010	0.037	1.259	1.524	0.740%	0.398%
%RSD		0.375	12.060	4.048	12.170	2.203	2.738	0.709	0.385

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:22:00	0.001	0.018	0.014	0.014	0.010	98.191%
2	13:22:09	0.001	0.009	0.017	0.017	0.009	99.539%
3	13:22:19	-0.002	0.011	0.010	0.021	0.013	98.901%
x		0.000	0.013	0.013	0.017	0.011	98.877%
σ		0.002	0.005	0.003	0.004	0.002	0.674%
%RSD		3122.000	37.590	24.060	20.890	15.780	0.682

180-61366-A-5 12/5/2016 1:28:00 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:04	103.086%	0.018	539.100	554.000	0.000	117800.000	47010.000	47050.000
2	13:27:14	101.104%	-0.005	552.600	560.200	0.000	118800.000	47210.000	47630.000
3	13:27:23	102.681%	0.000	549.000	552.500	0.000	119100.000	47570.000	47860.000
x		102.290%	0.004	546.900	555.600	0.000	118500.000	47260.000	47510.000
σ		1.047%	0.012	6.959	4.069	0.000	691.000	279.400	420.100
%RSD		1.024	267.500	1.273	0.732	0.000	0.583	0.591	0.884
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:04	48.980	427.700	0.000	130.600	7369.000	6824.000	107.010%	218.200
2	13:27:14	47.960	419.000	0.000	132.800	7616.000	6812.000	105.992%	214.100
3	13:27:23	47.790	426.400	0.000	138.400	7640.000	6854.000	105.509%	217.000
x		48.240	424.400	0.000	133.900	7542.000	6830.000	106.170%	216.400
σ		0.643	4.669	0.000	4.032	149.900	21.910	0.766%	2.101
%RSD		1.332	1.100	0.000	3.010	1.988	0.321	0.722	0.971
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:04	3.772	0.046	76.880	13.530	24.040	0.256	1.324	0.376
2	13:27:14	3.660	0.046	77.830	12.960	13.760	0.404	1.063	0.329
3	13:27:23	3.552	0.067	78.310	12.100	16.190	0.320	1.139	0.192
x		3.661	0.053	77.670	12.860	18.000	0.327	1.175	0.299
σ		0.110	0.012	0.730	0.722	5.376	0.074	0.135	0.096
%RSD		3.005	22.940	0.940	5.612	29.870	22.700	11.440	31.980
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:04	0.093	2.732	1.579	15.710	0.095	-1.036	0.000	369.600
2	13:27:14	0.162	2.248	3.292	15.350	-0.136	1.473	0.000	361.900
3	13:27:23	0.372	2.273	2.029	16.320	-0.134	0.583	0.000	367.700
x		0.209	2.418	2.300	15.790	-0.058	0.340	0.000	366.400
σ		0.146	0.273	0.888	0.490	0.133	1.272	0.000	4.028
%RSD		69.650	11.270	38.610	3.102	227.500	374.100	0.000	1.099
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:04	104.306%	1.285	1.612	102.013%	0.009	0.008	0.000	0.008
2	13:27:14	105.643%	1.320	1.441	101.946%	0.009	-0.000	-0.000	0.008
3	13:27:23	104.121%	1.408	1.288	101.428%	-0.011	0.012	0.021	0.016
x		104.690%	1.338	1.447	101.795%	0.003	0.007	0.007	0.011
σ		0.830%	0.063	0.162	0.320%	0.012	0.006	0.012	0.005
%RSD		0.793	4.726	11.200	0.314	460.100	96.430	173.100	45.090
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:04	101.711%	0.222	0.448	0.453	65.000	64.970	103.915%	102.566%
2	13:27:14	100.887%	0.236	0.512	0.498	67.670	69.110	102.918%	103.394%
3	13:27:23	99.977%	0.271	0.469	0.493	66.700	68.270	103.582%	103.168%
x		100.858%	0.243	0.476	0.481	66.460	67.450	103.471%	103.043%
σ		0.867%	0.025	0.032	0.025	1.352	2.185	0.508%	0.428%
%RSD		0.860	10.250	6.809	5.178	2.034	3.240	0.491	0.415
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:27:04	-0.010	0.005	0.007	0.044	0.022	97.935%		
2	13:27:14	-0.010	0.006	0.014	0.010	0.013	97.384%		
3	13:27:23	-0.007	-0.001	0.044	0.018	0.023	98.244%		
x		-0.009	0.003	0.021	0.024	0.019	97.855%		
σ		0.002	0.004	0.019	0.018	0.006	0.436%		
%RSD		17.440	116.300	90.840	73.940	28.510	0.445		

180-61366-A-6 12/5/2016 1:33:05 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:08	99.857%	0.100	58.280	56.020	0.000	112500.000	47280.000	47670.000
2	13:32:18	102.785%	0.006	54.400	54.640	0.000	112900.000	47480.000	47950.000
3	13:32:27	101.590%	0.007	58.230	55.650	0.000	112300.000	47560.000	47660.000
x		101.411%	0.038	56.970	55.440	0.000	112600.000	47440.000	47760.000
σ		1.472%	0.054	2.225	0.716	0.000	274.400	143.800	163.600
%RSD		1.452	143.100	3.905	1.291	0.000	0.244	0.303	0.343

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:08	17.280	222.800	0.000	28.940	1782.000	1412.000	105.722%	251.700
2	13:32:18	16.260	232.700	0.000	24.160	1709.000	1420.000	106.454%	246.300
3	13:32:27	15.520	220.500	0.000	30.780	1767.000	1432.000	105.627%	253.000
x		16.350	225.300	0.000	27.960	1753.000	1421.000	105.934%	250.300
σ		0.880	6.489	0.000	3.421	38.230	10.210	0.453%	3.554
%RSD		5.383	2.880	0.000	12.230	2.181	0.718	0.427	1.420

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:08	1.411	0.026	36.310	16.350	23.100	0.258	1.435	0.297
2	13:32:18	1.560	0.033	36.280	16.790	11.540	0.312	1.440	0.335
3	13:32:27	1.487	0.060	36.770	22.130	14.960	0.371	1.530	0.272
x		1.486	0.040	36.450	18.420	16.530	0.314	1.468	0.301
σ		0.074	0.018	0.279	3.214	5.939	0.056	0.053	0.031
%RSD		5.010	45.370	0.765	17.450	35.920	17.920	3.635	10.450

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:08	0.233	2.347	2.515	4.478	-0.019	0.343	0.000	111.700
2	13:32:18	0.282	2.979	2.716	5.025	-0.130	1.266	0.000	113.000
3	13:32:27	0.300	1.654	2.262	4.822	0.093	1.003	0.000	107.000
x		0.272	2.327	2.498	4.775	-0.019	0.871	0.000	110.600
σ		0.035	0.663	0.227	0.276	0.112	0.475	0.000	3.149
%RSD		12.860	28.490	9.101	5.782	590.900	54.580	0.000	2.848

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:08	104.397%	0.394	0.408	101.072%	0.001	-0.017	0.000	-0.000
2	13:32:18	101.884%	0.315	0.437	99.183%	0.006	-0.012	0.000	0.000
3	13:32:27	105.404%	0.288	0.344	101.697%	0.021	0.012	-0.000	-0.008
x		103.895%	0.332	0.396	100.651%	0.009	-0.006	0.000	-0.003
σ		1.813%	0.055	0.048	1.309%	0.011	0.015	0.000	0.005
%RSD		1.745	16.600	12.010	1.300	111.600	265.700	902.900	173.200

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:08	100.104%	0.057	0.197	0.137	66.730	61.620	103.915%	103.138%
2	13:32:18	99.103%	0.163	0.159	0.181	63.620	64.830	101.854%	100.273%
3	13:32:27	102.821%	0.108	0.222	0.205	59.290	64.710	104.933%	105.204%
x		100.676%	0.109	0.193	0.175	63.210	63.720	103.567%	102.872%
σ		1.924%	0.053	0.032	0.035	3.733	1.819	1.569%	2.476%
%RSD		1.911	48.560	16.480	19.780	5.906	2.855	1.515	2.407

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:08	0.007	0.008	0.003	0.006	0.001	99.855%
2	13:32:18	-0.001	0.010	-0.013	0.022	0.003	96.620%
3	13:32:27	0.006	0.012	0.010	0.013	0.004	99.964%
x		0.004	0.010	0.000	0.014	0.003	98.813%
σ		0.005	0.002	0.012	0.008	0.001	1.900%
%RSD		120.600	22.660	349100.000	56.800	46.070	1.923

180-61366-A-7 12/5/2016 1:38:10 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:14	102.757%	0.054	969.900	982.200	0.000	46100.000	10090.000	10090.000
2	13:37:24	102.190%	0.007	989.700	999.900	0.000	46010.000	10060.000	10070.000
3	13:37:34	102.527%	0.024	999.400	997.500	0.000	46390.000	10040.000	10130.000
x		102.492%	0.028	986.300	993.200	0.000	46170.000	10060.000	10100.000
σ		0.285%	0.024	15.050	9.587	0.000	199.600	24.630	33.530
%RSD		0.278	84.650	1.526	0.965	0.000	0.432	0.245	0.332

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:14	24.340	2685.000	0.000	3067.000	33440.000	32170.000	108.604%	2.347
2	13:37:24	24.450	2692.000	0.000	3057.000	33460.000	32260.000	109.854%	2.592
3	13:37:34	24.670	2773.000	0.000	3065.000	34020.000	32060.000	108.808%	2.064
x		24.490	2717.000	0.000	3063.000	33640.000	32160.000	109.089%	2.334
σ		0.168	48.700	0.000	5.179	327.300	99.180	0.670%	0.264
%RSD		0.685	1.793	0.000	0.169	0.973	0.308	0.614	11.320

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:14	1.914	0.038	113.600	-2.343	10.080	0.380	7.851	20.420
2	13:37:24	2.300	0.005	113.300	-1.933	9.963	0.351	9.403	20.070
3	13:37:34	1.916	0.012	113.800	-2.513	6.737	0.237	9.741	20.020
x		2.044	0.018	113.600	-2.263	8.928	0.322	8.998	20.170
σ		0.222	0.018	0.283	0.298	1.899	0.076	1.008	0.220
%RSD		10.880	96.970	0.249	13.180	21.260	23.420	11.200	1.092

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:14	20.180	10.920	7.122	31.450	-0.139	0.811	0.000	1075.000
2	13:37:24	19.610	9.013	6.557	30.910	-0.253	-3.407	0.000	1056.000
3	13:37:34	21.130	9.298	7.012	32.730	-0.134	1.011	0.000	1088.000
x		20.300	9.745	6.897	31.700	-0.175	-0.528	0.000	1073.000
σ		0.766	1.031	0.299	0.938	0.067	2.495	0.000	15.740
%RSD		3.773	10.580	4.341	2.958	38.320	472.200	0.000	1.467

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:14	106.115%	5.684	5.721	104.307%	-0.007	-0.005	-0.000	0.008
2	13:37:24	107.085%	5.613	5.825	103.058%	0.013	-0.013	-0.000	-0.000
3	13:37:34	103.458%	5.903	6.026	102.400%	0.001	-0.013	-0.000	0.016
x		105.553%	5.733	5.858	103.255%	0.002	-0.010	-0.000	0.008
σ		1.878%	0.151	0.155	0.969%	0.010	0.005	0.000	0.008
%RSD		1.779	2.640	2.650	0.938	424.400	46.000	90.380	104.200

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:14	102.638%	0.089	2.220	2.136	253.200	257.100	104.871%	103.198%
2	13:37:24	103.803%	0.056	2.092	2.303	253.200	252.700	106.122%	104.399%
3	13:37:34	102.528%	0.080	2.281	2.429	258.500	260.800	104.876%	103.094%
x		102.990%	0.075	2.198	2.289	255.000	256.900	105.290%	103.564%
σ		0.707%	0.017	0.097	0.147	3.046	4.037	0.721%	0.725%
%RSD		0.686	22.870	4.392	6.418	1.195	1.572	0.685	0.700

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:14	0.003	0.021	0.016	0.013	0.014	101.684%
2	13:37:24	-0.005	0.011	0.009	0.024	0.014	101.910%
3	13:37:34	0.001	0.013	0.016	0.002	0.005	100.930%
x		-0.000	0.015	0.014	0.013	0.011	101.508%
σ		0.004	0.005	0.004	0.011	0.005	0.513%
%RSD		1404.000	34.830	27.650	81.980	45.350	0.506

CCV 2136057 12/5/2016 1:43:18 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:21	98.710%	103.500	100.700	103.700	0.000	49530.000	49690.000	49920.000
2	13:42:31	97.326%	104.000	103.900	107.900	0.000	49760.000	49820.000	49990.000
3	13:42:40	101.726%	102.100	103.900	102.800	0.000	50150.000	50190.000	50190.000
x		99.254%	103.195%	102.818%	104.794%	0.000	99.629%	99.797%	100.071%
σ		2.250%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.267	0.983	1.809	2.631	0.000	0.633	0.520	0.277
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:21	514.700	5449.000	0.000	50440.000	49860.000	48580.000	104.509%	103.900
2	13:42:31	514.700	5445.000	0.000	50260.000	49870.000	48700.000	104.571%	106.400
3	13:42:40	521.800	5502.000	0.000	50450.000	49890.000	48940.000	103.916%	101.000
x		103.414%	109.303%	0.000	100.768%	99.741%	97.485%	104.332%	103.784%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.361%	n/a
%RSD		0.799	0.583	0.000	0.212	0.027	0.376	0.346	2.631
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:21	94.450	95.620	495.400	24300.000	24110.000	97.250	95.400	98.050
2	13:42:31	93.380	94.000	492.700	24070.000	23830.000	96.940	94.600	98.970
3	13:42:40	92.660	93.380	496.600	24070.000	24330.000	96.560	94.990	98.260
x		93.496%	94.336%	98.976%	96.584%	96.365%	96.918%	94.995%	98.429%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.962	1.227	0.410	0.555	1.032	0.360	0.419	0.490
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:21	96.840	93.470	97.530	96.500	95.640	103.700	0.000	100.400
2	13:42:31	98.400	93.010	97.150	97.630	100.900	89.090	0.000	99.150
3	13:42:40	96.910	93.180	96.670	98.400	97.230	89.860	0.000	97.520
x		97.383%	93.219%	97.118%	97.513%	97.927%	94.206%	0.000	99.018%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.902	0.250	0.442	0.980	2.760	8.713	0.000	1.449
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:21	105.591%	101.500	103.200	98.363%	98.830	98.990	100.800	100.200
2	13:42:31	105.564%	97.760	102.600	98.609%	96.990	98.230	98.350	98.970
3	13:42:40	104.828%	101.000	103.000	99.285%	98.390	97.770	98.670	99.260
x		105.328%	100.086%	102.928%	98.752%	98.072%	98.328%	99.263%	99.473%
σ		0.433%	n/a	n/a	0.477%	n/a	n/a	n/a	n/a
%RSD		0.411	2.025	0.317	0.483	0.977	0.630	1.323	0.645
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:21	98.556%	102.400	101.500	102.600	100.700	101.800	98.692%	98.034%
2	13:42:31	100.397%	100.100	98.290	98.240	100.100	99.180	101.094%	100.433%
3	13:42:40	99.068%	100.500	102.700	100.900	95.810	97.990	100.704%	99.196%
x		99.340%	100.996%	100.835%	100.569%	98.892%	99.660%	100.163%	99.221%
σ		0.950%	n/a	n/a	n/a	n/a	n/a	1.289%	1.200%
%RSD		0.956	1.200	2.261	2.183	2.719	1.960	1.287	1.209
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:42:21	97.750	97.130	96.640	97.810	96.720	95.631%		
2	13:42:31	96.090	95.700	94.250	95.450	94.930	96.437%		
3	13:42:40	97.150	96.200	94.620	98.010	95.820	96.271%		
x		96.998%	96.341%	95.173%	97.090%	95.824%	96.113%		
σ		n/a	n/a	n/a	n/a	n/a	0.426%		
%RSD		0.867	0.752	1.353	1.468	0.938	0.443		

CCB2 12/5/2016 1:48:26 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:30	103.177%	0.047	1.571	1.810	0.000	58.460	40.580	42.520
2	13:47:40	104.310%	0.099	2.139	1.204	0.000	57.910	41.930	40.380
3	13:47:49	103.795%	0.064	1.553	1.819	0.000	59.840	41.240	41.790
x		103.761%	0.070	1.754	1.611	0.000	58.740	41.250	41.560
σ		0.567%	0.026	0.333	0.353	0.000	0.996	0.674	1.090
%RSD		0.547	37.410	18.990	21.900	0.000	1.695	1.635	2.622

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:30	3.670	3.475	0.000	77.910	187.200	64.330	106.130%	0.292
2	13:47:40	3.540	5.109	0.000	76.410	118.700	69.730	106.162%	0.149
3	13:47:49	3.516	6.591	0.000	82.160	175.200	68.500	105.336%	0.338
x		3.576	5.058	0.000	78.830	160.400	67.520	105.876%	0.259
σ		0.083	1.558	0.000	2.981	36.590	2.832	0.468%	0.098
%RSD		2.319	30.810	0.000	3.782	22.810	4.194	0.442	37.950

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:30	0.084	0.087	0.873	25.950	27.520	0.118	0.238	0.224
2	13:47:40	0.055	0.087	0.846	21.950	21.770	0.075	0.106	0.317
3	13:47:49	0.209	0.143	0.821	22.400	13.830	0.058	0.174	0.202
x		0.116	0.106	0.847	23.430	21.040	0.084	0.172	0.248
σ		0.082	0.032	0.026	2.194	6.875	0.031	0.066	0.061
%RSD		70.820	30.380	3.114	9.361	32.670	37.090	38.170	24.550

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:30	0.298	1.044	1.670	0.045	-0.024	-1.488	0.000	0.165
2	13:47:40	0.207	1.962	2.603	0.121	0.204	-0.363	0.000	0.226
3	13:47:49	0.301	2.058	2.517	0.122	-0.250	1.002	0.000	0.227
x		0.268	1.688	2.263	0.096	-0.023	-0.283	0.000	0.206
σ		0.054	0.560	0.516	0.044	0.227	1.247	0.000	0.036
%RSD		19.970	33.170	22.780	45.870	968.800	440.800	0.000	17.270

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:30	106.162%	0.740	0.768	104.647%	0.072	0.035	0.139	0.111
2	13:47:40	106.088%	0.706	0.532	106.340%	0.106	0.062	0.020	0.094
3	13:47:49	105.499%	0.496	0.493	105.804%	0.075	0.087	0.039	0.102
x		105.917%	0.647	0.598	105.597%	0.084	0.061	0.066	0.102
σ		0.363%	0.133	0.149	0.865%	0.019	0.026	0.064	0.008
%RSD		0.343	20.460	24.860	0.819	22.240	41.700	96.960	8.279

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:30	103.614%	0.569	0.363	0.478	0.148	0.064	103.314%	101.503%
2	13:47:40	104.617%	0.776	0.487	0.385	0.226	0.064	103.898%	102.128%
3	13:47:49	104.447%	0.533	0.378	0.330	0.106	0.127	104.811%	103.224%
x		104.226%	0.626	0.409	0.398	0.160	0.085	104.008%	102.285%
σ		0.537%	0.131	0.068	0.075	0.061	0.036	0.754%	0.871%
%RSD		0.515	20.960	16.490	18.820	38.300	42.820	0.725	0.852

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:30	0.062	0.069	0.097	0.104	0.092	101.075%
2	13:47:40	0.034	0.080	0.087	0.049	0.072	101.276%
3	13:47:49	0.062	0.059	0.055	0.088	0.074	101.869%
x		0.053	0.069	0.080	0.080	0.079	101.407%
σ		0.016	0.010	0.022	0.028	0.011	0.413%
%RSD		30.430	14.720	28.080	34.880	13.880	0.407

180-61366-A-8 12/5/2016 1:53:34 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:37	93.466%	0.033	1388.000	1419.000	0.000	61490.000	12320.000	12480.000
2	13:52:47	93.754%	0.098	1387.000	1410.000	0.000	62820.000	12650.000	12740.000
3	13:52:57	94.080%	0.136	1366.000	1375.000	0.000	60070.000	12000.000	12090.000
x		93.767%	0.089	1380.000	1401.000	0.000	61460.000	12320.000	12440.000
σ		0.307%	0.052	12.000	23.190	0.000	1379.000	322.800	325.900
%RSD		0.328	58.710	0.870	1.655	0.000	2.243	2.619	2.620

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:37	8.165	2679.000	0.000	3337.000	36790.000	34690.000	102.249%	0.422
2	13:52:47	8.975	2653.000	0.000	3412.000	37440.000	35400.000	100.804%	0.669
3	13:52:57	7.760	2595.000	0.000	3285.000	35510.000	33940.000	102.912%	0.585
x		8.300	2642.000	0.000	3345.000	36580.000	34680.000	101.988%	0.559
σ		0.619	43.170	0.000	64.220	982.500	726.400	1.078%	0.126
%RSD		7.454	1.634	0.000	1.920	2.686	2.095	1.057	22.490

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:37	2.049	0.049	185.200	0.163	21.650	0.523	8.782	6.561
2	13:52:47	2.270	0.093	188.300	-1.019	6.051	0.489	8.725	7.100
3	13:52:57	1.614	0.042	181.500	-1.704	7.140	0.554	8.131	5.998
x		1.978	0.061	185.000	-0.853	11.620	0.522	8.546	6.553
σ		0.334	0.028	3.399	0.944	8.711	0.033	0.361	0.551
%RSD		16.880	45.110	1.837	110.700	75.000	6.254	4.220	8.406

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:37	6.890	4.147	0.639	40.790	-0.002	1.797	0.000	1544.000
2	13:52:47	6.303	3.944	-0.110	40.600	0.356	-3.477	0.000	1524.000
3	13:52:57	6.236	3.985	1.102	41.020	-0.006	0.789	0.000	1542.000
x		6.476	4.025	0.543	40.800	0.116	-0.297	0.000	1537.000
σ		0.360	0.107	0.611	0.213	0.208	2.800	0.000	11.000
%RSD		5.557	2.667	112.500	0.522	178.900	943.000	0.000	0.716

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:37	99.042%	5.679	6.472	98.665%	0.043	0.038	0.042	0.008
2	13:52:47	100.208%	5.966	5.514	98.997%	0.072	0.034	-0.000	0.025
3	13:52:57	100.071%	5.679	6.141	97.354%	0.019	0.022	0.000	0.025
x		99.774%	5.775	6.042	98.339%	0.045	0.031	0.014	0.020
σ		0.637%	0.166	0.486	0.869%	0.027	0.009	0.024	0.010
%RSD		0.639	2.874	8.049	0.883	60.210	27.410	173.200	49.380

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:37	98.675%	-0.022	2.818	2.769	290.800	289.700	102.671%	101.363%
2	13:52:47	98.514%	-0.021	2.995	3.072	284.800	285.300	103.197%	101.908%
3	13:52:57	98.426%	-0.000	2.995	2.467	289.600	290.700	102.200%	99.996%
x		98.538%	-0.014	2.936	2.770	288.400	288.600	102.690%	101.089%
σ		0.126%	0.012	0.102	0.303	3.159	2.878	0.499%	0.985%
%RSD		0.128	85.200	3.481	10.930	1.095	0.997	0.486	0.974

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:37	0.038	0.036	0.057	0.029	0.036	98.169%
2	13:52:47	0.032	0.043	0.020	0.051	0.035	98.578%
3	13:52:57	0.024	0.029	0.034	0.010	0.024	97.854%
x		0.032	0.036	0.037	0.030	0.031	98.200%
σ		0.007	0.007	0.019	0.020	0.007	0.363%
%RSD		22.400	20.190	50.390	68.050	21.320	0.370

180-61366-A-9 12/5/2016 1:58:39 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:43	96.817%	-0.002	1420.000	1432.000	0.000	34710.000	9559.000	9656.000
2	13:57:52	97.353%	0.035	1427.000	1433.000	0.000	34710.000	9630.000	9684.000
3	13:58:02	96.215%	0.011	1431.000	1451.000	0.000	34910.000	9672.000	9669.000
x		96.795%	0.015	1426.000	1439.000	0.000	34780.000	9621.000	9670.000
σ		0.569%	0.019	5.421	10.930	0.000	115.700	57.090	13.860
%RSD		0.588	128.700	0.380	0.760	0.000	0.333	0.593	0.143

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:43	5.141	2818.000	0.000	3004.000	31590.000	30160.000	102.752%	0.713
2	13:57:52	4.900	2815.000	0.000	3017.000	31860.000	30240.000	102.961%	0.543
3	13:58:02	4.823	2762.000	0.000	3037.000	31870.000	30230.000	102.126%	0.635
x		4.955	2798.000	0.000	3019.000	31770.000	30210.000	102.613%	0.630
σ		0.166	31.350	0.000	16.360	159.500	42.580	0.435%	0.085
%RSD		3.355	1.120	0.000	0.542	0.502	0.141	0.424	13.520

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:43	1.360	0.070	173.400	2.045	14.330	0.690	6.596	5.700
2	13:57:52	1.695	0.049	171.800	2.785	7.117	0.553	7.455	5.612
3	13:58:02	1.471	0.035	172.000	3.165	9.544	0.537	7.409	5.502
x		1.509	0.051	172.400	2.665	10.330	0.593	7.153	5.605
σ		0.171	0.018	0.871	0.569	3.670	0.084	0.483	0.099
%RSD		11.310	34.560	0.505	21.360	35.520	14.220	6.754	1.770

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:43	4.831	2.611	-1.207	39.350	-0.364	0.541	0.000	1112.000
2	13:57:52	7.016	2.636	-1.654	38.610	-0.008	-0.394	0.000	1097.000
3	13:58:02	5.098	1.808	-1.523	39.370	0.583	1.274	0.000	1082.000
x		5.649	2.352	-1.462	39.110	0.070	0.474	0.000	1097.000
σ		1.192	0.471	0.230	0.433	0.479	0.836	0.000	15.110
%RSD		21.100	20.020	15.720	1.107	681.100	176.600	0.000	1.377

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:43	100.071%	3.887	3.877	99.167%	0.006	0.004	0.000	0.017
2	13:57:52	100.961%	4.129	4.078	98.884%	0.018	0.013	-0.000	0.008
3	13:58:02	101.645%	3.861	3.562	99.496%	0.026	0.000	0.000	-0.000
x		100.892%	3.959	3.839	99.182%	0.017	0.006	-0.000	0.008
σ		0.789%	0.148	0.260	0.307%	0.010	0.006	0.000	0.008
%RSD		0.782	3.732	6.780	0.309	62.050	112.100	1646.000	100.800

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:43	98.721%	-0.125	2.341	2.134	257.200	264.800	102.119%	102.294%
2	13:57:52	99.753%	-0.064	1.969	1.887	261.900	263.400	101.075%	101.705%
3	13:58:02	100.043%	-0.116	2.167	2.028	264.100	260.500	102.114%	101.554%
x		99.506%	-0.102	2.159	2.016	261.100	262.900	101.769%	101.851%
σ		0.695%	0.033	0.186	0.124	3.512	2.212	0.602%	0.391%
%RSD		0.699	32.000	8.632	6.162	1.345	0.841	0.591	0.384

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:43	0.004	0.034	0.023	0.017	0.021	99.064%
2	13:57:52	0.015	0.030	0.016	0.039	0.021	99.744%
3	13:58:02	0.024	0.027	0.049	0.043	0.040	99.759%
x		0.014	0.031	0.030	0.033	0.027	99.522%
σ		0.010	0.004	0.017	0.014	0.011	0.397%
%RSD		69.860	11.480	58.420	41.670	40.820	0.399

180-61366-A-10 12/5/2016 2:03:42 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:46	97.463%	0.004	353.800	355.800	0.000	32180.000	7485.000	7488.000
2	14:02:55	97.413%	-0.009	345.900	351.800	0.000	31830.000	7429.000	7538.000
3	14:03:05	95.537%	-0.001	361.200	361.900	0.000	31930.000	7399.000	7491.000
x		96.804%	-0.002	353.600	356.500	0.000	31980.000	7438.000	7506.000
σ		1.098%	0.006	7.667	5.118	0.000	182.800	43.170	28.370
%RSD		1.134	303.300	2.168	1.436	0.000	0.571	0.580	0.378
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:46	4.616	2832.000	0.000	2991.000	29350.000	27820.000	102.354%	0.590
2	14:02:55	4.585	2770.000	0.000	3000.000	29190.000	27880.000	101.196%	0.387
3	14:03:05	4.722	2755.000	0.000	2982.000	29110.000	27800.000	102.020%	0.148
x		4.641	2785.000	0.000	2991.000	29220.000	27830.000	101.857%	0.375
σ		0.072	40.680	0.000	8.979	122.400	40.280	0.596%	0.221
%RSD		1.548	1.461	0.000	0.300	0.419	0.145	0.585	58.940
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:46	1.610	0.056	97.540	-0.960	6.010	0.424	5.962	4.323
2	14:02:55	1.629	0.050	98.430	0.404	13.320	0.444	4.352	4.651
3	14:03:05	1.531	0.064	97.880	0.075	2.382	0.531	5.420	4.639
x		1.590	0.057	97.950	-0.161	7.237	0.466	5.245	4.538
σ		0.052	0.007	0.446	0.712	5.571	0.057	0.819	0.186
%RSD		3.265	12.040	0.455	442.800	76.980	12.210	15.620	4.107
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:46	4.328	1.040	-1.412	32.330	-0.000	-0.663	0.000	635.700
2	14:02:55	4.671	0.998	-3.468	31.090	-0.364	0.847	0.000	628.700
3	14:03:05	4.011	1.030	-2.258	31.660	-0.005	0.790	0.000	615.600
x		4.337	1.022	-2.379	31.690	-0.123	0.325	0.000	626.600
σ		0.330	0.022	1.034	0.618	0.209	0.856	0.000	10.210
%RSD		7.615	2.114	43.440	1.950	169.700	263.700	0.000	1.630
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:46	98.290%	4.680	4.618	97.644%	0.002	0.009	0.000	-0.008
2	14:02:55	99.366%	5.101	4.828	98.737%	0.022	0.009	-0.000	0.033
3	14:03:05	100.092%	5.232	5.171	98.085%	0.014	0.000	0.021	0.009
x		99.249%	5.005	4.872	98.155%	0.013	0.006	0.007	0.011
σ		0.907%	0.288	0.279	0.550%	0.010	0.005	0.012	0.021
%RSD		0.914	5.761	5.726	0.560	81.920	79.770	173.300	186.200
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:46	98.956%	-0.022	1.102	1.330	336.000	342.200	100.816%	100.466%
2	14:02:55	98.526%	0.031	1.293	1.307	335.200	335.200	102.234%	100.208%
3	14:03:05	97.533%	-0.019	1.211	1.311	337.400	341.500	101.610%	100.840%
x		98.338%	-0.003	1.202	1.316	336.200	339.600	101.553%	100.504%
σ		0.730%	0.029	0.096	0.013	1.125	3.851	0.710%	0.318%
%RSD		0.742	864.300	7.973	0.956	0.335	1.134	0.700	0.316
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:02:46	0.001	0.028	0.031	0.029	0.037	97.678%		
2	14:02:55	0.018	0.026	0.013	0.036	0.027	98.939%		
3	14:03:05	0.015	0.015	0.023	0.058	0.039	99.294%		
x		0.012	0.023	0.022	0.041	0.034	98.637%		
σ		0.009	0.007	0.009	0.015	0.006	0.849%		
%RSD		78.300	30.990	38.300	36.900	18.280	0.861		

180-61366-A-11 12/5/2016 2:08:44 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:49	94.066%	0.052	853.100	869.800	0.000	42800.000	12520.000	12570.000
2	14:07:59	93.698%	0.000	857.500	874.300	0.000	44320.000	12930.000	13040.000
3	14:08:09	93.616%	0.000	856.300	863.500	0.000	42570.000	12470.000	12580.000
x		93.793%	0.017	855.600	869.200	0.000	43230.000	12640.000	12730.000
σ		0.240%	0.030	2.253	5.444	0.000	947.800	253.600	270.200
%RSD		0.256	172.800	0.263	0.626	0.000	2.192	2.006	2.122
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:49	30.190	2118.000	0.000	2522.000	41380.000	38960.000	101.356%	0.408
2	14:07:59	30.830	2103.000	0.000	2645.000	42400.000	40540.000	98.480%	0.320
3	14:08:09	30.310	2139.000	0.000	2556.000	40800.000	39090.000	100.394%	0.501
x		30.440	2120.000	0.000	2574.000	41530.000	39530.000	100.077%	0.410
σ		0.338	18.050	0.000	63.560	808.500	877.500	1.464%	0.090
%RSD		1.109	0.851	0.000	2.470	1.947	2.220	1.463	22.080
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:49	0.827	-0.015	61.480	0.288	18.150	0.134	3.689	1.751
2	14:07:59	1.171	0.044	63.970	0.951	8.648	0.155	3.223	1.528
3	14:08:09	1.063	0.000	61.810	1.389	11.020	0.098	2.891	1.426
x		1.020	0.010	62.420	0.876	12.610	0.129	3.268	1.568
σ		0.176	0.031	1.353	0.554	4.945	0.028	0.401	0.166
%RSD		17.240	309.200	2.168	63.300	39.220	22.050	12.270	10.600
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:49	1.456	1.883	-1.221	2.518	0.239	0.847	0.000	1166.000
2	14:07:59	1.623	2.465	-0.967	2.564	-0.243	0.346	0.000	1160.000
3	14:08:09	1.794	2.681	-1.122	2.823	-0.242	-0.671	0.000	1168.000
x		1.624	2.343	-1.104	2.635	-0.082	0.174	0.000	1165.000
σ		0.169	0.413	0.128	0.165	0.278	0.773	0.000	3.774
%RSD		10.400	17.610	11.620	6.249	339.500	444.400	0.000	0.324
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:49	99.318%	2.382	2.158	97.507%	-0.007	0.001	-0.000	0.009
2	14:07:59	99.996%	2.243	2.306	98.128%	0.010	-0.004	0.042	0.000
3	14:08:09	97.707%	2.406	2.107	97.464%	0.010	-0.008	-0.000	-0.008
x		99.007%	2.344	2.190	97.699%	0.005	-0.004	0.014	0.000
σ		1.176%	0.088	0.103	0.372%	0.010	0.004	0.024	0.008
%RSD		1.188	3.737	4.707	0.380	215.900	113.700	173.500	4874.000
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:49	97.607%	-0.134	0.496	0.507	246.900	248.800	101.032%	99.687%
2	14:07:59	97.526%	-0.061	0.503	0.566	249.200	250.600	101.758%	99.438%
3	14:08:09	97.397%	-0.071	0.387	0.617	246.500	244.400	102.203%	101.449%
x		97.510%	-0.088	0.462	0.563	247.500	247.900	101.664%	100.191%
σ		0.106%	0.040	0.065	0.055	1.451	3.156	0.591%	1.096%
%RSD		0.109	44.750	14.030	9.779	0.586	1.273	0.582	1.094
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:07:49	-0.007	0.001	0.020	0.033	0.016	97.801%		
2	14:07:59	-0.013	0.002	-0.006	0.003	0.002	97.934%		
3	14:08:09	-0.010	0.010	0.017	0.017	0.009	98.807%		
x		-0.010	0.005	0.010	0.018	0.009	98.181%		
σ		0.003	0.005	0.015	0.015	0.007	0.547%		
%RSD		27.990	104.500	141.800	85.210	82.460	0.557		

180-61366-A-12 12/5/2016 2:13:49 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:54	94.826%	-0.020	1299.000	1318.000	0.000	50760.000	14640.000	14900.000
2	14:13:03	92.672%	0.034	1312.000	1346.000	0.000	51080.000	14900.000	14930.000
3	14:13:13	95.648%	-0.008	1288.000	1319.000	0.000	51050.000	14650.000	14860.000
x		94.382%	0.002	1300.000	1328.000	0.000	50960.000	14730.000	14900.000
σ		1.537%	0.028	11.610	16.060	0.000	176.100	148.800	32.340
%RSD		1.628	1432.000	0.894	1.209	0.000	0.346	1.010	0.217

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:54	23.960	1870.000	0.000	2492.000	46380.000	44300.000	102.075%	0.381
2	14:13:03	23.760	1797.000	0.000	2491.000	43770.000	44450.000	100.947%	0.325
3	14:13:13	23.480	1838.000	0.000	2469.000	46550.000	44360.000	102.149%	0.444
x		23.730	1835.000	0.000	2484.000	45570.000	44370.000	101.724%	0.383
σ		0.241	36.580	0.000	12.800	1560.000	73.840	0.674%	0.059
%RSD		1.017	1.993	0.000	0.515	3.424	0.166	0.662	15.520

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:54	1.024	0.021	94.670	-3.728	9.628	0.115	0.564	1.269
2	14:13:03	1.137	-0.015	95.630	-3.693	12.050	0.133	0.977	1.397
3	14:13:13	0.976	0.007	94.040	-4.196	30.030	0.142	1.216	0.946
x		1.045	0.004	94.780	-3.872	17.240	0.130	0.919	1.204
σ		0.083	0.018	0.800	0.281	11.150	0.014	0.330	0.232
%RSD		7.931	406.700	0.845	7.251	64.670	10.490	35.900	19.290

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:54	1.332	1.332	-1.954	3.084	-0.123	1.297	0.000	1597.000
2	14:13:03	1.084	0.902	-1.899	3.197	0.111	0.837	0.000	1563.000
3	14:13:13	1.158	1.533	-4.942	2.972	-0.244	1.289	0.000	1572.000
x		1.191	1.255	-2.931	3.084	-0.085	1.141	0.000	1577.000
σ		0.128	0.323	1.741	0.113	0.180	0.263	0.000	17.320
%RSD		10.710	25.690	59.400	3.651	211.200	23.090	0.000	1.098

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:54	98.958%	2.558	2.803	98.660%	0.014	-0.021	0.021	-0.008
2	14:13:03	101.656%	2.968	2.898	98.829%	-0.003	0.000	-0.000	0.008
3	14:13:13	99.880%	2.854	2.995	99.425%	-0.011	0.000	0.000	0.008
x		100.164%	2.793	2.899	98.971%	0.000	-0.007	0.007	0.003
σ		1.371%	0.212	0.096	0.402%	0.013	0.012	0.012	0.010
%RSD		1.369	7.572	3.299	0.406	8519.000	176.900	173.200	345.300

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:54	99.647%	-0.146	0.783	0.676	272.200	281.800	104.357%	101.494%
2	14:13:03	98.601%	-0.063	0.510	0.784	282.000	285.100	103.386%	103.152%
3	14:13:13	100.547%	-0.147	0.875	0.678	279.900	280.100	104.871%	103.422%
x		99.598%	-0.119	0.723	0.713	278.000	282.400	104.205%	102.689%
σ		0.974%	0.049	0.190	0.062	5.157	2.556	0.754%	1.044%
%RSD		0.978	40.860	26.310	8.659	1.855	0.905	0.724	1.017

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:54	-0.010	-0.001	0.013	0.010	0.017	99.394%
2	14:13:03	-0.013	0.009	0.003	-0.009	0.004	100.245%
3	14:13:13	-0.005	0.001	0.013	0.017	0.011	101.388%
x		-0.010	0.003	0.010	0.006	0.011	100.342%
σ		0.004	0.005	0.006	0.013	0.007	1.001%
%RSD		44.380	180.200	57.910	216.500	61.890	0.997

180-61366-A-13 12/5/2016 2:18:55 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:59	98.494%	-0.016	1186.000	1205.000	0.000	33360.000	9191.000	9278.000
2	14:18:09	97.573%	-0.009	1198.000	1228.000	0.000	33730.000	9296.000	9387.000
3	14:18:19	97.554%	0.022	1208.000	1220.000	0.000	34020.000	9354.000	9417.000
x		97.873%	-0.001	1197.000	1218.000	0.000	33700.000	9281.000	9360.000
σ		0.537%	0.020	11.090	11.580	0.000	332.000	82.550	72.920
%RSD		0.549	3172.000	0.926	0.951	0.000	0.985	0.890	0.779

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:59	16.580	2175.000	0.000	2647.000	34590.000	32660.000	104.128%	0.553
2	14:18:09	17.430	2206.000	0.000	2667.000	35360.000	33270.000	103.744%	0.265
3	14:18:19	16.740	2206.000	0.000	2700.000	35070.000	33330.000	102.761%	0.376
x		16.920	2196.000	0.000	2671.000	35010.000	33090.000	103.544%	0.398
σ		0.451	17.900	0.000	27.020	386.500	371.200	0.705%	0.145
%RSD		2.663	0.815	0.000	1.011	1.104	1.122	0.681	36.540

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:59	0.654	0.006	74.740	5.413	16.500	0.059	0.314	1.817
2	14:18:09	0.878	0.027	75.610	6.020	11.810	0.184	0.655	1.677
3	14:18:19	0.960	0.028	75.890	7.684	34.640	0.123	0.593	1.692
x		0.831	0.020	75.420	6.372	20.980	0.122	0.521	1.729
σ		0.158	0.012	0.600	1.176	12.060	0.062	0.181	0.077
%RSD		19.070	60.260	0.795	18.450	57.470	51.180	34.840	4.445

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:59	1.728	1.751	-2.076	3.043	-0.364	-2.746	0.000	900.300
2	14:18:09	1.637	1.549	-0.603	2.956	-0.246	0.784	0.000	897.400
3	14:18:19	1.986	1.857	0.245	3.265	-0.126	-0.398	0.000	892.400
x		1.784	1.719	-0.811	3.088	-0.245	-0.787	0.000	896.700
σ		0.181	0.157	1.175	0.160	0.119	1.797	0.000	4.013
%RSD		10.150	9.111	144.800	5.171	48.700	228.400	0.000	0.448

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:59	101.062%	1.926	2.039	99.782%	-0.003	-0.021	0.021	-0.008
2	14:18:09	101.062%	2.269	2.213	100.099%	0.014	-0.008	0.000	-0.008
3	14:18:19	100.304%	2.637	2.134	99.225%	0.010	0.009	-0.000	0.000
x		100.809%	2.278	2.129	99.702%	0.007	-0.007	0.007	-0.005
σ		0.438%	0.356	0.087	0.442%	0.009	0.015	0.012	0.005
%RSD		0.434	15.610	4.078	0.444	123.900	215.300	173.400	87.340

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:59	100.889%	-0.147	0.466	0.573	259.500	261.700	102.442%	101.249%
2	14:18:09	100.260%	-0.188	0.435	0.385	261.900	261.900	103.262%	102.782%
3	14:18:19	99.059%	-0.156	0.374	0.424	261.500	263.500	102.141%	101.754%
x		100.070%	-0.164	0.425	0.460	260.900	262.400	102.615%	101.928%
σ		0.930%	0.021	0.047	0.099	1.266	0.988	0.580%	0.781%
%RSD		0.929	12.910	11.010	21.520	0.485	0.377	0.565	0.766

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:59	-0.013	0.001	0.046	0.024	0.035	99.790%
2	14:18:09	0.003	-0.000	0.052	0.038	0.033	101.189%
3	14:18:19	0.001	-0.002	0.065	0.042	0.044	100.478%
x		-0.003	-0.000	0.054	0.035	0.037	100.485%
σ		0.009	0.002	0.010	0.009	0.006	0.699%
%RSD		300.300	410.900	18.150	26.880	16.280	0.696

180-61366-A-14 12/5/2016 2:24:00 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:23:04	96.676%	-0.027	334.300	331.000	0.000	32530.000	7864.000	7881.000
2	14:23:14	95.129%	0.005	326.700	333.500	0.000	32380.000	7831.000	7893.000
3	14:23:23	97.068%	0.042	321.900	324.700	0.000	32400.000	7821.000	7869.000
x		96.291%	0.007	327.700	329.800	0.000	32440.000	7839.000	7881.000
σ		1.026%	0.035	6.252	4.521	0.000	79.650	22.290	11.610
%RSD		1.065	518.700	1.908	1.371	0.000	0.246	0.284	0.147
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:23:04	17.570	2325.000	0.000	2822.000	32080.000	30450.000	102.222%	0.443
2	14:23:14	17.940	2313.000	0.000	2855.000	31980.000	30610.000	101.255%	0.408
3	14:23:23	17.430	2278.000	0.000	2851.000	32400.000	30320.000	101.010%	0.367
x		17.640	2305.000	0.000	2843.000	32160.000	30460.000	101.496%	0.406
σ		0.265	24.350	0.000	17.860	218.500	146.600	0.641%	0.038
%RSD		1.500	1.056	0.000	0.628	0.679	0.481	0.632	9.356
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:23:04	0.981	0.042	46.980	10.830	25.210	0.078	0.252	2.298
2	14:23:14	1.044	0.007	47.260	10.620	13.300	0.134	0.427	2.435
3	14:23:23	0.931	0.007	46.610	10.560	25.380	0.097	0.634	2.209
x		0.985	0.019	46.950	10.670	21.300	0.103	0.437	2.314
σ		0.057	0.020	0.327	0.144	6.928	0.028	0.191	0.114
%RSD		5.759	108.900	0.697	1.347	32.530	27.260	43.750	4.921
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:23:04	1.757	1.030	-2.622	3.361	-0.364	-0.402	0.000	512.800
2	14:23:14	2.346	1.332	-2.288	2.694	-0.003	0.792	0.000	518.100
3	14:23:23	2.267	1.159	-3.155	3.137	-0.006	1.283	0.000	512.700
x		2.123	1.173	-2.688	3.064	-0.124	0.558	0.000	514.500
σ		0.320	0.152	0.438	0.339	0.208	0.866	0.000	3.087
%RSD		15.050	12.920	16.280	11.070	167.000	155.300	0.000	0.600
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:23:04	99.859%	2.124	2.001	98.010%	-0.011	-0.004	0.021	-0.008
2	14:23:14	99.784%	2.107	2.161	98.265%	0.018	0.000	-0.000	-0.000
3	14:23:23	100.707%	1.994	2.387	97.759%	0.010	-0.012	0.021	0.000
x		100.117%	2.075	2.183	98.011%	0.006	-0.005	0.014	-0.003
σ		0.512%	0.071	0.194	0.253%	0.015	0.006	0.012	0.005
%RSD		0.512	3.405	8.881	0.258	260.300	120.600	86.690	176.700
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:23:04	97.972%	-0.113	0.257	0.209	331.000	333.600	101.768%	101.098%
2	14:23:14	99.772%	-0.085	0.238	0.272	322.000	326.900	101.722%	100.884%
3	14:23:23	98.385%	-0.093	0.296	0.300	332.400	327.500	101.600%	100.182%
x		98.710%	-0.097	0.264	0.260	328.500	329.400	101.697%	100.722%
σ		0.943%	0.015	0.030	0.047	5.610	3.712	0.087%	0.479%
%RSD		0.955	15.020	11.220	18.000	1.708	1.127	0.085	0.476
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:23:04	-0.016	0.000	0.027	0.025	0.027	99.045%		
2	14:23:14	0.001	-0.006	0.023	0.025	0.026	99.262%		
3	14:23:23	-0.007	0.000	0.030	0.025	0.018	99.003%		
x		-0.008	-0.002	0.027	0.025	0.024	99.103%		
σ		0.009	0.003	0.003	0.000	0.005	0.139%		
%RSD		113.400	179.200	12.650	0.194	20.280	0.140		

180-61366-A-15 12/5/2016 2:29:05 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:09	92.686%	0.001	831.700	852.600	0.000	38930.000	11560.000	11750.000
2	14:28:19	93.937%	-0.020	828.200	840.300	0.000	38870.000	11510.000	11600.000
3	14:28:28	94.745%	0.006	816.800	830.900	0.000	38670.000	11420.000	11580.000
x		93.790%	-0.004	825.500	841.300	0.000	38820.000	11500.000	11640.000
σ		1.038%	0.013	7.796	10.920	0.000	135.400	72.790	94.260
%RSD		1.106	305.800	0.944	1.298	0.000	0.349	0.633	0.810
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:09	29.910	2112.000	0.000	2494.000	34320.000	37170.000	99.138%	0.272
2	14:28:19	30.050	2071.000	0.000	2488.000	38830.000	36920.000	99.349%	0.445
3	14:28:28	30.600	2064.000	0.000	2492.000	38540.000	36850.000	99.252%	0.685
x		30.180	2082.000	0.000	2491.000	37230.000	36980.000	99.246%	0.467
σ		0.366	25.690	0.000	2.989	2527.000	164.300	0.105%	0.208
%RSD		1.214	1.234	0.000	0.120	6.786	0.444	0.106	44.390
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:09	0.929	0.044	51.230	4.447	9.953	0.062	0.832	2.798
2	14:28:19	1.050	0.000	51.710	3.962	12.360	0.136	0.649	2.977
3	14:28:28	1.156	0.015	51.780	3.493	11.150	0.192	0.828	2.984
x		1.045	0.020	51.570	3.967	11.150	0.130	0.770	2.919
σ		0.114	0.022	0.298	0.477	1.205	0.065	0.104	0.106
%RSD		10.860	113.500	0.577	12.020	10.800	50.030	13.550	3.619
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:09	3.113	1.643	-2.154	3.012	-0.115	-0.170	0.000	1106.000
2	14:28:19	3.015	1.326	-1.786	3.333	-0.364	0.602	0.000	1087.000
3	14:28:28	2.997	1.286	-1.559	3.024	-0.117	-1.392	0.000	1080.000
x		3.042	1.418	-1.833	3.123	-0.199	-0.320	0.000	1091.000
σ		0.063	0.195	0.300	0.182	0.143	1.006	0.000	13.770
%RSD		2.063	13.780	16.390	5.828	71.970	314.500	0.000	1.262
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:09	96.016%	1.681	1.976	97.293%	-0.007	-0.012	0.000	-0.008
2	14:28:19	97.394%	2.144	2.354	97.701%	0.006	0.001	0.021	-0.008
3	14:28:28	97.039%	2.430	1.956	97.515%	-0.011	0.001	-0.000	-0.008
x		96.816%	2.085	2.095	97.503%	-0.004	-0.004	0.007	-0.008
σ		0.715%	0.378	0.224	0.204%	0.009	0.007	0.012	0.000
%RSD		0.739	18.150	10.680	0.209	224.400	199.600	173.900	0.000
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:09	96.617%	-0.101	0.357	0.272	239.400	241.600	100.683%	99.610%
2	14:28:19	97.455%	-0.061	0.312	0.387	242.800	241.300	102.733%	99.810%
3	14:28:28	96.956%	-0.133	0.383	0.364	238.800	238.200	101.973%	101.026%
x		97.009%	-0.098	0.351	0.341	240.300	240.400	101.796%	100.149%
σ		0.422%	0.036	0.036	0.061	2.171	1.901	1.037%	0.766%
%RSD		0.435	36.960	10.180	17.830	0.903	0.791	1.018	0.765
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:28:09	-0.016	-0.001	0.004	0.003	0.002	98.036%		
2	14:28:19	-0.010	0.001	0.003	0.017	0.011	99.076%		
3	14:28:28	-0.005	-0.001	0.023	0.014	0.016	99.481%		
x		-0.010	-0.000	0.010	0.011	0.010	98.864%		
σ		0.006	0.001	0.011	0.008	0.007	0.745%		
%RSD		54.700	431.800	112.400	68.030	69.350	0.754		

180-61366-A-16 12/5/2016 2:34:10 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:14	91.338%	0.022	1144.000	1163.000	0.000	48290.000	14690.000	14790.000
2	14:33:24	92.894%	0.014	1129.000	1150.000	0.000	48940.000	14760.000	14930.000
3	14:33:33	92.601%	-0.006	1130.000	1150.000	0.000	48630.000	14710.000	14920.000
x		92.277%	0.010	1134.000	1154.000	0.000	48620.000	14720.000	14880.000
σ		0.827%	0.014	8.266	7.322	0.000	323.000	35.220	74.600
%RSD		0.896	143.400	0.729	0.634	0.000	0.664	0.239	0.501
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:14	24.740	1792.000	0.000	2429.000	41640.000	43320.000	100.284%	0.049
2	14:33:24	25.180	1845.000	0.000	2450.000	42120.000	43350.000	99.940%	0.462
3	14:33:33	25.140	1826.000	0.000	2437.000	41700.000	43680.000	100.046%	0.439
x		25.020	1821.000	0.000	2439.000	41820.000	43450.000	100.090%	0.317
σ		0.244	26.990	0.000	10.680	263.700	199.900	0.176%	0.232
%RSD		0.976	1.482	0.000	0.438	0.631	0.460	0.176	73.210
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:14	0.749	0.007	81.000	0.569	9.743	0.144	0.779	1.660
2	14:33:24	1.052	0.015	81.570	-1.183	13.500	0.172	0.786	1.751
3	14:33:33	1.144	0.014	82.060	-1.338	8.563	0.080	0.502	1.681
x		0.982	0.012	81.540	-0.651	10.600	0.132	0.689	1.697
σ		0.206	0.004	0.531	1.059	2.581	0.047	0.162	0.047
%RSD		21.020	35.240	0.651	162.800	24.340	35.940	23.480	2.798
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:14	1.777	0.409	-1.217	3.107	0.118	1.792	0.000	1570.000
2	14:33:24	1.991	0.930	-2.010	3.790	-0.120	-0.415	0.000	1589.000
3	14:33:33	1.908	0.583	-2.115	3.115	-0.364	2.055	0.000	1555.000
x		1.892	0.641	-1.781	3.337	-0.122	1.144	0.000	1571.000
σ		0.108	0.265	0.491	0.392	0.241	1.356	0.000	17.240
%RSD		5.708	41.360	27.590	11.750	197.800	118.500	0.000	1.097
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:14	99.779%	2.492	2.816	98.012%	-0.003	0.009	0.000	0.000
2	14:33:24	98.083%	2.626	2.883	99.237%	0.002	0.005	0.000	0.000
3	14:33:33	98.979%	2.723	2.761	98.963%	0.010	-0.017	0.021	-0.008
x		98.947%	2.614	2.820	98.737%	0.003	-0.001	0.007	-0.003
σ		0.848%	0.116	0.061	0.643%	0.006	0.014	0.012	0.005
%RSD		0.858	4.429	2.161	0.651	214.200	1278.000	172.400	181.000
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:14	98.614%	-0.166	0.611	0.592	280.400	282.800	102.975%	101.896%
2	14:33:24	97.707%	-0.103	0.447	0.446	281.200	277.000	102.583%	102.052%
3	14:33:33	98.662%	-0.125	0.677	0.624	286.100	282.300	103.903%	103.131%
x		98.328%	-0.131	0.578	0.554	282.600	280.700	103.153%	102.360%
σ		0.538%	0.032	0.118	0.095	3.095	3.211	0.678%	0.673%
%RSD		0.547	24.470	20.480	17.200	1.095	1.144	0.657	0.657
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:33:14	-0.013	-0.005	-0.003	-0.001	0.002	100.492%		
2	14:33:24	0.001	0.002	0.003	0.020	0.007	101.231%		
3	14:33:33	-0.010	-0.000	-0.000	0.010	0.002	101.368%		
x		-0.008	-0.001	-0.000	0.010	0.004	101.030%		
σ		0.007	0.003	0.003	0.011	0.003	0.471%		
%RSD		96.040	401.000	2626.000	113.100	76.570	0.467		

180-61366-A-17 12/5/2016 2:39:18 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:20	94.574%	0.038	1233.000	1265.000	0.000	36360.000	10660.000	10770.000
2	14:38:30	93.720%	0.026	1248.000	1267.000	0.000	35790.000	10500.000	10650.000
3	14:38:40	94.577%	0.038	1229.000	1264.000	0.000	36030.000	10580.000	10640.000
x		94.290%	0.034	1237.000	1265.000	0.000	36060.000	10580.000	10690.000
σ		0.494%	0.007	10.180	1.466	0.000	286.800	78.380	73.360
%RSD		0.524	20.460	0.823	0.116	0.000	0.795	0.741	0.687
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:20	16.000	2110.000	0.000	2536.000	37280.000	35140.000	100.665%	0.370
2	14:38:30	15.700	2076.000	0.000	2502.000	37180.000	35050.000	101.241%	0.323
3	14:38:40	16.100	2117.000	0.000	2519.000	33630.000	35230.000	100.861%	0.304
x		15.930	2101.000	0.000	2519.000	36030.000	35140.000	100.922%	0.332
σ		0.208	21.820	0.000	16.750	2079.000	88.830	0.293%	0.034
%RSD		1.306	1.038	0.000	0.665	5.769	0.253	0.290	10.180
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:20	0.783	0.036	80.620	-2.547	8.552	0.107	0.537	1.274
2	14:38:30	0.945	0.014	79.650	-1.778	10.910	0.134	0.741	1.509
3	14:38:40	0.950	0.036	79.590	-1.423	2.442	0.117	0.538	1.574
x		0.893	0.029	79.950	-1.916	7.300	0.119	0.605	1.452
σ		0.095	0.013	0.575	0.575	4.369	0.013	0.118	0.158
%RSD		10.630	43.960	0.719	29.990	59.850	11.290	19.430	10.860
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:20	1.254	1.012	-2.564	3.240	-0.364	0.801	0.000	1101.000
2	14:38:30	1.823	0.874	-2.226	3.265	-0.122	1.047	0.000	1079.000
3	14:38:40	1.720	0.588	-1.914	3.134	0.250	2.334	0.000	1096.000
x		1.599	0.825	-2.235	3.213	-0.079	1.394	0.000	1092.000
σ		0.303	0.217	0.325	0.070	0.309	0.824	0.000	11.270
%RSD		18.970	26.280	14.540	2.176	392.300	59.100	0.000	1.032
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:20	97.770%	2.142	2.127	97.356%	0.006	-0.017	-0.000	0.000
2	14:38:30	98.952%	1.988	2.034	97.427%	-0.002	-0.017	0.000	-0.008
3	14:38:40	97.224%	2.094	2.206	96.645%	0.002	-0.012	-0.000	0.000
x		97.982%	2.075	2.122	97.143%	0.002	-0.015	-0.000	-0.003
σ		0.883%	0.079	0.086	0.432%	0.004	0.002	0.000	0.005
%RSD		0.901	3.813	4.057	0.445	241.600	16.460	278.200	184.300
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:20	97.823%	-0.103	0.420	0.438	255.600	256.400	101.359%	101.208%
2	14:38:30	97.336%	-0.113	0.531	0.507	260.100	250.300	101.416%	101.201%
3	14:38:40	97.562%	-0.175	0.536	0.370	251.900	253.400	101.980%	101.103%
x		97.574%	-0.130	0.496	0.439	255.900	253.400	101.585%	101.170%
σ		0.244%	0.039	0.066	0.069	4.090	3.053	0.343%	0.059%
%RSD		0.250	30.290	13.260	15.630	1.599	1.205	0.338	0.058
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:38:20	-0.016	-0.001	-0.006	0.014	0.003	99.208%		
2	14:38:30	-0.005	0.003	0.017	0.014	0.015	99.613%		
3	14:38:40	-0.008	0.001	0.000	0.017	0.013	99.226%		
x		-0.009	0.001	0.003	0.015	0.010	99.349%		
σ		0.006	0.002	0.012	0.002	0.006	0.229%		
%RSD		62.540	192.700	350.200	14.540	61.860	0.230		

CCV 2136057 12/5/2016 2:44:23 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:43:27	92.603%	104.400	108.800	106.900	0.000	50590.000	50930.000	51080.000
2	14:43:36	92.732%	103.700	107.900	106.300	0.000	50880.000	50780.000	50990.000
3	14:43:46	92.960%	103.600	109.100	107.400	0.000	50630.000	50570.000	50810.000
x		92.765%	103.906%	108.577%	106.862%	0.000	101.399%	101.519%	101.920%
σ		0.181%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.195	0.385	0.597	0.547	0.000	0.314	0.353	0.273
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:43:27	522.800	5510.000	0.000	51430.000	49960.000	48790.000	97.052%	103.700
2	14:43:36	517.700	5327.000	0.000	51340.000	50190.000	48600.000	96.973%	101.700
3	14:43:46	523.900	5532.000	0.000	51370.000	49900.000	48940.000	97.415%	102.500
x		104.291%	109.121%	0.000	102.764%	100.035%	97.558%	97.147%	102.635%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.236%	n/a
%RSD		0.630	2.059	0.000	0.090	0.304	0.347	0.243	0.962
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:43:27	95.600	98.020	500.000	25390.000	25000.000	101.400	104.500	101.400
2	14:43:36	91.530	98.690	496.900	24990.000	24870.000	98.390	95.730	100.000
3	14:43:46	97.680	99.070	497.100	25270.000	24660.000	101.500	99.700	101.900
x		94.938%	98.595%	99.599%	100.862%	99.380%	100.426%	99.967%	101.103%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		3.293	0.539	0.345	0.829	0.683	1.756	4.384	0.988
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:43:27	104.300	102.000	100.400	105.600	103.500	100.600	0.000	102.000
2	14:43:36	99.030	95.500	98.040	99.930	104.000	94.200	0.000	98.160
3	14:43:46	102.800	92.270	101.700	100.600	99.660	106.600	0.000	102.300
x		102.050%	96.596%	100.026%	102.034%	102.370%	100.463%	0.000	100.837%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.663	5.134	1.835	3.011	2.307	6.173	0.000	2.302
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:43:27	96.520%	101.100	105.000	94.696%	99.080	99.230	96.420	101.000
2	14:43:36	100.336%	99.070	102.300	95.404%	98.020	98.210	100.300	100.600
3	14:43:46	97.500%	105.700	106.100	95.398%	99.680	99.080	101.000	100.800
x		98.118%	101.970%	104.430%	95.166%	98.924%	98.841%	99.233%	100.775%
σ		1.982%	n/a	n/a	0.407%	n/a	n/a	n/a	n/a
%RSD		2.020	3.354	1.881	0.428	0.850	0.555	2.489	0.227
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:43:27	95.034%	99.600	100.600	102.100	98.550	99.620	97.694%	96.036%
2	14:43:36	94.983%	100.200	101.200	101.500	102.500	98.530	96.695%	96.528%
3	14:43:46	95.420%	100.800	101.500	101.300	99.310	96.870	98.678%	97.025%
x		95.146%	100.181%	101.092%	101.651%	100.127%	98.341%	97.689%	96.530%
σ		0.239%	n/a	n/a	n/a	n/a	n/a	0.991%	0.495%
%RSD		0.251	0.580	0.465	0.408	2.109	1.412	1.015	0.513
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:43:27	97.920	97.180	95.780	96.910	96.120	94.137%		
2	14:43:36	97.750	97.050	97.080	97.390	96.460	94.238%		
3	14:43:46	98.100	98.310	97.560	97.390	96.930	93.877%		
x		97.923%	97.514%	96.809%	97.230%	96.505%	94.084%		
σ		n/a	n/a	n/a	n/a	n/a	0.186%		
%RSD		0.182	0.708	0.952	0.285	0.424	0.198		

CCB3 12/5/2016 2:49:31 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:48:34	99.683%	0.100	3.256	2.768	0.000	56.460	45.660	43.400
2	14:48:44	98.785%	0.127	2.943	2.491	0.000	55.200	41.790	43.080
3	14:48:53	99.280%	0.193	3.513	3.072	0.000	56.260	40.290	40.980
x		99.249%	0.140	3.237	2.777	0.000	55.970	42.580	42.480
σ		0.450%	0.048	0.286	0.291	0.000	0.676	2.772	1.312
%RSD		0.453	34.230	8.820	10.470	0.000	1.208	6.510	3.087
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:48:34	3.660	2.314	0.000	72.250	154.900	63.560	103.301%	0.226
2	14:48:44	3.557	2.284	0.000	70.040	123.600	66.310	103.244%	0.205
3	14:48:53	3.536	1.159	0.000	71.670	134.900	70.450	103.271%	0.058
x		3.584	1.919	0.000	71.320	137.800	66.770	103.272%	0.163
σ		0.066	0.658	0.000	1.148	15.860	3.472	0.029%	0.091
%RSD		1.854	34.310	0.000	1.610	11.510	5.200	0.028	55.950
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:48:34	0.156	0.111	0.903	22.670	22.360	0.112	0.346	0.243
2	14:48:44	0.066	0.090	0.865	22.470	21.200	0.130	0.077	0.148
3	14:48:53	0.057	0.055	0.818	21.390	25.930	0.095	0.414	0.220
x		0.093	0.085	0.862	22.180	23.170	0.112	0.279	0.204
σ		0.054	0.028	0.043	0.688	2.464	0.018	0.179	0.049
%RSD		58.430	32.990	4.966	3.100	10.640	15.800	64.000	24.290
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:48:34	0.331	1.159	2.030	0.136	0.100	1.064	0.000	0.117
2	14:48:44	0.285	2.061	1.715	0.069	0.217	1.255	0.000	0.190
3	14:48:53	0.238	1.489	2.513	0.092	0.334	0.774	0.000	0.076
x		0.285	1.570	2.086	0.099	0.217	1.031	0.000	0.128
σ		0.046	0.457	0.402	0.034	0.117	0.242	0.000	0.058
%RSD		16.320	29.080	19.270	34.150	53.930	23.480	0.000	45.290
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:48:34	104.015%	0.274	0.489	102.988%	0.073	0.052	0.040	0.039
2	14:48:44	103.771%	0.536	0.479	103.696%	0.093	0.126	0.101	0.064
3	14:48:53	103.644%	0.346	0.391	104.172%	0.108	0.092	0.060	0.039
x		103.810%	0.385	0.453	103.619%	0.091	0.090	0.067	0.048
σ		0.189%	0.135	0.054	0.596%	0.018	0.037	0.031	0.014
%RSD		0.182	35.150	11.870	0.575	19.260	40.860	46.240	29.790
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:48:34	103.253%	0.276	0.300	0.343	0.027	0.173	102.181%	101.835%
2	14:48:44	102.095%	0.241	0.356	0.159	0.108	0.087	103.181%	102.005%
3	14:48:53	103.250%	0.255	0.280	0.229	0.107	0.235	104.641%	102.868%
x		102.866%	0.257	0.312	0.244	0.081	0.165	103.334%	102.236%
σ		0.668%	0.017	0.039	0.093	0.047	0.075	1.237%	0.554%
%RSD		0.649	6.793	12.590	38.180	57.950	45.240	1.197	0.542
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:48:34	0.062	0.086	0.074	0.063	0.077	101.701%		
2	14:48:44	0.036	0.084	0.089	0.070	0.084	102.479%		
3	14:48:53	0.042	0.091	0.061	0.092	0.065	102.433%		
x		0.047	0.087	0.075	0.075	0.075	102.204%		
σ		0.013	0.003	0.014	0.015	0.009	0.437%		
%RSD		28.600	3.892	19.330	19.550	12.450	0.427		

180-61366-A-18 12/5/2016 2:54:39 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:44	96.178%	0.024	372.200	376.000	0.000	32010.000	7783.000	7863.000
2	14:53:53	96.155%	0.075	370.800	375.300	0.000	31860.000	7734.000	7832.000
3	14:54:03	94.418%	0.071	383.700	387.600	0.000	32300.000	7831.000	7887.000
x		95.584%	0.056	375.600	379.600	0.000	32060.000	7783.000	7861.000
σ		1.010%	0.028	7.073	6.882	0.000	225.600	48.250	27.640
%RSD		1.056	50.230	1.883	1.813	0.000	0.704	0.620	0.352
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:44	22.000	2314.000	0.000	2828.000	31710.000	30360.000	101.557%	0.278
2	14:53:53	21.740	2265.000	0.000	2827.000	31610.000	30050.000	101.073%	0.174
3	14:54:03	22.100	2264.000	0.000	2842.000	32070.000	30360.000	100.860%	0.133
x		21.950	2281.000	0.000	2832.000	31790.000	30260.000	101.163%	0.195
σ		0.185	28.680	0.000	8.159	244.100	179.500	0.357%	0.075
%RSD		0.844	1.258	0.000	0.288	0.768	0.593	0.353	38.430
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:44	0.746	0.042	49.970	4.671	16.870	0.106	0.494	1.803
2	14:53:53	1.104	0.021	50.050	5.713	25.400	0.143	0.600	1.845
3	14:54:03	1.007	0.036	49.940	4.872	12.070	0.115	0.426	1.875
x		0.952	0.033	49.990	5.086	18.110	0.121	0.507	1.841
σ		0.185	0.011	0.055	0.553	6.754	0.019	0.088	0.036
%RSD		19.430	32.680	0.110	10.870	37.290	15.790	17.350	1.956
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:44	2.001	0.529	-2.042	3.510	-0.244	1.536	0.000	552.100
2	14:53:53	2.199	0.657	-2.283	3.388	-0.124	-0.401	0.000	552.600
3	14:54:03	1.997	0.569	-3.616	3.454	-0.007	-0.148	0.000	550.000
x		2.066	0.585	-2.647	3.451	-0.125	0.329	0.000	551.600
σ		0.115	0.066	0.848	0.061	0.119	1.053	0.000	1.371
%RSD		5.579	11.220	32.020	1.767	94.630	319.900	0.000	0.249
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:44	100.177%	1.366	2.001	99.159%	0.068	0.051	0.021	0.050
2	14:53:53	100.214%	1.421	1.821	99.882%	0.018	0.013	0.042	0.033
3	14:54:03	101.375%	1.683	1.726	99.768%	0.014	0.004	0.021	0.008
x		100.588%	1.490	1.849	99.603%	0.033	0.023	0.028	0.030
σ		0.681%	0.169	0.140	0.389%	0.030	0.025	0.012	0.021
%RSD		0.677	11.360	7.554	0.390	90.790	110.100	42.920	69.060
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:44	98.420%	-0.135	0.255	0.291	324.400	330.700	103.439%	100.935%
2	14:53:53	99.718%	-0.116	0.244	0.328	329.500	328.500	103.934%	101.777%
3	14:54:03	99.311%	-0.054	0.373	0.306	329.700	331.700	101.761%	101.354%
x		99.150%	-0.101	0.291	0.308	327.900	330.300	103.044%	101.356%
σ		0.663%	0.042	0.072	0.019	3.001	1.645	1.139%	0.421%
%RSD		0.669	41.930	24.710	6.107	0.915	0.498	1.105	0.415
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:53:44	0.029	0.016	0.056	0.039	0.034	99.410%		
2	14:53:53	0.004	0.018	0.050	0.073	0.048	99.242%		
3	14:54:03	0.023	0.025	0.023	0.050	0.031	100.118%		
x		0.019	0.020	0.043	0.054	0.038	99.590%		
σ		0.013	0.005	0.018	0.017	0.009	0.465%		
%RSD		70.830	23.410	41.030	31.450	24.180	0.467		

180-61366-A-18 SD@5 12/5/2016 2:59:47 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:58:50	97.259%	-0.027	79.360	79.110	0.000	6740.000	1608.000	1627.000
2	14:59:00	96.866%	-0.002	78.800	78.840	0.000	6522.000	1560.000	1555.000
3	14:59:09	97.229%	-0.009	78.580	77.820	0.000	6560.000	1578.000	1579.000
x		97.118%	-0.013	78.920	78.590	0.000	6607.000	1582.000	1587.000
σ		0.219%	0.013	0.404	0.681	0.000	116.400	23.930	36.750
%RSD		0.225	103.400	0.511	0.866	0.000	1.761	1.512	2.316
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:58:50	3.623	458.800	0.000	584.200	6776.000	6134.000	100.728%	-0.038
2	14:59:00	3.339	445.700	0.000	574.800	6553.000	5939.000	101.082%	-0.018
3	14:59:09	3.373	447.300	0.000	573.500	6478.000	5892.000	101.367%	-0.104
x		3.445	450.600	0.000	577.500	6602.000	5988.000	101.059%	-0.054
σ		0.155	7.157	0.000	5.870	154.900	128.200	0.320%	0.045
%RSD		4.498	1.588	0.000	1.016	2.346	2.141	0.317	84.160
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:58:50	0.247	0.014	10.390	3.963	13.360	-0.003	0.150	0.488
2	14:59:00	0.191	0.028	10.140	2.684	3.612	0.051	0.149	0.460
3	14:59:09	0.134	0.021	10.230	2.607	-0.019	0.024	0.149	0.545
x		0.191	0.021	10.250	3.085	5.650	0.024	0.149	0.498
σ		0.056	0.007	0.125	0.761	6.917	0.027	0.001	0.043
%RSD		29.430	33.290	1.217	24.680	122.400	112.700	0.498	8.677
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:58:50	0.274	0.535	-0.783	0.730	-0.003	-1.101	0.000	110.100
2	14:59:00	0.753	0.529	-1.016	0.817	0.115	0.293	0.000	111.000
3	14:59:09	0.415	0.528	0.880	0.782	-0.364	0.789	0.000	111.700
x		0.480	0.531	-0.306	0.776	-0.084	-0.007	0.000	110.900
σ		0.246	0.003	1.034	0.043	0.250	0.980	0.000	0.787
%RSD		51.210	0.630	337.400	5.604	297.000	14910.000	0.000	0.710
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:58:50	99.668%	0.319	0.367	99.946%	-0.007	-0.004	0.021	-0.008
2	14:59:00	100.500%	0.467	0.614	100.081%	0.014	0.000	-0.000	-0.008
3	14:59:09	100.463%	0.605	0.474	99.573%	0.026	-0.008	-0.000	-0.008
x		100.210%	0.463	0.485	99.867%	0.011	-0.004	0.007	-0.008
σ		0.470%	0.143	0.124	0.263%	0.017	0.004	0.012	0.000
%RSD		0.469	30.870	25.610	0.263	150.800	102.000	173.500	0.000
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:58:50	99.455%	0.049	0.099	0.114	66.530	67.420	100.458%	100.189%
2	14:59:00	99.217%	0.049	0.092	0.106	65.340	66.760	101.796%	101.082%
3	14:59:09	99.833%	-0.044	0.105	-0.028	70.590	66.700	101.185%	100.017%
x		99.502%	0.018	0.098	0.064	67.480	66.960	101.146%	100.429%
σ		0.311%	0.054	0.006	0.080	2.750	0.403	0.670%	0.572%
%RSD		0.313	299.000	6.413	124.200	4.074	0.601	0.662	0.569
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:58:50	-0.008	-0.001	0.016	0.021	0.019	100.670%		
2	14:59:00	-0.002	-0.001	0.006	0.013	0.008	101.015%		
3	14:59:09	-0.005	-0.001	0.013	0.017	0.012	100.793%		
x		-0.005	-0.001	0.012	0.017	0.013	100.826%		
σ		0.003	0.000	0.005	0.004	0.005	0.175%		
%RSD		57.540	1.158	42.280	21.750	40.030	0.173		

180-60993-F-2-B @10 12/5/2016 3:04:55 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:58	93.003%	0.040	1693.000	1726.000	0.000	3668.000	6196.000	6167.000
2	15:04:07	94.961%	-0.020	1632.000	1643.000	0.000	3560.000	5999.000	6057.000
3	15:04:17	92.779%	-0.013	1708.000	1714.000	0.000	3639.000	6098.000	6127.000
x		93.581%	0.002	1678.000	1694.000	0.000	3622.000	6098.000	6117.000
σ		1.200%	0.033	40.420	44.600	0.000	56.210	98.350	55.940
%RSD		1.283	1354.000	2.409	2.632	0.000	1.552	1.613	0.915

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:58	1.869	1662.000	0.000	1026.000	36730.000	35300.000	93.789%	0.308
2	15:04:07	1.862	1683.000	0.000	1013.000	35830.000	34730.000	94.103%	0.191
3	15:04:17	1.955	1685.000	0.000	1027.000	36980.000	35210.000	93.380%	0.311
x		1.895	1677.000	0.000	1022.000	36510.000	35080.000	93.758%	0.270
σ		0.052	12.700	0.000	7.802	602.100	304.400	0.363%	0.068
%RSD		2.753	0.757	0.000	0.764	1.649	0.868	0.387	25.350

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:58	-0.153	0.063	514.600	1996.000	2081.000	0.016	0.053	0.053
2	15:04:07	0.013	0.109	508.100	1988.000	2209.000	0.036	0.054	0.134
3	15:04:17	-0.041	0.110	513.200	1969.000	2103.000	0.046	0.054	0.042
x		-0.060	0.094	512.000	1984.000	2131.000	0.033	0.053	0.076
σ		0.084	0.027	3.417	13.620	68.800	0.015	0.001	0.050
%RSD		140.200	28.660	0.667	0.687	3.229	45.850	0.959	65.890

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:58	0.041	39.310	38.070	0.820	-0.237	0.349	0.000	121.200
2	15:04:07	0.068	38.740	41.750	0.663	-0.105	-0.726	0.000	124.300
3	15:04:17	0.042	38.880	36.860	0.671	-0.236	1.091	0.000	120.400
x		0.050	38.970	38.890	0.718	-0.193	0.238	0.000	122.000
σ		0.016	0.295	2.548	0.089	0.076	0.913	0.000	2.044
%RSD		30.960	0.756	6.552	12.360	39.380	383.700	0.000	1.676

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:58	95.311%	145.300	148.000	93.973%	-0.007	-0.012	0.044	0.035
2	15:04:07	92.609%	149.800	154.800	92.086%	0.007	-0.003	0.067	0.045
3	15:04:17	93.823%	146.200	147.300	93.418%	0.002	0.002	0.067	0.062
x		93.914%	147.100	150.000	93.159%	0.001	-0.004	0.059	0.047
σ		1.353%	2.385	4.122	0.970%	0.007	0.007	0.013	0.014
%RSD		1.441	1.621	2.747	1.041	792.100	155.500	22.350	28.840

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:58	94.446%	0.010	0.044	0.079	28.210	29.140	96.542%	95.129%
2	15:04:07	92.910%	0.070	0.060	0.054	27.500	27.290	94.735%	94.374%
3	15:04:17	93.198%	0.036	0.038	0.045	28.580	28.620	96.342%	95.957%
x		93.518%	0.039	0.047	0.059	28.100	28.350	95.873%	95.153%
σ		0.816%	0.030	0.011	0.018	0.545	0.953	0.991%	0.791%
%RSD		0.873	76.950	24.130	29.540	1.941	3.362	1.034	0.832

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:58	-0.010	-0.004	0.015	-0.001	0.006	94.497%
2	15:04:07	-0.016	0.004	-0.003	-0.005	-0.004	95.481%
3	15:04:17	-0.013	0.000	0.018	0.003	0.001	94.383%
x		-0.013	0.000	0.010	-0.001	0.001	94.787%
σ		0.003	0.004	0.011	0.004	0.005	0.604%
%RSD		22.880	19800.000	112.000	498.200	383.600	0.637

180-60993-F-2-B SD@50 12/5/2016 3:10:00 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:04	95.603%	0.018	351.100	353.700	0.000	726.300	1259.000	1267.000
2	15:09:14	96.128%	0.017	348.600	352.300	0.000	724.500	1262.000	1263.000
3	15:09:23	91.649%	0.015	371.000	373.000	0.000	761.600	1315.000	1310.000
x		94.460%	0.017	356.900	359.700	0.000	737.500	1279.000	1280.000
σ		2.448%	0.002	12.290	11.560	0.000	20.920	31.710	26.230
%RSD		2.592	9.961	3.442	3.214	0.000	2.836	2.480	2.050

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:04	2.545	347.800	0.000	214.800	7890.000	7223.000	99.028%	-0.011
2	15:09:14	2.767	341.100	0.000	217.600	7735.000	7189.000	98.295%	0.146
3	15:09:23	2.427	347.500	0.000	234.000	8263.000	7482.000	95.686%	-0.021
x		2.580	345.500	0.000	222.200	7963.000	7298.000	97.670%	0.038
σ		0.173	3.769	0.000	10.390	271.400	160.100	1.756%	0.094
%RSD		6.693	1.091	0.000	4.677	3.408	2.194	1.798	247.900

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:04	0.023	0.088	107.400	402.600	410.100	-0.003	0.012	0.085
2	15:09:14	-0.009	0.044	107.300	408.900	405.500	-0.003	0.012	0.022
3	15:09:23	0.073	0.083	112.600	414.100	484.000	-0.003	0.050	-0.001
x		0.029	0.072	109.100	408.600	433.200	-0.003	0.025	0.035
σ		0.041	0.024	3.011	5.767	44.040	0.000	0.022	0.044
%RSD		143.900	33.370	2.759	1.412	10.170	0.000	87.470	126.800

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:04	-0.015	1.364	1.003	0.250	-0.364	0.800	0.000	26.530
2	15:09:14	0.058	1.614	1.497	0.120	-0.001	1.545	0.000	26.220
3	15:09:23	0.111	0.909	1.412	0.075	-0.242	-0.160	0.000	24.710
x		0.051	1.296	1.304	0.148	-0.202	0.728	0.000	25.820
σ		0.063	0.357	0.264	0.091	0.185	0.855	0.000	0.971
%RSD		123.400	27.560	20.230	61.220	91.360	117.300	0.000	3.761

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:04	98.279%	31.610	31.850	99.749%	0.001	-0.012	0.021	0.017
2	15:09:14	99.912%	30.560	30.360	99.546%	-0.003	-0.004	0.021	-0.008
3	15:09:23	99.148%	30.980	31.360	99.816%	-0.003	-0.017	0.042	0.034
x		99.113%	31.050	31.190	99.703%	-0.001	-0.011	0.028	0.014
σ		0.817%	0.526	0.756	0.140%	0.002	0.006	0.012	0.021
%RSD		0.824	1.693	2.425	0.141	187.300	58.740	43.330	150.200

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:04	98.733%	-0.114	-0.002	-0.002	5.725	6.646	101.065%	99.543%
2	15:09:14	97.888%	-0.103	-0.028	-0.019	6.084	5.866	101.247%	100.363%
3	15:09:23	98.149%	-0.041	-0.049	-0.011	6.691	6.488	101.746%	99.689%
x		98.257%	-0.086	-0.026	-0.011	6.167	6.333	101.353%	99.865%
σ		0.433%	0.039	0.024	0.008	0.488	0.412	0.353%	0.438%
%RSD		0.441	45.820	90.450	78.000	7.913	6.511	0.348	0.438

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:04	-0.013	-0.005	0.000	0.010	-0.000	100.243%
2	15:09:14	-0.013	-0.007	-0.000	0.017	0.006	100.553%
3	15:09:23	-0.016	-0.005	0.013	0.002	0.001	100.622%
x		-0.014	-0.005	0.004	0.010	0.002	100.473%
σ		0.002	0.001	0.008	0.007	0.003	0.202%
%RSD		11.480	24.620	173.900	75.050	142.100	0.201

180-60993-F-2-C MS@10 12/5/2016 3:15:05 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:14:10	93.566%	5.138	1764.000	1775.000	0.000	8735.000	10990.000	11010.000
2	15:14:19	91.031%	5.001	1814.000	1818.000	0.000	8784.000	11120.000	11150.000
3	15:14:29	91.497%	5.028	1767.000	1791.000	0.000	8779.000	11000.000	11200.000
x		92.031%	5.056	1782.000	1795.000	0.000	8766.000	11040.000	11120.000
σ		1.349%	0.072	27.920	21.820	0.000	26.900	72.920	98.100
%RSD		1.466	1.433	1.567	1.216	0.000	0.307	0.661	0.882

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:14:10	191.700	2793.000	0.000	6187.000	41940.000	40280.000	94.766%	100.100
2	15:14:19	193.000	2734.000	0.000	6290.000	42020.000	40580.000	93.587%	100.900
3	15:14:29	191.100	2719.000	0.000	6280.000	41880.000	40460.000	93.096%	101.100
x		191.900	2749.000	0.000	6253.000	41940.000	40440.000	93.816%	100.700
σ		0.968	39.370	0.000	56.900	69.690	150.600	0.858%	0.534
%RSD		0.504	1.432	0.000	0.910	0.166	0.372	0.915	0.531

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:14:10	46.560	19.360	572.600	2067.000	2092.000	49.330	50.320	25.040
2	15:14:19	47.800	20.010	575.300	2071.000	2216.000	49.980	48.520	25.350
3	15:14:29	48.050	19.450	575.200	2061.000	2202.000	47.950	50.690	26.560
x		47.470	19.610	574.400	2066.000	2170.000	49.090	49.840	25.650
σ		0.797	0.353	1.565	5.451	67.770	1.037	1.163	0.805
%RSD		1.679	1.802	0.272	0.264	3.123	2.113	2.333	3.140

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:14:10	24.490	48.560	45.560	5.097	0.919	2.421	0.000	223.600
2	15:14:19	24.210	50.340	42.690	4.805	1.166	-0.443	0.000	222.900
3	15:14:29	26.570	49.150	41.340	4.676	1.167	1.876	0.000	219.200
x		25.090	49.350	43.200	4.859	1.084	1.285	0.000	221.900
σ		1.290	0.907	2.155	0.216	0.143	1.521	0.000	2.382
%RSD		5.140	1.837	4.989	4.440	13.180	118.400	0.000	1.074

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:14:10	93.605%	251.200	257.300	93.765%	4.896	4.861	5.059	8.553
2	15:14:19	94.792%	252.200	260.600	93.562%	4.884	4.953	4.731	8.600
3	15:14:29	94.866%	246.800	256.100	93.207%	4.749	4.904	4.920	8.561
x		94.421%	250.100	258.000	93.511%	4.843	4.906	4.903	8.571
σ		0.708%	2.846	2.353	0.283%	0.082	0.046	0.165	0.025
%RSD		0.749	1.138	0.912	0.302	1.693	0.939	3.356	0.293

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:14:10	94.839%	197.900	50.320	50.730	218.500	225.900	96.920%	96.052%
2	15:14:19	94.921%	200.300	50.360	50.940	219.900	221.100	98.589%	97.200%
3	15:14:29	94.066%	197.600	50.880	50.090	224.900	223.300	97.472%	96.700%
x		94.608%	198.600	50.520	50.590	221.100	223.400	97.660%	96.651%
σ		0.472%	1.488	0.310	0.445	3.360	2.369	0.851%	0.576%
%RSD		0.499	0.749	0.613	0.879	1.520	1.061	0.871	0.596

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:14:10	4.875	4.991	1.931	1.985	1.963	95.066%
2	15:14:19	4.934	4.882	2.025	1.970	1.977	96.148%
3	15:14:29	4.644	4.773	1.983	2.022	1.976	96.069%
x		4.817	4.882	1.979	1.993	1.972	95.761%
σ		0.153	0.109	0.047	0.027	0.008	0.603%
%RSD		3.183	2.223	2.382	1.332	0.404	0.630

180-60993-F-2-D MSD@10 12/5/2016 3:20:10 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:19:14	88.879%	5.378	1815.000	1860.000	0.000	9013.000	11580.000	11540.000
2	15:19:23	89.236%	5.397	1787.000	1812.000	0.000	8719.000	11120.000	11140.000
3	15:19:33	90.060%	5.089	1811.000	1821.000	0.000	8724.000	11140.000	11170.000
x		89.392%	5.288	1805.000	1831.000	0.000	8818.000	11280.000	11280.000
σ		0.606%	0.172	15.180	25.690	0.000	168.300	257.700	220.600
%RSD		0.678	3.259	0.841	1.403	0.000	1.909	2.285	1.955

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:19:14	226.800	2786.000	0.000	6435.000	43170.000	41620.000	90.468%	105.600
2	15:19:23	221.800	2747.000	0.000	6208.000	42290.000	40180.000	91.661%	100.500
3	15:19:33	221.800	2830.000	0.000	6204.000	41650.000	40420.000	92.552%	104.900
x		223.500	2788.000	0.000	6283.000	42370.000	40740.000	91.561%	103.700
σ		2.892	41.790	0.000	132.000	761.400	769.500	1.046%	2.746
%RSD		1.294	1.499	0.000	2.101	1.797	1.889	1.142	2.649

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:19:14	48.400	19.240	588.100	2089.000	2236.000	50.400	50.890	26.130
2	15:19:23	47.940	20.000	567.400	2043.000	2129.000	51.190	50.050	25.870
3	15:19:33	48.920	18.930	565.900	2041.000	2288.000	48.840	49.070	25.980
x		48.420	19.390	573.800	2058.000	2218.000	50.140	50.000	25.990
σ		0.493	0.550	12.400	26.770	81.130	1.194	0.909	0.135
%RSD		1.018	2.838	2.160	1.301	3.658	2.382	1.818	0.519

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:19:14	25.700	58.700	54.520	4.867	1.066	0.081	0.000	216.600
2	15:19:23	25.470	57.010	55.110	4.531	0.419	2.724	0.000	217.600
3	15:19:33	26.980	59.890	56.350	4.826	1.084	2.204	0.000	223.200
x		26.050	58.530	55.330	4.741	0.856	1.670	0.000	219.100
σ		0.816	1.444	0.935	0.183	0.379	1.400	0.000	3.596
%RSD		3.132	2.466	1.689	3.868	44.230	83.850	0.000	1.641

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:19:14	93.478%	254.800	255.300	91.601%	4.771	4.914	4.951	9.624
2	15:19:23	92.509%	253.400	257.600	91.117%	4.792	4.876	5.182	8.422
3	15:19:33	91.179%	253.400	259.100	91.065%	5.025	4.968	4.627	9.148
x		92.389%	253.900	257.300	91.261%	4.863	4.919	4.920	9.065
σ		1.154%	0.794	1.929	0.295%	0.141	0.046	0.279	0.605
%RSD		1.249	0.313	0.750	0.324	2.897	0.936	5.671	6.677

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:19:14	92.101%	202.000	51.330	49.990	229.800	220.400	95.802%	95.455%
2	15:19:23	91.584%	204.000	51.900	51.760	223.800	229.800	95.807%	94.869%
3	15:19:33	91.304%	204.600	51.420	51.460	231.000	230.800	95.372%	94.814%
x		91.663%	203.500	51.550	51.070	228.200	227.000	95.660%	95.046%
σ		0.404%	1.385	0.304	0.946	3.834	5.766	0.250%	0.355%
%RSD		0.441	0.680	0.590	1.853	1.680	2.540	0.261	0.374

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:19:14	5.048	4.877	2.034	2.098	2.052	93.392%
2	15:19:23	5.212	5.001	1.914	2.094	2.011	93.274%
3	15:19:33	5.123	4.970	2.095	2.087	2.093	93.575%
x		5.128	4.950	2.014	2.093	2.052	93.414%
σ		0.082	0.065	0.092	0.006	0.041	0.152%
%RSD		1.602	1.305	4.553	0.267	1.977	0.163

180-60993-F-2-B PDS@10 12/5/2016 3:25:15 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:24:19	89.284%	5.073	1796.000	1838.000	0.000	8807.000	11250.000	11280.000
2	15:24:29	87.773%	5.105	1859.000	1847.000	0.000	8758.000	11210.000	11320.000
3	15:24:39	89.443%	5.002	1834.000	1810.000	0.000	8795.000	11350.000	11280.000
x		88.833%	5.060	1830.000	1832.000	0.000	8786.000	11270.000	11290.000
σ		0.922%	0.053	31.460	19.370	0.000	25.680	74.110	19.330
%RSD		1.038	1.044	1.720	1.057	0.000	0.292	0.658	0.171
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:24:19	196.800	2798.000	0.000	6247.000	42230.000	41140.000	90.993%	102.100
2	15:24:29	198.400	2828.000	0.000	6301.000	42540.000	41110.000	90.399%	98.650
3	15:24:39	198.900	2792.000	0.000	6288.000	41990.000	41120.000	89.982%	103.900
x		198.000	2806.000	0.000	6279.000	42250.000	41120.000	90.458%	101.600
σ		1.091	19.660	0.000	28.510	278.800	13.440	0.508%	2.671
%RSD		0.551	0.701	0.000	0.454	0.660	0.033	0.562	2.630
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:24:19	47.990	18.720	577.000	2052.000	2191.000	50.130	48.440	25.500
2	15:24:29	49.810	19.920	578.400	2071.000	2316.000	50.620	51.810	26.520
3	15:24:39	48.690	19.270	577.600	2093.000	2345.000	50.960	50.370	26.720
x		48.830	19.310	577.700	2072.000	2284.000	50.570	50.210	26.250
σ		0.917	0.604	0.737	20.340	81.920	0.413	1.693	0.655
%RSD		1.878	3.129	0.128	0.982	3.587	0.817	3.372	2.494
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:24:19	25.850	45.450	48.180	4.758	0.956	-0.138	0.000	224.500
2	15:24:29	26.780	51.910	49.280	4.825	1.239	2.507	0.000	224.600
3	15:24:39	24.740	51.410	47.680	4.627	1.094	1.115	0.000	222.200
x		25.790	49.590	48.380	4.736	1.096	1.161	0.000	223.800
σ		1.020	3.593	0.820	0.101	0.141	1.323	0.000	1.390
%RSD		3.953	7.246	1.694	2.127	12.900	113.900	0.000	0.621
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:24:19	91.354%	256.300	263.000	89.779%	4.737	5.206	4.349	8.979
2	15:24:29	90.130%	261.000	264.100	89.880%	4.772	4.840	5.061	9.107
3	15:24:39	91.237%	257.000	263.200	89.638%	5.131	5.090	5.284	8.754
x		90.907%	258.100	263.400	89.766%	4.880	5.045	4.898	8.946
σ		0.675%	2.535	0.613	0.121%	0.219	0.187	0.489	0.179
%RSD		0.743	0.982	0.233	0.135	4.480	3.709	9.973	1.998
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:24:19	90.705%	199.400	50.430	52.060	225.800	223.800	94.233%	93.037%
2	15:24:29	90.586%	202.800	51.480	50.730	229.000	225.000	94.348%	94.342%
3	15:24:39	89.679%	204.900	51.550	51.530	219.900	228.400	93.734%	93.922%
x		90.323%	202.400	51.150	51.440	224.900	225.700	94.105%	93.767%
σ		0.561%	2.795	0.630	0.667	4.628	2.402	0.326%	0.666%
%RSD		0.621	1.381	1.231	1.297	2.058	1.064	0.347	0.711
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:24:19	4.973	4.961	1.847	2.089	1.980	93.042%		
2	15:24:29	5.007	4.925	2.007	2.070	1.982	92.561%		
3	15:24:39	5.153	4.975	1.859	1.960	2.002	92.942%		
x		5.044	4.954	1.904	2.040	1.988	92.848%		
σ		0.096	0.026	0.089	0.070	0.012	0.253%		
%RSD		1.902	0.524	4.679	3.410	0.610	0.273		

180-61032-F-2-C @10 12/5/2016 3:30:20 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:25	86.724%	0.019	1321.000	1357.000	0.000	2009.000	4106.000	4132.000
2	15:29:35	87.010%	0.124	1325.000	1361.000	0.000	2018.000	4148.000	4149.000
3	15:29:44	86.182%	0.034	1334.000	1370.000	0.000	2035.000	4124.000	4159.000
x		86.639%	0.059	1327.000	1362.000	0.000	2020.000	4126.000	4147.000
σ		0.421%	0.057	6.398	6.646	0.000	13.180	21.270	13.270
%RSD		0.486	95.980	0.482	0.488	0.000	0.652	0.516	0.320

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:25	181.400	643.300	0.000	479.700	60330.000	60650.000	89.922%	1.515
2	15:29:35	182.900	650.600	0.000	479.700	60450.000	59440.000	89.712%	1.375
3	15:29:44	184.700	575.200	0.000	481.500	60540.000	58930.000	89.834%	1.421
x		183.000	623.000	0.000	480.300	60440.000	59670.000	89.822%	1.437
σ		1.653	41.600	0.000	1.022	103.000	883.400	0.106%	0.071
%RSD		0.903	6.677	0.000	0.213	0.171	1.480	0.118	4.976

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:25	0.180	0.106	640.400	240.700	252.700	0.464	0.366	0.182
2	15:29:35	0.476	0.075	641.700	248.700	313.500	0.313	0.136	0.211
3	15:29:44	0.146	0.179	640.400	248.500	316.900	0.393	0.290	0.319
x		0.267	0.120	640.900	245.900	294.400	0.390	0.264	0.238
σ		0.182	0.053	0.760	4.555	36.120	0.075	0.118	0.072
%RSD		67.960	44.450	0.119	1.852	12.270	19.340	44.540	30.480

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:25	0.181	0.768	0.451	0.033	-0.100	2.207	0.000	401.800
2	15:29:35	0.263	0.540	0.924	0.071	-0.364	4.153	0.000	402.600
3	15:29:44	0.155	1.146	0.860	0.071	-0.232	2.607	0.000	404.800
x		0.200	0.818	0.745	0.058	-0.232	2.989	0.000	403.100
σ		0.057	0.306	0.257	0.022	0.132	1.028	0.000	1.576
%RSD		28.330	37.440	34.460	38.170	57.030	34.400	0.000	0.391

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:25	91.539%	2.532	1.981	90.742%	0.003	-0.003	0.023	0.019
2	15:29:35	90.655%	1.901	2.372	90.210%	-0.002	-0.012	0.000	0.037
3	15:29:44	91.062%	2.003	2.272	91.186%	-0.006	-0.016	-0.000	0.028
x		91.085%	2.146	2.208	90.713%	-0.002	-0.010	0.008	0.028
σ		0.443%	0.339	0.203	0.489%	0.005	0.007	0.013	0.009
%RSD		0.486	15.790	9.191	0.539	239.800	68.760	173.000	32.860

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:25	91.636%	1.040	0.033	0.074	4.733	4.986	95.449%	94.816%
2	15:29:35	90.988%	1.036	0.033	0.029	5.360	4.887	96.332%	93.896%
3	15:29:44	91.298%	0.910	0.025	0.110	5.622	5.617	96.182%	95.515%
x		91.308%	0.995	0.030	0.071	5.238	5.163	95.988%	94.742%
σ		0.324%	0.074	0.004	0.041	0.456	0.396	0.473%	0.812%
%RSD		0.355	7.436	13.900	57.430	8.713	7.668	0.492	0.857

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:25	0.017	0.049	0.105	0.158	0.132	94.625%
2	15:29:35	0.025	0.036	0.135	0.164	0.134	95.545%
3	15:29:44	0.046	0.027	0.174	0.138	0.148	94.925%
x		0.030	0.037	0.138	0.153	0.138	95.032%
σ		0.015	0.011	0.034	0.014	0.009	0.469%
%RSD		51.520	30.740	25.020	8.876	6.449	0.494

180-61032-I-2-C @10 12/5/2016 3:35:26 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:28	89.017%	0.010	1301.000	1329.000	0.000	1956.000	4130.000	4168.000
2	15:34:38	88.356%	-0.024	1293.000	1330.000	0.000	1928.000	4111.000	4133.000
3	15:34:47	88.434%	0.011	1306.000	1336.000	0.000	1958.000	4110.000	4172.000
x		88.602%	-0.001	1300.000	1332.000	0.000	1947.000	4117.000	4158.000
σ		0.361%	0.020	6.401	3.607	0.000	16.800	11.360	21.590
%RSD		0.408	2285.000	0.492	0.271	0.000	0.863	0.276	0.519

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:28	1.711	443.500	0.000	458.900	60530.000	60390.000	90.486%	0.261
2	15:34:38	1.716	436.200	0.000	457.500	60250.000	59090.000	90.809%	0.140
3	15:34:47	1.763	439.600	0.000	466.000	60170.000	59410.000	89.952%	0.048
x		1.730	439.800	0.000	460.800	60320.000	59630.000	90.416%	0.150
σ		0.029	3.670	0.000	4.535	190.200	676.800	0.433%	0.107
%RSD		1.658	0.835	0.000	0.984	0.315	1.135	0.479	71.290

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:28	0.016	0.034	583.600	50.990	65.200	0.323	0.136	-0.022
2	15:34:38	0.279	0.058	583.700	50.640	63.460	0.311	0.057	0.060
3	15:34:47	-0.467	0.067	586.900	51.520	83.040	0.263	0.331	0.020
x		-0.057	0.053	584.700	51.050	70.570	0.299	0.175	0.019
σ		0.378	0.017	1.908	0.445	10.840	0.032	0.141	0.041
%RSD		658.500	31.580	0.326	0.871	15.350	10.730	80.610	211.000

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:28	-0.005	0.497	0.848	0.072	-0.094	2.033	0.000	402.100
2	15:34:38	0.128	0.350	1.024	0.008	0.037	1.678	0.000	393.100
3	15:34:47	0.130	0.308	0.684	0.021	0.174	1.687	0.000	390.800
x		0.084	0.385	0.852	0.034	0.039	1.799	0.000	395.400
σ		0.078	0.099	0.170	0.034	0.134	0.202	0.000	5.992
%RSD		92.060	25.740	19.950	101.900	345.600	11.240	0.000	1.516

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:28	88.859%	1.641	1.670	89.639%	0.003	-0.007	0.000	0.037
2	15:34:38	89.913%	1.550	1.730	89.060%	-0.002	-0.007	0.000	0.001
3	15:34:47	89.415%	1.587	1.710	89.306%	-0.006	-0.007	0.000	0.001
x		89.396%	1.593	1.704	89.335%	-0.002	-0.007	0.000	0.013
σ		0.527%	0.046	0.031	0.291%	0.005	0.000	0.000	0.021
%RSD		0.590	2.886	1.792	0.325	260.800	1.319	56.520	160.100

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:28	90.291%	0.383	-0.047	0.075	4.251	3.944	94.422%	94.203%
2	15:34:38	89.556%	0.399	-0.010	-0.016	5.293	4.098	93.646%	94.365%
3	15:34:47	88.329%	0.338	-0.017	0.022	4.111	3.931	94.902%	93.589%
x		89.392%	0.373	-0.024	0.027	4.552	3.991	94.323%	94.052%
σ		0.992%	0.032	0.020	0.046	0.646	0.093	0.634%	0.409%
%RSD		1.109	8.473	81.380	169.300	14.190	2.328	0.672	0.435

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:28	0.011	0.026	0.001	-0.009	-0.000	93.772%
2	15:34:38	-0.007	0.020	0.015	0.003	0.005	93.810%
3	15:34:47	0.008	0.012	-0.006	0.007	0.001	94.315%
x		0.004	0.019	0.003	0.001	0.002	93.966%
σ		0.010	0.007	0.011	0.008	0.003	0.303%
%RSD		241.700	34.530	332.800	1444.000	129.100	0.322

MB 180-195615/1-A 12/5/2016 3:44:19 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:43:23	87.897%	-0.003	2.834	2.776	0.000	35.640	0.874	0.854
2	15:43:32	90.595%	-0.011	3.482	2.645	0.000	32.120	0.516	0.575
3	15:43:42	87.243%	-0.037	3.317	2.959	0.000	32.520	0.737	0.907
x		88.578%	-0.017	3.211	2.793	0.000	33.430	0.709	0.778
σ		1.777%	0.018	0.337	0.157	0.000	1.927	0.180	0.178
%RSD		2.006	105.700	10.480	5.637	0.000	5.764	25.450	22.920
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:43:23	0.652	0.674	0.000	1.544	61.950	1.552	85.615%	0.120
2	15:43:32	0.709	1.544	0.000	5.732	90.570	4.760	85.373%	0.020
3	15:43:42	0.972	3.641	0.000	6.775	60.170	7.773	84.487%	0.126
x		0.778	1.953	0.000	4.684	70.900	4.695	85.158%	0.088
σ		0.171	1.525	0.000	2.769	17.060	3.111	0.594%	0.060
%RSD		21.960	78.080	0.000	59.110	24.060	66.260	0.697	67.520
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:43:23	-0.414	0.568	0.170	7.123	10.150	-0.003	0.145	0.168
2	15:43:32	-0.082	0.426	0.207	6.445	4.488	0.008	0.146	0.213
3	15:43:42	0.112	0.611	0.150	7.398	7.441	-0.003	0.190	0.173
x		-0.128	0.535	0.176	6.989	7.358	0.001	0.160	0.184
σ		0.266	0.096	0.029	0.490	2.829	0.006	0.026	0.025
%RSD		207.200	18.030	16.420	7.014	38.450	1171.000	15.950	13.390
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:43:23	0.253	0.090	0.483	0.036	-0.364	-0.801	0.000	0.018
2	15:43:32	0.341	0.093	0.359	-0.004	-0.224	0.584	0.000	-0.007
3	15:43:42	0.116	-0.002	0.234	0.024	-0.079	1.179	0.000	0.005
x		0.237	0.060	0.359	0.019	-0.222	0.320	0.000	0.005
σ		0.113	0.054	0.125	0.020	0.143	1.016	0.000	0.012
%RSD		47.790	89.300	34.770	108.900	64.150	317.000	0.000	238.400
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:43:23	86.555%	0.085	0.136	88.177%	0.008	-0.002	-0.000	0.001
2	15:43:32	85.618%	0.087	0.067	87.145%	0.003	-0.016	0.000	0.001
3	15:43:42	84.517%	0.018	0.057	87.128%	0.003	-0.016	-0.000	0.020
x		85.563%	0.063	0.087	87.483%	0.005	-0.011	-0.000	0.008
σ		1.020%	0.039	0.043	0.601%	0.003	0.008	0.000	0.011
%RSD		1.193	62.360	49.740	0.687	54.310	72.890	205.300	143.900
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:43:23	86.895%	0.208	0.015	0.004	0.033	-0.000	91.075%	89.909%
2	15:43:32	85.239%	0.312	-0.030	-0.014	0.033	0.025	91.741%	90.617%
3	15:43:42	86.383%	0.211	0.000	0.043	0.128	0.050	90.164%	90.123%
x		86.172%	0.244	-0.005	0.011	0.065	0.025	90.994%	90.216%
σ		0.848%	0.059	0.023	0.029	0.055	0.025	0.792%	0.363%
%RSD		0.984	24.180	465.400	264.600	84.560	100.100	0.870	0.403
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:43:23	-0.010	-0.000	0.008	0.004	-0.002	91.433%		
2	15:43:32	0.005	-0.001	-0.002	-0.001	-0.003	92.603%		
3	15:43:42	-0.013	-0.002	0.005	-0.001	0.000	91.666%		
x		-0.006	-0.001	0.004	0.001	-0.002	91.901%		
σ		0.010	0.001	0.006	0.002	0.002	0.619%		
%RSD		169.000	74.840	153.800	296.800	107.600	0.674		

CCV 2136057 12/5/2016 3:49:24 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:28	84.440%	102.400	102.300	103.600	0.000	48440.000	48480.000	48550.000
2	15:48:38	84.644%	102.700	104.300	105.200	0.000	49550.000	49470.000	49770.000
3	15:48:48	83.767%	103.800	103.700	106.400	0.000	49750.000	49290.000	49730.000
x		84.284%	102.981%	103.463%	105.067%	0.000	98.490%	98.165%	98.699%
σ		0.459%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.545	0.718	0.981	1.338	0.000	1.427	1.071	1.412
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:28	506.900	5341.000	0.000	49940.000	49210.000	48220.000	89.755%	100.100
2	15:48:38	513.700	5274.000	0.000	50580.000	49780.000	49020.000	88.297%	105.100
3	15:48:48	513.500	5201.000	0.000	51120.000	49780.000	49310.000	88.097%	103.200
x		102.270%	105.445%	0.000	101.095%	99.179%	97.698%	88.716%	102.780%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.905%	n/a
%RSD		0.761	1.332	0.000	1.163	0.660	1.158	1.020	2.429
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:28	94.380	98.100	493.200	24790.000	24460.000	99.560	100.100	101.700
2	15:48:38	91.630	96.680	501.900	24950.000	24360.000	98.940	95.450	103.100
3	15:48:48	98.480	100.300	504.700	25340.000	25000.000	102.300	102.500	102.400
x		94.831%	98.372%	99.990%	100.100%	98.431%	100.267%	99.344%	102.381%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		3.633	1.871	1.204	1.151	1.380	1.782	3.593	0.663
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:28	102.000	99.620	102.100	102.300	102.300	94.070	0.000	101.700
2	15:48:38	106.100	99.460	96.650	100.900	100.800	99.780	0.000	99.850
3	15:48:48	99.690	100.500	104.800	101.900	97.310	108.000	0.000	100.500
x		102.628%	99.859%	101.176%	101.698%	100.133%	100.623%	0.000	100.676%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		3.186	0.560	4.096	0.686	2.554	6.963	0.000	0.917
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:28	90.448%	101.400	107.800	89.151%	98.500	99.470	98.920	99.480
2	15:48:38	91.974%	104.600	105.100	89.077%	98.490	99.820	100.100	102.100
3	15:48:48	92.763%	102.100	106.800	89.969%	97.930	99.410	100.200	99.980
x		91.728%	102.717%	106.567%	89.399%	98.310%	99.566%	99.739%	100.520%
σ		1.177%	n/a	n/a	0.495%	n/a	n/a	n/a	n/a
%RSD		1.283	1.640	1.307	0.554	0.334	0.220	0.719	1.384
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:28	88.739%	101.700	100.400	102.800	96.940	97.550	93.582%	92.795%
2	15:48:38	88.788%	103.000	103.800	103.700	98.140	101.400	94.307%	93.794%
3	15:48:48	90.180%	98.610	100.300	103.000	96.120	99.090	93.980%	92.842%
x		89.236%	101.100%	101.530%	103.172%	97.062%	99.345%	93.956%	93.143%
σ		0.818%	n/a	n/a	n/a	n/a	n/a	0.363%	0.564%
%RSD		0.916	2.236	1.949	0.448	1.046	1.944	0.387	0.605
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:48:28	99.690	99.190	96.830	98.740	98.430	90.472%		
2	15:48:38	99.010	98.440	98.440	98.850	98.510	90.976%		
3	15:48:48	98.190	98.900	97.770	99.710	98.550	90.589%		
x		98.964%	98.846%	97.677%	99.101%	98.498%	90.679%		
σ		n/a	n/a	n/a	n/a	n/a	0.264%		
%RSD		0.760	0.383	0.828	0.536	0.059	0.291		

CCB4 12/5/2016 3:54:32 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:53:37	93.207%	0.125	2.750	2.058	0.000	53.510	44.520	43.290
2	15:53:46	94.269%	0.188	2.660	2.091	0.000	52.890	40.730	42.010
3	15:53:56	92.249%	0.140	2.625	1.792	0.000	52.030	43.720	40.740
x		93.242%	0.151	2.679	1.981	0.000	52.810	42.990	42.010
σ		1.011%	0.033	0.065	0.164	0.000	0.744	1.998	1.277
%RSD		1.084	21.670	2.410	8.270	0.000	1.409	4.647	3.041
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:53:37	3.513	-1.308	0.000	53.090	65.560	60.890	94.444%	-0.086
2	15:53:46	3.588	-1.062	0.000	48.430	113.800	63.330	95.303%	0.048
3	15:53:56	3.431	-3.488	0.000	48.590	34.430	56.340	94.855%	-0.087
x		3.511	-1.953	0.000	50.040	71.250	60.190	94.867%	-0.041
σ		0.079	1.335	0.000	2.644	39.970	3.547	0.430%	0.077
%RSD		2.237	68.370	0.000	5.285	56.100	5.893	0.453	186.900
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:53:37	0.122	0.093	0.829	22.920	36.090	0.094	0.126	0.364
2	15:53:46	0.143	0.114	0.815	22.800	26.670	0.102	0.303	0.331
3	15:53:56	0.085	0.107	0.849	21.020	25.440	0.064	0.304	0.190
x		0.117	0.104	0.831	22.250	29.400	0.086	0.244	0.295
σ		0.029	0.011	0.017	1.064	5.827	0.020	0.103	0.092
%RSD		24.880	10.320	2.057	4.781	19.820	23.220	42.110	31.270
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:53:37	0.193	2.050	2.565	0.102	-0.238	0.553	0.000	0.127
2	15:53:46	0.162	2.092	2.587	0.040	0.128	-2.138	0.000	0.189
3	15:53:56	0.337	2.046	2.112	0.181	0.493	0.545	0.000	0.133
x		0.230	2.063	2.421	0.108	0.127	-0.347	0.000	0.150
σ		0.093	0.026	0.268	0.071	0.365	1.551	0.000	0.034
%RSD		40.520	1.242	11.070	65.510	287.000	447.700	0.000	22.620
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:53:37	95.969%	0.315	0.470	98.326%	0.060	0.064	0.021	0.067
2	15:53:46	98.915%	0.278	0.448	97.753%	0.112	0.074	0.021	0.051
3	15:53:56	99.694%	0.353	0.382	97.872%	0.086	0.061	0.043	0.112
x		98.193%	0.316	0.433	97.984%	0.086	0.066	0.028	0.077
σ		1.965%	0.037	0.046	0.302%	0.026	0.006	0.013	0.031
%RSD		2.001	11.820	10.510	0.309	29.710	9.727	44.140	40.920
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:53:37	97.916%	0.147	0.333	0.304	0.029	0.249	98.664%	97.769%
2	15:53:46	97.022%	0.130	0.398	0.127	0.029	0.091	98.394%	97.379%
3	15:53:56	95.844%	0.304	0.257	0.181	0.244	0.251	98.666%	98.120%
x		96.928%	0.194	0.329	0.204	0.101	0.197	98.574%	97.756%
σ		1.039%	0.096	0.071	0.091	0.125	0.092	0.157%	0.371%
%RSD		1.072	49.520	21.410	44.500	123.800	46.620	0.159	0.379
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:53:37	0.094	0.090	0.071	0.100	0.083	97.895%		
2	15:53:46	0.097	0.081	0.054	0.108	0.077	97.561%		
3	15:53:56	0.077	0.057	0.058	0.086	0.083	96.962%		
x		0.089	0.076	0.061	0.098	0.081	97.473%		
σ		0.011	0.017	0.009	0.011	0.003	0.472%		
%RSD		11.950	22.340	14.230	11.390	3.854	0.485		

LCS 180-195615/2-A 12/5/2016 3:59:40 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:58:44	93.359%	47.410	917.400	936.200	0.000	50600.000	50790.000	50940.000
2	15:58:53	92.818%	46.980	924.100	936.800	0.000	50730.000	50520.000	50860.000
3	15:59:03	94.683%	46.180	910.500	932.600	0.000	50970.000	51010.000	51220.000
x		93.620%	46.850	917.400	935.200	0.000	50760.000	50770.000	51000.000
σ		0.960%	0.626	6.792	2.261	0.000	186.600	245.400	189.600
%RSD		1.025	1.335	0.740	0.242	0.000	0.368	0.483	0.372

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:58:44	1987.000	10910.000	0.000	51980.000	51910.000	50040.000	82.819%	1037.000
2	15:58:53	1997.000	10750.000	0.000	52170.000	51350.000	49790.000	82.470%	1022.000
3	15:59:03	2009.000	11030.000	0.000	52180.000	51710.000	49990.000	83.843%	1027.000
x		1998.000	10900.000	0.000	52110.000	51660.000	49940.000	83.044%	1029.000
σ		11.200	139.600	0.000	112.800	283.700	132.000	0.714%	7.956
%RSD		0.561	1.281	0.000	0.216	0.549	0.264	0.860	0.774

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:58:44	483.600	195.000	512.600	901.900	1033.000	497.500	489.400	256.400
2	15:58:53	487.400	194.800	512.600	916.700	907.800	496.600	506.900	256.400
3	15:59:03	467.000	191.600	514.400	888.500	970.700	488.100	487.700	257.500
x		479.300	193.800	513.200	902.400	970.400	494.000	494.600	256.800
σ		10.860	1.897	1.024	14.130	62.490	5.182	10.600	0.677
%RSD		2.265	0.979	0.199	1.566	6.439	1.049	2.144	0.264

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:58:44	258.100	482.800	487.700	39.230	10.360	8.214	0.000	982.500
2	15:58:53	256.400	486.900	475.700	40.540	13.000	9.552	0.000	983.100
3	15:59:03	251.200	490.500	478.300	39.930	11.790	4.373	0.000	985.100
x		255.200	486.700	480.600	39.900	11.720	7.380	0.000	983.600
σ		3.591	3.823	6.285	0.652	1.320	2.689	0.000	1.337
%RSD		1.407	0.785	1.308	1.634	11.270	36.430	0.000	0.136

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:58:44	81.753%	1095.000	1108.000	81.926%	49.910	48.680	50.050	90.750
2	15:58:53	81.922%	1096.000	1117.000	81.477%	50.520	50.180	51.290	90.770
3	15:59:03	81.811%	1093.000	1114.000	81.553%	50.890	50.370	51.390	89.910
x		81.829%	1095.000	1113.000	81.652%	50.440	49.740	50.910	90.480
σ		0.086%	1.428	4.910	0.240%	0.498	0.923	0.748	0.491
%RSD		0.105	0.130	0.441	0.294	0.987	1.856	1.470	0.543

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:58:44	79.525%	2076.000	520.700	520.600	1969.000	1976.000	88.229%	87.092%
2	15:58:53	79.731%	2073.000	521.300	527.100	1950.000	1969.000	88.623%	87.359%
3	15:59:03	78.745%	2108.000	532.500	529.000	1988.000	1975.000	88.697%	87.066%
x		79.334%	2086.000	524.800	525.600	1969.000	1973.000	88.516%	87.172%
σ		0.520%	19.420	6.650	4.380	18.940	3.595	0.251%	0.162%
%RSD		0.655	0.931	1.267	0.833	0.962	0.182	0.284	0.186

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:58:44	50.400	50.050	20.040	20.910	20.400	84.222%
2	15:58:53	52.150	52.190	21.250	20.940	20.990	81.821%
3	15:59:03	52.600	51.850	21.340	20.910	21.110	82.795%
x		51.710	51.360	20.880	20.920	20.830	82.946%
σ		1.164	1.148	0.726	0.017	0.379	1.208%
%RSD		2.250	2.236	3.479	0.082	1.819	1.456

180-61069-E-1-A 12/5/2016 4:04:45 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:50	92.853%	0.303	18.990	19.740	0.000	16170.000	11400.000	11520.000
2	16:03:59	92.528%	0.212	20.290	20.840	0.000	16080.000	11330.000	11450.000
3	16:04:09	92.686%	0.172	19.790	19.720	0.000	16230.000	11310.000	11540.000
x		92.689%	0.229	19.690	20.100	0.000	16160.000	11350.000	11510.000
σ		0.163%	0.067	0.656	0.639	0.000	79.390	44.270	48.560
%RSD		0.175	29.330	3.334	3.177	0.000	0.491	0.390	0.422
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:50	1902.000	7904.000	0.000	1999.000	118100.000	119300.000	83.950%	-172.700
2	16:03:59	1881.000	7956.000	0.000	1963.000	118100.000	118700.000	84.650%	35.120
3	16:04:09	1886.000	7688.000	0.000	2019.000	119600.000	119500.000	83.188%	33.560
x		1890.000	7849.000	0.000	1994.000	118600.000	119200.000	83.929%	-34.670
σ		11.240	142.100	0.000	28.140	817.900	386.800	0.731%	119.500
%RSD		0.595	1.811	0.000	1.411	0.690	0.325	0.872	344.800
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:50	3.137	2.622	156.600	3033.000	3306.000	2.450	3.320	4.672
2	16:03:59	3.163	2.358	155.900	2988.000	3277.000	2.443	3.810	4.282
3	16:04:09	3.005	2.401	158.900	3053.000	3423.000	2.509	4.007	4.451
x		3.102	2.460	157.100	3025.000	3336.000	2.467	3.713	4.468
σ		0.085	0.141	1.546	33.120	77.480	0.036	0.354	0.196
%RSD		2.734	5.746	0.984	1.095	2.323	1.471	9.529	4.380
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:50	4.873	14.280	12.410	1.612	0.646	4.247	0.000	442.600
2	16:03:59	4.086	14.020	11.910	1.423	0.506	7.578	0.000	440.500
3	16:04:09	4.635	14.280	16.060	1.478	-0.217	10.410	0.000	447.800
x		4.531	14.190	13.460	1.504	0.312	7.411	0.000	443.600
σ		0.403	0.151	2.268	0.097	0.463	3.084	0.000	3.775
%RSD		8.898	1.062	16.850	6.466	148.500	41.610	0.000	0.851
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:50	83.299%	1.752	1.616	80.916%	0.020	0.031	0.051	0.165
2	16:03:59	82.637%	1.705	1.830	80.858%	-0.011	-0.005	0.231	0.104
3	16:04:09	81.102%	1.715	1.713	79.951%	0.020	0.005	0.078	0.126
x		82.346%	1.724	1.720	80.575%	0.010	0.010	0.120	0.131
σ		1.127%	0.025	0.107	0.541%	0.018	0.019	0.097	0.031
%RSD		1.369	1.424	6.226	0.672	186.000	181.300	80.890	23.410
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:50	80.711%	1.826	0.193	0.384	207.400	201.500	88.131%	87.521%
2	16:03:59	80.457%	1.680	0.251	0.334	199.700	199.600	88.637%	88.927%
3	16:04:09	79.750%	1.378	0.228	0.224	205.800	205.500	88.802%	87.593%
x		80.306%	1.628	0.224	0.314	204.300	202.200	88.523%	88.014%
σ		0.498%	0.228	0.029	0.082	4.099	3.024	0.349%	0.792%
%RSD		0.620	14.030	13.040	26.090	2.006	1.496	0.395	0.900
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:03:50	0.195	0.223	4.383	4.125	4.328	85.649%		
2	16:03:59	0.144	0.170	4.441	4.135	4.382	85.935%		
3	16:04:09	0.132	0.195	4.875	4.045	4.514	83.469%		
x		0.157	0.196	4.566	4.102	4.408	85.018%		
σ		0.033	0.027	0.269	0.050	0.096	1.349%		
%RSD		21.100	13.600	5.881	1.210	2.172	1.587		

180-61069-E-1-A SD@5 12/5/2016 4:09:50 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:55	86.590%	0.083	4.712	5.079	0.000	3240.000	2287.000	2286.000
2	16:09:05	85.599%	0.020	5.519	5.018	0.000	3233.000	2274.000	2264.000
3	16:09:14	86.030%	-0.023	5.756	5.453	0.000	3273.000	2288.000	2287.000
x		86.073%	0.027	5.329	5.183	0.000	3249.000	2283.000	2279.000
σ		0.497%	0.053	0.547	0.236	0.000	21.650	7.862	12.890
%RSD		0.577	196.900	10.270	4.549	0.000	0.666	0.344	0.565
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:55	372.200	1474.000	0.000	362.500	23810.000	22480.000	85.163%	5.961
2	16:09:05	371.700	1465.000	0.000	367.000	23770.000	22620.000	83.999%	5.559
3	16:09:14	373.000	1470.000	0.000	367.100	24030.000	22530.000	84.430%	6.477
x		372.300	1469.000	0.000	365.500	23870.000	22540.000	84.531%	5.999
σ		0.642	4.478	0.000	2.623	139.900	70.720	0.588%	0.460
%RSD		0.172	0.305	0.000	0.718	0.586	0.314	0.696	7.665
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:55	1.116	0.553	31.800	613.400	616.700	0.533	1.002	0.917
2	16:09:05	0.667	0.459	31.680	614.100	667.600	0.486	0.604	1.019
3	16:09:14	0.650	0.695	31.690	597.800	651.400	0.376	0.848	0.913
x		0.811	0.569	31.720	608.400	645.200	0.465	0.818	0.950
σ		0.264	0.119	0.063	9.214	25.980	0.081	0.201	0.060
%RSD		32.590	20.930	0.199	1.514	4.026	17.360	24.570	6.361
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:55	1.017	2.756	2.889	0.304	-0.085	2.956	0.000	89.950
2	16:09:05	0.948	3.002	2.607	0.445	-0.080	0.061	0.000	91.500
3	16:09:14	0.629	2.389	1.927	0.240	-0.364	4.971	0.000	88.410
x		0.865	2.716	2.474	0.330	-0.177	2.663	0.000	89.950
σ		0.207	0.309	0.495	0.105	0.163	2.468	0.000	1.546
%RSD		23.950	11.360	19.990	31.810	92.180	92.670	0.000	1.719
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:55	86.539%	0.351	0.255	85.708%	0.008	0.008	-0.000	0.011
2	16:09:05	85.210%	0.212	0.463	86.235%	0.008	-0.011	0.024	0.001
3	16:09:14	85.538%	0.282	0.223	86.319%	0.008	0.008	0.024	0.001
x		85.763%	0.281	0.314	86.088%	0.008	0.002	0.016	0.005
σ		0.692%	0.069	0.130	0.331%	0.000	0.011	0.014	0.005
%RSD		0.807	24.610	41.540	0.385	0.424	608.400	86.620	119.100
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:55	86.593%	0.104	0.015	0.023	37.870	40.030	92.204%	91.446%
2	16:09:05	85.362%	0.013	-0.007	0.034	37.120	39.930	91.472%	90.972%
3	16:09:14	84.505%	0.160	0.048	0.025	43.290	40.410	92.486%	91.927%
x		85.487%	0.092	0.019	0.027	39.430	40.120	92.054%	91.448%
σ		1.049%	0.074	0.028	0.006	3.365	0.251	0.524%	0.477%
%RSD		1.228	80.050	147.400	21.030	8.535	0.626	0.569	0.522
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:08:55	0.068	0.050	0.909	0.814	0.859	90.802%		
2	16:09:05	0.040	0.044	0.915	0.878	0.879	91.707%		
3	16:09:14	0.015	0.036	0.934	0.865	0.825	92.648%		
x		0.041	0.043	0.919	0.852	0.854	91.719%		
σ		0.027	0.007	0.013	0.034	0.028	0.923%		
%RSD		65.780	16.710	1.424	3.992	3.228	1.006		

180-61069-E-1-B MS 12/5/2016 4:14:58 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:02	86.994%	48.330	983.600	984.700	0.000	66060.000	61730.000	62100.000
2	16:14:12	87.121%	49.510	964.800	976.800	0.000	65630.000	60970.000	61490.000
3	16:14:21	88.253%	47.700	977.500	979.400	0.000	66290.000	61250.000	61910.000
x		87.456%	48.510	975.300	980.300	0.000	65990.000	61320.000	61840.000
σ		0.693%	0.917	9.574	4.023	0.000	338.600	385.800	310.200
%RSD		0.793	1.891	0.982	0.410	0.000	0.513	0.629	0.502

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:02	5648.000	20340.000	0.000	54090.000	172600.000	172200.000	81.339%	1052.000
2	16:14:12	5576.000	20450.000	0.000	54260.000	171300.000	171800.000	81.385%	1042.000
3	16:14:21	5609.000	20800.000	0.000	54300.000	172400.000	172600.000	82.052%	1054.000
x		5611.000	20530.000	0.000	54210.000	172100.000	172200.000	81.592%	1049.000
σ		36.010	239.600	0.000	112.600	673.300	393.100	0.399%	6.520
%RSD		0.642	1.167	0.000	0.208	0.391	0.228	0.489	0.622

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:02	485.700	194.900	674.500	4031.000	4363.000	489.100	486.300	255.000
2	16:14:12	480.200	193.000	673.500	4049.000	4295.000	489.900	494.900	256.100
3	16:14:21	480.000	195.100	676.700	4028.000	4216.000	490.600	491.800	253.700
x		482.000	194.400	674.900	4036.000	4291.000	489.900	491.000	254.900
σ		3.258	1.150	1.607	11.300	73.560	0.760	4.369	1.218
%RSD		0.676	0.592	0.238	0.280	1.714	0.155	0.890	0.478

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:02	253.400	482.200	476.300	40.410	10.220	20.650	0.000	1398.000
2	16:14:12	250.400	497.500	475.300	40.220	12.550	15.120	0.000	1418.000
3	16:14:21	252.900	498.900	476.300	41.350	11.500	21.820	0.000	1385.000
x		252.300	492.800	476.000	40.660	11.420	19.200	0.000	1400.000
σ		1.636	9.249	0.576	0.606	1.166	3.578	0.000	16.800
%RSD		0.649	1.877	0.121	1.490	10.210	18.640	0.000	1.200

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:02	83.743%	1092.000	1115.000	79.322%	50.570	50.650	52.380	90.750
2	16:14:12	82.388%	1097.000	1128.000	78.997%	50.600	50.200	51.290	91.980
3	16:14:21	82.378%	1084.000	1119.000	78.858%	51.480	50.650	52.590	91.510
x		82.836%	1091.000	1121.000	79.059%	50.880	50.500	52.080	91.410
σ		0.786%	6.439	6.681	0.238%	0.516	0.259	0.699	0.622
%RSD		0.948	0.590	0.596	0.301	1.015	0.513	1.341	0.680

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:02	77.819%	2088.000	520.000	517.900	2180.000	2196.000	87.690%	86.779%
2	16:14:12	77.277%	2105.000	526.600	527.000	2201.000	2204.000	86.968%	85.823%
3	16:14:21	76.884%	2093.000	524.800	527.000	2182.000	2177.000	87.778%	87.570%
x		77.327%	2095.000	523.800	524.000	2188.000	2192.000	87.479%	86.724%
σ		0.470%	8.763	3.384	5.274	11.860	13.570	0.445%	0.875%
%RSD		0.607	0.418	0.646	1.007	0.542	0.619	0.509	1.009

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:02	50.760	50.590	25.410	24.990	25.110	82.091%
2	16:14:12	48.930	49.720	24.990	24.460	24.550	84.341%
3	16:14:21	50.220	51.400	25.750	25.520	25.360	81.503%
x		49.970	50.570	25.390	24.990	25.010	82.645%
σ		0.938	0.845	0.378	0.528	0.416	1.498%
%RSD		1.877	1.670	1.490	2.114	1.664	1.812

180-61069-E-1-C MSD 12/5/2016 4:20:06 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:09	86.737%	48.250	965.800	981.800	0.000	65830.000	61060.000	61640.000
2	16:19:19	86.586%	49.030	977.300	994.600	0.000	66440.000	61360.000	62100.000
3	16:19:29	86.888%	49.140	984.700	983.900	0.000	65750.000	60930.000	61510.000
x		86.737%	48.810	975.900	986.800	0.000	66000.000	61120.000	61750.000
σ		0.151%	0.487	9.530	6.885	0.000	375.200	224.300	307.600
%RSD		0.174	0.998	0.977	0.698	0.000	0.568	0.367	0.498
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:09	5651.000	20550.000	0.000	53430.000	169200.000	171500.000	81.159%	1064.000
2	16:19:19	5697.000	20770.000	0.000	53590.000	170400.000	171100.000	81.665%	1056.000
3	16:19:29	5629.000	20950.000	0.000	53430.000	168700.000	170200.000	82.019%	1054.000
x		5659.000	20760.000	0.000	53480.000	169500.000	170900.000	81.614%	1058.000
σ		34.470	201.000	0.000	90.100	875.600	656.800	0.432%	5.104
%RSD		0.609	0.968	0.000	0.169	0.517	0.384	0.530	0.482
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:09	491.100	199.100	667.300	4115.000	4449.000	496.400	493.000	254.800
2	16:19:19	489.800	195.900	665.200	4067.000	4309.000	490.700	477.800	253.500
3	16:19:29	481.500	192.800	666.200	4055.000	4298.000	483.400	476.400	247.200
x		487.500	196.000	666.200	4079.000	4352.000	490.200	482.400	251.800
σ		5.203	3.153	1.058	31.670	84.260	6.522	9.232	4.043
%RSD		1.067	1.609	0.159	0.776	1.936	1.331	1.914	1.605
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:09	252.600	496.600	480.900	40.850	12.300	15.290	0.000	1411.000
2	16:19:19	254.100	491.700	469.300	40.710	10.210	17.020	0.000	1412.000
3	16:19:29	258.500	490.900	460.300	39.560	10.290	16.610	0.000	1424.000
x		255.000	493.100	470.200	40.370	10.930	16.310	0.000	1416.000
σ		3.083	3.064	10.320	0.709	1.186	0.903	0.000	7.417
%RSD		1.209	0.622	2.195	1.756	10.840	5.537	0.000	0.524
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:09	82.044%	1091.000	1129.000	78.073%	50.700	50.680	50.010	89.780
2	16:19:19	82.160%	1086.000	1124.000	78.232%	49.160	49.280	52.300	89.440
3	16:19:29	81.276%	1103.000	1133.000	78.090%	49.830	51.030	51.990	90.050
x		81.827%	1094.000	1129.000	78.131%	49.900	50.330	51.430	89.760
σ		0.480%	8.354	4.211	0.087%	0.775	0.927	1.241	0.304
%RSD		0.587	0.764	0.373	0.112	1.552	1.842	2.412	0.339
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:09	78.843%	2063.000	513.600	510.600	2164.000	2171.000	87.092%	86.509%
2	16:19:19	78.245%	2079.000	520.000	521.200	2171.000	2191.000	86.081%	85.665%
3	16:19:29	77.802%	2098.000	522.300	523.300	2224.000	2165.000	86.980%	86.809%
x		78.297%	2080.000	518.600	518.400	2186.000	2176.000	86.717%	86.328%
σ		0.523%	17.370	4.499	6.842	32.650	13.420	0.554%	0.593%
%RSD		0.667	0.835	0.867	1.320	1.493	0.617	0.639	0.687
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:19:09	51.000	50.840	25.610	25.010	25.540	80.623%		
2	16:19:19	50.630	50.700	25.050	25.300	25.220	81.277%		
3	16:19:29	51.160	51.170	24.950	25.300	25.310	81.250%		
x		50.930	50.900	25.200	25.200	25.360	81.050%		
σ		0.269	0.241	0.355	0.168	0.165	0.370%		
%RSD		0.528	0.474	1.406	0.668	0.652	0.457		

180-61069-E-1-A PDS 12/5/2016 4:25:14 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:16	89.251%	48.500	960.400	994.200	0.000	67250.000	62710.000	63020.000
2	16:24:26	87.187%	50.980	979.000	998.300	0.000	66990.000	62080.000	62780.000
3	16:24:35	87.755%	48.760	985.400	1004.000	0.000	66510.000	61670.000	62220.000
x		88.064%	49.410	974.900	998.800	0.000	66910.000	62160.000	62670.000
σ		1.066%	1.363	13.010	4.853	0.000	377.700	524.400	411.100
%RSD		1.210	2.758	1.335	0.486	0.000	0.565	0.844	0.656
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:16	3923.000	18280.000	0.000	55480.000	166800.000	167700.000	82.309%	1069.000
2	16:24:26	3916.000	18150.000	0.000	55440.000	166400.000	167700.000	82.036%	1070.000
3	16:24:35	3896.000	18170.000	0.000	55630.000	166800.000	167800.000	82.573%	1054.000
x		3911.000	18200.000	0.000	55520.000	166700.000	167700.000	82.306%	1065.000
σ		13.980	67.780	0.000	100.200	259.600	95.040	0.269%	9.084
%RSD		0.357	0.372	0.000	0.181	0.156	0.057	0.326	0.853
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:16	477.200	195.300	666.100	3802.000	4140.000	491.600	484.700	255.700
2	16:24:26	479.000	195.800	664.000	3830.000	4210.000	495.200	491.600	256.800
3	16:24:35	476.700	190.600	665.100	3792.000	4054.000	490.500	488.700	254.400
x		477.700	193.900	665.100	3808.000	4135.000	492.400	488.300	255.600
σ		1.209	2.897	1.077	19.890	78.050	2.476	3.445	1.160
%RSD		0.253	1.494	0.162	0.522	1.888	0.503	0.705	0.454
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:16	258.000	501.400	479.500	41.630	11.300	10.590	0.000	1407.000
2	16:24:26	260.000	493.400	472.000	42.210	10.130	17.590	0.000	1408.000
3	16:24:35	257.600	497.500	482.400	41.960	9.366	18.330	0.000	1402.000
x		258.600	497.500	477.900	41.930	10.270	15.500	0.000	1406.000
σ		1.308	3.994	5.377	0.293	0.975	4.269	0.000	3.090
%RSD		0.506	0.803	1.125	0.698	9.500	27.530	0.000	0.220
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:16	81.366%	1112.000	1147.000	78.712%	49.500	49.780	51.290	89.880
2	16:24:26	81.319%	1105.000	1159.000	77.896%	50.500	50.840	53.280	95.230
3	16:24:35	81.472%	1125.000	1145.000	78.271%	49.820	49.270	53.310	91.820
x		81.386%	1114.000	1150.000	78.293%	49.940	49.960	52.630	92.310
σ		0.079%	10.460	7.883	0.408%	0.510	0.802	1.159	2.710
%RSD		0.097	0.939	0.685	0.521	1.021	1.604	2.202	2.936
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:16	77.290%	2122.000	530.000	532.300	2198.000	2193.000	87.108%	86.980%
2	16:24:26	76.033%	2169.000	546.800	544.500	2220.000	2206.000	87.080%	86.287%
3	16:24:35	77.907%	2121.000	527.900	525.100	2191.000	2172.000	88.747%	88.027%
x		77.077%	2137.000	534.900	533.900	2203.000	2191.000	87.645%	87.098%
σ		0.955%	27.150	10.350	9.814	15.120	17.400	0.954%	0.876%
%RSD		1.239	1.270	1.935	1.838	0.686	0.794	1.089	1.006
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:24:16	53.140	52.360	25.370	24.890	25.080	81.723%		
2	16:24:26	49.580	50.380	24.660	24.030	24.170	86.761%		
3	16:24:35	52.500	53.140	25.730	25.260	25.800	81.304%		
x		51.740	51.960	25.250	24.730	25.010	83.262%		
σ		1.898	1.421	0.548	0.633	0.818	3.037%		
%RSD		3.668	2.736	2.171	2.561	3.271	3.647		

180-61069-E-2-A 12/5/2016 4:30:16 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:29:22	91.478%	0.055	21.180	19.210	0.000	2907.000	7501.000	7544.000
2	16:29:31	91.082%	0.069	20.980	20.100	0.000	2949.000	7486.000	7532.000
3	16:29:41	89.582%	0.037	19.520	19.470	0.000	2925.000	7469.000	7511.000
x		90.714%	0.054	20.560	19.600	0.000	2927.000	7485.000	7529.000
σ		1.000%	0.016	0.908	0.459	0.000	21.080	16.090	16.950
%RSD		1.103	29.740	4.414	2.342	0.000	0.720	0.215	0.225
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:29:22	377.500	5198.000	0.000	1098.000	100300.000	100900.000	83.854%	8.071
2	16:29:31	384.500	5268.000	0.000	1117.000	101300.000	102600.000	83.233%	8.731
3	16:29:41	379.300	5113.000	0.000	1107.000	101600.000	101000.000	83.914%	8.348
x		380.400	5193.000	0.000	1107.000	101100.000	101500.000	83.667%	8.383
σ		3.651	77.870	0.000	9.518	715.100	925.300	0.377%	0.332
%RSD		0.960	1.499	0.000	0.859	0.708	0.912	0.451	3.955
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:29:22	0.488	0.956	115.900	503.100	603.600	0.505	1.078	0.997
2	16:29:31	-0.005	0.999	117.000	494.400	536.600	0.443	0.706	1.204
3	16:29:41	1.241	0.981	117.100	493.700	545.800	0.604	0.656	0.951
x		0.575	0.979	116.700	497.100	562.000	0.517	0.814	1.051
σ		0.628	0.022	0.620	5.217	36.320	0.081	0.230	0.135
%RSD		109.200	2.218	0.531	1.050	6.463	15.680	28.310	12.800
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:29:22	1.001	3.439	1.683	0.545	0.371	2.125	0.000	279.900
2	16:29:31	1.161	2.806	1.838	0.637	-0.067	1.220	0.000	279.600
3	16:29:41	1.087	2.513	1.591	0.656	0.076	2.122	0.000	270.700
x		1.083	2.919	1.704	0.613	0.127	1.822	0.000	276.700
σ		0.080	0.473	0.124	0.059	0.223	0.521	0.000	5.259
%RSD		7.386	16.210	7.301	9.712	176.000	28.600	0.000	1.900
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:29:22	81.351%	1.758	1.853	82.904%	0.009	-0.011	0.051	0.072
2	16:29:31	80.234%	1.882	1.734	81.256%	-0.011	0.021	0.026	0.095
3	16:29:41	81.493%	1.655	1.640	81.792%	0.014	-0.016	-0.000	0.073
x		81.026%	1.765	1.742	81.984%	0.004	-0.002	0.025	0.080
σ		0.690%	0.114	0.107	0.841%	0.013	0.020	0.025	0.013
%RSD		0.851	6.445	6.150	1.025	322.200	1021.000	99.420	15.850
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:29:22	81.230%	1.637	0.840	0.471	116.800	117.200	89.291%	88.428%
2	16:29:31	79.714%	1.659	0.692	0.594	126.600	117.900	88.041%	87.985%
3	16:29:41	80.981%	1.129	0.411	0.331	115.500	113.900	89.527%	87.470%
x		80.642%	1.475	0.648	0.465	119.600	116.300	88.953%	87.961%
σ		0.813%	0.300	0.218	0.131	6.023	2.114	0.799%	0.480%
%RSD		1.008	20.350	33.640	28.250	5.035	1.818	0.898	0.545
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:29:22	0.117	0.161	0.493	0.577	0.548	86.828%		
2	16:29:31	0.125	0.138	0.595	0.484	0.565	90.881%		
3	16:29:41	0.102	0.123	0.612	0.552	0.584	86.132%		
x		0.115	0.140	0.567	0.538	0.566	87.947%		
σ		0.012	0.019	0.064	0.048	0.018	2.564%		
%RSD		10.100	13.570	11.330	8.995	3.180	2.916		

180-61069-E-3-A 12/5/2016 4:35:19 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:24	90.396%	0.050	20.500	18.100	0.000	7410.000	11300.000	11390.000
2	16:34:33	87.256%	0.068	19.140	19.810	0.000	7525.000	11380.000	11560.000
3	16:34:43	87.680%	0.046	17.200	19.360	0.000	7558.000	11510.000	11530.000
x		88.444%	0.055	18.950	19.090	0.000	7498.000	11400.000	11500.000
σ		1.704%	0.012	1.657	0.883	0.000	77.490	106.800	90.060
%RSD		1.926	21.210	8.744	4.624	0.000	1.034	0.937	0.783

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:24	367.500	5067.000	0.000	7577.000	76880.000	76890.000	83.820%	7.816
2	16:34:33	368.900	5092.000	0.000	7688.000	78490.000	77610.000	82.384%	8.221
3	16:34:43	346.600	5083.000	0.000	7668.000	78450.000	77910.000	82.858%	8.720
x		361.000	5081.000	0.000	7644.000	77940.000	77470.000	83.021%	8.252
σ		12.470	12.720	0.000	59.070	916.500	523.500	0.732%	0.453
%RSD		3.454	0.250	0.000	0.773	1.176	0.676	0.881	5.486

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:24	1.844	0.725	305.500	1017.000	1124.000	0.798	1.680	1.472
2	16:34:33	1.307	0.684	309.800	1007.000	1128.000	0.921	1.531	2.086
3	16:34:43	0.540	0.636	309.300	1000.000	1051.000	0.905	1.095	1.785
x		1.230	0.681	308.200	1008.000	1101.000	0.875	1.435	1.781
σ		0.656	0.045	2.331	8.434	43.140	0.067	0.304	0.307
%RSD		53.310	6.552	0.756	0.837	3.917	7.676	21.190	17.220

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:24	2.284	7.306	7.640	0.852	-0.066	3.088	0.000	254.900
2	16:34:33	1.864	6.088	6.498	0.846	-0.214	1.611	0.000	253.500
3	16:34:43	1.942	7.507	6.867	0.912	0.384	1.848	0.000	253.100
x		2.030	6.967	7.002	0.870	0.035	2.182	0.000	253.800
σ		0.224	0.768	0.583	0.037	0.311	0.793	0.000	0.904
%RSD		11.020	11.020	8.320	4.202	893.000	36.340	0.000	0.356

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:24	79.747%	0.914	0.657	80.669%	0.010	-0.016	-0.000	0.023
2	16:34:33	79.260%	0.537	0.735	80.920%	0.004	-0.011	0.026	0.033
3	16:34:43	79.763%	0.690	0.650	79.974%	0.010	-0.010	0.026	0.066
x		79.590%	0.714	0.681	80.521%	0.008	-0.012	0.017	0.040
σ		0.286%	0.189	0.047	0.490%	0.003	0.003	0.015	0.023
%RSD		0.359	26.520	6.927	0.608	39.180	25.130	86.820	56.310

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:24	80.056%	0.499	0.236	0.111	86.200	85.180	87.602%	86.813%
2	16:34:33	80.578%	0.495	0.136	0.181	86.430	83.060	87.860%	86.725%
3	16:34:43	77.391%	0.446	0.238	0.159	83.540	88.980	85.596%	86.192%
x		79.341%	0.480	0.203	0.150	85.390	85.740	87.019%	86.577%
σ		1.709%	0.030	0.058	0.036	1.605	3.001	1.239%	0.336%
%RSD		2.154	6.159	28.680	23.860	1.880	3.501	1.424	0.389

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:24	0.030	0.063	1.034	1.087	1.058	85.859%
2	16:34:33	0.066	0.057	1.127	0.824	1.005	86.122%
3	16:34:43	0.037	0.050	1.108	1.011	0.980	91.481%
x		0.044	0.057	1.090	0.974	1.014	87.821%
σ		0.019	0.006	0.049	0.135	0.040	3.172%
%RSD		43.080	11.090	4.486	13.860	3.932	3.612

180-61069-E-4-A 12/5/2016 4:40:24 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:39:28	87.533%	0.060	22.340	20.760	0.000	5362.000	9699.000	9775.000
2	16:39:38	85.550%	0.106	21.940	21.070	0.000	5362.000	9713.000	9758.000
3	16:39:47	86.645%	0.111	20.780	22.330	0.000	5345.000	9734.000	9774.000
x		86.576%	0.093	21.690	21.390	0.000	5356.000	9715.000	9769.000
σ		0.993%	0.028	0.812	0.831	0.000	9.831	17.490	9.752
%RSD		1.147	30.180	3.745	3.884	0.000	0.184	0.180	0.100
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:39:28	750.200	5888.000	0.000	1309.000	83140.000	82740.000	82.560%	12.790
2	16:39:38	744.000	5679.000	0.000	1326.000	84000.000	82720.000	81.684%	13.140
3	16:39:47	749.700	5913.000	0.000	1311.000	84100.000	83040.000	82.384%	13.420
x		748.000	5827.000	0.000	1315.000	83750.000	82830.000	82.209%	13.110
σ		3.422	128.600	0.000	9.389	530.100	182.200	0.464%	0.317
%RSD		0.458	2.206	0.000	0.714	0.633	0.220	0.564	2.414
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:39:28	1.914	1.349	214.800	1298.000	1460.000	0.782	1.095	1.967
2	16:39:38	1.522	1.268	214.800	1306.000	1407.000	1.009	1.762	1.691
3	16:39:47	1.693	1.211	215.100	1285.000	1461.000	0.762	1.656	1.473
x		1.710	1.276	214.900	1296.000	1443.000	0.851	1.504	1.710
σ		0.197	0.069	0.171	10.830	30.780	0.137	0.358	0.248
%RSD		11.510	5.411	0.079	0.836	2.133	16.140	23.810	14.480
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:39:28	1.762	5.421	4.030	0.881	0.083	1.222	0.000	279.000
2	16:39:38	1.519	6.569	4.812	0.723	-0.212	-0.904	0.000	280.600
3	16:39:47	1.410	6.433	5.769	0.727	-0.215	0.359	0.000	272.900
x		1.564	6.141	4.870	0.777	-0.115	0.226	0.000	277.500
σ		0.180	0.627	0.871	0.090	0.171	1.069	0.000	4.050
%RSD		11.520	10.210	17.890	11.570	149.600	473.600	0.000	1.459
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:39:28	80.186%	0.553	0.779	80.474%	-0.001	-0.021	0.026	0.033
2	16:39:38	78.529%	0.696	0.776	80.339%	0.004	-0.005	0.000	0.054
3	16:39:47	79.794%	0.707	0.570	80.299%	-0.006	0.016	0.026	0.043
x		79.503%	0.652	0.709	80.371%	-0.001	-0.003	0.017	0.043
σ		0.866%	0.086	0.120	0.092%	0.005	0.018	0.015	0.010
%RSD		1.089	13.130	16.880	0.114	761.300	534.600	86.390	23.830
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:39:28	79.812%	0.413	0.138	0.091	126.800	123.500	86.612%	86.110%
2	16:39:38	79.719%	0.197	0.105	0.112	126.200	122.100	87.988%	87.356%
3	16:39:47	79.268%	0.327	0.081	0.154	120.100	122.400	87.435%	86.755%
x		79.599%	0.312	0.108	0.119	124.300	122.700	87.345%	86.741%
σ		0.291%	0.109	0.029	0.032	3.682	0.752	0.692%	0.623%
%RSD		0.366	34.860	26.660	26.850	2.961	0.613	0.793	0.718
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:39:28	0.030	0.051	1.278	1.180	1.213	85.945%		
2	16:39:38	0.054	0.050	1.349	1.227	1.275	84.964%		
3	16:39:47	0.030	0.064	1.316	1.154	1.217	85.956%		
x		0.038	0.055	1.314	1.187	1.235	85.621%		
σ		0.014	0.008	0.035	0.037	0.035	0.570%		
%RSD		36.020	14.080	2.684	3.110	2.808	0.665		

180-61069-E-5-A 12/5/2016 4:45:29 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:34	86.774%	0.040	19.160	21.230	0.000	8155.000	9463.000	9612.000
2	16:44:44	84.589%	0.007	19.610	21.570	0.000	8130.000	9440.000	9566.000
3	16:44:53	85.030%	0.028	22.260	20.630	0.000	8030.000	9336.000	9453.000
x		85.465%	0.025	20.350	21.150	0.000	8105.000	9413.000	9544.000
σ		1.155%	0.017	1.677	0.476	0.000	66.350	67.450	82.170
%RSD		1.352	66.970	8.243	2.252	0.000	0.819	0.717	0.861
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:34	46.510	4908.000	0.000	1413.000	80780.000	79940.000	82.747%	2.435
2	16:44:44	46.550	4855.000	0.000	1406.000	80090.000	78860.000	82.248%	4.503
3	16:44:53	45.270	4901.000	0.000	1411.000	79810.000	78230.000	82.436%	2.918
x		46.110	4888.000	0.000	1410.000	80230.000	79010.000	82.477%	3.285
σ		0.730	28.550	0.000	3.279	499.300	862.300	0.252%	1.081
%RSD		1.582	0.584	0.000	0.233	0.622	1.091	0.305	32.920
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:34	0.562	0.329	81.350	108.700	150.500	0.064	-0.058	0.438
2	16:44:44	1.021	0.322	80.690	108.700	146.900	0.076	0.370	0.350
3	16:44:53	-0.012	0.340	80.810	111.400	150.400	0.121	0.416	0.322
x		0.524	0.331	80.950	109.600	149.300	0.087	0.243	0.370
σ		0.518	0.009	0.353	1.579	2.076	0.030	0.262	0.061
%RSD		98.850	2.761	0.436	1.441	1.391	34.740	107.900	16.360
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:34	0.303	2.296	1.018	0.311	-0.066	-1.124	0.000	270.900
2	16:44:44	0.574	2.675	1.042	0.398	0.085	-1.130	0.000	271.600
3	16:44:53	0.519	2.700	2.606	0.592	-0.213	1.872	0.000	271.700
x		0.465	2.557	1.555	0.434	-0.065	-0.127	0.000	271.400
σ		0.143	0.226	0.910	0.144	0.149	1.731	0.000	0.428
%RSD		30.810	8.849	58.520	33.150	230.400	1361.000	0.000	0.158
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:34	80.228%	0.458	0.511	80.852%	-0.001	-0.011	0.000	0.012
2	16:44:44	79.890%	0.496	0.422	81.198%	0.015	0.010	0.026	-0.008
3	16:44:53	78.397%	0.427	0.392	81.059%	-0.001	0.005	-0.000	0.012
x		79.505%	0.460	0.442	81.037%	0.004	0.002	0.009	0.005
σ		0.974%	0.035	0.062	0.174%	0.009	0.011	0.015	0.012
%RSD		1.226	7.519	13.980	0.215	202.000	664.600	173.000	217.000
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:34	79.847%	0.399	0.055	0.081	99.200	96.900	87.595%	87.298%
2	16:44:44	79.966%	0.322	0.071	0.080	97.320	94.750	88.852%	88.277%
3	16:44:53	79.628%	0.388	0.063	-0.012	98.330	99.660	88.375%	87.658%
x		79.814%	0.370	0.063	0.050	98.280	97.100	88.274%	87.745%
σ		0.172%	0.042	0.008	0.053	0.945	2.462	0.635%	0.495%
%RSD		0.215	11.320	12.740	106.900	0.962	2.536	0.719	0.565
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:44:34	0.000	0.012	0.021	0.089	0.061	86.216%		
2	16:44:44	0.026	0.017	0.066	0.038	0.044	87.373%		
3	16:44:53	-0.003	0.019	0.040	0.059	0.053	86.793%		
x		0.008	0.016	0.042	0.062	0.053	86.794%		
σ		0.016	0.004	0.022	0.026	0.008	0.579%		
%RSD		204.800	24.430	53.040	41.860	15.590	0.667		

CCV 2136057 12/5/2016 4:50:35 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:38	83.147%	102.700	104.900	102.600	0.000	49340.000	49810.000	49850.000
2	16:49:47	83.963%	102.600	100.600	103.100	0.000	50340.000	50350.000	49970.000
3	16:49:57	83.328%	103.300	97.180	103.000	0.000	49890.000	49880.000	49580.000
x		83.479%	102.859%	100.891%	102.924%	0.000	99.712%	100.021%	99.600%
σ		0.428%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.513	0.352	3.808	0.265	0.000	1.002	0.588	0.409
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:38	515.000	5395.000	0.000	49910.000	50210.000	48240.000	85.959%	104.100
2	16:49:47	521.800	5305.000	0.000	50380.000	49810.000	48290.000	85.446%	100.200
3	16:49:57	514.400	5315.000	0.000	50410.000	49720.000	48040.000	85.180%	103.800
x		103.416%	106.765%	0.000	100.463%	99.827%	96.379%	85.528%	102.718%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.396%	n/a
%RSD		0.793	0.924	0.000	0.550	0.520	0.277	0.463	2.120
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:38	99.550	99.180	492.900	24720.000	24760.000	100.400	99.480	102.900
2	16:49:47	102.200	99.980	498.900	24860.000	24680.000	102.300	99.140	103.200
3	16:49:57	96.590	98.760	500.000	25140.000	24920.000	102.400	105.500	101.300
x		99.455%	99.309%	99.449%	99.632%	99.162%	101.729%	101.372%	102.455%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.831	0.623	0.767	0.859	0.495	1.117	3.529	1.004
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:38	103.800	102.600	98.990	99.210	105.900	91.390	0.000	102.900
2	16:49:47	103.400	98.050	101.600	101.800	102.400	91.860	0.000	100.000
3	16:49:57	102.400	102.200	99.620	102.000	104.700	102.000	0.000	97.100
x		103.201%	100.955%	100.067%	101.004%	104.354%	95.069%	0.000	100.003%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.674	2.500	1.364	1.544	1.709	6.285	0.000	2.883
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:38	88.080%	102.600	105.400	85.930%	98.290	99.750	101.600	101.400
2	16:49:47	89.611%	103.000	102.800	86.360%	98.500	102.100	103.400	103.200
3	16:49:57	87.826%	102.700	105.200	86.568%	100.500	100.800	102.500	100.100
x		88.506%	102.752%	104.458%	86.286%	99.100%	100.882%	102.508%	101.564%
σ		0.966%	n/a	n/a	0.326%	n/a	n/a	n/a	n/a
%RSD		1.091	0.189	1.372	0.377	1.234	1.149	0.875	1.531
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:38	85.844%	101.300	101.300	102.000	98.050	98.270	88.785%	88.312%
2	16:49:47	84.341%	101.700	102.400	102.800	97.340	100.800	89.749%	88.505%
3	16:49:57	86.433%	98.270	100.600	100.100	98.620	99.480	91.054%	88.208%
x		85.539%	100.451%	101.418%	101.645%	98.005%	99.512%	89.863%	88.342%
σ		1.079%	n/a	n/a	n/a	n/a	n/a	1.139%	0.151%
%RSD		1.261	1.895	0.913	1.382	0.655	1.266	1.267	0.171
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:49:38	100.800	99.180	97.420	98.230	97.870	85.475%		
2	16:49:47	100.400	99.490	98.120	99.580	98.420	85.443%		
3	16:49:57	100.600	99.400	97.940	100.800	98.530	85.658%		
x		100.603%	99.355%	97.827%	99.551%	98.274%	85.526%		
σ		n/a	n/a	n/a	n/a	n/a	0.116%		
%RSD		0.176	0.161	0.371	1.314	0.362	0.136		

CCB5 12/5/2016 4:55:40 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:45	92.373%	0.127	0.921	0.877	0.000	57.650	56.780	55.110
2	16:54:54	94.435%	0.116	0.576	0.936	0.000	57.250	56.100	52.390
3	16:55:04	95.971%	0.088	0.705	0.571	0.000	55.880	54.470	53.580
x		94.260%	0.110	0.734	0.794	0.000	56.930	55.790	53.690
σ		1.805%	0.020	0.175	0.196	0.000	0.929	1.188	1.363
%RSD		1.915	18.330	23.780	24.690	0.000	1.632	2.129	2.538

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:45	3.936	-0.004	0.000	33.640	96.240	76.520	92.412%	0.131
2	16:54:54	4.263	2.229	0.000	38.700	60.680	81.420	91.822%	0.134
3	16:55:04	4.033	-0.783	0.000	34.270	100.500	70.730	92.134%	0.109
x		4.077	0.481	0.000	35.540	85.800	76.220	92.123%	0.125
σ		0.168	1.564	0.000	2.757	21.860	5.349	0.295%	0.014
%RSD		4.119	325.400	0.000	7.759	25.480	7.017	0.320	10.980

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:45	0.203	0.134	1.021	29.410	30.370	0.224	0.280	0.415
2	16:54:54	0.176	0.127	1.025	29.510	26.570	0.076	0.206	0.364
3	16:55:04	-0.072	0.126	0.947	27.420	32.860	0.115	0.241	0.424
x		0.102	0.129	0.998	28.780	29.930	0.139	0.243	0.401
σ		0.152	0.004	0.044	1.179	3.169	0.077	0.037	0.032
%RSD		148.300	3.353	4.425	4.095	10.590	55.370	15.260	8.096

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:45	0.200	2.290	2.629	0.081	0.153	1.897	0.000	0.246
2	16:54:54	0.359	1.707	3.175	0.143	-0.235	-0.187	0.000	0.270
3	16:55:04	0.249	2.174	2.775	0.140	0.144	0.817	0.000	0.251
x		0.269	2.057	2.860	0.121	0.021	0.842	0.000	0.256
σ		0.081	0.309	0.283	0.035	0.221	1.042	0.000	0.012
%RSD		30.220	15.010	9.890	29.020	1070.000	123.700	0.000	4.857

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:45	93.515%	0.585	0.440	95.013%	0.107	0.055	0.176	0.088
2	16:54:54	93.298%	0.492	0.445	93.946%	0.099	0.091	0.133	0.116
3	16:55:04	95.783%	0.402	0.409	94.757%	0.068	0.087	0.089	0.036
x		94.199%	0.493	0.431	94.572%	0.091	0.077	0.133	0.080
σ		1.376%	0.092	0.020	0.557%	0.020	0.020	0.043	0.040
%RSD		1.461	18.580	4.581	0.589	22.420	25.810	32.710	50.360

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:45	93.503%	0.276	0.438	0.339	0.254	0.261	93.317%	92.119%
2	16:54:54	92.594%	0.181	0.356	0.307	0.076	0.024	92.822%	91.762%
3	16:55:04	91.914%	0.117	0.314	0.280	0.165	0.238	94.859%	92.491%
x		92.670%	0.191	0.370	0.309	0.165	0.174	93.666%	92.124%
σ		0.797%	0.080	0.063	0.029	0.089	0.131	1.062%	0.365%
%RSD		0.860	41.620	17.030	9.516	53.930	75.020	1.134	0.396

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:45	0.113	0.112	0.144	0.155	0.118	91.935%
2	16:54:54	0.095	0.101	0.083	0.123	0.099	91.864%
3	16:55:04	0.088	0.107	0.101	0.142	0.121	92.274%
x		0.099	0.107	0.109	0.140	0.112	92.024%
σ		0.013	0.005	0.031	0.016	0.012	0.219%
%RSD		13.110	5.110	28.540	11.420	10.570	0.238

180-61069-E-6-A 12/5/2016 5:00:49 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:53	86.182%	-0.023	21.540	22.430	0.000	12520.000	10690.000	10840.000
2	17:00:03	87.205%	0.005	20.860	21.080	0.000	12470.000	10600.000	10670.000
3	17:00:12	85.860%	0.027	22.130	22.280	0.000	12370.000	10530.000	10690.000
x		86.416%	0.003	21.510	21.930	0.000	12450.000	10610.000	10740.000
σ		0.703%	0.025	0.633	0.741	0.000	81.290	79.570	93.560
%RSD		0.813	788.600	2.944	3.377	0.000	0.653	0.750	0.872

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:53	16.740	4441.000	0.000	1802.000	83260.000	82380.000	81.890%	3.019
2	17:00:03	16.420	4474.000	0.000	1808.000	81980.000	82290.000	81.845%	2.968
3	17:00:12	16.380	4546.000	0.000	1793.000	81340.000	81720.000	82.646%	2.648
x		16.510	4487.000	0.000	1801.000	82190.000	82130.000	82.127%	2.878
σ		0.195	53.930	0.000	7.441	978.400	358.200	0.450%	0.201
%RSD		1.178	1.202	0.000	0.413	1.190	0.436	0.548	6.987

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:53	-0.439	0.128	64.980	78.870	130.300	0.098	0.455	0.363
2	17:00:03	-0.489	0.226	64.240	78.890	103.800	0.053	0.458	0.229
3	17:00:12	0.551	0.181	64.970	76.270	109.300	0.087	0.199	0.547
x		-0.126	0.178	64.730	78.010	114.500	0.079	0.370	0.380
σ		0.586	0.049	0.424	1.508	13.970	0.023	0.149	0.160
%RSD		466.900	27.420	0.655	1.933	12.200	29.270	40.140	42.040

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:53	0.452	0.686	-0.178	0.579	-0.364	2.443	0.000	303.900
2	17:00:03	0.276	1.112	0.454	0.570	0.235	-1.440	0.000	308.400
3	17:00:12	0.216	0.902	-0.064	0.271	-0.064	1.543	0.000	304.700
x		0.314	0.900	0.071	0.473	-0.064	0.849	0.000	305.600
σ		0.123	0.213	0.337	0.175	0.299	2.032	0.000	2.403
%RSD		39.050	23.640	476.700	37.080	465.100	239.400	0.000	0.786

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:53	81.107%	0.603	0.672	81.066%	0.009	-0.005	0.077	0.022
2	17:00:03	80.032%	0.719	0.607	81.592%	0.014	-0.000	-0.000	0.002
3	17:00:12	79.318%	0.535	0.743	81.454%	-0.006	-0.011	-0.000	-0.008
x		80.152%	0.619	0.674	81.371%	0.006	-0.005	0.026	0.005
σ		0.901%	0.093	0.068	0.272%	0.011	0.005	0.044	0.016
%RSD		1.124	15.010	10.080	0.335	176.700	96.640	173.300	290.300

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:53	80.761%	0.430	0.103	0.191	96.300	98.700	88.155%	86.707%
2	17:00:03	79.841%	0.247	0.170	0.173	103.300	99.830	88.580%	87.489%
3	17:00:12	80.598%	0.242	0.193	0.140	101.400	98.910	88.888%	89.115%
x		80.400%	0.306	0.155	0.168	100.300	99.150	88.541%	87.770%
σ		0.491%	0.107	0.047	0.026	3.632	0.603	0.368%	1.229%
%RSD		0.611	34.980	30.200	15.290	3.620	0.608	0.415	1.400

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:53	0.007	0.015	0.029	0.034	0.037	85.343%
2	17:00:03	0.000	0.025	0.044	0.017	0.028	86.068%
3	17:00:12	0.003	0.018	0.017	0.041	0.026	88.060%
x		0.004	0.019	0.030	0.031	0.030	86.490%
σ		0.003	0.005	0.014	0.013	0.006	1.407%
%RSD		95.910	27.690	45.690	40.600	20.350	1.627

180-61069-E-7-A 12/5/2016 5:05:55 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:58	84.383%	0.029	19.570	23.190	0.000	11650.000	10320.000	10430.000
2	17:05:07	87.175%	-0.002	20.370	22.170	0.000	11900.000	10360.000	10600.000
3	17:05:16	85.878%	0.042	21.760	22.530	0.000	11750.000	10380.000	10510.000
x		85.812%	0.023	20.560	22.630	0.000	11770.000	10350.000	10510.000
σ		1.397%	0.022	1.107	0.520	0.000	126.000	32.550	83.560
%RSD		1.628	98.600	5.385	2.299	0.000	1.070	0.314	0.795

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:58	23.780	4153.000	0.000	2055.000	80540.000	80410.000	84.068%	2.957
2	17:05:07	25.680	4236.000	0.000	2083.000	82120.000	81100.000	83.416%	2.517
3	17:05:16	25.060	4352.000	0.000	2059.000	81090.000	80800.000	84.245%	2.283
x		24.840	4247.000	0.000	2066.000	81250.000	80770.000	83.910%	2.586
σ		0.966	99.960	0.000	15.460	803.100	346.000	0.436%	0.342
%RSD		3.888	2.354	0.000	0.749	0.989	0.428	0.520	13.240

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:58	-0.641	0.177	44.630	92.460	102.500	0.074	0.360	0.458
2	17:05:07	0.555	0.274	45.000	88.230	137.500	0.097	0.577	0.359
3	17:05:16	0.606	0.308	44.550	90.520	127.300	0.042	0.451	0.739
x		0.173	0.253	44.730	90.410	122.500	0.071	0.463	0.519
σ		0.706	0.068	0.240	2.119	18.020	0.028	0.109	0.197
%RSD		407.600	26.950	0.536	2.343	14.720	39.350	23.480	37.990

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:58	0.528	1.633	-1.394	0.429	-0.219	1.806	0.000	302.100
2	17:05:07	0.477	0.833	0.448	0.393	-0.068	3.367	0.000	301.900
3	17:05:16	0.362	2.040	0.162	0.644	0.088	0.988	0.000	306.000
x		0.456	1.502	-0.262	0.489	-0.066	2.054	0.000	303.300
σ		0.085	0.614	0.991	0.136	0.153	1.209	0.000	2.324
%RSD		18.600	40.860	378.900	27.790	231.700	58.860	0.000	0.766

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:58	82.176%	0.631	0.391	81.998%	0.019	-0.011	0.025	0.012
2	17:05:07	80.763%	0.600	0.632	82.498%	-0.001	-0.016	-0.000	0.002
3	17:05:16	78.545%	0.424	0.477	81.962%	-0.006	-0.005	-0.000	-0.008
x		80.495%	0.551	0.500	82.153%	0.004	-0.011	0.008	0.002
σ		1.830%	0.112	0.122	0.300%	0.013	0.005	0.015	0.010
%RSD		2.274	20.260	24.430	0.365	323.000	48.920	173.700	570.200

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:58	82.279%	0.171	0.011	0.126	103.200	96.230	90.216%	88.830%
2	17:05:07	81.979%	0.209	0.084	0.047	99.260	97.020	90.252%	88.995%
3	17:05:16	79.954%	0.170	0.038	0.029	96.960	98.780	89.737%	89.380%
x		81.404%	0.183	0.044	0.067	99.820	97.340	90.069%	89.068%
σ		1.265%	0.023	0.037	0.052	3.167	1.306	0.288%	0.282%
%RSD		1.554	12.320	82.780	76.840	3.172	1.342	0.319	0.317

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:58	-0.006	0.010	0.028	0.029	0.043	87.944%
2	17:05:07	0.006	0.010	0.046	0.054	0.041	88.353%
3	17:05:16	0.003	0.023	0.035	0.037	0.043	88.275%
x		0.001	0.014	0.037	0.040	0.042	88.191%
σ		0.007	0.007	0.009	0.013	0.001	0.217%
%RSD		655.300	51.600	25.380	31.550	2.669	0.246

180-61069-E-8-A 12/5/2016 5:11:00 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:10:05	87.816%	0.032	24.860	26.480	0.000	14330.000	11960.000	11990.000
2	17:10:15	86.015%	-0.001	25.640	26.780	0.000	14320.000	11920.000	12050.000
3	17:10:24	85.863%	-0.008	25.920	26.730	0.000	14080.000	11750.000	11940.000
x		86.565%	0.008	25.470	26.660	0.000	14240.000	11880.000	11990.000
σ		1.086%	0.022	0.549	0.162	0.000	143.700	112.500	52.490
%RSD		1.255	286.200	2.155	0.606	0.000	1.009	0.947	0.438

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:10:05	41.120	4488.000	0.000	2372.000	80940.000	80230.000	83.730%	2.816
2	17:10:15	40.690	4555.000	0.000	2391.000	81010.000	80560.000	82.929%	2.898
3	17:10:24	41.090	4567.000	0.000	2383.000	81250.000	80400.000	83.250%	3.301
x		40.970	4536.000	0.000	2382.000	81070.000	80400.000	83.303%	3.005
σ		0.238	42.450	0.000	9.604	166.100	164.900	0.403%	0.260
%RSD		0.581	0.936	0.000	0.403	0.205	0.205	0.484	8.648

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:10:05	0.170	0.308	85.210	138.500	191.300	0.185	0.236	0.536
2	17:10:15	0.465	0.276	85.900	141.700	219.100	0.143	0.411	0.576
3	17:10:24	0.130	0.337	85.030	140.200	152.000	0.154	0.155	0.319
x		0.255	0.307	85.380	140.100	187.500	0.161	0.268	0.477
σ		0.183	0.030	0.458	1.584	33.690	0.022	0.131	0.138
%RSD		71.710	9.886	0.536	1.130	17.970	13.640	48.910	29.000

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:10:05	0.386	0.570	-0.444	0.587	0.077	2.736	0.000	353.500
2	17:10:15	0.602	0.637	-1.491	0.627	0.085	1.227	0.000	358.800
3	17:10:24	0.454	1.370	0.409	0.659	0.088	1.547	0.000	359.900
x		0.480	0.859	-0.509	0.624	0.083	1.837	0.000	357.400
σ		0.111	0.443	0.951	0.036	0.006	0.795	0.000	3.451
%RSD		23.010	51.630	186.900	5.739	6.783	43.290	0.000	0.966

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:10:05	81.351%	0.786	0.614	81.627%	0.009	-0.021	-0.000	0.044
2	17:10:15	79.604%	1.137	0.609	81.403%	-0.006	-0.011	-0.000	0.002
3	17:10:24	78.947%	0.672	0.649	80.704%	0.025	-0.005	-0.000	0.002
x		79.967%	0.865	0.624	81.245%	0.009	-0.012	-0.000	0.016
σ		1.242%	0.242	0.022	0.481%	0.015	0.008	0.000	0.024
%RSD		1.553	27.990	3.476	0.593	162.000	65.010	69.790	151.300

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:10:05	78.949%	0.226	0.023	0.051	101.100	103.500	89.014%	87.382%
2	17:10:15	80.301%	0.396	0.079	0.008	105.700	100.800	88.058%	87.607%
3	17:10:24	79.708%	0.502	0.072	0.081	102.100	102.200	88.100%	87.551%
x		79.653%	0.375	0.058	0.047	103.000	102.200	88.391%	87.513%
σ		0.678%	0.139	0.031	0.036	2.385	1.323	0.540%	0.117%
%RSD		0.851	37.140	52.990	77.880	2.316	1.295	0.611	0.134

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:10:05	-0.003	0.018	0.129	0.073	0.092	85.595%
2	17:10:15	0.000	0.009	0.089	0.097	0.088	86.694%
3	17:10:24	0.004	-0.001	0.085	0.106	0.094	86.597%
x		0.000	0.009	0.101	0.092	0.091	86.296%
σ		0.003	0.010	0.024	0.017	0.003	0.609%
%RSD		1112.000	114.200	23.720	18.600	3.182	0.705

180-61069-E-9-A 12/5/2016 5:16:08 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:15:11	87.053%	0.019	27.390	28.590	0.000	13930.000	12050.000	12190.000
2	17:15:20	88.324%	0.052	26.930	28.720	0.000	14000.000	12180.000	12310.000
3	17:15:30	86.236%	0.020	28.850	29.370	0.000	13800.000	11990.000	12210.000
x		87.204%	0.030	27.720	28.890	0.000	13910.000	12070.000	12240.000
σ		1.052%	0.019	1.001	0.422	0.000	100.700	95.160	61.940
%RSD		1.207	62.600	3.612	1.459	0.000	0.724	0.788	0.506
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:15:11	66.520	4272.000	0.000	2393.000	78690.000	79170.000	83.072%	4.012
2	17:15:20	67.280	4265.000	0.000	2403.000	80450.000	79090.000	83.095%	3.568
3	17:15:30	70.470	4295.000	0.000	2392.000	78250.000	78250.000	83.636%	3.388
x		68.090	4278.000	0.000	2396.000	79130.000	78840.000	83.268%	3.656
σ		2.098	15.860	0.000	6.326	1162.000	513.300	0.319%	0.321
%RSD		3.082	0.371	0.000	0.264	1.469	0.651	0.383	8.783
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:15:11	0.527	0.294	74.480	176.000	210.500	0.132	0.370	0.608
2	17:15:20	0.611	0.312	74.790	177.500	213.700	0.177	0.327	0.670
3	17:15:30	-1.246	0.293	73.920	172.800	215.900	0.188	0.155	0.517
x		-0.036	0.299	74.400	175.400	213.400	0.165	0.284	0.598
σ		1.049	0.011	0.440	2.440	2.732	0.030	0.114	0.077
%RSD		2906.000	3.542	0.591	1.391	1.280	17.920	39.960	12.870
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:15:11	0.664	0.798	-0.092	0.545	-0.213	0.045	0.000	353.600
2	17:15:20	1.085	0.905	-1.160	0.734	-0.062	1.868	0.000	355.300
3	17:15:30	0.395	0.903	0.000	0.720	-0.364	2.505	0.000	356.600
x		0.715	0.869	-0.417	0.666	-0.213	1.473	0.000	355.200
σ		0.348	0.061	0.645	0.105	0.151	1.277	0.000	1.463
%RSD		48.630	7.055	154.600	15.820	71.050	86.680	0.000	0.412
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:15:11	78.799%	0.543	0.553	79.811%	-0.006	-0.016	-0.000	0.012
2	17:15:20	78.503%	0.525	0.710	80.142%	0.015	0.005	0.052	-0.008
3	17:15:30	78.132%	0.548	0.660	79.244%	-0.011	-0.005	0.053	0.013
x		78.478%	0.539	0.641	79.732%	-0.001	-0.005	0.035	0.006
σ		0.334%	0.013	0.080	0.454%	0.014	0.011	0.031	0.012
%RSD		0.426	2.345	12.460	0.569	2298.000	212.200	86.630	209.700
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:15:11	79.141%	0.649	0.098	0.040	97.820	101.500	87.001%	86.289%
2	17:15:20	78.328%	0.386	0.032	0.125	101.200	102.300	86.975%	86.022%
3	17:15:30	76.547%	0.439	0.025	0.086	101.900	106.500	87.011%	84.603%
x		78.005%	0.491	0.052	0.084	100.300	103.500	86.995%	85.638%
σ		1.327%	0.139	0.040	0.042	2.183	2.678	0.019%	0.906%
%RSD		1.701	28.300	77.310	50.490	2.176	2.589	0.021	1.058
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:15:11	-0.006	0.009	0.127	0.143	0.135	84.299%		
2	17:15:20	-0.003	0.016	0.106	0.129	0.139	85.373%		
3	17:15:30	-0.002	0.007	0.190	0.182	0.167	80.615%		
x		-0.004	0.011	0.141	0.151	0.147	83.429%		
σ		0.002	0.004	0.044	0.027	0.017	2.495%		
%RSD		57.040	40.350	30.970	18.150	11.660	2.991		

180-61069-E-10-A 12/5/2016 5:21:16 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:20:18	85.916%	0.020	18.730	19.690	0.000	10260.000	9193.000	9304.000
2	17:20:28	86.234%	-0.001	19.610	20.350	0.000	10340.000	9240.000	9368.000
3	17:20:37	84.586%	-0.022	21.320	20.410	0.000	10360.000	9311.000	9445.000
x		85.578%	-0.001	19.890	20.150	0.000	10320.000	9248.000	9372.000
σ		0.874%	0.021	1.318	0.395	0.000	52.270	59.510	71.000
%RSD		1.022	2005.000	6.626	1.961	0.000	0.507	0.644	0.758
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:20:18	66.660	5344.000	0.000	1666.000	80800.000	81460.000	81.941%	3.175
2	17:20:28	67.190	5155.000	0.000	1678.000	81340.000	81710.000	81.710%	4.217
3	17:20:37	71.190	5445.000	0.000	1693.000	82140.000	81770.000	81.621%	3.533
x		68.340	5315.000	0.000	1679.000	81430.000	81650.000	81.758%	3.642
σ		2.477	147.500	0.000	13.290	671.400	161.000	0.165%	0.529
%RSD		3.624	2.775	0.000	0.792	0.825	0.197	0.202	14.540
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:20:18	-0.085	0.307	108.900	103.200	143.700	0.133	0.548	0.478
2	17:20:28	-0.955	0.316	109.300	103.500	161.900	0.111	0.245	0.401
3	17:20:37	0.146	0.380	110.100	99.060	120.100	0.180	0.595	0.450
x		-0.298	0.334	109.400	101.900	141.900	0.141	0.463	0.443
σ		0.580	0.040	0.579	2.474	20.970	0.035	0.190	0.039
%RSD		194.900	11.830	0.529	2.427	14.780	24.900	41.060	8.816
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:20:18	0.704	1.076	0.075	0.420	-0.059	0.927	0.000	248.400
2	17:20:28	0.280	0.440	-0.296	0.375	0.092	2.188	0.000	249.300
3	17:20:37	0.404	0.923	-0.779	0.525	-0.058	1.569	0.000	242.900
x		0.462	0.813	-0.334	0.440	-0.008	1.561	0.000	246.800
σ		0.218	0.332	0.428	0.077	0.087	0.631	0.000	3.459
%RSD		47.180	40.840	128.500	17.420	1039.000	40.380	0.000	1.402
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:20:18	78.042%	0.374	0.532	79.972%	0.004	-0.010	0.026	0.033
2	17:20:28	78.492%	0.487	0.441	80.060%	-0.001	-0.010	-0.000	0.012
3	17:20:37	77.624%	0.508	0.475	80.474%	0.015	0.000	0.000	0.023
x		78.053%	0.456	0.483	80.169%	0.006	-0.007	0.009	0.023
σ		0.434%	0.072	0.046	0.268%	0.008	0.006	0.015	0.010
%RSD		0.556	15.840	9.589	0.334	126.500	88.520	173.600	44.890
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:20:18	79.879%	0.349	0.055	-0.012	88.800	93.250	86.634%	85.915%
2	17:20:28	79.448%	0.300	0.031	0.009	90.660	89.650	87.953%	86.431%
3	17:20:37	78.460%	0.229	0.057	-0.011	90.790	88.940	87.974%	87.275%
x		79.263%	0.293	0.048	-0.005	90.080	90.610	87.520%	86.540%
σ		0.728%	0.060	0.015	0.012	1.114	2.310	0.768%	0.686%
%RSD		0.918	20.540	30.900	257.900	1.237	2.549	0.877	0.793
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:20:18	-0.006	0.005	0.079	0.052	0.077	85.174%		
2	17:20:28	-0.003	-0.000	0.060	0.077	0.084	85.797%		
3	17:20:37	-0.003	0.011	0.099	0.058	0.081	87.621%		
x		-0.004	0.006	0.079	0.062	0.081	86.197%		
σ		0.002	0.006	0.020	0.013	0.004	1.272%		
%RSD		44.300	102.500	25.040	20.930	4.767	1.475		

180-61069-E-11-A 12/5/2016 5:26:24 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:27	85.263%	-0.008	20.960	20.050	0.000	10500.000	9241.000	9349.000
2	17:25:37	85.414%	0.013	17.930	19.030	0.000	10260.000	9050.000	9263.000
3	17:25:46	84.289%	0.007	18.750	20.670	0.000	10530.000	9219.000	9358.000
x		84.989%	0.004	19.210	19.920	0.000	10430.000	9170.000	9324.000
σ		0.610%	0.011	1.565	0.824	0.000	148.100	104.100	52.470
%RSD		0.718	255.300	8.143	4.139	0.000	1.420	1.136	0.563
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:27	53.330	5252.000	0.000	1655.000	80710.000	80480.000	82.436%	2.865
2	17:25:37	57.240	5206.000	0.000	1655.000	80720.000	80260.000	82.562%	3.070
3	17:25:46	55.100	5190.000	0.000	1678.000	81160.000	80760.000	81.076%	4.253
x		55.220	5216.000	0.000	1662.000	80860.000	80500.000	82.024%	3.396
σ		1.957	32.090	0.000	13.150	254.700	251.800	0.824%	0.749
%RSD		3.544	0.615	0.000	0.791	0.315	0.313	1.005	22.050
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:27	0.354	0.278	105.900	101.900	121.600	0.211	0.543	0.397
2	17:25:37	0.637	0.277	107.100	99.500	184.000	0.098	0.284	0.456
3	17:25:46	0.298	0.363	108.600	102.400	146.100	0.180	0.334	0.450
x		0.430	0.306	107.200	101.300	150.600	0.163	0.387	0.434
σ		0.182	0.049	1.352	1.558	31.410	0.058	0.138	0.032
%RSD		42.290	16.120	1.261	1.539	20.860	35.810	35.540	7.438
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:27	0.367	1.535	-2.025	0.488	-0.062	2.243	0.000	245.500
2	17:25:37	0.634	0.953	-2.677	0.657	-0.064	2.476	0.000	243.300
3	17:25:46	0.798	0.709	1.595	0.289	-0.212	2.192	0.000	242.000
x		0.599	1.065	-1.036	0.478	-0.113	2.304	0.000	243.600
σ		0.218	0.425	2.302	0.184	0.086	0.152	0.000	1.759
%RSD		36.310	39.840	222.300	38.490	76.090	6.577	0.000	0.722
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:27	78.995%	0.424	0.502	81.174%	0.004	-0.021	0.026	0.013
2	17:25:37	79.551%	0.498	0.701	80.995%	-0.001	-0.010	0.026	0.023
3	17:25:46	78.429%	0.390	0.517	80.580%	-0.011	-0.016	-0.000	0.013
x		78.992%	0.437	0.573	80.916%	-0.002	-0.016	0.017	0.016
σ		0.561%	0.055	0.111	0.304%	0.008	0.005	0.015	0.006
%RSD		0.710	12.640	19.310	0.376	325.100	33.410	86.670	36.210
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:27	78.756%	0.253	-0.010	-0.011	91.800	92.600	88.332%	86.087%
2	17:25:37	79.007%	0.264	-0.036	0.020	87.780	89.770	88.864%	86.486%
3	17:25:46	77.163%	0.211	-0.026	0.063	92.480	89.730	87.876%	87.131%
x		78.309%	0.243	-0.024	0.024	90.690	90.700	88.357%	86.568%
σ		1.000%	0.028	0.013	0.037	2.539	1.648	0.494%	0.527%
%RSD		1.277	11.680	52.700	157.100	2.800	1.817	0.559	0.609
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:25:27	0.001	0.005	0.045	0.056	0.055	85.255%		
2	17:25:37	-0.006	0.001	0.060	0.068	0.057	85.885%		
3	17:25:46	0.000	0.004	0.048	0.051	0.040	86.599%		
x		-0.002	0.003	0.051	0.058	0.051	85.913%		
σ		0.004	0.002	0.008	0.009	0.009	0.672%		
%RSD		210.000	58.610	15.590	15.460	17.710	0.783		

180-61069-E-12-A 12/5/2016 5:31:32 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:35	85.251%	0.035	17.690	19.610	0.000	6266.000	7813.000	7883.000
2	17:30:45	86.386%	0.006	16.760	18.660	0.000	6492.000	8073.000	8194.000
3	17:30:54	85.491%	0.013	17.360	17.460	0.000	6359.000	7976.000	8116.000
x		85.710%	0.018	17.270	18.580	0.000	6372.000	7954.000	8064.000
σ		0.598%	0.015	0.474	1.074	0.000	113.800	131.300	161.900
%RSD		0.698	85.050	2.744	5.781	0.000	1.786	1.650	2.007
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:35	111.100	4508.000	0.000	1796.000	72230.000	72350.000	85.366%	3.540
2	17:30:45	118.400	4539.000	0.000	1855.000	74220.000	74390.000	83.407%	3.968
3	17:30:54	115.200	4542.000	0.000	1854.000	74240.000	74210.000	83.704%	4.289
x		114.900	4530.000	0.000	1835.000	73560.000	73650.000	84.159%	3.932
σ		3.628	18.600	0.000	33.930	1153.000	1129.000	1.055%	0.376
%RSD		3.157	0.411	0.000	1.849	1.568	1.533	1.254	9.556
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:35	0.576	0.295	112.600	255.700	311.500	0.195	0.698	0.567
2	17:30:45	0.333	0.310	116.100	259.100	302.200	0.199	0.882	0.410
3	17:30:54	0.311	0.309	114.600	257.200	326.600	0.276	0.623	0.378
x		0.407	0.305	114.400	257.300	313.400	0.223	0.734	0.452
σ		0.147	0.008	1.796	1.700	12.310	0.046	0.133	0.101
%RSD		36.130	2.769	1.570	0.661	3.927	20.530	18.080	22.330
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:35	0.358	1.296	1.059	0.425	-0.065	1.362	0.000	231.800
2	17:30:45	0.693	1.057	-0.518	0.329	-0.364	4.064	0.000	232.600
3	17:30:54	0.423	1.732	0.137	0.371	-0.214	3.118	0.000	228.700
x		0.491	1.361	0.226	0.375	-0.214	2.848	0.000	231.000
σ		0.178	0.342	0.792	0.048	0.150	1.371	0.000	2.058
%RSD		36.170	25.120	350.700	12.870	69.880	48.130	0.000	0.891
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:35	78.990%	0.236	0.348	80.540%	0.010	-0.010	0.000	0.012
2	17:30:45	78.709%	0.312	0.247	80.998%	0.004	-0.021	-0.000	0.012
3	17:30:54	78.757%	0.447	0.238	80.322%	0.010	-0.010	0.026	-0.008
x		78.819%	0.331	0.278	80.620%	0.008	-0.014	0.009	0.005
σ		0.150%	0.107	0.061	0.345%	0.003	0.006	0.015	0.012
%RSD		0.190	32.180	22.100	0.428	37.940	43.160	173.300	216.400
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:35	79.825%	0.285	0.022	-0.032	83.650	88.780	88.296%	87.057%
2	17:30:45	79.320%	0.097	-0.002	0.009	86.480	88.610	87.888%	87.379%
3	17:30:54	80.176%	0.119	-0.003	-0.002	87.650	87.530	87.218%	87.472%
x		79.774%	0.167	0.005	-0.008	85.930	88.310	87.801%	87.303%
σ		0.430%	0.103	0.014	0.021	2.059	0.679	0.544%	0.218%
%RSD		0.540	61.760	261.200	261.000	2.397	0.769	0.620	0.250
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:30:35	-0.006	0.001	0.124	0.132	0.149	86.153%		
2	17:30:45	-0.006	0.005	0.157	0.194	0.162	86.704%		
3	17:30:54	0.003	0.010	0.161	0.122	0.151	86.980%		
x		-0.003	0.006	0.147	0.149	0.154	86.613%		
σ		0.006	0.005	0.020	0.039	0.007	0.421%		
%RSD		185.100	81.480	13.710	26.240	4.556	0.486		

180-61069-E-13-A 12/5/2016 5:36:37 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:35:42	83.995%	0.022	18.310	18.780	0.000	6569.000	8320.000	8392.000
2	17:35:51	85.370%	-0.015	17.350	18.460	0.000	6587.000	8282.000	8322.000
3	17:36:01	84.987%	0.007	18.400	18.580	0.000	6585.000	8346.000	8399.000
x		84.784%	0.005	18.020	18.600	0.000	6580.000	8316.000	8371.000
σ		0.710%	0.019	0.584	0.164	0.000	10.020	32.300	42.280
%RSD		0.837	409.400	3.243	0.879	0.000	0.152	0.388	0.505

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:35:42	119.700	4622.000	0.000	1935.000	76930.000	76170.000	82.557%	3.358
2	17:35:51	120.200	4527.000	0.000	1919.000	76370.000	76020.000	82.450%	3.888
3	17:36:01	121.000	4648.000	0.000	1942.000	76920.000	76260.000	82.104%	4.011
x		120.300	4599.000	0.000	1932.000	76740.000	76150.000	82.370%	3.752
σ		0.658	63.950	0.000	11.530	321.700	119.900	0.237%	0.347
%RSD		0.546	1.390	0.000	0.597	0.419	0.158	0.287	9.239

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:35:42	0.615	0.322	117.200	267.200	343.300	0.144	0.458	0.474
2	17:35:51	-0.144	0.304	116.400	266.000	311.200	0.222	0.499	0.350
3	17:36:01	-0.155	0.368	117.000	272.200	307.400	0.258	0.935	0.277
x		0.106	0.331	116.900	268.500	320.600	0.208	0.631	0.367
σ		0.441	0.033	0.434	3.276	19.730	0.058	0.265	0.099
%RSD		418.100	9.953	0.371	1.220	6.154	28.090	41.980	27.060

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:35:42	0.547	1.379	1.350	0.517	-0.213	6.023	0.000	238.400
2	17:35:51	0.664	1.737	0.687	0.227	0.536	3.099	0.000	236.800
3	17:36:01	0.158	1.440	0.781	0.505	-0.364	4.399	0.000	243.500
x		0.456	1.519	0.939	0.417	-0.014	4.507	0.000	239.600
σ		0.265	0.191	0.359	0.164	0.482	1.465	0.000	3.481
%RSD		58.030	12.610	38.190	39.420	3516.000	32.500	0.000	1.453

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:35:42	78.746%	0.390	0.396	79.945%	-0.006	-0.016	-0.000	-0.008
2	17:35:51	79.598%	0.292	0.136	80.220%	0.015	-0.021	-0.000	-0.008
3	17:36:01	78.460%	0.237	0.259	80.836%	0.004	-0.021	0.000	0.023
x		78.935%	0.306	0.264	80.334%	0.004	-0.019	-0.000	0.002
σ		0.592%	0.078	0.130	0.456%	0.010	0.003	0.000	0.018
%RSD		0.750	25.410	49.270	0.567	230.800	15.720	115.500	867.900

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:35:42	80.344%	0.207	-0.044	0.019	88.970	88.530	86.503%	86.414%
2	17:35:51	79.551%	0.275	0.039	0.019	91.060	88.920	86.352%	86.178%
3	17:36:01	79.655%	0.185	-0.003	0.050	88.400	90.180	87.161%	86.519%
x		79.850%	0.222	-0.003	0.029	89.480	89.210	86.672%	86.370%
σ		0.431%	0.047	0.042	0.018	1.398	0.862	0.430%	0.175%
%RSD		0.539	21.160	1580.000	60.640	1.562	0.966	0.496	0.202

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:35:42	0.007	-0.004	0.162	0.199	0.180	84.438%
2	17:35:51	0.004	-0.003	0.149	0.198	0.163	84.947%
3	17:36:01	0.004	0.008	0.181	0.170	0.158	86.333%
x		0.005	0.000	0.164	0.189	0.167	85.239%
σ		0.002	0.006	0.016	0.017	0.012	0.981%
%RSD		42.030	1495.000	9.762	8.932	7.052	1.150

180-61069-E-14-A 12/5/2016 5:41:42 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:40:45	79.706%	-0.004	14.060	15.550	0.000	23920.000	9096.000	9150.000
2	17:40:55	80.442%	-0.020	12.120	15.220	0.000	23290.000	8811.000	8944.000
3	17:41:05	80.207%	-0.012	14.750	14.660	0.000	23340.000	8785.000	8986.000
x		80.118%	-0.012	13.640	15.140	0.000	23520.000	8897.000	9027.000
σ		0.376%	0.008	1.366	0.448	0.000	351.300	172.200	108.700
%RSD		0.469	66.810	10.010	2.956	0.000	1.494	1.936	1.204

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:40:45	7.290	7003.000	0.000	1587.000	239100.000	237500.000	79.188%	2.124
2	17:40:55	7.921	7121.000	0.000	1553.000	235200.000	232000.000	80.142%	3.093
3	17:41:05	7.432	7131.000	0.000	1559.000	235400.000	232000.000	80.174%	3.010
x		7.548	7085.000	0.000	1566.000	236600.000	233800.000	79.835%	2.742
σ		0.331	71.540	0.000	17.900	2183.000	3173.000	0.561%	0.537
%RSD		4.386	1.010	0.000	1.143	0.923	1.357	0.702	19.580

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:40:45	-0.200	0.455	8.062	60.560	123.000	0.044	2.212	0.304
2	17:40:55	-0.572	0.460	7.871	61.000	141.000	0.020	1.717	0.303
3	17:41:05	0.075	0.506	7.868	56.880	128.700	0.090	1.808	0.193
x		-0.233	0.473	7.934	59.480	130.900	0.051	1.913	0.267
σ		0.324	0.028	0.111	2.264	9.189	0.036	0.264	0.064
%RSD		139.500	5.914	1.402	3.806	7.020	69.290	13.780	23.830

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:40:45	0.445	1.490	-1.702	0.192	1.034	18.030	0.000	480.600
2	17:40:55	0.383	1.274	-1.494	0.134	-0.051	10.460	0.000	484.700
3	17:41:05	0.321	2.199	1.556	0.209	0.577	13.040	0.000	486.300
x		0.383	1.654	-0.547	0.178	0.520	13.840	0.000	483.900
σ		0.062	0.484	1.824	0.039	0.545	3.849	0.000	2.960
%RSD		16.110	29.260	333.600	22.150	104.800	27.800	0.000	0.612

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:40:45	77.037%	0.169	0.331	76.886%	-0.006	-0.010	-0.000	-0.008
2	17:40:55	75.947%	0.131	0.204	77.201%	0.011	-0.021	0.000	0.013
3	17:41:05	75.714%	0.112	0.041	77.373%	0.005	-0.005	-0.000	0.002
x		76.232%	0.138	0.192	77.153%	0.003	-0.012	-0.000	0.003
σ		0.706%	0.029	0.145	0.247%	0.008	0.008	0.000	0.011
%RSD		0.926	21.230	75.570	0.320	245.700	70.080	118.800	425.500

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:40:45	76.429%	0.282	0.043	0.054	183.500	177.000	85.177%	85.373%
2	17:40:55	75.640%	0.314	0.183	0.077	183.500	183.900	84.907%	86.157%
3	17:41:05	76.754%	0.398	0.068	0.138	174.400	179.300	86.748%	86.052%
x		76.274%	0.331	0.098	0.090	180.400	180.000	85.611%	85.861%
σ		0.573%	0.060	0.075	0.044	5.262	3.533	0.994%	0.426%
%RSD		0.751	18.090	76.210	48.590	2.916	1.962	1.161	0.496

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:40:45	0.001	0.004	0.035	0.018	0.029	82.255%
2	17:40:55	-0.006	0.001	0.030	0.031	0.030	84.028%
3	17:41:05	0.001	0.000	0.045	0.026	0.023	84.047%
x		-0.001	0.002	0.037	0.025	0.027	83.443%
σ		0.004	0.002	0.008	0.006	0.004	1.029%
%RSD		281.700	108.800	21.780	25.370	13.140	1.234

180-61069-E-15-A 12/5/2016 5:46:47 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:45:51	80.152%	-0.012	123.900	131.000	0.000	10790.000	22490.000	22860.000
2	17:46:00	80.961%	0.025	123.700	127.200	0.000	10720.000	22240.000	22490.000
3	17:46:09	81.701%	0.002	123.000	128.100	0.000	10690.000	22220.000	22630.000
x		80.938%	0.005	123.500	128.800	0.000	10740.000	22320.000	22660.000
σ		0.775%	0.019	0.442	1.986	0.000	50.680	148.000	190.800
%RSD		0.957	360.500	0.358	1.542	0.000	0.472	0.663	0.842

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:45:51	4.628	10450.000	0.000	2842.000	69320.000	72870.000	79.206%	2.833
2	17:46:00	3.598	10410.000	0.000	2796.000	68000.000	69610.000	79.568%	2.547
3	17:46:09	4.236	10600.000	0.000	2792.000	66940.000	69410.000	79.893%	3.130
x		4.154	10490.000	0.000	2810.000	68090.000	70630.000	79.556%	2.837
σ		0.520	99.710	0.000	27.560	1190.000	1942.000	0.344%	0.292
%RSD		12.520	0.951	0.000	0.981	1.748	2.749	0.432	10.280

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:45:51	-0.858	0.344	34.260	232.900	271.200	0.044	0.030	0.067
2	17:46:00	0.217	0.389	33.720	233.700	280.500	0.009	0.030	0.067
3	17:46:09	-0.353	0.252	32.970	231.400	307.100	0.032	0.075	0.020
x		-0.331	0.328	33.650	232.700	286.300	0.028	0.045	0.051
σ		0.538	0.070	0.649	1.178	18.640	0.018	0.026	0.027
%RSD		162.400	21.310	1.929	0.506	6.511	63.460	57.140	52.570

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:45:51	0.072	1.048	-1.032	0.823	-0.364	1.958	0.000	3531.000
2	17:46:00	0.165	1.540	0.444	0.799	-0.054	4.485	0.000	3575.000
3	17:46:09	0.135	0.734	-0.167	1.015	-0.208	-0.873	0.000	3588.000
x		0.124	1.107	-0.252	0.879	-0.209	1.857	0.000	3565.000
σ		0.048	0.406	0.742	0.119	0.155	2.681	0.000	30.190
%RSD		38.470	36.690	294.700	13.480	74.440	144.400	0.000	0.847

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:45:51	77.921%	0.107	0.279	78.328%	0.010	0.001	0.000	0.002
2	17:46:00	76.989%	0.187	0.269	78.389%	-0.000	-0.015	-0.000	0.003
3	17:46:09	75.931%	0.288	0.237	78.091%	0.005	-0.010	0.027	0.013
x		76.947%	0.194	0.261	78.269%	0.005	-0.008	0.009	0.006
σ		0.996%	0.091	0.022	0.157%	0.005	0.008	0.015	0.006
%RSD		1.294	46.730	8.378	0.201	106.500	99.130	173.000	100.200

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:45:51	76.635%	0.320	-0.000	0.001	167.400	162.900	85.785%	85.282%
2	17:46:00	75.390%	0.221	0.018	0.044	153.900	165.300	86.433%	86.224%
3	17:46:09	77.401%	0.262	-0.009	-0.021	165.500	157.500	86.245%	86.922%
x		76.475%	0.268	0.003	0.008	162.300	161.900	86.154%	86.143%
σ		1.015%	0.050	0.014	0.033	7.300	3.988	0.334%	0.823%
%RSD		1.327	18.540	497.000	419.800	4.498	2.463	0.387	0.955

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:45:51	-0.003	-0.003	-0.001	-0.004	0.004	84.336%
2	17:46:00	-0.013	0.000	-0.009	-0.009	-0.009	85.237%
3	17:46:09	-0.013	0.005	-0.005	-0.000	-0.002	86.189%
x		-0.009	0.001	-0.005	-0.004	-0.002	85.254%
σ		0.006	0.004	0.004	0.004	0.007	0.926%
%RSD		62.050	444.300	72.560	100.100	292.900	1.087

CCV 2136057 12/5/2016 5:51:53 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:50:57	84.447%	100.200	99.080	98.800	0.000	49750.000	49920.000	49610.000
2	17:51:06	82.068%	103.000	101.700	102.400	0.000	50600.000	50290.000	50450.000
3	17:51:16	83.012%	102.400	101.500	99.100	0.000	50080.000	49820.000	50070.000
x		83.176%	101.877%	100.740%	100.090%	0.000	100.283%	100.022%	100.082%
σ		1.198%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.441	1.486	1.432	1.977	0.000	0.852	0.490	0.843
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:50:57	513.600	5395.000	0.000	50800.000	49800.000	48230.000	83.756%	101.500
2	17:51:06	518.600	5408.000	0.000	51290.000	50250.000	48390.000	82.993%	103.300
3	17:51:16	511.900	5370.000	0.000	51070.000	49580.000	48130.000	83.203%	102.000
x		102.935%	107.819%	0.000	102.102%	99.756%	96.502%	83.317%	102.244%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.394%	n/a
%RSD		0.680	0.357	0.000	0.478	0.689	0.274	0.473	0.912
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:50:57	95.440	98.240	499.600	25220.000	24400.000	104.000	103.400	103.000
2	17:51:06	99.040	102.000	501.800	25750.000	25340.000	103.600	99.420	104.700
3	17:51:16	98.250	99.310	500.500	25410.000	25270.000	102.600	99.730	102.200
x		97.574%	99.857%	100.123%	101.834%	100.023%	103.426%	100.846%	103.328%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.938	1.957	0.216	1.039	2.094	0.702	2.186	1.222
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:50:57	104.900	101.800	103.800	101.200	103.400	101.900	0.000	99.490
2	17:51:06	105.200	103.900	104.800	103.200	98.180	100.000	0.000	99.400
3	17:51:16	102.400	97.530	104.300	103.100	108.200	93.950	0.000	99.180
x		104.175%	101.072%	104.297%	102.486%	103.237%	98.618%	0.000	99.359%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.458	3.212	0.489	1.111	4.838	4.209	0.000	0.161
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:50:57	86.110%	100.900	103.800	84.515%	100.400	98.730	98.020	101.900
2	17:51:06	85.523%	102.900	106.600	84.147%	102.300	101.700	101.600	103.100
3	17:51:16	85.999%	103.700	104.400	84.930%	100.900	99.770	98.620	103.000
x		85.877%	102.520%	104.954%	84.531%	101.207%	100.083%	99.418%	102.664%
σ		0.312%	n/a	n/a	0.392%	n/a	n/a	n/a	n/a
%RSD		0.364	1.386	1.426	0.463	0.999	1.534	1.938	0.648
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:50:57	83.596%	102.000	100.700	101.900	95.340	99.490	88.341%	86.827%
2	17:51:06	82.723%	103.200	102.200	102.400	98.230	100.400	87.585%	86.055%
3	17:51:16	83.344%	101.600	101.400	101.500	97.510	101.600	87.931%	87.106%
x		83.221%	102.298%	101.419%	101.928%	97.026%	100.500%	87.953%	86.663%
σ		0.449%	n/a	n/a	n/a	n/a	n/a	0.379%	0.545%
%RSD		0.540	0.791	0.746	0.446	1.554	1.074	0.430	0.628
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:50:57	99.780	99.570	99.520	102.000	99.180	83.338%		
2	17:51:06	99.650	99.920	98.670	99.090	98.950	83.737%		
3	17:51:16	100.200	98.980	98.960	100.300	99.300	83.852%		
x		99.889%	99.491%	99.050%	100.461%	99.142%	83.642%		
σ		n/a	n/a	n/a	n/a	n/a	0.270%		
%RSD		0.306	0.479	0.438	1.440	0.180	0.322		

CCB6 12/5/2016 5:57:00 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:56:04	95.454%	0.076	0.512	0.228	0.000	71.340	65.760	63.180
2	17:56:13	93.402%	0.144	0.096	0.023	0.000	72.190	61.450	62.210
3	17:56:23	93.149%	0.099	-0.194	-0.006	0.000	71.020	65.230	63.620
x		94.002%	0.106	0.138	0.082	0.000	71.510	64.140	63.000
σ		1.264%	0.035	0.355	0.128	0.000	0.605	2.351	0.722
%RSD		1.344	32.820	257.600	156.200	0.000	0.846	3.665	1.146
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:56:04	4.636	3.295	0.000	44.900	88.730	94.590	90.818%	0.211
2	17:56:13	4.616	4.294	0.000	49.880	160.600	86.820	89.670%	0.532
3	17:56:23	4.577	2.756	0.000	46.070	143.200	95.600	89.630%	0.195
x		4.609	3.449	0.000	46.950	130.900	92.330	90.039%	0.312
σ		0.030	0.781	0.000	2.603	37.510	4.807	0.674%	0.190
%RSD		0.653	22.630	0.000	5.545	28.660	5.206	0.749	60.860
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:56:04	-0.060	0.224	1.018	34.420	36.300	0.098	0.210	0.194
2	17:56:13	0.017	0.219	1.047	31.710	48.950	0.201	0.329	0.471
3	17:56:23	-0.008	0.123	1.052	31.280	31.150	0.280	0.404	0.371
x		-0.017	0.189	1.039	32.470	38.800	0.193	0.314	0.345
σ		0.039	0.057	0.018	1.702	9.160	0.092	0.098	0.140
%RSD		225.700	30.420	1.730	5.240	23.610	47.490	31.100	40.620
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:56:04	0.312	2.061	2.921	0.095	-0.233	2.473	0.000	0.286
2	17:56:13	0.129	3.025	2.749	0.135	-0.364	1.118	0.000	0.348
3	17:56:23	0.446	2.388	3.884	0.158	-0.102	0.350	0.000	0.306
x		0.295	2.491	3.185	0.129	-0.233	1.314	0.000	0.313
σ		0.159	0.491	0.612	0.031	0.131	1.075	0.000	0.032
%RSD		53.920	19.690	19.210	24.360	56.170	81.820	0.000	10.080
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:56:04	91.709%	0.421	0.416	92.223%	0.111	0.108	0.161	0.120
2	17:56:13	90.909%	0.438	0.425	92.817%	0.132	0.125	0.091	0.127
3	17:56:23	92.864%	0.463	0.410	93.257%	0.096	0.115	0.113	0.136
x		91.827%	0.441	0.417	92.766%	0.113	0.116	0.121	0.128
σ		0.983%	0.021	0.008	0.519%	0.018	0.008	0.036	0.008
%RSD		1.070	4.849	1.831	0.559	16.150	7.291	29.470	6.058
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:56:04	89.295%	0.368	0.326	0.449	0.079	0.246	91.278%	90.281%
2	17:56:13	90.647%	0.123	0.313	0.387	0.307	0.170	91.863%	90.970%
3	17:56:23	91.153%	0.154	0.319	0.257	0.168	0.145	92.479%	91.070%
x		90.365%	0.215	0.319	0.364	0.185	0.187	91.873%	90.773%
σ		0.960%	0.133	0.006	0.098	0.115	0.052	0.600%	0.430%
%RSD		1.063	62.040	2.016	26.870	62.290	28.050	0.653	0.473
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:56:04	0.137	0.090	0.110	0.133	0.115	90.499%		
2	17:56:13	0.112	0.095	0.161	0.149	0.141	90.662%		
3	17:56:23	0.099	0.097	0.124	0.132	0.114	90.895%		
x		0.116	0.094	0.132	0.138	0.124	90.685%		
σ		0.019	0.004	0.026	0.009	0.015	0.199%		
%RSD		16.720	3.771	19.780	6.766	12.530	0.219		

MB 180-195582/1-A 12/5/2016 6:07:16 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:20	86.953%	-0.002	0.446	-0.374	0.000	-1.444	1.924	2.704
2	18:06:29	86.067%	-0.008	-0.217	-0.227	0.000	-2.364	1.350	1.999
3	18:06:39	86.437%	-0.037	-0.359	-0.506	0.000	-4.752	1.814	2.463
x		86.486%	-0.016	-0.043	-0.369	0.000	-2.853	1.696	2.389
σ		0.445%	0.019	0.429	0.139	0.000	1.708	0.305	0.358
%RSD		0.514	118.100	995.800	37.760	0.000	59.840	17.960	14.990

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:20	1.699	8.489	0.000	-8.287	63.660	-2.522	82.537%	0.164
2	18:06:29	1.627	8.332	0.000	-11.740	66.820	5.985	82.593%	0.294
3	18:06:39	1.538	6.695	0.000	-18.760	17.100	-1.303	83.138%	0.030
x		1.621	7.839	0.000	-12.930	49.190	0.720	82.756%	0.163
σ		0.081	0.993	0.000	5.338	27.840	4.600	0.332%	0.132
%RSD		4.971	12.670	0.000	41.290	56.600	638.900	0.401	81.350

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:20	-0.083	0.197	0.133	1.982	4.684	-0.003	0.026	0.134
2	18:06:29	0.095	0.206	0.180	1.986	1.735	-0.003	0.154	0.059
3	18:06:39	-0.182	0.239	0.113	2.130	1.719	0.030	0.237	0.014
x		-0.057	0.214	0.142	2.032	2.713	0.008	0.139	0.069
σ		0.141	0.022	0.034	0.084	1.707	0.019	0.106	0.060
%RSD		248.200	10.440	24.340	4.142	62.930	239.000	76.440	87.420

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:20	0.004	0.313	0.441	0.039	-0.364	2.102	0.000	0.032
2	18:06:29	0.093	0.419	0.644	0.053	-0.218	0.900	0.000	-0.007
3	18:06:39	0.150	0.518	0.042	0.039	-0.072	0.898	0.000	0.032
x		0.082	0.417	0.375	0.044	-0.218	1.300	0.000	0.019
σ		0.074	0.102	0.306	0.008	0.146	0.694	0.000	0.023
%RSD		89.560	24.530	81.630	18.930	67.010	53.400	0.000	120.400

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:20	82.812%	0.076	0.041	84.023%	0.004	-0.011	-0.000	0.194
2	18:06:29	82.033%	0.113	-0.002	84.049%	-0.001	-0.011	-0.000	0.182
3	18:06:39	82.266%	-0.015	-0.013	84.090%	0.009	-0.011	0.025	0.144
x		82.371%	0.058	0.009	84.054%	0.004	-0.011	0.008	0.173
σ		0.399%	0.066	0.028	0.034%	0.005	0.000	0.015	0.026
%RSD		0.485	113.600	321.500	0.040	127.000	0.405	173.300	15.060

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:20	80.846%	10.970	0.054	0.120	0.086	0.026	87.981%	86.760%
2	18:06:29	81.882%	10.330	0.085	0.018	0.085	0.026	87.867%	88.296%
3	18:06:39	80.550%	10.060	0.029	0.059	0.086	0.105	88.418%	87.312%
x		81.093%	10.460	0.056	0.065	0.085	0.053	88.089%	87.456%
σ		0.699%	0.467	0.028	0.051	0.000	0.046	0.291%	0.778%
%RSD		0.862	4.468	49.590	78.490	0.443	86.750	0.330	0.890

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:20	-0.010	0.004	0.028	-0.000	0.010	87.855%
2	18:06:29	-0.000	0.006	0.013	0.004	0.007	88.975%
3	18:06:39	-0.003	-0.000	0.005	0.012	0.013	88.834%
x		-0.004	0.003	0.015	0.005	0.010	88.555%
σ		0.005	0.003	0.012	0.006	0.003	0.610%
%RSD		110.800	101.300	75.040	119.300	31.970	0.689

LCS 180-195582/2-A 12/5/2016 6:12:21 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:26	85.067%	48.380	994.100	1005.000	0.000	50360.000	50110.000	50800.000
2	18:11:35	86.558%	47.540	957.900	980.000	0.000	49440.000	48930.000	49860.000
3	18:11:45	85.855%	48.580	986.300	993.800	0.000	49880.000	49510.000	49910.000
x		85.827%	48.160	979.400	992.900	0.000	49890.000	49520.000	50190.000
σ		0.746%	0.554	19.080	12.470	0.000	461.400	592.400	528.000
%RSD		0.869	1.150	1.949	1.256	0.000	0.925	1.196	1.052
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:26	1977.000	10220.000	0.000	52490.000	51520.000	49120.000	81.712%	1019.000
2	18:11:35	1935.000	10180.000	0.000	52450.000	50510.000	48460.000	81.828%	1007.000
3	18:11:45	1956.000	10270.000	0.000	52990.000	51170.000	48950.000	81.999%	1022.000
x		1956.000	10220.000	0.000	52640.000	51060.000	48850.000	81.846%	1016.000
σ		20.770	41.810	0.000	301.600	514.700	342.300	0.144%	7.995
%RSD		1.062	0.409	0.000	0.573	1.008	0.701	0.176	0.787
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:26	466.700	191.400	509.300	877.700	1002.000	481.800	488.300	251.100
2	18:11:35	465.400	190.600	509.200	891.200	1044.000	488.800	499.400	252.700
3	18:11:45	463.800	188.400	515.000	871.300	943.000	484.900	491.300	247.700
x		465.300	190.100	511.100	880.100	996.300	485.200	493.000	250.500
σ		1.463	1.541	3.311	10.140	50.560	3.509	5.738	2.555
%RSD		0.314	0.811	0.648	1.152	5.074	0.723	1.164	1.020
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:26	250.300	462.300	443.900	36.490	10.110	6.016	0.000	956.500
2	18:11:35	251.000	480.900	451.500	39.700	12.320	9.454	0.000	971.600
3	18:11:45	251.800	464.600	441.800	39.270	9.859	12.470	0.000	957.100
x		251.000	469.300	445.700	38.490	10.760	9.313	0.000	961.700
σ		0.729	10.130	5.090	1.739	1.352	3.229	0.000	8.533
%RSD		0.291	2.158	1.142	4.518	12.560	34.670	0.000	0.887
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:26	80.107%	1088.000	1116.000	79.155%	49.510	50.620	49.970	89.870
2	18:11:35	79.175%	1095.000	1119.000	79.354%	49.970	50.550	48.200	85.430
3	18:11:45	79.561%	1082.000	1116.000	79.651%	49.370	48.770	51.230	86.740
x		79.614%	1088.000	1117.000	79.387%	49.620	49.980	49.800	87.340
σ		0.468%	6.727	1.876	0.250%	0.315	1.050	1.521	2.280
%RSD		0.588	0.618	0.168	0.315	0.635	2.100	3.054	2.610
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:26	76.677%	2088.000	504.600	508.100	1943.000	1954.000	87.495%	86.203%
2	18:11:35	78.130%	2082.000	495.600	501.000	1947.000	1935.000	87.731%	86.421%
3	18:11:45	77.818%	2066.000	500.000	499.500	1931.000	1942.000	86.727%	86.695%
x		77.542%	2079.000	500.100	502.900	1940.000	1943.000	87.317%	86.440%
σ		0.765%	11.500	4.510	4.566	8.215	9.514	0.525%	0.246%
%RSD		0.986	0.553	0.902	0.908	0.423	0.490	0.601	0.285
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:11:26	51.410	50.990	20.110	20.370	20.230	81.728%		
2	18:11:35	50.640	51.180	20.450	20.800	20.360	82.330%		
3	18:11:45	50.500	50.140	20.150	20.850	20.260	83.981%		
x		50.850	50.770	20.240	20.670	20.280	82.680%		
σ		0.492	0.550	0.185	0.262	0.067	1.167%		
%RSD		0.968	1.083	0.916	1.268	0.331	1.411		

180-61122-A-1-E 12/5/2016 6:17:27 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:31	84.220%	4.170	28.500	29.140	0.000	323.000	10160.000	10310.000
2	18:16:41	85.373%	4.084	27.220	27.880	0.000	318.700	10160.000	10230.000
3	18:16:50	85.677%	3.970	30.230	28.580	0.000	318.400	10140.000	10300.000
x		85.090%	4.075	28.650	28.530	0.000	320.000	10150.000	10280.000
σ		0.769%	0.101	1.511	0.633	0.000	2.549	10.990	41.060
%RSD		0.904	2.467	5.273	2.218	0.000	0.796	0.108	0.399

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:31	54410.000	6428.000	0.000	6189.000	31000.000	29280.000	84.100%	300.700
2	18:16:41	54370.000	6423.000	0.000	6250.000	30970.000	29240.000	84.230%	303.600
3	18:16:50	54500.000	6195.000	0.000	6250.000	31620.000	29280.000	85.187%	301.500
x		54430.000	6349.000	0.000	6230.000	31200.000	29270.000	84.506%	301.900
σ		64.460	132.900	0.000	35.250	367.500	25.250	0.594%	1.518
%RSD		0.118	2.093	0.000	0.566	1.178	0.086	0.702	0.503

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:31	169.800	70.780	3817.000	63700.000	63530.000	73.530	61.780	93.630
2	18:16:41	170.600	71.240	3824.000	62950.000	62820.000	72.470	62.170	94.240
3	18:16:50	167.700	71.120	3824.000	63540.000	63110.000	75.840	62.640	94.500
x		169.400	71.050	3822.000	63400.000	63150.000	73.950	62.200	94.120
σ		1.523	0.239	3.962	393.500	353.000	1.722	0.429	0.450
%RSD		0.899	0.336	0.104	0.621	0.559	2.328	0.690	0.478

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:31	97.330	1049.000	1044.000	28.150	4.724	10.610	0.000	153.300
2	18:16:41	93.670	1032.000	1020.000	28.530	4.265	6.120	0.000	152.800
3	18:16:50	95.950	1053.000	1036.000	28.790	5.544	4.971	0.000	153.200
x		95.650	1045.000	1033.000	28.490	4.844	7.234	0.000	153.100
σ		1.847	11.230	12.490	0.322	0.648	2.981	0.000	0.264
%RSD		1.931	1.075	1.208	1.131	13.380	41.200	0.000	0.172

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:31	0.000	3.645	4.312	82.013%	0.619	0.462	2.478	4.197
2	18:16:41	0.000	4.242	4.487	82.620%	0.533	0.515	2.919	3.352
3	18:16:50	0.000	4.114	4.393	82.477%	0.531	0.537	2.942	3.357
x		0.000	4.000	4.397	82.370%	0.561	0.504	2.780	3.635
σ		0.000	0.314	0.087	0.317%	0.050	0.038	0.261	0.486
%RSD		0.000	7.850	1.989	0.385	8.910	7.621	9.403	13.370

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:31	79.232%	29.790	3.860	3.595	1338.000	1336.000	91.558%	90.383%
2	18:16:41	79.902%	30.410	3.495	3.306	1334.000	1315.000	93.183%	90.763%
3	18:16:50	81.124%	30.420	3.405	3.822	1340.000	1324.000	91.961%	91.671%
x		80.086%	30.210	3.587	3.574	1337.000	1325.000	92.234%	90.939%
σ		0.959%	0.361	0.241	0.259	3.329	10.700	0.846%	0.662%
%RSD		1.198	1.195	6.720	7.247	0.249	0.807	0.918	0.728

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:31	0.710	0.566	673.500	620.600	645.400	82.807%
2	18:16:41	0.630	0.601	653.600	604.200	627.300	85.506%
3	18:16:50	0.654	0.604	669.000	622.400	644.900	83.831%
x		0.665	0.590	665.400	615.700	639.200	84.048%
σ		0.041	0.021	10.410	10.040	10.300	1.363%
%RSD		6.136	3.618	1.564	1.630	1.611	1.621

180-61122-A-1-E SD@5 12/5/2016 6:22:32 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:21:36	90.223%	0.700	4.155	5.274	0.000	55.960	2070.000	2091.000
2	18:21:45	90.124%	0.667	4.770	5.030	0.000	54.970	2072.000	2065.000
3	18:21:55	90.395%	0.779	5.315	4.812	0.000	56.180	2048.000	2068.000
x		90.247%	0.715	4.747	5.039	0.000	55.700	2063.000	2075.000
σ		0.137%	0.058	0.581	0.231	0.000	0.643	13.340	14.320
%RSD		0.152	8.097	12.230	4.578	0.000	1.154	0.647	0.690

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:21:36	11420.000	1161.000	0.000	1275.000	6621.000	5952.000	89.768%	62.960
2	18:21:45	11310.000	1157.000	0.000	1277.000	6305.000	5954.000	90.294%	63.120
3	18:21:55	11210.000	1138.000	0.000	1277.000	6479.000	5944.000	89.972%	59.520
x		11310.000	1152.000	0.000	1276.000	6468.000	5950.000	90.012%	61.870
σ		103.800	12.320	0.000	1.114	157.900	5.458	0.265%	2.033
%RSD		0.918	1.069	0.000	0.087	2.442	0.092	0.295	3.285

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:21:36	35.550	14.560	778.200	12360.000	12630.000	14.820	12.570	18.610
2	18:21:45	33.310	14.430	775.800	12200.000	12390.000	15.260	11.480	18.690
3	18:21:55	35.230	13.550	778.500	12370.000	12430.000	14.950	11.510	19.510
x		34.700	14.180	777.500	12310.000	12480.000	15.010	11.850	18.940
σ		1.211	0.551	1.481	93.530	128.900	0.225	0.622	0.497
%RSD		3.489	3.883	0.191	0.760	1.033	1.501	5.251	2.626

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:21:36	19.750	207.400	208.100	5.884	1.137	1.118	0.000	28.620
2	18:21:45	19.890	209.600	205.100	5.606	0.262	0.402	0.000	28.700
3	18:21:55	19.300	205.800	208.000	5.850	1.003	2.589	0.000	28.980
x		19.650	207.600	207.100	5.780	0.801	1.369	0.000	28.770
σ		0.309	1.913	1.716	0.152	0.472	1.115	0.000	0.190
%RSD		1.570	0.922	0.829	2.623	58.910	81.400	0.000	0.660

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:21:36	98.724%	0.514	1.056	90.922%	0.131	0.096	0.863	0.730
2	18:21:45	98.454%	0.940	0.642	91.781%	0.152	0.076	0.437	0.571
3	18:21:55	99.477%	0.669	0.624	91.116%	0.176	0.077	0.531	0.775
x		98.885%	0.707	0.774	91.273%	0.153	0.083	0.610	0.692
σ		0.530%	0.216	0.245	0.451%	0.022	0.011	0.224	0.107
%RSD		0.536	30.500	31.590	0.494	14.590	13.790	36.710	15.510

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:21:36	87.582%	5.977	0.769	0.547	273.900	277.500	94.551%	93.204%
2	18:21:45	89.112%	5.990	0.667	0.696	271.000	269.900	94.725%	92.786%
3	18:21:55	88.923%	5.821	0.691	0.632	267.900	277.900	94.482%	92.428%
x		88.539%	5.929	0.709	0.625	270.900	275.100	94.586%	92.806%
σ		0.834%	0.094	0.053	0.074	2.957	4.503	0.125%	0.388%
%RSD		0.942	1.589	7.520	11.910	1.091	1.637	0.133	0.418

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	18:21:36	0.143	0.138	130.700	121.600	125.400	90.250%
2	18:21:45	0.132	0.140	128.800	120.000	123.700	91.526%
3	18:21:55	0.105	0.154	132.700	121.700	125.900	90.833%
x		0.127	0.144	130.700	121.100	125.000	90.870%
σ		0.020	0.009	1.915	0.986	1.182	0.639%
%RSD		15.420	6.311	1.465	0.814	0.946	0.703

180-61122-A-1-F MS 12/5/2016 6:27:37 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:26:41	84.641%	48.700	931.900	944.600	0.000	43380.000	56970.000	57340.000
2	18:26:51	84.749%	49.110	938.900	947.500	0.000	43560.000	57400.000	57880.000
3	18:27:00	83.092%	50.270	967.600	979.900	0.000	43610.000	57080.000	57560.000
x		84.161%	49.360	946.200	957.300	0.000	43510.000	57150.000	57590.000
σ		0.927%	0.814	18.920	19.580	0.000	121.200	221.600	272.600
%RSD		1.101	1.650	2.000	2.045	0.000	0.279	0.388	0.473

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:26:41	110600.000	9298.000	0.000	56490.000	72480.000	72580.000	88.143%	1419.000
2	18:26:51	111100.000	9374.000	0.000	56700.000	73240.000	73020.000	88.021%	1413.000
3	18:27:00	110000.000	9378.000	0.000	57000.000	73100.000	73180.000	87.736%	1413.000
x		110500.000	9350.000	0.000	56730.000	72940.000	72930.000	87.966%	1415.000
σ		556.500	45.100	0.000	257.300	399.500	308.000	0.209%	3.265
%RSD		0.503	0.482	0.000	0.453	0.548	0.422	0.238	0.231

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:26:41	567.300	274.300	1335.000	69800.000	68760.000	447.200	484.600	307.200
2	18:26:51	560.900	272.600	1344.000	70020.000	69180.000	446.300	487.400	307.500
3	18:27:00	555.800	268.300	1349.000	70780.000	68900.000	456.000	489.500	303.500
x		561.400	271.700	1343.000	70200.000	68950.000	449.900	487.200	306.100
σ		5.775	3.097	6.715	517.400	214.700	5.328	2.428	2.208
%RSD		1.029	1.140	0.500	0.737	0.311	1.184	0.498	0.721

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:26:41	304.300	1384.000	1385.000	54.930	12.870	4.509	0.000	1019.000
2	18:26:51	304.300	1397.000	1383.000	53.090	14.730	14.330	0.000	1021.000
3	18:27:00	317.600	1389.000	1381.000	55.070	12.380	16.750	0.000	993.900
x		308.800	1390.000	1383.000	54.360	13.330	11.860	0.000	1011.000
σ		7.671	6.803	2.005	1.103	1.241	6.481	0.000	15.110
%RSD		2.484	0.489	0.145	2.029	9.307	54.640	0.000	1.494

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:26:41	0.000	941.500	977.000	80.703%	43.860	45.170	47.370	81.640
2	18:26:51	0.000	945.300	979.200	80.886%	43.830	44.030	47.470	82.120
3	18:27:00	0.000	941.700	957.600	81.634%	44.430	45.190	47.290	81.720
x		0.000	942.800	971.300	81.074%	44.040	44.790	47.380	81.830
σ		0.000	2.130	11.880	0.493%	0.338	0.662	0.094	0.260
%RSD		0.000	0.226	1.223	0.608	0.767	1.478	0.198	0.317

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:26:41	79.053%	1810.000	361.400	363.800	2457.000	2449.000	91.512%	90.292%
2	18:26:51	79.237%	1827.000	367.400	364.400	2477.000	2453.000	91.364%	89.870%
3	18:27:00	78.897%	1823.000	366.600	364.200	2451.000	2449.000	92.789%	91.286%
x		79.062%	1820.000	365.100	364.100	2462.000	2450.000	91.888%	90.483%
σ		0.170%	8.947	3.231	0.298	13.520	2.673	0.783%	0.727%
%RSD		0.215	0.492	0.885	0.082	0.549	0.109	0.853	0.803

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	18:26:41	44.980	45.480	632.200	587.600	608.600	81.217%
2	18:26:51	45.630	45.970	634.500	590.200	611.600	81.318%
3	18:27:00	44.820	44.720	619.300	569.400	595.900	83.398%
x		45.140	45.390	628.600	582.400	605.400	81.978%
σ		0.428	0.634	8.206	11.310	8.313	1.231%
%RSD		0.948	1.396	1.305	1.943	1.373	1.502

180-61122-A-1-G MSD 12/5/2016 6:32:42 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:31:47	88.253%	49.200	914.200	939.400	0.000	43520.000	57840.000	57960.000
2	18:31:57	87.779%	48.820	923.800	943.100	0.000	43310.000	56910.000	57390.000
3	18:32:06	86.294%	49.430	931.900	948.300	0.000	43170.000	57050.000	57530.000
x		87.442%	49.150	923.300	943.600	0.000	43330.000	57270.000	57630.000
σ		1.022%	0.311	8.858	4.474	0.000	175.900	504.100	297.900
%RSD		1.169	0.633	0.959	0.474	0.000	0.406	0.880	0.517
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:31:47	113600.000	10540.000	0.000	56680.000	73520.000	74110.000	89.820%	1408.000
2	18:31:57	111700.000	10500.000	0.000	56760.000	72960.000	73490.000	89.719%	1417.000
3	18:32:06	112400.000	10610.000	0.000	57100.000	73140.000	74040.000	89.380%	1398.000
x		112600.000	10550.000	0.000	56850.000	73210.000	73880.000	89.640%	1408.000
σ		978.900	57.590	0.000	224.600	286.000	341.500	0.230%	9.550
%RSD		0.870	0.546	0.000	0.395	0.391	0.462	0.257	0.678
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:31:47	544.800	264.700	1328.000	66690.000	65960.000	447.900	484.900	305.600
2	18:31:57	555.100	268.600	1330.000	66960.000	66440.000	449.200	482.800	303.700
3	18:32:06	555.300	272.000	1341.000	67370.000	66180.000	451.000	486.500	311.700
x		551.700	268.400	1333.000	67010.000	66190.000	449.400	484.700	307.000
σ		6.023	3.622	7.128	341.500	241.300	1.549	1.874	4.177
%RSD		1.092	1.349	0.535	0.510	0.364	0.345	0.387	1.360
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:31:47	306.800	1376.000	1363.000	51.010	10.460	12.660	0.000	1022.000
2	18:31:57	311.300	1399.000	1365.000	51.610	14.050	14.180	0.000	1033.000
3	18:32:06	307.000	1397.000	1388.000	52.190	13.110	15.070	0.000	1013.000
x		308.400	1391.000	1372.000	51.600	12.540	13.970	0.000	1022.000
σ		2.534	12.430	13.780	0.594	1.862	1.218	0.000	10.010
%RSD		0.822	0.894	1.004	1.151	14.850	8.721	0.000	0.979
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:31:47	0.000	935.800	968.900	81.066%	43.360	44.710	46.890	80.990
2	18:31:57	0.000	944.600	979.800	80.839%	45.020	45.300	47.960	81.520
3	18:32:06	0.000	941.200	971.400	81.887%	44.410	45.190	48.590	81.610
x		0.000	940.500	973.400	81.264%	44.260	45.060	47.810	81.370
σ		0.000	4.422	5.674	0.551%	0.842	0.314	0.860	0.333
%RSD		0.000	0.470	0.583	0.679	1.902	0.696	1.799	0.409
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:31:47	78.464%	1811.000	367.700	365.100	2471.000	2474.000	90.477%	90.229%
2	18:31:57	78.569%	1819.000	369.600	369.300	2495.000	2481.000	90.994%	89.487%
3	18:32:06	79.380%	1796.000	365.400	365.100	2446.000	2462.000	92.536%	89.626%
x		78.804%	1808.000	367.600	366.500	2471.000	2472.000	91.336%	89.781%
σ		0.502%	11.660	2.080	2.387	24.690	9.867	1.071%	0.395%
%RSD		0.637	0.645	0.566	0.651	1.000	0.399	1.173	0.440
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:31:47	46.170	46.040	602.400	557.200	578.900	80.215%		
2	18:31:57	46.340	46.120	600.500	558.300	577.300	80.677%		
3	18:32:06	45.190	44.880	583.200	540.500	563.000	83.429%		
x		45.900	45.680	595.400	552.000	573.100	81.440%		
σ		0.623	0.695	10.590	9.994	8.737	1.738%		
%RSD		1.358	1.520	1.779	1.811	1.525	2.134		

180-61122-A-1-E PDS 12/5/2016 6:37:48 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:52	87.710%	54.810	1067.000	1050.000	0.000	49570.000	59450.000	59500.000
2	18:37:01	86.222%	54.720	1053.000	1063.000	0.000	50890.000	60860.000	60980.000
3	18:37:11	84.162%	56.840	1075.000	1093.000	0.000	50950.000	60420.000	60940.000
x		86.031%	55.460	1065.000	1069.000	0.000	50470.000	60240.000	60480.000
σ		1.782%	1.196	11.300	22.120	0.000	781.500	717.900	844.900
%RSD		2.071	2.157	1.061	2.070	0.000	1.548	1.192	1.397

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:52	54310.000	16710.000	0.000	56780.000	79610.000	81130.000	88.789%	1293.000
2	18:37:01	55570.000	17130.000	0.000	58300.000	81260.000	82600.000	87.234%	1311.000
3	18:37:11	54990.000	17220.000	0.000	58270.000	80920.000	82170.000	87.522%	1317.000
x		54960.000	17020.000	0.000	57780.000	80600.000	81970.000	87.848%	1307.000
σ		632.600	272.200	0.000	868.700	870.000	752.400	0.827%	12.610
%RSD		1.151	1.600	0.000	1.503	1.080	0.918	0.941	0.965

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:52	621.800	250.900	4057.000	60290.000	58920.000	549.400	536.500	332.800
2	18:37:01	634.600	254.900	4137.000	61370.000	61090.000	566.800	550.400	337.000
3	18:37:11	620.500	252.500	4158.000	60920.000	60140.000	557.200	550.700	338.200
x		625.600	252.800	4118.000	60860.000	60050.000	557.800	545.900	336.000
σ		7.777	2.034	53.450	545.500	1092.000	8.704	8.116	2.851
%RSD		1.243	0.804	1.298	0.896	1.818	1.560	1.487	0.849

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:52	333.300	1435.000	1429.000	66.570	14.210	17.810	0.000	1153.000
2	18:37:01	336.800	1456.000	1436.000	68.990	15.350	12.320	0.000	1154.000
3	18:37:11	340.900	1446.000	1446.000	67.410	13.050	16.640	0.000	1152.000
x		337.000	1446.000	1437.000	67.650	14.200	15.590	0.000	1153.000
σ		3.813	10.790	8.190	1.229	1.151	2.894	0.000	0.782
%RSD		1.131	0.746	0.570	1.816	8.105	18.560	0.000	0.068

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:52	0.000	1133.000	1167.000	81.281%	50.200	50.330	54.320	93.670
2	18:37:01	0.000	1132.000	1161.000	81.023%	51.040	50.020	54.090	96.880
3	18:37:11	0.000	1145.000	1167.000	80.788%	49.370	50.630	54.610	95.140
x		0.000	1137.000	1165.000	81.030%	50.200	50.320	54.340	95.230
σ		0.000	7.369	3.381	0.247%	0.835	0.305	0.258	1.607
%RSD		0.000	0.648	0.290	0.304	1.664	0.606	0.475	1.687

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:52	79.681%	2152.000	529.800	532.200	3285.000	3286.000	91.794%	90.213%
2	18:37:01	78.327%	2184.000	543.000	539.500	3295.000	3305.000	92.801%	90.250%
3	18:37:11	78.843%	2174.000	532.800	536.500	3328.000	3302.000	92.488%	91.372%
x		78.950%	2170.000	535.200	536.100	3303.000	3298.000	92.361%	90.612%
σ		0.683%	16.720	6.928	3.709	22.730	10.040	0.516%	0.658%
%RSD		0.865	0.770	1.294	0.692	0.688	0.304	0.558	0.727

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:52	53.200	53.450	683.100	630.000	657.300	79.052%
2	18:37:01	52.920	53.000	672.800	624.100	649.800	80.582%
3	18:37:11	52.430	53.080	668.300	621.200	646.700	81.192%
x		52.850	53.180	674.700	625.100	651.300	80.275%
σ		0.389	0.240	7.618	4.515	5.476	1.102%
%RSD		0.736	0.451	1.129	0.722	0.841	1.373

180-61122-A-2-C 12/5/2016 6:42:55 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:59	94.553%	22.370	68.900	67.640	0.000	5846.000	42370.000	42170.000
2	18:42:08	91.500%	24.020	67.690	69.930	0.000	5888.000	42470.000	42470.000
3	18:42:18	94.279%	23.380	69.190	69.720	0.000	5928.000	42860.000	42660.000
x		93.444%	23.250	68.590	69.100	0.000	5887.000	42560.000	42430.000
σ		1.689%	0.832	0.793	1.265	0.000	40.680	257.400	246.700
%RSD		1.808	3.578	1.156	1.831	0.000	0.691	0.605	0.581

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:59	230600.000	9346.000	0.000	15250.000	56230.000	56890.000	105.881%	220.300
2	18:42:08	233700.000	9575.000	0.000	15390.000	56860.000	57080.000	105.527%	222.900
3	18:42:18	234000.000	9427.000	0.000	15380.000	56720.000	57020.000	105.504%	223.300
x		232800.000	9450.000	0.000	15340.000	56600.000	56990.000	105.637%	222.200
σ		1851.000	116.200	0.000	75.800	326.300	96.110	0.211%	1.649
%RSD		0.795	1.230	0.000	0.494	0.577	0.169	0.200	0.742

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:59	921.900	247.900	56920.000	373300.000	371900.000	903.500	888.100	169.100
2	18:42:08	935.800	247.400	57230.000	376600.000	379700.000	920.800	900.100	171.000
3	18:42:18	949.700	249.600	57230.000	378200.000	383400.000	921.400	904.000	171.400
x		935.800	248.300	57120.000	376000.000	378300.000	915.300	897.400	170.500
σ		13.900	1.163	178.900	2492.000	5839.000	10.160	8.248	1.230
%RSD		1.485	0.468	0.313	0.663	1.543	1.110	0.919	0.721

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:59	171.100	348.400	268.800	104.900	23.920	29.680	0.000	569.700
2	18:42:08	173.000	345.800	260.200	107.300	24.590	30.670	0.000	573.800
3	18:42:18	176.800	350.400	252.100	103.500	24.740	23.230	0.000	576.000
x		173.700	348.200	260.400	105.200	24.420	27.860	0.000	573.200
σ		2.903	2.306	8.357	1.899	0.437	4.040	0.000	3.202
%RSD		1.672	0.662	3.210	1.805	1.789	14.500	0.000	0.559

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:59	0.000	28.860	30.330	84.835%	0.541	0.545	3.669	4.516
2	18:42:08	0.000	29.280	29.900	86.326%	0.442	0.382	4.293	4.399
3	18:42:18	0.000	28.670	29.500	86.934%	0.509	0.445	4.006	4.462
x		0.000	28.940	29.910	86.031%	0.497	0.457	3.989	4.459
σ		0.000	0.311	0.414	1.080%	0.050	0.082	0.313	0.059
%RSD		0.000	1.074	1.383	1.255	10.140	18.000	7.837	1.312

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:59	85.317%	34.590	4.260	3.939	4628.000	4564.000	120.232%	111.567%
2	18:42:08	86.227%	34.030	3.712	3.599	4598.000	4567.000	120.486%	111.918%
3	18:42:18	87.456%	34.970	3.833	4.332	4569.000	4553.000	120.590%	111.259%
x		86.333%	34.530	3.935	3.957	4598.000	4561.000	120.436%	111.581%
σ		1.073%	0.473	0.288	0.367	29.580	7.021	0.184%	0.330%
%RSD		1.243	1.369	7.318	9.269	0.643	0.154	0.153	0.296

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:59	3.066	2.956	984.900	912.600	959.700	78.856%
2	18:42:08	3.138	3.129	1065.000	981.300	1034.000	73.228%
3	18:42:18	3.070	3.083	1049.000	968.500	1020.000	74.183%
x		3.091	3.056	1033.000	954.100	1004.000	75.422%
σ		0.040	0.090	42.300	36.520	39.410	3.011%
%RSD		1.309	2.940	4.096	3.828	3.924	3.993

180-61122-A-3-C 12/5/2016 6:48:01 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:06	84.407%	7.323	62.970	65.580	0.000	1502.000	31200.000	31310.000
2	18:47:15	83.388%	6.615	65.350	67.130	0.000	1511.000	30920.000	31290.000
3	18:47:25	81.159%	6.919	66.270	67.250	0.000	1513.000	31230.000	31600.000
x		82.985%	6.953	64.860	66.660	0.000	1509.000	31120.000	31400.000
σ		1.661%	0.355	1.708	0.933	0.000	5.945	171.700	173.800
%RSD		2.002	5.110	2.633	1.400	0.000	0.394	0.552	0.553

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:06	107100.000	6927.000	0.000	16990.000	326900.000	329300.000	87.657%	417.500
2	18:47:15	106300.000	7223.000	0.000	17130.000	325900.000	328700.000	87.478%	424.400
3	18:47:25	107900.000	7344.000	0.000	17310.000	327900.000	330500.000	87.496%	422.000
x		107100.000	7165.000	0.000	17140.000	326900.000	329500.000	87.544%	421.300
σ		817.900	214.500	0.000	161.600	999.100	937.600	0.099%	3.527
%RSD		0.764	2.994	0.000	0.943	0.306	0.285	0.113	0.837

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:06	219.300	166.300	2442.000	122100.000	119200.000	63.750	115.600	148.300
2	18:47:15	217.000	161.500	2459.000	119500.000	118700.000	64.230	118.100	149.400
3	18:47:25	215.900	162.100	2474.000	122200.000	118300.000	62.860	116.500	148.900
x		217.400	163.300	2458.000	121300.000	118700.000	63.610	116.700	148.900
σ		1.738	2.595	15.950	1515.000	480.700	0.695	1.249	0.507
%RSD		0.799	1.590	0.649	1.249	0.405	1.093	1.070	0.341

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:06	149.000	937.700	942.400	33.760	4.308	5.010	0.000	735.600
2	18:47:15	146.400	949.700	941.400	33.660	5.191	15.540	0.000	731.700
3	18:47:25	151.400	944.400	958.800	33.310	7.032	9.918	0.000	734.000
x		149.000	943.900	947.500	33.580	5.510	10.160	0.000	733.800
σ		2.500	6.024	9.769	0.237	1.390	5.267	0.000	1.958
%RSD		1.678	0.638	1.031	0.707	25.220	51.870	0.000	0.267

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:06	0.000	7.675	8.134	79.038%	0.981	1.028	2.211	2.813
2	18:47:15	0.000	7.720	8.029	78.983%	1.114	1.038	2.329	3.043
3	18:47:25	0.000	7.573	8.063	80.041%	1.148	0.942	2.467	2.648
x		0.000	7.656	8.075	79.354%	1.081	1.003	2.336	2.835
σ		0.000	0.075	0.054	0.596%	0.088	0.053	0.128	0.199
%RSD		0.000	0.982	0.667	0.750	8.187	5.246	5.491	7.011

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:06	79.788%	35.420	4.876	4.517	1245.000	1249.000	92.121%	91.564%
2	18:47:15	79.099%	33.970	4.616	4.804	1235.000	1255.000	93.615%	91.218%
3	18:47:25	80.730%	33.620	4.563	3.835	1257.000	1251.000	93.930%	92.767%
x		79.872%	34.340	4.685	4.385	1246.000	1251.000	93.222%	91.850%
σ		0.819%	0.952	0.168	0.498	10.910	2.937	0.967%	0.813%
%RSD		1.025	2.772	3.585	11.350	0.876	0.235	1.037	0.885

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:06	1.003	0.986	481.600	442.000	461.400	79.245%
2	18:47:15	1.159	1.062	483.600	445.600	464.600	79.135%
3	18:47:25	1.068	1.091	481.100	443.900	462.400	80.739%
x		1.077	1.046	482.100	443.800	462.800	79.706%
σ		0.078	0.054	1.327	1.764	1.646	0.896%
%RSD		7.286	5.174	0.275	0.397	0.356	1.124

CCV 2136057 12/5/2016 6:53:09 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:12	93.046%	101.500	102.100	99.610	0.000	50320.000	50590.000	50400.000
2	18:52:22	94.575%	102.400	99.790	100.900	0.000	50730.000	50660.000	50620.000
3	18:52:31	93.987%	103.100	97.960	100.300	0.000	50580.000	50400.000	50710.000
x		93.869%	102.318%	99.960%	100.254%	0.000	101.089%	101.103%	101.145%
σ		0.772%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.822	0.788	2.091	0.642	0.000	0.406	0.276	0.315
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:12	532.900	5455.000	0.000	50310.000	49750.000	48590.000	95.766%	104.000
2	18:52:22	536.000	5469.000	0.000	50630.000	49890.000	48860.000	95.360%	103.300
3	18:52:31	535.100	5252.000	0.000	50760.000	49740.000	49090.000	94.894%	101.700
x		106.933%	107.839%	0.000	101.132%	99.585%	97.689%	95.340%	103.024%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.436%	n/a
%RSD		0.296	2.258	0.000	0.451	0.165	0.514	0.458	1.140
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:12	101.200	98.670	481.900	25110.000	24360.000	101.000	99.080	99.910
2	18:52:22	93.090	98.340	483.300	25190.000	24750.000	101.600	102.700	100.000
3	18:52:31	98.210	96.100	484.000	24990.000	24550.000	100.600	101.100	98.200
x		97.510%	97.701%	96.610%	100.383%	98.218%	101.050%	100.956%	99.382%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		4.225	1.433	0.227	0.415	0.801	0.489	1.804	1.034
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:12	103.300	97.230	97.100	100.500	101.400	100.600	0.000	97.630
2	18:52:22	99.820	98.360	95.040	100.400	93.590	84.230	0.000	100.200
3	18:52:31	97.420	95.300	95.900	96.680	92.860	88.330	0.000	95.380
x		100.163%	96.965%	96.013%	99.197%	95.960%	91.044%	0.000	97.725%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.928	1.592	1.075	2.200	4.950	9.340	0.000	2.451
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:12	98.808%	97.590	105.400	91.292%	99.310	98.790	93.800	99.650
2	18:52:22	98.742%	100.400	105.200	92.124%	99.230	100.800	99.370	100.600
3	18:52:31	101.546%	95.910	101.000	91.509%	97.280	99.150	97.470	101.500
x		99.699%	97.954%	103.864%	91.642%	98.610%	99.572%	96.880%	100.587%
σ		1.600%	n/a	n/a	0.432%	n/a	n/a	n/a	n/a
%RSD		1.605	2.298	2.389	0.471	1.168	1.065	2.926	0.930
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:12	91.530%	97.750	100.000	101.200	99.810	99.620	89.980%	88.572%
2	18:52:22	89.846%	99.650	100.600	101.600	104.100	99.270	90.994%	89.129%
3	18:52:31	90.185%	100.800	100.800	103.400	102.900	105.500	91.033%	89.403%
x		90.520%	99.402%	100.452%	102.056%	102.285%	101.451%	90.669%	89.035%
σ		0.891%	n/a	n/a	n/a	n/a	n/a	0.597%	0.423%
%RSD		0.984	1.556	0.388	1.184	2.175	3.432	0.658	0.476
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:52:12	99.270	98.020	97.220	98.590	98.030	83.490%		
2	18:52:22	97.840	98.550	96.850	98.440	97.690	83.881%		
3	18:52:31	101.000	98.920	97.950	97.960	98.340	83.952%		
x		99.359%	98.498%	97.339%	98.329%	98.019%	83.774%		
σ		n/a	n/a	n/a	n/a	n/a	0.249%		
%RSD		1.572	0.456	0.573	0.335	0.330	0.297		

CCB7 12/5/2016 6:58:16 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:57:20	99.842%	0.186	0.616	0.451	0.000	68.690	70.860	73.530
2	18:57:29	100.168%	0.191	0.570	0.847	0.000	66.760	74.870	75.070
3	18:57:39	100.671%	0.184	0.442	0.456	0.000	68.090	71.010	74.280
x		100.227%	0.187	0.543	0.585	0.000	67.850	72.250	74.290
σ		0.418%	0.004	0.090	0.227	0.000	0.989	2.271	0.772
%RSD		0.417	2.029	16.600	38.900	0.000	1.457	3.143	1.039
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:57:20	10.840	3.997	0.000	57.640	189.800	118.400	97.583%	0.371
2	18:57:29	10.340	3.512	0.000	62.650	207.800	122.100	97.490%	0.305
3	18:57:39	10.630	1.803	0.000	57.360	223.500	123.700	96.962%	0.442
x		10.600	3.104	0.000	59.220	207.000	121.400	97.345%	0.373
σ		0.251	1.152	0.000	2.979	16.870	2.723	0.335%	0.069
%RSD		2.369	37.130	0.000	5.031	8.148	2.242	0.344	18.440
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:57:20	0.242	0.207	1.884	40.890	50.850	0.127	0.543	0.321
2	18:57:29	0.082	0.177	1.952	39.320	48.150	0.154	0.294	0.628
3	18:57:39	0.196	0.200	1.915	37.750	44.790	0.165	0.403	0.472
x		0.173	0.194	1.917	39.320	47.930	0.149	0.413	0.474
σ		0.083	0.016	0.034	1.573	3.037	0.019	0.125	0.153
%RSD		47.680	8.088	1.772	4.001	6.336	13.050	30.310	32.380
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:57:20	0.548	2.553	3.621	0.235	0.118	1.039	0.000	0.399
2	18:57:29	0.373	2.529	2.928	0.072	-0.246	0.293	0.000	0.402
3	18:57:39	0.450	2.597	3.454	0.119	-0.124	1.284	0.000	0.396
x		0.457	2.560	3.334	0.142	-0.084	0.872	0.000	0.399
σ		0.088	0.035	0.362	0.084	0.185	0.516	0.000	0.003
%RSD		19.220	1.351	10.850	59.050	220.400	59.230	0.000	0.688
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:57:20	100.818%	0.587	0.516	100.115%	0.097	0.101	0.104	0.108
2	18:57:29	102.753%	0.491	0.592	99.792%	0.109	0.106	-0.000	0.175
3	18:57:39	101.459%	0.435	0.426	99.911%	0.110	0.115	0.084	0.093
x		101.677%	0.504	0.511	99.939%	0.105	0.107	0.063	0.125
σ		0.986%	0.077	0.083	0.164%	0.007	0.007	0.055	0.044
%RSD		0.969	15.260	16.280	0.164	7.054	6.396	88.110	34.960
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:57:20	98.532%	0.198	0.367	0.398	0.375	0.414	94.494%	93.287%
2	18:57:29	98.432%	0.198	0.381	0.398	0.072	0.275	95.086%	93.113%
3	18:57:39	97.535%	0.118	0.377	0.375	0.159	0.321	96.124%	93.394%
x		98.166%	0.172	0.375	0.391	0.202	0.337	95.235%	93.265%
σ		0.549%	0.046	0.007	0.013	0.156	0.071	0.826%	0.142%
%RSD		0.559	26.980	1.868	3.442	77.270	21.000	0.867	0.152
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:57:20	0.133	0.119	0.215	0.209	0.184	90.668%		
2	18:57:29	0.117	0.150	0.153	0.160	0.154	91.012%		
3	18:57:39	0.105	0.103	0.210	0.164	0.173	91.220%		
x		0.118	0.124	0.192	0.178	0.170	90.967%		
σ		0.014	0.024	0.034	0.027	0.015	0.279%		
%RSD		12.130	19.420	17.930	15.350	9.013	0.307		

180-61122-A-4-C 12/5/2016 7:03:24 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:02:27	85.243%	6.018	57.960	56.450	0.000	1686.000	28110.000	28260.000
2	19:02:37	84.788%	5.467	57.630	57.600	0.000	1621.000	26990.000	27250.000
3	19:02:46	83.933%	5.444	55.520	57.130	0.000	1640.000	27530.000	27720.000
x		84.655%	5.643	57.040	57.060	0.000	1649.000	27540.000	27740.000
σ		0.665%	0.325	1.322	0.580	0.000	33.400	557.500	509.000
%RSD		0.785	5.762	2.318	1.016	0.000	2.026	2.024	1.835

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:02:27	90100.000	5483.000	0.000	11980.000	239300.000	240500.000	87.932%	467.700
2	19:02:37	87830.000	5283.000	0.000	11770.000	232900.000	233700.000	88.410%	465.700
3	19:02:46	89470.000	5370.000	0.000	11970.000	236500.000	236700.000	87.298%	454.200
x		89130.000	5379.000	0.000	11900.000	236300.000	237000.000	87.880%	462.600
σ		1171.000	100.300	0.000	118.200	3188.000	3410.000	0.558%	7.274
%RSD		1.314	1.865	0.000	0.993	1.349	1.439	0.635	1.573

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:02:27	163.800	131.100	2007.000	88160.000	85870.000	43.010	91.790	97.800
2	19:02:37	164.000	132.500	1975.000	88240.000	86650.000	42.010	89.700	99.490
3	19:02:46	163.200	133.300	2002.000	90040.000	88660.000	42.910	93.660	100.600
x		163.700	132.300	1995.000	88810.000	87060.000	42.640	91.720	99.280
σ		0.429	1.105	17.550	1065.000	1436.000	0.552	1.982	1.389
%RSD		0.262	0.835	0.880	1.199	1.649	1.294	2.161	1.399

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:02:27	96.680	709.800	694.800	25.410	3.254	4.742	0.000	278.900
2	19:02:37	97.260	698.800	702.400	24.490	1.878	2.533	0.000	274.700
3	19:02:46	96.500	707.100	711.400	24.850	2.844	6.506	0.000	277.600
x		96.810	705.200	702.900	24.920	2.659	4.594	0.000	277.000
σ		0.395	5.750	8.311	0.463	0.706	1.991	0.000	2.159
%RSD		0.407	0.815	1.182	1.860	26.560	43.330	0.000	0.779

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:02:27	130.799%	4.355	4.645	79.462%	3.527	3.513	2.969	4.084
2	19:02:37	133.190%	4.203	5.126	80.404%	3.429	3.492	2.599	3.576
3	19:02:46	131.033%	4.654	4.623	79.702%	3.625	3.406	2.848	3.604
x		131.674%	4.404	4.798	79.856%	3.527	3.471	2.805	3.755
σ		1.318%	0.229	0.284	0.489%	0.098	0.057	0.189	0.286
%RSD		1.001	5.204	5.920	0.613	2.774	1.640	6.718	7.606

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:02:27	79.437%	38.270	4.598	4.135	1025.000	1011.000	92.221%	90.805%
2	19:02:37	80.392%	39.080	4.434	4.183	992.800	993.700	93.742%	91.857%
3	19:02:46	80.022%	40.100	3.985	4.574	1021.000	1011.000	92.457%	90.654%
x		79.951%	39.150	4.339	4.297	1013.000	1005.000	92.807%	91.105%
σ		0.482%	0.917	0.317	0.241	17.600	9.971	0.818%	0.655%
%RSD		0.602	2.341	7.315	5.607	1.737	0.992	0.882	0.719

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	19:02:27	0.832	0.872	865.000	787.600	825.900	80.479%
2	19:02:37	0.862	0.842	843.400	773.700	807.700	82.928%
3	19:02:46	0.948	0.883	866.400	794.100	830.800	80.967%
x		0.880	0.866	858.300	785.100	821.500	81.458%
σ		0.060	0.022	12.860	10.390	12.150	1.296%
%RSD		6.837	2.493	1.498	1.324	1.479	1.591

180-60526-A-21-B @10 12/5/2016 7:08:29 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:07:34	87.675%	0.004	349.400	365.700	0.000	904300.000	111800.000	111900.000
2	19:07:43	88.027%	0.060	353.200	365.600	0.000	917500.000	113500.000	113700.000
3	19:07:53	89.341%	0.051	353.300	363.800	0.000	907500.000	112200.000	111700.000
x		88.348%	0.038	352.000	365.100	0.000	909800.000	112500.000	112400.000
σ		0.878%	0.030	2.232	1.059	0.000	6885.000	872.000	1069.000
%RSD		0.994	77.310	0.634	0.290	0.000	0.757	0.775	0.951
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:07:34	16.850	972.700	0.000	37070.000	35630.000	34050.000	94.105%	1.753
2	19:07:43	16.780	966.900	0.000	37660.000	35830.000	34520.000	93.410%	1.329
3	19:07:53	15.980	972.200	0.000	37230.000	36010.000	34240.000	95.233%	1.774
x		16.540	970.600	0.000	37320.000	35820.000	34270.000	94.249%	1.619
σ		0.480	3.226	0.000	300.000	193.700	239.800	0.920%	0.251
%RSD		2.900	0.332	0.000	0.804	0.541	0.700	0.976	15.500
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:07:34	1.626	0.401	9.805	13.570	26.090	0.056	0.128	0.199
2	19:07:43	1.036	0.395	9.708	13.400	28.790	0.017	0.054	0.055
3	19:07:53	1.094	0.251	9.566	12.350	29.540	0.016	0.235	0.091
x		1.252	0.349	9.693	13.110	28.140	0.029	0.139	0.115
σ		0.325	0.085	0.120	0.658	1.815	0.023	0.091	0.075
%RSD		25.970	24.300	1.242	5.019	6.450	76.870	65.730	65.380
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:07:34	0.171	0.597	0.770	5.657	-0.106	81.700	0.000	663.800
2	19:07:43	0.120	0.643	1.083	5.716	-0.107	81.820	0.000	656.500
3	19:07:53	0.116	1.293	1.102	6.436	-0.111	77.130	0.000	641.800
x		0.136	0.844	0.985	5.936	-0.108	80.220	0.000	654.000
σ		0.031	0.389	0.186	0.434	0.003	2.673	0.000	11.220
%RSD		22.850	46.120	18.930	7.310	2.419	3.332	0.000	1.716
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:07:34	93.118%	2.928	3.164	86.769%	-0.011	-0.011	0.024	-0.008
2	19:07:43	93.807%	2.778	2.676	88.167%	-0.011	-0.007	0.023	-0.008
3	19:07:53	95.163%	2.352	3.131	88.795%	0.026	-0.012	-0.000	0.001
x		94.029%	2.686	2.990	87.910%	0.001	-0.010	0.016	-0.005
σ		1.041%	0.298	0.273	1.037%	0.021	0.003	0.014	0.005
%RSD		1.107	11.110	9.117	1.180	1583.000	27.270	86.640	100.900
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:07:34	87.870%	-0.167	0.075	0.042	3.272	4.083	90.510%	88.517%
2	19:07:43	89.487%	-0.078	0.013	0.058	3.219	3.603	91.720%	89.329%
3	19:07:53	90.332%	-0.192	0.056	0.066	3.181	3.099	93.121%	90.550%
x		89.230%	-0.146	0.048	0.055	3.224	3.595	91.784%	89.465%
σ		1.251%	0.060	0.032	0.013	0.046	0.492	1.307%	1.023%
%RSD		1.402	41.320	66.290	22.940	1.412	13.690	1.424	1.144
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:07:34	0.011	0.011	0.274	0.334	0.315	83.058%		
2	19:07:43	-0.009	0.000	0.303	0.367	0.309	80.585%		
3	19:07:53	0.001	0.007	0.342	0.308	0.322	81.760%		
x		0.001	0.006	0.306	0.336	0.315	81.801%		
σ		0.010	0.005	0.034	0.029	0.006	1.237%		
%RSD		1064.000	86.480	11.100	8.767	2.036	1.512		

MB 180-196121/1-A 12/5/2016 7:17:23 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:28	97.437%	-0.015	0.147	-0.006	0.000	85.730	12.700	12.850
2	19:16:37	98.829%	-0.040	0.758	0.016	0.000	81.840	13.030	12.930
3	19:16:47	97.034%	-0.015	0.276	0.118	0.000	83.070	13.270	12.570
x		97.767%	-0.023	0.393	0.043	0.000	83.550	13.000	12.780
σ		0.942%	0.015	0.322	0.066	0.000	1.985	0.287	0.184
%RSD		0.963	62.910	81.830	154.700	0.000	2.376	2.207	1.441

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:28	5.570	-4.180	0.000	-12.600	103.500	16.420	95.701%	0.092
2	19:16:37	5.131	-4.240	0.000	-10.660	98.920	9.990	95.910%	0.181
3	19:16:47	5.496	-2.986	0.000	-10.760	122.200	14.190	95.424%	0.161
x		5.399	-3.802	0.000	-11.340	108.200	13.530	95.679%	0.144
σ		0.235	0.707	0.000	1.097	12.340	3.264	0.244%	0.047
%RSD		4.351	18.600	0.000	9.670	11.400	24.120	0.255	32.440

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:28	-0.049	0.024	0.348	4.613	11.520	-0.003	0.014	0.038
2	19:16:37	-0.037	0.031	0.358	3.793	2.585	0.016	-0.022	0.012
3	19:16:47	0.055	0.039	0.389	3.411	3.884	0.016	0.015	0.052
x		-0.010	0.031	0.365	3.939	5.996	0.010	0.002	0.034
σ		0.057	0.008	0.021	0.614	4.827	0.011	0.021	0.020
%RSD		544.700	24.480	5.815	15.600	80.500	113.800	905.700	58.600

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:28	0.140	0.266	1.228	0.017	-0.364	0.348	0.000	0.049
2	19:16:37	-0.013	0.396	0.480	-0.007	-0.364	0.551	0.000	0.026
3	19:16:47	-0.063	0.621	0.656	0.030	0.013	0.814	0.000	-0.007
x		0.021	0.428	0.788	0.013	-0.239	0.571	0.000	0.023
σ		0.105	0.180	0.391	0.018	0.218	0.233	0.000	0.028
%RSD		490.500	42.050	49.670	138.000	91.400	40.880	0.000	125.300

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:28	95.937%	-0.074	-0.042	94.447%	-0.002	-0.021	-0.000	-0.008
2	19:16:37	96.557%	-0.043	-0.061	95.787%	-0.007	-0.017	-0.000	-0.008
3	19:16:47	95.873%	-0.059	-0.014	95.430%	-0.007	-0.003	-0.000	-0.008
x		96.122%	-0.059	-0.039	95.221%	-0.005	-0.014	-0.000	-0.008
σ		0.378%	0.016	0.024	0.694%	0.003	0.009	0.000	0.000
%RSD		0.393	26.550	60.430	0.729	49.630	68.020	77.130	0.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:28	93.485%	-0.172	-0.062	-0.008	0.076	0.143	92.770%	92.015%
2	19:16:37	95.982%	-0.153	-0.041	-0.044	0.030	0.093	94.947%	92.433%
3	19:16:47	93.689%	-0.161	-0.055	-0.035	0.030	0.024	94.398%	92.693%
x		94.385%	-0.162	-0.053	-0.029	0.045	0.087	94.038%	92.380%
σ		1.386%	0.010	0.011	0.019	0.026	0.060	1.132%	0.342%
%RSD		1.469	5.969	20.050	64.260	58.170	69.290	1.204	0.370

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:28	-0.010	-0.003	0.023	0.008	0.010	91.235%
2	19:16:37	-0.013	-0.002	0.005	0.028	0.020	91.397%
3	19:16:47	-0.001	0.001	0.008	0.039	0.019	92.188%
x		-0.008	-0.001	0.012	0.025	0.016	91.607%
σ		0.006	0.002	0.010	0.016	0.006	0.510%
%RSD		81.000	137.100	79.830	64.650	34.990	0.557

LCS 180-196121/2-A 12/5/2016 7:22:28 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	83.870%	12.220	252.200	251.200	0.000	12790.000	12260.000	12330.000
2	19:21:42	84.172%	12.660	249.900	251.000	0.000	12820.000	12250.000	12380.000
3	19:21:52	85.805%	12.520	245.000	249.200	0.000	12880.000	12260.000	12400.000
x		84.616%	12.470	249.000	250.500	0.000	12830.000	12260.000	12370.000
σ		1.041%	0.226	3.654	1.140	0.000	43.730	2.118	37.590
%RSD		1.230	1.810	1.467	0.455	0.000	0.341	0.017	0.304
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	488.800	2806.000	0.000	13420.000	12840.000	12120.000	82.086%	247.800
2	19:21:42	493.300	2811.000	0.000	13480.000	13070.000	12120.000	82.580%	249.100
3	19:21:52	487.200	2829.000	0.000	13480.000	13120.000	12130.000	82.850%	255.500
x		489.800	2815.000	0.000	13460.000	13010.000	12120.000	82.505%	250.800
σ		3.197	12.180	0.000	30.880	151.200	5.464	0.388%	4.090
%RSD		0.653	0.433	0.000	0.230	1.162	0.045	0.470	1.631
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	119.000	48.930	124.700	229.100	283.400	123.900	127.600	66.010
2	19:21:42	117.500	48.090	124.400	228.900	267.700	122.500	121.000	64.150
3	19:21:52	116.600	49.270	125.700	228.100	282.600	123.500	119.900	63.480
x		117.700	48.760	125.000	228.700	277.900	123.300	122.800	64.550
σ		1.219	0.609	0.683	0.521	8.843	0.736	4.151	1.311
%RSD		1.036	1.249	0.546	0.228	3.182	0.597	3.379	2.032
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	65.980	124.200	109.800	10.240	2.632	2.847	0.000	245.600
2	19:21:42	63.480	121.800	114.000	9.841	2.893	3.978	0.000	242.800
3	19:21:52	68.890	124.000	115.400	10.320	2.019	4.314	0.000	243.600
x		66.120	123.300	113.100	10.130	2.515	3.713	0.000	244.000
σ		2.709	1.352	2.920	0.256	0.449	0.768	0.000	1.461
%RSD		4.098	1.096	2.581	2.530	17.840	20.690	0.000	0.599
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	79.895%	271.300	273.100	81.031%	12.480	13.180	12.250	22.280
2	19:21:42	81.017%	265.500	273.800	81.122%	12.650	12.510	12.580	22.410
3	19:21:52	80.287%	262.100	273.300	81.254%	12.240	12.550	12.860	23.070
x		80.399%	266.300	273.400	81.136%	12.460	12.740	12.560	22.580
σ		0.570%	4.667	0.397	0.112%	0.207	0.376	0.306	0.427
%RSD		0.708	1.752	0.145	0.139	1.660	2.948	2.438	1.889
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	79.112%	531.600	124.000	124.800	499.400	500.400	87.933%	85.913%
2	19:21:42	80.799%	521.000	125.100	123.900	493.400	490.000	89.138%	88.008%
3	19:21:52	78.872%	540.400	126.200	127.600	494.700	498.400	87.557%	86.892%
x		79.594%	531.000	125.100	125.400	495.800	496.300	88.209%	86.938%
σ		1.050%	9.730	1.077	1.933	3.108	5.472	0.826%	1.048%
%RSD		1.319	1.832	0.860	1.541	0.627	1.103	0.936	1.206
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:21:33	13.140	12.770	5.091	5.325	5.222	83.651%		
2	19:21:42	12.740	13.010	5.183	5.633	5.310	85.018%		
3	19:21:52	13.130	13.090	5.313	5.229	5.219	84.991%		
x		13.000	12.960	5.195	5.396	5.250	84.553%		
σ		0.226	0.164	0.112	0.211	0.052	0.782%		
%RSD		1.735	1.266	2.148	3.913	0.991	0.924		

180-61251-K-1-A 12/5/2016 7:27:33 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:26:38	81.929%	0.136	212.200	220.100	0.000	159300.000	1039.000	1041.000
2	19:26:47	81.207%	0.130	214.600	220.200	0.000	159100.000	1042.000	1040.000
3	19:26:57	82.303%	0.150	213.500	217.500	0.000	159900.000	1049.000	1059.000
x		81.813%	0.139	213.400	219.300	0.000	159400.000	1043.000	1046.000
σ		0.557%	0.010	1.219	1.521	0.000	418.900	5.279	10.550
%RSD		0.681	7.282	0.571	0.694	0.000	0.263	0.506	1.009
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:26:38	1126.000	8338.000	0.000	1822.000	5957.000	5381.000	84.663%	5.615
2	19:26:47	1140.000	8620.000	0.000	1815.000	5795.000	5380.000	85.294%	5.546
3	19:26:57	1136.000	8547.000	0.000	1844.000	5866.000	5402.000	84.255%	5.234
x		1134.000	8502.000	0.000	1827.000	5873.000	5388.000	84.737%	5.465
σ		7.415	146.000	0.000	14.770	81.000	12.530	0.524%	0.203
%RSD		0.654	1.718	0.000	0.808	1.379	0.233	0.618	3.719
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:26:38	1.433	0.438	16.950	417.900	447.300	0.181	0.764	2.435
2	19:26:47	1.549	0.360	16.880	414.800	431.200	0.159	1.094	2.631
3	19:26:57	1.531	0.458	17.120	419.000	475.200	0.193	0.770	2.587
x		1.504	0.419	16.980	417.200	451.200	0.177	0.876	2.551
σ		0.063	0.052	0.121	2.201	22.220	0.017	0.189	0.103
%RSD		4.171	12.360	0.714	0.528	4.924	9.638	21.550	4.035
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:26:38	2.624	10.900	9.349	1.686	0.059	1.462	0.000	171.200
2	19:26:47	2.720	10.950	10.310	1.730	-0.079	2.070	0.000	172.600
3	19:26:57	2.935	11.600	8.630	1.609	-0.079	1.771	0.000	171.600
x		2.759	11.150	9.429	1.675	-0.033	1.768	0.000	171.800
σ		0.159	0.392	0.842	0.061	0.080	0.304	0.000	0.738
%RSD		5.774	3.514	8.932	3.662	244.300	17.200	0.000	0.429
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:26:38	85.538%	1.306	1.376	83.469%	0.009	0.004	0.074	0.031
2	19:26:47	84.072%	1.235	1.435	82.805%	0.004	0.014	0.100	0.021
3	19:26:57	84.421%	1.394	1.315	82.864%	0.014	-0.011	0.050	0.071
x		84.677%	1.312	1.375	83.046%	0.009	0.003	0.074	0.041
σ		0.766%	0.080	0.060	0.368%	0.005	0.013	0.025	0.026
%RSD		0.905	6.074	4.388	0.443	55.970	499.800	33.500	63.720
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:26:38	83.978%	0.502	0.341	0.379	68.170	69.070	88.773%	88.396%
2	19:26:47	83.170%	0.497	0.281	0.343	68.900	68.580	89.288%	88.561%
3	19:26:57	83.387%	0.154	0.265	0.363	70.110	72.470	87.485%	88.106%
x		83.512%	0.384	0.296	0.362	69.060	70.040	88.516%	88.354%
σ		0.418%	0.199	0.040	0.018	0.980	2.120	0.929%	0.230%
%RSD		0.501	51.870	13.600	5.058	1.418	3.027	1.049	0.261
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:26:38	-0.003	0.020	2.010	1.871	1.937	85.172%		
2	19:26:47	0.000	0.010	2.034	1.926	1.963	85.796%		
3	19:26:57	0.007	0.006	2.267	1.935	2.067	85.993%		
x		0.001	0.012	2.104	1.911	1.989	85.654%		
σ		0.005	0.007	0.142	0.035	0.069	0.429%		
%RSD		338.000	55.810	6.744	1.811	3.453	0.501		

180-61251-J-1-A 12/5/2016 7:32:41 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:31:43	80.014%	-0.035	206.400	221.700	0.000	157200.000	728.000	734.100
2	19:31:53	82.426%	0.016	205.900	216.100	0.000	155900.000	713.600	725.700
3	19:32:02	83.326%	0.059	209.000	211.900	0.000	158700.000	745.600	739.200
x		81.922%	0.014	207.100	216.600	0.000	157300.000	729.100	733.000
σ		1.713%	0.047	1.632	4.915	0.000	1374.000	16.030	6.821
%RSD		2.091	343.500	0.788	2.270	0.000	0.873	2.198	0.931
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:31:43	61.690	6244.000	0.000	1740.000	4780.000	4460.000	85.794%	0.925
2	19:31:53	62.570	6190.000	0.000	1754.000	4657.000	4464.000	85.745%	0.648
3	19:32:02	61.010	6328.000	0.000	1782.000	4825.000	4495.000	84.903%	0.658
x		61.750	6254.000	0.000	1759.000	4754.000	4473.000	85.481%	0.744
σ		0.781	69.900	0.000	21.410	87.010	19.250	0.501%	0.157
%RSD		1.265	1.118	0.000	1.217	1.830	0.430	0.586	21.090
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:31:43	1.054	0.223	5.612	4.385	10.170	0.008	0.105	0.241
2	19:31:53	1.199	0.156	5.627	5.354	4.499	0.018	0.024	0.229
3	19:32:02	1.627	0.140	5.652	4.302	1.658	0.040	0.065	0.129
x		1.293	0.173	5.630	4.680	5.443	0.022	0.065	0.200
σ		0.298	0.044	0.020	0.585	4.335	0.017	0.041	0.062
%RSD		23.030	25.330	0.353	12.490	79.630	75.090	62.830	30.920
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:31:43	0.198	7.664	6.347	1.318	0.200	-0.230	0.000	142.900
2	19:31:53	0.143	7.973	5.945	1.441	-0.222	1.180	0.000	141.400
3	19:32:02	0.231	7.570	7.216	1.762	-0.221	0.949	0.000	142.500
x		0.191	7.736	6.503	1.507	-0.081	0.633	0.000	142.300
σ		0.044	0.211	0.650	0.229	0.243	0.756	0.000	0.791
%RSD		23.200	2.726	9.993	15.200	300.200	119.400	0.000	0.556
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:31:43	85.332%	1.022	1.133	83.399%	0.004	-0.016	0.000	0.021
2	19:31:53	84.072%	1.028	1.282	84.131%	-0.006	-0.001	-0.000	0.021
3	19:32:02	83.955%	0.977	1.170	83.653%	-0.001	0.009	0.000	0.011
x		84.453%	1.009	1.195	83.727%	-0.001	-0.003	0.000	0.018
σ		0.763%	0.028	0.077	0.372%	0.005	0.013	0.000	0.006
%RSD		0.904	2.750	6.456	0.444	447.200	480.200	796.000	31.890
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:31:43	83.616%	0.153	0.201	0.194	53.650	53.000	88.322%	87.078%
2	19:31:53	83.719%	0.140	0.224	0.213	51.270	52.740	88.907%	87.547%
3	19:32:02	84.031%	0.102	0.199	0.153	52.380	51.020	89.291%	89.034%
x		83.789%	0.132	0.208	0.187	52.430	52.250	88.840%	87.886%
σ		0.216%	0.026	0.014	0.031	1.191	1.077	0.488%	1.021%
%RSD		0.258	19.940	6.674	16.370	2.272	2.061	0.549	1.162
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:31:43	-0.009	-0.003	0.194	0.150	0.155	85.517%		
2	19:31:53	-0.009	-0.001	0.174	0.123	0.155	85.952%		
3	19:32:02	-0.006	0.003	0.169	0.170	0.151	86.201%		
x		-0.008	-0.000	0.179	0.148	0.154	85.890%		
σ		0.002	0.003	0.013	0.023	0.002	0.346%		
%RSD		22.120	561.200	7.327	15.700	1.572	0.403		

180-61251-I-2-A 12/5/2016 7:37:47 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:36:50	89.017%	-0.003	0.751	0.145	0.000	65.840	2.825	2.168
2	19:37:00	88.552%	-0.003	0.719	0.183	0.000	63.550	1.419	3.129
3	19:37:09	86.267%	-0.023	0.098	0.182	0.000	63.890	3.139	3.160
x		87.945%	-0.010	0.523	0.170	0.000	64.430	2.461	2.819
σ		1.472%	0.011	0.368	0.022	0.000	1.234	0.916	0.564
%RSD		1.674	115.200	70.380	12.740	0.000	1.915	37.230	20.000

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:36:50	4.188	3.267	0.000	-30.610	80.080	7.521	88.310%	0.129
2	19:37:00	4.427	4.992	0.000	-27.880	104.200	8.016	87.965%	0.033
3	19:37:09	4.983	3.765	0.000	-15.560	115.200	8.404	85.764%	-0.083
x		4.533	4.008	0.000	-24.690	99.830	7.980	87.346%	0.026
σ		0.408	0.888	0.000	8.017	17.970	0.443	1.381%	0.106
%RSD		8.993	22.150	0.000	32.470	18.000	5.546	1.581	402.500

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:36:50	-0.722	0.060	0.183	1.117	7.050	-0.003	-0.019	0.049
2	19:37:00	-0.367	0.143	0.201	0.864	0.168	0.018	-0.058	0.037
3	19:37:09	-0.284	0.155	0.186	0.862	3.026	-0.003	0.185	0.110
x		-0.458	0.119	0.190	0.948	3.415	0.004	0.036	0.065
σ		0.233	0.052	0.009	0.147	3.458	0.012	0.131	0.039
%RSD		50.780	43.300	4.932	15.490	101.200	307.300	365.100	60.050

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:36:50	0.051	5.190	5.677	-0.018	-0.364	0.352	0.000	0.029
2	19:37:00	-0.030	5.371	5.960	-0.004	-0.226	0.066	0.000	0.042
3	19:37:09	0.055	5.775	5.825	0.023	-0.364	-0.221	0.000	0.042
x		0.025	5.445	5.821	0.000	-0.318	0.066	0.000	0.038
σ		0.048	0.299	0.141	0.020	0.080	0.287	0.000	0.008
%RSD		189.900	5.498	2.427	9966.000	25.160	435.100	0.000	20.270

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:36:50	88.960%	-0.089	-0.038	89.382%	-0.006	-0.011	-0.000	-0.008
2	19:37:00	86.582%	-0.054	-0.047	88.702%	-0.006	-0.002	-0.000	0.001
3	19:37:09	87.069%	-0.089	-0.037	88.842%	-0.006	0.008	-0.000	-0.008
x		87.537%	-0.077	-0.041	88.975%	-0.006	-0.002	-0.000	-0.005
σ		1.256%	0.020	0.006	0.359%	0.000	0.010	0.000	0.005
%RSD		1.435	25.980	13.560	0.403	0.429	526.200	126.900	108.400

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:36:50	87.596%	-0.144	-0.001	-0.034	-0.014	0.100	90.696%	88.331%
2	19:37:00	86.059%	-0.142	-0.015	0.005	0.033	0.025	91.493%	89.800%
3	19:37:09	86.452%	-0.154	-0.054	-0.024	0.033	0.025	90.243%	89.378%
x		86.702%	-0.147	-0.023	-0.018	0.018	0.050	90.811%	89.169%
σ		0.798%	0.007	0.027	0.020	0.027	0.043	0.633%	0.756%
%RSD		0.921	4.477	118.500	112.900	156.000	86.200	0.697	0.848

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	19:36:50	-0.016	-0.005	0.134	0.188	0.148	89.458%
2	19:37:00	-0.010	-0.003	0.140	0.194	0.162	90.324%
3	19:37:09	-0.013	0.001	0.187	0.174	0.146	90.199%
x		-0.013	-0.002	0.154	0.186	0.152	89.994%
σ		0.003	0.003	0.029	0.010	0.009	0.469%
%RSD		24.250	127.100	19.080	5.519	5.887	0.521

180-61256-H-1-A 12/5/2016 7:42:52 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:41:56	82.113%	-0.013	130.900	135.200	0.000	92830.000	1532.000	1546.000
2	19:42:06	80.810%	-0.035	133.100	136.900	0.000	94380.000	1564.000	1566.000
3	19:42:15	83.199%	0.016	132.900	132.600	0.000	93130.000	1534.000	1551.000
x		82.041%	-0.011	132.300	134.900	0.000	93440.000	1543.000	1554.000
σ		1.196%	0.025	1.199	2.193	0.000	820.700	17.610	10.630
%RSD		1.458	234.100	0.906	1.625	0.000	0.878	1.141	0.684

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:41:56	57.740	5849.000	0.000	1542.000	6756.000	6261.000	86.440%	1.916
2	19:42:06	61.280	5854.000	0.000	1578.000	6786.000	6326.000	85.201%	3.015
3	19:42:15	65.880	5841.000	0.000	1572.000	6759.000	6324.000	85.876%	1.880
x		61.630	5848.000	0.000	1564.000	6767.000	6304.000	85.839%	2.270
σ		4.078	6.302	0.000	19.410	16.420	37.230	0.621%	0.645
%RSD		6.617	0.108	0.000	1.241	0.243	0.591	0.723	28.410

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:41:56	0.187	0.180	125.200	37.980	55.810	0.029	0.187	0.837
2	19:42:06	0.399	0.268	127.400	38.660	43.510	0.040	0.066	0.422
3	19:42:15	0.373	0.164	127.600	37.250	58.920	0.051	0.106	0.651
x		0.319	0.204	126.700	37.960	52.750	0.040	0.120	0.637
σ		0.116	0.056	1.351	0.705	8.148	0.011	0.062	0.208
%RSD		36.220	27.360	1.066	1.858	15.450	27.020	51.710	32.610

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:41:56	0.942	6.225	4.234	0.475	-0.364	2.078	0.000	177.400
2	19:42:06	0.319	6.143	6.309	0.397	-0.364	1.491	0.000	178.500
3	19:42:15	0.745	6.093	5.915	0.653	0.066	1.780	0.000	175.900
x		0.668	6.154	5.486	0.508	-0.221	1.783	0.000	177.300
σ		0.318	0.067	1.102	0.132	0.248	0.293	0.000	1.325
%RSD		47.630	1.082	20.080	25.890	112.300	16.440	0.000	0.747

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:41:56	83.426%	0.238	0.392	84.020%	-0.006	-0.011	0.025	-0.008
2	19:42:06	82.923%	0.240	0.417	83.367%	-0.006	-0.016	-0.000	0.021
3	19:42:15	83.532%	0.491	0.297	83.650%	-0.001	0.004	0.025	0.022
x		83.293%	0.323	0.368	83.679%	-0.004	-0.008	0.017	0.012
σ		0.325%	0.146	0.063	0.327%	0.003	0.010	0.014	0.017
%RSD		0.391	45.170	17.170	0.391	65.430	139.300	86.740	148.600

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:41:56	83.411%	0.629	0.018	0.066	80.550	79.520	89.078%	87.642%
2	19:42:06	83.456%	0.531	-0.013	0.026	81.220	76.770	87.819%	87.711%
3	19:42:15	82.737%	0.783	-0.005	0.037	78.960	77.530	88.821%	89.166%
x		83.202%	0.648	0.000	0.043	80.240	77.940	88.573%	88.173%
σ		0.403%	0.127	0.016	0.020	1.162	1.418	0.665%	0.861%
%RSD		0.484	19.570	72730.000	47.480	1.448	1.819	0.751	0.976

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	19:41:56	-0.010	0.001	0.059	0.034	0.047	87.012%
2	19:42:06	-0.003	-0.003	0.028	0.058	0.043	87.490%
3	19:42:15	-0.006	-0.005	0.069	0.058	0.056	87.783%
x		-0.006	-0.002	0.052	0.050	0.049	87.429%
σ		0.003	0.003	0.021	0.014	0.006	0.389%
%RSD		50.490	142.200	40.910	28.560	13.020	0.445

180-61256-H-1-A SD@5 12/5/2016 7:47:57 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:47:02	88.727%	-0.024	25.820	26.770	0.000	19070.000	312.300	316.600
2	19:47:12	87.504%	-0.037	24.550	27.340	0.000	19020.000	320.600	318.600
3	19:47:22	86.848%	-0.009	24.480	26.470	0.000	18980.000	318.600	312.900
x		87.693%	-0.023	24.950	26.860	0.000	19020.000	317.200	316.000
σ		0.954%	0.014	0.759	0.441	0.000	47.570	4.301	2.901
%RSD		1.088	60.730	3.040	1.643	0.000	0.250	1.356	0.918

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:47:02	11.600	1135.000	0.000	269.100	1355.000	1258.000	89.407%	0.728
2	19:47:12	11.940	1108.000	0.000	272.300	1374.000	1243.000	89.151%	0.464
3	19:47:22	11.960	1148.000	0.000	276.100	1326.000	1276.000	88.893%	-0.020
x		11.830	1130.000	0.000	272.500	1351.000	1259.000	89.150%	0.391
σ		0.202	20.420	0.000	3.501	24.130	16.690	0.257%	0.379
%RSD		1.706	1.807	0.000	1.285	1.786	1.325	0.289	97.040

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:47:02	-0.105	0.043	25.050	7.735	16.590	0.018	-0.019	0.201
2	19:47:12	0.028	0.059	25.180	9.008	11.090	0.028	-0.019	0.048
3	19:47:22	-0.099	0.035	25.270	8.541	8.442	-0.003	-0.019	0.232
x		-0.059	0.046	25.170	8.428	12.040	0.014	-0.019	0.160
σ		0.075	0.012	0.111	0.644	4.156	0.016	0.000	0.098
%RSD		128.000	26.590	0.439	7.636	34.510	111.400	1.147	61.400

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:47:02	0.078	0.935	1.642	0.073	0.181	0.353	0.000	35.780
2	19:47:12	0.159	0.977	0.667	0.099	0.041	0.572	0.000	36.440
3	19:47:22	0.135	1.188	1.449	0.114	-0.364	-0.218	0.000	37.460
x		0.124	1.033	1.253	0.095	-0.048	0.236	0.000	36.560
σ		0.042	0.135	0.517	0.020	0.283	0.408	0.000	0.851
%RSD		33.580	13.110	41.230	21.490	595.000	173.300	0.000	2.327

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:47:02	88.139%	-0.038	0.023	88.643%	-0.002	-0.011	-0.000	-0.008
2	19:47:12	89.230%	0.030	0.033	88.370%	-0.006	0.003	0.000	-0.008
3	19:47:22	87.000%	0.033	0.045	87.561%	-0.006	-0.016	-0.000	-0.008
x		88.123%	0.008	0.033	88.191%	-0.005	-0.008	0.000	-0.008
σ		1.115%	0.040	0.011	0.563%	0.003	0.010	0.000	0.000
%RSD		1.265	470.500	32.880	0.638	56.720	118.800	695.500	0.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:47:02	87.747%	0.007	-0.008	-0.015	15.450	15.700	91.047%	88.512%
2	19:47:12	88.491%	-0.064	-0.024	-0.006	14.700	14.870	89.482%	90.009%
3	19:47:22	86.812%	0.010	-0.046	-0.024	15.840	15.030	89.052%	88.923%
x		87.683%	-0.016	-0.026	-0.015	15.330	15.200	89.860%	89.148%
σ		0.841%	0.042	0.019	0.009	0.580	0.442	1.050%	0.774%
%RSD		0.960	263.600	72.640	61.150	3.781	2.907	1.168	0.868

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	19:47:02	-0.016	-0.003	0.016	0.024	0.013	88.795%
2	19:47:12	-0.013	0.003	0.013	0.012	0.013	89.040%
3	19:47:22	-0.006	-0.000	0.009	0.025	0.011	88.426%
x		-0.012	0.000	0.013	0.020	0.012	88.754%
σ		0.005	0.003	0.004	0.007	0.001	0.309%
%RSD		41.380	2227.000	28.630	35.450	7.637	0.348

180-61256-E-1-C MS 12/5/2016 7:53:05 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:52:08	79.225%	53.290	1178.000	1155.000	0.000	142500.000	52250.000	52020.000
2	19:52:17	77.462%	52.840	1175.000	1169.000	0.000	142600.000	51600.000	51790.000
3	19:52:27	79.183%	53.670	1177.000	1166.000	0.000	144300.000	52490.000	52260.000
x		78.624%	53.270	1177.000	1163.000	0.000	143100.000	52110.000	52020.000
σ		1.006%	0.417	1.740	7.081	0.000	990.400	458.000	233.500
%RSD		1.280	0.784	0.148	0.609	0.000	0.692	0.879	0.449
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:52:08	2107.000	15890.000	0.000	51950.000	57790.000	56700.000	81.620%	1006.000
2	19:52:17	2095.000	15740.000	0.000	52040.000	57410.000	56240.000	81.390%	993.400
3	19:52:27	2125.000	15970.000	0.000	52200.000	57590.000	56920.000	81.672%	1001.000
x		2109.000	15870.000	0.000	52070.000	57600.000	56620.000	81.561%	1000.000
σ		15.390	115.200	0.000	125.700	192.000	349.300	0.150%	6.543
%RSD		0.730	0.726	0.000	0.241	0.333	0.617	0.184	0.654
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:52:08	508.900	200.200	616.900	990.400	1083.000	502.500	503.400	256.700
2	19:52:17	506.200	199.500	616.200	978.400	975.700	510.500	496.400	257.400
3	19:52:27	495.100	197.500	615.700	963.600	1082.000	505.900	505.200	253.100
x		503.400	199.100	616.300	977.500	1047.000	506.300	501.700	255.800
σ		7.299	1.385	0.586	13.420	61.670	4.060	4.679	2.305
%RSD		1.450	0.695	0.095	1.373	5.891	0.802	0.933	0.901
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:52:08	251.100	498.800	486.200	39.530	11.270	6.970	0.000	1185.000
2	19:52:17	259.000	502.500	483.600	41.400	9.797	12.050	0.000	1163.000
3	19:52:27	248.200	502.600	495.700	40.550	7.586	14.090	0.000	1150.000
x		252.800	501.300	488.500	40.490	9.551	11.040	0.000	1166.000
σ		5.579	2.156	6.371	0.936	1.854	3.668	0.000	17.670
%RSD		2.207	0.430	1.304	2.312	19.410	33.230	0.000	1.515
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:52:08	83.304%	1070.000	1102.000	79.951%	49.210	48.410	52.190	88.560
2	19:52:17	83.574%	1058.000	1090.000	80.241%	47.530	49.170	50.270	91.250
3	19:52:27	83.950%	1073.000	1112.000	79.710%	48.670	48.710	50.080	85.820
x		83.609%	1067.000	1101.000	79.967%	48.470	48.760	50.850	88.540
σ		0.324%	7.866	10.980	0.266%	0.861	0.382	1.169	2.714
%RSD		0.388	0.737	0.997	0.333	1.777	0.783	2.299	3.065
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:52:08	80.172%	2087.000	524.700	523.600	2099.000	2093.000	86.615%	85.990%
2	19:52:17	80.369%	2082.000	523.400	519.700	2074.000	2080.000	86.507%	86.461%
3	19:52:27	81.022%	2066.000	517.900	519.500	2056.000	2066.000	87.073%	85.623%
x		80.521%	2079.000	522.000	520.900	2077.000	2080.000	86.732%	86.025%
σ		0.445%	11.050	3.628	2.293	21.770	13.590	0.300%	0.420%
%RSD		0.553	0.531	0.695	0.440	1.048	0.654	0.346	0.488
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:52:08	50.120	49.700	20.030	20.690	20.370	82.262%		
2	19:52:17	50.470	49.940	20.070	19.930	19.810	82.251%		
3	19:52:27	51.020	50.440	20.170	20.600	20.360	82.028%		
x		50.540	50.030	20.090	20.410	20.180	82.180%		
σ		0.451	0.378	0.076	0.414	0.323	0.132%		
%RSD		0.892	0.756	0.379	2.029	1.602	0.161		

CCV 2136057 12/5/2016 7:58:02 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:07	86.049%	102.100	104.700	101.700	0.000	50850.000	51310.000	51160.000
2	19:57:16	86.912%	101.200	100.100	101.200	0.000	50970.000	51370.000	51200.000
3	19:57:26	83.480%	105.000	105.200	104.500	0.000	51410.000	51510.000	51420.000
x		85.481%	102.745%	103.338%	102.470%	0.000	102.151%	102.794%	102.526%
σ		1.785%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.088	1.919	2.757	1.743	0.000	0.585	0.199	0.272
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:07	552.500	5314.000	0.000	49700.000	49580.000	48980.000	84.223%	102.900
2	19:57:16	546.000	5402.000	0.000	49680.000	49410.000	49280.000	84.713%	102.100
3	19:57:26	546.600	5287.000	0.000	50360.000	50080.000	49280.000	83.806%	104.600
x		109.674%	106.694%	0.000	99.828%	99.385%	98.357%	84.247%	103.203%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.454%	n/a
%RSD		0.648	1.124	0.000	0.774	0.700	0.349	0.539	1.239
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:07	101.300	100.700	485.300	26410.000	25270.000	104.600	103.600	106.600
2	19:57:16	100.400	100.600	485.800	26250.000	25740.000	103.400	104.500	105.300
3	19:57:26	105.000	104.200	492.400	26470.000	26120.000	105.300	102.200	104.200
x		102.238%	101.840%	97.563%	105.508%	102.851%	104.430%	103.429%	105.373%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.409	2.005	0.813	0.433	1.659	0.926	1.107	1.143
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:07	101.400	103.300	97.940	104.400	104.300	95.570	0.000	101.800
2	19:57:16	102.100	98.840	102.300	104.300	98.500	98.100	0.000	101.500
3	19:57:26	104.300	100.700	103.600	103.600	106.000	94.150	0.000	102.600
x		102.603%	100.951%	101.283%	104.102%	102.952%	95.943%	0.000	101.979%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.508	2.231	2.927	0.403	3.828	2.086	0.000	0.541
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:07	88.139%	104.000	109.500	83.222%	96.860	96.820	98.270	98.740
2	19:57:16	87.837%	103.900	109.500	83.123%	98.270	99.520	94.750	101.400
3	19:57:26	89.071%	103.700	107.700	84.182%	98.500	99.410	95.920	100.000
x		88.349%	103.861%	108.867%	83.509%	97.876%	98.586%	96.314%	100.031%
σ		0.643%	n/a	n/a	0.585%	n/a	n/a	n/a	n/a
%RSD		0.728	0.119	0.941	0.700	0.910	1.548	1.858	1.307
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:07	84.399%	103.500	103.100	103.700	107.800	104.500	85.878%	86.145%
2	19:57:16	85.365%	102.500	101.500	101.500	101.700	100.300	87.533%	85.779%
3	19:57:26	85.049%	101.300	103.500	103.200	97.650	100.900	87.011%	86.688%
x		84.938%	102.448%	102.705%	102.810%	102.393%	101.889%	86.807%	86.204%
σ		0.492%	n/a	n/a	n/a	n/a	n/a	0.846%	0.458%
%RSD		0.580	1.087	1.040	1.133	5.010	2.231	0.975	0.531
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:57:07	98.450	98.400	99.040	98.190	98.290	82.242%		
2	19:57:16	98.750	98.490	97.810	99.920	98.830	82.526%		
3	19:57:26	98.890	98.300	99.960	99.090	99.250	82.683%		
x		98.697%	98.398%	98.937%	99.066%	98.792%	82.484%		
σ		n/a	n/a	n/a	n/a	n/a	0.224%		
%RSD		0.223	0.094	1.088	0.874	0.489	0.271		

CCB8 12/5/2016 8:03:10 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:02:14	93.443%	0.026	0.221	0.126	0.000	14.420	8.777	8.814
2	20:02:23	91.558%	0.015	1.158	0.406	0.000	15.810	8.305	8.201
3	20:02:33	92.095%	0.028	0.290	0.121	0.000	14.950	7.491	8.157
x		92.365%	0.023	0.556	0.218	0.000	15.060	8.191	8.391
σ		0.971%	0.007	0.522	0.163	0.000	0.699	0.651	0.367
%RSD		1.051	30.630	93.840	74.990	0.000	4.642	7.941	4.376

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:02:14	0.361	-5.682	0.000	-9.844	-46.480	-9.598	88.774%	0.005
2	20:02:23	0.240	-6.153	0.000	-2.737	-10.540	-7.349	87.735%	-0.065
3	20:02:33	0.014	-4.133	0.000	-10.120	-16.060	-13.100	88.569%	-0.043
x		0.205	-5.323	0.000	-7.566	-24.360	-10.010	88.359%	-0.034
σ		0.176	1.057	0.000	4.184	19.350	2.897	0.550%	0.036
%RSD		85.790	19.850	0.000	55.310	79.440	28.930	0.623	104.200

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:02:14	0.071	0.003	0.111	6.022	2.845	0.058	-0.020	0.032
2	20:02:23	-0.048	0.003	0.125	4.517	11.100	0.038	-0.058	-0.049
3	20:02:33	0.061	0.011	0.123	4.094	2.854	0.028	-0.020	0.074
x		0.028	0.005	0.120	4.878	5.601	0.041	-0.033	0.019
σ		0.066	0.005	0.008	1.013	4.765	0.015	0.022	0.062
%RSD		234.500	86.560	6.313	20.770	85.070	37.570	68.590	329.500

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:02:14	0.100	0.300	-0.011	0.045	0.028	0.562	0.000	0.027
2	20:02:23	-0.006	0.164	0.274	0.070	0.030	1.919	0.000	0.027
3	20:02:33	-0.006	-0.119	0.151	0.045	0.029	1.645	0.000	0.016
x		0.029	0.115	0.138	0.053	0.029	1.375	0.000	0.024
σ		0.061	0.214	0.143	0.015	0.001	0.717	0.000	0.007
%RSD		208.200	186.000	103.700	27.750	3.408	52.150	0.000	28.350

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:02:14	93.219%	1.140	1.136	91.156%	0.025	-0.007	0.022	0.045
2	20:02:23	92.970%	0.612	0.645	92.288%	0.007	-0.003	0.000	0.027
3	20:02:33	93.038%	0.677	0.645	92.296%	0.011	-0.012	0.045	0.010
x		93.076%	0.810	0.808	91.913%	0.014	-0.007	0.023	0.027
σ		0.129%	0.288	0.284	0.656%	0.009	0.005	0.023	0.018
%RSD		0.138	35.500	35.080	0.714	65.470	61.790	100.000	64.940

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:02:14	92.348%	0.493	0.416	0.426	0.077	0.048	90.978%	89.067%
2	20:02:23	92.654%	0.479	0.364	0.289	0.031	0.024	91.448%	90.004%
3	20:02:33	91.731%	0.631	0.405	0.265	0.123	0.049	90.825%	89.322%
x		92.244%	0.534	0.395	0.327	0.077	0.040	91.083%	89.464%
σ		0.470%	0.084	0.027	0.087	0.046	0.014	0.325%	0.485%
%RSD		0.509	15.730	6.943	26.530	59.510	34.900	0.356	0.542

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	20:02:14	0.031	0.006	0.013	0.008	0.002	89.325%
2	20:02:23	0.009	0.011	0.009	-0.000	0.003	89.485%
3	20:02:33	0.006	0.001	0.013	0.012	0.008	89.619%
x		0.016	0.006	0.011	0.006	0.004	89.476%
σ		0.014	0.005	0.002	0.006	0.003	0.147%
%RSD		88.950	84.460	18.740	96.280	66.090	0.165

180-61256-E-1-D MSD 12/5/2016 8:08:18 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:07:21	77.784%	54.660	1194.000	1212.000	0.000	142500.000	52570.000	52730.000
2	20:07:31	78.228%	54.570	1191.000	1190.000	0.000	143700.000	52520.000	52330.000
3	20:07:40	78.306%	53.830	1154.000	1182.000	0.000	142200.000	52070.000	52100.000
x		78.106%	54.360	1180.000	1195.000	0.000	142800.000	52390.000	52390.000
σ		0.282%	0.457	22.560	15.530	0.000	813.800	273.200	317.800
%RSD		0.360	0.840	1.912	1.300	0.000	0.570	0.522	0.607
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:07:21	2117.000	16410.000	0.000	52630.000	57710.000	56450.000	84.471%	1006.000
2	20:07:31	2113.000	16330.000	0.000	53100.000	57920.000	59620.000	83.363%	1024.000
3	20:07:40	2080.000	16300.000	0.000	52630.000	57280.000	56270.000	83.872%	1004.000
x		2104.000	16350.000	0.000	52790.000	57640.000	57450.000	83.902%	1011.000
σ		20.170	54.100	0.000	273.400	327.200	1883.000	0.555%	11.200
%RSD		0.959	0.331	0.000	0.518	0.568	3.278	0.661	1.107
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:07:21	492.900	193.800	616.300	969.400	1064.000	496.900	485.100	252.300
2	20:07:31	494.200	196.300	624.200	978.000	1050.000	506.200	503.800	254.400
3	20:07:40	497.800	195.800	617.500	971.000	1079.000	498.200	495.600	252.700
x		495.000	195.300	619.300	972.800	1064.000	500.400	494.800	253.100
σ		2.527	1.352	4.235	4.537	14.260	5.029	9.392	1.110
%RSD		0.511	0.692	0.684	0.466	1.340	1.005	1.898	0.438
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:07:21	251.300	495.800	475.600	41.200	10.290	11.230	0.000	1176.000
2	20:07:31	252.600	502.800	487.500	41.240	9.962	12.160	0.000	1179.000
3	20:07:40	250.100	501.500	492.000	41.410	9.294	8.954	0.000	1177.000
x		251.300	500.000	485.000	41.280	9.848	10.780	0.000	1177.000
σ		1.258	3.707	8.487	0.114	0.507	1.650	0.000	1.337
%RSD		0.501	0.741	1.750	0.275	5.144	15.310	0.000	0.114
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:07:21	84.972%	1070.000	1113.000	81.041%	48.800	48.890	48.520	90.850
2	20:07:31	84.257%	1081.000	1110.000	80.713%	48.840	48.720	52.860	89.580
3	20:07:40	83.505%	1084.000	1105.000	80.917%	47.950	49.120	51.630	91.100
x		84.245%	1078.000	1109.000	80.891%	48.530	48.910	51.000	90.510
σ		0.733%	7.363	4.140	0.165%	0.505	0.203	2.236	0.817
%RSD		0.871	0.683	0.373	0.205	1.041	0.415	4.384	0.903
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:07:21	80.976%	2088.000	527.400	529.400	2088.000	2082.000	87.177%	87.185%
2	20:07:31	81.691%	2074.000	524.600	527.200	2102.000	2091.000	86.641%	87.502%
3	20:07:40	81.356%	2077.000	520.100	520.700	2085.000	2087.000	87.387%	87.393%
x		81.341%	2080.000	524.000	525.800	2091.000	2087.000	87.069%	87.360%
σ		0.358%	7.567	3.686	4.500	9.150	4.221	0.385%	0.162%
%RSD		0.440	0.364	0.703	0.856	0.438	0.202	0.442	0.185
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:07:21	49.590	50.430	19.980	20.350	20.050	83.500%		
2	20:07:31	50.140	49.750	19.820	19.560	20.050	83.774%		
3	20:07:40	50.380	49.850	20.160	20.040	19.880	83.762%		
x		50.030	50.010	19.990	19.980	19.990	83.679%		
σ		0.407	0.368	0.175	0.395	0.100	0.155%		
%RSD		0.814	0.736	0.874	1.975	0.501	0.185		

180-61256-J-2-A 12/5/2016 8:13:23 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:12:28	82.933%	0.067	131.300	135.600	0.000	94090.000	1617.000	1583.000
2	20:12:38	83.633%	0.015	133.200	135.100	0.000	94880.000	1613.000	1615.000
3	20:12:48	81.960%	0.032	131.700	140.300	0.000	94590.000	1597.000	1588.000
x		82.842%	0.038	132.000	137.000	0.000	94520.000	1609.000	1595.000
σ		0.840%	0.027	1.001	2.840	0.000	401.800	10.950	17.070
%RSD		1.014	70.090	0.758	2.073	0.000	0.425	0.681	1.070
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:12:28	67.350	5640.000	0.000	1576.000	6747.000	6374.000	83.977%	2.137
2	20:12:38	69.170	5720.000	0.000	1570.000	6729.000	6411.000	84.775%	1.960
3	20:12:48	70.560	5619.000	0.000	1579.000	6585.000	6419.000	84.242%	2.694
x		69.030	5660.000	0.000	1575.000	6687.000	6401.000	84.331%	2.264
σ		1.606	53.480	0.000	4.594	88.920	24.370	0.407%	0.383
%RSD		2.327	0.945	0.000	0.292	1.330	0.381	0.482	16.910
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:12:28	0.117	0.159	126.400	42.540	49.500	0.095	0.066	0.612
2	20:12:38	-0.534	0.132	126.900	43.600	39.060	0.105	0.312	0.709
3	20:12:48	-0.101	0.141	126.200	44.090	45.110	0.084	0.149	0.671
x		-0.173	0.144	126.500	43.410	44.550	0.095	0.176	0.664
σ		0.332	0.014	0.375	0.795	5.241	0.011	0.125	0.049
%RSD		192.200	9.527	0.297	1.831	11.760	11.130	71.350	7.392
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:12:28	0.461	6.721	4.580	0.487	-0.222	0.882	0.000	175.500
2	20:12:38	0.658	7.181	4.793	0.539	-0.222	-0.232	0.000	178.700
3	20:12:48	0.893	6.376	5.891	0.393	-0.079	1.771	0.000	176.600
x		0.671	6.759	5.088	0.473	-0.174	0.807	0.000	176.900
σ		0.216	0.404	0.704	0.074	0.083	1.004	0.000	1.630
%RSD		32.220	5.973	13.830	15.700	47.520	124.400	0.000	0.921
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:12:28	84.882%	3.445	3.495	82.720%	-0.006	-0.006	0.025	0.091
2	20:12:38	84.993%	3.042	2.612	82.969%	-0.001	0.004	-0.000	0.021
3	20:12:48	84.432%	2.786	2.579	82.788%	-0.006	-0.016	-0.000	0.081
x		84.769%	3.091	2.895	82.826%	-0.004	-0.006	0.008	0.064
σ		0.297%	0.332	0.520	0.129%	0.003	0.010	0.014	0.038
%RSD		0.351	10.750	17.950	0.156	65.880	174.000	173.700	58.410
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:12:28	82.815%	3.335	0.931	1.150	76.540	81.780	87.984%	86.275%
2	20:12:38	83.263%	3.170	1.069	0.808	76.290	79.870	88.310%	86.593%
3	20:12:48	82.833%	2.905	0.891	0.832	77.400	78.680	87.769%	86.512%
x		82.970%	3.137	0.963	0.930	76.750	80.110	88.021%	86.460%
σ		0.254%	0.217	0.093	0.191	0.585	1.560	0.273%	0.165%
%RSD		0.306	6.909	9.690	20.540	0.763	1.948	0.310	0.191
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:12:28	0.014	0.021	0.056	0.034	0.041	85.818%		
2	20:12:38	0.000	0.012	0.052	0.085	0.060	86.105%		
3	20:12:48	0.007	0.019	0.036	0.063	0.049	86.417%		
x		0.007	0.017	0.048	0.061	0.050	86.113%		
σ		0.007	0.005	0.010	0.026	0.010	0.300%		
%RSD		95.490	28.550	21.430	41.940	19.340	0.348		

180-61163-B-1-F 12/5/2016 8:18:28 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:17:31	77.569%	2.541	36.640	35.770	0.000	3226.000	93110.000	93000.000
2	20:17:41	79.783%	2.591	36.570	38.630	0.000	3209.000	92970.000	93340.000
3	20:17:50	79.616%	2.382	36.250	37.260	0.000	3190.000	92090.000	92590.000
x		78.989%	2.505	36.490	37.220	0.000	3208.000	92720.000	92980.000
σ		1.233%	0.109	0.208	1.431	0.000	17.830	552.600	375.000
%RSD		1.561	4.361	0.569	3.844	0.000	0.556	0.596	0.403

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:17:31	20420.000	3794.000	0.000	4628.000	2753000.000	2587000.000	80.423%	241.700
2	20:17:41	20380.000	3797.000	0.000	4648.000	2765000.000	2595000.000	80.750%	245.500
3	20:17:50	20420.000	3806.000	0.000	4634.000	2763000.000	2595000.000	81.369%	246.600
x		20410.000	3799.000	0.000	4637.000	2760000.000	2592000.000	80.847%	244.600
σ		24.760	6.031	0.000	10.250	6090.000	4734.000	0.481%	2.572
%RSD		0.121	0.159	0.000	0.221	0.221	0.183	0.595	1.051

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:17:31	69.160	53.750	8947.000	64680.000	64010.000	53.700	69.670	115.900
2	20:17:41	72.430	53.390	9010.000	64610.000	62830.000	52.260	71.950	113.200
3	20:17:50	69.150	52.770	9012.000	63940.000	63370.000	52.400	68.460	113.000
x		70.250	53.300	8990.000	64410.000	63400.000	52.790	70.030	114.000
σ		1.893	0.497	37.050	409.000	591.000	0.792	1.772	1.600
%RSD		2.695	0.932	0.412	0.635	0.932	1.500	2.530	1.403

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:17:31	115.800	354.200	344.000	20.810	1.430	0.686	0.000	2735.000
2	20:17:41	113.500	345.500	337.900	21.600	1.419	-3.031	0.000	2732.000
3	20:17:50	113.200	348.600	338.100	20.370	0.831	3.091	0.000	2734.000
x		114.100	349.400	340.000	20.930	1.227	0.249	0.000	2734.000
σ		1.405	4.405	3.490	0.621	0.343	3.085	0.000	1.558
%RSD		1.231	1.261	1.026	2.965	27.920	1240.000	0.000	0.057

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:17:31	109.970%	8.447	9.225	71.482%	0.230	0.183	2.586	3.096
2	20:17:41	110.840%	8.087	9.399	71.069%	0.173	0.183	2.154	3.042
3	20:17:50	109.509%	7.924	8.723	70.857%	0.139	0.237	2.539	2.910
x		110.106%	8.153	9.115	71.136%	0.181	0.201	2.427	3.016
σ		0.676%	0.267	0.351	0.318%	0.046	0.031	0.237	0.096
%RSD		0.614	3.280	3.849	0.447	25.380	15.430	9.764	3.169

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:17:31	72.270%	38.170	2.698	2.904	999.400	988.100	83.148%	82.402%
2	20:17:41	72.519%	36.670	2.561	2.858	1013.000	993.900	83.825%	83.193%
3	20:17:50	72.123%	36.850	2.764	2.658	990.200	989.700	83.713%	82.300%
x		72.304%	37.230	2.674	2.807	1001.000	990.600	83.562%	82.632%
σ		0.200%	0.817	0.104	0.131	11.200	2.989	0.363%	0.489%
%RSD		0.277	2.194	3.888	4.653	1.119	0.302	0.434	0.591

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	20:17:31	1.106	1.074	236.400	219.900	227.000	74.658%
2	20:17:41	1.154	1.194	255.000	233.800	242.600	69.429%
3	20:17:50	1.103	1.131	254.600	233.300	242.400	70.047%
x		1.121	1.133	248.700	229.000	237.400	71.378%
σ		0.029	0.060	10.630	7.855	8.951	2.857%
%RSD		2.573	5.306	4.276	3.430	3.771	4.003

180-61163-B-2-F 12/5/2016 8:23:31 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:22:37	76.713%	2.682	30.420	29.420	0.000	3117.000	116000.000	116500.000
2	20:22:47	75.912%	2.502	25.800	30.550	0.000	3092.000	114900.000	114600.000
3	20:22:56	75.292%	2.506	28.530	30.780	0.000	3079.000	114300.000	115200.000
x		75.972%	2.563	28.250	30.250	0.000	3096.000	115000.000	115400.000
σ		0.712%	0.103	2.324	0.726	0.000	19.240	851.200	974.600
%RSD		0.938	4.005	8.226	2.399	0.000	0.621	0.740	0.844

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:22:37	26150.000	3348.000	0.000	5587.000	2275000.000	2153000.000	79.076%	280.600
2	20:22:47	25680.000	3376.000	0.000	5628.000	2268000.000	2136000.000	78.500%	281.400
3	20:22:56	25600.000	3365.000	0.000	5597.000	2255000.000	2135000.000	78.849%	278.500
x		25810.000	3363.000	0.000	5604.000	2266000.000	2142000.000	78.808%	280.200
σ		293.100	14.150	0.000	21.430	10440.000	9898.000	0.290%	1.482
%RSD		1.136	0.421	0.000	0.382	0.461	0.462	0.368	0.529

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:22:37	77.440	64.450	1580.000	75050.000	73490.000	31.510	78.210	142.600
2	20:22:47	77.790	66.030	1589.000	76030.000	74120.000	32.010	77.490	149.100
3	20:22:56	75.440	63.010	1576.000	75180.000	73550.000	31.550	82.390	146.000
x		76.890	64.500	1582.000	75420.000	73720.000	31.690	79.360	145.900
σ		1.269	1.510	6.866	528.900	343.800	0.276	2.647	3.271
%RSD		1.651	2.341	0.434	0.701	0.466	0.872	3.335	2.242

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:22:37	141.900	422.700	422.700	24.470	2.610	4.338	0.000	2542.000
2	20:22:47	145.700	428.800	416.700	23.880	1.142	5.097	0.000	2553.000
3	20:22:56	145.300	412.100	428.100	23.300	2.132	2.662	0.000	2520.000
x		144.300	421.200	422.500	23.880	1.961	4.032	0.000	2538.000
σ		2.078	8.447	5.713	0.589	0.749	1.246	0.000	16.520
%RSD		1.440	2.005	1.352	2.465	38.190	30.890	0.000	0.651

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:22:37	105.319%	9.956	10.980	70.059%	0.252	0.192	1.926	3.382
2	20:22:47	103.755%	9.946	10.920	69.507%	0.269	0.215	1.848	3.197
3	20:22:56	104.381%	10.150	10.620	70.191%	0.303	0.285	2.321	2.886
x		104.485%	10.020	10.840	69.919%	0.275	0.231	2.032	3.155
σ		0.787%	0.113	0.192	0.363%	0.026	0.049	0.254	0.250
%RSD		0.753	1.127	1.773	0.519	9.509	21.090	12.480	7.934

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:22:37	71.298%	41.680	3.209	2.722	355.500	349.100	83.046%	80.172%
2	20:22:47	72.770%	40.380	3.130	2.738	343.600	347.100	81.702%	80.923%
3	20:22:56	71.895%	42.090	2.596	2.968	344.800	352.000	82.114%	80.786%
x		71.988%	41.390	2.979	2.809	348.000	349.400	82.287%	80.627%
σ		0.740%	0.891	0.333	0.138	6.545	2.453	0.689%	0.400%
%RSD		1.028	2.154	11.190	4.896	1.881	0.702	0.837	0.496

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	20:22:37	0.557	0.543	323.700	299.800	310.500	68.752%
2	20:22:47	0.513	0.498	318.000	296.800	306.200	69.727%
3	20:22:56	0.503	0.535	313.900	295.600	304.300	70.138%
x		0.524	0.525	318.500	297.400	307.000	69.539%
σ		0.029	0.024	4.948	2.172	3.140	0.712%
%RSD		5.466	4.626	1.553	0.730	1.023	1.024

180-61163-A-4-F 12/5/2016 8:28:33 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:27:38	73.768%	2.849	31.330	31.720	0.000	3913.000	166500.000	168200.000
2	20:27:48	71.361%	2.913	31.290	33.020	0.000	3923.000	167000.000	168600.000
3	20:27:58	72.220%	2.641	32.850	32.360	0.000	3898.000	165300.000	166200.000
x		72.450%	2.801	31.820	32.360	0.000	3912.000	166300.000	167700.000
σ		1.220%	0.142	0.891	0.652	0.000	12.660	859.500	1275.000
%RSD		1.684	5.081	2.799	2.014	0.000	0.324	0.517	0.760

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:27:38	24860.000	3454.000	0.000	5716.000	2737000.000	2569000.000	77.454%	283.400
2	20:27:48	24910.000	3424.000	0.000	5802.000	2768000.000	2592000.000	76.459%	282.100
3	20:27:58	24660.000	3425.000	0.000	5787.000	2751000.000	2585000.000	76.887%	280.600
x		24810.000	3434.000	0.000	5768.000	2752000.000	2582000.000	76.933%	282.000
σ		130.100	16.830	0.000	46.280	15530.000	11700.000	0.500%	1.367
%RSD		0.525	0.490	0.000	0.802	0.564	0.453	0.649	0.485

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:27:38	59.510	53.780	1557.000	68210.000	66450.000	26.190	69.930	188.200
2	20:27:48	62.840	55.010	1588.000	68930.000	66600.000	27.280	64.820	190.600
3	20:27:58	60.070	53.160	1576.000	67900.000	66480.000	27.300	69.840	188.900
x		60.800	53.980	1574.000	68350.000	66510.000	26.930	68.200	189.200
σ		1.784	0.940	15.580	525.000	82.550	0.636	2.922	1.205
%RSD		2.934	1.742	0.990	0.768	0.124	2.360	4.285	0.637

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:27:38	188.300	196.400	192.200	20.340	1.668	0.069	0.000	2795.000
2	20:27:48	186.400	200.900	193.900	20.630	0.955	3.262	0.000	2768.000
3	20:27:58	185.000	193.000	190.500	19.060	2.166	1.357	0.000	2794.000
x		186.500	196.800	192.200	20.010	1.596	1.563	0.000	2786.000
σ		1.658	3.992	1.697	0.839	0.609	1.606	0.000	15.100
%RSD		0.889	2.029	0.883	4.194	38.120	102.800	0.000	0.542

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:27:38	112.044%	4.167	4.500	67.679%	0.261	0.199	0.903	1.677
2	20:27:48	112.225%	4.187	4.866	66.549%	0.252	0.207	1.001	1.684
3	20:27:58	111.169%	4.092	5.096	66.760%	0.318	0.170	0.999	1.313
x		111.813%	4.149	4.821	66.996%	0.277	0.192	0.967	1.558
σ		0.565%	0.050	0.300	0.601%	0.036	0.020	0.056	0.212
%RSD		0.505	1.202	6.230	0.897	13.020	10.230	5.798	13.630

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:27:38	69.323%	31.510	1.416	1.635	247.800	245.100	79.841%	78.270%
2	20:27:48	69.116%	30.980	1.593	1.960	242.600	243.100	78.772%	78.907%
3	20:27:58	69.198%	30.420	1.579	1.825	249.200	240.700	79.851%	78.879%
x		69.213%	30.970	1.529	1.807	246.600	243.000	79.488%	78.685%
σ		0.104%	0.543	0.099	0.164	3.500	2.175	0.620%	0.360%
%RSD		0.151	1.755	6.446	9.059	1.419	0.895	0.780	0.458

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	20:27:38	0.604	0.601	150.700	140.900	145.200	67.031%
2	20:27:48	0.663	0.630	152.100	141.100	145.700	66.900%
3	20:27:58	0.538	0.602	147.600	136.600	140.800	68.666%
x		0.602	0.611	150.200	139.600	143.900	67.532%
σ		0.062	0.016	2.298	2.524	2.733	0.984%
%RSD		10.360	2.696	1.531	1.808	1.899	1.457

180-61163-B-7-G 12/5/2016 8:33:39 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:32:42	74.128%	3.626	30.380	31.050	0.000	1100.000	73450.000	73690.000
2	20:32:52	72.664%	3.650	30.700	31.970	0.000	1107.000	73250.000	73940.000
3	20:33:01	75.609%	3.821	29.130	31.030	0.000	1089.000	73660.000	72980.000
x		74.134%	3.699	30.070	31.350	0.000	1099.000	73450.000	73540.000
σ		1.472%	0.106	0.829	0.538	0.000	8.783	207.500	498.700
%RSD		1.986	2.864	2.756	1.717	0.000	0.799	0.283	0.678

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:32:42	46250.000	2399.000	0.000	5238.000	794900.000	794200.000	78.373%	1084.000
2	20:32:52	46670.000	2350.000	0.000	5284.000	797900.000	798200.000	77.663%	1097.000
3	20:33:01	46120.000	2364.000	0.000	5258.000	798100.000	796600.000	78.329%	1086.000
x		46350.000	2371.000	0.000	5260.000	797000.000	796300.000	78.122%	1089.000
σ		285.800	25.430	0.000	23.270	1808.000	1997.000	0.398%	7.414
%RSD		0.617	1.073	0.000	0.442	0.227	0.251	0.509	0.681

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:32:42	129.100	81.470	2894.000	108700.000	106000.000	38.060	87.580	131.400
2	20:32:52	128.800	81.440	2903.000	109000.000	104900.000	36.800	85.520	128.200
3	20:33:01	128.200	81.570	2912.000	108200.000	105400.000	38.020	88.330	131.400
x		128.700	81.500	2903.000	108600.000	105400.000	37.630	87.140	130.400
σ		0.494	0.069	8.927	434.800	590.400	0.714	1.457	1.870
%RSD		0.384	0.085	0.308	0.400	0.560	1.899	1.672	1.434

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:32:42	132.400	271.300	259.100	37.840	3.970	3.287	0.000	2295.000
2	20:32:52	128.200	277.800	266.000	38.670	3.689	4.863	0.000	2249.000
3	20:33:01	127.900	271.100	273.100	38.300	3.102	3.501	0.000	2268.000
x		129.500	273.400	266.100	38.270	3.587	3.883	0.000	2271.000
σ		2.483	3.821	7.035	0.420	0.443	0.855	0.000	23.220
%RSD		1.918	1.397	2.644	1.096	12.340	22.020	0.000	1.023

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:32:42	110.288%	8.439	7.934	71.953%	0.303	0.327	1.173	2.134
2	20:32:52	112.378%	7.457	8.494	71.766%	0.295	0.271	0.928	2.157
3	20:33:01	111.482%	8.052	8.016	72.378%	0.357	0.294	0.792	2.259
x		111.383%	7.983	8.148	72.032%	0.318	0.297	0.964	2.183
σ		1.049%	0.495	0.303	0.314%	0.034	0.028	0.194	0.067
%RSD		0.941	6.199	3.716	0.436	10.560	9.445	20.080	3.058

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:32:42	72.457%	55.030	3.674	3.474	690.400	683.300	82.438%	82.240%
2	20:32:52	74.569%	55.150	3.565	3.623	688.500	671.400	83.675%	82.880%
3	20:33:01	73.590%	54.010	3.444	3.616	685.800	674.000	84.154%	82.729%
x		73.538%	54.730	3.561	3.571	688.200	676.200	83.422%	82.616%
σ		1.057%	0.628	0.115	0.084	2.290	6.272	0.885%	0.335%
%RSD		1.437	1.147	3.222	2.349	0.333	0.927	1.061	0.405

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	20:32:42	0.993	1.014	364.400	338.300	350.600	73.471%
2	20:32:52	0.894	0.984	360.700	335.900	346.700	74.087%
3	20:33:01	0.881	1.031	363.000	337.600	348.300	73.901%
x		0.923	1.010	362.700	337.300	348.500	73.820%
σ		0.061	0.023	1.864	1.259	1.986	0.316%
%RSD		6.608	2.318	0.514	0.373	0.570	0.427

180-61163-B-8-G 12/5/2016 8:38:41 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:37:46	74.900%	4.273	52.360	49.560	0.000	1056.000	126600.000	126100.000
2	20:37:56	76.026%	4.651	48.000	49.270	0.000	1063.000	126500.000	126100.000
3	20:38:06	73.038%	4.300	49.270	49.670	0.000	1067.000	125800.000	126300.000
x		74.655%	4.408	49.880	49.500	0.000	1062.000	126300.000	126200.000
σ		1.509%	0.211	2.241	0.204	0.000	5.557	453.000	74.230
%RSD		2.021	4.780	4.493	0.413	0.000	0.523	0.359	0.059
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:37:46	58300.000	2061.000	0.000	8319.000	880900.000	876400.000	78.131%	1189.000
2	20:37:56	58400.000	2050.000	0.000	8382.000	880300.000	882700.000	77.942%	1212.000
3	20:38:06	58140.000	2043.000	0.000	8441.000	878600.000	880200.000	77.412%	1180.000
x		58280.000	2052.000	0.000	8381.000	879900.000	879800.000	77.828%	1194.000
σ		127.400	9.204	0.000	60.920	1194.000	3147.000	0.373%	16.330
%RSD		0.219	0.449	0.000	0.727	0.136	0.358	0.479	1.368
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:37:46	106.800	93.760	2172.000	114700.000	112000.000	37.810	84.060	164.400
2	20:37:56	110.400	93.940	2173.000	114000.000	111500.000	37.700	86.730	165.800
3	20:38:06	107.500	94.510	2187.000	114000.000	110900.000	38.310	89.070	165.000
x		108.200	94.070	2178.000	114200.000	111500.000	37.940	86.620	165.100
σ		1.892	0.390	8.356	439.300	581.300	0.326	2.506	0.727
%RSD		1.749	0.415	0.384	0.385	0.522	0.860	2.893	0.440
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:37:46	164.600	469.800	456.600	45.110	6.288	5.194	0.000	2063.000
2	20:37:56	160.900	459.100	450.300	44.780	7.165	9.012	0.000	2058.000
3	20:38:06	161.600	453.100	450.400	43.980	5.469	9.045	0.000	2051.000
x		162.300	460.700	452.400	44.620	6.307	7.750	0.000	2058.000
σ		1.971	8.451	3.617	0.582	0.848	2.214	0.000	5.698
%RSD		1.214	1.835	0.799	1.305	13.440	28.560	0.000	0.277
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:37:46	128.218%	9.822	12.110	71.558%	0.623	0.667	2.621	3.264
2	20:37:56	128.276%	10.770	12.340	71.394%	0.626	0.759	1.779	3.145
3	20:38:06	127.039%	10.420	11.780	71.000%	0.735	0.655	2.003	3.316
x		127.844%	10.330	12.080	71.318%	0.661	0.694	2.134	3.241
σ		0.698%	0.478	0.284	0.287%	0.064	0.057	0.436	0.088
%RSD		0.546	4.622	2.352	0.402	9.700	8.165	20.450	2.700
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:37:46	73.147%	53.050	6.358	6.055	952.700	956.500	85.236%	83.030%
2	20:37:56	72.469%	50.180	6.357	5.992	954.800	965.600	85.167%	83.522%
3	20:38:06	71.411%	53.760	6.266	6.972	963.900	968.100	84.304%	82.121%
x		72.342%	52.330	6.327	6.340	957.100	963.400	84.903%	82.891%
σ		0.875%	1.894	0.053	0.549	5.934	6.090	0.519%	0.711%
%RSD		1.209	3.620	0.837	8.655	0.620	0.632	0.612	0.857
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:37:46	1.334	1.472	373.300	348.400	358.700	71.725%		
2	20:37:56	1.546	1.467	372.500	347.100	359.600	72.120%		
3	20:38:06	1.348	1.320	342.500	320.200	329.300	79.205%		
x		1.410	1.420	362.700	338.600	349.200	74.350%		
σ		0.119	0.086	17.550	15.930	17.260	4.209%		
%RSD		8.407	6.058	4.837	4.706	4.942	5.661		

180-61163-B-10-G 12/5/2016 8:43:46 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:49	77.278%	4.069	23.740	22.870	0.000	997.600	22820.000	22920.000
2	20:42:59	77.282%	4.471	24.450	23.690	0.000	999.200	22920.000	22890.000
3	20:43:08	78.650%	4.525	21.910	23.510	0.000	993.400	22850.000	23030.000
x		77.737%	4.355	23.370	23.350	0.000	996.700	22860.000	22940.000
σ		0.791%	0.249	1.315	0.429	0.000	3.020	49.760	73.270
%RSD		1.018	5.726	5.627	1.836	0.000	0.303	0.218	0.319

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:49	44690.000	2660.000	0.000	8774.000	339300.000	346400.000	79.984%	720.200
2	20:42:59	45010.000	2667.000	0.000	8802.000	341500.000	346600.000	79.708%	721.300
3	20:43:08	44810.000	2702.000	0.000	8824.000	340200.000	346900.000	80.097%	721.100
x		44840.000	2676.000	0.000	8800.000	340300.000	346600.000	79.930%	720.800
σ		160.800	22.950	0.000	25.160	1141.000	213.000	0.200%	0.584
%RSD		0.359	0.858	0.000	0.286	0.335	0.061	0.250	0.081

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:49	102.000	81.680	3749.000	127700.000	125700.000	38.820	75.500	187.600
2	20:42:59	105.100	81.170	3745.000	128400.000	124800.000	37.390	74.940	186.200
3	20:43:08	101.600	78.640	3752.000	128600.000	123700.000	36.000	70.270	186.000
x		102.900	80.500	3748.000	128200.000	124700.000	37.400	73.570	186.600
σ		1.939	1.629	3.568	446.800	1016.000	1.413	2.870	0.872
%RSD		1.884	2.024	0.095	0.349	0.815	3.778	3.900	0.467

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:49	184.400	357.800	343.200	71.960	8.413	9.010	0.000	872.000
2	20:42:59	181.400	357.300	342.800	71.410	5.926	8.633	0.000	871.800
3	20:43:08	181.800	347.800	345.900	71.030	6.038	9.856	0.000	867.900
x		182.500	354.300	344.000	71.470	6.792	9.166	0.000	870.600
σ		1.605	5.620	1.691	0.471	1.404	0.626	0.000	2.277
%RSD		0.880	1.586	0.492	0.659	20.680	6.834	0.000	0.262

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:49	118.428%	9.575	11.700	75.003%	0.700	0.612	2.248	3.096
2	20:42:59	118.030%	10.460	11.120	74.694%	0.647	0.647	1.839	2.803
3	20:43:08	117.823%	10.130	11.580	74.332%	0.674	0.583	1.880	2.973
x		118.093%	10.050	11.470	74.676%	0.674	0.614	1.989	2.957
σ		0.307%	0.447	0.305	0.335%	0.026	0.032	0.225	0.147
%RSD		0.260	4.447	2.664	0.449	3.927	5.208	11.320	4.966

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:49	75.703%	55.610	11.700	12.140	936.500	958.200	85.000%	83.835%
2	20:42:59	75.716%	55.700	10.970	11.280	934.500	947.100	85.372%	83.923%
3	20:43:08	76.773%	54.580	11.300	11.330	933.700	941.100	84.795%	84.484%
x		76.064%	55.300	11.320	11.580	934.900	948.800	85.056%	84.081%
σ		0.614%	0.623	0.369	0.479	1.435	8.680	0.292%	0.352%
%RSD		0.807	1.126	3.263	4.138	0.153	0.915	0.344	0.419

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:49	1.984	2.023	615.000	574.800	593.700	74.815%
2	20:42:59	1.900	1.891	614.000	574.000	595.200	75.541%
3	20:43:08	2.010	1.818	614.500	575.400	594.500	75.372%
x		1.965	1.911	614.500	574.800	594.500	75.242%
σ		0.057	0.104	0.508	0.733	0.725	0.380%
%RSD		2.911	5.427	0.083	0.128	0.122	0.505

180-60709-A-3-B @10 12/5/2016 8:48:52 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:47:56	78.490%	0.005	322.900	335.400	0.000	827900.000	100600.000	101100.000
2	20:48:05	78.632%	0.028	314.200	340.000	0.000	825200.000	99910.000	100400.000
3	20:48:14	78.630%	0.020	330.200	340.700	0.000	828000.000	100400.000	100900.000
x		78.584%	0.018	322.400	338.700	0.000	827000.000	100300.000	100800.000
σ		0.081%	0.012	8.004	2.887	0.000	1558.000	360.500	385.600
%RSD		0.103	66.560	2.482	0.852	0.000	0.188	0.359	0.383

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:47:56	6.807	794.900	0.000	34210.000	33530.000	32110.000	84.102%	1.105
2	20:48:05	5.734	780.700	0.000	34190.000	33270.000	31920.000	84.456%	1.534
3	20:48:14	5.601	778.000	0.000	34420.000	33890.000	32020.000	84.510%	1.021
x		6.047	784.500	0.000	34270.000	33560.000	32020.000	84.356%	1.220
σ		0.661	9.077	0.000	129.700	309.400	97.320	0.222%	0.275
%RSD		10.940	1.157	0.000	0.378	0.922	0.304	0.263	22.550

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:47:56	1.419	0.313	14.480	18.110	38.000	-0.003	0.025	0.115
2	20:48:05	1.998	0.371	14.260	17.400	31.890	0.008	0.024	0.099
3	20:48:14	1.588	0.166	14.480	15.770	27.480	0.019	-0.058	0.199
x		1.668	0.283	14.410	17.090	32.460	0.008	-0.003	0.138
σ		0.298	0.106	0.128	1.198	5.283	0.011	0.048	0.054
%RSD		17.850	37.370	0.886	7.012	16.280	139.200	1457.000	39.050

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:47:56	0.118	1.161	0.604	2.498	-0.221	65.790	0.000	606.700
2	20:48:05	0.058	0.494	1.092	1.998	-0.223	62.940	0.000	592.500
3	20:48:14	0.171	0.985	0.657	2.225	-0.084	52.490	0.000	591.500
x		0.115	0.880	0.785	2.240	-0.176	60.410	0.000	596.900
σ		0.056	0.345	0.268	0.250	0.080	7.006	0.000	8.513
%RSD		48.890	39.250	34.120	11.170	45.230	11.600	0.000	1.426

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:47:56	83.786%	3.384	3.811	79.631%	-0.001	-0.016	-0.000	-0.008
2	20:48:05	85.607%	3.267	3.374	79.776%	0.004	-0.016	-0.000	-0.008
3	20:48:14	86.502%	3.586	3.545	80.927%	-0.006	-0.016	-0.000	-0.008
x		85.298%	3.412	3.577	80.111%	-0.001	-0.016	-0.000	-0.008
σ		1.384%	0.162	0.221	0.710%	0.005	0.000	0.000	0.000
%RSD		1.623	4.737	6.164	0.886	700.600	0.257	63.300	0.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:47:56	82.367%	-0.051	0.157	0.098	6.456	8.356	84.526%	83.879%
2	20:48:05	81.639%	-0.161	0.159	0.109	6.849	7.274	85.716%	83.529%
3	20:48:14	82.934%	-0.028	0.171	0.147	8.307	7.983	86.219%	84.705%
x		82.313%	-0.080	0.162	0.118	7.204	7.871	85.487%	84.038%
σ		0.649%	0.071	0.008	0.025	0.975	0.549	0.869%	0.604%
%RSD		0.788	89.600	4.790	21.570	13.530	6.980	1.017	0.718

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	20:47:56	-0.016	0.006	0.071	0.099	0.087	78.169%
2	20:48:05	-0.005	-0.005	0.098	0.068	0.086	76.640%
3	20:48:14	0.006	0.007	0.075	0.076	0.084	77.433%
x		-0.005	0.003	0.081	0.081	0.085	77.414%
σ		0.011	0.007	0.014	0.016	0.002	0.765%
%RSD		208.700	247.800	17.810	19.940	1.892	0.988

CCV 2136057 12/5/2016 8:53:57 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:53:01	84.143%	104.000	101.500	99.700	0.000	50650.000	50580.000	50620.000
2	20:53:10	84.717%	100.500	98.660	96.130	0.000	50460.000	50070.000	49930.000
3	20:53:20	84.387%	102.000	98.410	99.530	0.000	50550.000	50180.000	49970.000
x		84.416%	102.167%	99.521%	98.455%	0.000	101.110%	100.556%	100.351%
σ		0.288%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.341	1.717	1.721	2.044	0.000	0.192	0.533	0.777

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:53:01	551.500	5226.000	0.000	51340.000	49990.000	49280.000	85.399%	105.400
2	20:53:10	549.700	5189.000	0.000	51390.000	50160.000	49450.000	85.690%	104.700
3	20:53:20	547.600	5138.000	0.000	51310.000	50080.000	49450.000	85.591%	100.100
x		109.920%	103.685%	0.000	102.702%	100.153%	98.784%	85.560%	103.407%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.148%	n/a
%RSD		0.354	0.855	0.000	0.079	0.167	0.201	0.173	2.760

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:53:01	100.100	99.530	479.000	25670.000	25130.000	100.700	103.100	99.490
2	20:53:10	99.170	100.100	478.600	25760.000	24880.000	103.000	104.300	101.600
3	20:53:20	101.000	99.320	480.600	25690.000	24960.000	101.200	106.400	100.600
x		100.088%	99.649%	95.887%	102.820%	99.958%	101.639%	104.615%	100.552%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.923	0.405	0.220	0.190	0.501	1.187	1.608	1.034

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:53:01	102.800	99.110	95.250	101.400	102.700	93.360	0.000	99.010
2	20:53:10	104.400	93.420	91.860	100.500	100.600	92.500	0.000	97.360
3	20:53:20	101.100	100.300	93.430	99.630	102.500	105.600	0.000	96.770
x		102.776%	97.592%	93.516%	100.504%	101.916%	97.148%	0.000	97.714%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.594	3.749	1.813	0.876	1.141	7.534	0.000	1.191

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:53:01	92.368%	96.340	102.700	84.312%	97.770	98.140	95.910	96.850
2	20:53:10	93.218%	99.030	103.200	84.195%	96.760	98.630	93.100	99.400
3	20:53:20	93.185%	102.000	102.800	83.794%	97.280	96.300	95.290	97.420
x		92.924%	99.119%	102.880%	84.100%	97.269%	97.693%	94.764%	97.889%
σ		0.481%	n/a	n/a	0.272%	n/a	n/a	n/a	n/a
%RSD		0.518	2.845	0.261	0.323	0.519	1.257	1.560	1.366

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:53:01	85.556%	98.810	100.500	100.800	98.230	103.200	86.953%	85.129%
2	20:53:10	85.301%	99.020	102.500	101.700	104.500	106.500	86.653%	84.130%
3	20:53:20	85.318%	101.500	100.300	98.790	104.900	101.900	85.399%	84.955%
x		85.392%	99.787%	101.090%	100.448%	102.547%	103.870%	86.335%	84.738%
σ		0.142%	n/a	n/a	n/a	n/a	n/a	0.825%	0.534%
%RSD		0.167	1.521	1.226	1.497	3.650	2.305	0.955	0.630

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	20:53:01	97.980	98.090	98.410	96.760	97.080	80.589%
2	20:53:10	99.320	99.300	99.040	97.170	97.680	80.912%
3	20:53:20	99.330	98.650	97.760	98.400	97.460	80.908%
x		98.880%	98.680%	98.400%	97.442%	97.406%	80.803%
σ		n/a	n/a	n/a	n/a	n/a	0.185%
%RSD		0.784	0.611	0.650	0.874	0.311	0.229

CCB9 12/5/2016 8:59:05 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:58:08	91.507%	0.048	0.259	-0.485	0.000	78.360	19.190	19.860
2	20:58:18	91.478%	0.095	0.174	-0.237	0.000	75.360	19.080	19.370
3	20:58:27	89.653%	0.064	-0.096	-0.267	0.000	69.620	17.290	18.970
x		90.879%	0.069	0.112	-0.330	0.000	74.450	18.520	19.400
σ		1.062%	0.024	0.186	0.136	0.000	4.439	1.066	0.443
%RSD		1.168	34.350	165.300	41.100	0.000	5.963	5.758	2.283
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:58:08	0.678	-5.998	0.000	-1.592	62.790	21.160	90.474%	0.046
2	20:58:18	0.620	-3.798	0.000	0.106	108.800	13.620	90.341%	0.358
3	20:58:27	0.553	-5.911	0.000	2.107	106.300	16.810	90.106%	0.144
x		0.617	-5.236	0.000	0.207	92.630	17.200	90.307%	0.182
σ		0.062	1.246	0.000	1.851	25.870	3.789	0.187%	0.159
%RSD		10.110	23.800	0.000	895.200	27.930	22.030	0.207	87.420
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:58:08	0.089	0.018	0.224	9.757	6.766	0.017	-0.020	-0.010
2	20:58:18	-0.010	0.074	0.215	8.490	9.476	0.027	-0.020	-0.010
3	20:58:27	0.138	0.074	0.208	8.288	5.468	0.037	-0.020	0.071
x		0.072	0.055	0.216	8.845	7.237	0.027	-0.020	0.017
σ		0.075	0.032	0.008	0.796	2.045	0.010	0.000	0.047
%RSD		104.000	58.430	3.586	9.002	28.260	37.330	0.559	272.000
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:58:08	0.070	-0.124	0.027	0.093	0.021	1.088	0.000	0.038
2	20:58:18	0.019	-0.030	0.028	0.106	0.414	0.350	0.000	0.085
3	20:58:27	0.203	-0.123	0.087	0.056	0.154	1.361	0.000	0.107
x		0.097	-0.092	0.048	0.085	0.196	0.933	0.000	0.077
σ		0.095	0.054	0.035	0.026	0.200	0.523	0.000	0.035
%RSD		97.820	58.240	72.870	30.390	101.800	56.080	0.000	45.940
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:58:08	94.866%	0.331	0.373	91.724%	0.039	0.007	0.000	0.019
2	20:58:18	93.722%	0.334	0.308	91.535%	0.003	-0.007	0.045	0.010
3	20:58:27	94.130%	0.317	0.269	91.552%	-0.002	0.016	-0.000	0.019
x		94.239%	0.327	0.317	91.603%	0.013	0.005	0.015	0.016
σ		0.580%	0.009	0.053	0.104%	0.022	0.012	0.026	0.005
%RSD		0.615	2.814	16.650	0.114	170.100	228.500	173.100	34.450
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:58:08	90.318%	0.113	0.257	0.307	0.079	0.025	89.708%	89.020%
2	20:58:18	92.401%	0.117	0.272	0.173	0.077	0.073	90.257%	87.384%
3	20:58:27	90.289%	0.068	0.198	0.196	0.079	0.049	89.735%	89.554%
x		91.003%	0.099	0.242	0.226	0.078	0.049	89.900%	88.653%
σ		1.211%	0.027	0.039	0.071	0.001	0.024	0.310%	1.131%
%RSD		1.331	27.240	16.220	31.670	1.030	49.280	0.344	1.275
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:58:08	0.007	0.012	0.044	0.017	0.024	86.706%		
2	20:58:18	0.007	0.026	0.062	0.071	0.048	87.122%		
3	20:58:27	0.013	0.033	0.051	0.050	0.039	86.932%		
x		0.009	0.024	0.052	0.046	0.037	86.920%		
σ		0.004	0.011	0.009	0.028	0.012	0.208%		
%RSD		42.100	47.130	17.970	59.600	33.370	0.240		

180-60709-A-6-B @10 12/5/2016 9:04:13 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:03:17	78.133%	0.036	360.700	377.600	0.000	885100.000	108400.000	108800.000
2	21:03:26	78.340%	0.021	360.000	379.600	0.000	891800.000	109700.000	109800.000
3	21:03:36	77.783%	0.076	365.800	380.900	0.000	897000.000	109400.000	108800.000
x		78.086%	0.044	362.200	379.400	0.000	891300.000	109200.000	109100.000
σ		0.282%	0.029	3.187	1.667	0.000	5952.000	664.000	590.600
%RSD		0.361	64.480	0.880	0.440	0.000	0.668	0.608	0.541
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:03:17	1.825	376.400	0.000	35790.000	34470.000	33620.000	83.699%	0.776
2	21:03:26	1.606	387.500	0.000	35830.000	34210.000	33450.000	84.265%	0.563
3	21:03:36	1.673	385.400	0.000	36010.000	34870.000	33500.000	83.859%	1.187
x		1.701	383.100	0.000	35870.000	34520.000	33520.000	83.941%	0.842
σ		0.112	5.901	0.000	120.600	332.100	87.850	0.292%	0.317
%RSD		6.603	1.540	0.000	0.336	0.962	0.262	0.348	37.620
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:03:17	0.309	0.124	94.070	-0.710	14.680	0.008	0.065	0.244
2	21:03:26	0.911	0.141	94.010	-1.326	14.700	-0.003	0.190	0.290
3	21:03:36	0.113	0.125	94.630	-0.643	16.190	0.030	0.025	0.159
x		0.444	0.130	94.240	-0.893	15.190	0.011	0.093	0.231
σ		0.416	0.010	0.341	0.377	0.869	0.017	0.086	0.067
%RSD		93.670	7.436	0.362	42.190	5.720	145.300	92.370	28.840
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:03:17	0.258	2.587	2.105	0.670	0.057	73.040	0.000	619.900
2	21:03:26	0.117	3.162	3.299	0.694	0.064	64.610	0.000	638.000
3	21:03:36	0.318	2.914	3.192	0.611	0.492	74.870	0.000	636.300
x		0.231	2.888	2.866	0.658	0.204	70.840	0.000	631.400
σ		0.104	0.289	0.661	0.043	0.249	5.472	0.000	9.985
%RSD		44.820	9.991	23.050	6.456	121.700	7.724	0.000	1.581
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:03:17	86.433%	3.069	3.115	79.660%	0.015	-0.016	-0.000	-0.008
2	21:03:26	84.389%	2.021	3.019	80.163%	-0.001	0.010	-0.000	-0.008
3	21:03:36	84.681%	2.930	2.412	80.272%	-0.001	-0.011	0.000	0.002
x		85.168%	2.674	2.849	80.032%	0.004	-0.005	-0.000	-0.005
σ		1.106%	0.569	0.381	0.327%	0.009	0.014	0.000	0.006
%RSD		1.298	21.300	13.380	0.408	202.900	255.000	222.300	117.200
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:03:17	81.784%	0.050	0.256	0.190	1.696	3.387	84.753%	83.993%
2	21:03:26	81.245%	0.127	0.200	0.231	2.539	2.863	86.400%	85.505%
3	21:03:36	82.479%	-0.039	0.237	0.248	2.418	2.762	86.438%	84.855%
x		81.836%	0.046	0.231	0.223	2.217	3.004	85.864%	84.784%
σ		0.619%	0.083	0.028	0.030	0.456	0.336	0.962%	0.759%
%RSD		0.756	179.700	12.320	13.290	20.550	11.180	1.121	0.895
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:03:17	-0.002	0.008	0.075	0.071	0.088	78.232%		
2	21:03:26	0.002	0.003	0.111	0.079	0.087	79.332%		
3	21:03:36	-0.009	0.002	0.078	0.042	0.064	79.183%		
x		-0.003	0.004	0.088	0.064	0.080	78.916%		
σ		0.005	0.003	0.020	0.019	0.013	0.597%		
%RSD		177.800	69.070	22.670	30.140	16.690	0.757		

180-60709-A-9-B @10 12/5/2016 9:09:21 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:08:24	80.108%	0.042	370.200	396.500	0.000	888500.000	108500.000	109300.000
2	21:08:33	83.230%	0.030	356.700	380.900	0.000	895200.000	109200.000	109200.000
3	21:08:43	83.302%	0.045	361.800	379.900	0.000	886000.000	108600.000	108700.000
x		82.213%	0.039	362.900	385.800	0.000	889900.000	108700.000	109100.000
σ		1.824%	0.008	6.803	9.303	0.000	4750.000	381.800	298.900
%RSD		2.218	19.700	1.874	2.411	0.000	0.534	0.351	0.274
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:08:24	23.790	575.900	0.000	35980.000	33930.000	32910.000	88.518%	0.763
2	21:08:33	23.670	571.000	0.000	36100.000	34130.000	33240.000	88.635%	0.859
3	21:08:43	22.780	589.700	0.000	35850.000	33770.000	32900.000	89.859%	0.746
x		23.410	578.900	0.000	35980.000	33940.000	33020.000	89.004%	0.790
σ		0.550	9.725	0.000	128.900	183.300	193.100	0.742%	0.061
%RSD		2.347	1.680	0.000	0.358	0.540	0.585	0.834	7.711
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:08:24	0.698	0.207	84.470	1.936	13.980	0.028	-0.058	0.539
2	21:08:33	0.450	0.157	85.150	1.529	9.774	0.018	0.020	0.479
3	21:08:43	0.394	0.285	84.130	2.165	8.378	0.038	-0.019	0.425
x		0.514	0.217	84.580	1.877	10.710	0.028	-0.019	0.481
σ		0.162	0.065	0.520	0.322	2.914	0.010	0.039	0.057
%RSD		31.500	29.810	0.615	17.160	27.210	36.880	205.900	11.820
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:08:24	0.272	0.944	1.531	1.724	-0.090	65.440	0.000	621.300
2	21:08:33	0.432	0.457	1.372	1.602	0.177	62.800	0.000	609.100
3	21:08:43	0.271	1.182	0.740	1.561	-0.227	65.020	0.000	626.400
x		0.325	0.861	1.214	1.629	-0.047	64.420	0.000	618.900
σ		0.093	0.369	0.418	0.085	0.205	1.420	0.000	8.857
%RSD		28.650	42.890	34.450	5.226	441.800	2.204	0.000	1.431
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:08:24	87.779%	2.439	2.345	81.585%	0.004	-0.006	0.000	-0.008
2	21:08:33	89.124%	2.483	2.494	81.962%	0.004	-0.016	-0.000	0.002
3	21:08:43	86.651%	2.854	2.604	81.486%	0.004	-0.011	-0.000	-0.008
x		87.851%	2.592	2.481	81.677%	0.004	-0.011	-0.000	-0.005
σ		1.238%	0.228	0.130	0.251%	0.000	0.005	0.000	0.006
%RSD		1.409	8.781	5.248	0.307	0.517	47.000	1327.000	114.600
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:08:24	83.629%	0.007	0.264	0.322	2.972	2.465	87.583%	84.823%
2	21:08:33	83.533%	-0.102	0.312	0.351	3.103	3.019	88.723%	86.544%
3	21:08:43	84.045%	-0.067	0.270	0.359	2.264	2.593	89.055%	86.804%
x		83.736%	-0.054	0.282	0.344	2.780	2.692	88.454%	86.057%
σ		0.272%	0.056	0.026	0.019	0.452	0.290	0.772%	1.077%
%RSD		0.325	103.200	9.163	5.614	16.250	10.770	0.873	1.251
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:08:24	-0.013	0.005	0.252	0.200	0.223	78.889%		
2	21:08:33	-0.009	-0.004	0.190	0.209	0.217	80.509%		
3	21:08:43	-0.016	0.005	0.291	0.250	0.233	80.474%		
x		-0.013	0.002	0.245	0.220	0.224	79.957%		
σ		0.003	0.005	0.051	0.027	0.008	0.925%		
%RSD		27.720	253.400	20.950	12.180	3.583	1.157		

180-60709-A-12-B @10 12/5/2016 9:14:26 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:13:31	86.154%	0.020	374.500	391.000	0.000	948300.000	117300.000	117200.000
2	21:13:40	83.223%	0.016	383.800	402.700	0.000	946000.000	116300.000	116500.000
3	21:13:50	82.635%	0.046	383.000	411.200	0.000	954200.000	117600.000	117200.000
x		84.004%	0.027	380.400	401.600	0.000	949500.000	117000.000	117000.000
σ		1.885%	0.016	5.166	10.110	0.000	4234.000	680.800	422.800
%RSD		2.244	60.230	1.358	2.517	0.000	0.446	0.582	0.362
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:13:31	2.990	441.200	0.000	37780.000	36720.000	35280.000	93.223%	0.335
2	21:13:40	3.207	451.400	0.000	37910.000	36340.000	35290.000	93.271%	0.729
3	21:13:50	2.903	451.900	0.000	38230.000	36470.000	35340.000	92.785%	0.642
x		3.033	448.200	0.000	37980.000	36510.000	35300.000	93.093%	0.569
σ		0.157	6.004	0.000	230.400	194.100	33.600	0.268%	0.207
%RSD		5.164	1.340	0.000	0.607	0.532	0.095	0.288	36.350
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:13:31	1.168	0.079	42.690	-3.084	6.637	-0.003	-0.058	0.082
2	21:13:40	0.608	0.079	42.920	-3.037	9.325	-0.003	-0.021	0.097
3	21:13:50	1.087	0.064	43.160	-3.698	8.017	0.007	0.055	0.070
x		0.954	0.074	42.930	-3.273	7.993	0.000	-0.008	0.083
σ		0.302	0.009	0.233	0.369	1.344	0.006	0.058	0.013
%RSD		31.700	11.770	0.543	11.270	16.820	2197.000	720.400	16.230
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:13:31	0.017	0.876	1.267	0.614	0.024	109.100	0.000	663.000
2	21:13:40	0.018	1.166	0.845	0.688	0.032	105.500	0.000	666.000
3	21:13:50	0.071	0.750	1.301	0.634	0.029	113.200	0.000	661.500
x		0.035	0.931	1.138	0.645	0.028	109.300	0.000	663.500
σ		0.031	0.213	0.254	0.038	0.004	3.853	0.000	2.257
%RSD		86.940	22.940	22.340	5.914	12.950	3.526	0.000	0.340
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:13:31	92.922%	2.164	1.988	86.330%	-0.006	-0.016	0.000	0.038
2	21:13:40	90.665%	1.773	1.900	85.961%	0.003	-0.006	0.000	0.001
3	21:13:50	91.513%	1.896	1.746	86.284%	-0.001	-0.021	0.024	-0.008
x		91.700%	1.944	1.878	86.192%	-0.001	-0.014	0.008	0.010
σ		1.140%	0.200	0.122	0.201%	0.005	0.007	0.014	0.025
%RSD		1.243	10.300	6.512	0.233	336.500	51.220	173.000	235.700
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:13:31	88.289%	-0.145	0.112	0.135	4.922	4.292	89.677%	89.438%
2	21:13:40	86.700%	-0.084	0.053	0.128	4.506	4.316	91.395%	88.774%
3	21:13:50	87.245%	-0.155	0.084	0.118	4.479	4.165	89.770%	89.227%
x		87.411%	-0.128	0.083	0.127	4.636	4.258	90.281%	89.146%
σ		0.807%	0.038	0.029	0.009	0.248	0.081	0.966%	0.339%
%RSD		0.924	29.870	35.380	6.778	5.355	1.909	1.070	0.380
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:13:31	-0.009	-0.001	0.015	0.014	0.016	81.951%		
2	21:13:40	-0.016	-0.005	0.003	0.032	0.012	81.962%		
3	21:13:50	-0.013	-0.004	0.015	0.018	0.014	81.677%		
x		-0.013	-0.003	0.011	0.021	0.014	81.864%		
σ		0.003	0.002	0.007	0.009	0.002	0.162%		
%RSD		26.990	62.400	63.920	43.690	13.520	0.197		

180-60709-A-15-B @10 12/5/2016 9:19:31 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:18:35	86.962%	0.040	375.500	405.100	0.000	949900.000	117500.000	117400.000
2	21:18:45	86.825%	-0.002	378.000	401.600	0.000	952600.000	117600.000	117300.000
3	21:18:55	87.932%	0.081	384.000	403.500	0.000	951300.000	117600.000	117800.000
x		87.240%	0.040	379.200	403.400	0.000	951300.000	117600.000	117500.000
σ		0.604%	0.041	4.362	1.750	0.000	1346.000	82.130	222.300
%RSD		0.692	104.100	1.150	0.434	0.000	0.142	0.070	0.189
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:18:35	54.680	286.600	0.000	37890.000	36430.000	35200.000	97.320%	0.373
2	21:18:45	54.750	293.100	0.000	38120.000	36470.000	35160.000	97.142%	0.241
3	21:18:55	54.610	282.800	0.000	38230.000	36510.000	35260.000	97.533%	0.393
x		54.680	287.500	0.000	38080.000	36470.000	35210.000	97.332%	0.336
σ		0.070	5.198	0.000	173.700	40.450	49.270	0.196%	0.083
%RSD		0.128	1.808	0.000	0.456	0.111	0.140	0.201	24.700
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:18:35	0.186	0.277	87.440	-2.644	8.896	0.006	0.087	0.591
2	21:18:45	0.199	0.278	88.250	-2.925	6.422	0.016	0.161	0.688
3	21:18:55	0.214	0.291	88.370	-3.415	3.825	-0.003	0.050	0.512
x		0.200	0.282	88.020	-2.995	6.381	0.007	0.099	0.597
σ		0.014	0.008	0.505	0.390	2.536	0.010	0.057	0.088
%RSD		7.019	2.780	0.573	13.030	39.730	147.100	56.930	14.770
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:18:35	0.569	0.266	1.307	0.466	0.270	92.560	0.000	664.900
2	21:18:45	0.628	0.899	1.110	0.449	-0.106	97.200	0.000	675.900
3	21:18:55	0.694	0.750	1.189	0.380	-0.364	85.320	0.000	659.300
x		0.631	0.638	1.202	0.432	-0.067	91.700	0.000	666.700
σ		0.063	0.331	0.099	0.045	0.319	5.986	0.000	8.416
%RSD		9.916	51.850	8.232	10.480	476.800	6.528	0.000	1.262
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:18:35	94.257%	1.661	1.542	88.348%	0.003	-0.016	0.000	0.001
2	21:18:45	92.228%	1.418	1.709	87.939%	-0.011	-0.021	0.000	-0.008
3	21:18:55	94.384%	1.689	1.625	88.720%	-0.006	-0.002	0.000	-0.008
x		93.623%	1.590	1.625	88.336%	-0.005	-0.013	0.000	-0.005
σ		1.210%	0.149	0.084	0.391%	0.007	0.010	0.000	0.005
%RSD		1.292	9.374	5.142	0.442	148.700	73.880	86.830	102.500
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:18:35	89.407%	-0.089	0.184	0.114	2.283	1.997	92.966%	90.905%
2	21:18:45	89.207%	-0.077	0.095	0.068	2.992	2.085	91.818%	91.098%
3	21:18:55	90.806%	-0.148	0.085	0.184	1.531	2.773	93.388%	91.172%
x		89.807%	-0.105	0.121	0.122	2.269	2.285	92.724%	91.058%
σ		0.871%	0.038	0.054	0.059	0.731	0.425	0.813%	0.138%
%RSD		0.970	35.990	44.810	48.090	32.200	18.580	0.877	0.151
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:18:35	-0.013	-0.007	0.473	0.473	0.469	83.383%		
2	21:18:45	-0.016	0.000	0.569	0.471	0.494	82.946%		
3	21:18:55	-0.013	-0.004	0.470	0.452	0.499	83.931%		
x		-0.014	-0.003	0.504	0.465	0.487	83.420%		
σ		0.002	0.003	0.057	0.011	0.016	0.494%		
%RSD		13.960	99.450	11.270	2.424	3.316	0.592		

CRI 2136054 12/5/2016 9:33:32 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:32:35	99.576%	0.972	20.440	19.760	0.000	593.600	515.200	512.200
2	21:32:45	97.607%	1.055	19.790	19.410	0.000	592.600	510.600	512.600
3	21:32:54	97.330%	0.983	19.290	19.300	0.000	598.300	523.500	511.100
x		98.171%	100.308%	396.812%	389.833%	0.000	743.531%	516.425%	511.957%
σ		1.224%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.247	4.514	2.891	1.243	0.000	0.513	1.274	0.152
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:32:35	32.680	532.300	0.000	473.800	499.900	496.700	105.295%	3.808
2	21:32:45	33.540	533.200	0.000	476.400	450.000	489.200	104.535%	4.872
3	21:32:54	34.420	535.800	0.000	485.200	508.400	496.300	103.501%	4.716
x		111.823%	106.750%	0.000	478.441%	486.112%	494.052%	104.444%	89.304%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.901%	n/a
%RSD		2.594	0.339	0.000	1.248	6.496	0.859	0.863	12.870
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:32:35	0.823	1.958	4.906	54.110	52.980	0.441	1.330	2.300
2	21:32:45	0.739	1.968	4.816	54.490	64.990	0.611	1.367	2.568
3	21:32:54	0.846	2.197	5.022	54.740	65.580	0.536	0.969	2.651
x		80.274%	102.060%	98.298%	108.894%	122.370%	105.876%	122.180%	125.308%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		7.044	6.631	2.106	0.577	11.620	16.130	18.010	7.328
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:32:35	2.301	6.269	4.972	1.041	7.176	6.771	0.000	5.648
2	21:32:45	2.422	5.859	5.996	0.982	4.767	2.632	0.000	5.712
3	21:32:54	2.227	5.033	6.661	0.921	4.563	6.039	0.000	5.834
x		115.827%	114.407%	117.528%	98.127%	110.037%	102.944%	0.000	114.628%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		4.232	11.010	14.470	6.138	26.410	42.920	0.000	1.650
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:32:35	99.247%	4.752	5.198	95.951%	0.963	0.884	1.111	1.137
2	21:32:45	99.863%	5.344	5.013	95.656%	1.129	1.157	0.871	1.195
3	21:32:54	99.252%	4.655	5.289	94.710%	0.967	0.964	0.873	1.187
x		99.454%	98.344%	103.338%	95.439%	101.950%	100.176%	95.159%	117.301%
σ		0.354%	n/a	n/a	0.648%	n/a	n/a	n/a	n/a
%RSD		0.356	7.581	2.722	0.679	9.275	14.010	14.480	2.703
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:32:35	94.521%	5.893	1.936	2.210	9.992	10.140	92.457%	91.511%
2	21:32:45	94.722%	4.863	2.128	2.388	10.470	10.700	93.271%	90.545%
3	21:32:54	94.797%	4.743	2.036	2.098	11.160	9.945	92.758%	90.849%
x		94.680%	103.331%	101.657%	111.603%	105.436%	102.624%	92.829%	90.968%
σ		0.143%	n/a	n/a	n/a	n/a	n/a	0.412%	0.494%
%RSD		0.151	12.230	4.715	6.549	5.586	3.821	0.443	0.543
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:32:35	1.035	0.961	0.976	1.098	1.049	90.260%		
2	21:32:45	1.026	1.141	1.143	1.061	1.059	90.022%		
3	21:32:54	0.990	1.017	1.160	0.994	1.083	89.778%		
x		101.701%	103.975%	109.297%	105.094%	106.360%	90.020%		
σ		n/a	n/a	n/a	n/a	n/a	0.241%		
%RSD		2.315	8.897	9.326	5.014	1.646	0.268		

CCV 2136057 12/5/2016 9:38:40 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:37:44	92.752%	103.600	99.120	100.000	0.000	50170.000	50320.000	50360.000
2	21:37:53	93.917%	103.600	102.700	97.090	0.000	50300.000	50530.000	50390.000
3	21:38:03	90.398%	105.500	98.400	102.400	0.000	50480.000	50650.000	50580.000
x		92.355%	104.254%	100.063%	99.834%	0.000	100.633%	101.006%	100.883%
σ		1.793%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.941	1.046	2.287	2.650	0.000	0.306	0.330	0.236
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:37:44	535.000	5318.000	0.000	49670.000	47880.000	47890.000	95.238%	99.300
2	21:37:53	539.700	5382.000	0.000	49290.000	47830.000	48000.000	96.041%	99.530
3	21:38:03	537.600	5284.000	0.000	49640.000	48320.000	48120.000	94.955%	98.890
x		107.487%	106.563%	0.000	99.068%	96.016%	96.007%	95.411%	99.242%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.564%	n/a
%RSD		0.436	0.928	0.000	0.426	0.563	0.245	0.591	0.325
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:37:44	98.710	98.720	458.600	26570.000	24780.000	103.500	101.400	100.500
2	21:37:53	102.400	97.650	455.500	26260.000	24780.000	101.200	100.700	100.500
3	21:38:03	99.290	97.370	460.000	26130.000	24410.000	98.900	100.000	99.790
x		100.121%	97.915%	91.609%	105.279%	98.631%	101.223%	100.728%	100.261%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.956	0.724	0.503	0.868	0.886	2.297	0.713	0.411
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:37:44	98.870	95.160	96.650	97.820	88.100	98.310	0.000	99.440
2	21:37:53	102.500	96.950	95.760	101.000	102.400	100.100	0.000	99.330
3	21:38:03	100.600	99.370	95.310	98.020	95.590	84.910	0.000	100.400
x		100.650%	97.160%	95.906%	98.937%	95.360%	94.452%	0.000	99.717%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.807	2.175	0.710	1.785	7.502	8.802	0.000	0.582
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:37:44	98.896%	98.700	103.700	88.081%	96.150	97.270	100.100	97.250
2	21:37:53	98.731%	99.320	103.300	89.036%	97.460	95.900	97.300	97.710
3	21:38:03	99.018%	99.410	103.800	88.543%	96.900	97.510	97.060	99.570
x		98.882%	99.145%	103.594%	88.553%	96.834%	96.891%	98.151%	98.177%
σ		0.144%	n/a	n/a	0.478%	n/a	n/a	n/a	n/a
%RSD		0.146	0.390	0.224	0.540	0.681	0.895	1.721	1.251
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:37:44	89.887%	100.000	100.100	100.300	103.400	105.200	87.089%	86.876%
2	21:37:53	89.963%	98.700	100.700	100.800	108.200	104.600	88.885%	86.630%
3	21:38:03	89.549%	97.690	98.840	98.560	99.660	102.500	88.945%	86.885%
x		89.800%	98.814%	99.896%	99.886%	103.763%	104.098%	88.306%	86.797%
σ		0.220%	n/a	n/a	n/a	n/a	n/a	1.055%	0.145%
%RSD		0.245	1.196	0.958	1.178	4.141	1.346	1.194	0.167
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:37:44	97.880	97.410	97.380	96.430	96.580	82.031%		
2	21:37:53	98.020	97.350	96.380	97.100	96.510	82.258%		
3	21:38:03	98.060	99.060	96.420	96.150	96.000	82.035%		
x		97.990%	97.941%	96.725%	96.558%	96.360%	82.108%		
σ		n/a	n/a	n/a	n/a	n/a	0.130%		
%RSD		0.094	0.992	0.582	0.503	0.330	0.158		

CCB10 12/5/2016 9:43:48 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:42:52	97.469%	0.048	0.388	-0.023	0.000	109.200	25.930	23.030
2	21:43:02	99.649%	0.070	-0.246	-0.308	0.000	105.100	22.930	22.560
3	21:43:11	98.482%	0.071	0.089	-0.100	0.000	102.300	20.140	23.400
x		98.533%	0.063	0.077	-0.144	0.000	105.600	23.000	23.000
σ		1.091%	0.013	0.317	0.147	0.000	3.453	2.895	0.421
%RSD		1.107	21.030	411.200	102.400	0.000	3.271	12.590	1.829
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:42:52	0.693	-0.661	0.000	0.236	18.370	11.410	95.718%	-0.089
2	21:43:02	0.748	-3.765	0.000	1.736	6.307	13.950	95.986%	0.248
3	21:43:11	0.698	-3.180	0.000	1.006	45.400	15.970	96.173%	-0.046
x		0.713	-2.535	0.000	0.993	23.360	13.780	95.959%	0.038
σ		0.030	1.650	0.000	0.750	20.020	2.284	0.228%	0.183
%RSD		4.264	65.060	0.000	75.580	85.700	16.580	0.238	486.700
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:42:52	0.120	0.069	0.185	11.970	15.320	0.016	-0.058	0.025
2	21:43:02	-0.007	0.053	0.196	10.500	7.629	0.025	-0.022	0.050
3	21:43:11	0.015	0.031	0.214	9.651	11.380	0.016	-0.022	0.049
x		0.043	0.051	0.198	10.700	11.440	0.019	-0.034	0.042
σ		0.068	0.019	0.015	1.172	3.844	0.005	0.021	0.014
%RSD		159.300	37.610	7.506	10.950	33.600	28.600	60.560	33.790
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:42:52	0.063	-0.088	0.137	-0.019	0.011	3.401	0.000	0.015
2	21:43:02	-0.013	-0.134	0.192	0.029	0.378	1.370	0.000	0.037
3	21:43:11	0.161	-0.048	0.134	0.016	-0.119	0.601	0.000	0.156
x		0.070	-0.090	0.155	0.009	0.090	1.791	0.000	0.069
σ		0.087	0.043	0.033	0.025	0.258	1.447	0.000	0.076
%RSD		124.000	47.660	21.070	280.400	285.300	80.800	0.000	109.800
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:42:52	96.456%	0.415	0.303	95.164%	0.011	0.006	0.022	0.035
2	21:43:02	97.855%	0.286	0.246	95.023%	0.037	0.023	0.000	0.009
3	21:43:11	98.703%	0.065	0.188	95.404%	0.015	-0.008	-0.000	0.018
x		97.671%	0.255	0.246	95.197%	0.021	0.007	0.007	0.021
σ		1.135%	0.177	0.057	0.192%	0.014	0.016	0.013	0.013
%RSD		1.162	69.290	23.360	0.202	67.070	221.300	173.100	64.720
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:42:52	94.200%	0.077	0.137	0.382	0.076	0.119	91.763%	89.816%
2	21:43:02	94.678%	-0.033	0.221	0.265	-0.014	0.213	93.011%	89.422%
3	21:43:11	95.390%	0.084	0.142	0.272	0.208	0.071	92.376%	89.953%
x		94.756%	0.043	0.167	0.306	0.090	0.134	92.383%	89.730%
σ		0.599%	0.065	0.047	0.066	0.112	0.072	0.624%	0.276%
%RSD		0.632	152.800	28.160	21.500	124.300	53.680	0.676	0.308
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:42:52	0.003	0.043	0.039	0.029	0.038	87.531%		
2	21:43:02	0.019	0.032	0.039	0.045	0.031	88.435%		
3	21:43:11	0.003	0.025	0.031	0.058	0.033	88.505%		
x		0.008	0.033	0.037	0.044	0.034	88.157%		
σ		0.009	0.009	0.004	0.014	0.004	0.543%		
%RSD		108.400	27.830	12.220	32.530	10.390	0.616		

MB 180-195415/1-A 12/5/2016 9:50:37 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:49:41	94.884%	0.025	0.276	-0.365	0.000	122.600	12.720	12.170
2	21:49:51	97.154%	-0.002	-0.494	-0.442	0.000	126.900	12.400	13.290
3	21:50:00	97.330%	0.016	0.109	-0.461	0.000	126.700	13.210	12.120
x		96.456%	0.013	-0.036	-0.423	0.000	125.400	12.770	12.530
σ		1.364%	0.014	0.405	0.051	0.000	2.461	0.409	0.663
%RSD		1.414	107.100	1116.000	12.090	0.000	1.962	3.201	5.293

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:49:41	1.094	-2.038	0.000	-19.190	-16.380	-9.533	95.805%	0.023
2	21:49:51	1.354	-2.993	0.000	-11.130	-86.030	-10.650	94.096%	0.007
3	21:50:00	1.232	-1.334	0.000	-17.200	-59.510	-8.400	94.625%	0.005
x		1.227	-2.122	0.000	-15.840	-53.980	-9.527	94.842%	0.012
σ		0.130	0.833	0.000	4.195	35.150	1.124	0.875%	0.010
%RSD		10.610	39.250	0.000	26.490	65.130	11.790	0.923	82.640

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:49:41	0.023	0.107	-0.005	4.021	7.700	0.007	0.015	0.052
2	21:49:51	-0.096	0.116	0.046	4.511	7.817	0.016	0.052	0.079
3	21:50:00	-0.182	0.116	0.042	4.108	0.066	0.016	0.089	0.053
x		-0.085	0.113	0.028	4.213	5.194	0.013	0.052	0.061
σ		0.103	0.005	0.028	0.261	4.442	0.006	0.037	0.015
%RSD		121.200	4.831	101.900	6.202	85.510	43.350	71.870	25.090

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:49:41	-0.012	0.798	1.116	0.005	-0.112	1.599	0.000	0.015
2	21:49:51	0.015	0.586	0.546	-0.006	-0.238	0.293	0.000	0.004
3	21:50:00	0.144	0.544	1.190	0.006	-0.364	0.293	0.000	0.004
x		0.049	0.643	0.951	0.002	-0.238	0.728	0.000	0.008
σ		0.083	0.136	0.352	0.007	0.126	0.754	0.000	0.006
%RSD		170.800	21.200	37.060	420.800	52.970	103.600	0.000	83.260

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:49:41	95.492%	-0.026	0.044	93.026%	0.024	-0.007	-0.000	-0.008
2	21:49:51	95.545%	-0.026	0.034	93.764%	-0.002	-0.003	-0.000	-0.008
3	21:50:00	94.162%	0.055	0.045	93.255%	0.011	0.011	-0.000	-0.008
x		95.066%	0.001	0.041	93.349%	0.011	0.000	-0.000	-0.008
σ		0.784%	0.047	0.006	0.378%	0.013	0.009	0.000	0.000
%RSD		0.824	4341.000	14.670	0.405	119.000	10400.000	46.940	0.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:49:41	93.156%	-0.018	-0.026	0.019	-0.014	0.048	92.204%	89.939%
2	21:49:51	93.420%	-0.030	-0.005	0.072	0.031	0.024	92.978%	89.986%
3	21:50:00	91.883%	-0.126	0.018	-0.026	0.031	-0.000	91.968%	90.301%
x		92.820%	-0.058	-0.004	0.022	0.016	0.024	92.383%	90.075%
σ		0.822%	0.059	0.022	0.049	0.026	0.024	0.528%	0.197%
%RSD		0.886	102.000	543.500	224.100	162.300	100.200	0.572	0.219

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	21:49:41	-0.010	0.005	0.020	0.016	0.012	88.738%
2	21:49:51	0.009	0.006	0.009	0.016	0.014	89.745%
3	21:50:00	0.006	0.001	0.009	0.028	0.011	89.861%
x		0.002	0.004	0.013	0.020	0.012	89.448%
σ		0.010	0.003	0.007	0.007	0.001	0.617%
%RSD		559.400	68.370	51.920	34.620	10.970	0.690

LCS 180-195415/2-A 12/5/2016 9:55:45 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:54:47	85.884%	51.360	993.700	999.900	0.000	51660.000	51070.000	51480.000
2	21:54:56	85.683%	51.870	1001.000	1001.000	0.000	52220.000	51760.000	51870.000
3	21:55:06	85.993%	50.560	985.200	981.700	0.000	51690.000	51100.000	51570.000
x		85.853%	51.260	993.300	994.200	0.000	51860.000	51310.000	51640.000
σ		0.157%	0.664	7.873	10.810	0.000	318.500	394.700	202.200
%RSD		0.183	1.295	0.793	1.087	0.000	0.614	0.769	0.392
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:54:47	1942.000	11670.000	0.000	53080.000	49580.000	48830.000	87.383%	988.900
2	21:54:56	1975.000	11880.000	0.000	53950.000	50910.000	49780.000	87.176%	1013.000
3	21:55:06	1936.000	11860.000	0.000	53630.000	49850.000	48990.000	87.255%	994.200
x		1951.000	11800.000	0.000	53550.000	50110.000	49200.000	87.271%	998.800
σ		21.090	116.600	0.000	443.600	705.500	509.700	0.104%	12.870
%RSD		1.081	0.988	0.000	0.828	1.408	1.036	0.119	1.289
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:54:47	477.700	188.800	473.400	876.300	975.500	487.900	486.200	249.200
2	21:54:56	478.600	185.000	482.300	878.300	924.700	486.300	480.000	248.200
3	21:55:06	472.500	186.400	480.400	876.700	951.400	488.200	481.300	248.200
x		476.300	186.700	478.700	877.100	950.500	487.500	482.500	248.500
σ		3.286	1.895	4.679	1.067	25.430	1.045	3.294	0.584
%RSD		0.690	1.015	0.977	0.122	2.676	0.214	0.683	0.235
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:54:47	252.600	455.900	451.000	39.170	10.210	6.833	0.000	982.600
2	21:54:56	251.900	453.300	455.900	39.420	8.969	10.150	0.000	984.500
3	21:55:06	244.900	460.400	432.700	39.650	8.726	9.668	0.000	983.200
x		249.800	456.500	446.500	39.410	9.302	8.884	0.000	983.400
σ		4.260	3.599	12.240	0.241	0.797	1.793	0.000	0.973
%RSD		1.706	0.788	2.741	0.611	8.573	20.180	0.000	0.099
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:54:47	83.341%	1046.000	1076.000	80.768%	48.380	49.530	48.070	82.520
2	21:54:56	82.896%	1050.000	1086.000	80.779%	47.920	49.320	50.600	87.270
3	21:55:06	82.351%	1063.000	1084.000	79.993%	47.890	48.430	48.900	87.760
x		82.863%	1053.000	1082.000	80.513%	48.060	49.090	49.190	85.850
σ		0.496%	9.215	5.446	0.451%	0.273	0.582	1.286	2.892
%RSD		0.598	0.875	0.503	0.560	0.568	1.186	2.615	3.368
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:54:47	80.439%	1987.000	498.100	497.300	1969.000	1974.000	87.158%	86.073%
2	21:54:56	78.417%	2051.000	505.200	507.800	2015.000	2001.000	86.801%	84.619%
3	21:55:06	79.725%	2008.000	499.600	499.100	1976.000	1996.000	85.976%	85.456%
x		79.527%	2015.000	501.000	501.400	1987.000	1990.000	86.645%	85.383%
σ		1.025%	32.520	3.717	5.625	24.710	14.590	0.607%	0.730%
%RSD		1.289	1.614	0.742	1.122	1.244	0.733	0.700	0.855
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:54:47	49.180	49.560	20.140	19.940	19.950	81.006%		
2	21:54:56	50.300	49.670	20.460	20.430	20.270	80.064%		
3	21:55:06	50.270	49.450	19.940	19.630	19.680	80.365%		
x		49.920	49.560	20.180	20.000	19.970	80.479%		
σ		0.638	0.108	0.267	0.402	0.296	0.481%		
%RSD		1.279	0.218	1.321	2.009	1.483	0.598		

180-61130-C-5-D 12/5/2016 10:00:50 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:59:55	84.604%	0.166	6964.000	7153.000	0.000	17180.000	16990.000	17110.000
2	22:00:04	85.413%	0.114	6911.000	7027.000	0.000	17010.000	16820.000	16920.000
3	22:00:14	83.726%	0.125	7069.000	7252.000	0.000	17240.000	17150.000	17200.000
x		84.581%	0.135	6981.000	7144.000	0.000	17140.000	16990.000	17080.000
σ		0.844%	0.028	80.410	112.300	0.000	115.300	166.400	142.700
%RSD		0.998	20.470	1.152	1.572	0.000	0.672	0.980	0.836

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:59:55	6.240	3779.000	0.000	19450.000	380900.000	399900.000	84.862%	1.831
2	22:00:04	5.552	3749.000	0.000	19490.000	379700.000	401100.000	84.859%	1.907
3	22:00:14	5.661	3892.000	0.000	19580.000	380700.000	398500.000	84.566%	1.838
x		5.818	3807.000	0.000	19500.000	380400.000	399900.000	84.762%	1.859
σ		0.370	75.440	0.000	69.770	651.700	1313.000	0.170%	0.042
%RSD		6.356	1.982	0.000	0.358	0.171	0.328	0.201	2.267

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:59:55	-0.519	0.236	1906.000	490.700	619.800	2.925	1.327	1.517
2	22:00:04	0.309	0.141	1918.000	491.600	659.000	3.144	1.452	1.843
3	22:00:14	-0.683	0.108	1924.000	495.100	658.700	3.092	1.810	1.630
x		-0.298	0.162	1916.000	492.500	645.800	3.054	1.530	1.663
σ		0.532	0.066	9.358	2.302	22.520	0.114	0.251	0.166
%RSD		178.700	40.980	0.488	0.467	3.487	3.740	16.410	9.962

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:59:55	1.911	2.160	2.300	10.630	-0.216	6.463	0.000	2470.000
2	22:00:04	1.352	2.107	3.298	10.200	-0.068	4.055	0.000	2455.000
3	22:00:14	1.553	2.667	2.269	9.736	-0.364	2.638	0.000	2522.000
x		1.605	2.312	2.622	10.190	-0.216	4.385	0.000	2482.000
σ		0.283	0.309	0.585	0.448	0.148	1.934	0.000	35.470
%RSD		17.620	13.370	22.310	4.401	68.460	44.100	0.000	1.429

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:59:55	80.186%	565.300	587.000	78.002%	-0.011	-0.016	0.106	0.044
2	22:00:04	80.318%	576.400	590.200	77.530%	-0.000	0.006	0.211	0.138
3	22:00:14	78.064%	572.200	592.800	77.824%	-0.000	-0.005	0.265	0.149
x		79.523%	571.300	590.000	77.785%	-0.004	-0.005	0.194	0.110
σ		1.265%	5.604	2.896	0.238%	0.006	0.011	0.081	0.058
%RSD		1.591	0.981	0.491	0.307	156.100	221.100	41.820	52.320

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:59:55	78.580%	0.786	0.176	0.125	66.800	62.210	83.449%	83.937%
2	22:00:04	78.809%	0.924	0.040	0.052	62.130	63.490	84.767%	82.840%
3	22:00:14	78.201%	0.543	0.092	0.042	67.120	65.880	84.390%	83.682%
x		78.530%	0.751	0.102	0.073	65.350	63.860	84.202%	83.486%
σ		0.307%	0.193	0.068	0.046	2.795	1.866	0.679%	0.574%
%RSD		0.390	25.650	66.690	62.720	4.278	2.923	0.806	0.687

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	21:59:55	0.223	0.234	0.084	0.117	0.112	81.420%
2	22:00:04	0.191	0.234	0.077	0.105	0.101	80.392%
3	22:00:14	0.204	0.185	0.121	0.101	0.110	80.391%
x		0.206	0.217	0.094	0.108	0.108	80.735%
σ		0.016	0.028	0.024	0.009	0.006	0.594%
%RSD		7.790	12.990	25.680	7.976	5.507	0.736

180-61130-C-5-D SD@5 12/5/2016 10:05:55 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:04:58	90.067%	0.050	1348.000	1376.000	0.000	3449.000	3377.000	3356.000
2	22:05:08	87.719%	0.053	1405.000	1406.000	0.000	3467.000	3378.000	3413.000
3	22:05:17	89.207%	0.003	1362.000	1377.000	0.000	3498.000	3417.000	3405.000
x		88.998%	0.036	1371.000	1386.000	0.000	3471.000	3391.000	3392.000
σ		1.188%	0.028	29.750	16.820	0.000	24.560	23.160	30.930
%RSD		1.335	78.690	2.169	1.214	0.000	0.707	0.683	0.912
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:04:58	3.113	714.400	0.000	3831.000	74010.000	79140.000	88.164%	0.204
2	22:05:08	3.282	712.400	0.000	3816.000	73860.000	79120.000	88.035%	0.475
3	22:05:17	3.184	719.100	0.000	3879.000	74810.000	79790.000	86.749%	0.562
x		3.193	715.300	0.000	3842.000	74220.000	79350.000	87.649%	0.413
σ		0.085	3.434	0.000	32.940	509.000	378.400	0.782%	0.187
%RSD		2.661	0.480	0.000	0.857	0.686	0.477	0.893	45.180
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:04:58	-0.177	0.094	353.800	106.100	137.000	0.596	0.262	0.278
2	22:05:08	-0.154	0.085	352.900	101.400	139.800	0.711	0.422	0.306
3	22:05:17	-0.172	0.079	357.500	104.100	126.200	0.636	0.266	0.341
x		-0.168	0.086	354.800	103.900	134.300	0.648	0.317	0.308
σ		0.012	0.007	2.453	2.385	7.167	0.059	0.091	0.031
%RSD		7.247	8.731	0.691	2.296	5.335	9.043	28.780	10.120
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:04:58	0.249	0.574	0.412	2.453	-0.224	-0.165	0.000	493.800
2	22:05:08	0.277	1.108	0.328	2.248	-0.225	1.741	0.000	493.400
3	22:05:17	0.282	1.227	0.890	1.968	-0.223	2.053	0.000	490.600
x		0.269	0.970	0.544	2.223	-0.224	1.210	0.000	492.600
σ		0.018	0.348	0.303	0.244	0.001	1.201	0.000	1.758
%RSD		6.553	35.900	55.760	10.960	0.435	99.240	0.000	0.357
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:04:58	85.496%	111.400	112.600	84.246%	-0.006	0.004	0.098	0.069
2	22:05:08	85.819%	113.900	114.600	84.008%	0.009	-0.021	0.049	0.011
3	22:05:17	84.749%	111.200	114.400	83.455%	-0.001	-0.001	0.025	0.011
x		85.355%	112.200	113.900	83.903%	0.000	-0.006	0.057	0.031
σ		0.549%	1.492	1.098	0.406%	0.007	0.013	0.037	0.034
%RSD		0.643	1.330	0.964	0.483	1576.000	219.100	65.280	109.700
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:04:58	84.643%	0.101	-0.022	-0.014	13.800	12.950	86.832%	85.626%
2	22:05:08	84.727%	0.124	0.025	-0.023	13.350	11.990	88.306%	86.229%
3	22:05:17	84.158%	-0.079	0.002	0.026	12.850	12.660	87.113%	85.837%
x		84.509%	0.048	0.002	-0.004	13.330	12.530	87.417%	85.897%
σ		0.307%	0.111	0.023	0.026	0.477	0.492	0.782%	0.306%
%RSD		0.364	229.100	1283.000	705.300	3.580	3.927	0.895	0.356
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	22:04:58	0.044	0.039	0.041	0.035	0.033	84.828%		
2	22:05:08	0.027	0.053	0.052	0.034	0.046	85.119%		
3	22:05:17	0.047	0.049	0.041	0.043	0.023	84.911%		
x		0.039	0.047	0.045	0.037	0.034	84.952%		
σ		0.011	0.007	0.007	0.005	0.012	0.150%		
%RSD		27.370	15.880	14.680	13.350	34.340	0.176		

180-61130-C-5-E MS 12/5/2016 10:11:03 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:10:08	76.654%	54.620	8610.000	8773.000	0.000	67690.000	68910.000	69030.000
2	22:10:18	76.363%	52.750	8645.000	8811.000	0.000	67610.000	68470.000	68930.000
3	22:10:28	76.263%	53.290	8716.000	8936.000	0.000	68370.000	69700.000	69860.000
x		76.427%	53.550	8657.000	8840.000	0.000	67890.000	69020.000	69270.000
σ		0.203%	0.964	53.690	85.090	0.000	418.200	622.100	508.200
%RSD		0.266	1.799	0.620	0.963	0.000	0.616	0.901	0.734
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:10:08	1936.000	15010.000	0.000	72820.000	436500.000	455500.000	80.669%	990.900
2	22:10:18	1932.000	15110.000	0.000	73100.000	435800.000	454400.000	80.632%	987.900
3	22:10:28	1962.000	15690.000	0.000	73600.000	439800.000	458300.000	80.304%	1003.000
x		1944.000	15270.000	0.000	73170.000	437300.000	456100.000	80.535%	994.000
σ		16.320	368.200	0.000	392.700	2135.000	1994.000	0.201%	8.112
%RSD		0.840	2.412	0.000	0.537	0.488	0.437	0.250	0.816
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:10:08	482.400	187.200	2432.000	1391.000	1615.000	490.500	485.400	244.700
2	22:10:18	485.600	188.500	2452.000	1397.000	1641.000	494.600	494.300	247.500
3	22:10:28	477.100	191.200	2462.000	1425.000	1601.000	496.000	501.800	252.800
x		481.700	189.000	2448.000	1404.000	1619.000	493.700	493.800	248.300
σ		4.289	2.012	15.370	17.980	19.920	2.872	8.220	4.108
%RSD		0.890	1.065	0.628	1.280	1.230	0.582	1.665	1.654
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:10:08	242.200	455.500	419.500	48.580	12.200	16.620	0.000	3490.000
2	22:10:18	245.800	454.300	428.000	50.280	10.160	14.930	0.000	3522.000
3	22:10:28	245.800	472.200	438.500	50.670	10.090	20.740	0.000	3590.000
x		244.600	460.700	428.700	49.840	10.820	17.430	0.000	3534.000
σ		2.045	10.030	9.518	1.108	1.198	2.987	0.000	51.070
%RSD		0.836	2.178	2.220	2.223	11.080	17.140	0.000	1.445
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:10:08	79.260%	1639.000	1702.000	74.989%	49.150	48.240	49.750	86.190
2	22:10:18	78.439%	1672.000	1726.000	74.828%	48.970	48.320	47.530	86.580
3	22:10:28	76.285%	1683.000	1746.000	74.689%	49.310	49.620	48.650	85.900
x		77.995%	1665.000	1725.000	74.835%	49.140	48.730	48.640	86.230
σ		1.536%	22.820	21.600	0.151%	0.171	0.776	1.113	0.342
%RSD		1.970	1.371	1.253	0.201	0.347	1.593	2.288	0.397
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:10:08	75.882%	1994.000	497.500	500.400	2028.000	2046.000	81.178%	82.082%
2	22:10:18	75.130%	2027.000	505.700	503.500	2057.000	2059.000	83.124%	82.416%
3	22:10:28	74.757%	2019.000	500.100	507.800	2045.000	2057.000	82.931%	82.569%
x		75.256%	2013.000	501.100	503.900	2044.000	2054.000	82.411%	82.356%
σ		0.573%	17.200	4.191	3.712	14.240	7.240	1.073%	0.249%
%RSD		0.762	0.854	0.836	0.737	0.697	0.353	1.302	0.302
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	22:10:08	49.030	48.950	19.640	20.230	19.630	77.799%		
2	22:10:18	50.090	50.440	19.790	20.070	20.000	76.803%		
3	22:10:28	49.990	50.520	20.360	20.350	20.320	76.901%		
x		49.710	49.970	19.930	20.220	19.980	77.168%		
σ		0.585	0.884	0.379	0.140	0.347	0.549%		
%RSD		1.176	1.770	1.902	0.691	1.735	0.712		

180-61130-C-5-F MSD 12/5/2016 10:16:08 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:15:13	75.724%	52.340	8730.000	9065.000	0.000	68000.000	68710.000	68980.000
2	22:15:22	77.028%	53.010	8688.000	8954.000	0.000	68310.000	69110.000	69110.000
3	22:15:32	76.874%	52.620	8761.000	8913.000	0.000	67180.000	68480.000	68760.000
x		76.542%	52.660	8726.000	8977.000	0.000	67830.000	68770.000	68950.000
σ		0.712%	0.336	36.690	79.090	0.000	582.600	323.400	175.900
%RSD		0.931	0.638	0.421	0.881	0.000	0.859	0.470	0.255
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:15:13	1938.000	15240.000	0.000	72480.000	444700.000	464000.000	80.278%	992.200
2	22:15:22	1941.000	15140.000	0.000	72470.000	447300.000	464200.000	80.616%	1007.000
3	22:15:32	1932.000	15390.000	0.000	72360.000	445600.000	464600.000	81.146%	1001.000
x		1937.000	15260.000	0.000	72440.000	445800.000	464300.000	80.680%	1000.000
σ		4.524	127.300	0.000	68.890	1332.000	295.300	0.437%	7.298
%RSD		0.234	0.835	0.000	0.095	0.299	0.064	0.542	0.730
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:15:13	489.300	190.800	2461.000	1425.000	1599.000	493.000	496.600	246.500
2	22:15:22	484.200	188.200	2462.000	1413.000	1726.000	486.400	492.300	243.900
3	22:15:32	480.200	186.100	2456.000	1392.000	1578.000	473.500	481.800	247.500
x		484.600	188.300	2460.000	1410.000	1635.000	484.300	490.200	246.000
σ		4.604	2.361	3.436	16.670	79.960	9.913	7.635	1.898
%RSD		0.950	1.254	0.140	1.183	4.892	2.047	1.557	0.772
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:15:13	249.000	463.200	431.200	52.550	10.930	16.760	0.000	3659.000
2	22:15:22	244.900	451.600	448.000	51.490	9.094	12.960	0.000	3564.000
3	22:15:32	244.700	448.500	428.600	50.670	8.669	13.410	0.000	3604.000
x		246.200	454.400	436.000	51.570	9.563	14.380	0.000	3609.000
σ		2.411	7.739	10.510	0.943	1.200	2.074	0.000	47.490
%RSD		0.980	1.703	2.412	1.828	12.550	14.430	0.000	1.316
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:15:13	77.159%	1687.000	1754.000	74.711%	48.560	49.150	48.470	88.830
2	22:15:22	78.471%	1668.000	1742.000	74.331%	48.290	49.540	47.770	87.720
3	22:15:32	77.937%	1671.000	1728.000	75.416%	47.960	47.990	49.180	82.700
x		77.855%	1675.000	1741.000	74.820%	48.270	48.890	48.480	86.420
σ		0.660%	10.370	13.120	0.551%	0.302	0.807	0.707	3.269
%RSD		0.848	0.619	0.753	0.736	0.626	1.650	1.458	3.782
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:15:13	74.079%	2049.000	512.400	508.300	2089.000	2078.000	82.007%	81.401%
2	22:15:22	75.065%	2009.000	507.800	505.900	2046.000	2054.000	83.439%	80.802%
3	22:15:32	75.398%	1998.000	502.900	501.200	2004.000	2052.000	82.648%	83.014%
x		74.847%	2019.000	507.700	505.100	2046.000	2061.000	82.698%	81.739%
σ		0.686%	26.580	4.734	3.590	42.410	14.350	0.717%	1.144%
%RSD		0.916	1.317	0.933	0.711	2.072	0.697	0.868	1.400
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	22:15:13	49.860	50.390	19.990	20.100	20.130	76.521%		
2	22:15:22	49.820	50.290	20.350	20.880	20.270	76.610%		
3	22:15:32	50.450	50.120	19.420	20.040	19.610	77.353%		
x		50.040	50.270	19.920	20.340	20.000	76.828%		
σ		0.355	0.135	0.469	0.468	0.350	0.457%		
%RSD		0.710	0.268	2.352	2.299	1.751	0.594		

180-61130-C-5-D PDS 12/5/2016 10:21:13 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:20:18	77.207%	54.700	8086.000	8334.000	0.000	69370.000	70200.000	70350.000
2	22:20:27	77.911%	55.380	8004.000	8202.000	0.000	69410.000	70160.000	70280.000
3	22:20:37	77.235%	54.350	7990.000	8183.000	0.000	69190.000	70190.000	70230.000
x		77.451%	54.810	8027.000	8240.000	0.000	69320.000	70180.000	70290.000
σ		0.398%	0.522	52.210	82.300	0.000	117.700	19.880	63.400
%RSD		0.514	0.952	0.650	0.999	0.000	0.170	0.028	0.090
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:20:18	2006.000	15780.000	0.000	73300.000	412000.000	431400.000	81.224%	1062.000
2	22:20:27	2006.000	15770.000	0.000	73490.000	413000.000	432000.000	81.259%	1069.000
3	22:20:37	2008.000	15440.000	0.000	74220.000	416200.000	436500.000	80.796%	1059.000
x		2007.000	15670.000	0.000	73670.000	413700.000	433300.000	81.093%	1063.000
σ		0.987	193.300	0.000	488.200	2178.000	2787.000	0.258%	5.176
%RSD		0.049	1.234	0.000	0.663	0.526	0.643	0.318	0.487
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:20:18	496.100	194.100	2311.000	1392.000	1656.000	503.400	498.600	251.400
2	22:20:27	502.600	199.800	2320.000	1394.000	1549.000	499.200	506.300	249.800
3	22:20:37	495.400	193.400	2329.000	1374.000	1565.000	492.100	504.100	249.700
x		498.100	195.800	2320.000	1387.000	1590.000	498.200	503.000	250.300
σ		3.979	3.505	8.753	11.180	57.480	5.704	3.950	0.990
%RSD		0.799	1.791	0.377	0.806	3.616	1.145	0.785	0.396
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:20:18	256.400	461.200	455.000	51.010	13.090	17.770	0.000	3411.000
2	22:20:27	250.500	472.200	454.500	49.320	12.290	16.140	0.000	3437.000
3	22:20:37	249.600	460.500	456.600	50.370	8.973	16.910	0.000	3362.000
x		252.200	464.600	455.400	50.230	11.450	16.940	0.000	3403.000
σ		3.714	6.539	1.095	0.856	2.184	0.818	0.000	37.790
%RSD		1.473	1.407	0.241	1.703	19.070	4.827	0.000	1.110
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:20:18	78.042%	1689.000	1748.000	74.612%	48.390	48.020	53.190	88.380
2	22:20:27	78.302%	1703.000	1747.000	74.692%	49.040	48.200	49.340	88.810
3	22:20:37	79.763%	1680.000	1736.000	75.234%	47.360	47.640	48.590	90.280
x		78.702%	1691.000	1744.000	74.846%	48.260	47.960	50.380	89.160
σ		0.927%	11.350	6.821	0.339%	0.843	0.285	2.469	0.997
%RSD		1.178	0.671	0.391	0.453	1.747	0.594	4.902	1.119
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:20:18	75.332%	2153.000	536.300	533.500	2094.000	2105.000	83.430%	82.302%
2	22:20:27	75.403%	2165.000	541.400	540.300	2105.000	2104.000	83.644%	82.001%
3	22:20:37	75.396%	2144.000	535.300	533.400	2078.000	2089.000	84.362%	83.316%
x		75.377%	2154.000	537.600	535.700	2092.000	2099.000	83.812%	82.540%
σ		0.039%	10.520	3.257	3.922	13.870	8.938	0.488%	0.689%
%RSD		0.052	0.488	0.606	0.732	0.663	0.426	0.582	0.834
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	22:20:18	52.740	51.990	20.290	21.320	20.600	76.902%		
2	22:20:27	52.030	51.570	20.570	21.460	20.820	77.680%		
3	22:20:37	51.020	50.310	20.310	20.810	20.370	78.749%		
x		51.930	51.290	20.390	21.190	20.600	77.777%		
σ		0.866	0.871	0.155	0.340	0.225	0.927%		
%RSD		1.667	1.697	0.759	1.606	1.091	1.192		

180-61130-G-1-B 12/5/2016 10:26:19 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:25:23	82.959%	0.089	147.400	150.900	0.000	13000.000	21440.000	21500.000
2	22:25:33	83.097%	0.097	149.600	147.700	0.000	13030.000	21330.000	21400.000
3	22:25:42	83.931%	0.037	149.100	146.600	0.000	13010.000	21180.000	21300.000
x		83.329%	0.074	148.700	148.400	0.000	13010.000	21320.000	21400.000
σ		0.526%	0.033	1.163	2.225	0.000	14.590	129.100	98.240
%RSD		0.631	44.040	0.782	1.499	0.000	0.112	0.606	0.459

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:25:23	8.186	5360.000	0.000	447.200	363800.000	384900.000	81.078%	2.199
2	22:25:33	8.407	5350.000	0.000	447.400	367200.000	388700.000	80.813%	2.288
3	22:25:42	8.131	5402.000	0.000	441.800	362900.000	388000.000	81.514%	2.106
x		8.241	5371.000	0.000	445.500	364600.000	387200.000	81.135%	2.198
σ		0.146	27.550	0.000	3.152	2276.000	1991.000	0.354%	0.091
%RSD		1.772	0.513	0.000	0.708	0.624	0.514	0.436	4.138

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:25:23	0.846	0.603	911.800	657.700	850.600	2.432	0.678	0.492
2	22:25:33	0.262	0.677	921.400	645.900	799.500	2.756	0.506	0.585
3	22:25:42	-0.274	0.727	915.400	653.900	836.700	2.467	0.419	0.586
x		0.278	0.669	916.200	652.500	828.900	2.552	0.534	0.554
σ		0.560	0.062	4.888	6.041	26.440	0.178	0.132	0.054
%RSD		201.400	9.262	0.533	0.926	3.189	6.977	24.720	9.713

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:25:23	0.429	6.917	7.709	0.732	-0.364	5.918	0.000	843.300
2	22:25:33	0.461	6.664	5.344	0.502	0.088	4.982	0.000	826.600
3	22:25:42	0.703	6.676	5.680	0.622	0.699	3.133	0.000	835.600
x		0.531	6.753	6.244	0.619	0.141	4.677	0.000	835.200
σ		0.150	0.143	1.280	0.115	0.534	1.417	0.000	8.385
%RSD		28.220	2.110	20.500	18.580	378.900	30.300	0.000	1.004

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:25:23	79.635%	2.768	2.619	76.903%	0.026	0.001	0.000	0.023
2	22:25:33	79.662%	1.973	2.166	77.238%	0.005	-0.005	0.053	0.066
3	22:25:42	78.651%	1.857	1.826	76.857%	-0.000	0.038	0.000	0.033
x		79.316%	2.199	2.204	77.000%	0.010	0.011	0.018	0.041
σ		0.576%	0.496	0.398	0.208%	0.014	0.023	0.031	0.022
%RSD		0.726	22.560	18.070	0.270	136.500	206.100	172.900	54.310

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:25:23	78.642%	1.703	0.159	0.083	13.760	16.520	83.318%	82.849%
2	22:25:33	77.992%	1.692	0.084	0.116	13.940	16.310	83.928%	83.107%
3	22:25:42	79.010%	1.231	0.191	0.072	13.750	15.070	83.787%	83.121%
x		78.548%	1.542	0.144	0.091	13.820	15.970	83.677%	83.026%
σ		0.516%	0.269	0.055	0.023	0.107	0.784	0.320%	0.153%
%RSD		0.657	17.470	38.110	24.930	0.776	4.911	0.382	0.184

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	22:25:23	0.192	0.182	0.065	0.005	0.047	79.800%
2	22:25:33	0.159	0.177	0.031	0.036	0.030	82.162%
3	22:25:42	0.172	0.160	0.097	0.055	0.056	80.743%
x		0.175	0.173	0.064	0.032	0.044	80.902%
σ		0.016	0.011	0.033	0.025	0.013	1.189%
%RSD		9.451	6.513	51.260	78.240	30.210	1.470

180-61130-H-1-B 12/5/2016 10:31:24 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:30:28	82.227%	0.009	140.100	136.800	0.000	12530.000	20920.000	21010.000
2	22:30:37	83.793%	0.051	133.600	138.100	0.000	12590.000	20980.000	20990.000
3	22:30:47	84.309%	0.072	129.700	137.400	0.000	12470.000	20680.000	20910.000
x		83.443%	0.044	134.500	137.400	0.000	12530.000	20860.000	20970.000
σ		1.084%	0.032	5.225	0.625	0.000	61.510	156.600	53.530
%RSD		1.299	72.790	3.886	0.455	0.000	0.491	0.751	0.255
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:30:28	1.981	5137.000	0.000	452.600	353700.000	378000.000	81.358%	2.456
2	22:30:37	2.246	5260.000	0.000	448.400	354200.000	378900.000	81.633%	1.944
3	22:30:47	2.086	5287.000	0.000	444.500	354100.000	378700.000	81.441%	1.843
x		2.104	5228.000	0.000	448.500	354000.000	378500.000	81.477%	2.081
σ		0.133	80.060	0.000	4.014	248.600	476.600	0.141%	0.329
%RSD		6.342	1.531	0.000	0.895	0.070	0.126	0.173	15.810
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:30:28	0.646	0.407	1.992	-70.520	51.770	0.043	0.332	0.556
2	22:30:37	0.105	0.380	2.023	-71.050	60.940	0.020	0.508	0.342
3	22:30:47	-0.817	0.381	2.146	-71.330	38.320	0.031	0.247	0.436
x		-0.022	0.389	2.054	-70.960	50.340	0.031	0.362	0.445
σ		0.740	0.015	0.082	0.409	11.370	0.011	0.133	0.107
%RSD		3350.000	3.929	3.987	0.577	22.590	36.430	36.600	24.100
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:30:28	0.371	3.774	4.378	0.404	-0.364	-1.151	0.000	827.900
2	22:30:37	0.403	3.527	4.795	0.349	-0.058	1.956	0.000	832.300
3	22:30:47	0.589	3.703	3.773	0.219	-0.210	6.705	0.000	828.700
x		0.454	3.668	4.315	0.324	-0.211	2.503	0.000	829.700
σ		0.117	0.127	0.514	0.095	0.153	3.957	0.000	2.352
%RSD		25.840	3.459	11.920	29.370	72.760	158.100	0.000	0.284
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:30:28	78.651%	0.771	0.736	76.248%	-0.011	-0.021	0.027	0.013
2	22:30:37	77.630%	0.640	0.797	76.378%	0.010	-0.021	-0.000	-0.008
3	22:30:47	77.196%	0.704	0.475	75.817%	-0.006	-0.015	-0.000	0.002
x		77.825%	0.705	0.669	76.148%	-0.002	-0.019	0.009	0.002
σ		0.747%	0.066	0.171	0.294%	0.011	0.003	0.015	0.011
%RSD		0.960	9.330	25.520	0.386	553.100	16.550	173.400	445.500
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:30:28	77.584%	0.471	0.084	0.074	11.810	13.150	83.666%	82.193%
2	22:30:37	78.054%	0.363	0.033	0.126	13.400	12.550	84.204%	81.968%
3	22:30:47	77.120%	0.673	0.111	0.075	12.380	12.040	83.542%	82.708%
x		77.586%	0.502	0.076	0.092	12.530	12.580	83.804%	82.290%
σ		0.467%	0.157	0.040	0.030	0.802	0.557	0.352%	0.379%
%RSD		0.602	31.310	52.360	32.390	6.401	4.425	0.420	0.461
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	22:30:28	0.061	0.067	0.023	0.032	0.026	80.662%		
2	22:30:37	0.050	0.078	0.027	0.059	0.032	80.957%		
3	22:30:47	0.041	0.070	0.030	0.044	0.030	84.008%		
x		0.051	0.072	0.027	0.045	0.029	81.876%		
σ		0.010	0.006	0.003	0.014	0.003	1.853%		
%RSD		19.310	7.910	12.060	30.000	11.610	2.263		

180-61130-G-2-B 12/5/2016 10:36:29 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:35:33	86.550%	0.005	20.670	22.550	0.000	7404.000	6149.000	6152.000
2	22:35:43	82.613%	0.097	25.240	23.390	0.000	7480.000	6230.000	6220.000
3	22:35:52	86.219%	-0.001	22.800	22.140	0.000	7517.000	6241.000	6228.000
x		85.127%	0.034	22.900	22.690	0.000	7467.000	6207.000	6200.000
σ		2.183%	0.055	2.289	0.635	0.000	57.500	50.010	41.790
%RSD		2.565	163.300	9.993	2.799	0.000	0.770	0.806	0.674

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:35:33	18.610	4600.000	0.000	503.900	13220.000	12800.000	82.926%	1.777
2	22:35:43	18.400	4599.000	0.000	519.100	13720.000	12820.000	81.702%	1.809
3	22:35:52	19.230	4697.000	0.000	511.200	13340.000	12910.000	82.535%	1.630
x		18.750	4632.000	0.000	511.400	13430.000	12840.000	82.388%	1.739
σ		0.433	56.230	0.000	7.574	258.600	56.850	0.625%	0.095
%RSD		2.311	1.214	0.000	1.481	1.926	0.443	0.759	5.491

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:35:33	0.309	0.400	72.610	68.750	88.360	0.739	2.214	0.320
2	22:35:43	0.792	0.405	73.470	68.270	81.700	0.485	2.190	0.124
3	22:35:52	1.340	0.438	72.910	67.350	72.490	0.496	2.060	0.094
x		0.814	0.414	73.000	68.120	80.850	0.573	2.155	0.179
σ		0.516	0.021	0.437	0.711	7.967	0.144	0.083	0.123
%RSD		63.430	4.990	0.599	1.044	9.855	25.080	3.849	68.530

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:35:33	0.246	1.951	3.177	0.329	0.240	1.055	0.000	15.420
2	22:35:43	0.158	2.386	2.349	0.359	-0.062	0.988	0.000	14.810
3	22:35:52	0.159	1.920	2.225	0.261	-0.211	1.567	0.000	15.360
x		0.188	2.086	2.584	0.316	-0.011	1.203	0.000	15.200
σ		0.051	0.261	0.518	0.050	0.230	0.317	0.000	0.337
%RSD		27.000	12.500	20.040	15.940	2084.000	26.310	0.000	2.220

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:35:33	78.762%	0.702	0.754	78.514%	-0.000	-0.016	0.027	0.076
2	22:35:43	79.006%	0.490	0.788	78.308%	-0.006	-0.005	0.054	0.035
3	22:35:52	77.603%	0.726	0.800	79.004%	-0.000	-0.010	0.026	0.044
x		78.457%	0.639	0.781	78.609%	-0.002	-0.010	0.036	0.052
σ		0.749%	0.130	0.024	0.358%	0.003	0.005	0.016	0.022
%RSD		0.955	20.320	3.101	0.455	137.000	53.330	44.080	42.150

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:35:33	77.761%	0.379	-0.018	0.032	8.056	8.462	83.539%	83.135%
2	22:35:43	76.625%	0.440	-0.009	-0.021	7.600	7.362	84.841%	83.898%
3	22:35:52	78.124%	0.635	-0.018	0.063	6.775	7.836	85.394%	84.538%
x		77.503%	0.484	-0.015	0.025	7.477	7.887	84.591%	83.857%
σ		0.782%	0.134	0.005	0.042	0.649	0.552	0.952%	0.702%
%RSD		1.009	27.630	36.020	171.400	8.681	6.999	1.126	0.838

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	22:35:33	0.072	0.045	0.018	0.040	0.023	83.676%
2	22:35:43	0.038	0.064	0.034	-0.004	0.016	84.205%
3	22:35:52	0.061	0.067	0.049	0.061	0.042	84.481%
x		0.057	0.059	0.034	0.032	0.027	84.121%
σ		0.017	0.012	0.015	0.033	0.013	0.409%
%RSD		30.710	20.720	45.670	103.300	48.220	0.486

CCV 2136057 12/5/2016 10:41:34 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:40:40	82.048%	103.300	103.900	104.100	0.000	52150.000	52160.000	51970.000
2	22:40:49	82.212%	103.200	104.800	104.400	0.000	52250.000	52190.000	52540.000
3	22:40:58	81.801%	104.400	104.200	104.500	0.000	52620.000	52330.000	52150.000
x		82.021%	103.630%	104.304%	104.348%	0.000	104.673%	104.454%	104.440%
σ		0.207%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.252	0.624	0.411	0.212	0.000	0.472	0.172	0.563

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:40:40	545.700	5557.000	0.000	52900.000	49280.000	48720.000	83.748%	102.700
2	22:40:49	546.300	5619.000	0.000	53340.000	49610.000	49440.000	83.277%	102.300
3	22:40:58	548.100	5599.000	0.000	53220.000	49710.000	49070.000	83.018%	103.600
x		109.338%	111.830%	0.000	106.312%	99.071%	98.153%	83.348%	102.845%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.370%	n/a
%RSD		0.229	0.567	0.000	0.431	0.452	0.729	0.444	0.664

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:40:40	98.690	99.580	476.800	26630.000	24260.000	100.100	106.700	101.800
2	22:40:49	103.700	100.000	478.600	26640.000	25140.000	102.000	101.000	104.100
3	22:40:58	98.350	101.500	481.300	26990.000	25080.000	103.400	106.000	103.200
x		100.233%	100.368%	95.780%	107.002%	99.297%	101.847%	104.564%	103.027%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.961	1.009	0.465	0.770	1.985	1.611	2.986	1.158

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:40:40	101.100	96.550	101.200	98.690	98.390	104.000	0.000	101.800
2	22:40:49	101.000	101.400	97.070	100.300	99.470	102.400	0.000	100.500
3	22:40:58	104.000	95.700	102.300	102.100	100.100	87.800	0.000	104.100
x		102.042%	97.888%	100.211%	100.369%	99.318%	98.054%	0.000	102.140%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.682	3.150	2.773	1.710	0.869	9.094	0.000	1.812

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:40:40	84.686%	101.600	103.900	80.274%	97.470	97.230	96.930	100.100
2	22:40:49	84.268%	102.100	103.100	80.046%	98.740	97.820	99.030	101.200
3	22:40:58	83.336%	105.400	105.300	79.204%	98.520	99.160	101.300	100.300
x		84.096%	103.007%	104.117%	79.841%	98.243%	98.069%	99.100%	100.519%
σ		0.691%	n/a	n/a	0.564%	n/a	n/a	n/a	n/a
%RSD		0.822	2.004	1.033	0.707	0.694	1.005	2.229	0.603

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:40:40	81.197%	97.760	100.100	99.790	104.500	106.100	83.349%	82.773%
2	22:40:49	79.554%	100.800	99.340	100.400	103.400	103.500	84.719%	82.812%
3	22:40:58	79.600%	103.200	102.500	102.200	101.400	104.400	83.565%	82.998%
x		80.117%	100.604%	100.651%	100.798%	103.112%	104.651%	83.878%	82.861%
σ		0.936%	n/a	n/a	n/a	n/a	n/a	0.737%	0.120%
%RSD		1.168	2.720	1.670	1.250	1.508	1.307	0.878	0.145

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	22:40:40	98.630	97.880	97.930	97.660	97.510	80.579%
2	22:40:49	98.880	99.350	99.960	98.140	98.240	80.453%
3	22:40:58	99.380	99.830	99.320	99.180	99.120	80.540%
x		98.964%	99.021%	99.067%	98.328%	98.287%	80.524%
σ		n/a	n/a	n/a	n/a	n/a	0.064%
%RSD		0.384	1.031	1.050	0.793	0.818	0.080

CCB11 12/5/2016 10:46:42 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:45:46	90.379%	0.117	4.839	2.782	0.000	54.710	24.070	24.270
2	22:45:56	89.023%	0.099	3.351	3.489	0.000	56.330	24.770	24.470
3	22:46:05	89.635%	0.064	2.792	3.272	0.000	53.260	23.200	23.400
x		89.679%	0.094	3.661	3.181	0.000	54.770	24.010	24.050
σ		0.679%	0.027	1.058	0.362	0.000	1.537	0.788	0.570
%RSD		0.757	28.790	28.910	11.390	0.000	2.807	3.282	2.371
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:45:46	0.630	-3.212	0.000	7.250	-12.820	17.770	88.078%	0.008
2	22:45:56	0.697	-4.050	0.000	11.370	2.647	16.850	86.633%	0.039
3	22:46:05	0.674	-2.020	0.000	7.134	-9.931	6.247	87.644%	0.034
x		0.667	-3.094	0.000	8.585	-6.701	13.620	87.451%	0.027
σ		0.034	1.020	0.000	2.413	8.224	6.405	0.741%	0.017
%RSD		5.102	32.970	0.000	28.110	122.700	47.010	0.848	61.970
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:45:46	-0.034	0.052	0.181	17.010	19.560	0.039	-0.058	0.022
2	22:45:56	0.025	0.053	0.206	14.460	19.740	0.102	0.061	0.036
3	22:46:05	0.006	0.061	0.227	11.910	7.151	0.070	0.061	0.037
x		-0.001	0.055	0.205	14.460	15.480	0.070	0.021	0.032
σ		0.030	0.005	0.023	2.552	7.217	0.032	0.069	0.009
%RSD		2600.000	8.679	11.310	17.650	46.610	44.990	322.500	27.110
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:45:46	-0.031	-0.112	0.491	0.139	0.046	1.143	0.000	0.164
2	22:45:56	-0.003	0.033	0.284	0.048	-0.228	1.136	0.000	0.089
3	22:46:05	0.137	-0.013	0.308	0.009	0.190	1.440	0.000	0.079
x		0.034	-0.031	0.361	0.065	0.002	1.240	0.000	0.111
σ		0.090	0.074	0.113	0.067	0.212	0.174	0.000	0.046
%RSD		261.400	241.700	31.450	102.500	8612.000	14.030	0.000	41.600
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:45:46	88.086%	0.433	0.562	85.672%	0.056	0.023	0.024	0.001
2	22:45:56	89.187%	0.513	0.638	86.370%	0.032	0.013	0.048	0.030
3	22:46:05	86.846%	0.364	0.282	87.018%	0.055	0.008	-0.000	0.058
x		88.040%	0.437	0.494	86.353%	0.048	0.015	0.024	0.030
σ		1.171%	0.075	0.188	0.673%	0.014	0.008	0.024	0.028
%RSD		1.330	17.110	37.980	0.779	28.930	51.980	99.690	95.790
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:45:46	85.970%	0.203	0.281	0.257	-0.014	0.104	85.544%	84.617%
2	22:45:56	86.821%	0.292	0.192	0.196	0.082	-0.000	87.883%	86.767%
3	22:46:05	86.383%	0.117	0.139	0.226	0.130	0.204	88.100%	86.755%
x		86.391%	0.204	0.204	0.226	0.066	0.102	87.176%	86.046%
σ		0.425%	0.087	0.072	0.031	0.073	0.102	1.417%	1.238%
%RSD		0.492	42.780	35.060	13.560	111.200	99.430	1.626	1.439
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	22:45:46	0.026	0.043	0.028	0.034	0.047	87.016%		
2	22:45:56	0.049	0.050	0.062	0.050	0.046	87.054%		
3	22:46:05	0.065	0.032	0.047	0.046	0.030	87.236%		
x		0.047	0.042	0.046	0.043	0.041	87.102%		
σ		0.019	0.009	0.017	0.009	0.009	0.117%		
%RSD		41.550	21.890	36.880	20.080	22.870	0.135		

180-61130-G-3-B 12/5/2016 10:51:50 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:50:55	80.231%	0.064	918.700	968.200	0.000	20400.000	39360.000	39560.000
2	22:51:04	80.498%	0.033	926.300	959.600	0.000	20670.000	39820.000	40150.000
3	22:51:14	81.378%	0.040	914.500	964.800	0.000	20610.000	40370.000	40280.000
x		80.702%	0.046	919.900	964.200	0.000	20560.000	39850.000	39990.000
σ		0.600%	0.016	5.993	4.338	0.000	139.700	509.200	381.200
%RSD		0.744	35.390	0.652	0.450	0.000	0.680	1.278	0.953

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:50:55	4.060	9538.000	0.000	2051.000	282700.000	308200.000	79.716%	1.674
2	22:51:04	4.424	9753.000	0.000	2100.000	287200.000	312800.000	78.565%	1.676
3	22:51:14	4.332	9852.000	0.000	2082.000	286100.000	312000.000	79.308%	1.820
x		4.272	9714.000	0.000	2078.000	285400.000	311000.000	79.196%	1.723
σ		0.190	160.800	0.000	24.540	2336.000	2467.000	0.584%	0.084
%RSD		4.439	1.655	0.000	1.181	0.819	0.793	0.737	4.879

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:50:55	-0.358	0.965	784.100	-47.310	42.260	0.254	1.859	1.206
2	22:51:04	0.000	0.942	794.700	-48.930	50.750	0.222	1.841	0.743
3	22:51:14	-0.426	0.953	790.300	-48.170	36.330	0.374	2.189	1.217
x		-0.261	0.953	789.700	-48.140	43.110	0.284	1.963	1.056
σ		0.229	0.011	5.330	0.810	7.250	0.080	0.196	0.271
%RSD		87.570	1.201	0.675	1.682	16.820	28.230	9.990	25.630

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:50:55	1.101	4.820	4.332	0.284	-0.364	21.940	0.000	692.100
2	22:51:04	0.771	4.781	1.897	0.607	0.432	17.660	0.000	702.000
3	22:51:14	1.238	4.758	5.113	0.484	0.271	20.150	0.000	692.600
x		1.037	4.786	3.780	0.458	0.113	19.910	0.000	695.600
σ		0.240	0.031	1.677	0.163	0.421	2.150	0.000	5.583
%RSD		23.170	0.657	44.370	35.580	372.700	10.800	0.000	0.803

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:50:55	75.740%	2.792	2.780	73.283%	0.000	0.019	0.083	0.025
2	22:51:04	74.772%	2.717	2.935	72.922%	0.006	0.002	0.028	0.092
3	22:51:14	74.735%	3.544	3.311	72.560%	0.012	-0.015	0.056	0.047
x		75.082%	3.018	3.009	72.922%	0.006	0.002	0.056	0.054
σ		0.570%	0.458	0.273	0.362%	0.006	0.017	0.028	0.034
%RSD		0.759	15.160	9.080	0.496	96.580	974.400	49.430	62.740

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:50:55	75.200%	1.075	0.142	0.242	100.800	98.900	81.042%	82.110%
2	22:51:04	74.029%	1.176	0.278	0.146	97.320	100.100	82.007%	80.675%
3	22:51:14	74.387%	0.760	0.108	0.310	97.070	98.630	82.181%	81.630%
x		74.539%	1.003	0.176	0.233	98.390	99.210	81.743%	81.472%
σ		0.600%	0.217	0.090	0.082	2.068	0.779	0.614%	0.730%
%RSD		0.805	21.600	51.050	35.410	2.102	0.786	0.751	0.897

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	22:50:55	0.034	0.044	0.004	0.038	0.026	78.520%
2	22:51:04	0.034	0.036	0.016	0.033	0.017	79.567%
3	22:51:14	0.026	0.051	-0.001	0.014	0.010	79.889%
x		0.031	0.044	0.006	0.028	0.018	79.325%
σ		0.004	0.008	0.009	0.012	0.008	0.716%
%RSD		13.910	17.530	138.800	43.750	44.200	0.902

180-61130-H-4-B 12/5/2016 10:56:55 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:55:59	77.607%	0.124	6901.000	7106.000	0.000	8506.000	77680.000	78170.000
2	22:56:09	77.618%	0.100	6752.000	7061.000	0.000	8460.000	77190.000	77550.000
3	22:56:18	77.763%	0.076	6816.000	7139.000	0.000	8614.000	78530.000	79340.000
x		77.663%	0.100	6823.000	7102.000	0.000	8527.000	77800.000	78350.000
σ		0.087%	0.024	74.740	39.250	0.000	78.990	676.300	909.800
%RSD		0.112	23.750	1.095	0.553	0.000	0.926	0.869	1.161

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:55:59	3.770	5529.000	0.000	2911.000	603400.000	570200.000	77.108%	1.350
2	22:56:09	3.433	5534.000	0.000	2905.000	595000.000	564600.000	77.410%	1.595
3	22:56:18	3.875	5638.000	0.000	2953.000	610600.000	575900.000	76.928%	1.213
x		3.693	5567.000	0.000	2923.000	603000.000	570200.000	77.149%	1.386
σ		0.231	61.200	0.000	26.220	7778.000	5633.000	0.244%	0.193
%RSD		6.254	1.099	0.000	0.897	1.290	0.988	0.316	13.930

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:55:59	-0.933	0.384	1267.000	-123.200	64.450	0.540	1.872	0.284
2	22:56:09	-0.915	0.373	1257.000	-121.100	72.290	0.671	1.639	0.300
3	22:56:18	0.046	0.310	1277.000	-125.300	48.780	0.787	2.166	0.436
x		-0.601	0.356	1267.000	-123.200	61.840	0.666	1.893	0.340
σ		0.560	0.040	9.788	2.083	11.970	0.124	0.264	0.083
%RSD		93.240	11.210	0.773	1.691	19.350	18.590	13.960	24.500

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:55:59	0.207	1.610	1.506	0.632	0.282	12.110	0.000	794.800
2	22:56:09	0.207	2.840	1.139	0.262	-0.203	14.400	0.000	785.800
3	22:56:18	0.340	2.424	2.239	0.500	-0.200	17.090	0.000	811.200
x		0.252	2.291	1.628	0.465	-0.041	14.530	0.000	797.300
σ		0.077	0.626	0.560	0.187	0.279	2.489	0.000	12.870
%RSD		30.550	27.300	34.410	40.340	687.700	17.130	0.000	1.615

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:55:59	73.846%	1.075	0.848	72.043%	-0.005	-0.003	0.058	0.026
2	22:56:09	73.730%	0.891	0.802	71.659%	0.001	0.002	-0.000	0.003
3	22:56:18	72.460%	0.875	1.035	72.525%	0.000	-0.021	0.028	0.059
x		73.345%	0.947	0.895	72.076%	-0.001	-0.007	0.029	0.030
σ		0.769%	0.111	0.123	0.433%	0.003	0.012	0.029	0.028
%RSD		1.048	11.690	13.770	0.601	226.000	165.100	100.700	95.530

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:55:59	71.444%	0.475	0.078	0.107	32.230	33.100	80.263%	80.221%
2	22:56:09	72.364%	0.606	0.104	0.162	31.960	33.560	80.804%	81.224%
3	22:56:18	73.082%	0.389	0.039	0.059	32.820	33.850	81.704%	80.112%
x		72.297%	0.490	0.074	0.109	32.340	33.500	80.923%	80.519%
σ		0.821%	0.109	0.033	0.051	0.444	0.375	0.728%	0.613%
%RSD		1.135	22.250	44.210	47.020	1.372	1.119	0.900	0.762

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	22:55:59	0.042	0.031	0.008	-0.004	0.007	78.082%
2	22:56:09	0.026	0.023	0.007	0.019	0.011	80.199%
3	22:56:18	0.023	0.036	-0.009	0.024	0.004	78.987%
x		0.030	0.030	0.002	0.013	0.007	79.089%
σ		0.010	0.007	0.010	0.015	0.003	1.062%
%RSD		32.610	22.250	456.800	113.900	46.480	1.343

180-61130-H-5-B 12/5/2016 11:02:03 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:01:06	75.360%	0.219	7287.000	7537.000	0.000	17380.000	17620.000	17780.000
2	23:01:16	75.724%	0.137	7289.000	7520.000	0.000	17410.000	17640.000	17850.000
3	23:01:26	76.328%	0.175	7187.000	7470.000	0.000	17460.000	17760.000	17870.000
x		75.804%	0.177	7254.000	7509.000	0.000	17420.000	17670.000	17830.000
σ		0.489%	0.041	57.910	34.510	0.000	40.310	77.940	46.310
%RSD		0.645	23.240	0.798	0.460	0.000	0.231	0.441	0.260

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:01:06	335.300	4344.000	0.000	19870.000	384300.000	411400.000	77.856%	5.582
2	23:01:16	333.500	4400.000	0.000	19850.000	387100.000	412700.000	77.812%	5.669
3	23:01:26	335.500	4368.000	0.000	19980.000	386200.000	412700.000	77.577%	5.882
x		334.800	4371.000	0.000	19900.000	385800.000	412200.000	77.748%	5.711
σ		1.086	27.990	0.000	67.260	1424.000	762.500	0.150%	0.154
%RSD		0.324	0.640	0.000	0.338	0.369	0.185	0.193	2.704

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:01:06	0.057	0.697	2268.000	1640.000	1966.000	3.522	1.490	0.523
2	23:01:16	-0.520	0.531	2254.000	1650.000	1805.000	3.634	2.275	0.608
3	23:01:26	-0.116	0.616	2269.000	1638.000	1972.000	3.740	1.450	0.768
x		-0.193	0.615	2264.000	1642.000	1914.000	3.632	1.739	0.633
σ		0.296	0.083	8.400	6.305	94.910	0.109	0.465	0.125
%RSD		153.200	13.560	0.371	0.384	4.958	2.991	26.760	19.690

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:01:06	0.522	2.537	1.216	11.460	0.276	5.688	0.000	2462.000
2	23:01:16	0.206	3.505	2.881	11.960	-0.041	4.664	0.000	2501.000
3	23:01:26	0.908	2.157	1.441	11.680	0.118	5.376	0.000	2446.000
x		0.545	2.733	1.846	11.700	0.118	5.243	0.000	2470.000
σ		0.351	0.695	0.903	0.251	0.159	0.525	0.000	28.270
%RSD		64.390	25.430	48.910	2.144	135.000	10.010	0.000	1.145

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:01:06	74.481%	565.500	586.100	71.743%	-0.011	-0.003	0.087	0.187
2	23:01:16	73.576%	575.100	583.800	72.102%	0.017	-0.015	0.085	0.227
3	23:01:26	74.174%	564.800	585.800	71.827%	0.006	-0.009	0.285	0.161
x		74.077%	568.500	585.200	71.891%	0.004	-0.009	0.152	0.192
σ		0.460%	5.725	1.284	0.188%	0.014	0.006	0.115	0.034
%RSD		0.621	1.007	0.219	0.261	339.000	63.160	75.490	17.560

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:01:06	71.631%	2.495	0.050	0.050	71.290	75.200	80.206%	78.119%
2	23:01:16	73.296%	1.939	0.066	0.014	74.070	68.200	79.710%	80.024%
3	23:01:26	73.041%	2.083	0.039	0.126	72.160	67.650	80.737%	80.272%
x		72.656%	2.172	0.052	0.064	72.500	70.350	80.217%	79.471%
σ		0.897%	0.289	0.014	0.057	1.421	4.208	0.513%	1.178%
%RSD		1.234	13.280	25.960	90.090	1.960	5.981	0.640	1.482

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	23:01:06	0.128	0.134	0.349	0.363	0.336	80.984%
2	23:01:16	0.135	0.131	0.355	0.322	0.348	78.520%
3	23:01:26	0.114	0.129	0.377	0.357	0.350	78.107%
x		0.126	0.131	0.360	0.347	0.345	79.204%
σ		0.011	0.003	0.015	0.022	0.008	1.555%
%RSD		8.529	2.177	4.182	6.295	2.210	1.964

180-61130-H-6-B 12/5/2016 11:07:08 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:06:14	78.432%	0.036	664.600	675.400	0.000	7804.000	9678.000	9695.000
2	23:06:23	79.115%	-0.003	652.600	669.400	0.000	7830.000	9805.000	9776.000
3	23:06:33	77.110%	0.006	637.400	674.900	0.000	7856.000	9753.000	9951.000
x		78.219%	0.013	651.500	673.200	0.000	7830.000	9745.000	9807.000
σ		1.019%	0.021	13.630	3.317	0.000	25.840	63.770	130.800
%RSD		1.303	159.400	2.092	0.493	0.000	0.330	0.654	1.334
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:06:14	60.430	7113.000	0.000	1478.000	144100.000	156900.000	76.695%	2.430
2	23:06:23	61.050	7220.000	0.000	1490.000	145300.000	158500.000	76.776%	2.568
3	23:06:33	60.050	7256.000	0.000	1531.000	146700.000	159600.000	75.227%	1.996
x		60.510	7196.000	0.000	1500.000	145400.000	158300.000	76.233%	2.332
σ		0.503	74.230	0.000	27.860	1315.000	1369.000	0.872%	0.298
%RSD		0.832	1.031	0.000	1.858	0.905	0.865	1.144	12.800
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:06:14	0.077	0.499	97.240	1.446	45.340	0.118	0.817	1.442
2	23:06:23	0.294	0.385	99.820	2.213	53.340	0.214	1.184	1.230
3	23:06:33	0.175	0.393	101.000	0.827	57.700	0.219	0.927	1.488
x		0.182	0.426	99.340	1.495	52.130	0.184	0.976	1.387
σ		0.109	0.064	1.911	0.695	6.265	0.057	0.189	0.138
%RSD		59.650	14.920	1.924	46.450	12.020	31.060	19.330	9.939
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:06:14	1.395	7.388	6.662	0.338	-0.364	4.642	0.000	249.100
2	23:06:23	1.748	6.657	6.684	0.369	-0.042	6.986	0.000	252.000
3	23:06:33	1.555	6.792	7.011	0.267	-0.364	5.064	0.000	256.500
x		1.566	6.946	6.786	0.325	-0.257	5.564	0.000	252.600
σ		0.177	0.389	0.196	0.052	0.186	1.249	0.000	3.755
%RSD		11.270	5.600	2.884	16.140	72.400	22.460	0.000	1.487
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:06:14	74.216%	1.946	2.125	73.082%	0.000	-0.010	0.028	0.025
2	23:06:23	74.174%	1.556	2.124	73.144%	-0.011	0.008	-0.000	0.014
3	23:06:33	72.867%	1.730	1.877	72.036%	0.000	0.008	0.029	0.049
x		73.753%	1.744	2.042	72.754%	-0.003	0.002	0.019	0.029
σ		0.767%	0.195	0.143	0.623%	0.007	0.010	0.016	0.018
%RSD		1.040	11.200	7.014	0.856	192.300	481.900	86.700	59.740
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:06:14	73.760%	1.771	0.038	0.036	35.000	34.360	82.209%	81.470%
2	23:06:23	73.070%	1.998	0.147	0.048	36.450	35.430	81.278%	81.315%
3	23:06:33	72.369%	2.203	0.104	0.117	37.250	34.500	80.194%	79.632%
x		73.066%	1.991	0.097	0.067	36.230	34.760	81.227%	80.806%
σ		0.696%	0.216	0.055	0.044	1.142	0.586	1.009%	1.019%
%RSD		0.952	10.850	56.960	65.270	3.151	1.685	1.242	1.261
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	23:06:14	0.005	0.020	0.076	0.086	0.057	81.281%		
2	23:06:23	-0.002	0.019	0.070	0.067	0.059	82.717%		
3	23:06:33	0.008	0.020	0.065	0.066	0.070	84.245%		
x		0.003	0.020	0.070	0.073	0.062	82.748%		
σ		0.005	0.000	0.005	0.012	0.007	1.482%		
%RSD		152.900	2.392	7.526	15.800	11.690	1.791		

180-61130-H-7-B 12/5/2016 11:12:14 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:11:18	72.931%	1.216	13380.000	14000.000	0.000	13240.000	18280.000	18450.000
2	23:11:28	73.681%	1.054	13110.000	13800.000	0.000	13120.000	18120.000	18220.000
3	23:11:37	71.821%	1.270	13370.000	14140.000	0.000	13190.000	18020.000	18360.000
x		72.811%	1.180	13290.000	13980.000	0.000	13180.000	18140.000	18340.000
σ		0.936%	0.113	151.700	169.600	0.000	62.280	130.300	114.600
%RSD		1.285	9.532	1.141	1.214	0.000	0.472	0.718	0.625

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:11:18	1166.000	7617.000	0.000	2331.000	762000.000	799300.000	74.072%	2.850
2	23:11:28	1144.000	7698.000	0.000	2312.000	762300.000	794500.000	74.423%	3.329
3	23:11:37	1159.000	7723.000	0.000	2327.000	762100.000	799700.000	73.950%	2.300
x		1156.000	7679.000	0.000	2323.000	762100.000	797800.000	74.148%	2.826
σ		11.270	55.380	0.000	9.689	170.800	2890.000	0.246%	0.515
%RSD		0.975	0.721	0.000	0.417	0.022	0.362	0.332	18.220

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:11:18	-0.084	0.369	24790.000	69.000	322.700	25.480	17.580	0.366
2	23:11:28	-1.020	0.276	24740.000	65.970	296.700	26.560	17.510	0.485
3	23:11:37	-0.363	0.221	24840.000	65.990	328.700	26.060	16.340	0.443
x		-0.489	0.289	24790.000	66.990	316.000	26.030	17.140	0.432
σ		0.481	0.075	49.290	1.745	16.980	0.537	0.695	0.060
%RSD		98.290	25.960	0.199	2.605	5.373	2.064	4.053	13.990

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:11:18	0.543	13.340	13.250	0.735	0.917	20.590	0.000	3349.000
2	23:11:28	0.545	12.550	11.950	0.817	0.412	27.210	0.000	3343.000
3	23:11:37	0.260	12.640	12.670	0.679	1.319	25.230	0.000	3328.000
x		0.449	12.840	12.620	0.744	0.883	24.350	0.000	3340.000
σ		0.164	0.435	0.650	0.069	0.455	3.399	0.000	10.870
%RSD		36.490	3.387	5.150	9.337	51.500	13.960	0.000	0.326

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:11:18	103.320%	0.574	0.293	68.171%	0.007	-0.015	0.719	0.890
2	23:11:28	101.677%	0.291	0.574	67.829%	0.007	-0.015	0.547	0.618
3	23:11:37	101.831%	0.456	0.474	67.215%	0.026	0.004	0.706	0.710
x		102.276%	0.440	0.447	67.738%	0.013	-0.009	0.657	0.739
σ		0.908%	0.142	0.143	0.484%	0.011	0.011	0.096	0.139
%RSD		0.888	32.180	31.900	0.715	80.580	126.500	14.570	18.750

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:11:18	69.589%	0.319	-0.022	-0.006	53.670	53.370	79.460%	79.855%
2	23:11:28	68.258%	0.403	-0.002	-0.005	55.830	53.720	80.010%	79.233%
3	23:11:37	67.496%	0.260	-0.001	0.079	50.010	54.930	79.250%	79.145%
x		68.448%	0.327	-0.008	0.023	53.170	54.000	79.573%	79.411%
σ		1.059%	0.072	0.012	0.049	2.943	0.817	0.392%	0.387%
%RSD		1.548	21.870	142.600	216.000	5.535	1.512	0.493	0.487

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	23:11:18	0.069	0.136	0.697	0.687	0.736	75.601%
2	23:11:28	0.099	0.164	0.754	0.708	0.726	75.957%
3	23:11:37	0.106	0.137	0.809	0.808	0.755	76.128%
x		0.091	0.145	0.753	0.734	0.739	75.895%
σ		0.019	0.016	0.056	0.064	0.015	0.269%
%RSD		21.200	10.810	7.435	8.760	1.972	0.354

180-61130-G-8-B 12/5/2016 11:17:19 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:16:22	78.251%	-0.003	77.020	76.960	0.000	5486.000	9319.000	9370.000
2	23:16:32	77.657%	-0.002	77.720	79.450	0.000	5112.000	8824.000	8837.000
3	23:16:42	76.563%	-0.017	75.980	77.180	0.000	5475.000	9226.000	9360.000
x		77.490%	-0.007	76.910	77.870	0.000	5358.000	9123.000	9189.000
σ		0.856%	0.009	0.874	1.380	0.000	212.700	263.100	304.900
%RSD		1.105	115.200	1.136	1.773	0.000	3.970	2.884	3.318

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:16:22	4.849	4920.000	0.000	589.900	83070.000	88710.000	76.176%	1.768
2	23:16:32	4.689	4954.000	0.000	540.700	77770.000	83380.000	80.874%	1.324
3	23:16:42	5.007	4861.000	0.000	599.300	82190.000	88810.000	75.778%	1.523
x		4.848	4912.000	0.000	576.600	81010.000	86960.000	77.609%	1.538
σ		0.159	47.530	0.000	31.480	2840.000	3109.000	2.834%	0.223
%RSD		3.285	0.968	0.000	5.460	3.506	3.575	3.652	14.470

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:16:22	0.789	0.218	59.720	46.570	85.380	0.243	0.834	0.193
2	23:16:32	-0.215	0.188	55.370	43.270	55.240	0.116	0.757	0.330
3	23:16:42	1.413	0.238	58.620	46.040	80.610	0.170	1.023	0.410
x		0.662	0.215	57.900	45.290	73.740	0.176	0.872	0.311
σ		0.821	0.025	2.261	1.773	16.200	0.064	0.137	0.110
%RSD		124.000	11.630	3.905	3.914	21.970	36.400	15.700	35.240

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:16:22	0.380	1.718	3.174	0.605	-0.198	4.117	0.000	140.100
2	23:16:32	0.366	2.614	1.628	0.611	-0.034	2.789	0.000	142.000
3	23:16:42	0.478	3.038	1.369	0.745	-0.364	6.172	0.000	144.400
x		0.408	2.456	2.057	0.654	-0.199	4.359	0.000	142.200
σ		0.061	0.674	0.976	0.079	0.165	1.704	0.000	2.156
%RSD		15.000	27.430	47.440	12.110	83.160	39.090	0.000	1.516

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:16:22	71.010%	0.785	0.801	71.688%	0.001	-0.009	0.000	0.003
2	23:16:32	70.667%	0.872	1.001	71.910%	0.006	-0.021	0.029	0.015
3	23:16:42	71.529%	0.717	0.760	71.860%	0.006	-0.021	0.029	-0.008
x		71.069%	0.792	0.854	71.819%	0.004	-0.017	0.019	0.003
σ		0.434%	0.077	0.129	0.116%	0.003	0.007	0.017	0.012
%RSD		0.611	9.770	15.070	0.162	76.180	39.520	86.440	354.900

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:16:22	71.911%	0.400	0.032	0.152	39.780	43.100	80.125%	79.690%
2	23:16:32	71.223%	0.263	0.014	0.096	41.170	41.550	80.630%	79.113%
3	23:16:42	71.179%	0.107	0.060	0.096	43.100	42.260	80.036%	80.721%
x		71.438%	0.257	0.035	0.115	41.350	42.300	80.264%	79.841%
σ		0.411%	0.146	0.023	0.032	1.668	0.777	0.320%	0.815%
%RSD		0.575	57.000	65.980	28.010	4.033	1.837	0.399	1.021

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	23:16:22	-0.002	0.019	0.040	0.024	0.038	79.820%
2	23:16:32	0.015	0.021	0.052	0.059	0.048	80.920%
3	23:16:42	0.008	0.019	0.023	0.055	0.036	80.957%
x		0.007	0.020	0.039	0.046	0.041	80.566%
σ		0.009	0.002	0.014	0.019	0.006	0.646%
%RSD		119.000	7.890	37.190	42.430	15.680	0.802

CRI 2136054 12/5/2016 11:27:35 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:26:40	88.749%	1.002	27.900	24.960	0.000	604.700	547.100	546.200
2	23:26:49	89.627%	1.052	24.500	24.160	0.000	615.400	546.200	545.500
3	23:26:59	88.276%	1.146	22.540	25.680	0.000	611.800	547.500	551.400
x		88.884%	106.656%	499.584%	498.670%	0.000	763.279%	546.940%	547.729%
σ		0.686%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.772	6.852	10.840	3.044	0.000	0.889	0.128	0.592

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:26:40	33.990	528.600	0.000	548.300	554.700	560.000	83.899%	5.231
2	23:26:49	34.370	549.000	0.000	559.100	587.700	549.700	82.740%	5.101
3	23:26:59	33.580	553.700	0.000	561.000	580.400	566.200	82.827%	5.173
x		113.269%	108.750%	0.000	556.181%	574.269%	558.646%	83.156%	103.370%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.645%	n/a
%RSD		1.156	2.454	0.000	1.232	3.013	1.494	0.776	1.267

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:26:40	1.021	1.973	5.975	56.600	72.320	0.668	0.971	2.043
2	23:26:49	1.230	2.012	5.932	54.900	44.210	0.558	1.281	2.760
3	23:26:59	1.044	2.089	6.009	54.530	66.150	0.470	1.490	2.360
x		109.818%	101.236%	119.440%	110.685%	121.789%	113.046%	124.744%	119.389%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		10.470	2.908	0.644	1.991	24.260	17.560	20.940	15.040

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:26:40	2.479	5.264	5.363	0.977	5.244	3.828	0.000	5.190
2	23:26:49	2.467	6.024	6.449	1.066	4.072	8.277	0.000	5.613
3	23:26:59	2.698	7.336	7.125	1.299	3.785	5.911	0.000	4.953
x		127.400%	124.159%	126.248%	111.411%	87.339%	120.111%	0.000	105.034%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		5.102	16.890	14.080	14.900	17.700	37.060	0.000	6.366

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:26:40	86.657%	5.326	4.838	82.197%	0.995	0.981	1.006	1.239
2	23:26:49	84.724%	5.702	5.922	82.825%	1.014	1.080	1.138	1.181
3	23:26:59	84.702%	5.254	5.086	82.106%	0.975	1.044	1.217	1.383
x		85.361%	108.545%	105.642%	82.376%	99.453%	103.523%	112.025%	126.766%
σ		1.123%	n/a	n/a	0.391%	n/a	n/a	n/a	n/a
%RSD		1.315	4.431	10.750	0.475	1.980	4.839	9.517	8.221

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:26:40	82.297%	4.995	2.069	2.116	11.610	10.950	85.608%	83.995%
2	23:26:49	81.332%	4.741	2.002	2.270	10.490	9.646	85.411%	83.877%
3	23:26:59	81.348%	4.904	2.166	2.037	10.750	11.090	85.256%	84.197%
x		81.659%	97.601%	103.955%	107.059%	109.534%	105.643%	85.425%	84.023%
σ		0.553%	n/a	n/a	n/a	n/a	n/a	0.177%	0.162%
%RSD		0.677	2.633	3.947	5.533	5.344	7.557	0.207	0.193

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	23:26:40	1.133	1.065	1.050	1.137	1.062	87.032%
2	23:26:49	1.106	1.132	0.972	0.933	0.983	86.854%
3	23:26:59	1.002	1.022	1.015	1.086	1.069	87.082%
x		108.044%	107.294%	101.249%	105.220%	103.789%	86.989%
σ		n/a	n/a	n/a	n/a	n/a	0.120%
%RSD		6.423	5.148	3.833	10.120	4.609	0.138

CCV 2136057 12/5/2016 11:32:43 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:31:47	79.121%	104.100	104.900	105.200	0.000	52510.000	52430.000	52490.000
2	23:31:56	79.981%	103.800	105.800	103.700	0.000	52870.000	52860.000	52490.000
3	23:32:06	80.613%	103.600	104.700	103.600	0.000	52390.000	52430.000	52480.000
x		79.905%	103.827%	105.161%	104.168%	0.000	105.187%	105.144%	104.981%
σ		0.749%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.937	0.265	0.555	0.833	0.000	0.478	0.468	0.010
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:31:47	547.400	5650.000	0.000	53890.000	49650.000	48580.000	80.771%	102.900
2	23:31:56	547.000	5603.000	0.000	53770.000	49670.000	48880.000	81.126%	100.700
3	23:32:06	545.400	5734.000	0.000	53750.000	49440.000	48910.000	81.258%	101.400
x		109.322%	113.245%	0.000	107.614%	99.174%	97.586%	81.052%	101.656%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.252%	n/a
%RSD		0.193	1.179	0.000	0.139	0.258	0.375	0.311	1.137
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:31:47	98.660	98.160	487.100	26860.000	24830.000	102.500	106.600	99.600
2	23:31:56	102.600	99.880	483.500	26580.000	24730.000	104.000	105.700	103.800
3	23:32:06	96.640	97.590	485.200	26370.000	24630.000	102.500	98.850	101.600
x		99.288%	98.544%	97.057%	106.417%	98.921%	103.004%	103.722%	101.643%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		3.030	1.213	0.374	0.916	0.411	0.851	4.095	2.059
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:31:47	102.400	97.340	102.100	102.100	102.500	89.850	0.000	103.200
2	23:31:56	101.300	92.120	98.470	100.700	103.300	99.980	0.000	99.980
3	23:32:06	106.100	97.730	94.420	103.700	108.300	95.040	0.000	101.900
x		103.289%	95.728%	98.313%	102.164%	104.699%	94.954%	0.000	101.689%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.433	3.273	3.882	1.483	3.003	5.333	0.000	1.575
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:31:47	80.239%	100.600	106.100	77.996%	97.310	99.240	97.310	100.000
2	23:31:56	81.313%	99.920	105.100	78.476%	97.950	96.700	97.470	98.070
3	23:32:06	79.688%	99.240	101.800	78.220%	96.650	96.830	98.930	100.700
x		80.414%	99.932%	104.325%	78.231%	97.303%	97.591%	97.905%	99.616%
σ		0.826%	n/a	n/a	0.240%	n/a	n/a	n/a	n/a
%RSD		1.028	0.701	2.181	0.307	0.669	1.467	0.914	1.388
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:31:47	77.674%	100.600	99.110	101.700	105.000	103.700	81.823%	80.214%
2	23:31:56	78.866%	100.400	100.200	99.480	97.880	100.700	82.290%	81.064%
3	23:32:06	76.507%	99.410	101.100	100.900	103.300	101.800	82.629%	82.244%
x		77.682%	100.145%	100.140%	100.712%	102.078%	102.071%	82.247%	81.174%
σ		1.180%	n/a	n/a	n/a	n/a	n/a	0.404%	1.020%
%RSD		1.519	0.639	1.014	1.127	3.655	1.492	0.492	1.256
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	23:31:47	97.440	97.510	95.990	98.940	96.780	80.164%		
2	23:31:56	97.990	97.840	97.070	96.730	96.670	80.483%		
3	23:32:06	98.440	97.640	95.400	96.690	95.720	80.758%		
x		97.957%	97.662%	96.154%	97.456%	96.391%	80.468%		
σ		n/a	n/a	n/a	n/a	n/a	0.297%		
%RSD		0.513	0.171	0.884	1.318	0.604	0.370		

CCB12 12/5/2016 11:37:50 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

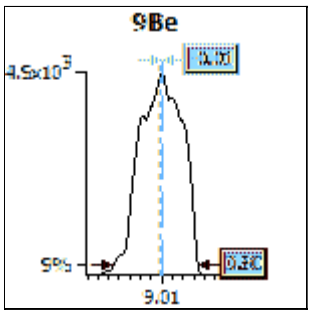
Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:36:54	86.541%	0.097	3.583	4.363	0.000	51.100	27.670	29.040
2	23:37:04	85.459%	0.035	4.842	4.092	0.000	51.160	30.240	28.090
3	23:37:13	87.096%	0.054	5.171	4.175	0.000	50.960	29.010	27.980
x		86.365%	0.062	4.532	4.210	0.000	51.070	28.980	28.370
σ		0.833%	0.032	0.838	0.139	0.000	0.098	1.286	0.582
%RSD		0.964	51.420	18.500	3.301	0.000	0.193	4.439	2.052
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:36:54	0.620	0.020	0.000	15.890	-65.620	19.740	85.804%	-0.108
2	23:37:04	0.619	2.321	0.000	16.510	7.120	18.420	85.498%	-0.057
3	23:37:13	0.596	2.360	0.000	14.450	-25.050	13.950	85.446%	0.070
x		0.611	1.567	0.000	15.620	-27.850	17.370	85.583%	-0.032
σ		0.014	1.340	0.000	1.058	36.450	3.038	0.193%	0.092
%RSD		2.219	85.510	0.000	6.774	130.900	17.490	0.226	288.400
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:36:54	0.101	0.063	0.394	18.540	15.940	0.008	0.024	0.011
2	23:37:04	0.220	0.054	0.361	15.690	18.790	0.051	0.023	0.069
3	23:37:13	0.025	0.080	0.473	14.790	8.849	0.019	0.148	0.070
x		0.115	0.066	0.409	16.340	14.530	0.026	0.065	0.050
σ		0.098	0.013	0.058	1.962	5.120	0.022	0.072	0.034
%RSD		85.110	19.990	14.160	12.010	35.250	87.040	110.600	67.290
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:36:54	-0.028	-0.054	0.491	0.187	-0.222	3.547	0.000	0.223
2	23:37:04	0.000	-0.055	0.167	0.037	-0.081	-0.819	0.000	0.195
3	23:37:13	0.002	-0.102	0.300	0.066	0.356	1.787	0.000	0.174
x		-0.009	-0.070	0.319	0.097	0.018	1.505	0.000	0.197
σ		0.017	0.027	0.163	0.080	0.301	2.196	0.000	0.025
%RSD		192.700	39.150	51.120	82.610	1715.000	145.900	0.000	12.480
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:36:54	84.098%	0.647	0.451	84.719%	0.043	0.024	-0.000	0.041
2	23:37:04	84.988%	0.341	0.367	84.250%	0.009	0.034	-0.000	0.041
3	23:37:13	83.140%	0.185	0.481	83.268%	0.034	0.045	-0.000	0.062
x		84.075%	0.391	0.433	84.079%	0.028	0.034	-0.000	0.048
σ		0.924%	0.235	0.059	0.741%	0.018	0.011	0.000	0.012
%RSD		1.099	60.160	13.720	0.881	62.070	31.310	102.500	25.910
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:36:54	83.951%	0.140	0.265	0.343	0.035	0.053	84.998%	83.761%
2	23:37:04	83.119%	0.279	0.227	0.256	0.085	0.237	85.430%	83.898%
3	23:37:13	81.168%	0.090	0.242	0.303	0.188	0.160	85.020%	83.624%
x		82.746%	0.170	0.244	0.301	0.103	0.150	85.149%	83.761%
σ		1.428%	0.098	0.019	0.043	0.078	0.093	0.243%	0.137%
%RSD		1.726	57.580	7.702	14.440	75.480	61.800	0.286	0.163
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	23:36:54	0.050	0.034	0.060	0.102	0.056	85.955%		
2	23:37:04	0.057	0.058	0.021	0.055	0.043	86.012%		
3	23:37:13	0.050	0.045	0.052	0.077	0.050	85.901%		
x		0.052	0.046	0.044	0.078	0.049	85.956%		
σ		0.004	0.012	0.020	0.024	0.007	0.056%		
%RSD		7.214	25.960	45.760	30.060	13.190	0.065		

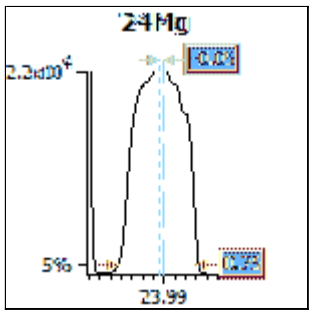
Performance Report

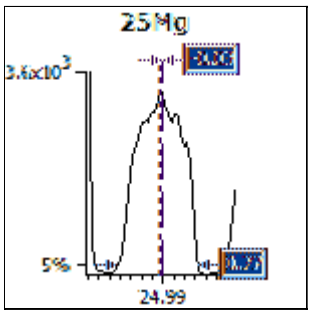
Sample details
Sample name : ITUNE
Acquired at : 12/5/2016 6:59:45 AM
Report name : EPA ILM05.2 / 6020A 2.1 [6/28/2016 12:34:31 PM]

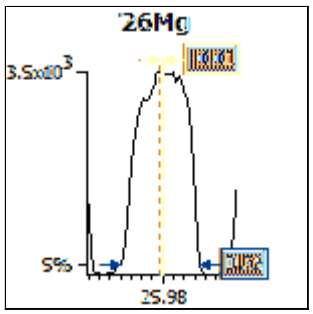
Mass Calibration verification

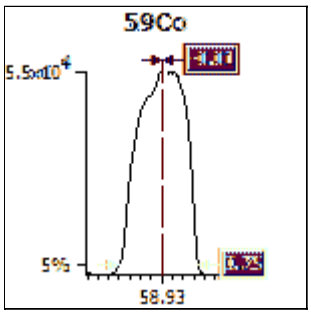
Acquisition parameters
Sweeps : 10
Dwell : 10.0 mSecs
Point spacing : 0.02 amu
Peak width measured at 5% of the peak maximum

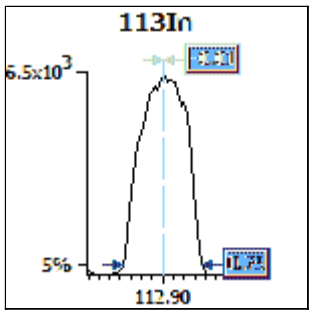


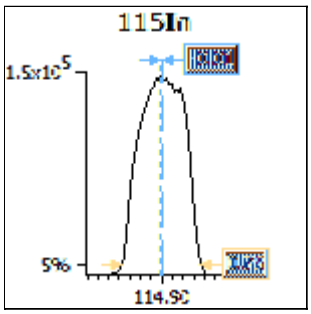


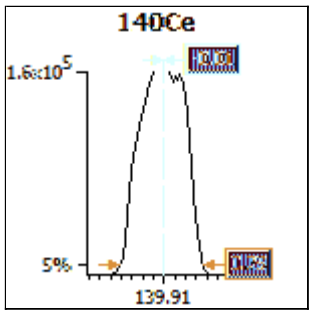


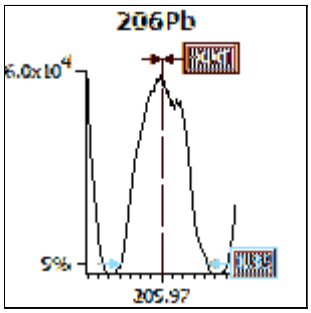


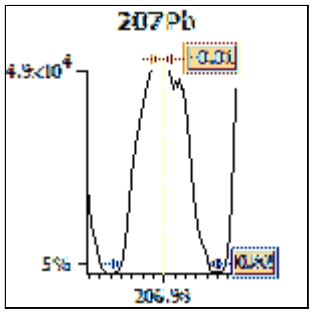


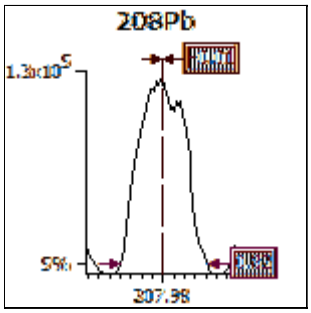












Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.90	0.40	0.10	0.80	-0.01
24Mg	0.90	0.40	0.10	0.75	-0.05
25Mg	0.90	0.40	0.10	0.77	-0.03
26Mg	0.90	0.40	0.10	0.75	-0.01
59Co	0.90	0.40	0.10	0.75	-0.01
113In	0.90	0.40	0.10	0.75	-0.01
115In	0.90	0.40	0.10	0.75	-0.01
140Ce	0.90	0.40	0.10	0.79	-0.01
206Pb	0.90	0.40	0.10	0.82	-0.01
207Pb	0.90	0.40	0.10	0.82	-0.01
208Pb	0.90	0.40	0.10	0.82	-0.01

Sample details
Sample name : ITUNE
Acquired at : 12/5/2016 6:59:45 AM
Report name : EPA ILM05.2 / 6020A 2.1 [6/28/2016 12:34:31 PM]

Tune conditions

Major	
Extraction	-157
Lens 1	2.9
Focus	22.7
D1	-36.9
Pole Bias	-1.0
Hexapole Bias	-3.0
Nebuliser	0.78
Sampling Depth	113

Minor	
Lens 2	-20.4
Lens 3	-194.5
Forward power	1404
Horizontal	47
Vertical	465
D2	-151
DA	-80.0
Cool	13.0
Auxiliary	0.80

Global	
Standard resolution	n/a
High resolution	n/a
Analogue Detector	n/a
PC Detector	n/a

Add. Gases	
CCT1	0.00
CCT2	0.00

Sensitivity and stability results

Acquisition parameters
Sweeps : 180

Run	Time	5Bkg	9Be	24Mg	25Mg	26Mg	59Co	113In	115In
Dwell (mSecs)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Limits	%RSD	-	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
	Countrate	-	>100	>500	>150	>150	>500	>500	>10000
1	7:01:18 AM	2	4578	27247	3206	3919	54463	6203	145602
2	7:02:31 AM	1	4488	26450	3129	3712	54442	6114	146053
3	7:03:43 AM	1	4429	26145	3063	3670	53940	6084	145141
4	7:04:56 AM	2	4414	25980	3007	3618	54282	6005	145615
5	7:06:08 AM	1	4365	25588	3062	3617	54114	6158	145544
x		1	4455	26282	3093	3707	54248	6113	145591
σ		0.37	81.45	622.77	76.20	124.81	222.20	75.15	323.68
%RSD		27.776	1.828	2.370	2.463	3.366	0.410	1.229	0.222

Run	Time	140Ce	156Ce O	206Pb	207Pb	208Pb	220Bkg
Dwell (mSecs)		0.0	0.0	0.0	0.0	0.0	0.0
Limits	%RSD	5.0%	-	5.0%	5.0%	5.0%	-
	Countrate	>10000	-	>1000	>1000	>5000	-
1	7:01:18 AM	163031	3423	60543	49475	133052	0
2	7:02:31 AM	162101	3407	60635	49302	132585	0
3	7:03:43 AM	162062	3345	60244	49073	131992	0
4	7:04:56 AM	162517	3399	60776	49171	131430	0
5	7:06:08 AM	162545	3440	60359	49176	131899	0
x		162451	3403	60511	49239	132192	0
σ		394.56	36.07	212.81	154.67	632.51	0.11
%RSD		0.243	1.060	0.352	0.314	0.478	50.619

Ratio results

Run	Time	156Ce O/140Ce
Ratio limits		<0.0600
1	7:01:18 AM	0
2	7:02:31 AM	0
3	7:03:43 AM	0
4	7:04:56 AM	0
5	7:06:08 AM	0
x		0.0209
σ		0.00
%RSD		0.9269

Result : The performance report passed.

Dilution Corrected Concentrations

STD1 2120847 12/6/2016 9:08:09 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:07:14	101.651%	-0.005	-0.067	0.064	0.000	-0.515	0.350	-0.131
2	09:07:23	99.060%	0.025	0.195	-0.119	0.000	0.167	-0.140	-0.536
3	09:07:33	99.289%	-0.020	-0.128	0.055	0.000	0.348	-0.210	0.667
x		100.000%	0.000	-0.000	-0.000	0.000	0.000	-0.000	-0.000
σ		1.434%	0.023	0.172	0.103	0.000	0.455	0.305	0.613
%RSD		1.434	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:07:14	-0.031	-1.764	0.000	-2.866	-2.373	-3.363	100.783%	0.015
2	09:07:23	0.025	1.317	0.000	-1.033	-13.440	2.030	99.855%	0.001
3	09:07:33	0.006	0.447	0.000	3.899	15.810	1.333	99.362%	-0.016
x		0.000	-0.000	0.000	0.000	-0.000	-0.000	100.000%	-0.000
σ		0.029	1.588	0.000	3.498	14.770	2.933	0.722%	0.015
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.722	0.000

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:07:14	0.018	0.004	-0.045	-0.009	1.406	0.011	-0.010	0.006
2	09:07:23	0.036	-0.015	0.021	0.313	3.711	-0.005	0.021	0.029
3	09:07:33	-0.054	0.011	0.025	-0.304	-5.117	-0.005	-0.010	-0.035
x		0.000	-0.000	-0.000	-0.000	0.000	0.000	-0.000	0.000
σ		0.048	0.014	0.039	0.309	4.579	0.009	0.018	0.033
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:07:14	0.007	-0.067	0.032	0.010	0.241	0.458	0.000	-0.003
2	09:07:23	0.050	0.172	0.034	-0.020	-0.068	1.686	0.000	-0.003
3	09:07:33	-0.057	-0.105	-0.066	0.010	-0.172	-2.144	0.000	0.006
x		-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	0.000
σ		0.054	0.150	0.057	0.017	0.215	1.955	0.000	0.005
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:07:14	100.543%	0.026	0.156	99.852%	-0.012	-0.001	-0.007	0.003
2	09:07:23	99.897%	0.054	-0.041	100.671%	0.004	0.010	-0.007	-0.013
3	09:07:33	99.560%	-0.081	-0.115	99.477%	0.008	-0.009	0.013	0.010
x		100.000%	0.000	0.000	100.000%	-0.000	0.000	0.000	0.000
σ		0.500%	0.071	0.140	0.611%	0.010	0.010	0.011	0.012
%RSD		0.500	0.000	0.000	0.611	0.000	0.000	0.000	0.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:07:14	99.335%	-0.037	0.009	0.027	0.000	0.000	100.092%	99.618%
2	09:07:23	100.001%	0.077	0.015	-0.005	0.000	0.021	99.801%	99.578%
3	09:07:33	100.665%	-0.040	-0.024	-0.021	0.000	-0.021	100.107%	100.804%
x		100.000%	0.000	-0.000	-0.000	0.000	-0.000	100.000%	100.000%
σ		0.665%	0.067	0.021	0.025	0.000	0.021	0.172%	0.697%
%RSD		0.665	0.000	0.000	0.000	0.000	0.000	0.172	0.697

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	09:07:14	0.014	0.000	0.001	-0.008	-0.003	100.004%
2	09:07:23	-0.019	-0.007	0.001	-0.004	0.003	99.994%
3	09:07:33	0.005	0.006	-0.002	0.012	-0.000	100.002%
x		0.000	-0.000	0.000	0.000	-0.000	100.000%
σ		0.017	0.007	0.002	0.010	0.003	0.005%
%RSD		0.000	0.000	0.000	0.000	0.000	0.005

STD2 2149583 12/6/2016 9:13:49 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:12:52	94.826%	200.600	0.921	0.466	0.000	100000.000	99920.000	99850.000
2	09:13:02	95.278%	198.000	0.318	0.477	0.000	100700.000	100100.000	100300.000
3	09:13:11	95.425%	201.400	0.609	0.798	0.000	99340.000	99950.000	99860.000
x		95.176%	200.000	0.616	0.580	0.000	100000.000	100000.000	100000.000
σ		0.312%	1.743	0.302	0.189	0.000	661.800	107.000	248.900
%RSD		0.328	0.872	48.990	32.510	0.000	0.662	0.107	0.249

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:12:52	992.600	6.854	0.000	99750.000	99260.000	100000.000	95.396%	0.204
2	09:13:02	1001.000	5.088	0.000	100600.000	100400.000	99930.000	94.637%	0.250
3	09:13:11	1006.000	4.970	0.000	99670.000	100300.000	100100.000	95.676%	0.222
x		1000.000	5.637	0.000	100000.000	100000.000	100000.000	95.236%	0.226
σ		6.878	1.055	0.000	504.500	640.900	66.240	0.538%	0.023
%RSD		0.688	18.720	0.000	0.505	0.641	0.066	0.564	10.270

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:12:52	199.600	198.400	1003.000	50040.000	49790.000	197.600	201.100	201.800
2	09:13:02	200.900	201.300	1002.000	50340.000	50490.000	200.900	201.700	199.100
3	09:13:11	199.500	200.300	995.600	49620.000	49720.000	201.500	197.200	199.000
x		200.000	200.000	1000.000	50000.000	50000.000	200.000	200.000	200.000
σ		0.787	1.448	3.821	365.100	427.400	2.105	2.435	1.571
%RSD		0.393	0.724	0.382	0.730	0.855	1.053	1.218	0.785

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:12:52	197.700	194.700	198.200	198.400	199.700	194.000	0.000	200.100
2	09:13:02	200.300	202.200	198.200	201.700	195.700	203.800	0.000	198.500
3	09:13:11	202.000	203.000	203.700	200.000	204.600	202.200	0.000	201.400
x		200.000	200.000	200.000	200.000	200.000	200.000	0.000	200.000
σ		2.133	4.579	3.174	1.654	4.465	5.256	0.000	1.447
%RSD		1.067	2.290	1.587	0.827	2.232	2.628	0.000	0.723

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:12:52	94.342%	-0.224	-0.174	90.136%	197.300	199.400	199.300	200.800
2	09:13:02	94.755%	-0.014	-0.247	90.433%	200.100	199.000	200.400	200.100
3	09:13:11	93.791%	-0.251	-0.144	89.674%	202.600	201.600	200.400	199.100
x		94.296%	-0.163	-0.188	90.081%	200.000	200.000	200.000	200.000
σ		0.483%	0.130	0.053	0.383%	2.642	1.390	0.645	0.855
%RSD		0.513	79.680	28.230	0.425	1.321	0.695	0.323	0.428

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:12:52	91.625%	0.104	0.217	0.164	203.000	199.600	92.623%	94.787%
2	09:13:02	91.640%	0.124	0.216	0.259	199.200	202.300	93.405%	94.485%
3	09:13:11	91.752%	0.082	0.257	0.266	197.800	198.100	94.456%	94.008%
x		91.672%	0.103	0.230	0.230	200.000	200.000	93.495%	94.427%
σ		0.069%	0.021	0.023	0.057	2.669	2.103	0.920%	0.393%
%RSD		0.075	20.510	10.160	24.650	1.334	1.051	0.984	0.416

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	09:12:52	197.700	198.900	197.600	197.700	197.700	89.860%
2	09:13:02	200.500	200.800	200.600	201.200	200.500	89.174%
3	09:13:11	201.800	200.400	201.800	201.100	201.800	89.245%
x		200.000	200.000	200.000	200.000	200.000	89.426%
σ		2.071	1.013	2.137	2.014	2.094	0.377%
%RSD		1.036	0.507	1.069	1.007	1.047	0.422

STD3 2149585 12/6/2016 9:18:54 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:17:58	97.762%	0.640	199.700	200.800	0.000	222.800	117.000	117.500
2	09:18:08	96.450%	0.633	204.100	202.300	0.000	224.700	114.000	118.000
3	09:18:17	97.202%	0.531	196.200	196.900	0.000	222.200	115.500	118.700
x		97.138%	0.601	200.000	200.000	0.000	223.200	115.500	118.100
σ		0.658%	0.061	3.929	2.796	0.000	1.281	1.503	0.591
%RSD		0.677	10.140	1.964	1.398	0.000	0.574	1.302	0.500
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:17:58	13.560	9991.000	0.000	137.100	191.800	231.800	94.408%	197.900
2	09:18:08	13.680	10020.000	0.000	133.500	148.400	225.400	93.938%	201.300
3	09:18:17	13.540	9986.000	0.000	132.700	182.500	236.900	94.108%	200.800
x		13.590	10000.000	0.000	134.400	174.200	231.400	94.151%	200.000
σ		0.073	20.010	0.000	2.364	22.830	5.758	0.238%	1.867
%RSD		0.540	0.200	0.000	1.758	13.100	2.488	0.253	0.934
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:17:58	0.332	0.250	1.039	56.630	56.110	0.347	0.807	2.052
2	09:18:08	0.264	0.230	0.985	54.320	50.610	0.350	0.615	2.750
3	09:18:17	0.201	0.243	1.012	53.240	48.020	0.365	0.874	2.459
x		0.265	0.241	1.012	54.730	51.580	0.354	0.765	2.420
σ		0.066	0.010	0.027	1.732	4.130	0.010	0.135	0.350
%RSD		24.750	4.111	2.711	3.165	8.008	2.764	17.590	14.470
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:17:58	2.298	2.138	1.978	0.566	0.492	0.998	0.000	0.515
2	09:18:08	2.842	2.324	1.975	0.592	1.948	-1.782	0.000	0.529
3	09:18:17	2.393	2.268	2.246	0.684	0.160	2.305	0.000	0.714
x		2.511	2.243	2.066	0.614	0.867	0.507	0.000	0.586
σ		0.291	0.095	0.156	0.062	0.951	2.087	0.000	0.111
%RSD		11.590	4.251	7.546	10.070	109.700	411.600	0.000	18.890
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:17:58	93.625%	200.000	198.800	95.007%	0.351	0.298	0.638	4.147
2	09:18:08	92.823%	200.600	200.300	94.442%	0.283	0.254	0.432	4.291
3	09:18:17	93.687%	199.500	200.900	94.653%	0.233	0.252	0.636	4.152
x		93.378%	200.000	200.000	94.701%	0.289	0.268	0.568	4.197
σ		0.482%	0.540	1.045	0.286%	0.059	0.026	0.118	0.081
%RSD		0.516	0.270	0.523	0.302	20.440	9.672	20.810	1.939
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:17:58	94.318%	200.900	199.100	199.000	0.568	0.677	95.391%	96.131%
2	09:18:08	93.908%	201.700	200.400	202.300	0.690	0.524	95.985%	96.367%
3	09:18:17	94.837%	197.400	200.600	198.800	0.322	0.822	96.683%	96.875%
x		94.355%	200.000	200.000	200.000	0.526	0.674	96.020%	96.458%
σ		0.466%	2.263	0.820	1.961	0.187	0.149	0.647%	0.380%
%RSD		0.493	1.132	0.410	0.981	35.600	22.080	0.674	0.394
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:17:58	0.221	0.238	0.303	0.168	0.220	96.495%		
2	09:18:08	0.242	0.267	0.256	0.268	0.243	96.598%		
3	09:18:17	0.153	0.238	0.246	0.212	0.252	96.526%		
x		0.205	0.248	0.269	0.216	0.238	96.540%		
σ		0.046	0.017	0.031	0.050	0.017	0.053%		
%RSD		22.600	6.821	11.440	23.100	6.965	0.054		

ICV 2136053 12/6/2016 9:23:59 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:23:03	92.010%	86.840	83.990	86.190	0.000	40580.000	41160.000	41210.000
2	09:23:13	91.827%	84.600	85.890	85.580	0.000	40750.000	41420.000	41590.000
3	09:23:23	93.241%	84.510	84.440	84.590	0.000	40610.000	41390.000	41390.000
x		92.360%	106.646%	105.968%	106.820%	0.000	101.615%	103.308%	103.491%
σ		0.769%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.833	1.545	1.167	0.946	0.000	0.224	0.336	0.452
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:23:03	422.700	4584.000	0.000	40080.000	40500.000	39080.000	93.290%	85.050
2	09:23:13	427.200	4628.000	0.000	40530.000	40530.000	39060.000	92.659%	87.230
3	09:23:23	422.200	4650.000	0.000	40470.000	40680.000	39370.000	92.853%	84.410
x		106.011%	115.518%	0.000	100.903%	101.424%	97.924%	92.934%	106.958%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.323%	n/a
%RSD		0.650	0.725	0.000	0.600	0.246	0.438	0.348	1.727
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:23:03	82.260	82.230	402.900	20000.000	19880.000	79.540	81.250	82.220
2	09:23:13	83.910	84.680	406.700	20170.000	20150.000	83.620	78.890	81.620
3	09:23:23	79.310	82.240	404.500	19900.000	19820.000	80.430	81.760	82.760
x		102.285%	103.814%	101.177%	100.110%	99.751%	101.494%	100.791%	102.750%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.847	1.701	0.463	0.676	0.886	2.639	1.901	0.694
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:23:03	82.910	85.770	84.640	80.210	79.570	84.260	0.000	77.990
2	09:23:13	84.400	83.740	81.650	80.620	80.100	89.270	0.000	78.160
3	09:23:23	81.200	81.280	81.770	79.650	85.830	78.270	0.000	78.220
x		103.546%	104.496%	103.358%	100.198%	102.290%	104.914%	0.000	97.655%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.929	2.689	2.052	0.608	4.239	6.559	0.000	0.158
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:23:03	95.014%	83.300	84.200	90.588%	81.600	81.080	80.200	81.780
2	09:23:13	96.670%	81.380	84.450	90.692%	81.390	82.230	79.530	82.150
3	09:23:23	97.471%	84.690	84.240	91.367%	82.120	81.450	82.030	81.930
x		96.385%	103.905%	105.373%	90.882%	102.128%	101.985%	100.733%	102.442%
σ		1.253%	n/a	n/a	0.423%	n/a	n/a	n/a	n/a
%RSD		1.300	1.999	0.158	0.465	0.457	0.723	1.609	0.226
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:23:03	92.955%	81.930	82.680	81.620	81.110	80.070	93.457%	93.224%
2	09:23:13	91.635%	81.460	83.110	83.520	80.170	79.480	95.083%	94.963%
3	09:23:23	91.968%	82.210	84.140	82.610	81.120	81.920	94.316%	95.091%
x		92.186%	102.336%	104.138%	103.228%	100.999%	100.611%	94.285%	94.426%
σ		0.686%	n/a	n/a	n/a	n/a	n/a	0.813%	1.043%
%RSD		0.745	0.462	0.896	1.149	0.678	1.581	0.863	1.104
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:23:03	82.060	82.910	82.380	79.490	80.100	92.003%		
2	09:23:13	83.600	83.600	80.650	79.770	80.120	92.009%		
3	09:23:23	82.530	82.780	82.360	77.390	80.300	92.899%		
x		103.411%	103.871%	102.248%	98.602%	100.213%	92.304%		
σ		n/a	n/a	n/a	n/a	n/a	0.516%		
%RSD		0.958	0.532	1.219	1.652	0.138	0.559		

ICB 12/6/2016 9:29:07 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:28:11	99.192%	0.163	0.475	0.541	0.000	57.570	33.000	31.900
2	09:28:20	99.171%	0.175	0.547	0.400	0.000	55.720	31.900	31.730
3	09:28:29	98.151%	0.144	0.537	0.546	0.000	56.180	29.380	30.450
x		98.838%	0.161	0.520	0.496	0.000	56.490	31.430	31.360
σ		0.595%	0.016	0.039	0.083	0.000	0.965	1.853	0.791
%RSD		0.602	9.736	7.442	16.710	0.000	1.708	5.895	2.524

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:28:11	0.657	8.618	0.000	62.910	99.220	47.360	97.493%	-0.142
2	09:28:20	0.460	7.801	0.000	58.120	137.700	40.620	97.486%	-0.122
3	09:28:29	0.571	8.452	0.000	56.220	110.000	46.530	97.577%	-0.317
x		0.563	8.291	0.000	59.080	115.600	44.830	97.519%	-0.194
σ		0.099	0.432	0.000	3.449	19.850	3.677	0.051%	0.107
%RSD		17.630	5.211	0.000	5.837	17.160	8.200	0.052	55.340

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:28:11	0.165	0.106	0.379	16.590	14.200	0.136	0.116	0.144
2	09:28:20	0.150	0.093	0.349	15.160	26.800	0.086	0.180	0.045
3	09:28:29	0.116	0.066	0.438	14.590	8.539	0.078	0.210	0.155
x		0.144	0.088	0.389	15.440	16.510	0.100	0.169	0.115
σ		0.025	0.021	0.045	1.031	9.346	0.031	0.048	0.060
%RSD		17.520	23.350	11.680	6.672	56.610	31.340	28.620	52.640

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:28:11	0.010	0.222	0.208	0.133	0.146	1.215	0.000	0.206
2	09:28:20	0.143	0.389	0.246	0.166	0.257	0.775	0.000	0.132
3	09:28:29	0.252	0.019	0.550	0.154	0.253	1.270	0.000	0.159
x		0.135	0.210	0.335	0.151	0.219	1.087	0.000	0.166
σ		0.121	0.185	0.187	0.017	0.063	0.271	0.000	0.037
%RSD		89.830	88.310	55.970	10.930	28.790	24.970	0.000	22.540

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:28:11	98.050%	-0.073	-0.363	98.903%	0.051	0.063	0.153	0.051
2	09:28:20	96.526%	-0.223	-0.275	98.351%	0.059	0.079	0.033	0.074
3	09:28:29	97.812%	-0.230	-0.495	99.297%	0.051	0.023	0.094	0.059
x		97.463%	-0.175	-0.377	98.850%	0.054	0.055	0.093	0.061
σ		0.820%	0.089	0.111	0.475%	0.005	0.029	0.060	0.012
%RSD		0.841	50.760	29.290	0.481	8.633	52.320	64.160	19.450

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:28:11	97.973%	0.181	0.068	0.189	0.078	0.126	99.307%	98.598%
2	09:28:20	98.386%	0.257	0.164	0.100	0.039	0.125	99.789%	97.987%
3	09:28:29	97.515%	0.153	0.082	0.069	0.235	0.190	99.295%	98.624%
x		97.958%	0.197	0.105	0.119	0.117	0.147	99.464%	98.403%
σ		0.436%	0.054	0.052	0.062	0.104	0.037	0.282%	0.360%
%RSD		0.445	27.380	49.630	52.320	88.440	25.040	0.283	0.366

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	09:28:11	0.032	0.038	0.040	0.047	0.056	99.334%
2	09:28:20	0.044	0.053	0.074	0.073	0.064	99.801%
3	09:28:29	0.049	0.070	0.057	0.081	0.072	100.228%
x		0.042	0.054	0.057	0.067	0.064	99.788%
σ		0.009	0.016	0.017	0.018	0.008	0.447%
%RSD		21.130	30.580	30.450	26.830	12.000	0.448

CRI 2136054 12/6/2016 9:34:17 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:33:20	99.554%	1.063	20.350	21.370	0.000	570.600	518.100	512.000
2	09:33:29	98.424%	1.116	21.750	20.960	0.000	573.800	516.000	518.100
3	09:33:39	99.776%	1.132	21.110	20.650	0.000	568.800	515.000	512.700
x		99.251%	110.378%	421.439%	419.859%	0.000	713.822%	516.358%	514.291%
σ		0.725%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.731	3.267	3.321	1.699	0.000	0.445	0.302	0.650

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:33:20	35.650	516.300	0.000	519.000	553.800	532.700	105.137%	4.711
2	09:33:29	35.550	519.000	0.000	522.000	534.800	531.400	104.545%	5.085
3	09:33:39	34.970	517.500	0.000	524.000	577.100	535.700	104.322%	5.025
x		117.965%	103.518%	0.000	521.666%	555.251%	533.303%	104.668%	98.808%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.421%	n/a
%RSD		1.039	0.264	0.000	0.483	3.818	0.415	0.402	4.062

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:33:20	1.168	2.026	5.831	51.620	61.500	0.502	1.136	2.439
2	09:33:29	1.149	2.238	5.883	53.730	42.570	0.571	1.056	2.195
3	09:33:39	0.885	2.043	5.976	52.620	50.180	0.555	0.934	2.118
x		106.723%	105.123%	117.934%	105.309%	102.834%	108.503%	104.185%	112.547%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		14.820	5.616	1.251	1.999	18.530	6.615	9.798	7.440

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:33:20	1.963	5.682	6.089	0.981	4.578	6.990	0.000	5.905
2	09:33:29	2.114	5.705	6.243	1.178	5.604	8.414	0.000	5.438
3	09:33:39	2.026	5.062	5.110	1.124	5.374	6.863	0.000	5.951
x		101.724%	109.656%	116.283%	109.427%	103.701%	148.445%	0.000	115.297%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		3.719	6.651	10.570	9.304	10.390	11.600	0.000	4.924

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:33:20	96.359%	4.436	4.910	97.661%	1.202	1.098	0.909	1.156
2	09:33:29	94.864%	4.780	4.575	96.928%	1.134	1.088	1.081	1.241
3	09:33:39	95.291%	4.476	4.459	96.150%	1.176	1.095	1.017	1.176
x		95.505%	91.278%	92.963%	96.913%	117.045%	109.353%	100.256%	119.116%
σ		0.770%	n/a	n/a	0.756%	n/a	n/a	n/a	n/a
%RSD		0.807	4.117	5.038	0.780	2.960	0.482	8.690	3.733

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:33:20	95.992%	5.395	1.928	2.452	10.400	10.250	98.976%	99.005%
2	09:33:29	97.775%	5.097	2.282	1.949	11.230	10.140	98.165%	98.815%
3	09:33:39	95.849%	5.560	2.108	2.183	10.690	10.440	97.218%	98.063%
x		96.539%	107.011%	105.294%	109.734%	107.718%	102.767%	98.119%	98.628%
σ		1.073%	n/a	n/a	n/a	n/a	n/a	0.880%	0.498%
%RSD		1.111	4.388	8.393	11.450	3.943	1.480	0.897	0.505

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	09:33:20	1.133	1.028	1.181	0.997	1.093	99.393%
2	09:33:29	1.066	1.063	1.193	1.139	1.100	99.871%
3	09:33:39	1.097	1.102	1.078	1.169	1.119	99.258%
x		109.891%	106.474%	115.069%	110.175%	110.400%	99.507%
σ		n/a	n/a	n/a	n/a	n/a	0.322%
%RSD		3.040	3.474	5.481	8.366	1.237	0.324

ICSA 2136055 12/6/2016 9:39:25 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:28	83.660%	0.053	3.530	4.976	0.000	98640.000	100400.000	100200.000
2	09:38:37	83.676%	0.066	4.158	5.275	0.000	99150.000	100400.000	100300.000
3	09:38:47	83.723%	0.125	3.023	4.830	0.000	99470.000	100700.000	100500.000
x		83.687%	0.081	3.570	5.027	0.000	99090.000	100500.000	100300.000
σ		0.032%	0.038	0.569	0.227	0.000	417.100	164.100	156.600
%RSD		0.039	47.260	15.930	4.511	0.000	0.421	0.163	0.156

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:28	102200.000	18.550	0.000	96400.000	99810.000	100400.000	83.607%	2173.000
2	09:38:37	102500.000	19.540	0.000	96150.000	100400.000	100300.000	83.704%	2185.000
3	09:38:47	102600.000	21.580	0.000	96610.000	99800.000	100500.000	82.968%	2185.000
x		102400.000	19.890	0.000	96390.000	99990.000	100400.000	83.426%	2181.000
σ		187.100	1.545	0.000	230.600	317.500	99.310	0.400%	6.986
%RSD		0.183	7.765	0.000	0.239	0.318	0.099	0.479	0.320

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:28	-0.224	1.349	3.142	100300.000	100000.000	0.081	0.425	0.924
2	09:38:37	-0.132	1.310	3.271	100900.000	101300.000	0.100	0.208	1.117
3	09:38:47	-0.430	1.448	3.118	102300.000	103000.000	0.072	0.136	1.154
x		-0.262	1.369	3.177	101200.000	101400.000	0.084	0.256	1.065
σ		0.153	0.071	0.083	1034.000	1466.000	0.014	0.150	0.124
%RSD		58.290	5.181	2.597	1.022	1.445	17.030	58.670	11.590

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:28	1.361	1.635	1.353	0.201	0.189	0.779	0.000	0.949
2	09:38:37	0.683	1.220	1.591	0.237	0.069	0.274	0.000	0.772
3	09:38:47	1.123	1.186	1.390	0.157	0.559	0.562	0.000	0.866
x		1.055	1.347	1.445	0.198	0.272	0.538	0.000	0.863
σ		0.344	0.250	0.128	0.040	0.256	0.253	0.000	0.089
%RSD		32.620	18.580	8.863	20.250	93.810	47.030	0.000	10.280

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:28	87.294%	2055.000	2090.000	81.633%	0.111	0.094	0.698	0.682
2	09:38:37	86.786%	2094.000	2112.000	81.551%	0.060	0.099	0.774	0.726
3	09:38:47	85.975%	2101.000	2119.000	81.759%	0.092	0.074	1.021	0.493
x		86.685%	2083.000	2107.000	81.648%	0.088	0.089	0.831	0.634
σ		0.665%	25.080	15.220	0.105%	0.026	0.013	0.169	0.124
%RSD		0.767	1.204	0.723	0.128	29.290	14.580	20.310	19.500

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:28	84.610%	0.243	0.127	0.025	0.223	0.194	88.685%	90.303%
2	09:38:37	83.823%	0.520	0.211	0.072	0.222	0.051	90.221%	91.395%
3	09:38:47	85.317%	0.407	0.096	0.144	0.220	0.074	89.783%	90.235%
x		84.583%	0.390	0.145	0.080	0.222	0.106	89.563%	90.644%
σ		0.747%	0.139	0.059	0.060	0.001	0.077	0.792%	0.651%
%RSD		0.883	35.720	41.110	74.020	0.528	72.530	0.884	0.719

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:28	0.024	0.051	0.329	0.214	0.285	86.850%
2	09:38:37	0.034	0.030	0.307	0.269	0.285	86.275%
3	09:38:47	0.010	0.044	0.301	0.236	0.323	86.934%
x		0.023	0.042	0.313	0.240	0.298	86.686%
σ		0.012	0.010	0.015	0.028	0.022	0.359%
%RSD		53.290	24.630	4.746	11.490	7.257	0.414

ICSAB 2136056 12/6/2016 9:44:30 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:43:35	84.898%	21.160	51.410	51.960	0.000	99590.000	101500.000	101600.000
2	09:43:45	84.370%	21.650	51.370	51.360	0.000	98680.000	99650.000	99990.000
3	09:43:54	84.266%	21.810	49.770	53.590	0.000	99050.000	99990.000	100100.000
x		84.512%	107.700%	101.707%	104.608%	0.000	99.111%	100.386%	100.561%
σ		0.339%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.401	1.567	1.840	2.199	0.000	0.462	0.994	0.908
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:43:35	103200.000	539.700	0.000	97270.000	100600.000	100800.000	85.986%	2182.000
2	09:43:45	101700.000	532.300	0.000	97890.000	101400.000	101200.000	85.657%	2199.000
3	09:43:54	102100.000	532.800	0.000	97120.000	101100.000	100800.000	85.825%	2196.000
x		102.353%	106.989%	0.000	97.428%	101.032%	100.969%	85.823%	109.608%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.164%	n/a
%RSD		0.721	0.777	0.000	0.422	0.372	0.235	0.192	0.412
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:43:35	19.660	22.460	23.090	101500.000	102100.000	20.510	19.010	20.730
2	09:43:45	20.560	21.990	23.110	101200.000	101400.000	20.550	19.990	20.980
3	09:43:54	19.740	21.810	22.810	100100.000	101700.000	20.270	19.130	20.970
x		99.925%	110.432%	115.019%	100.923%	101.748%	102.204%	96.884%	104.474%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.489	1.519	0.719	0.718	0.372	0.747	2.748	0.691
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:43:35	22.320	24.130	23.590	19.830	53.850	58.010	0.000	20.490
2	09:43:45	21.400	23.090	21.550	20.760	47.840	50.270	0.000	18.870
3	09:43:54	22.030	23.730	18.220	20.400	51.830	45.550	0.000	20.900
x		109.579%	94.608%	84.478%	101.650%	102.348%	102.553%	0.000	100.436%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.155	2.229	12.840	2.313	5.976	12.270	0.000	5.355
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:43:35	86.715%	2127.000	2140.000	81.875%	20.280	20.310	22.600	22.640
2	09:43:45	86.264%	2124.000	2143.000	82.063%	20.620	19.810	20.760	22.680
3	09:43:54	85.387%	2129.000	2160.000	81.612%	19.820	20.280	19.900	23.250
x		86.122%	106.318%	107.385%	81.850%	101.197%	100.661%	105.423%	114.274%
σ		0.676%	n/a	n/a	0.227%	n/a	n/a	n/a	n/a
%RSD		0.784	0.124	0.500	0.277	1.988	1.403	6.530	1.482
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:43:35	85.055%	103.200	20.720	20.450	20.220	19.950	90.626%	90.185%
2	09:43:45	85.318%	103.400	21.660	21.090	20.430	21.500	89.964%	90.754%
3	09:43:54	84.920%	102.500	20.130	20.490	20.880	20.770	90.371%	89.819%
x		85.098%	103.036%	104.177%	103.391%	102.568%	103.713%	90.320%	90.253%
σ		0.203%	n/a	n/a	n/a	n/a	n/a	0.334%	0.471%
%RSD		0.238	0.480	3.714	1.736	1.646	3.743	0.370	0.522
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:43:35	19.650	19.900	20.410	20.670	20.770	86.156%		
2	09:43:45	19.740	20.380	20.760	20.790	20.670	86.658%		
3	09:43:54	20.670	20.500	21.000	20.960	20.730	86.592%		
x		100.099%	101.301%	103.611%	104.034%	103.613%	86.469%		
σ		n/a	n/a	n/a	n/a	n/a	0.272%		
%RSD		2.816	1.580	1.412	0.695	0.262	0.315		

CCV 2136057 12/6/2016 9:49:38 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:48:41	89.268%	106.300	104.500	104.400	0.000	48240.000	48800.000	48670.000
2	09:48:50	88.734%	105.900	102.800	105.400	0.000	48130.000	48730.000	48820.000
3	09:49:00	88.252%	106.200	105.600	104.200	0.000	48340.000	48550.000	48830.000
x		88.751%	106.156%	104.271%	104.646%	0.000	96.474%	97.386%	97.547%
σ		0.508%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.573	0.173	1.355	0.629	0.000	0.218	0.264	0.181
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:48:41	552.300	5401.000	0.000	47110.000	48610.000	47610.000	94.033%	104.000
2	09:48:50	547.600	5425.000	0.000	47460.000	49500.000	48830.000	93.576%	102.000
3	09:49:00	542.800	5412.000	0.000	47510.000	49020.000	47640.000	93.804%	105.700
x		109.514%	108.249%	0.000	94.724%	98.092%	96.056%	93.804%	103.907%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.228%	n/a
%RSD		0.868	0.219	0.000	0.458	0.909	1.446	0.243	1.742
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:48:41	97.220	98.080	485.800	24740.000	24870.000	98.830	99.860	99.140
2	09:48:50	98.970	96.180	485.900	24420.000	24160.000	98.370	99.580	97.930
3	09:49:00	98.880	97.530	487.700	24420.000	24630.000	96.450	98.920	98.920
x		98.357%	97.263%	97.289%	98.113%	98.214%	97.882%	99.454%	98.663%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.001	1.002	0.217	0.730	1.460	1.293	0.488	0.655
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:48:41	103.000	107.300	97.580	100.500	105.300	107.800	0.000	101.000
2	09:48:50	98.920	103.600	105.000	99.450	99.880	112.700	0.000	101.100
3	09:49:00	99.440	98.800	94.840	100.700	94.650	119.200	0.000	103.700
x		100.436%	103.215%	99.139%	100.223%	99.948%	113.244%	0.000	101.941%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.186	4.109	5.295	0.671	5.333	5.068	0.000	1.472
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:48:41	89.771%	109.700	105.600	88.010%	96.320	96.650	99.330	101.100
2	09:48:50	89.163%	104.900	105.900	88.185%	96.380	95.040	96.870	100.900
3	09:49:00	88.158%	108.800	107.600	88.045%	97.150	95.750	102.400	100.900
x		89.031%	107.832%	106.360%	88.080%	96.619%	95.811%	99.541%	100.962%
σ		0.815%	n/a	n/a	0.093%	n/a	n/a	n/a	n/a
%RSD		0.915	2.362	1.010	0.105	0.479	0.845	2.790	0.144
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:48:41	88.330%	102.300	102.600	102.700	95.960	101.800	93.009%	92.189%
2	09:48:50	89.569%	99.070	100.600	101.000	97.570	99.320	94.039%	93.590%
3	09:49:00	89.060%	103.700	101.800	103.400	99.910	99.730	93.322%	93.450%
x		88.986%	101.690%	101.658%	102.341%	97.810%	100.275%	93.457%	93.076%
σ		0.623%	n/a	n/a	n/a	n/a	n/a	0.528%	0.772%
%RSD		0.700	2.333	1.008	1.220	2.030	1.315	0.565	0.829
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:48:41	100.200	100.200	99.430	99.260	99.360	90.073%		
2	09:48:50	98.910	98.900	98.760	99.790	99.360	91.194%		
3	09:49:00	99.780	100.900	99.960	99.640	99.710	90.823%		
x		99.619%	100.030%	99.384%	99.562%	99.479%	90.697%		
σ		n/a	n/a	n/a	n/a	n/a	0.571%		
%RSD		0.643	1.041	0.603	0.273	0.203	0.630		

CCB1 12/6/2016 9:54:46 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:53:49	94.041%	0.131	0.684	0.652	0.000	57.680	41.350	39.300
2	09:53:59	93.390%	0.085	1.116	0.560	0.000	55.750	36.980	39.730
3	09:54:08	93.963%	0.137	0.425	0.418	0.000	57.340	38.910	41.610
x		93.798%	0.117	0.741	0.543	0.000	56.920	39.080	40.210
σ		0.356%	0.028	0.349	0.118	0.000	1.035	2.190	1.228
%RSD		0.379	24.040	47.100	21.650	0.000	1.819	5.605	3.053

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:53:49	1.480	-0.786	0.000	69.240	127.400	52.210	95.217%	0.066
2	09:53:59	1.352	-0.841	0.000	71.960	136.400	50.180	94.585%	0.090
3	09:54:08	1.202	1.762	0.000	68.900	84.320	47.440	94.838%	0.229
x		1.345	0.045	0.000	70.030	116.000	49.940	94.880%	0.129
σ		0.140	1.487	0.000	1.675	27.850	2.395	0.318%	0.088
%RSD		10.380	3280.000	0.000	2.392	24.000	4.796	0.335	68.080

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:53:49	-0.057	0.034	0.395	22.250	25.500	0.038	0.088	0.051
2	09:53:59	0.167	0.083	0.424	19.410	24.380	0.046	0.120	0.005
3	09:54:08	0.130	0.068	0.456	18.860	26.650	0.089	0.250	0.028
x		0.080	0.062	0.425	20.170	25.510	0.058	0.153	0.028
σ		0.120	0.025	0.031	1.815	1.137	0.028	0.086	0.023
%RSD		149.800	40.730	7.181	8.995	4.457	47.820	56.370	82.580

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:53:49	0.174	-0.014	0.313	0.098	0.273	-1.254	0.000	0.189
2	09:53:59	0.082	0.154	0.258	0.033	0.380	1.518	0.000	0.166
3	09:54:08	0.219	0.154	0.046	0.054	0.269	1.257	0.000	0.206
x		0.158	0.098	0.205	0.062	0.308	0.507	0.000	0.187
σ		0.070	0.097	0.141	0.033	0.063	1.531	0.000	0.020
%RSD		43.940	98.810	68.690	53.270	20.450	301.800	0.000	10.660

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:53:49	92.690%	0.676	0.599	94.036%	0.054	0.050	0.035	0.029
2	09:53:59	93.848%	0.363	0.519	94.600%	0.042	0.058	0.035	0.037
3	09:54:08	93.815%	0.501	0.351	94.165%	0.075	0.038	0.098	0.046
x		93.451%	0.513	0.489	94.267%	0.057	0.049	0.056	0.037
σ		0.659%	0.157	0.127	0.295%	0.017	0.010	0.036	0.008
%RSD		0.706	30.550	25.920	0.313	29.380	20.720	64.820	22.420

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:53:49	93.960%	0.269	0.289	0.267	0.283	0.218	96.488%	97.203%
2	09:53:59	95.341%	0.292	0.205	0.245	0.279	0.022	97.730%	97.819%
3	09:54:08	93.976%	0.136	0.330	0.266	0.121	0.174	96.929%	97.850%
x		94.426%	0.232	0.275	0.259	0.228	0.138	97.049%	97.624%
σ		0.793%	0.084	0.064	0.012	0.092	0.103	0.630%	0.365%
%RSD		0.839	36.230	23.230	4.718	40.580	74.450	0.649	0.373

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	09:53:49	0.042	0.084	0.086	0.059	0.069	98.596%
2	09:53:59	0.050	0.068	0.061	0.074	0.065	98.699%
3	09:54:08	0.029	0.080	0.033	0.008	0.043	98.846%
x		0.040	0.077	0.060	0.047	0.059	98.714%
σ		0.011	0.008	0.026	0.035	0.014	0.126%
%RSD		26.160	10.650	44.200	73.850	23.570	0.127

MB 180-196157/1-A 12/6/2016 9:59:51 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:58:56	91.599%	0.040	0.563	0.119	0.000	68.520	1.984	2.012
2	09:59:06	90.711%	-0.001	0.626	0.133	0.000	69.460	1.517	1.876
3	09:59:15	91.291%	0.011	-0.005	0.022	0.000	66.330	0.779	2.019
x		91.200%	0.017	0.395	0.091	0.000	68.100	1.426	1.969
σ		0.451%	0.021	0.348	0.061	0.000	1.602	0.608	0.081
%RSD		0.494	126.700	88.160	66.460	0.000	2.353	42.610	4.092

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:58:56	1.387	-0.126	0.000	58.600	130.500	12.470	90.060%	-0.131
2	09:59:06	1.541	-0.609	0.000	59.630	122.600	12.640	89.106%	-0.211
3	09:59:15	1.262	0.911	0.000	58.740	108.400	12.650	89.206%	0.255
x		1.397	0.059	0.000	58.990	120.500	12.590	89.457%	-0.029
σ		0.140	0.776	0.000	0.558	11.180	0.103	0.524%	0.249
%RSD		10.020	1322.000	0.000	0.946	9.275	0.820	0.586	862.600

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:58:56	0.195	0.037	0.024	0.767	-4.621	0.013	0.024	0.002
2	09:59:06	0.026	0.038	0.098	0.611	-0.867	0.004	0.059	-0.035
3	09:59:15	0.274	0.060	0.089	-0.061	-0.826	0.013	0.129	0.040
x		0.165	0.045	0.070	0.439	-2.105	0.010	0.071	0.002
σ		0.127	0.013	0.041	0.440	2.179	0.005	0.053	0.037
%RSD		76.560	28.850	57.790	100.300	103.600	53.580	75.500	1645.000

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:58:56	0.069	0.890	0.977	0.025	0.416	0.273	0.000	-0.012
2	09:59:06	0.093	0.713	0.847	0.025	-0.055	1.044	0.000	-0.012
3	09:59:15	0.046	0.722	0.914	0.037	0.066	-0.852	0.000	0.009
x		0.069	0.775	0.913	0.029	0.142	0.155	0.000	-0.005
σ		0.024	0.100	0.065	0.007	0.245	0.953	0.000	0.012
%RSD		33.930	12.860	7.131	23.740	172.200	614.400	0.000	234.900

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:58:56	87.778%	-0.021	-0.242	88.980%	-0.006	-0.007	-0.007	-0.004
2	09:59:06	88.471%	-0.024	-0.225	88.902%	0.011	-0.016	-0.007	-0.003
3	09:59:15	86.710%	-0.208	-0.193	88.878%	-0.002	-0.020	-0.007	-0.021
x		87.653%	-0.084	-0.220	88.920%	0.001	-0.014	-0.007	-0.009
σ		0.887%	0.107	0.025	0.053%	0.009	0.007	0.000	0.010
%RSD		1.012	126.900	11.370	0.060	998.700	47.070	0.059	108.700

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:58:56	90.459%	0.044	0.066	0.071	0.042	0.024	93.829%	94.350%
2	09:59:06	89.480%	-0.007	0.060	0.011	0.084	0.024	95.372%	94.913%
3	09:59:15	89.947%	0.077	0.031	0.037	0.000	0.047	94.001%	94.540%
x		89.962%	0.038	0.052	0.040	0.042	0.032	94.401%	94.601%
σ		0.490%	0.042	0.018	0.030	0.042	0.013	0.845%	0.286%
%RSD		0.544	111.900	35.320	76.300	99.960	41.260	0.896	0.303

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	09:58:56	-0.009	-0.009	0.027	0.024	0.018	96.327%
2	09:59:06	-0.006	-0.004	0.016	0.020	0.013	97.239%
3	09:59:15	-0.015	-0.001	0.012	0.020	0.013	96.773%
x		-0.010	-0.005	0.018	0.022	0.015	96.780%
σ		0.005	0.004	0.008	0.002	0.003	0.456%
%RSD		45.870	79.090	41.460	11.260	21.010	0.471

PB 180-196068/1-C 12/6/2016 10:04:54 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:03:58	85.910%	0.024	-0.005	-0.140	0.000	59.500	1.454	0.986
2	10:04:07	85.281%	0.018	-0.238	-0.221	0.000	62.180	-0.021	0.552
3	10:04:17	85.069%	0.038	-0.316	-0.156	0.000	63.530	0.661	1.060
x		85.420%	0.026	-0.186	-0.173	0.000	61.740	0.698	0.866
σ		0.438%	0.010	0.162	0.043	0.000	2.051	0.738	0.274
%RSD		0.513	38.480	86.780	24.900	0.000	3.322	105.800	31.670

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:03:58	7.581	1.918	0.000	37.680	78.020	8.544	86.230%	-0.157
2	10:04:07	7.453	3.877	0.000	41.010	97.320	10.300	85.114%	-0.130
3	10:04:17	7.108	3.569	0.000	51.240	93.550	6.030	84.032%	-0.012
x		7.381	3.121	0.000	43.310	89.630	8.290	85.126%	-0.099
σ		0.244	1.053	0.000	7.065	10.230	2.145	1.099%	0.077
%RSD		3.311	33.750	0.000	16.310	11.420	25.870	1.291	77.490

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:03:58	-0.112	0.033	0.029	-1.063	-6.983	-0.005	0.026	-0.005
2	10:04:07	0.253	0.033	0.070	-1.536	-3.055	-0.005	0.099	0.035
3	10:04:17	-0.308	0.081	0.041	-1.366	3.567	-0.005	0.026	0.049
x		-0.056	0.049	0.047	-1.322	-2.157	-0.005	0.050	0.026
σ		0.284	0.028	0.021	0.239	5.332	0.000	0.042	0.028
%RSD		511.100	56.410	45.750	18.110	247.200	0.000	83.490	106.200

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:03:58	0.126	1.310	0.889	0.039	0.195	0.793	0.000	-0.012
2	10:04:07	0.128	1.180	1.250	-0.008	0.320	3.118	0.000	0.043
3	10:04:17	0.078	1.000	1.198	0.004	0.074	1.376	0.000	-0.001
x		0.111	1.163	1.112	0.012	0.196	1.762	0.000	0.010
σ		0.028	0.156	0.195	0.025	0.123	1.209	0.000	0.029
%RSD		25.410	13.400	17.520	212.900	62.520	68.620	0.000	302.600

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:03:58	84.267%	-0.554	-0.562	86.696%	0.012	-0.006	-0.007	-0.012
2	10:04:07	84.272%	-0.289	-0.438	86.380%	-0.006	-0.011	0.016	-0.012
3	10:04:17	84.424%	-0.586	-0.475	85.870%	0.003	-0.006	-0.007	-0.003
x		84.321%	-0.477	-0.491	86.315%	0.003	-0.008	0.001	-0.009
σ		0.089%	0.163	0.064	0.417%	0.009	0.003	0.013	0.005
%RSD		0.106	34.170	12.930	0.483	292.100	34.820	1308.000	59.850

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:03:58	86.772%	0.044	0.035	-0.004	0.086	-0.021	92.156%	93.414%
2	10:04:07	86.736%	0.110	0.078	-0.004	0.086	0.072	92.423%	93.822%
3	10:04:17	86.314%	0.100	0.013	-0.013	0.000	0.049	92.745%	93.604%
x		86.608%	0.085	0.042	-0.007	0.058	0.033	92.441%	93.613%
σ		0.255%	0.036	0.033	0.005	0.050	0.048	0.295%	0.204%
%RSD		0.294	42.280	78.650	69.270	86.600	144.800	0.319	0.218

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:03:58	-0.009	-0.004	0.002	0.008	0.006	96.380%
2	10:04:07	-0.027	-0.004	0.023	0.008	0.010	96.441%
3	10:04:17	-0.018	-0.008	0.009	0.004	0.005	97.006%
x		-0.018	-0.005	0.011	0.007	0.007	96.609%
σ		0.009	0.002	0.011	0.002	0.002	0.345%
%RSD		50.660	42.720	98.870	33.360	33.180	0.358

LCS 180-196157/2-A 12/6/2016 10:09:57 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:09:01	80.952%	50.360	973.200	997.600	0.000	49870.000	49810.000	49770.000
2	10:09:11	83.347%	49.680	945.800	980.600	0.000	49500.000	49270.000	49770.000
3	10:09:21	83.090%	47.730	943.800	971.600	0.000	49690.000	49310.000	50110.000
x		82.463%	49.260	954.200	983.300	0.000	49680.000	49460.000	49880.000
σ		1.315%	1.365	16.410	13.200	0.000	184.800	298.500	194.500
%RSD		1.595	2.771	1.720	1.343	0.000	0.372	0.604	0.390
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:09:01	2015.000	10060.000	0.000	51240.000	51450.000	50040.000	75.903%	1036.000
2	10:09:11	2012.000	9920.000	0.000	51120.000	51950.000	50060.000	76.494%	1040.000
3	10:09:21	2019.000	10010.000	0.000	51490.000	52070.000	50310.000	76.314%	1050.000
x		2016.000	9995.000	0.000	51280.000	51820.000	50140.000	76.237%	1042.000
σ		3.492	68.830	0.000	188.800	327.300	150.000	0.302%	7.176
%RSD		0.173	0.689	0.000	0.368	0.632	0.299	0.397	0.689
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:09:01	498.200	197.400	511.500	917.000	1008.000	486.500	489.000	254.800
2	10:09:11	484.400	193.500	510.900	905.400	1003.000	485.700	489.200	248.400
3	10:09:21	491.600	193.400	516.500	903.100	907.000	483.000	479.100	242.400
x		491.400	194.800	512.900	908.500	972.700	485.100	485.700	248.500
σ		6.863	2.272	3.081	7.483	57.010	1.800	5.784	6.188
%RSD		1.397	1.167	0.601	0.824	5.861	0.371	1.191	2.490
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:09:01	251.700	498.700	475.100	38.690	10.960	12.780	0.000	986.100
2	10:09:11	249.800	499.600	471.000	38.800	10.020	10.120	0.000	987.300
3	10:09:21	245.600	487.200	457.200	38.090	9.069	14.230	0.000	977.500
x		249.000	495.200	467.800	38.530	10.010	12.380	0.000	983.600
σ		3.127	6.893	9.410	0.382	0.945	2.082	0.000	5.321
%RSD		1.256	1.392	2.012	0.993	9.432	16.820	0.000	0.541
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:09:01	74.258%	1126.000	1114.000	74.383%	49.590	49.670	51.800	91.840
2	10:09:11	73.769%	1134.000	1116.000	74.624%	50.310	48.930	52.070	87.890
3	10:09:21	74.983%	1132.000	1109.000	75.035%	48.440	49.880	50.870	90.860
x		74.337%	1131.000	1113.000	74.681%	49.450	49.490	51.580	90.200
σ		0.611%	4.190	3.537	0.330%	0.943	0.500	0.631	2.061
%RSD		0.821	0.371	0.318	0.441	1.906	1.011	1.224	2.285
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:09:01	75.054%	2103.000	528.500	521.900	1981.000	2002.000	85.734%	87.496%
2	10:09:11	75.374%	2083.000	523.900	521.400	1967.000	1978.000	87.522%	87.232%
3	10:09:21	75.223%	2106.000	527.100	522.600	1983.000	1984.000	87.046%	88.697%
x		75.217%	2097.000	526.500	522.000	1977.000	1988.000	86.768%	87.808%
σ		0.160%	12.590	2.357	0.606	8.385	12.390	0.926%	0.780%
%RSD		0.213	0.601	0.448	0.116	0.424	0.623	1.067	0.889
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:09:01	51.030	50.830	21.140	20.360	20.620	86.146%		
2	10:09:11	50.820	50.540	20.780	20.120	20.570	87.321%		
3	10:09:21	51.430	51.520	20.160	20.810	20.580	86.810%		
x		51.090	50.960	20.690	20.430	20.590	86.759%		
σ		0.310	0.503	0.495	0.350	0.028	0.589%		
%RSD		0.606	0.986	2.392	1.711	0.135	0.679		

600-140260-G-1-B 12/6/2016 10:14:59 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:03	80.516%	0.018	142.900	154.600	0.000	132400.000	7953.000	8108.000
2	10:14:13	79.972%	0.025	143.500	154.600	0.000	133300.000	8031.000	8118.000
3	10:14:23	79.618%	0.046	150.300	155.800	0.000	133200.000	8040.000	8112.000
x		80.035%	0.030	145.600	155.000	0.000	133000.000	8008.000	8112.000
σ		0.452%	0.015	4.145	0.679	0.000	495.300	48.080	4.872
%RSD		0.565	50.310	2.847	0.438	0.000	0.373	0.600	0.060
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:03	24.200	3069.000	0.000	10590.000	90410.000	92170.000	74.807%	3.647
2	10:14:13	23.570	3108.000	0.000	10640.000	91340.000	92230.000	75.115%	3.050
3	10:14:23	23.410	3083.000	0.000	10670.000	91190.000	92360.000	74.809%	3.090
x		23.720	3087.000	0.000	10630.000	90980.000	92260.000	74.910%	3.262
σ		0.415	19.430	0.000	42.370	500.600	98.460	0.177%	0.334
%RSD		1.751	0.630	0.000	0.398	0.550	0.107	0.237	10.230
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:03	5.021	1.098	1.167	-15.340	8.320	0.257	2.902	1.674
2	10:14:13	4.475	0.605	1.105	-16.010	12.810	0.324	2.115	1.268
3	10:14:23	3.554	1.021	1.142	-15.970	12.840	0.280	2.118	1.371
x		4.350	0.908	1.138	-15.770	11.320	0.287	2.378	1.438
σ		0.742	0.266	0.031	0.378	2.601	0.034	0.453	0.211
%RSD		17.050	29.240	2.736	2.399	22.970	11.720	19.070	14.680
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:03	1.328	8.505	6.089	4.537	0.682	5.676	0.000	599.300
2	10:14:13	1.422	8.163	5.411	4.421	0.690	7.362	0.000	606.000
3	10:14:23	1.860	7.945	4.859	4.949	0.687	4.358	0.000	604.300
x		1.537	8.204	5.453	4.636	0.686	5.799	0.000	603.200
σ		0.284	0.282	0.616	0.278	0.004	1.506	0.000	3.460
%RSD		18.500	3.439	11.300	5.986	0.569	25.970	0.000	0.574
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:03	72.371%	31.540	33.050	74.321%	-0.004	0.024	0.020	0.021
2	10:14:13	71.438%	34.810	32.560	73.345%	0.012	-0.018	-0.007	0.043
3	10:14:23	71.769%	33.380	31.540	73.801%	0.002	-0.013	-0.007	0.021
x		71.859%	33.240	32.390	73.823%	0.003	-0.002	0.002	0.028
σ		0.473%	1.639	0.770	0.488%	0.008	0.023	0.015	0.012
%RSD		0.659	4.930	2.376	0.661	241.500	955.100	694.600	43.990
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:03	75.116%	2.058	1.180	1.217	107.600	107.100	86.053%	86.357%
2	10:14:13	73.752%	1.776	1.243	1.040	107.700	109.700	85.894%	87.455%
3	10:14:23	73.824%	1.967	1.039	1.226	107.600	108.600	86.246%	87.221%
x		74.231%	1.934	1.154	1.161	107.600	108.500	86.064%	87.011%
σ		0.768%	0.144	0.105	0.105	0.056	1.286	0.176%	0.578%
%RSD		1.034	7.445	9.059	9.048	0.052	1.186	0.205	0.665
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:14:03	0.060	0.139	0.014	0.028	0.035	87.909%		
2	10:14:13	0.109	0.132	0.017	0.021	0.025	94.105%		
3	10:14:23	0.089	0.099	0.059	0.055	0.039	86.516%		
x		0.086	0.124	0.030	0.035	0.033	89.510%		
σ		0.024	0.022	0.025	0.018	0.007	4.040%		
%RSD		28.360	17.430	83.410	51.630	21.180	4.513		

600-140260-G-2-B 12/6/2016 10:20:04 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:07	78.065%	0.014	150.300	159.200	0.000	136200.000	8117.000	8263.000
2	10:19:17	76.380%	0.002	150.100	160.300	0.000	135800.000	8043.000	8185.000
3	10:19:26	75.836%	0.061	150.400	156.600	0.000	134500.000	7991.000	8125.000
x		76.760%	0.025	150.300	158.700	0.000	135500.000	8050.000	8191.000
σ		1.162%	0.031	0.177	1.930	0.000	904.900	63.280	68.970
%RSD		1.514	121.700	0.118	1.216	0.000	0.668	0.786	0.842
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:07	4.211	3077.000	0.000	10690.000	91590.000	91430.000	75.573%	1.925
2	10:19:17	4.240	3090.000	0.000	10730.000	90940.000	91500.000	75.268%	3.168
3	10:19:26	4.385	3077.000	0.000	10800.000	91280.000	91470.000	74.895%	3.212
x		4.279	3081.000	0.000	10740.000	91270.000	91470.000	75.245%	2.769
σ		0.093	7.415	0.000	52.240	325.500	32.010	0.339%	0.730
%RSD		2.174	0.241	0.000	0.486	0.357	0.035	0.451	26.380
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:07	4.436	1.036	1.160	-17.930	14.100	0.169	2.510	1.415
2	10:19:17	5.010	1.177	1.207	-17.570	2.405	0.259	3.297	1.764
3	10:19:26	3.861	1.076	1.214	-18.270	11.460	0.216	3.434	1.280
x		4.436	1.097	1.194	-17.930	9.321	0.214	3.080	1.486
σ		0.574	0.073	0.029	0.347	6.134	0.045	0.499	0.250
%RSD		12.950	6.622	2.448	1.938	65.810	21.060	16.190	16.800
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:07	1.697	9.635	7.654	4.302	0.537	2.302	0.000	596.400
2	10:19:17	2.256	8.384	8.457	4.635	1.136	3.120	0.000	620.100
3	10:19:26	1.524	10.100	7.562	4.587	0.264	4.012	0.000	606.500
x		1.826	9.373	7.891	4.508	0.646	3.145	0.000	607.700
σ		0.383	0.888	0.492	0.180	0.446	0.855	0.000	11.880
%RSD		20.950	9.473	6.236	3.989	69.010	27.190	0.000	1.955
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:07	72.428%	34.270	32.400	73.837%	0.023	0.003	0.020	0.096
2	10:19:17	70.305%	33.230	32.710	73.233%	0.033	0.003	0.020	0.011
3	10:19:26	70.277%	33.880	33.730	73.270%	-0.009	-0.018	0.020	0.022
x		71.003%	33.800	32.950	73.447%	0.016	-0.004	0.020	0.043
σ		1.234%	0.524	0.695	0.338%	0.022	0.012	0.000	0.046
%RSD		1.738	1.551	2.110	0.461	138.900	326.700	0.694	107.000
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:07	73.462%	0.542	0.925	1.220	109.300	108.000	86.437%	87.313%
2	10:19:17	72.734%	0.680	0.952	1.169	106.600	108.800	85.760%	87.501%
3	10:19:26	73.034%	0.598	0.973	1.069	106.500	110.400	86.267%	87.702%
x		73.076%	0.607	0.950	1.153	107.500	109.100	86.155%	87.505%
σ		0.366%	0.069	0.024	0.077	1.595	1.236	0.352%	0.195%
%RSD		0.501	11.440	2.530	6.659	1.484	1.133	0.408	0.222
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:19:07	-0.011	0.023	0.046	0.010	0.022	88.687%		
2	10:19:17	0.014	0.026	0.035	0.025	0.026	94.582%		
3	10:19:26	0.030	0.022	0.030	0.028	0.024	88.395%		
x		0.011	0.023	0.037	0.021	0.024	90.555%		
σ		0.020	0.002	0.008	0.009	0.002	3.491%		
%RSD		184.600	8.816	21.550	45.070	8.913	3.855		

600-140260-D-3-B 12/6/2016 10:25:10 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:24:13	75.924%	0.002	180.500	194.300	0.000	135400.000	7942.000	8115.000
2	10:24:23	73.970%	-0.003	185.800	199.900	0.000	135100.000	7910.000	8115.000
3	10:24:33	75.404%	0.003	182.300	193.700	0.000	135900.000	7979.000	8147.000
x		75.100%	0.001	182.900	195.900	0.000	135500.000	7944.000	8126.000
σ		1.012%	0.003	2.741	3.431	0.000	432.200	34.930	18.500
%RSD		1.347	302.000	1.499	1.751	0.000	0.319	0.440	0.228

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:24:13	11.420	3212.000	0.000	10460.000	90410.000	90110.000	75.813%	1.893
2	10:24:23	12.770	3261.000	0.000	10490.000	90410.000	90740.000	75.638%	2.249
3	10:24:33	11.710	3215.000	0.000	10550.000	90850.000	90570.000	75.112%	3.453
x		11.970	3229.000	0.000	10500.000	90550.000	90470.000	75.521%	2.532
σ		0.711	27.700	0.000	44.800	253.700	324.100	0.365%	0.818
%RSD		5.937	0.858	0.000	0.427	0.280	0.358	0.483	32.300

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:24:13	4.398	0.974	1.947	-15.690	15.580	0.245	2.346	1.009
2	10:24:23	4.486	1.086	1.888	-15.420	12.830	0.280	2.540	1.289
3	10:24:33	5.010	1.077	1.970	-15.240	12.730	0.246	2.770	1.012
x		4.631	1.046	1.935	-15.450	13.710	0.257	2.552	1.103
σ		0.331	0.062	0.042	0.228	1.618	0.020	0.212	0.161
%RSD		7.155	5.948	2.176	1.478	11.800	7.877	8.318	14.600

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:24:13	1.700	10.350	7.857	4.144	0.398	2.992	0.000	597.800
2	10:24:23	1.372	9.363	8.185	4.252	-0.027	4.712	0.000	607.300
3	10:24:33	1.006	9.619	7.750	4.083	0.397	5.941	0.000	594.900
x		1.359	9.779	7.930	4.159	0.256	4.548	0.000	600.000
σ		0.348	0.515	0.226	0.086	0.245	1.482	0.000	6.460
%RSD		25.570	5.266	2.855	2.063	95.620	32.570	0.000	1.077

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:24:13	71.864%	33.930	33.070	74.401%	0.022	-0.023	0.020	0.011
2	10:24:23	69.983%	33.000	32.240	73.990%	-0.014	-0.008	0.046	0.011
3	10:24:33	72.319%	31.910	32.020	74.065%	-0.019	-0.002	-0.007	0.021
x		71.389%	32.950	32.440	74.152%	-0.004	-0.011	0.020	0.014
σ		1.239%	1.013	0.554	0.219%	0.023	0.011	0.026	0.006
%RSD		1.735	3.076	1.709	0.296	615.000	98.220	132.700	41.880

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:24:13	73.895%	0.358	1.096	0.838	117.300	114.200	86.946%	88.502%
2	10:24:23	74.626%	0.237	0.933	0.838	114.400	110.000	88.527%	88.155%
3	10:24:33	74.752%	0.275	0.992	0.901	112.500	113.200	87.175%	89.373%
x		74.425%	0.290	1.007	0.859	114.800	112.500	87.549%	88.677%
σ		0.463%	0.062	0.082	0.036	2.427	2.198	0.855%	0.627%
%RSD		0.622	21.240	8.169	4.216	2.115	1.954	0.976	0.707

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:24:13	-0.004	0.004	0.014	0.031	0.024	89.682%
2	10:24:23	0.018	0.006	0.055	0.022	0.038	91.299%
3	10:24:33	-0.008	0.004	0.025	0.044	0.022	90.942%
x		0.002	0.004	0.032	0.032	0.028	90.641%
σ		0.014	0.001	0.021	0.011	0.008	0.849%
%RSD		660.100	31.470	68.150	32.970	30.000	0.937

600-140260-F-2-A 12/6/2016 10:30:15 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:29:19	74.513%	0.145	148.300	159.600	0.000	134500.000	8151.000	8335.000
2	10:29:29	75.972%	0.089	152.300	156.800	0.000	135700.000	8156.000	8230.000
3	10:29:38	74.385%	0.019	147.400	161.800	0.000	133800.000	8112.000	8263.000
x		74.957%	0.084	149.300	159.400	0.000	134700.000	8140.000	8276.000
σ		0.882%	0.063	2.608	2.509	0.000	960.400	23.650	53.870
%RSD		1.176	74.480	1.746	1.574	0.000	0.713	0.291	0.651
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:29:19	560.500	4325.000	0.000	10730.000	94610.000	93490.000	74.370%	7.746
2	10:29:29	559.400	4313.000	0.000	10770.000	93420.000	93500.000	74.314%	7.879
3	10:29:38	561.200	4279.000	0.000	10800.000	94290.000	94210.000	73.920%	8.206
x		560.300	4306.000	0.000	10770.000	94110.000	93740.000	74.201%	7.944
σ		0.875	24.220	0.000	35.600	612.900	412.800	0.245%	0.237
%RSD		0.156	0.563	0.000	0.331	0.651	0.440	0.330	2.981
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:29:19	4.697	1.771	55.570	493.200	523.600	0.524	3.849	5.491
2	10:29:29	5.409	1.845	55.750	496.100	529.300	0.559	3.901	5.804
3	10:29:38	5.001	1.973	55.810	489.300	601.100	0.485	3.250	5.594
x		5.036	1.863	55.710	492.900	551.400	0.523	3.667	5.630
σ		0.357	0.102	0.124	3.431	43.180	0.037	0.361	0.160
%RSD		7.094	5.471	0.223	0.696	7.831	7.094	9.856	2.835
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:29:19	6.018	66.630	67.370	4.032	1.123	4.036	0.000	603.400
2	10:29:29	5.506	62.090	66.480	4.772	0.262	6.110	0.000	607.700
3	10:29:38	5.816	62.240	65.150	4.799	0.265	7.820	0.000	614.300
x		5.780	63.650	66.330	4.535	0.550	5.989	0.000	608.400
σ		0.258	2.575	1.116	0.435	0.496	1.895	0.000	5.472
%RSD		4.461	4.046	1.682	9.595	90.250	31.650	0.000	0.899
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:29:19	71.461%	33.980	33.880	72.794%	-0.003	-0.013	0.074	0.000
2	10:29:29	71.044%	33.390	32.670	72.969%	0.007	-0.002	0.103	0.001
3	10:29:38	70.338%	33.790	33.370	72.339%	0.007	0.004	0.021	0.044
x		70.948%	33.720	33.310	72.701%	0.004	-0.004	0.066	0.015
σ		0.568%	0.299	0.603	0.325%	0.006	0.008	0.042	0.025
%RSD		0.800	0.886	1.811	0.448	165.900	238.100	63.420	165.200
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:29:19	73.678%	0.552	0.896	0.809	119.800	116.100	86.932%	86.376%
2	10:29:29	71.532%	0.548	0.836	0.758	117.300	121.100	86.044%	87.477%
3	10:29:38	72.526%	0.656	0.697	0.876	122.100	118.400	85.544%	88.046%
x		72.579%	0.586	0.810	0.815	119.700	118.500	86.173%	87.300%
σ		1.074%	0.061	0.102	0.059	2.385	2.534	0.703%	0.849%
%RSD		1.480	10.460	12.600	7.273	1.992	2.138	0.816	0.973
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:29:19	-0.007	0.001	0.998	0.857	0.925	89.345%		
2	10:29:29	-0.000	0.010	0.986	0.784	0.916	88.189%		
3	10:29:38	0.012	0.012	0.918	0.950	0.972	90.283%		
x		0.002	0.007	0.968	0.864	0.938	89.273%		
σ		0.010	0.005	0.043	0.083	0.030	1.049%		
%RSD		649.200	73.370	4.474	9.631	3.211	1.175		

600-140260-C-3-A 12/6/2016 10:35:20 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:34:25	74.201%	0.034	189.600	197.500	0.000	134800.000	7971.000	8072.000
2	10:34:34	74.413%	0.004	180.600	193.700	0.000	134600.000	7984.000	8060.000
3	10:34:44	74.200%	0.005	186.800	196.600	0.000	134300.000	8019.000	8108.000
x		74.271%	0.014	185.700	195.900	0.000	134600.000	7991.000	8080.000
σ		0.123%	0.017	4.583	1.970	0.000	263.700	24.710	25.210
%RSD		0.165	119.200	2.469	1.006	0.000	0.196	0.309	0.312
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:34:25	236.000	3768.000	0.000	10410.000	90910.000	91180.000	74.379%	5.657
2	10:34:34	227.700	3700.000	0.000	10450.000	90830.000	91420.000	73.788%	5.270
3	10:34:44	230.500	3714.000	0.000	10450.000	91120.000	91460.000	74.345%	5.176
x		231.400	3727.000	0.000	10440.000	90950.000	91350.000	74.171%	5.367
σ		4.195	35.840	0.000	26.230	149.500	146.900	0.332%	0.255
%RSD		1.813	0.962	0.000	0.251	0.164	0.161	0.447	4.750
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:34:25	6.191	1.235	42.030	185.300	238.100	0.317	3.031	1.929
2	10:34:34	5.107	1.364	42.440	185.200	217.100	0.416	3.154	1.967
3	10:34:44	3.522	1.211	42.320	183.500	276.900	0.374	2.875	1.985
x		4.940	1.270	42.260	184.700	244.100	0.369	3.020	1.960
σ		1.342	0.083	0.209	1.005	30.340	0.050	0.140	0.028
%RSD		27.180	6.499	0.495	0.544	12.430	13.550	4.631	1.446
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:34:25	2.127	35.420	32.060	4.048	0.266	4.028	0.000	600.200
2	10:34:34	2.265	34.420	34.720	4.519	0.405	4.656	0.000	585.500
3	10:34:44	2.139	34.970	34.860	4.490	-0.025	5.465	0.000	600.200
x		2.177	34.940	33.880	4.352	0.216	4.716	0.000	595.300
σ		0.076	0.500	1.574	0.264	0.220	0.721	0.000	8.449
%RSD		3.507	1.431	4.644	6.070	101.900	15.280	0.000	1.419
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:34:25	70.026%	32.590	33.530	72.802%	-0.003	-0.013	-0.007	0.054
2	10:34:34	71.343%	32.600	32.770	72.896%	0.012	0.003	0.020	0.001
3	10:34:44	69.244%	33.430	33.100	72.563%	-0.003	-0.012	0.102	-0.021
x		70.204%	32.870	33.130	72.754%	0.002	-0.007	0.039	0.011
σ		1.061%	0.482	0.384	0.172%	0.009	0.009	0.057	0.039
%RSD		1.511	1.467	1.157	0.236	475.500	127.900	146.400	341.600
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:34:25	72.756%	0.223	0.866	0.768	117.900	120.800	85.525%	87.444%
2	10:34:34	73.300%	0.245	0.680	0.729	120.500	117.300	87.201%	87.427%
3	10:34:44	72.286%	0.422	0.853	0.750	122.000	120.700	86.822%	87.828%
x		72.781%	0.297	0.800	0.749	120.100	119.600	86.516%	87.566%
σ		0.507%	0.109	0.104	0.020	2.073	1.983	0.879%	0.227%
%RSD		0.697	36.750	12.990	2.620	1.725	1.658	1.016	0.259
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:34:25	-0.021	-0.001	0.453	0.437	0.461	88.640%		
2	10:34:34	-0.021	-0.001	0.484	0.423	0.431	88.754%		
3	10:34:44	-0.004	0.006	0.531	0.426	0.456	90.050%		
x		-0.015	0.001	0.489	0.428	0.449	89.148%		
σ		0.009	0.004	0.039	0.007	0.016	0.783%		
%RSD		62.540	358.400	8.033	1.687	3.595	0.879		

180-61225-E-1-B 12/6/2016 10:40:28 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:39:31	73.368%	-0.009	27.980	30.530	0.000	52710.000	34370.000	34650.000
2	10:39:40	72.209%	0.007	28.220	30.490	0.000	52710.000	34430.000	34750.000
3	10:39:50	74.062%	0.072	28.370	28.310	0.000	52500.000	34240.000	34510.000
x		73.213%	0.023	28.190	29.780	0.000	52640.000	34350.000	34640.000
σ		0.936%	0.043	0.193	1.270	0.000	119.300	95.920	124.100
%RSD		1.278	184.000	0.686	4.266	0.000	0.227	0.279	0.358
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:39:31	24.770	7157.000	0.000	2351.000	264000.000	246200.000	71.344%	2.416
2	10:39:40	25.490	7472.000	0.000	2402.000	245500.000	246300.000	70.407%	2.939
3	10:39:50	25.130	7404.000	0.000	2389.000	264700.000	244800.000	70.581%	2.877
x		25.130	7344.000	0.000	2380.000	258100.000	245800.000	70.777%	2.744
σ		0.364	165.900	0.000	26.780	10890.000	806.400	0.498%	0.286
%RSD		1.447	2.258	0.000	1.125	4.220	0.328	0.704	10.420
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:39:31	-1.037	1.617	3847.000	11080.000	11250.000	2.481	2.483	0.319
2	10:39:40	0.671	1.223	3890.000	11080.000	11650.000	2.326	3.428	0.524
3	10:39:50	0.248	1.184	3876.000	10950.000	11790.000	2.290	2.897	0.554
x		-0.039	1.341	3871.000	11030.000	11570.000	2.366	2.936	0.466
σ		0.889	0.239	22.260	75.110	279.400	0.101	0.474	0.128
%RSD		2260.000	17.840	0.575	0.681	2.416	4.276	16.130	27.530
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:39:31	0.790	8.398	8.940	6.994	0.579	4.634	0.000	338.700
2	10:39:40	0.671	11.350	7.328	7.139	-0.172	8.747	0.000	338.900
3	10:39:50	0.332	9.930	7.520	7.250	-0.022	6.628	0.000	339.100
x		0.598	9.894	7.929	7.127	0.128	6.670	0.000	338.900
σ		0.238	1.478	0.881	0.128	0.397	2.057	0.000	0.203
%RSD		39.760	14.940	11.110	1.798	309.900	30.840	0.000	0.060
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:39:31	68.453%	-0.475	-0.477	69.627%	-0.003	-0.012	0.022	0.001
2	10:39:40	68.656%	-0.252	-0.409	69.819%	0.003	-0.012	0.049	-0.010
3	10:39:50	68.448%	-0.658	-0.417	69.284%	-0.003	-0.023	-0.007	0.057
x		68.519%	-0.462	-0.434	69.577%	-0.001	-0.016	0.021	0.016
σ		0.119%	0.203	0.037	0.271%	0.003	0.006	0.028	0.036
%RSD		0.174	44.020	8.622	0.389	367.800	41.150	130.300	219.500
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:39:31	70.201%	0.374	-0.003	0.022	45.670	41.670	83.199%	83.568%
2	10:39:40	70.426%	0.494	0.032	0.109	40.890	42.570	82.535%	84.597%
3	10:39:50	69.897%	0.499	0.050	0.066	43.710	44.980	82.421%	84.943%
x		70.174%	0.456	0.026	0.066	43.420	43.070	82.718%	84.369%
σ		0.265%	0.071	0.027	0.044	2.402	1.715	0.420%	0.715%
%RSD		0.378	15.520	103.700	66.230	5.532	3.982	0.508	0.848
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:39:31	-0.017	-0.003	2.165	1.968	2.153	85.137%		
2	10:39:40	-0.027	-0.008	2.291	2.030	2.090	85.566%		
3	10:39:50	-0.008	-0.007	2.226	2.110	2.040	91.711%		
x		-0.017	-0.006	2.227	2.036	2.094	87.471%		
σ		0.010	0.002	0.063	0.071	0.057	3.678%		
%RSD		56.490	37.690	2.828	3.486	2.701	4.205		

180-60951-E-2-A 12/6/2016 10:45:33 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:38	67.017%	0.056	28.050	28.220	0.000	399200.000	13300.000	13530.000
2	10:44:47	68.261%	-0.011	25.340	28.320	0.000	404800.000	13430.000	13660.000
3	10:44:57	68.910%	-0.004	23.660	28.300	0.000	404900.000	13550.000	13800.000
x		68.063%	0.014	25.680	28.280	0.000	403000.000	13430.000	13670.000
σ		0.962%	0.037	2.215	0.052	0.000	3233.000	120.800	134.500
%RSD		1.413	270.300	8.625	0.183	0.000	0.802	0.900	0.984
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:38	5.322	16550.000	0.000	26010.000	71330.000	73190.000	68.258%	4.797
2	10:44:47	5.316	16600.000	0.000	26320.000	72140.000	73330.000	67.880%	5.552
3	10:44:57	5.067	16540.000	0.000	26470.000	71490.000	73240.000	67.828%	5.472
x		5.235	16560.000	0.000	26260.000	71650.000	73250.000	67.989%	5.274
σ		0.146	31.040	0.000	234.600	432.900	68.700	0.235%	0.415
%RSD		2.779	0.187	0.000	0.893	0.604	0.094	0.346	7.869
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:38	0.203	0.580	9736.000	20530.000	20390.000	17.990	7.195	0.306
2	10:44:47	0.475	0.493	9806.000	20600.000	20440.000	19.240	7.167	0.271
3	10:44:57	-0.009	0.688	9828.000	20740.000	20910.000	18.390	7.108	0.257
x		0.223	0.587	9790.000	20620.000	20580.000	18.540	7.157	0.278
σ		0.243	0.098	48.080	105.800	286.400	0.642	0.045	0.025
%RSD		108.700	16.640	0.491	0.513	1.392	3.464	0.625	8.975
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:38	0.443	11.410	7.496	3.821	1.076	8.129	0.000	572.100
2	10:44:47	0.566	10.800	9.034	3.785	-0.172	11.460	0.000	570.600
3	10:44:57	0.506	12.570	7.084	4.085	0.448	12.020	0.000	574.100
x		0.505	11.590	7.871	3.897	0.451	10.540	0.000	572.300
σ		0.062	0.901	1.028	0.164	0.624	2.105	0.000	1.768
%RSD		12.180	7.774	13.060	4.196	138.500	19.970	0.000	0.309
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:38	65.999%	0.002	-0.003	67.313%	-0.002	-0.017	0.051	-0.009
2	10:44:47	67.462%	-0.013	-0.351	68.205%	-0.014	-0.006	-0.007	0.002
3	10:44:57	66.695%	-0.047	-0.034	67.661%	-0.014	0.011	-0.007	0.024
x		66.719%	-0.019	-0.129	67.727%	-0.010	-0.004	0.013	0.006
σ		0.732%	0.025	0.193	0.449%	0.007	0.014	0.033	0.017
%RSD		1.097	127.800	148.900	0.663	67.670	373.700	261.800	300.600
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:38	68.021%	0.533	0.045	0.025	158.600	157.900	80.641%	82.190%
2	10:44:47	68.446%	0.334	0.062	0.036	152.800	156.400	81.517%	83.809%
3	10:44:57	69.092%	0.356	0.043	0.057	151.100	156.100	82.245%	83.459%
x		68.520%	0.408	0.050	0.039	154.200	156.800	81.468%	83.153%
σ		0.539%	0.109	0.011	0.016	3.955	0.953	0.803%	0.852%
%RSD		0.787	26.740	21.310	41.190	2.566	0.607	0.986	1.025
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:44:38	-0.006	-0.003	0.040	0.058	0.056	83.782%		
2	10:44:47	-0.020	-0.002	0.110	0.057	0.062	84.320%		
3	10:44:57	-0.003	-0.012	0.048	0.047	0.045	84.931%		
x		-0.009	-0.006	0.066	0.054	0.054	84.344%		
σ		0.009	0.005	0.038	0.006	0.009	0.575%		
%RSD		97.760	95.240	57.710	10.470	16.080	0.682		

CCV 2136057 12/6/2016 10:50:38 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:49:43	77.103%	100.900	98.290	102.100	0.000	47070.000	46800.000	47470.000
2	10:49:53	75.910%	104.700	102.800	106.800	0.000	48030.000	47740.000	48070.000
3	10:50:02	75.547%	104.000	101.800	104.000	0.000	48240.000	47720.000	48230.000
x		76.187%	103.220%	100.958%	104.292%	0.000	95.563%	94.842%	95.846%
σ		0.814%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.068	1.964	2.337	2.285	0.000	1.310	1.133	0.840

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:49:43	532.100	5347.000	0.000	49580.000	49250.000	47520.000	81.293%	102.600
2	10:49:53	540.500	5388.000	0.000	49690.000	49370.000	47720.000	81.326%	101.500
3	10:50:02	546.000	5442.000	0.000	50160.000	49880.000	48050.000	80.940%	102.600
x		107.910%	107.843%	0.000	99.616%	98.998%	95.524%	81.186%	102.228%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.214%	n/a
%RSD		1.304	0.878	0.000	0.618	0.682	0.559	0.263	0.585

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:49:43	98.990	97.210	495.400	24350.000	24250.000	96.490	98.080	100.300
2	10:49:53	94.820	93.490	501.900	24030.000	23830.000	95.070	94.500	99.580
3	10:50:02	101.700	99.630	500.400	24610.000	24490.000	96.980	96.880	101.900
x		98.520%	96.778%	99.849%	97.322%	96.757%	96.179%	96.484%	100.600%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		3.538	3.199	0.685	1.202	1.371	1.034	1.885	1.206

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:49:43	101.400	98.070	96.610	98.120	88.530	117.100	0.000	99.530
2	10:49:53	98.730	102.100	99.290	96.850	96.510	105.000	0.000	98.750
3	10:50:02	103.900	104.100	101.000	99.850	97.500	106.600	0.000	101.000
x		101.357%	101.429%	98.958%	98.273%	94.182%	109.560%	0.000	99.767%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.573	3.036	2.230	1.529	5.222	6.003	0.000	1.157

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:49:43	79.098%	103.600	106.400	79.660%	95.850	95.740	102.400	102.500
2	10:49:53	80.198%	104.400	102.800	80.682%	95.650	94.510	96.850	103.500
3	10:50:02	77.984%	109.000	103.900	79.244%	96.090	96.330	96.660	99.830
x		79.093%	105.679%	104.369%	79.862%	95.866%	95.529%	98.622%	101.939%
σ		1.107%	n/a	n/a	0.740%	n/a	n/a	n/a	n/a
%RSD		1.400	2.731	1.791	0.926	0.232	0.971	3.277	1.862

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:49:43	79.895%	102.200	102.700	103.600	98.500	103.700	88.842%	90.952%
2	10:49:53	80.512%	102.000	102.300	102.000	105.400	105.300	89.347%	90.517%
3	10:50:02	81.125%	100.800	105.300	102.900	98.220	98.360	89.249%	90.282%
x		80.511%	101.680%	103.409%	102.832%	100.710%	102.461%	89.146%	90.584%
σ		0.615%	n/a	n/a	n/a	n/a	n/a	0.268%	0.340%
%RSD		0.764	0.754	1.587	0.784	4.042	3.555	0.300	0.375

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:49:43	99.490	99.560	100.500	99.990	100.100	90.569%
2	10:49:53	99.550	100.000	99.650	99.410	99.390	90.778%
3	10:50:02	101.200	100.900	101.000	101.400	101.400	89.999%
x		100.075%	100.175%	100.367%	100.264%	100.297%	90.449%
σ		n/a	n/a	n/a	n/a	n/a	0.403%
%RSD		0.960	0.684	0.675	1.013	1.021	0.446

CCB2 12/6/2016 10:55:46 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:54:49	83.186%	0.160	0.270	0.650	0.000	93.070	46.940	45.000
2	10:54:59	84.280%	0.111	0.907	0.484	0.000	93.110	47.690	50.120
3	10:55:09	82.940%	0.147	0.615	0.471	0.000	92.100	47.360	48.280
x		83.469%	0.139	0.598	0.535	0.000	92.760	47.330	47.800
σ		0.714%	0.025	0.319	0.100	0.000	0.571	0.373	2.594
%RSD		0.855	18.290	53.390	18.670	0.000	0.615	0.789	5.428
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:54:49	8.166	5.239	0.000	48.200	184.700	69.610	83.581%	0.263
2	10:54:59	9.198	5.820	0.000	55.810	154.700	77.430	82.913%	0.155
3	10:55:09	9.287	6.269	0.000	53.720	121.600	67.910	83.320%	0.152
x		8.884	5.776	0.000	52.580	153.600	71.650	83.271%	0.190
σ		0.623	0.516	0.000	3.932	31.550	5.077	0.337%	0.063
%RSD		7.013	8.937	0.000	7.479	20.540	7.085	0.404	33.310
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:54:49	0.088	0.143	0.632	33.240	24.540	0.158	0.026	0.086
2	10:54:59	0.316	0.098	0.643	28.110	40.980	0.151	0.249	0.116
3	10:55:09	-0.105	0.097	0.697	26.360	25.960	0.072	0.246	0.087
x		0.100	0.113	0.657	29.230	30.490	0.127	0.174	0.096
σ		0.211	0.027	0.035	3.575	9.108	0.048	0.128	0.017
%RSD		212.000	23.530	5.312	12.230	29.870	37.720	73.540	17.740
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:54:49	0.128	0.103	0.442	0.145	0.193	1.933	0.000	0.172
2	10:54:59	0.132	0.109	0.194	0.064	-0.048	1.684	0.000	0.189
3	10:55:09	0.154	0.104	0.306	0.169	-0.050	0.275	0.000	0.140
x		0.138	0.105	0.314	0.126	0.032	1.297	0.000	0.167
σ		0.014	0.003	0.124	0.055	0.140	0.894	0.000	0.025
%RSD		10.130	3.093	39.570	43.480	441.600	68.910	0.000	14.890
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:54:49	85.942%	-0.167	-0.116	87.114%	0.052	0.084	0.039	0.124
2	10:54:59	83.437%	-0.154	-0.276	86.592%	0.087	0.048	0.106	0.060
3	10:55:09	85.762%	-0.215	-0.275	87.243%	0.087	0.052	0.106	0.033
x		85.047%	-0.179	-0.223	86.983%	0.075	0.061	0.084	0.072
σ		1.397%	0.032	0.092	0.345%	0.020	0.020	0.039	0.047
%RSD		1.643	18.020	41.330	0.396	27.010	32.450	46.400	64.800
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:54:49	85.898%	0.268	0.445	0.340	0.259	0.210	93.753%	94.575%
2	10:54:59	87.290%	0.271	0.308	0.361	0.000	0.230	94.237%	93.625%
3	10:55:09	86.745%	0.209	0.274	0.256	0.172	0.117	93.260%	93.331%
x		86.644%	0.249	0.342	0.319	0.143	0.186	93.750%	93.844%
σ		0.701%	0.035	0.090	0.055	0.132	0.060	0.489%	0.650%
%RSD		0.809	14.160	26.460	17.390	91.730	32.400	0.521	0.693
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:54:49	0.076	0.091	0.116	0.060	0.091	97.238%		
2	10:54:59	0.064	0.083	0.116	0.091	0.097	97.466%		
3	10:55:09	0.054	0.081	0.100	0.055	0.077	98.390%		
x		0.065	0.085	0.111	0.069	0.088	97.698%		
σ		0.011	0.006	0.009	0.020	0.010	0.610%		
%RSD		17.050	6.694	7.988	28.640	11.540	0.624		

180-60951-E-2-A SD@5 12/6/2016 11:00:54 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:59	75.012%	0.004	5.334	5.295	0.000	81930.000	2690.000	2677.000
2	11:00:09	75.776%	0.010	4.936	5.562	0.000	82700.000	2723.000	2709.000
3	11:00:18	76.006%	0.010	5.192	5.248	0.000	82990.000	2713.000	2715.000
x		75.598%	0.008	5.154	5.368	0.000	82540.000	2708.000	2700.000
σ		0.520%	0.004	0.202	0.170	0.000	546.400	16.690	20.460
%RSD		0.688	46.180	3.913	3.157	0.000	0.662	0.616	0.758
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:59	4.682	3308.000	0.000	5111.000	14050.000	13310.000	76.500%	0.336
2	11:00:09	4.763	3307.000	0.000	5167.000	14290.000	13380.000	75.896%	0.593
3	11:00:18	4.749	3311.000	0.000	5170.000	14440.000	13400.000	76.005%	0.417
x		4.731	3308.000	0.000	5149.000	14260.000	13370.000	76.134%	0.449
σ		0.043	2.391	0.000	33.430	198.000	51.760	0.322%	0.131
%RSD		0.911	0.072	0.000	0.649	1.389	0.387	0.423	29.240
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:59	-0.443	0.135	1896.000	3921.000	4238.000	3.426	1.498	0.100
2	11:00:09	-0.255	0.084	1916.000	3840.000	4064.000	3.647	1.607	0.055
3	11:00:18	0.072	0.197	1914.000	3831.000	4031.000	3.807	1.581	0.100
x		-0.208	0.139	1909.000	3864.000	4111.000	3.627	1.562	0.085
σ		0.261	0.056	10.900	49.950	111.100	0.191	0.057	0.026
%RSD		125.100	40.790	0.571	1.293	2.702	5.266	3.646	30.820
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:59	0.071	2.470	2.116	0.813	-0.033	3.524	0.000	117.200
2	11:00:09	0.210	1.754	3.544	0.819	-0.036	2.138	0.000	110.500
3	11:00:18	0.185	2.044	1.711	0.876	-0.033	1.857	0.000	116.800
x		0.156	2.089	2.457	0.836	-0.034	2.506	0.000	114.800
σ		0.074	0.360	0.963	0.035	0.002	0.892	0.000	3.718
%RSD		47.560	17.230	39.190	4.155	5.821	35.590	0.000	3.238
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:59	73.604%	-0.632	-0.606	76.562%	0.001	-0.003	-0.007	-0.001
2	11:00:09	76.514%	-0.305	-0.546	76.526%	0.016	-0.013	-0.007	0.010
3	11:00:18	74.305%	-0.502	-0.649	76.320%	-0.009	-0.018	-0.007	-0.021
x		74.807%	-0.480	-0.600	76.469%	0.003	-0.012	-0.007	-0.004
σ		1.519%	0.165	0.052	0.130%	0.013	0.008	0.000	0.015
%RSD		2.030	34.320	8.631	0.170	504.800	65.460	0.133	387.900
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:59	77.947%	0.060	0.022	0.073	31.650	30.360	87.563%	88.606%
2	11:00:09	77.075%	0.002	0.015	0.074	31.040	31.340	86.425%	89.276%
3	11:00:18	76.570%	-0.022	-0.009	0.075	29.890	32.900	87.577%	88.851%
x		77.197%	0.013	0.009	0.074	30.860	31.540	87.188%	88.911%
σ		0.697%	0.042	0.016	0.001	0.893	1.282	0.661%	0.339%
%RSD		0.903	316.500	172.600	1.587	2.894	4.065	0.759	0.381
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:59:59	-0.027	-0.008	0.044	0.005	0.023	91.371%		
2	11:00:09	-0.011	0.002	0.017	0.022	0.023	91.429%		
3	11:00:18	-0.014	-0.008	0.025	0.009	0.019	91.995%		
x		-0.018	-0.005	0.029	0.012	0.021	91.598%		
σ		0.009	0.006	0.014	0.009	0.002	0.345%		
%RSD		48.690	124.400	47.930	71.420	10.400	0.376		

180-60951-E-2-B MS 12/6/2016 11:05:59 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:05:04	69.036%	52.270	1038.000	1097.000	0.000	466700.000	64310.000	65420.000
2	11:05:13	68.629%	53.040	1063.000	1099.000	0.000	464900.000	64180.000	65140.000
3	11:05:23	68.732%	54.880	1075.000	1132.000	0.000	469000.000	65150.000	65210.000
x		68.799%	53.400	1059.000	1109.000	0.000	466800.000	64550.000	65260.000
σ		0.212%	1.342	19.020	19.850	0.000	2046.000	523.100	143.600
%RSD		0.308	2.513	1.797	1.790	0.000	0.438	0.811	0.220

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:05:04	2111.000	27800.000	0.000	80630.000	127400.000	130100.000	69.977%	1064.000
2	11:05:13	2113.000	27680.000	0.000	80350.000	126700.000	129600.000	70.116%	1064.000
3	11:05:23	2127.000	27830.000	0.000	80690.000	127400.000	129500.000	70.321%	1065.000
x		2117.000	27770.000	0.000	80560.000	127200.000	129700.000	70.138%	1064.000
σ		8.634	75.960	0.000	182.000	424.100	332.200	0.173%	0.703
%RSD		0.408	0.274	0.000	0.226	0.334	0.256	0.247	0.066

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:05:04	507.300	200.300	10650.000	22400.000	22460.000	522.200	503.800	259.800
2	11:05:13	507.400	202.200	10570.000	22440.000	21930.000	510.000	510.600	252.100
3	11:05:23	505.400	197.200	10570.000	22150.000	22230.000	514.700	494.200	259.900
x		506.700	199.900	10600.000	22330.000	22210.000	515.600	502.900	257.300
σ		1.114	2.548	46.390	156.300	266.800	6.160	8.238	4.458
%RSD		0.220	1.275	0.438	0.700	1.201	1.195	1.638	1.733

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:05:04	258.500	527.100	488.900	46.810	9.037	24.210	0.000	1616.000
2	11:05:13	257.400	496.800	468.500	43.460	7.994	28.910	0.000	1596.000
3	11:05:23	262.600	508.700	467.600	44.820	8.706	24.950	0.000	1611.000
x		259.500	510.900	475.000	45.030	8.579	26.020	0.000	1608.000
σ		2.739	15.250	12.070	1.688	0.533	2.524	0.000	10.660
%RSD		1.056	2.984	2.542	3.748	6.210	9.699	0.000	0.663

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:05:04	66.946%	1177.000	1175.000	68.519%	50.660	51.340	53.370	91.800
2	11:05:13	68.225%	1163.000	1167.000	68.104%	50.960	51.270	51.430	96.840
3	11:05:23	67.084%	1177.000	1167.000	68.209%	51.860	51.840	51.350	95.710
x		67.418%	1173.000	1170.000	68.277%	51.160	51.480	52.050	94.780
σ		0.702%	8.300	4.991	0.216%	0.627	0.308	1.140	2.641
%RSD		1.042	0.708	0.427	0.316	1.225	0.599	2.191	2.787

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:05:04	68.732%	2164.000	544.200	541.500	2186.000	2196.000	81.738%	84.077%
2	11:05:13	68.172%	2191.000	551.300	552.500	2179.000	2210.000	82.185%	83.425%
3	11:05:23	68.503%	2167.000	544.300	544.600	2167.000	2191.000	82.535%	83.451%
x		68.469%	2174.000	546.600	546.200	2177.000	2199.000	82.153%	83.651%
σ		0.281%	14.990	4.075	5.657	9.302	9.942	0.400%	0.369%
%RSD		0.411	0.690	0.746	1.036	0.427	0.452	0.486	0.441

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:05:04	50.020	49.360	20.300	20.670	20.220	86.400%
2	11:05:13	52.550	52.440	21.300	21.720	21.370	81.517%
3	11:05:23	51.710	52.420	21.350	21.140	21.220	82.595%
x		51.430	51.410	20.980	21.180	20.940	83.504%
σ		1.289	1.770	0.594	0.522	0.624	2.565%
%RSD		2.507	3.443	2.830	2.466	2.981	3.072

180-60951-E-2-C MSD 12/6/2016 11:11:01 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:10:06	69.884%	51.540	1026.000	1060.000	0.000	453300.000	62970.000	63100.000
2	11:10:16	67.208%	53.140	1050.000	1111.000	0.000	450000.000	62130.000	63160.000
3	11:10:25	69.122%	52.730	1031.000	1069.000	0.000	446100.000	61780.000	62710.000
x		68.738%	52.470	1035.000	1080.000	0.000	449800.000	62290.000	62990.000
σ		1.379%	0.830	12.720	27.340	0.000	3581.000	611.600	240.800
%RSD		2.006	1.582	1.229	2.532	0.000	0.796	0.982	0.382
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:10:06	1968.000	26680.000	0.000	76820.000	122800.000	124300.000	70.057%	1021.000
2	11:10:16	1970.000	27220.000	0.000	77110.000	122700.000	123900.000	70.314%	1028.000
3	11:10:25	1963.000	26840.000	0.000	77010.000	121600.000	123900.000	70.367%	1029.000
x		1967.000	26910.000	0.000	76980.000	122400.000	124000.000	70.246%	1026.000
σ		3.475	279.100	0.000	146.700	640.700	211.300	0.166%	4.270
%RSD		0.177	1.037	0.000	0.191	0.524	0.170	0.236	0.416
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:10:06	479.600	192.100	10180.000	21520.000	21460.000	499.300	485.500	245.400
2	11:10:16	480.500	194.200	10160.000	21910.000	21650.000	501.300	490.000	248.400
3	11:10:25	492.600	195.800	10200.000	21710.000	21650.000	502.000	496.000	250.100
x		484.300	194.000	10180.000	21710.000	21590.000	500.900	490.500	248.000
σ		7.262	1.875	19.280	194.900	107.300	1.392	5.248	2.352
%RSD		1.500	0.966	0.189	0.898	0.497	0.278	1.070	0.949
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:10:06	250.600	487.100	448.800	42.460	8.171	23.900	0.000	1544.000
2	11:10:16	244.800	494.800	461.300	42.580	9.652	30.610	0.000	1537.000
3	11:10:25	251.500	499.600	446.400	44.000	11.170	23.190	0.000	1526.000
x		249.000	493.800	452.200	43.010	9.664	25.900	0.000	1535.000
σ		3.634	6.291	8.005	0.860	1.499	4.092	0.000	9.013
%RSD		1.460	1.274	1.770	1.999	15.510	15.800	0.000	0.587
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:10:06	67.965%	1126.000	1128.000	67.987%	49.790	48.790	52.290	90.710
2	11:10:16	68.220%	1130.000	1115.000	68.385%	49.270	49.300	50.720	89.170
3	11:10:25	68.159%	1124.000	1117.000	68.539%	49.080	48.840	50.270	90.370
x		68.115%	1127.000	1120.000	68.304%	49.380	48.970	51.090	90.090
σ		0.134%	3.346	6.879	0.285%	0.369	0.281	1.060	0.810
%RSD		0.196	0.297	0.614	0.417	0.747	0.574	2.074	0.900
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:10:06	67.629%	2107.000	527.000	528.200	2118.000	2143.000	80.953%	84.198%
2	11:10:16	69.071%	2075.000	517.200	520.600	2081.000	2102.000	82.863%	83.786%
3	11:10:25	68.614%	2084.000	527.700	521.500	2105.000	2109.000	82.509%	82.889%
x		68.438%	2089.000	524.000	523.400	2101.000	2118.000	82.108%	83.625%
σ		0.737%	16.540	5.857	4.176	18.520	21.850	1.016%	0.669%
%RSD		1.077	0.792	1.118	0.798	0.881	1.032	1.238	0.800
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:10:06	50.230	50.490	20.420	20.830	20.380	81.834%		
2	11:10:16	50.670	50.190	19.930	20.420	20.210	82.428%		
3	11:10:25	50.590	49.910	19.710	20.290	19.960	82.984%		
x		50.500	50.200	20.020	20.510	20.180	82.416%		
σ		0.230	0.291	0.363	0.282	0.210	0.575%		
%RSD		0.456	0.580	1.812	1.376	1.040	0.698		

180-60951-E-2-A PDS 12/6/2016 11:16:06 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:10	70.220%	54.330	1078.000	1121.000	0.000	443400.000	65000.000	65510.000
2	11:15:20	69.812%	54.250	1097.000	1123.000	0.000	443600.000	64660.000	65450.000
3	11:15:29	67.933%	54.290	1095.000	1139.000	0.000	442200.000	64730.000	65580.000
x		69.322%	54.290	1090.000	1128.000	0.000	443100.000	64790.000	65510.000
σ		1.220%	0.038	10.280	10.140	0.000	735.800	177.900	66.940
%RSD		1.760	0.070	0.943	0.900	0.000	0.166	0.275	0.102

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:10	2038.000	27090.000	0.000	77940.000	122500.000	124800.000	71.587%	1088.000
2	11:15:20	2027.000	27260.000	0.000	78990.000	123200.000	125300.000	70.805%	1082.000
3	11:15:29	2039.000	27300.000	0.000	79440.000	122300.000	125300.000	70.356%	1081.000
x		2035.000	27210.000	0.000	78790.000	122700.000	125100.000	70.916%	1084.000
σ		6.621	110.200	0.000	768.800	469.200	276.600	0.623%	3.661
%RSD		0.325	0.405	0.000	0.976	0.383	0.221	0.879	0.338

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:10	493.500	194.400	9762.000	20870.000	20790.000	507.700	503.000	252.000
2	11:15:20	498.800	199.000	9866.000	21270.000	20770.000	524.300	511.000	256.900
3	11:15:29	515.500	202.900	9916.000	21350.000	21010.000	522.300	510.700	259.700
x		502.600	198.800	9848.000	21160.000	20860.000	518.100	508.200	256.200
σ		11.460	4.274	78.490	260.500	133.700	9.101	4.515	3.899
%RSD		2.279	2.150	0.797	1.231	0.641	1.757	0.888	1.522

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:10	247.700	506.100	475.800	43.090	8.485	24.590	0.000	1544.000
2	11:15:20	262.800	521.200	477.200	43.990	10.600	31.480	0.000	1559.000
3	11:15:29	264.800	511.600	470.400	43.850	10.010	25.470	0.000	1603.000
x		258.400	513.000	474.500	43.640	9.699	27.180	0.000	1569.000
σ		9.355	7.607	3.565	0.487	1.091	3.747	0.000	30.430
%RSD		3.620	1.483	0.751	1.115	11.250	13.790	0.000	1.940

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:10	68.960%	1184.000	1178.000	68.719%	49.480	50.200	53.750	93.400
2	11:15:20	67.733%	1195.000	1197.000	68.043%	50.470	50.000	53.790	95.460
3	11:15:29	66.359%	1210.000	1197.000	68.455%	49.680	48.990	50.960	91.830
x		67.684%	1196.000	1191.000	68.406%	49.880	49.730	52.830	93.560
σ		1.301%	13.260	10.800	0.341%	0.523	0.652	1.622	1.818
%RSD		1.922	1.109	0.907	0.498	1.048	1.311	3.071	1.943

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:10	68.126%	2201.000	548.900	550.600	2152.000	2195.000	81.398%	82.214%
2	11:15:20	68.876%	2172.000	554.600	547.100	2167.000	2192.000	80.636%	82.721%
3	11:15:29	68.713%	2183.000	546.700	541.400	2125.000	2157.000	82.811%	83.729%
x		68.571%	2186.000	550.100	546.400	2148.000	2181.000	81.615%	82.888%
σ		0.394%	14.950	4.080	4.626	21.080	21.230	1.104%	0.771%
%RSD		0.575	0.684	0.742	0.847	0.981	0.974	1.352	0.930

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:10	52.650	52.290	21.220	20.940	21.270	81.430%
2	11:15:20	50.130	50.540	19.970	20.400	20.330	85.764%
3	11:15:29	52.850	52.960	21.740	21.690	21.740	80.359%
x		51.870	51.930	20.970	21.010	21.110	82.518%
σ		1.518	1.250	0.910	0.647	0.716	2.862%
%RSD		2.926	2.408	4.338	3.077	3.393	3.469

180-60951-E-3-A 12/6/2016 11:21:09 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:13	74.679%	0.321	65.210	68.230	0.000	165100.000	7702.000	7781.000
2	11:20:22	72.299%	0.228	60.330	69.730	0.000	162700.000	7537.000	7727.000
3	11:20:32	74.147%	0.131	63.230	68.150	0.000	163300.000	7612.000	7680.000
x		73.708%	0.227	62.920	68.700	0.000	163700.000	7617.000	7729.000
σ		1.249%	0.095	2.453	0.889	0.000	1251.000	82.710	50.350
%RSD		1.695	41.940	3.899	1.294	0.000	0.764	1.086	0.652

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:13	83.150	10520.000	0.000	1966.000	38610.000	36840.000	73.708%	4.428
2	11:20:22	82.210	10590.000	0.000	1998.000	38750.000	36760.000	72.831%	4.332
3	11:20:32	82.880	10530.000	0.000	1972.000	38660.000	36720.000	73.629%	4.742
x		82.750	10550.000	0.000	1979.000	38670.000	36770.000	73.390%	4.501
σ		0.484	39.310	0.000	17.050	72.630	61.260	0.485%	0.215
%RSD		0.585	0.373	0.000	0.862	0.188	0.167	0.661	4.767

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:13	-0.655	0.849	1947.000	59.700	98.190	1.367	7.580	3.461
2	11:20:22	0.420	0.890	1970.000	62.340	64.650	1.064	6.696	3.464
3	11:20:32	0.446	0.846	1971.000	63.030	65.640	1.249	7.900	3.474
x		0.070	0.862	1963.000	61.690	76.160	1.226	7.392	3.466
σ		0.628	0.025	13.250	1.761	19.080	0.153	0.624	0.007
%RSD		894.500	2.865	0.675	2.855	25.060	12.440	8.435	0.204

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:13	3.976	45.060	44.140	0.204	0.994	13.070	0.000	287.400
2	11:20:22	3.644	44.720	45.400	0.124	0.729	7.573	0.000	295.400
3	11:20:32	4.080	44.120	43.770	0.268	0.278	13.480	0.000	290.800
x		3.900	44.630	44.440	0.199	0.667	11.370	0.000	291.200
σ		0.228	0.476	0.855	0.072	0.362	3.298	0.000	3.986
%RSD		5.836	1.066	1.923	36.200	54.320	28.990	0.000	1.369

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:13	70.447%	0.423	0.528	72.250%	-0.003	0.004	0.131	0.231
2	11:20:22	68.007%	0.548	0.247	72.361%	-0.003	0.004	0.048	0.250
3	11:20:32	67.898%	0.578	0.211	71.319%	0.008	-0.023	0.104	0.122
x		68.784%	0.516	0.329	71.976%	0.000	-0.005	0.094	0.201
σ		1.441%	0.082	0.173	0.572%	0.006	0.016	0.042	0.069
%RSD		2.095	15.930	52.740	0.795	1412.000	307.000	44.790	34.510

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:13	71.321%	1.443	0.205	0.053	101.300	99.670	84.206%	85.897%
2	11:20:22	71.918%	0.914	0.202	0.062	98.550	102.900	85.387%	86.347%
3	11:20:32	71.220%	1.192	0.092	0.085	104.900	102.400	84.265%	86.025%
x		71.486%	1.183	0.166	0.067	101.600	101.600	84.619%	86.090%
σ		0.377%	0.265	0.065	0.017	3.176	1.725	0.665%	0.232%
%RSD		0.528	22.360	38.860	25.020	3.126	1.697	0.786	0.270

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:13	0.181	0.161	0.069	0.045	0.063	88.506%
2	11:20:22	0.120	0.152	0.061	0.079	0.073	89.010%
3	11:20:32	0.101	0.129	0.089	0.061	0.072	95.913%
x		0.134	0.147	0.073	0.062	0.069	91.143%
σ		0.042	0.017	0.014	0.017	0.006	4.139%
%RSD		31.230	11.390	19.750	27.770	8.093	4.541

180-60951-E-4-A 12/6/2016 11:26:11 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:16	70.624%	0.204	30.590	32.100	0.000	209500.000	22680.000	23170.000
2	11:25:26	69.931%	0.294	29.000	31.650	0.000	212800.000	23050.000	23350.000
3	11:25:35	70.092%	0.246	30.940	30.960	0.000	210000.000	22660.000	23090.000
x		70.216%	0.248	30.180	31.570	0.000	210800.000	22790.000	23200.000
σ		0.363%	0.045	1.030	0.575	0.000	1801.000	219.200	130.600
%RSD		0.517	18.060	3.414	1.821	0.000	0.855	0.962	0.563
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:16	15.440	18770.000	0.000	5967.000	151800.000	154000.000	72.353%	4.704
2	11:25:26	16.160	18980.000	0.000	6062.000	154000.000	155900.000	71.702%	5.043
3	11:25:35	16.420	18740.000	0.000	6075.000	153400.000	154600.000	71.757%	5.091
x		16.010	18830.000	0.000	6035.000	153100.000	154800.000	71.937%	4.946
σ		0.509	129.700	0.000	58.870	1144.000	955.800	0.361%	0.211
%RSD		3.182	0.689	0.000	0.976	0.747	0.617	0.502	4.258
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:16	0.955	0.299	61180.000	4347.000	4555.000	54.200	49.060	6.022
2	11:25:26	0.229	0.320	62090.000	4325.000	4687.000	53.770	49.200	5.785
3	11:25:35	-0.065	0.247	62170.000	4289.000	4499.000	54.340	47.220	6.335
x		0.373	0.289	61810.000	4320.000	4580.000	54.100	48.490	6.047
σ		0.525	0.038	547.900	29.250	96.730	0.299	1.104	0.276
%RSD		140.800	13.020	0.886	0.677	2.112	0.553	2.278	4.561
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:16	6.362	63.480	64.760	0.179	0.123	56.560	0.000	621.400
2	11:25:26	5.988	69.040	67.040	0.306	0.270	41.730	0.000	606.000
3	11:25:35	6.357	65.720	61.340	0.266	0.275	52.760	0.000	612.100
x		6.236	66.080	64.380	0.250	0.223	50.350	0.000	613.200
σ		0.214	2.794	2.871	0.065	0.086	7.703	0.000	7.752
%RSD		3.438	4.228	4.460	26.090	38.770	15.300	0.000	1.264
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:16	69.713%	-0.422	-0.440	71.290%	-0.003	0.010	1.023	1.255
2	11:25:26	69.983%	-0.263	-0.440	71.201%	0.002	-0.012	1.127	0.925
3	11:25:35	69.092%	-0.520	-0.450	71.234%	-0.008	-0.012	1.127	1.134
x		69.596%	-0.402	-0.443	71.241%	-0.003	-0.005	1.092	1.105
σ		0.457%	0.130	0.006	0.045%	0.005	0.013	0.060	0.167
%RSD		0.656	32.330	1.274	0.063	181.500	268.200	5.535	15.110
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:16	70.285%	0.414	0.014	0.054	126.300	127.300	83.996%	83.769%
2	11:25:26	70.952%	0.448	-0.004	-0.022	120.700	124.100	84.246%	85.448%
3	11:25:35	70.915%	0.583	0.014	-0.033	120.800	123.900	83.668%	84.917%
x		70.717%	0.482	0.008	-0.000	122.600	125.100	83.970%	84.712%
σ		0.375%	0.089	0.010	0.048	3.190	1.932	0.290%	0.858%
%RSD		0.530	18.530	131.600	13240.000	2.602	1.545	0.345	1.013
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:25:16	0.098	0.084	0.040	0.052	0.034	85.153%		
2	11:25:26	0.070	0.075	0.031	0.029	0.037	85.605%		
3	11:25:35	0.100	0.071	0.071	0.042	0.053	86.051%		
x		0.089	0.077	0.047	0.041	0.041	85.603%		
σ		0.017	0.007	0.021	0.011	0.010	0.449%		
%RSD		19.150	8.939	44.630	28.020	24.980	0.525		

180-60951-E-4-A @10 12/6/2016 11:31:16 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:30:19	77.755%	0.000	3.496	3.555	0.000	21590.000	2287.000	2323.000
2	11:30:29	78.116%	0.035	3.830	3.510	0.000	22030.000	2330.000	2340.000
3	11:30:38	77.996%	0.028	3.254	3.348	0.000	21820.000	2299.000	2318.000
x		77.956%	0.021	3.527	3.471	0.000	21810.000	2305.000	2327.000
σ		0.184%	0.018	0.289	0.109	0.000	220.400	21.980	11.680
%RSD		0.236	87.190	8.203	3.132	0.000	1.010	0.953	0.502

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:30:19	1.417	1861.000	0.000	556.400	15410.000	14280.000	79.541%	0.755
2	11:30:29	1.319	1874.000	0.000	567.400	15390.000	14440.000	79.171%	0.546
3	11:30:38	1.346	1844.000	0.000	564.000	15210.000	14300.000	79.046%	0.452
x		1.361	1860.000	0.000	562.600	15340.000	14340.000	79.253%	0.585
σ		0.051	15.010	0.000	5.624	106.800	88.960	0.258%	0.155
%RSD		3.728	0.807	0.000	1.000	0.696	0.620	0.325	26.560

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:30:19	-0.266	0.071	6038.000	442.700	465.500	5.450	4.644	0.779
2	11:30:29	-0.074	0.055	6099.000	441.600	468.200	5.938	5.596	0.726
3	11:30:38	-0.056	0.113	6052.000	425.800	442.100	5.480	4.719	0.606
x		-0.132	0.080	6063.000	436.700	458.600	5.623	4.986	0.704
σ		0.116	0.030	31.700	9.460	14.340	0.274	0.529	0.089
%RSD		88.250	38.000	0.523	2.166	3.126	4.865	10.620	12.620

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:30:19	0.667	6.461	6.730	0.031	-0.172	7.495	0.000	62.290
2	11:30:29	0.531	7.181	6.462	0.031	0.095	11.910	0.000	62.940
3	11:30:38	0.287	6.464	6.488	0.019	0.098	8.522	0.000	63.330
x		0.495	6.702	6.560	0.027	0.007	9.310	0.000	62.850
σ		0.193	0.415	0.148	0.007	0.155	2.313	0.000	0.529
%RSD		38.960	6.187	2.253	26.510	2277.000	24.840	0.000	0.841

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:30:19	77.035%	-0.530	-0.636	78.967%	0.010	-0.024	0.241	0.058
2	11:30:29	77.192%	-0.532	-0.606	79.633%	-0.010	-0.004	0.117	0.048
3	11:30:38	76.272%	-0.638	-0.532	79.409%	0.005	-0.009	0.118	0.148
x		76.833%	-0.567	-0.592	79.337%	0.002	-0.012	0.159	0.085
σ		0.492%	0.062	0.053	0.339%	0.010	0.010	0.072	0.055
%RSD		0.640	10.920	9.012	0.427	554.400	83.990	45.020	64.750

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:30:19	79.362%	-0.149	-0.043	-0.047	12.920	14.070	87.234%	87.707%
2	11:30:29	79.109%	-0.016	-0.011	-0.067	12.490	12.430	88.599%	89.496%
3	11:30:38	78.781%	-0.112	-0.066	-0.027	13.520	12.930	88.234%	89.045%
x		79.084%	-0.092	-0.040	-0.047	12.980	13.140	88.023%	88.750%
σ		0.291%	0.068	0.028	0.020	0.516	0.840	0.707%	0.931%
%RSD		0.368	74.280	69.630	41.870	3.975	6.394	0.803	1.049

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:30:19	-0.011	0.026	-0.002	0.001	-0.002	92.867%
2	11:30:29	0.028	0.029	-0.005	0.005	0.006	91.375%
3	11:30:38	0.034	0.028	0.002	-0.007	0.002	91.847%
x		0.017	0.028	-0.002	-0.000	0.002	92.029%
σ		0.025	0.002	0.004	0.006	0.004	0.763%
%RSD		145.700	5.675	222.300	1746.000	196.100	0.829

180-60951-E-6-A 12/6/2016 11:36:22 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:35:25	71.485%	0.016	25.920	28.220	0.000	251900.000	12580.000	12820.000
2	11:35:35	71.309%	0.024	26.540	30.140	0.000	250800.000	12620.000	12800.000
3	11:35:44	72.384%	0.030	29.310	28.140	0.000	253400.000	12550.000	12810.000
x		71.726%	0.023	27.260	28.830	0.000	252000.000	12580.000	12810.000
σ		0.577%	0.007	1.806	1.131	0.000	1323.000	37.300	7.147
%RSD		0.804	29.890	6.624	3.924	0.000	0.525	0.296	0.056
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:35:25	19.500	15460.000	0.000	15600.000	37950.000	36040.000	72.973%	3.518
2	11:35:35	19.170	15560.000	0.000	15620.000	37880.000	36080.000	73.397%	3.985
3	11:35:44	19.000	15450.000	0.000	15690.000	38400.000	36160.000	73.112%	3.562
x		19.230	15490.000	0.000	15640.000	38080.000	36090.000	73.161%	3.688
σ		0.255	57.720	0.000	46.950	280.800	62.100	0.216%	0.258
%RSD		1.327	0.373	0.000	0.300	0.738	0.172	0.295	6.988
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:35:25	0.223	0.369	10470.000	42010.000	40970.000	11.720	4.604	0.473
2	11:35:35	0.021	0.224	10460.000	41790.000	40870.000	11.520	4.100	0.672
3	11:35:44	-0.105	0.261	10540.000	41440.000	41750.000	11.260	4.399	0.596
x		0.046	0.285	10490.000	41750.000	41200.000	11.500	4.368	0.581
σ		0.166	0.075	41.820	289.000	486.600	0.233	0.254	0.100
%RSD		358.900	26.510	0.399	0.692	1.181	2.029	5.806	17.270
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:35:25	0.499	9.300	6.485	6.935	0.560	8.265	0.000	232.300
2	11:35:35	0.803	9.015	7.227	7.756	0.272	12.240	0.000	234.000
3	11:35:44	0.801	9.333	6.882	6.861	-0.025	7.975	0.000	231.700
x		0.701	9.216	6.865	7.184	0.269	9.493	0.000	232.700
σ		0.175	0.175	0.371	0.497	0.293	2.381	0.000	1.215
%RSD		24.960	1.896	5.408	6.914	108.700	25.090	0.000	0.522
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:35:25	70.239%	-0.465	-0.365	72.118%	-0.014	-0.018	0.021	0.001
2	11:35:35	69.087%	-0.319	-0.392	71.274%	0.002	-0.012	0.021	0.012
3	11:35:44	69.609%	-0.442	-0.213	71.797%	0.013	0.020	-0.007	0.001
x		69.645%	-0.409	-0.324	71.730%	0.000	-0.003	0.012	0.005
σ		0.577%	0.078	0.096	0.426%	0.014	0.021	0.016	0.006
%RSD		0.828	19.170	29.780	0.594	2902.000	634.600	134.700	140.500
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:35:25	72.074%	1.177	-0.031	-0.023	147.700	144.900	83.601%	85.083%
2	11:35:35	71.161%	0.819	0.004	-0.001	145.400	148.600	85.346%	85.716%
3	11:35:44	71.988%	0.742	0.064	-0.012	144.400	145.100	84.494%	85.377%
x		71.741%	0.913	0.013	-0.012	145.800	146.200	84.480%	85.392%
σ		0.504%	0.232	0.048	0.011	1.685	2.032	0.872%	0.317%
%RSD		0.703	25.420	383.800	90.160	1.155	1.389	1.033	0.371
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:35:25	-0.010	0.024	0.019	0.002	0.010	86.853%		
2	11:35:35	0.028	0.030	0.011	0.020	0.007	85.842%		
3	11:35:44	0.007	0.022	0.007	0.033	0.019	86.510%		
x		0.008	0.025	0.012	0.018	0.012	86.402%		
σ		0.019	0.004	0.006	0.016	0.006	0.514%		
%RSD		228.300	15.210	49.830	86.140	50.230	0.595		

180-60951-E-7-A 12/6/2016 11:41:27 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:30	77.695%	-0.049	0.202	0.556	0.000	580.300	6.308	6.769
2	11:40:40	77.801%	-0.007	0.109	1.084	0.000	578.100	6.840	8.365
3	11:40:50	78.541%	-0.001	0.715	0.829	0.000	570.300	5.055	6.624
x		78.012%	-0.019	0.342	0.823	0.000	576.300	6.068	7.253
σ		0.461%	0.026	0.326	0.264	0.000	5.256	0.917	0.966
%RSD		0.591	139.500	95.400	32.070	0.000	0.912	15.100	13.320

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:30	22.840	737.900	0.000	25.650	387.800	198.600	76.134%	1.534
2	11:40:40	23.010	733.700	0.000	26.800	388.500	199.300	75.986%	1.763
3	11:40:50	22.770	738.500	0.000	28.300	351.000	195.800	76.218%	1.731
x		22.870	736.700	0.000	26.920	375.800	197.900	76.113%	1.676
σ		0.126	2.607	0.000	1.330	21.450	1.835	0.117%	0.124
%RSD		0.550	0.354	0.000	4.942	5.707	0.927	0.154	7.378

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:30	-0.213	0.215	1.601	8.270	9.612	-0.005	0.155	0.045
2	11:40:40	-0.041	0.242	1.417	7.745	2.289	0.006	0.073	0.032
3	11:40:50	0.163	0.293	1.410	6.568	8.132	-0.005	-0.010	0.162
x		-0.031	0.250	1.476	7.527	6.678	-0.002	0.072	0.079
σ		0.188	0.040	0.108	0.871	3.872	0.006	0.083	0.072
%RSD		616.000	15.850	7.342	11.580	57.980	363.600	114.000	90.030

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:30	0.103	5.244	6.538	0.076	-0.172	-0.052	0.000	0.377
2	11:40:40	0.104	5.062	4.718	0.104	-0.172	3.287	0.000	0.472
3	11:40:50	0.161	4.656	5.457	0.049	0.113	2.924	0.000	0.481
x		0.123	4.988	5.571	0.076	-0.077	2.053	0.000	0.443
σ		0.033	0.301	0.915	0.028	0.165	1.832	0.000	0.058
%RSD		27.070	6.038	16.430	36.540	213.800	89.250	0.000	13.080

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:30	71.774%	-0.554	-0.669	77.022%	-0.004	-0.024	-0.007	-0.010
2	11:40:40	71.030%	-0.648	-0.723	76.882%	-0.004	-0.024	-0.007	-0.010
3	11:40:50	71.646%	-0.592	-0.723	76.814%	-0.009	-0.013	-0.007	0.021
x		71.484%	-0.598	-0.705	76.906%	-0.006	-0.020	-0.007	-0.000
σ		0.398%	0.047	0.031	0.106%	0.003	0.006	0.000	0.018
%RSD		0.556	7.916	4.375	0.138	50.430	29.660	0.201	170900.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:30	74.875%	0.440	-0.016	-0.025	0.388	0.524	85.475%	87.389%
2	11:40:40	74.915%	0.338	-0.049	0.037	0.676	0.470	86.194%	87.463%
3	11:40:50	74.932%	0.490	0.017	-0.025	0.385	0.595	87.184%	87.240%
x		74.907%	0.422	-0.016	-0.004	0.483	0.529	86.284%	87.364%
σ		0.029%	0.077	0.033	0.036	0.167	0.063	0.858%	0.114%
%RSD		0.039	18.310	209.100	811.300	34.680	11.910	0.995	0.130

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:30	-0.011	0.010	0.017	0.018	0.009	92.490%
2	11:40:40	-0.002	0.004	0.021	0.018	0.017	92.757%
3	11:40:50	0.005	0.008	0.036	0.009	0.027	92.789%
x		-0.003	0.007	0.025	0.015	0.017	92.679%
σ		0.008	0.003	0.010	0.005	0.009	0.164%
%RSD		301.100	36.130	40.320	32.570	51.830	0.177

180-60951-E-9-A 12/6/2016 11:46:32 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:36	71.014%	0.001	39.010	43.630	0.000	168000.000	33820.000	34370.000
2	11:45:46	72.352%	-0.001	39.080	41.620	0.000	170600.000	34390.000	35040.000
3	11:45:55	72.152%	-0.000	37.590	42.260	0.000	168700.000	34060.000	34530.000
x		71.839%	0.000	38.560	42.510	0.000	169100.000	34090.000	34640.000
σ		0.722%	0.001	0.843	1.027	0.000	1324.000	285.800	349.600
%RSD		1.005	611.800	2.185	2.417	0.000	0.783	0.838	1.009

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:36	10.170	10480.000	0.000	1342.000	84320.000	84600.000	72.619%	4.164
2	11:45:46	11.210	10540.000	0.000	1363.000	84310.000	85650.000	72.115%	4.407
3	11:45:55	11.140	10460.000	0.000	1373.000	84400.000	85230.000	71.563%	3.757
x		10.840	10490.000	0.000	1359.000	84340.000	85160.000	72.099%	4.109
σ		0.580	42.770	0.000	15.700	47.660	528.200	0.528%	0.328
%RSD		5.347	0.408	0.000	1.155	0.057	0.620	0.732	7.993

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:36	-0.211	0.264	20320.000	1241.000	1396.000	25.870	13.100	2.042
2	11:45:46	0.161	0.276	20480.000	1246.000	1260.000	26.440	12.380	2.322
3	11:45:55	0.129	0.194	20720.000	1244.000	1372.000	26.100	13.460	2.275
x		0.026	0.245	20510.000	1243.000	1343.000	26.140	12.980	2.213
σ		0.206	0.044	204.100	2.616	72.600	0.287	0.546	0.150
%RSD		777.100	18.090	0.995	0.210	5.406	1.098	4.210	6.795

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:36	2.353	20.150	22.190	0.198	0.586	3.612	0.000	204.400
2	11:45:46	2.172	17.580	22.380	0.173	0.137	3.974	0.000	209.400
3	11:45:55	2.449	21.410	19.980	0.142	-0.172	3.945	0.000	206.100
x		2.325	19.710	21.510	0.171	0.184	3.843	0.000	206.700
σ		0.141	1.952	1.334	0.028	0.382	0.201	0.000	2.526
%RSD		6.064	9.904	6.201	16.400	207.700	5.235	0.000	1.222

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:36	67.183%	-0.739	-0.722	69.679%	-0.019	-0.017	1.404	1.727
2	11:45:46	65.620%	-0.780	-0.672	69.119%	0.003	-0.017	1.427	1.601
3	11:45:55	66.311%	-0.739	-0.745	69.422%	-0.019	-0.006	1.091	1.374
x		66.371%	-0.753	-0.713	69.407%	-0.012	-0.014	1.307	1.568
σ		0.783%	0.024	0.037	0.280%	0.013	0.006	0.187	0.179
%RSD		1.180	3.155	5.193	0.404	109.700	47.110	14.340	11.420

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:36	69.639%	0.284	-0.021	-0.054	3.045	3.067	81.386%	83.330%
2	11:45:46	68.247%	0.391	-0.065	-0.043	2.183	2.862	82.333%	84.156%
3	11:45:55	69.979%	0.200	-0.021	-0.033	2.660	2.928	82.623%	83.757%
x		69.288%	0.292	-0.035	-0.043	2.629	2.952	82.114%	83.748%
σ		0.917%	0.096	0.026	0.011	0.432	0.104	0.647%	0.413%
%RSD		1.324	32.790	72.250	25.230	16.420	3.531	0.788	0.493

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:36	0.011	0.020	0.032	0.007	0.023	84.994%
2	11:45:46	-0.006	0.027	0.027	0.024	0.025	86.010%
3	11:45:55	0.000	0.029	0.039	0.033	0.034	86.394%
x		0.002	0.026	0.033	0.021	0.028	85.799%
σ		0.009	0.005	0.006	0.014	0.006	0.724%
%RSD		508.000	18.280	18.490	63.290	21.940	0.843

CCV 2136057 12/6/2016 11:51:37 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:40	76.037%	105.200	102.800	105.300	0.000	48400.000	48070.000	48340.000
2	11:50:50	77.699%	105.600	102.900	103.800	0.000	48770.000	48380.000	48960.000
3	11:50:59	77.153%	107.100	99.960	103.200	0.000	48410.000	47970.000	48400.000
x		76.963%	105.962%	101.898%	104.073%	0.000	97.052%	96.281%	97.131%
σ		0.847%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.101	0.924	1.651	1.028	0.000	0.431	0.438	0.708

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:40	538.700	5385.000	0.000	49570.000	49460.000	47760.000	80.126%	105.800
2	11:50:50	548.100	5438.000	0.000	49560.000	49430.000	48080.000	80.747%	102.800
3	11:50:59	542.200	5426.000	0.000	49620.000	49720.000	47900.000	80.904%	102.600
x		108.602%	108.324%	0.000	99.167%	99.072%	95.825%	80.592%	103.728%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.411%	n/a
%RSD		0.876	0.510	0.000	0.059	0.325	0.336	0.510	1.703

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:40	100.200	99.060	506.600	24430.000	24570.000	98.550	99.250	99.380
2	11:50:50	97.180	96.450	504.000	24710.000	24210.000	99.740	100.700	98.310
3	11:50:59	94.240	98.470	503.100	24540.000	24390.000	99.100	101.100	101.100
x		97.204%	97.992%	100.908%	98.227%	97.545%	99.127%	100.322%	99.608%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		3.055	1.395	0.360	0.572	0.738	0.602	0.942	1.437

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:40	102.300	100.400	98.400	98.800	99.250	117.400	0.000	99.230
2	11:50:50	103.400	104.200	100.900	99.280	93.690	98.710	0.000	99.310
3	11:50:59	99.760	102.000	97.830	98.650	99.490	110.900	0.000	97.830
x		101.814%	102.203%	99.026%	98.907%	97.478%	109.002%	0.000	98.789%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.842	1.855	1.626	0.332	3.364	8.703	0.000	0.846

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:40	78.619%	104.500	101.100	79.189%	95.490	94.630	100.400	102.500
2	11:50:50	79.188%	104.700	103.500	79.333%	96.090	96.670	99.800	102.300
3	11:50:59	79.221%	105.500	103.600	79.656%	96.070	96.110	100.900	103.300
x		79.009%	104.920%	102.758%	79.393%	95.883%	95.803%	100.390%	102.687%
σ		0.338%	n/a	n/a	0.239%	n/a	n/a	n/a	n/a
%RSD		0.428	0.498	1.372	0.302	0.356	1.102	0.562	0.563

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:40	79.315%	100.700	102.200	101.100	104.000	101.500	88.444%	89.544%
2	11:50:50	79.572%	101.900	103.100	103.800	101.300	99.190	88.747%	90.187%
3	11:50:59	79.837%	99.690	102.500	101.300	100.100	100.300	89.337%	89.534%
x		79.575%	100.766%	102.580%	102.059%	101.786%	100.309%	88.843%	89.755%
σ		0.261%	n/a	n/a	n/a	n/a	n/a	0.454%	0.374%
%RSD		0.328	1.081	0.434	1.465	1.927	1.141	0.511	0.417

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:40	98.600	98.900	98.640	99.190	98.950	90.110%
2	11:50:50	98.350	100.300	100.700	101.300	100.700	90.132%
3	11:50:59	99.360	100.500	98.830	99.670	99.830	90.554%
x		98.770%	99.911%	99.400%	100.052%	99.834%	90.266%
σ		n/a	n/a	n/a	n/a	n/a	0.250%
%RSD		0.533	0.883	1.157	1.104	0.882	0.277

CCB3 12/6/2016 11:56:45 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:49	86.321%	0.112	-0.096	0.347	0.000	129.500	48.890	48.990
2	11:55:59	85.203%	0.186	0.176	0.118	0.000	127.200	46.760	47.930
3	11:56:08	84.146%	0.091	0.245	0.435	0.000	123.600	46.400	49.530
x		85.223%	0.130	0.108	0.300	0.000	126.800	47.350	48.810
σ		1.088%	0.050	0.180	0.164	0.000	2.988	1.347	0.816
%RSD		1.277	38.280	166.400	54.520	0.000	2.357	2.845	1.671

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:49	5.456	5.799	0.000	42.420	164.600	75.660	84.020%	0.078
2	11:55:59	5.135	6.750	0.000	43.050	167.100	78.060	83.610%	0.127
3	11:56:08	5.257	7.033	0.000	41.920	177.800	78.810	83.663%	0.081
x		5.283	6.527	0.000	42.460	169.800	77.510	83.764%	0.095
σ		0.162	0.647	0.000	0.567	7.036	1.645	0.223%	0.027
%RSD		3.060	9.908	0.000	1.335	4.143	2.122	0.266	28.480

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:49	0.145	0.143	1.679	32.060	29.930	0.062	0.173	0.049
2	11:55:59	0.219	0.113	1.585	28.060	20.870	0.121	0.174	0.167
3	11:56:08	0.155	0.120	1.567	26.680	26.110	0.189	0.137	0.050
x		0.173	0.126	1.610	28.930	25.640	0.124	0.161	0.089
σ		0.040	0.016	0.060	2.795	4.549	0.063	0.021	0.068
%RSD		23.320	12.650	3.732	9.660	17.740	51.000	13.120	76.340

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:49	0.079	0.012	0.250	0.135	-0.048	0.214	0.000	0.311
2	11:55:59	0.080	0.346	0.333	0.196	-0.048	0.571	0.000	0.313
3	11:56:08	0.054	0.392	0.432	0.088	0.076	0.570	0.000	0.267
x		0.071	0.250	0.338	0.140	-0.006	0.452	0.000	0.297
σ		0.015	0.208	0.091	0.054	0.072	0.206	0.000	0.026
%RSD		20.800	83.030	26.820	38.880	1109.000	45.590	0.000	8.762

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:49	83.613%	0.029	-0.113	86.087%	0.084	0.113	0.154	0.098
2	11:55:59	83.143%	-0.267	-0.196	85.852%	0.071	0.067	0.039	0.116
3	11:56:08	83.470%	-0.285	-0.330	85.895%	0.093	0.112	0.039	0.088
x		83.409%	-0.175	-0.213	85.945%	0.082	0.097	0.077	0.101
σ		0.241%	0.177	0.110	0.125%	0.011	0.026	0.066	0.014
%RSD		0.289	101.200	51.590	0.145	13.520	26.800	85.480	14.210

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:49	85.440%	0.316	0.257	0.315	0.043	0.142	92.547%	93.685%
2	11:55:59	85.287%	0.317	0.339	0.326	0.174	0.143	92.051%	92.143%
3	11:56:08	85.938%	0.179	0.306	0.232	0.130	0.211	92.533%	92.571%
x		85.555%	0.271	0.300	0.291	0.116	0.166	92.377%	92.800%
σ		0.340%	0.079	0.041	0.051	0.067	0.040	0.282%	0.796%
%RSD		0.398	29.200	13.710	17.650	57.440	24.030	0.305	0.857

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:49	0.077	0.062	0.098	0.072	0.086	96.935%
2	11:55:59	0.070	0.100	0.069	0.104	0.086	97.332%
3	11:56:08	0.105	0.135	0.080	0.076	0.095	96.971%
x		0.084	0.099	0.083	0.084	0.089	97.079%
σ		0.018	0.036	0.015	0.017	0.005	0.219%
%RSD		21.580	36.580	17.620	20.440	5.462	0.226

180-60951-E-10-A 12/6/2016 12:01:53 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:57	71.056%	0.032	41.900	42.550	0.000	174200.000	34900.000	35310.000
2	12:01:06	69.692%	0.058	40.140	43.950	0.000	173500.000	34740.000	35140.000
3	12:01:16	70.823%	0.040	37.830	42.680	0.000	170500.000	34270.000	34970.000
x		70.523%	0.044	39.960	43.060	0.000	172800.000	34640.000	35140.000
σ		0.729%	0.013	2.040	0.774	0.000	1970.000	323.400	167.200
%RSD		1.034	30.660	5.106	1.796	0.000	1.140	0.934	0.476

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:57	2.275	10690.000	0.000	1384.000	84970.000	86810.000	71.389%	2.918
2	12:01:06	2.403	10820.000	0.000	1403.000	85010.000	87000.000	70.652%	3.892
3	12:01:16	2.377	10850.000	0.000	1386.000	84900.000	86640.000	71.724%	3.641
x		2.352	10790.000	0.000	1391.000	84960.000	86820.000	71.255%	3.484
σ		0.068	88.660	0.000	10.270	52.590	181.000	0.549%	0.506
%RSD		2.876	0.822	0.000	0.738	0.062	0.209	0.770	14.520

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:57	0.150	0.296	20680.000	1264.000	1286.000	27.210	13.140	1.393
2	12:01:06	0.901	0.280	20840.000	1259.000	1385.000	27.650	14.640	1.627
3	12:01:16	-0.581	0.147	20610.000	1227.000	1310.000	27.060	12.780	1.526
x		0.157	0.241	20710.000	1250.000	1327.000	27.310	13.520	1.515
σ		0.741	0.082	117.000	20.410	51.650	0.303	0.989	0.118
%RSD		472.900	33.990	0.565	1.633	3.892	1.109	7.312	7.762

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:57	1.476	20.980	24.390	0.257	-0.020	4.539	0.000	208.200
2	12:01:06	1.928	24.070	23.830	0.230	0.441	3.201	0.000	208.200
3	12:01:16	1.686	22.160	23.120	0.140	0.434	3.167	0.000	206.000
x		1.696	22.400	23.780	0.209	0.285	3.636	0.000	207.500
σ		0.226	1.559	0.641	0.061	0.264	0.783	0.000	1.260
%RSD		13.340	6.961	2.694	29.340	92.800	21.520	0.000	0.608

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:57	67.396%	-0.513	-0.640	69.681%	0.025	-0.012	1.660	1.709
2	12:01:06	66.804%	-0.615	-0.698	69.266%	0.008	0.005	1.118	1.549
3	12:01:16	67.534%	-0.677	-0.733	68.881%	0.003	-0.012	1.705	1.793
x		67.245%	-0.602	-0.690	69.276%	0.012	-0.006	1.494	1.683
σ		0.388%	0.083	0.047	0.400%	0.011	0.010	0.327	0.124
%RSD		0.577	13.760	6.815	0.578	93.650	156.800	21.880	7.376

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:57	69.470%	0.462	0.185	0.056	2.774	2.611	82.609%	83.290%
2	12:01:06	70.197%	0.564	0.059	0.121	2.347	2.757	82.775%	83.705%
3	12:01:16	68.842%	0.386	0.088	0.013	2.425	2.374	82.775%	83.345%
x		69.503%	0.471	0.111	0.063	2.515	2.581	82.720%	83.447%
σ		0.678%	0.089	0.066	0.054	0.227	0.193	0.096%	0.226%
%RSD		0.975	19.010	59.810	86.180	9.042	7.495	0.116	0.270

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:57	0.018	0.005	0.027	0.006	0.010	86.238%
2	12:01:06	0.001	0.016	0.007	0.029	0.014	85.774%
3	12:01:16	-0.006	0.007	0.019	0.011	0.018	86.218%
x		0.004	0.009	0.018	0.015	0.014	86.077%
σ		0.012	0.006	0.010	0.012	0.004	0.262%
%RSD		314.500	62.430	57.250	77.800	27.770	0.304

180-60951-E-11-A 12/6/2016 12:06:58 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:02	74.000%	0.116	6.477	8.968	0.000	27570.000	12110.000	12420.000
2	12:06:12	72.135%	0.107	7.620	8.557	0.000	27750.000	12240.000	12510.000
3	12:06:21	72.149%	0.076	8.202	8.821	0.000	27480.000	12170.000	12410.000
x		72.761%	0.100	7.433	8.782	0.000	27600.000	12170.000	12440.000
σ		1.073%	0.021	0.878	0.208	0.000	134.800	67.470	57.010
%RSD		1.474	21.140	11.810	2.371	0.000	0.489	0.554	0.458

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:02	44.120	11230.000	0.000	1814.000	24590.000	23120.000	72.637%	4.058
2	12:06:12	42.710	11270.000	0.000	1840.000	24790.000	23100.000	71.982%	4.021
3	12:06:21	43.340	11210.000	0.000	1848.000	24510.000	23020.000	71.737%	4.538
x		43.390	11230.000	0.000	1834.000	24630.000	23080.000	72.119%	4.206
σ		0.705	31.540	0.000	17.710	141.400	51.120	0.465%	0.288
%RSD		1.624	0.281	0.000	0.966	0.574	0.222	0.645	6.858

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:02	1.391	0.773	2243.000	5264.000	5512.000	17.650	10.790	0.435
2	12:06:12	0.571	0.733	2252.000	5187.000	5377.000	18.100	12.900	0.377
3	12:06:21	0.188	0.607	2260.000	5169.000	5495.000	17.620	11.090	0.889
x		0.717	0.704	2252.000	5207.000	5461.000	17.790	11.590	0.567
σ		0.614	0.086	8.520	50.500	73.710	0.267	1.141	0.280
%RSD		85.720	12.250	0.378	0.970	1.350	1.502	9.846	49.440

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:02	0.507	18.690	19.060	0.510	-0.172	6.228	0.000	108.400
2	12:06:12	0.388	20.250	17.880	0.555	0.127	2.417	0.000	109.400
3	12:06:21	0.667	21.520	19.690	0.545	-0.172	4.147	0.000	109.100
x		0.521	20.150	18.870	0.536	-0.073	4.264	0.000	108.900
σ		0.140	1.417	0.921	0.024	0.173	1.908	0.000	0.538
%RSD		26.920	7.033	4.877	4.399	238.100	44.750	0.000	0.494

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:02	68.680%	-0.720	-0.759	70.565%	-0.014	0.010	0.133	0.212
2	12:06:12	68.604%	-0.640	-0.783	70.814%	-0.014	-0.007	0.076	0.221
3	12:06:21	67.969%	-0.740	-0.771	70.624%	0.003	-0.001	0.217	0.146
x		68.418%	-0.700	-0.771	70.667%	-0.008	0.001	0.142	0.193
σ		0.390%	0.053	0.012	0.130%	0.009	0.009	0.071	0.041
%RSD		0.570	7.619	1.513	0.184	113.800	982.200	49.770	21.170

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:02	70.561%	0.291	-0.004	-0.011	115.100	118.400	83.392%	83.921%
2	12:06:12	71.136%	0.273	-0.030	0.032	116.600	116.600	83.149%	85.149%
3	12:06:21	70.203%	0.429	0.068	0.000	121.200	117.400	82.514%	84.893%
x		70.633%	0.331	0.011	0.007	117.700	117.500	83.018%	84.655%
σ		0.470%	0.085	0.051	0.022	3.165	0.923	0.453%	0.648%
%RSD		0.666	25.710	452.800	321.600	2.690	0.786	0.546	0.766

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:02	-0.010	-0.012	0.313	0.284	0.312	87.546%
2	12:06:12	-0.004	-0.001	0.292	0.327	0.321	88.907%
3	12:06:21	0.003	-0.003	0.312	0.280	0.297	88.671%
x		-0.004	-0.005	0.306	0.297	0.310	88.375%
σ		0.007	0.006	0.012	0.026	0.012	0.727%
%RSD		180.300	109.500	3.870	8.792	3.870	0.823

180-60951-E-13-A 12/6/2016 12:12:03 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:11:07	69.914%	0.066	30.220	34.770	0.000	161000.000	20600.000	21030.000
2	12:11:16	69.480%	0.035	30.520	34.390	0.000	161400.000	20720.000	21220.000
3	12:11:26	69.431%	0.043	32.820	34.080	0.000	161600.000	20560.000	21150.000
x		69.608%	0.048	31.180	34.410	0.000	161300.000	20630.000	21130.000
σ		0.266%	0.016	1.422	0.346	0.000	308.100	84.290	97.260
%RSD		0.382	33.270	4.560	1.005	0.000	0.191	0.409	0.460

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:11:07	18.320	9063.000	0.000	3722.000	62640.000	59620.000	70.926%	3.421
2	12:11:16	19.010	9038.000	0.000	3780.000	62570.000	59990.000	70.418%	3.208
3	12:11:26	18.530	9040.000	0.000	3774.000	61980.000	62930.000	70.920%	2.781
x		18.620	9047.000	0.000	3759.000	62400.000	60850.000	70.754%	3.137
σ		0.352	13.670	0.000	32.330	361.500	1813.000	0.291%	0.326
%RSD		1.890	0.151	0.000	0.860	0.579	2.980	0.412	10.400

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:11:07	0.313	0.755	1053.000	215.300	234.100	2.042	15.960	11.380
2	12:11:16	-0.273	0.638	1063.000	214.200	235.800	2.139	16.560	11.190
3	12:11:26	-0.452	0.689	1060.000	208.500	258.900	1.968	15.170	11.810
x		-0.137	0.694	1059.000	212.700	242.900	2.050	15.900	11.460
σ		0.400	0.058	4.999	3.596	13.830	0.086	0.698	0.318
%RSD		291.100	8.422	0.472	1.691	5.693	4.178	4.393	2.770

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:11:07	11.370	19.380	20.350	0.097	0.133	7.825	0.000	250.400
2	12:11:16	12.700	23.100	18.250	0.275	0.289	7.145	0.000	246.600
3	12:11:26	11.140	21.710	23.330	0.243	-0.020	8.497	0.000	246.300
x		11.740	21.400	20.640	0.205	0.134	7.823	0.000	247.800
σ		0.841	1.881	2.554	0.095	0.155	0.676	0.000	2.272
%RSD		7.162	8.789	12.370	46.190	115.500	8.641	0.000	0.917

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:11:07	67.027%	-0.697	-0.709	68.622%	0.036	-0.006	0.502	0.582
2	12:11:16	66.605%	-0.655	-0.756	68.422%	0.020	-0.006	0.475	0.540
3	12:11:26	67.538%	-0.636	-0.757	68.618%	-0.014	-0.012	0.363	0.430
x		67.057%	-0.663	-0.740	68.554%	0.014	-0.008	0.447	0.517
σ		0.467%	0.031	0.027	0.114%	0.026	0.003	0.074	0.079
%RSD		0.697	4.751	3.705	0.167	179.200	40.760	16.500	15.190

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:11:07	70.048%	1.013	-0.039	-0.033	128.600	132.200	81.985%	84.004%
2	12:11:16	69.739%	0.881	-0.021	-0.011	133.800	130.900	84.008%	85.731%
3	12:11:26	69.348%	1.025	-0.020	-0.010	134.100	136.200	82.195%	84.274%
x		69.712%	0.973	-0.027	-0.018	132.200	133.100	82.729%	84.670%
σ		0.351%	0.080	0.010	0.013	3.073	2.753	1.112%	0.929%
%RSD		0.503	8.231	39.150	72.410	2.325	2.068	1.345	1.097

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:11:07	-0.013	0.002	0.183	0.140	0.170	86.571%
2	12:11:16	-0.010	-0.004	0.150	0.169	0.156	87.443%
3	12:11:26	-0.024	-0.001	0.198	0.125	0.165	87.350%
x		-0.016	-0.001	0.177	0.145	0.164	87.121%
σ		0.007	0.003	0.025	0.022	0.007	0.479%
%RSD		44.840	281.500	13.970	15.420	4.423	0.550

180-60951-E-14-A 12/6/2016 12:17:09 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:16:12	70.536%	0.017	159.900	174.200	0.000	185200.000	1349.000	1375.000
2	12:16:21	69.502%	0.011	165.400	175.500	0.000	187700.000	1360.000	1377.000
3	12:16:31	70.222%	-0.037	163.000	175.300	0.000	187600.000	1362.000	1388.000
x		70.087%	-0.003	162.800	175.000	0.000	186800.000	1357.000	1380.000
σ		0.530%	0.030	2.752	0.692	0.000	1428.000	6.777	7.040
%RSD		0.756	1073.000	1.691	0.395	0.000	0.764	0.499	0.510

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:16:12	11.800	6467.000	0.000	1487.000	7810.000	7175.000	71.366%	2.654
2	12:16:21	11.850	6481.000	0.000	1508.000	8122.000	7253.000	70.808%	2.492
3	12:16:31	13.440	6504.000	0.000	1520.000	8121.000	7221.000	70.411%	2.321
x		12.360	6484.000	0.000	1505.000	8018.000	7216.000	70.862%	2.489
σ		0.930	18.370	0.000	16.820	179.700	38.810	0.479%	0.167
%RSD		7.525	0.283	0.000	1.118	2.242	0.538	0.677	6.698

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:16:12	1.251	1.141	8.006	24.480	34.620	0.622	1.226	2.415
2	12:16:21	1.036	1.107	7.909	23.010	36.170	0.597	1.223	2.822
3	12:16:31	2.010	1.247	8.145	24.220	34.980	0.579	1.324	3.009
x		1.432	1.165	8.020	23.900	35.260	0.599	1.258	2.749
σ		0.512	0.073	0.119	0.785	0.811	0.021	0.057	0.304
%RSD		35.740	6.255	1.478	3.286	2.301	3.544	4.539	11.050

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:16:12	2.945	11.960	13.340	0.333	0.134	7.132	0.000	161.500
2	12:16:21	2.401	12.050	12.870	0.488	0.885	5.580	0.000	161.000
3	12:16:31	2.615	10.110	10.170	0.510	0.594	3.273	0.000	160.200
x		2.654	11.370	12.130	0.444	0.538	5.328	0.000	160.900
σ		0.274	1.098	1.707	0.096	0.379	1.942	0.000	0.634
%RSD		10.320	9.654	14.080	21.720	70.400	36.440	0.000	0.394

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:16:12	66.600%	-0.615	-0.745	69.683%	-0.014	-0.006	0.077	0.101
2	12:16:21	68.088%	-0.598	-0.724	70.257%	-0.003	-0.018	0.049	0.068
3	12:16:31	66.989%	-0.615	-0.663	69.596%	0.014	-0.001	0.078	0.102
x		67.226%	-0.609	-0.711	69.845%	-0.001	-0.008	0.068	0.091
σ		0.772%	0.010	0.043	0.359%	0.014	0.009	0.016	0.019
%RSD		1.148	1.672	6.010	0.514	1593.000	105.100	23.840	21.280

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:16:12	70.317%	0.765	0.076	0.055	40.770	43.450	83.309%	85.308%
2	12:16:21	70.076%	0.767	0.032	0.044	39.920	42.970	84.187%	86.286%
3	12:16:31	70.010%	0.728	0.032	0.077	38.950	40.950	83.273%	85.173%
x		70.134%	0.753	0.047	0.058	39.880	42.460	83.589%	85.589%
σ		0.161%	0.022	0.025	0.017	0.913	1.327	0.518%	0.607%
%RSD		0.230	2.907	54.090	28.970	2.290	3.126	0.619	0.709

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:16:12	-0.017	-0.004	0.054	0.063	0.053	88.180%
2	12:16:21	-0.007	-0.003	0.073	0.075	0.063	89.004%
3	12:16:31	-0.014	0.003	0.026	0.028	0.048	88.848%
x		-0.013	-0.001	0.051	0.055	0.055	88.677%
σ		0.005	0.004	0.024	0.025	0.008	0.438%
%RSD		39.660	271.900	46.260	44.780	14.120	0.494

180-60951-E-15-A @10 12/6/2016 12:22:11 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:16	69.201%	0.075	16.400	19.600	0.000	476100.000	36.820	39.170
2	12:21:25	68.689%	0.109	18.730	18.800	0.000	478600.000	37.140	40.370
3	12:21:34	69.376%	0.075	18.780	20.380	0.000	485500.000	38.330	42.370
x		69.089%	0.086	17.970	19.590	0.000	480100.000	37.430	40.630
σ		0.357%	0.019	1.362	0.791	0.000	4855.000	0.795	1.616
%RSD		0.517	22.450	7.579	4.037	0.000	1.011	2.124	3.977
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:16	10.740	4758.000	0.000	969.800	772.800	542.300	71.950%	20.950
2	12:21:25	11.400	4778.000	0.000	993.200	759.100	552.100	70.496%	20.960
3	12:21:34	10.900	4825.000	0.000	983.700	736.700	552.600	70.995%	22.440
x		11.010	4787.000	0.000	982.300	756.200	549.000	71.147%	21.450
σ		0.341	34.570	0.000	11.750	18.230	5.838	0.739%	0.856
%RSD		3.096	0.722	0.000	1.197	2.410	1.063	1.039	3.992
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:16	68.610	5.737	14.940	194.200	187.100	3.248	14.770	1.821
2	12:21:25	73.570	6.372	14.920	195.200	203.500	3.135	14.960	2.306
3	12:21:34	70.910	6.746	14.920	195.500	236.100	3.085	16.090	2.044
x		71.030	6.285	14.920	195.000	208.900	3.156	15.280	2.057
σ		2.485	0.510	0.016	0.673	24.960	0.083	0.715	0.243
%RSD		3.499	8.121	0.106	0.345	11.950	2.644	4.681	11.800
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:16	2.292	3.526	2.892	100.600	-0.025	6.859	0.000	4.248
2	12:21:25	2.119	2.224	3.568	98.880	0.278	4.830	0.000	3.754
3	12:21:34	2.308	3.257	2.666	101.500	-0.021	7.736	0.000	4.125
x		2.240	3.002	3.042	100.300	0.078	6.475	0.000	4.042
σ		0.105	0.687	0.469	1.348	0.174	1.491	0.000	0.257
%RSD		4.679	22.880	15.430	1.343	224.200	23.020	0.000	6.361
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:16	69.732%	0.764	1.119	70.512%	0.008	-0.012	0.021	0.046
2	12:21:25	68.746%	0.805	0.736	69.710%	-0.019	-0.029	0.021	0.024
3	12:21:34	67.955%	0.901	1.217	69.397%	-0.008	-0.006	-0.007	0.036
x		68.811%	0.823	1.024	69.873%	-0.006	-0.016	0.012	0.035
σ		0.890%	0.070	0.255	0.575%	0.014	0.012	0.016	0.011
%RSD		1.294	8.525	24.850	0.823	214.700	75.410	133.200	31.840
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:16	70.091%	0.810	0.130	0.088	5.648	5.273	81.662%	84.872%
2	12:21:25	70.320%	0.738	0.076	-0.011	4.741	5.804	82.702%	84.718%
3	12:21:34	68.835%	0.675	0.088	0.046	5.749	6.031	82.069%	84.644%
x		69.749%	0.741	0.098	0.041	5.380	5.703	82.144%	84.745%
σ		0.799%	0.067	0.028	0.050	0.555	0.389	0.524%	0.116%
%RSD		1.146	9.065	28.840	120.900	10.310	6.826	0.638	0.137
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:21:16	-0.017	-0.009	0.346	0.447	0.446	84.968%		
2	12:21:25	-0.024	-0.005	0.458	0.391	0.408	85.327%		
3	12:21:34	-0.027	-0.009	0.467	0.346	0.431	85.208%		
x		-0.022	-0.008	0.424	0.394	0.428	85.168%		
σ		0.005	0.002	0.068	0.050	0.019	0.183%		
%RSD		23.720	31.360	15.960	12.800	4.399	0.215		

180-61016-E-2-A 12/6/2016 12:27:16 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:20	70.174%	0.002	8.488	10.170	0.000	127100.000	9979.000	10050.000
2	12:26:30	71.685%	0.000	8.317	10.770	0.000	127200.000	9873.000	10070.000
3	12:26:39	69.359%	0.051	10.330	11.190	0.000	126400.000	9815.000	9947.000
x		70.406%	0.018	9.045	10.710	0.000	126900.000	9889.000	10020.000
σ		1.181%	0.029	1.117	0.511	0.000	475.400	83.270	64.020
%RSD		1.677	160.400	12.350	4.772	0.000	0.375	0.842	0.639

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:20	15.600	8462.000	0.000	1791.000	31390.000	30030.000	69.337%	3.894
2	12:26:30	14.470	8384.000	0.000	1788.000	31780.000	29950.000	69.145%	4.345
3	12:26:39	14.920	8422.000	0.000	1794.000	31570.000	29950.000	69.067%	4.542
x		14.990	8423.000	0.000	1791.000	31580.000	29980.000	69.183%	4.260
σ		0.566	38.610	0.000	2.943	194.100	46.580	0.139%	0.332
%RSD		3.774	0.458	0.000	0.164	0.615	0.155	0.201	7.795

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:20	-0.507	0.400	1600.000	9223.000	9617.000	4.423	5.948	0.525
2	12:26:30	0.278	0.804	1607.000	9265.000	9761.000	4.248	5.987	0.594
3	12:26:39	0.670	0.700	1603.000	9173.000	9658.000	4.499	6.049	0.548
x		0.147	0.635	1603.000	9221.000	9679.000	4.390	5.995	0.555
σ		0.600	0.210	3.229	46.110	74.360	0.129	0.051	0.035
%RSD		408.500	33.030	0.201	0.500	0.768	2.934	0.857	6.332

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:20	0.502	29.720	27.120	5.145	-0.172	8.318	0.000	208.000
2	12:26:30	0.730	27.710	27.770	4.685	-0.015	2.903	0.000	211.500
3	12:26:39	0.797	30.360	25.430	5.161	0.144	6.959	0.000	209.700
x		0.676	29.260	26.780	4.997	-0.015	6.060	0.000	209.700
σ		0.155	1.380	1.207	0.270	0.158	2.817	0.000	1.756
%RSD		22.880	4.716	4.507	5.404	1076.000	46.490	0.000	0.837

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:20	66.027%	-0.465	-0.455	68.125%	-0.019	-0.011	0.022	0.106
2	12:26:30	65.137%	-0.397	-0.487	67.501%	-0.002	0.000	0.110	0.025
3	12:26:39	64.753%	-0.269	-0.438	67.768%	-0.008	0.000	0.108	0.036
x		65.306%	-0.377	-0.460	67.798%	-0.010	-0.004	0.080	0.056
σ		0.654%	0.100	0.025	0.313%	0.009	0.007	0.050	0.044
%RSD		1.001	26.440	5.357	0.462	89.060	179.600	62.400	78.370

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:20	67.745%	1.543	0.448	0.511	143.800	141.900	81.464%	82.721%
2	12:26:30	67.669%	1.925	0.366	0.467	142.400	139.000	80.672%	81.958%
3	12:26:39	68.620%	1.342	0.442	0.348	139.000	140.900	81.740%	82.252%
x		68.011%	1.603	0.419	0.442	141.700	140.600	81.292%	82.310%
σ		0.529%	0.296	0.045	0.084	2.424	1.451	0.555%	0.385%
%RSD		0.777	18.460	10.840	19.080	1.710	1.032	0.682	0.468

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:20	-0.013	-0.010	0.146	0.088	0.120	85.285%
2	12:26:30	-0.031	-0.005	0.115	0.117	0.121	90.117%
3	12:26:39	-0.013	-0.006	0.132	0.076	0.124	83.862%
x		-0.019	-0.007	0.131	0.094	0.121	86.421%
σ		0.010	0.003	0.015	0.021	0.002	3.279%
%RSD		53.720	37.150	11.830	22.760	1.845	3.794

180-61016-E-3-A 12/6/2016 12:32:21 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:24	73.869%	-0.047	0.125	-0.218	0.000	77.410	-6.033	-5.194
2	12:31:34	74.166%	-0.018	0.211	-0.076	0.000	72.500	-5.314	-4.167
3	12:31:43	72.931%	-0.039	-0.908	-0.073	0.000	72.070	-6.941	-4.740
x		73.655%	-0.035	-0.191	-0.122	0.000	74.000	-6.096	-4.700
σ		0.645%	0.015	0.622	0.083	0.000	2.967	0.815	0.515
%RSD		0.876	44.120	326.200	67.900	0.000	4.009	13.370	10.950
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:24	0.896	16.620	0.000	11.690	215.000	31.360	71.551%	2.169
2	12:31:34	0.905	16.860	0.000	12.720	285.600	26.260	71.822%	1.896
3	12:31:43	0.758	18.770	0.000	12.900	240.100	32.670	71.642%	1.611
x		0.853	17.410	0.000	12.440	246.900	30.100	71.672%	1.892
σ		0.083	1.177	0.000	0.649	35.780	3.386	0.138%	0.279
%RSD		9.697	6.761	0.000	5.221	14.490	11.250	0.192	14.760
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:24	-0.304	0.249	0.831	9.216	3.000	0.006	0.078	0.150
2	12:31:34	0.170	0.155	0.809	7.525	1.336	-0.005	0.120	0.101
3	12:31:43	0.163	0.258	0.857	8.113	6.092	0.029	0.034	0.118
x		0.010	0.221	0.832	8.285	3.476	0.010	0.077	0.123
σ		0.272	0.057	0.024	0.858	2.414	0.018	0.043	0.025
%RSD		2795.000	25.710	2.855	10.360	69.440	175.800	56.240	20.250
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:24	0.301	5.486	5.820	0.111	-0.172	2.377	0.000	0.070
2	12:31:34	0.205	4.853	4.604	0.152	0.426	1.984	0.000	0.001
3	12:31:43	0.115	4.210	3.567	0.096	0.281	2.005	0.000	0.056
x		0.207	4.850	4.664	0.120	0.178	2.122	0.000	0.043
σ		0.093	0.638	1.128	0.029	0.312	0.221	0.000	0.037
%RSD		44.950	13.160	24.190	24.290	175.200	10.430	0.000	86.020
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:24	67.330%	-0.700	-0.806	73.281%	-0.009	-0.018	-0.007	0.001
2	12:31:34	68.746%	-0.742	-0.751	73.438%	0.002	-0.013	-0.007	0.012
3	12:31:43	67.846%	-0.721	-0.784	73.417%	-0.009	-0.007	-0.007	-0.010
x		67.974%	-0.721	-0.780	73.379%	-0.005	-0.012	-0.007	0.001
σ		0.717%	0.021	0.028	0.085%	0.006	0.005	0.000	0.011
%RSD		1.055	2.850	3.608	0.116	118.500	43.090	0.309	1118.000
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:24	71.140%	0.700	-0.057	-0.022	0.050	0.060	84.172%	86.139%
2	12:31:34	71.835%	0.705	-0.065	-0.066	0.000	0.006	84.515%	85.742%
3	12:31:43	71.537%	0.735	-0.022	-0.034	0.000	0.033	84.575%	85.942%
x		71.504%	0.713	-0.048	-0.041	0.017	0.033	84.421%	85.941%
σ		0.348%	0.019	0.023	0.022	0.029	0.027	0.217%	0.198%
%RSD		0.487	2.646	47.830	55.390	173.200	82.130	0.257	0.230
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:31:24	-0.011	-0.011	0.006	0.010	0.007	90.996%		
2	12:31:34	-0.017	-0.010	0.018	0.005	0.003	91.087%		
3	12:31:43	-0.027	-0.012	0.010	0.014	0.008	91.929%		
x		-0.019	-0.011	0.011	0.010	0.006	91.337%		
σ		0.008	0.001	0.006	0.004	0.002	0.515%		
%RSD		44.490	12.260	52.790	43.100	38.390	0.564		

180-61016-E-4-A 12/6/2016 12:37:27 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:30	68.128%	0.110	23.900	26.830	0.000	230600.000	26760.000	27490.000
2	12:36:40	69.396%	0.027	23.580	25.980	0.000	231300.000	26610.000	27350.000
3	12:36:49	68.727%	-0.012	24.750	26.430	0.000	229700.000	26620.000	26840.000
x		68.750%	0.042	24.070	26.410	0.000	230500.000	26660.000	27230.000
σ		0.634%	0.062	0.604	0.424	0.000	776.500	83.790	341.600
%RSD		0.922	148.700	2.507	1.604	0.000	0.337	0.314	1.254
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:30	26.690	9370.000	0.000	1882.000	56870.000	54020.000	69.475%	4.022
2	12:36:40	25.890	9300.000	0.000	1893.000	57680.000	54810.000	69.128%	4.565
3	12:36:49	25.680	9300.000	0.000	1861.000	56370.000	54010.000	69.603%	3.796
x		26.080	9323.000	0.000	1879.000	56970.000	54280.000	69.402%	4.128
σ		0.532	40.070	0.000	16.050	660.300	456.800	0.246%	0.395
%RSD		2.039	0.430	0.000	0.854	1.159	0.842	0.354	9.580
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:30	0.204	0.543	748.300	46.430	64.820	12.470	14.100	17.870
2	12:36:40	0.218	0.326	755.100	45.240	66.830	12.210	13.080	18.060
3	12:36:49	-0.610	0.484	754.800	46.090	53.170	13.170	13.520	18.320
x		-0.063	0.451	752.700	45.920	61.600	12.620	13.570	18.090
σ		0.474	0.112	3.889	0.610	7.376	0.494	0.510	0.224
%RSD		753.500	24.910	0.517	1.327	11.970	3.911	3.762	1.238
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:30	18.620	39.940	39.410	0.235	0.297	3.555	0.000	251.700
2	12:36:40	17.890	39.260	38.230	0.252	0.300	8.799	0.000	247.200
3	12:36:49	18.330	40.330	38.640	0.218	0.756	4.248	0.000	245.300
x		18.280	39.840	38.760	0.235	0.451	5.534	0.000	248.000
σ		0.368	0.538	0.600	0.017	0.264	2.849	0.000	3.269
%RSD		2.013	1.349	1.548	7.225	58.610	51.480	0.000	1.318
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:30	65.411%	-0.738	-0.791	67.528%	-0.002	-0.017	0.835	0.970
2	12:36:40	65.047%	-0.780	-0.718	67.556%	0.026	-0.011	0.575	0.858
3	12:36:49	66.330%	-0.675	-0.743	67.537%	0.009	-0.023	0.928	1.036
x		65.596%	-0.731	-0.750	67.541%	0.011	-0.017	0.779	0.955
σ		0.661%	0.053	0.037	0.014%	0.014	0.006	0.183	0.090
%RSD		1.008	7.223	4.944	0.021	128.400	33.840	23.440	9.452
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:30	67.774%	0.829	0.063	0.070	39.950	38.060	81.231%	82.951%
2	12:36:40	67.522%	0.902	0.119	0.048	39.730	39.940	81.993%	83.399%
3	12:36:49	67.168%	0.682	0.073	0.015	37.560	38.170	81.890%	83.954%
x		67.488%	0.805	0.085	0.044	39.080	38.720	81.705%	83.435%
σ		0.305%	0.112	0.029	0.028	1.322	1.053	0.413%	0.502%
%RSD		0.451	13.930	34.640	63.430	3.382	2.719	0.506	0.602
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:36:30	-0.006	0.015	0.578	0.659	0.657	85.178%		
2	12:36:40	0.004	0.005	0.656	0.705	0.619	85.680%		
3	12:36:49	-0.011	0.008	0.621	0.614	0.595	89.600%		
x		-0.004	0.009	0.618	0.659	0.623	86.819%		
σ		0.008	0.005	0.039	0.045	0.031	2.421%		
%RSD		178.500	55.380	6.293	6.864	5.048	2.789		

180-61016-E-6-A 12/6/2016 12:42:32 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:41:36	66.293%	12.320	50.090	57.100	0.000	581300.000	47700.000	48590.000
2	12:41:45	65.417%	13.110	52.930	56.900	0.000	583000.000	47970.000	48730.000
3	12:41:55	66.281%	12.810	48.930	56.290	0.000	571700.000	47060.000	47610.000
x		65.997%	12.740	50.650	56.770	0.000	578700.000	47580.000	48310.000
σ		0.502%	0.398	2.058	0.424	0.000	6125.000	467.100	607.700
%RSD		0.761	3.126	4.064	0.747	0.000	1.059	0.982	1.258
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:41:36	7415.000	20140.000	0.000	17330.000	216800.000	219400.000	68.185%	7.691
2	12:41:45	7584.000	20380.000	0.000	17550.000	220600.000	219800.000	67.856%	8.568
3	12:41:55	7411.000	20260.000	0.000	17410.000	218100.000	220000.000	68.886%	8.514
x		7470.000	20260.000	0.000	17430.000	218500.000	219700.000	68.309%	8.258
σ		98.760	122.700	0.000	110.400	1912.000	315.400	0.526%	0.492
%RSD		1.322	0.606	0.000	0.634	0.875	0.144	0.770	5.954
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:41:36	1.473	0.732	29610.000	25000.000	24280.000	242.200	1020.000	8.536
2	12:41:45	0.862	0.658	29900.000	24850.000	24200.000	243.100	1011.000	9.265
3	12:41:55	1.117	0.897	29630.000	24710.000	24360.000	241.500	1010.000	8.941
x		1.151	0.762	29710.000	24850.000	24280.000	242.300	1013.000	8.914
σ		0.307	0.122	158.500	146.000	83.090	0.786	5.464	0.365
%RSD		26.690	16.040	0.533	0.588	0.342	0.324	0.539	4.099
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:41:36	9.721	1605.000	1523.000	3.745	2.718	23.090	0.000	1182.000
2	12:41:45	8.064	1617.000	1524.000	3.427	2.080	24.520	0.000	1180.000
3	12:41:55	9.186	1596.000	1536.000	4.257	3.592	19.530	0.000	1187.000
x		8.990	1606.000	1528.000	3.809	2.797	22.380	0.000	1183.000
σ		0.846	10.460	7.412	0.419	0.759	2.568	0.000	3.469
%RSD		9.410	0.651	0.485	10.990	27.150	11.480	0.000	0.293
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:41:36	184.592%	0.691	0.908	66.259%	-0.002	-0.011	5.687	5.746
2	12:41:45	184.779%	0.779	1.013	65.784%	0.016	-0.005	6.274	5.968
3	12:41:55	183.760%	0.678	0.925	66.412%	-0.002	-0.005	6.044	5.465
x		184.377%	0.716	0.949	66.152%	0.004	-0.007	6.002	5.726
σ		0.542%	0.055	0.056	0.328%	0.010	0.003	0.296	0.252
%RSD		0.294	7.689	5.956	0.495	251.600	49.580	4.928	4.403
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:41:36	66.760%	0.471	-0.001	0.126	12.490	13.140	91.451%	93.906%
2	12:41:45	66.105%	0.605	-0.028	0.026	13.680	12.030	91.541%	94.739%
3	12:41:55	66.138%	0.462	0.037	0.048	12.730	12.420	92.173%	94.402%
x		66.334%	0.513	0.003	0.067	12.960	12.530	91.722%	94.349%
σ		0.369%	0.080	0.032	0.053	0.630	0.566	0.393%	0.419%
%RSD		0.556	15.650	1241.000	79.060	4.861	4.519	0.429	0.445
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:41:36	0.031	0.058	3.516	3.031	3.165	80.684%		
2	12:41:45	0.069	0.077	3.554	3.441	3.414	81.660%		
3	12:41:55	0.047	0.070	3.521	3.209	3.267	82.088%		
x		0.049	0.068	3.530	3.227	3.282	81.477%		
σ		0.019	0.010	0.021	0.205	0.125	0.720%		
%RSD		39.330	14.150	0.593	6.366	3.822	0.883		

180-61016-E-6-A @10 12/6/2016 12:47:37 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:40	73.962%	1.158	4.061	4.631	0.000	60600.000	4671.000	4716.000
2	12:46:50	73.920%	1.337	4.729	4.815	0.000	61220.000	4746.000	4802.000
3	12:46:59	74.485%	1.179	3.500	4.990	0.000	61200.000	4724.000	4778.000
x		74.122%	1.225	4.097	4.812	0.000	61010.000	4714.000	4765.000
σ		0.315%	0.098	0.615	0.180	0.000	352.800	38.680	44.510
%RSD		0.425	8.011	15.020	3.735	0.000	0.578	0.821	0.934
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:40	721.000	1983.000	0.000	1702.000	21810.000	20530.000	74.347%	0.540
2	12:46:50	744.400	2001.000	0.000	1721.000	22350.000	20580.000	74.178%	0.389
3	12:46:59	732.800	1988.000	0.000	1737.000	22090.000	20700.000	73.795%	0.881
x		732.700	1991.000	0.000	1720.000	22080.000	20600.000	74.107%	0.603
σ		11.710	9.538	0.000	17.490	266.400	83.570	0.283%	0.252
%RSD		1.598	0.479	0.000	1.017	1.206	0.406	0.381	41.820
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:40	0.201	0.093	2951.000	2711.000	2811.000	30.160	127.800	1.178
2	12:46:50	-0.014	0.102	2959.000	2765.000	2986.000	30.210	127.000	0.895
3	12:46:59	0.530	0.180	2981.000	2716.000	2926.000	29.270	127.000	1.316
x		0.239	0.125	2964.000	2731.000	2908.000	29.880	127.300	1.130
σ		0.274	0.048	15.320	29.850	88.620	0.530	0.458	0.215
%RSD		114.500	38.610	0.517	1.093	3.048	1.774	0.360	19.000
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:40	1.577	226.800	235.100	0.567	0.727	6.215	0.000	280.000
2	12:46:50	1.267	227.300	219.600	0.574	0.718	5.973	0.000	272.600
3	12:46:59	1.300	225.900	232.800	0.526	1.230	5.327	0.000	270.300
x		1.381	226.700	229.200	0.555	0.892	5.838	0.000	274.300
σ		0.170	0.683	8.347	0.026	0.293	0.459	0.000	5.049
%RSD		12.310	0.301	3.642	4.670	32.860	7.862	0.000	1.841
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:40	83.233%	-0.604	-0.704	72.819%	0.002	-0.018	0.532	0.545
2	12:46:50	84.504%	-0.536	-0.570	73.850%	-0.009	-0.018	0.714	0.510
3	12:46:59	84.391%	-0.570	-0.546	72.891%	-0.009	-0.023	0.556	0.457
x		84.043%	-0.570	-0.607	73.187%	-0.005	-0.020	0.601	0.504
σ		0.703%	0.034	0.085	0.576%	0.006	0.003	0.099	0.045
%RSD		0.837	5.946	14.000	0.787	118.100	15.560	16.470	8.855
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:40	73.055%	-0.143	-0.074	-0.034	1.718	1.604	85.858%	86.611%
2	12:46:50	73.509%	-0.091	-0.032	-0.045	1.902	1.177	86.422%	86.630%
3	12:46:59	73.587%	-0.117	-0.049	-0.035	1.225	1.236	85.284%	87.498%
x		73.383%	-0.117	-0.052	-0.038	1.615	1.339	85.855%	86.913%
σ		0.287%	0.026	0.021	0.006	0.350	0.231	0.569%	0.507%
%RSD		0.391	21.850	41.290	16.120	21.670	17.280	0.663	0.583
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:46:40	-0.017	-0.004	0.540	0.403	0.444	88.465%		
2	12:46:50	0.010	-0.001	0.453	0.458	0.452	88.742%		
3	12:46:59	-0.011	-0.008	0.496	0.373	0.454	89.343%		
x		-0.006	-0.004	0.496	0.411	0.450	88.850%		
σ		0.014	0.003	0.044	0.043	0.005	0.449%		
%RSD		229.400	76.530	8.836	10.520	1.152	0.505		

CCV 2136057 12/6/2016 12:52:42 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:51:46	75.869%	103.800	97.800	101.600	0.000	49800.000	49380.000	49340.000
2	12:51:55	76.468%	102.100	98.670	99.360	0.000	49330.000	48620.000	49100.000
3	12:52:05	76.937%	102.500	94.170	100.200	0.000	49340.000	49060.000	49250.000
x		76.425%	102.819%	96.878%	100.375%	0.000	98.979%	98.036%	98.461%
σ		0.536%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.701	0.886	2.459	1.144	0.000	0.538	0.780	0.254
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:51:46	514.800	5317.000	0.000	50420.000	49840.000	47750.000	76.013%	102.300
2	12:51:55	508.900	5344.000	0.000	50470.000	50030.000	47920.000	75.990%	101.500
3	12:52:05	512.400	5347.000	0.000	50360.000	49980.000	48000.000	76.453%	98.070
x		102.408%	106.719%	0.000	100.835%	99.903%	95.781%	76.152%	100.633%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.261%	n/a
%RSD		0.573	0.306	0.000	0.105	0.192	0.270	0.342	2.235
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:51:46	99.990	98.270	502.400	24790.000	24600.000	98.270	103.600	102.300
2	12:51:55	97.990	99.510	502.500	24820.000	24470.000	98.360	99.720	101.000
3	12:52:05	94.470	96.900	501.500	24710.000	24690.000	97.310	96.670	100.300
x		97.483%	98.226%	100.428%	99.094%	98.341%	97.978%	99.981%	101.217%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.867	1.328	0.106	0.227	0.452	0.597	3.453	1.015
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:51:46	98.490	99.150	101.800	96.150	98.360	102.500	0.000	98.550
2	12:51:55	102.900	106.300	97.240	97.560	99.000	103.000	0.000	98.920
3	12:52:05	103.400	97.110	102.800	101.000	97.590	101.800	0.000	100.400
x		101.569%	100.862%	100.589%	98.249%	98.315%	102.426%	0.000	99.304%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.634	4.803	2.924	2.566	0.717	0.596	0.000	1.006
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:51:46	73.926%	102.600	104.300	75.998%	96.790	96.690	97.500	100.800
2	12:51:55	74.125%	105.200	100.900	75.263%	96.540	96.100	99.310	99.810
3	12:52:05	73.438%	106.800	102.900	75.521%	98.620	98.640	100.200	101.500
x		73.829%	104.857%	102.696%	75.594%	97.315%	97.141%	99.004%	100.688%
σ		0.354%	n/a	n/a	0.373%	n/a	n/a	n/a	n/a
%RSD		0.479	2.050	1.632	0.493	1.166	1.369	1.388	0.830
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:51:46	76.093%	99.770	101.900	98.800	101.300	96.590	85.565%	86.779%
2	12:51:55	76.102%	99.740	99.220	102.300	96.700	100.500	84.906%	85.534%
3	12:52:05	75.147%	100.400	101.800	101.400	98.820	99.140	85.482%	86.668%
x		75.781%	99.981%	100.995%	100.830%	98.957%	98.743%	85.318%	86.327%
σ		0.549%	n/a	n/a	n/a	n/a	n/a	0.359%	0.689%
%RSD		0.724	0.393	1.527	1.791	2.346	2.010	0.421	0.798
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:51:46	99.130	98.710	98.620	99.090	98.130	86.932%		
2	12:51:55	98.300	98.920	98.960	99.350	98.660	87.517%		
3	12:52:05	97.930	97.790	97.960	98.560	98.080	87.758%		
x		98.450%	98.472%	98.515%	98.998%	98.290%	87.402%		
σ		n/a	n/a	n/a	n/a	n/a	0.425%		
%RSD		0.623	0.611	0.515	0.408	0.327	0.486		

CCB4 12/6/2016 12:57:53 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:56	79.905%	0.101	0.098	-0.153	0.000	110.600	26.010	28.350
2	12:57:05	81.295%	0.064	-0.369	-0.195	0.000	104.800	26.980	27.810
3	12:57:15	79.189%	0.061	0.339	-0.192	0.000	108.400	26.170	26.660
x		80.130%	0.075	0.023	-0.180	0.000	108.000	26.390	27.610
σ		1.071%	0.022	0.360	0.023	0.000	2.940	0.520	0.865
%RSD		1.336	29.590	1584.000	12.890	0.000	2.723	1.972	3.132

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:56	2.865	4.793	0.000	25.210	111.200	48.390	79.378%	0.114
2	12:57:05	2.693	1.695	0.000	25.150	83.180	43.040	79.794%	-0.056
3	12:57:15	2.995	4.860	0.000	26.180	119.800	47.130	79.120%	0.068
x		2.851	3.783	0.000	25.520	104.700	46.190	79.431%	0.042
σ		0.152	1.808	0.000	0.578	19.150	2.796	0.340%	0.088
%RSD		5.326	47.800	0.000	2.266	18.290	6.054	0.428	207.700

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:56	0.138	0.029	1.731	19.450	15.570	0.118	0.029	0.048
2	12:57:05	0.058	0.013	1.558	17.140	14.040	0.056	0.028	-0.035
3	12:57:15	0.075	0.071	1.755	16.550	11.420	0.066	0.029	0.130
x		0.090	0.038	1.682	17.710	13.680	0.080	0.029	0.047
σ		0.042	0.030	0.108	1.531	2.101	0.033	0.000	0.083
%RSD		46.720	79.540	6.398	8.641	15.360	41.340	0.504	174.100

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:56	0.145	0.077	0.214	0.133	-0.172	1.150	0.000	0.071
2	12:57:05	0.279	0.975	0.338	0.081	-0.172	2.384	0.000	0.212
3	12:57:15	-0.018	0.630	0.467	0.082	0.355	-3.013	0.000	0.118
x		0.135	0.561	0.340	0.098	0.004	0.174	0.000	0.134
σ		0.149	0.453	0.127	0.030	0.305	2.828	0.000	0.072
%RSD		110.200	80.800	37.340	30.040	8537.000	1629.000	0.000	53.800

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:56	78.401%	-0.238	-0.362	82.009%	0.052	0.058	0.091	0.018
2	12:57:05	78.927%	-0.170	-0.282	81.904%	0.023	0.019	0.114	0.056
3	12:57:15	78.609%	-0.292	-0.383	82.214%	0.084	0.077	0.042	0.027
x		78.646%	-0.234	-0.342	82.042%	0.053	0.051	0.082	0.034
σ		0.265%	0.061	0.053	0.158%	0.031	0.029	0.037	0.020
%RSD		0.337	26.260	15.490	0.192	57.700	57.190	44.840	58.270

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:56	80.143%	0.148	0.238	0.271	0.046	0.077	89.945%	89.473%
2	12:57:05	81.380%	0.131	0.203	0.172	0.317	0.076	89.788%	90.914%
3	12:57:15	80.814%	0.192	0.244	0.125	0.091	0.101	89.576%	90.776%
x		80.779%	0.157	0.228	0.189	0.151	0.085	89.769%	90.387%
σ		0.619%	0.032	0.022	0.075	0.145	0.014	0.185%	0.795%
%RSD		0.767	20.190	9.619	39.440	96.110	16.680	0.206	0.880

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:56	0.020	0.049	0.082	0.037	0.061	95.275%
2	12:57:05	0.047	0.066	0.085	0.045	0.067	96.178%
3	12:57:15	0.047	0.042	0.070	0.085	0.069	96.063%
x		0.038	0.052	0.079	0.056	0.066	95.839%
σ		0.016	0.012	0.008	0.026	0.004	0.491%
%RSD		41.850	23.120	9.651	46.270	6.484	0.513

180-61016-E-7-A 12/6/2016 1:03:03 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:07	70.840%	0.017	21.370	24.200	0.000	78020.000	22430.000	23020.000
2	13:02:16	70.194%	0.034	24.140	25.250	0.000	77380.000	22120.000	22770.000
3	13:02:26	70.601%	0.002	22.640	24.620	0.000	78050.000	22350.000	23740.000
x		70.545%	0.017	22.720	24.690	0.000	77820.000	22300.000	23180.000
σ		0.326%	0.016	1.384	0.529	0.000	379.400	157.700	502.200
%RSD		0.463	91.360	6.092	2.143	0.000	0.488	0.707	2.167

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:07	24.520	6759.000	0.000	1668.000	58650.000	60000.000	71.496%	2.834
2	13:02:16	22.980	6708.000	0.000	1665.000	58850.000	56080.000	71.363%	3.026
3	13:02:26	22.750	6738.000	0.000	1674.000	58870.000	56570.000	71.489%	2.304
x		23.420	6735.000	0.000	1669.000	58790.000	57550.000	71.449%	2.721
σ		0.965	25.650	0.000	4.791	119.700	2137.000	0.075%	0.374
%RSD		4.119	0.381	0.000	0.287	0.204	3.714	0.105	13.730

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:07	-0.609	0.175	3609.000	848.500	888.200	8.825	10.660	1.242
2	13:02:16	0.267	0.194	3611.000	842.300	1017.000	8.827	12.530	1.472
3	13:02:26	0.568	0.231	3644.000	837.300	981.900	8.249	10.910	1.520
x		0.075	0.200	3621.000	842.700	962.300	8.634	11.370	1.411
σ		0.611	0.028	19.480	5.629	66.430	0.333	1.019	0.149
%RSD		815.400	14.110	0.538	0.668	6.904	3.859	8.969	10.540

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:07	1.667	83.600	80.590	0.303	0.287	2.107	0.000	243.800
2	13:02:16	1.663	80.520	77.490	0.141	-0.172	4.186	0.000	238.300
3	13:02:26	1.231	81.070	81.120	0.185	-0.020	0.653	0.000	238.800
x		1.520	81.730	79.730	0.210	0.032	2.315	0.000	240.300
σ		0.251	1.644	1.959	0.084	0.234	1.775	0.000	3.024
%RSD		16.480	2.012	2.457	40.000	741.400	76.680	0.000	1.259

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:07	66.776%	-0.595	-0.663	69.796%	0.025	-0.017	0.673	0.453
2	13:02:16	67.259%	-0.719	-0.664	69.893%	0.003	0.022	0.694	0.591
3	13:02:26	66.994%	-0.574	-0.569	69.770%	-0.003	-0.006	0.613	0.572
x		67.009%	-0.629	-0.632	69.820%	0.008	-0.001	0.660	0.538
σ		0.242%	0.078	0.054	0.065%	0.015	0.020	0.042	0.075
%RSD		0.361	12.450	8.622	0.093	175.400	2876.000	6.352	13.880

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:07	69.155%	0.356	0.159	0.134	130.000	133.400	82.647%	84.381%
2	13:02:16	70.252%	0.401	0.138	0.120	122.900	130.800	83.787%	85.593%
3	13:02:26	69.750%	0.215	0.104	0.154	123.500	136.100	82.944%	85.100%
x		69.719%	0.324	0.134	0.136	125.500	133.500	83.126%	85.025%
σ		0.549%	0.097	0.028	0.017	3.933	2.665	0.591%	0.609%
%RSD		0.788	29.970	20.850	12.730	3.135	1.997	0.711	0.717

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:07	0.000	0.006	0.059	0.060	0.060	86.503%
2	13:02:16	-0.017	0.009	0.039	0.019	0.039	87.108%
3	13:02:26	-0.017	0.008	0.054	0.041	0.042	87.695%
x		-0.011	0.008	0.051	0.040	0.047	87.102%
σ		0.010	0.001	0.011	0.020	0.011	0.596%
%RSD		89.070	18.790	21.110	50.310	23.670	0.685

180-61016-E-9-A 12/6/2016 1:08:08 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:13	68.985%	0.642	149.000	157.400	0.000	297400.000	668.700	685.300
2	13:07:22	69.420%	0.487	147.600	156.700	0.000	297800.000	662.100	688.200
3	13:07:32	68.909%	0.611	148.000	159.500	0.000	293900.000	661.400	667.500
x		69.105%	0.580	148.200	157.900	0.000	296400.000	664.100	680.300
σ		0.276%	0.082	0.730	1.446	0.000	2162.000	4.012	11.230
%RSD		0.399	14.160	0.492	0.916	0.000	0.730	0.604	1.651

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:13	4368.000	12690.000	0.000	18060.000	4450.000	3911.000	70.255%	77.950
2	13:07:22	4327.000	12660.000	0.000	18130.000	4519.000	3899.000	70.509%	78.960
3	13:07:32	4295.000	12650.000	0.000	18070.000	4255.000	3869.000	70.822%	78.200
x		4330.000	12670.000	0.000	18090.000	4408.000	3893.000	70.528%	78.370
σ		36.810	19.700	0.000	38.340	137.100	21.660	0.284%	0.524
%RSD		0.850	0.156	0.000	0.212	3.111	0.556	0.403	0.669

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:13	11.390	8.611	54.550	7463.000	7993.000	3.625	11.780	15.330
2	13:07:22	11.890	8.615	54.770	7423.000	7779.000	3.944	10.620	15.150
3	13:07:32	12.470	8.315	54.380	7425.000	7896.000	3.463	12.950	14.640
x		11.910	8.514	54.570	7437.000	7889.000	3.677	11.780	15.040
σ		0.543	0.172	0.198	22.350	106.800	0.245	1.165	0.357
%RSD		4.562	2.022	0.363	0.301	1.354	6.656	9.890	2.374

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:13	15.500	25.160	23.550	6.911	2.000	7.438	0.000	25.310
2	13:07:22	14.760	23.640	23.250	6.963	3.792	13.540	0.000	25.960
3	13:07:32	15.700	23.880	22.090	7.478	3.193	8.756	0.000	25.240
x		15.320	24.230	22.960	7.117	2.995	9.912	0.000	25.500
σ		0.500	0.818	0.770	0.314	0.912	3.212	0.000	0.397
%RSD		3.262	3.374	3.352	4.405	30.460	32.400	0.000	1.557

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:13	85.776%	2.873	2.785	68.313%	0.037	0.017	0.080	0.025
2	13:07:22	85.558%	2.383	2.827	68.452%	0.071	-0.017	0.136	0.115
3	13:07:32	83.968%	2.819	2.766	67.689%	0.044	0.047	0.170	0.084
x		85.101%	2.691	2.793	68.152%	0.051	0.016	0.129	0.075
σ		0.987%	0.269	0.031	0.406%	0.018	0.032	0.045	0.046
%RSD		1.159	9.986	1.117	0.596	34.960	205.100	35.060	60.960

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:13	67.709%	0.576	0.281	0.406	34.970	39.080	85.248%	86.053%
2	13:07:22	68.896%	0.316	0.357	0.344	37.240	38.250	84.810%	86.374%
3	13:07:32	66.619%	0.489	0.287	0.334	40.290	40.250	83.720%	86.041%
x		67.741%	0.460	0.308	0.362	37.500	39.190	84.593%	86.156%
σ		1.139%	0.133	0.042	0.039	2.667	1.008	0.787%	0.188%
%RSD		1.682	28.800	13.630	10.770	7.112	2.571	0.930	0.219

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:13	0.031	0.039	7.044	6.520	6.691	85.803%
2	13:07:22	0.014	0.041	6.988	6.472	6.689	86.945%
3	13:07:32	0.009	0.035	6.645	6.505	6.485	91.172%
x		0.018	0.038	6.892	6.499	6.622	87.973%
σ		0.012	0.003	0.216	0.024	0.119	2.828%
%RSD		66.670	8.458	3.129	0.374	1.789	3.215

180-61016-E-10-A 12/6/2016 1:13:16 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:20	68.383%	0.021	27.140	27.250	0.000	242100.000	9823.000	9929.000
2	13:12:29	67.571%	0.030	26.400	27.860	0.000	238200.000	9607.000	9811.000
3	13:12:39	69.076%	0.028	24.510	27.250	0.000	236900.000	9545.000	9768.000
x		68.343%	0.026	26.020	27.450	0.000	239100.000	9658.000	9836.000
σ		0.753%	0.005	1.356	0.353	0.000	2702.000	146.200	83.590
%RSD		1.102	18.600	5.212	1.286	0.000	1.130	1.513	0.850

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:20	66.260	25800.000	0.000	90720.000	35910.000	33540.000	69.777%	8.806
2	13:12:29	64.220	25680.000	0.000	90340.000	35660.000	33370.000	70.046%	8.662
3	13:12:39	66.200	25540.000	0.000	90190.000	35750.000	33300.000	70.735%	7.689
x		65.560	25680.000	0.000	90410.000	35770.000	33400.000	70.186%	8.386
σ		1.160	130.900	0.000	274.400	131.300	120.400	0.494%	0.608
%RSD		1.769	0.510	0.000	0.303	0.367	0.361	0.704	7.246

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:20	3.519	2.068	1244.000	329.900	388.600	5.616	4.229	1.465
2	13:12:29	2.689	2.101	1243.000	332.300	357.500	5.540	5.939	1.496
3	13:12:39	2.322	1.848	1234.000	319.800	365.700	5.461	5.133	1.374
x		2.843	2.006	1240.000	327.300	370.600	5.539	5.100	1.445
σ		0.613	0.138	5.786	6.605	16.140	0.078	0.855	0.064
%RSD		21.570	6.864	0.467	2.018	4.354	1.399	16.770	4.405

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:20	1.454	38.500	37.470	11.890	0.297	11.340	0.000	265.800
2	13:12:29	1.899	37.640	40.990	11.370	0.141	14.810	0.000	268.000
3	13:12:39	1.286	39.360	37.120	11.410	-0.016	11.700	0.000	264.900
x		1.546	38.500	38.530	11.560	0.141	12.620	0.000	266.200
σ		0.317	0.862	2.139	0.287	0.157	1.908	0.000	1.613
%RSD		20.470	2.238	5.553	2.480	111.400	15.120	0.000	0.606

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:20	65.397%	4.647	4.762	67.591%	-0.008	-0.011	0.022	0.095
2	13:12:29	65.085%	5.162	5.205	67.874%	-0.002	-0.011	0.023	0.165
3	13:12:39	65.340%	4.932	5.018	68.026%	0.015	-0.023	0.022	0.198
x		65.274%	4.914	4.995	67.830%	0.002	-0.015	0.023	0.153
σ		0.167%	0.258	0.223	0.221%	0.012	0.007	0.000	0.053
%RSD		0.255	5.250	4.455	0.326	739.300	44.190	0.525	34.650

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:20	67.652%	6.503	7.935	7.621	123.000	123.600	82.697%	83.442%
2	13:12:29	67.063%	5.803	7.757	8.023	126.400	128.400	80.991%	83.338%
3	13:12:39	67.730%	6.664	7.617	7.525	120.100	122.000	82.611%	84.253%
x		67.481%	6.323	7.770	7.723	123.200	124.700	82.100%	83.677%
σ		0.365%	0.458	0.159	0.264	3.175	3.293	0.961%	0.501%
%RSD		0.541	7.238	2.052	3.421	2.578	2.641	1.171	0.599

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:20	-0.010	-0.005	0.379	0.308	0.353	85.870%
2	13:12:29	-0.027	-0.001	0.325	0.328	0.320	86.349%
3	13:12:39	-0.020	-0.002	0.289	0.351	0.314	87.440%
x		-0.019	-0.003	0.331	0.329	0.329	86.553%
σ		0.009	0.002	0.045	0.021	0.021	0.804%
%RSD		45.670	75.110	13.730	6.536	6.411	0.929

180-61122-A-2-C @10 12/6/2016 1:18:24 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:27	75.503%	2.524	5.147	6.059	0.000	690.100	4532.000	4541.000
2	13:17:36	76.721%	2.289	6.315	5.468	0.000	693.200	4542.000	4555.000
3	13:17:46	77.780%	2.504	6.383	5.708	0.000	695.200	4552.000	4582.000
x		76.668%	2.439	5.948	5.745	0.000	692.800	4542.000	4560.000
σ		1.139%	0.130	0.695	0.297	0.000	2.582	10.340	20.960
%RSD		1.486	5.345	11.680	5.172	0.000	0.373	0.228	0.460
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:27	26390.000	989.000	0.000	1776.000	6572.000	5940.000	76.891%	24.030
2	13:17:36	26570.000	986.700	0.000	1794.000	6720.000	5998.000	76.900%	26.290
3	13:17:46	26560.000	977.500	0.000	1794.000	6654.000	6052.000	77.248%	26.510
x		26510.000	984.400	0.000	1788.000	6649.000	5997.000	77.013%	25.610
σ		104.800	6.058	0.000	10.520	74.070	55.630	0.203%	1.376
%RSD		0.395	0.615	0.000	0.588	1.114	0.928	0.264	5.371
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:27	101.000	27.010	7001.000	38270.000	37130.000	90.530	84.930	16.530
2	13:17:36	98.860	25.600	7020.000	37800.000	36740.000	90.460	89.750	16.170
3	13:17:46	100.200	25.840	7032.000	38350.000	37270.000	91.380	86.350	16.700
x		100.000	26.150	7018.000	38140.000	37050.000	90.790	87.010	16.470
σ		1.073	0.755	15.710	295.400	274.400	0.513	2.479	0.269
%RSD		1.073	2.888	0.224	0.775	0.741	0.565	2.849	1.633
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:27	16.700	34.060	25.220	8.775	2.543	-2.990	0.000	42.080
2	13:17:36	17.690	31.490	24.230	8.597	1.402	5.094	0.000	41.960
3	13:17:46	17.710	33.600	24.950	8.970	2.752	5.396	0.000	42.310
x		17.370	33.050	24.800	8.781	2.232	2.500	0.000	42.120
σ		0.582	1.368	0.509	0.187	0.727	4.757	0.000	0.181
%RSD		3.349	4.140	2.054	2.124	32.550	190.300	0.000	0.429
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:27	98.192%	2.282	1.922	78.138%	0.030	0.037	0.451	0.364
2	13:17:36	99.009%	1.768	1.442	78.799%	0.035	0.046	0.497	0.442
3	13:17:46	98.781%	2.028	1.725	78.567%	0.055	0.031	0.448	0.492
x		98.661%	2.026	1.696	78.501%	0.040	0.038	0.465	0.433
σ		0.421%	0.257	0.242	0.335%	0.013	0.008	0.028	0.064
%RSD		0.427	12.690	14.240	0.427	32.420	19.730	6.007	14.910
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:27	76.970%	3.566	0.338	0.382	510.600	519.100	90.874%	91.773%
2	13:17:36	77.557%	3.416	0.359	0.290	511.300	523.600	91.293%	91.206%
3	13:17:46	77.527%	3.342	0.295	0.280	513.800	516.500	91.844%	91.172%
x		77.351%	3.441	0.330	0.317	511.900	519.700	91.337%	91.384%
σ		0.331%	0.114	0.033	0.056	1.669	3.613	0.486%	0.338%
%RSD		0.427	3.316	9.918	17.800	0.326	0.695	0.533	0.369
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:17:27	0.317	0.300	104.000	94.800	98.810	89.802%		
2	13:17:36	0.253	0.335	103.700	95.650	99.100	90.481%		
3	13:17:46	0.271	0.273	104.600	96.800	99.800	91.051%		
x		0.281	0.302	104.100	95.750	99.240	90.445%		
σ		0.033	0.031	0.475	1.004	0.511	0.625%		
%RSD		11.760	10.250	0.457	1.048	0.515	0.691		

MB 180-195917/1-A 12/6/2016 1:27:20 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:25	82.595%	0.008	-0.734	-0.796	0.000	22.680	-8.962	-7.903
2	13:26:35	84.413%	-0.033	-0.677	-1.042	0.000	21.290	-8.845	-7.631
3	13:26:44	82.856%	-0.019	-0.611	-0.676	0.000	24.190	-8.581	-7.471
x		83.288%	-0.015	-0.674	-0.838	0.000	22.720	-8.796	-7.669
σ		0.983%	0.021	0.062	0.187	0.000	1.452	0.195	0.219
%RSD		1.180	143.900	9.151	22.290	0.000	6.390	2.215	2.850

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:25	0.408	2.366	0.000	-20.300	68.880	1.955	82.579%	-0.163
2	13:26:35	0.115	0.702	0.000	-14.970	113.300	-1.308	82.819%	-0.187
3	13:26:44	0.147	3.599	0.000	-15.500	74.130	1.160	81.620%	-0.275
x		0.223	2.222	0.000	-16.920	85.450	0.602	82.339%	-0.209
σ		0.161	1.454	0.000	2.938	24.290	1.702	0.635%	0.059
%RSD		72.010	65.410	0.000	17.360	28.430	282.500	0.771	28.210

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:25	-0.227	-0.005	0.274	-3.048	-4.185	0.005	0.027	-0.052
2	13:26:35	-0.050	0.003	0.316	-3.150	-6.874	0.014	-0.010	0.054
3	13:26:44	-0.031	0.020	0.302	-3.132	-9.562	0.025	0.028	-0.051
x		-0.103	0.006	0.297	-3.110	-6.874	0.014	0.015	-0.016
σ		0.108	0.012	0.021	0.054	2.688	0.010	0.022	0.061
%RSD		104.700	199.400	7.163	1.743	39.110	69.180	146.600	374.100

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:25	0.057	0.066	0.383	-0.020	0.210	1.419	0.000	-0.012
2	13:26:35	-0.100	0.066	0.323	0.005	0.084	1.123	0.000	0.011
3	13:26:44	0.138	0.019	0.449	0.029	-0.044	-0.025	0.000	-0.001
x		0.032	0.051	0.385	0.005	0.083	0.839	0.000	-0.001
σ		0.121	0.027	0.063	0.025	0.127	0.762	0.000	0.012
%RSD		382.700	53.330	16.340	528.700	152.600	90.860	0.000	1302.000

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:25	81.151%	-0.767	-0.834	84.912%	-0.001	0.004	-0.007	-0.021
2	13:26:35	80.568%	-0.801	-0.805	85.323%	-0.006	-0.019	-0.007	-0.021
3	13:26:44	80.762%	-0.767	-0.786	84.883%	-0.006	-0.010	-0.007	-0.021
x		80.827%	-0.779	-0.809	85.039%	-0.004	-0.009	-0.007	-0.021
σ		0.297%	0.020	0.024	0.246%	0.003	0.012	0.000	0.000
%RSD		0.367	2.525	3.026	0.289	65.680	137.100	0.147	0.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:25	83.259%	-0.163	-0.067	-0.067	0.000	-0.021	92.011%	91.678%
2	13:26:35	83.341%	-0.175	-0.044	-0.067	0.000	0.027	91.508%	92.103%
3	13:26:44	84.123%	-0.187	-0.067	-0.030	0.088	0.027	90.645%	92.573%
x		83.575%	-0.175	-0.059	-0.055	0.029	0.011	91.388%	92.118%
σ		0.477%	0.012	0.013	0.021	0.051	0.027	0.691%	0.448%
%RSD		0.571	6.628	22.080	39.010	173.200	251.300	0.756	0.486

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:25	-0.018	-0.006	0.016	0.021	0.013	96.302%
2	13:26:35	-0.024	-0.010	0.030	0.016	0.016	96.672%
3	13:26:44	-0.027	-0.009	0.016	0.012	0.011	96.684%
x		-0.023	-0.008	0.021	0.016	0.013	96.553%
σ		0.005	0.002	0.008	0.004	0.003	0.217%
%RSD		20.260	22.860	39.890	24.700	19.860	0.225

LCS 180-195917/2-A 12/6/2016 1:32:25 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:29	74.771%	49.050	962.500	1006.000	0.000	49740.000	49700.000	49950.000
2	13:31:39	75.466%	49.280	954.300	994.800	0.000	49300.000	49200.000	49650.000
3	13:31:49	73.909%	50.510	991.200	1027.000	0.000	50150.000	50170.000	50530.000
x		74.715%	49.620	969.300	1009.000	0.000	49730.000	49690.000	50050.000
σ		0.780%	0.784	19.360	16.500	0.000	425.200	487.200	448.000
%RSD		1.044	1.581	1.997	1.634	0.000	0.855	0.981	0.895

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:29	1936.000	9981.000	0.000	51950.000	50870.000	48510.000	70.996%	1016.000
2	13:31:39	1933.000	9930.000	0.000	52140.000	50920.000	48550.000	71.108%	1016.000
3	13:31:49	1947.000	10080.000	0.000	52860.000	51430.000	48440.000	70.481%	1011.000
x		1938.000	9997.000	0.000	52320.000	51080.000	48500.000	70.862%	1015.000
σ		7.276	76.330	0.000	478.200	308.200	54.300	0.334%	2.740
%RSD		0.375	0.764	0.000	0.914	0.603	0.112	0.472	0.270

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:29	469.600	189.100	505.500	860.600	883.000	469.200	480.600	244.300
2	13:31:39	476.000	190.700	508.500	869.900	909.000	475.700	469.800	244.800
3	13:31:49	477.300	191.000	513.300	869.000	904.900	479.500	482.300	245.600
x		474.300	190.200	509.100	866.500	899.000	474.800	477.600	244.900
σ		4.079	1.023	3.949	5.137	14.020	5.197	6.758	0.667
%RSD		0.860	0.538	0.776	0.593	1.559	1.094	1.415	0.272

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:29	246.200	468.500	446.400	37.080	7.943	10.460	0.000	940.100
2	13:31:39	243.200	472.400	429.300	36.600	9.476	13.290	0.000	944.300
3	13:31:49	247.800	475.800	455.900	36.460	9.839	9.346	0.000	952.100
x		245.700	472.200	443.900	36.710	9.086	11.030	0.000	945.500
σ		2.342	3.675	13.460	0.326	1.006	2.035	0.000	6.116
%RSD		0.953	0.778	3.033	0.888	11.070	18.450	0.000	0.647

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:29	66.851%	1099.000	1089.000	68.962%	49.730	50.150	50.390	87.220
2	13:31:39	66.804%	1103.000	1093.000	69.135%	49.500	50.490	49.910	89.620
3	13:31:49	66.491%	1108.000	1097.000	68.558%	49.130	50.720	49.180	88.560
x		66.716%	1103.000	1093.000	68.885%	49.450	50.450	49.830	88.470
σ		0.196%	4.775	3.736	0.296%	0.300	0.289	0.606	1.204
%RSD		0.293	0.433	0.342	0.430	0.607	0.572	1.215	1.361

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:29	67.592%	2068.000	504.300	504.000	1922.000	1940.000	82.116%	83.743%
2	13:31:39	67.645%	2060.000	504.600	504.200	1913.000	1940.000	82.164%	83.643%
3	13:31:49	68.062%	2044.000	500.800	499.500	1909.000	1945.000	82.300%	83.316%
x		67.767%	2057.000	503.200	502.600	1915.000	1942.000	82.193%	83.568%
σ		0.257%	11.810	2.125	2.680	6.834	3.005	0.095%	0.223%
%RSD		0.380	0.574	0.422	0.533	0.357	0.155	0.116	0.267

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:29	50.890	51.020	20.790	20.740	20.590	83.416%
2	13:31:39	50.930	50.820	20.400	19.690	20.250	84.117%
3	13:31:49	50.240	51.050	20.710	21.130	20.500	83.826%
x		50.690	50.960	20.630	20.520	20.450	83.786%
σ		0.389	0.123	0.206	0.745	0.174	0.352%
%RSD		0.767	0.241	0.999	3.632	0.853	0.420

LCS 180-196121/2-A 12/6/2016 1:37:33 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:37	71.476%	54.030	988.800	1029.000	0.000	50250.000	50190.000	50680.000
2	13:36:46	69.442%	53.920	1001.000	1046.000	0.000	50140.000	50100.000	50430.000
3	13:36:56	72.057%	54.090	994.600	1022.000	0.000	50230.000	50470.000	50890.000
x		70.992%	54.010	994.900	1032.000	0.000	50210.000	50260.000	50670.000
σ		1.373%	0.087	6.231	12.330	0.000	58.960	192.200	230.500
%RSD		1.934	0.162	0.626	1.195	0.000	0.117	0.383	0.455
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:37	1965.000	10600.000	0.000	51820.000	50540.000	48810.000	72.568%	1022.000
2	13:36:46	1972.000	10700.000	0.000	52010.000	50900.000	49250.000	71.758%	1034.000
3	13:36:56	1985.000	10550.000	0.000	52230.000	50770.000	49110.000	71.879%	1036.000
x		1974.000	10620.000	0.000	52020.000	50740.000	49060.000	72.068%	1031.000
σ		10.140	78.810	0.000	201.600	183.500	226.100	0.437%	7.545
%RSD		0.514	0.742	0.000	0.388	0.362	0.461	0.607	0.732
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:37	498.400	195.200	505.300	908.700	1019.000	495.400	496.800	250.500
2	13:36:46	492.600	193.800	507.500	895.800	948.800	483.000	486.700	248.600
3	13:36:56	491.300	194.100	510.300	888.700	946.700	486.800	491.900	247.800
x		494.100	194.400	507.700	897.800	971.600	488.400	491.800	249.000
σ		3.781	0.708	2.513	10.150	41.330	6.372	5.053	1.380
%RSD		0.765	0.364	0.495	1.131	4.254	1.305	1.027	0.554
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:37	247.400	499.900	482.700	37.690	11.000	18.220	0.000	970.300
2	13:36:46	252.100	496.400	484.900	39.140	9.033	9.875	0.000	978.800
3	13:36:56	251.900	496.300	468.200	37.900	8.215	12.390	0.000	934.300
x		250.500	497.500	478.600	38.240	9.415	13.490	0.000	961.200
σ		2.652	2.059	9.062	0.784	1.430	4.279	0.000	23.600
%RSD		1.059	0.414	1.893	2.050	15.180	31.710	0.000	2.455
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:37	68.865%	1106.000	1093.000	70.994%	48.060	49.380	51.110	89.020
2	13:36:46	67.913%	1112.000	1094.000	70.353%	48.980	48.640	49.990	88.330
3	13:36:56	70.177%	1085.000	1081.000	70.543%	49.010	49.820	51.980	89.170
x		68.985%	1101.000	1089.000	70.630%	48.680	49.280	51.030	88.840
σ		1.137%	13.920	7.060	0.329%	0.543	0.595	0.999	0.448
%RSD		1.648	1.265	0.648	0.466	1.115	1.208	1.957	0.505
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:37	70.824%	2079.000	520.400	518.500	1959.000	1977.000	82.402%	83.703%
2	13:36:46	70.297%	2080.000	520.300	521.000	1939.000	1973.000	82.273%	84.388%
3	13:36:56	70.247%	2071.000	521.700	523.900	1911.000	1966.000	83.249%	83.684%
x		70.456%	2077.000	520.800	521.100	1936.000	1972.000	82.641%	83.925%
σ		0.320%	4.887	0.753	2.697	24.090	5.744	0.530%	0.401%
%RSD		0.454	0.235	0.145	0.518	1.244	0.291	0.641	0.478
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:36:37	49.630	49.390	19.550	20.410	19.980	85.673%		
2	13:36:46	49.700	49.350	20.170	20.420	20.040	85.305%		
3	13:36:56	50.370	49.600	19.880	19.730	19.870	85.379%		
x		49.900	49.450	19.860	20.190	19.960	85.452%		
σ		0.408	0.136	0.309	0.395	0.084	0.194%		
%RSD		0.817	0.276	1.555	1.955	0.421	0.228		

180-61163-B-1-F 12/6/2016 1:42:41 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:41:44	65.871%	2.548	39.970	39.910	0.000	3205.000	92740.000	92770.000
2	13:41:53	67.443%	2.657	35.560	39.200	0.000	3215.000	92190.000	92870.000
3	13:42:03	66.650%	2.360	35.850	39.030	0.000	3158.000	91720.000	92440.000
x		66.655%	2.522	37.130	39.380	0.000	3192.000	92220.000	92690.000
σ		0.786%	0.150	2.469	0.467	0.000	30.620	508.000	223.900
%RSD		1.179	5.966	6.649	1.187	0.000	0.959	0.551	0.242

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:41:44	20670.000	5199.000	0.000	4622.000	2771000.000	2552000.000	68.284%	246.000
2	13:41:53	20700.000	5083.000	0.000	4665.000	2782000.000	2556000.000	67.893%	246.300
3	13:42:03	20360.000	5103.000	0.000	4660.000	2769000.000	2546000.000	68.067%	247.800
x		20580.000	5129.000	0.000	4649.000	2774000.000	2552000.000	68.081%	246.700
σ		189.000	61.760	0.000	23.480	7176.000	5066.000	0.196%	0.938
%RSD		0.918	1.204	0.000	0.505	0.259	0.199	0.288	0.380

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:41:44	69.610	51.660	9180.000	62700.000	62460.000	51.230	64.810	112.500
2	13:41:53	71.660	52.480	9223.000	62400.000	62870.000	50.640	66.990	111.900
3	13:42:03	65.400	52.250	9198.000	61280.000	61500.000	50.270	67.680	111.600
x		68.890	52.130	9200.000	62130.000	62280.000	50.710	66.490	112.000
σ		3.191	0.423	21.500	752.700	702.600	0.484	1.500	0.439
%RSD		4.632	0.811	0.234	1.212	1.128	0.955	2.255	0.392

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:41:44	111.100	345.900	325.300	19.510	1.942	5.924	0.000	2584.000
2	13:41:53	112.900	345.800	325.400	19.770	1.982	2.378	0.000	2640.000
3	13:42:03	109.700	333.600	322.900	18.650	2.116	5.544	0.000	2619.000
x		111.200	341.800	324.500	19.310	2.013	4.615	0.000	2614.000
σ		1.587	7.060	1.424	0.587	0.091	1.947	0.000	28.560
%RSD		1.427	2.066	0.439	3.040	4.517	42.180	0.000	1.093

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:41:44	90.222%	9.097	9.508	60.572%	0.195	0.195	2.135	3.111
2	13:41:53	88.053%	9.104	9.558	60.059%	0.178	0.151	2.793	2.889
3	13:42:03	87.569%	8.227	8.944	59.818%	0.154	0.211	2.069	2.595
x		88.615%	8.809	9.337	60.150%	0.176	0.186	2.332	2.865
σ		1.413%	0.505	0.341	0.385%	0.021	0.031	0.400	0.259
%RSD		1.594	5.727	3.652	0.640	11.970	16.580	17.160	9.027

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:41:44	61.913%	37.880	2.780	2.691	963.100	980.600	77.005%	77.888%
2	13:41:53	61.554%	37.380	2.832	2.552	961.500	962.100	77.768%	78.381%
3	13:42:03	60.949%	38.290	2.498	2.768	980.500	974.900	76.593%	78.440%
x		61.472%	37.850	2.703	2.670	968.400	972.500	77.122%	78.237%
σ		0.487%	0.457	0.180	0.109	10.540	9.489	0.596%	0.303%
%RSD		0.792	1.208	6.650	4.087	1.089	0.976	0.773	0.387

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:41:44	1.211	1.141	247.500	228.500	237.900	71.597%
2	13:41:53	1.179	1.113	249.400	231.000	239.100	71.183%
3	13:42:03	1.146	1.126	248.700	229.100	237.900	71.761%
x		1.179	1.127	248.500	229.500	238.300	71.514%
σ		0.032	0.014	0.981	1.279	0.670	0.298%
%RSD		2.743	1.219	0.395	0.557	0.281	0.417

180-61163-B-2-F 12/6/2016 1:47:46 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:50	63.743%	2.627	27.880	31.300	0.000	3106.000	113400.000	115500.000
2	13:46:59	62.990%	2.782	29.960	30.920	0.000	3116.000	115000.000	115700.000
3	13:47:09	62.386%	2.819	30.390	31.570	0.000	3092.000	114000.000	114800.000
x		63.040%	2.743	29.410	31.260	0.000	3104.000	114100.000	115300.000
σ		0.680%	0.102	1.342	0.327	0.000	11.880	785.300	449.800
%RSD		1.079	3.705	4.563	1.047	0.000	0.383	0.688	0.390

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:50	26050.000	4413.000	0.000	5541.000	2289000.000	2097000.000	65.330%	282.600
2	13:46:59	26150.000	4440.000	0.000	5574.000	2308000.000	2123000.000	65.152%	288.800
3	13:47:09	25880.000	4433.000	0.000	5583.000	2293000.000	2098000.000	64.795%	284.600
x		26030.000	4429.000	0.000	5566.000	2297000.000	2106000.000	65.092%	285.300
σ		137.400	14.010	0.000	22.070	9920.000	14830.000	0.273%	3.176
%RSD		0.528	0.316	0.000	0.397	0.432	0.704	0.419	1.113

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:50	84.320	66.410	1632.000	74250.000	73900.000	30.170	75.530	143.000
2	13:46:59	81.540	65.750	1651.000	75800.000	74690.000	31.130	79.700	149.600
3	13:47:09	80.670	65.890	1653.000	74750.000	74580.000	31.470	80.650	147.200
x		82.180	66.020	1645.000	74930.000	74390.000	30.920	78.630	146.600
σ		1.910	0.349	11.390	793.900	430.100	0.675	2.724	3.311
%RSD		2.324	0.528	0.692	1.060	0.578	2.182	3.465	2.258

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:50	144.200	440.200	425.600	22.540	1.013	6.273	0.000	2441.000
2	13:46:59	148.200	436.300	413.200	24.100	1.269	5.030	0.000	2444.000
3	13:47:09	146.700	428.500	412.200	23.490	1.654	5.365	0.000	2399.000
x		146.400	435.000	417.000	23.380	1.312	5.556	0.000	2428.000
σ		2.026	5.935	7.491	0.786	0.323	0.643	0.000	25.130
%RSD		1.384	1.364	1.796	3.363	24.590	11.580	0.000	1.035

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:50	84.713%	9.356	10.310	59.086%	0.316	0.186	2.172	2.772
2	13:46:59	85.463%	9.208	10.270	58.936%	0.286	0.155	2.129	3.356
3	13:47:09	86.198%	9.615	10.100	58.952%	0.246	0.259	2.279	3.237
x		85.458%	9.393	10.230	58.991%	0.283	0.200	2.194	3.121
σ		0.742%	0.206	0.109	0.082%	0.035	0.053	0.077	0.309
%RSD		0.869	2.195	1.062	0.139	12.430	26.610	3.523	9.886

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:50	61.099%	41.630	2.859	2.666	337.100	337.800	75.992%	76.950%
2	13:46:59	60.207%	43.620	2.742	2.509	330.000	336.500	76.401%	77.009%
3	13:47:09	60.768%	41.300	2.746	3.023	343.000	341.500	74.841%	77.149%
x		60.691%	42.180	2.782	2.733	336.700	338.600	75.745%	77.036%
σ		0.451%	1.253	0.066	0.264	6.543	2.563	0.809%	0.102%
%RSD		0.743	2.969	2.386	9.657	1.943	0.757	1.067	0.133

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:50	0.541	0.502	314.000	289.400	301.500	71.152%
2	13:46:59	0.550	0.497	316.800	288.900	303.200	71.069%
3	13:47:09	0.478	0.519	316.500	292.100	303.300	70.626%
x		0.523	0.506	315.800	290.100	302.700	70.949%
σ		0.039	0.011	1.543	1.729	0.987	0.283%
%RSD		7.448	2.208	0.489	0.596	0.326	0.399

180-61163-A-4-F 12/6/2016 1:52:52 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:51:55	62.972%	3.438	31.420	32.760	0.000	3972.000	167900.000	169000.000
2	13:52:05	62.114%	2.822	33.860	33.970	0.000	3926.000	165800.000	168200.000
3	13:52:15	61.828%	2.871	34.820	32.310	0.000	3929.000	165800.000	168500.000
x		62.304%	3.044	33.370	33.010	0.000	3942.000	166500.000	168500.000
σ		0.595%	0.342	1.753	0.860	0.000	25.630	1197.000	397.200
%RSD		0.955	11.240	5.252	2.605	0.000	0.650	0.719	0.236

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:51:55	25130.000	4894.000	0.000	5566.000	2745000.000	2523000.000	63.845%	283.800
2	13:52:05	25060.000	4900.000	0.000	5591.000	2724000.000	2519000.000	63.165%	285.900
3	13:52:15	24780.000	4866.000	0.000	5568.000	2719000.000	2505000.000	63.583%	285.200
x		24990.000	4886.000	0.000	5575.000	2729000.000	2516000.000	63.531%	285.000
σ		189.300	17.940	0.000	14.060	13610.000	9313.000	0.343%	1.062
%RSD		0.758	0.367	0.000	0.252	0.499	0.370	0.540	0.373

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:51:55	60.080	54.220	1608.000	67520.000	66540.000	25.970	67.850	184.600
2	13:52:05	63.500	53.390	1609.000	68100.000	67840.000	27.380	66.030	187.200
3	13:52:15	59.050	53.540	1607.000	67300.000	66850.000	25.300	68.680	185.600
x		60.880	53.720	1608.000	67640.000	67070.000	26.210	67.520	185.800
σ		2.327	0.441	0.751	416.300	681.100	1.060	1.356	1.293
%RSD		3.822	0.821	0.047	0.616	1.015	4.042	2.008	0.696

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:51:55	184.900	199.100	189.300	19.540	1.111	5.383	0.000	2712.000
2	13:52:05	186.500	206.000	190.600	18.890	0.984	5.546	0.000	2699.000
3	13:52:15	190.700	203.000	193.300	19.820	2.400	4.154	0.000	2689.000
x		187.400	202.700	191.000	19.420	1.498	5.028	0.000	2700.000
σ		2.996	3.449	2.067	0.477	0.783	0.761	0.000	11.240
%RSD		1.599	1.702	1.082	2.457	52.270	15.140	0.000	0.417

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:51:55	88.831%	3.673	4.412	55.578%	0.207	0.255	0.787	1.446
2	13:52:05	89.197%	3.831	4.430	55.429%	0.187	0.229	1.106	1.460
3	13:52:15	88.789%	3.856	4.417	55.511%	0.249	0.214	1.348	1.349
x		88.939%	3.787	4.420	55.506%	0.214	0.233	1.080	1.418
σ		0.224%	0.099	0.009	0.075%	0.031	0.020	0.281	0.060
%RSD		0.252	2.617	0.204	0.134	14.700	8.769	26.040	4.259

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:51:55	57.637%	30.580	1.790	1.732	233.100	240.200	71.995%	72.735%
2	13:52:05	57.062%	30.460	1.656	1.509	237.000	238.000	71.847%	72.844%
3	13:52:15	57.107%	30.340	1.495	1.604	243.000	238.900	71.068%	73.076%
x		57.269%	30.460	1.647	1.615	237.700	239.000	71.637%	72.885%
σ		0.320%	0.119	0.148	0.112	4.982	1.112	0.498%	0.174%
%RSD		0.558	0.392	8.989	6.954	2.096	0.465	0.695	0.239

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:51:55	0.630	0.562	150.700	137.300	143.400	66.374%
2	13:52:05	0.554	0.561	144.500	132.400	137.600	69.292%
3	13:52:15	0.551	0.638	151.000	141.500	146.400	65.141%
x		0.578	0.587	148.700	137.100	142.500	66.936%
σ		0.045	0.044	3.704	4.528	4.484	2.131%
%RSD		7.703	7.532	2.491	3.303	3.147	3.184

CCV 2136057 12/6/2016 1:57:57 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:01	69.254%	105.600	97.490	99.690	0.000	50160.000	50250.000	50210.000
2	13:57:11	69.687%	104.500	96.620	102.600	0.000	50570.000	50950.000	50930.000
3	13:57:20	67.774%	106.700	98.730	101.900	0.000	51160.000	51620.000	52020.000
x		68.905%	105.616%	97.611%	101.403%	0.000	101.262%	101.879%	102.109%
σ		1.003%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.456	1.052	1.086	1.503	0.000	0.997	1.345	1.784

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:01	518.400	5364.000	0.000	50110.000	49910.000	48220.000	66.661%	104.000
2	13:57:11	531.800	5388.000	0.000	50370.000	49970.000	48450.000	66.373%	100.800
3	13:57:20	535.500	5524.000	0.000	51730.000	51270.000	49640.000	65.280%	105.200
x		105.713%	108.503%	0.000	101.470%	100.766%	97.537%	66.105%	103.351%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.729%	n/a
%RSD		1.700	1.587	0.000	1.718	1.528	1.562	1.103	2.201

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:01	103.900	102.100	494.800	25930.000	25350.000	105.500	103.200	101.800
2	13:57:11	98.880	99.760	497.700	25840.000	25510.000	102.200	104.000	102.000
3	13:57:20	103.000	104.100	511.000	26290.000	25730.000	103.700	103.600	103.700
x		101.914%	102.006%	100.238%	104.084%	102.115%	103.787%	103.610%	102.483%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.615	2.144	1.724	0.905	0.742	1.586	0.415	1.018

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:01	104.200	101.900	97.440	97.180	94.140	107.200	0.000	96.210
2	13:57:11	101.000	99.770	96.110	99.180	97.840	105.200	0.000	98.360
3	13:57:20	104.800	105.000	106.400	99.970	96.730	102.400	0.000	102.800
x		103.318%	102.243%	99.979%	98.778%	96.233%	104.930%	0.000	99.120%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.936	2.594	5.587	1.454	1.970	2.315	0.000	3.381

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:01	67.515%	105.700	104.600	66.677%	98.810	97.200	96.140	99.690
2	13:57:11	67.766%	103.300	102.900	67.258%	96.610	96.940	97.220	99.120
3	13:57:20	65.866%	103.900	105.800	66.983%	98.280	96.840	100.700	101.900
x		67.049%	104.294%	104.454%	66.973%	97.901%	96.994%	98.032%	100.252%
σ		1.032%	n/a	n/a	0.291%	n/a	n/a	n/a	n/a
%RSD		1.539	1.193	1.409	0.434	1.171	0.193	2.459	1.492

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:01	67.307%	97.160	101.300	100.700	100.200	101.900	74.796%	76.713%
2	13:57:11	67.809%	97.330	98.550	98.870	93.980	101.700	75.450%	75.870%
3	13:57:20	66.706%	98.800	100.800	100.900	96.090	100.100	76.223%	76.308%
x		67.274%	97.763%	100.197%	100.178%	96.773%	101.252%	75.490%	76.297%
σ		0.552%	n/a	n/a	n/a	n/a	n/a	0.714%	0.422%
%RSD		0.821	0.921	1.450	1.134	3.294	0.970	0.946	0.553

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:01	98.540	99.270	98.390	99.530	98.550	76.857%
2	13:57:11	98.910	99.040	97.530	98.390	98.260	77.059%
3	13:57:20	99.210	98.970	98.470	98.820	98.280	77.296%
x		98.889%	99.093%	98.132%	98.916%	98.364%	77.071%
σ		n/a	n/a	n/a	n/a	n/a	0.219%
%RSD		0.338	0.159	0.528	0.583	0.168	0.285

CCB5 12/6/2016 2:03:07 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:10	75.708%	0.068	-0.205	-0.214	0.000	96.340	41.610	46.680
2	14:02:19	75.490%	0.149	-0.153	-0.414	0.000	94.310	42.680	42.870
3	14:02:29	75.503%	0.069	-0.153	-0.492	0.000	94.040	40.520	39.350
x		75.567%	0.095	-0.170	-0.373	0.000	94.900	41.600	42.970
σ		0.122%	0.046	0.030	0.144	0.000	1.254	1.081	3.665
%RSD		0.162	48.800	17.440	38.480	0.000	1.322	2.598	8.530

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:10	3.404	4.776	0.000	48.370	70.010	81.840	68.667%	0.077
2	14:02:19	3.393	2.709	0.000	48.970	116.600	67.230	68.594%	-0.006
3	14:02:29	3.254	3.169	0.000	49.060	48.290	70.560	68.459%	0.327
x		3.351	3.551	0.000	48.800	78.300	73.210	68.573%	0.133
σ		0.084	1.085	0.000	0.375	34.900	7.654	0.106%	0.174
%RSD		2.494	30.560	0.000	0.768	44.570	10.460	0.154	130.700

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:10	0.066	0.105	1.941	23.240	32.020	0.088	0.034	0.137
2	14:02:19	0.174	0.124	2.086	23.710	29.070	0.101	0.169	0.029
3	14:02:29	0.125	0.134	1.993	22.730	16.130	0.077	0.034	0.123
x		0.122	0.121	2.006	23.230	25.740	0.089	0.079	0.096
σ		0.054	0.015	0.073	0.490	8.449	0.012	0.078	0.059
%RSD		44.200	12.280	3.662	2.107	32.830	13.440	98.190	60.800

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:10	0.117	0.118	0.361	0.152	0.274	-0.763	0.000	0.200
2	14:02:19	0.150	0.353	0.270	0.126	-0.021	0.927	0.000	0.232
3	14:02:29	0.180	0.350	0.268	0.096	-0.023	1.625	0.000	0.362
x		0.149	0.274	0.300	0.125	0.077	0.597	0.000	0.265
σ		0.032	0.135	0.053	0.028	0.171	1.228	0.000	0.086
%RSD		21.270	49.190	17.750	22.800	222.500	205.800	0.000	32.480

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:10	70.177%	-0.123	-0.382	70.914%	0.057	0.043	-0.007	0.110
2	14:02:19	68.727%	-0.135	-0.355	70.880%	0.084	0.065	0.076	0.034
3	14:02:29	69.666%	-0.341	-0.301	71.012%	0.078	0.059	0.049	0.132
x		69.523%	-0.200	-0.346	70.935%	0.073	0.056	0.039	0.092
σ		0.735%	0.122	0.041	0.068%	0.014	0.011	0.042	0.052
%RSD		1.058	61.340	11.950	0.096	19.690	20.620	106.900	56.050

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:10	71.523%	0.273	0.374	0.196	0.156	0.258	77.038%	77.208%
2	14:02:19	71.452%	0.180	0.146	0.229	0.208	0.119	77.128%	77.521%
3	14:02:29	71.452%	0.073	0.146	0.175	0.209	0.147	76.838%	76.611%
x		71.476%	0.176	0.222	0.200	0.191	0.175	77.002%	77.114%
σ		0.041%	0.100	0.132	0.027	0.030	0.074	0.148%	0.462%
%RSD		0.058	56.980	59.400	13.700	15.790	42.230	0.193	0.599

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:10	0.062	0.074	0.081	0.108	0.082	80.802%
2	14:02:19	0.091	0.056	0.146	0.118	0.121	80.625%
3	14:02:29	0.046	0.072	0.085	0.055	0.087	81.384%
x		0.066	0.067	0.104	0.094	0.097	80.937%
σ		0.023	0.010	0.036	0.034	0.021	0.397%
%RSD		34.300	14.260	35.010	36.130	21.920	0.491

180-61163-B-5-F 12/6/2016 2:08:15 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:19	61.361%	1.809	40.310	42.230	0.000	1359.000	137400.000	137200.000
2	14:07:29	62.819%	1.642	41.230	42.600	0.000	1345.000	136800.000	137500.000
3	14:07:38	63.871%	1.571	37.600	41.830	0.000	1351.000	136600.000	137700.000
x		62.684%	1.674	39.710	42.220	0.000	1352.000	136900.000	137500.000
σ		1.260%	0.122	1.884	0.385	0.000	7.219	429.300	265.600
%RSD		2.011	7.306	4.745	0.913	0.000	0.534	0.314	0.193

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:19	13340.000	4093.000	0.000	3525.000	2414000.000	2251000.000	60.602%	245.200
2	14:07:29	13460.000	4052.000	0.000	3555.000	2438000.000	2273000.000	60.138%	250.200
3	14:07:38	13410.000	4063.000	0.000	3549.000	2439000.000	2255000.000	60.263%	239.700
x		13400.000	4069.000	0.000	3543.000	2430000.000	2259000.000	60.334%	245.000
σ		58.360	21.400	0.000	15.500	14240.000	11760.000	0.240%	5.242
%RSD		0.435	0.526	0.000	0.437	0.586	0.521	0.398	2.139

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:19	112.600	149.200	1899.000	134400.000	132300.000	158.100	223.200	391.200
2	14:07:29	117.900	149.800	1913.000	134800.000	132900.000	159.000	223.500	390.200
3	14:07:38	121.400	151.900	1914.000	133500.000	132600.000	159.400	216.900	394.300
x		117.300	150.300	1909.000	134200.000	132600.000	158.800	221.200	391.900
σ		4.479	1.418	8.462	640.100	291.500	0.677	3.731	2.123
%RSD		3.818	0.944	0.443	0.477	0.220	0.427	1.687	0.542

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:19	395.000	566.300	534.600	24.250	2.335	3.356	0.000	4519.000
2	14:07:29	400.800	553.300	557.400	23.260	1.748	4.311	0.000	4520.000
3	14:07:38	393.800	573.600	546.100	23.960	2.042	3.161	0.000	4541.000
x		396.500	564.400	546.000	23.820	2.042	3.609	0.000	4527.000
σ		3.753	10.290	11.420	0.505	0.293	0.615	0.000	12.860
%RSD		0.946	1.823	2.092	2.120	14.360	17.040	0.000	0.284

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:19	74.476%	16.050	16.530	55.897%	0.618	0.408	4.963	5.286
2	14:07:29	74.518%	14.440	16.120	55.313%	0.420	0.505	4.729	5.322
3	14:07:38	74.547%	13.840	14.540	55.526%	0.607	0.486	4.306	5.086
x		74.514%	14.780	15.730	55.579%	0.548	0.466	4.666	5.231
σ		0.036%	1.139	1.052	0.296%	0.111	0.051	0.333	0.127
%RSD		0.048	7.708	6.689	0.532	20.220	10.960	7.140	2.433

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:19	56.845%	40.650	6.260	6.674	557.900	574.100	68.978%	70.063%
2	14:07:29	57.611%	41.050	6.348	6.707	564.100	570.700	68.831%	70.519%
3	14:07:38	56.979%	40.840	6.440	6.348	556.900	566.200	70.180%	70.822%
x		57.145%	40.850	6.350	6.577	559.600	570.300	69.330%	70.468%
σ		0.409%	0.200	0.090	0.198	3.904	3.942	0.740%	0.382%
%RSD		0.716	0.489	1.422	3.015	0.698	0.691	1.067	0.543

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:19	0.429	0.313	654.500	609.600	628.900	65.660%
2	14:07:29	0.294	0.359	659.700	616.800	636.900	64.929%
3	14:07:38	0.325	0.379	659.900	608.300	633.100	65.053%
x		0.349	0.350	658.000	611.600	633.000	65.214%
σ		0.071	0.034	3.108	4.567	4.004	0.391%
%RSD		20.350	9.663	0.472	0.747	0.633	0.600

180-61163-B-6-G 12/6/2016 2:13:20 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:24	63.849%	1.571	39.820	41.600	0.000	1175.000	170900.000	171100.000
2	14:12:34	62.800%	1.923	44.870	40.920	0.000	1178.000	171600.000	171200.000
3	14:12:43	62.850%	1.834	39.810	41.340	0.000	1167.000	168900.000	169500.000
x		63.166%	1.776	41.500	41.290	0.000	1173.000	170500.000	170600.000
σ		0.591%	0.183	2.922	0.345	0.000	5.783	1409.000	936.800
%RSD		0.936	10.300	7.041	0.835	0.000	0.493	0.827	0.549

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:24	18370.000	3835.000	0.000	4360.000	2150000.000	2005000.000	62.090%	184.000
2	14:12:34	18440.000	4016.000	0.000	4406.000	2159000.000	2002000.000	61.829%	178.800
3	14:12:43	18210.000	3837.000	0.000	4419.000	2156000.000	2008000.000	61.324%	185.600
x		18340.000	3896.000	0.000	4395.000	2155000.000	2005000.000	61.748%	182.800
σ		119.300	103.900	0.000	30.930	4446.000	2913.000	0.389%	3.573
%RSD		0.650	2.668	0.000	0.704	0.206	0.145	0.631	1.955

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:24	122.100	71.000	1277.000	66640.000	65490.000	22.570	91.550	204.300
2	14:12:34	123.500	70.010	1282.000	65160.000	64240.000	22.850	93.690	202.200
3	14:12:43	122.900	72.200	1285.000	66500.000	65170.000	23.080	93.040	208.200
x		122.800	71.070	1281.000	66100.000	64960.000	22.830	92.760	204.900
σ		0.702	1.097	4.182	817.900	650.600	0.256	1.100	3.042
%RSD		0.572	1.544	0.326	1.237	1.001	1.120	1.185	1.484

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:24	201.700	383.400	376.800	18.710	1.276	3.638	0.000	2781.000
2	14:12:34	201.400	372.200	370.700	17.500	1.949	4.779	0.000	2679.000
3	14:12:43	206.800	394.000	375.200	18.270	1.571	3.908	0.000	2756.000
x		203.300	383.200	374.200	18.160	1.599	4.108	0.000	2739.000
σ		3.051	10.870	3.144	0.615	0.337	0.596	0.000	53.080
%RSD		1.501	2.836	0.840	3.389	21.110	14.510	0.000	1.938

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:24	75.646%	8.293	8.488	55.135%	0.348	0.315	2.416	15.100
2	14:12:34	78.363%	7.532	8.034	55.300%	0.271	0.307	2.764	15.490
3	14:12:43	75.694%	6.851	8.648	54.468%	0.282	0.248	2.476	15.620
x		76.568%	7.559	8.390	54.968%	0.301	0.290	2.552	15.400
σ		1.555%	0.722	0.319	0.440%	0.042	0.037	0.186	0.268
%RSD		2.031	9.545	3.797	0.801	13.840	12.700	7.296	1.740

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:24	56.364%	690.900	6.340	6.209	261.800	255.800	67.995%	68.475%
2	14:12:34	56.370%	678.700	7.476	6.484	255.100	263.700	68.596%	69.137%
3	14:12:43	55.871%	684.800	7.060	6.699	257.700	262.900	68.517%	69.417%
x		56.202%	684.800	6.959	6.464	258.200	260.800	68.369%	69.010%
σ		0.287%	6.082	0.575	0.246	3.388	4.333	0.327%	0.484%
%RSD		0.510	0.888	8.260	3.802	1.312	1.661	0.478	0.701

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:24	0.257	0.301	874.000	801.900	833.600	66.522%
2	14:12:34	0.328	0.279	912.300	833.100	870.300	63.524%
3	14:12:43	0.340	0.347	915.600	844.200	880.300	62.955%
x		0.309	0.309	900.600	826.400	861.400	64.333%
σ		0.045	0.035	23.150	21.910	24.570	1.917%
%RSD		14.570	11.190	2.571	2.652	2.852	2.979

180-61163-B-7-G 12/6/2016 2:18:28 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:31	64.599%	3.937	29.770	30.100	0.000	1137.000	75740.000	76010.000
2	14:17:40	64.888%	4.012	31.190	30.860	0.000	1130.000	75280.000	75120.000
3	14:17:50	64.754%	3.528	32.350	30.520	0.000	1128.000	75140.000	74910.000
x		64.747%	3.826	31.100	30.490	0.000	1132.000	75380.000	75350.000
σ		0.145%	0.261	1.293	0.384	0.000	5.128	313.100	582.300
%RSD		0.224	6.813	4.156	1.260	0.000	0.453	0.415	0.773

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:31	48670.000	3275.000	0.000	5075.000	775200.000	787400.000	60.070%	1114.000
2	14:17:40	48330.000	3232.000	0.000	5047.000	776400.000	786200.000	60.541%	1098.000
3	14:17:50	48080.000	3243.000	0.000	5054.000	775200.000	785000.000	60.286%	1103.000
x		48360.000	3250.000	0.000	5059.000	775600.000	786200.000	60.299%	1105.000
σ		295.200	22.330	0.000	14.730	693.800	1166.000	0.236%	8.284
%RSD		0.611	0.687	0.000	0.291	0.089	0.148	0.391	0.750

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:31	139.000	84.770	2893.000	113200.000	112400.000	38.810	91.050	132.400
2	14:17:40	134.600	84.050	2894.000	110600.000	109900.000	37.830	87.040	130.600
3	14:17:50	137.000	82.480	2898.000	111400.000	109100.000	37.830	88.540	133.500
x		136.800	83.760	2895.000	111700.000	110500.000	38.160	88.880	132.200
σ		2.196	1.171	2.773	1341.000	1691.000	0.569	2.029	1.463
%RSD		1.605	1.398	0.096	1.201	1.531	1.490	2.283	1.107

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:31	132.900	282.500	264.900	36.010	5.126	3.577	0.000	2245.000
2	14:17:40	130.200	282.600	260.600	36.050	3.995	4.877	0.000	2208.000
3	14:17:50	134.300	286.500	268.000	37.270	3.466	5.567	0.000	2219.000
x		132.500	283.900	264.500	36.450	4.196	4.674	0.000	2224.000
σ		2.110	2.308	3.709	0.716	0.848	1.011	0.000	18.900
%RSD		1.593	0.813	1.402	1.964	20.210	21.620	0.000	0.850

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:31	84.120%	6.960	7.167	56.529%	0.357	0.249	1.244	2.224
2	14:17:40	85.126%	7.341	7.519	56.766%	0.360	0.246	0.785	2.133
3	14:17:50	84.974%	6.762	7.605	56.244%	0.334	0.273	1.433	2.102
x		84.740%	7.021	7.430	56.513%	0.350	0.256	1.154	2.153
σ		0.542%	0.294	0.232	0.261%	0.014	0.015	0.334	0.063
%RSD		0.640	4.188	3.124	0.462	4.097	5.827	28.910	2.931

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:31	58.971%	51.270	3.878	3.411	655.700	667.000	69.845%	70.167%
2	14:17:40	57.286%	54.450	4.025	3.166	659.300	663.200	69.550%	71.203%
3	14:17:50	57.847%	52.720	3.398	3.890	639.200	666.100	69.954%	71.381%
x		58.035%	52.810	3.767	3.489	651.400	665.400	69.783%	70.917%
σ		0.858%	1.591	0.328	0.368	10.730	2.002	0.209%	0.656%
%RSD		1.478	3.013	8.707	10.560	1.648	0.301	0.299	0.925

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:31	0.911	0.930	362.400	334.900	348.300	66.016%
2	14:17:40	0.984	0.932	356.900	334.400	344.500	66.778%
3	14:17:50	0.964	0.971	359.100	333.500	345.300	66.882%
x		0.953	0.944	359.500	334.300	346.000	66.559%
σ		0.037	0.023	2.745	0.697	1.996	0.473%
%RSD		3.928	2.422	0.764	0.209	0.577	0.710

180-61163-B-8-G 12/6/2016 2:23:33 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:38	65.095%	4.033	51.690	47.580	0.000	1092.000	130000.000	130000.000
2	14:22:47	65.487%	4.302	47.030	49.970	0.000	1089.000	129200.000	129000.000
3	14:22:57	65.124%	4.420	54.090	47.790	0.000	1080.000	129400.000	129200.000
x		65.235%	4.252	50.940	48.450	0.000	1087.000	129500.000	129400.000
σ		0.218%	0.198	3.592	1.323	0.000	6.517	383.100	522.300
%RSD		0.335	4.664	7.053	2.731	0.000	0.600	0.296	0.404

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:38	60930.000	3454.000	0.000	8027.000	859000.000	869300.000	60.495%	1229.000
2	14:22:47	60640.000	3313.000	0.000	7941.000	856100.000	869500.000	60.998%	1215.000
3	14:22:57	60480.000	3282.000	0.000	8016.000	858600.000	868000.000	60.875%	1214.000
x		60680.000	3349.000	0.000	7995.000	857900.000	868900.000	60.790%	1219.000
σ		224.400	91.570	0.000	47.130	1550.000	799.900	0.262%	8.132
%RSD		0.370	2.734	0.000	0.590	0.181	0.092	0.432	0.667

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:38	121.600	98.340	2189.000	118500.000	115500.000	37.250	91.160	167.000
2	14:22:47	116.100	97.680	2181.000	117300.000	115800.000	38.400	91.420	166.400
3	14:22:57	110.600	96.040	2186.000	117100.000	115700.000	38.540	89.490	164.800
x		116.100	97.350	2185.000	117600.000	115700.000	38.060	90.690	166.100
σ		5.503	1.182	4.537	755.600	183.300	0.706	1.046	1.152
%RSD		4.740	1.214	0.208	0.642	0.158	1.855	1.153	0.694

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:38	167.000	483.300	459.200	43.190	5.824	9.941	0.000	1998.000
2	14:22:47	168.000	478.800	464.400	42.650	7.099	11.210	0.000	2015.000
3	14:22:57	168.600	481.600	449.700	42.690	7.162	9.175	0.000	2007.000
x		167.900	481.200	457.800	42.840	6.695	10.110	0.000	2007.000
σ		0.809	2.270	7.458	0.300	0.755	1.025	0.000	8.228
%RSD		0.482	0.472	1.629	0.700	11.280	10.140	0.000	0.410

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:38	98.074%	10.360	10.640	55.883%	0.612	0.575	2.221	3.079
2	14:22:47	96.587%	9.578	11.320	56.365%	0.653	0.590	2.471	3.313
3	14:22:57	97.898%	9.163	10.940	56.698%	0.695	0.727	2.310	3.033
x		97.520%	9.699	10.970	56.316%	0.653	0.631	2.334	3.142
σ		0.812%	0.606	0.339	0.410%	0.042	0.084	0.127	0.150
%RSD		0.833	6.249	3.093	0.728	6.364	13.280	5.430	4.783

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:38	56.717%	51.010	5.671	5.850	951.500	949.900	70.163%	71.582%
2	14:22:47	57.445%	50.710	5.966	5.750	931.700	939.500	70.881%	70.422%
3	14:22:57	58.141%	51.330	5.999	5.482	915.800	939.500	70.790%	71.622%
x		57.435%	51.020	5.879	5.694	933.000	943.000	70.611%	71.209%
σ		0.712%	0.310	0.180	0.190	17.870	6.007	0.391%	0.681%
%RSD		1.240	0.607	3.069	3.340	1.915	0.637	0.553	0.957

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:38	1.469	1.437	371.700	348.700	358.600	65.040%
2	14:22:47	1.508	1.377	370.400	348.300	358.900	65.246%
3	14:22:57	1.363	1.377	370.400	344.100	357.400	65.895%
x		1.447	1.397	370.800	347.100	358.300	65.394%
σ		0.075	0.035	0.729	2.525	0.817	0.446%
%RSD		5.192	2.483	0.197	0.727	0.228	0.683

180-61163-B-9-G 12/6/2016 2:28:41 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:44	65.910%	4.566	25.990	23.780	0.000	726.200	47880.000	47900.000
2	14:27:54	66.069%	4.930	23.910	25.020	0.000	733.600	48580.000	48360.000
3	14:28:03	66.277%	4.806	23.510	24.220	0.000	733.000	48200.000	48330.000
x		66.085%	4.767	24.470	24.340	0.000	730.900	48220.000	48200.000
σ		0.184%	0.185	1.335	0.631	0.000	4.077	354.700	258.000
%RSD		0.278	3.877	5.454	2.592	0.000	0.558	0.736	0.535

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:44	63360.000	2948.000	0.000	5937.000	353700.000	365400.000	62.194%	983.600
2	14:27:54	64050.000	2966.000	0.000	5962.000	353200.000	367000.000	61.997%	989.600
3	14:28:03	63960.000	2930.000	0.000	5961.000	353900.000	366600.000	62.253%	977.500
x		63790.000	2948.000	0.000	5953.000	353600.000	366300.000	62.148%	983.600
σ		374.500	18.400	0.000	14.130	335.500	847.400	0.134%	6.018
%RSD		0.587	0.624	0.000	0.237	0.095	0.231	0.215	0.612

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:44	114.300	86.070	4794.000	147900.000	144800.000	47.370	96.860	131.800
2	14:27:54	113.200	86.280	4797.000	148800.000	144500.000	47.750	91.700	129.100
3	14:28:03	112.500	84.110	4806.000	148200.000	145900.000	46.950	91.700	128.100
x		113.300	85.480	4799.000	148300.000	145100.000	47.360	93.420	129.600
σ		0.907	1.197	5.878	467.400	724.900	0.400	2.978	1.898
%RSD		0.800	1.400	0.123	0.315	0.500	0.844	3.188	1.464

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:44	128.000	306.100	297.600	48.140	4.456	1.924	0.000	1217.000
2	14:27:54	130.800	317.900	298.000	47.380	4.864	4.157	0.000	1227.000
3	14:28:03	129.000	307.800	297.800	46.880	4.779	9.905	0.000	1233.000
x		129.300	310.600	297.800	47.470	4.700	5.329	0.000	1226.000
σ		1.461	6.384	0.176	0.634	0.215	4.117	0.000	7.814
%RSD		1.130	2.055	0.059	1.336	4.584	77.270	0.000	0.638

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:44	89.757%	5.446	5.683	58.330%	0.295	0.189	1.051	1.348
2	14:27:54	89.292%	5.514	5.730	58.752%	0.241	0.229	1.183	1.456
3	14:28:03	87.963%	6.397	6.334	58.687%	0.189	0.234	0.978	1.443
x		89.004%	5.786	5.916	58.590%	0.242	0.217	1.071	1.416
σ		0.931%	0.530	0.363	0.227%	0.053	0.024	0.104	0.059
%RSD		1.046	9.166	6.132	0.388	21.930	11.190	9.699	4.166

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:44	60.008%	27.040	2.752	3.196	615.000	620.600	71.208%	71.291%
2	14:27:54	59.785%	26.240	3.414	2.743	607.300	624.100	71.522%	71.473%
3	14:28:03	60.415%	27.540	3.106	2.465	611.600	628.200	71.239%	72.214%
x		60.070%	26.940	3.091	2.801	611.300	624.300	71.323%	71.659%
σ		0.319%	0.657	0.331	0.369	3.867	3.780	0.173%	0.489%
%RSD		0.531	2.440	10.720	13.160	0.633	0.606	0.242	0.682

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:44	0.939	0.946	288.200	265.200	275.500	71.348%
2	14:27:54	0.988	1.079	310.400	282.300	295.700	66.719%
3	14:28:03	1.107	1.057	305.300	279.400	290.600	67.762%
x		1.012	1.027	301.300	275.600	287.300	68.610%
σ		0.086	0.071	11.650	9.113	10.520	2.428%
%RSD		8.546	6.942	3.868	3.306	3.664	3.539

180-61163-B-10-G 12/6/2016 2:33:49 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:32:53	65.034%	4.121	23.290	24.330	0.000	1027.000	23120.000	23060.000
2	14:33:03	67.203%	4.272	22.530	21.840	0.000	1023.000	22920.000	23010.000
3	14:33:12	67.451%	4.492	24.110	22.860	0.000	1019.000	22630.000	22860.000
x		66.563%	4.295	23.310	23.010	0.000	1023.000	22890.000	22980.000
σ		1.330%	0.187	0.788	1.251	0.000	3.814	247.600	100.200
%RSD		1.998	4.345	3.379	5.439	0.000	0.373	1.082	0.436
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:32:53	46460.000	3837.000	0.000	8494.000	332400.000	341400.000	61.785%	714.800
2	14:33:03	46260.000	3768.000	0.000	8488.000	335200.000	344500.000	61.835%	734.200
3	14:33:12	46060.000	3769.000	0.000	8507.000	333300.000	344500.000	62.538%	727.800
x		46260.000	3791.000	0.000	8497.000	333600.000	343500.000	62.052%	725.600
σ		197.000	39.110	0.000	9.681	1415.000	1817.000	0.421%	9.860
%RSD		0.426	1.031	0.000	0.114	0.424	0.529	0.679	1.359
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:32:53	104.100	84.840	3780.000	133700.000	131100.000	40.310	76.010	188.700
2	14:33:03	104.300	82.060	3795.000	132100.000	129400.000	37.010	73.150	188.600
3	14:33:12	104.300	85.500	3790.000	132500.000	129600.000	37.770	74.060	184.700
x		104.200	84.130	3788.000	132700.000	130100.000	38.360	74.410	187.300
σ		0.093	1.826	7.768	827.200	941.100	1.726	1.461	2.299
%RSD		0.089	2.170	0.205	0.623	0.724	4.498	1.963	1.227
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:32:53	190.700	369.400	344.100	69.040	6.312	4.237	0.000	856.100
2	14:33:03	189.900	373.200	334.700	68.890	9.415	10.720	0.000	840.500
3	14:33:12	183.700	367.700	337.700	69.740	9.258	9.956	0.000	849.800
x		188.100	370.100	338.900	69.220	8.328	8.304	0.000	848.800
σ		3.878	2.814	4.820	0.453	1.748	3.543	0.000	7.856
%RSD		2.062	0.760	1.422	0.654	20.990	42.660	0.000	0.925
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:32:53	88.888%	9.694	10.800	59.381%	0.617	0.562	1.939	2.959
2	14:33:03	90.772%	9.237	11.070	59.520%	0.592	0.733	1.852	3.126
3	14:33:12	90.687%	10.150	10.450	59.114%	0.671	0.637	1.593	3.366
x		90.116%	9.696	10.770	59.338%	0.627	0.644	1.795	3.150
σ		1.064%	0.459	0.311	0.206%	0.041	0.086	0.180	0.204
%RSD		1.181	4.733	2.889	0.347	6.520	13.340	10.050	6.489
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:32:53	61.174%	52.950	11.670	11.800	904.100	911.700	73.073%	72.725%
2	14:33:03	60.604%	56.660	11.070	11.740	918.800	919.400	72.125%	73.130%
3	14:33:12	60.746%	54.950	10.290	11.190	907.300	924.200	73.116%	73.178%
x		60.841%	54.850	11.010	11.580	910.100	918.500	72.772%	73.011%
σ		0.297%	1.857	0.691	0.337	7.727	6.313	0.560%	0.249%
%RSD		0.488	3.385	6.276	2.913	0.849	0.687	0.770	0.340
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:32:53	1.822	2.004	610.600	573.500	591.400	69.468%		
2	14:33:03	1.915	1.965	611.500	571.300	590.200	69.768%		
3	14:33:12	1.957	1.979	615.100	572.200	591.200	69.932%		
x		1.898	1.983	612.400	572.300	590.900	69.723%		
σ		0.069	0.020	2.361	1.114	0.615	0.235%		
%RSD		3.636	1.005	0.386	0.195	0.104	0.338		

180-61163-B-11-O 12/6/2016 2:38:57 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:00	70.438%	4.689	9.994	10.890	0.000	351.900	15160.000	15180.000
2	14:38:10	70.790%	4.610	10.780	10.230	0.000	353.400	15250.000	15080.000
3	14:38:19	70.065%	4.518	9.807	11.210	0.000	354.900	15160.000	15180.000
x		70.431%	4.606	10.190	10.780	0.000	353.400	15190.000	15140.000
σ		0.362%	0.086	0.515	0.500	0.000	1.499	54.710	59.880
%RSD		0.515	1.857	5.051	4.639	0.000	0.424	0.360	0.395

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:00	64270.000	3923.000	0.000	7469.000	48080.000	46900.000	65.943%	486.000
2	14:38:10	63770.000	3753.000	0.000	7473.000	48200.000	46810.000	65.861%	477.500
3	14:38:19	64350.000	3823.000	0.000	7503.000	48230.000	46920.000	65.825%	486.400
x		64130.000	3833.000	0.000	7482.000	48170.000	46880.000	65.876%	483.300
σ		317.600	85.460	0.000	18.610	76.800	54.550	0.061%	5.043
%RSD		0.495	2.229	0.000	0.249	0.159	0.116	0.092	1.043

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:00	127.100	88.670	2954.000	184100.000	183500.000	65.140	95.020	92.530
2	14:38:10	125.000	90.140	2946.000	184200.000	184100.000	64.250	93.480	94.070
3	14:38:19	128.200	90.180	2969.000	186400.000	182800.000	63.700	91.170	95.400
x		126.800	89.660	2956.000	184900.000	183500.000	64.360	93.220	94.000
σ		1.644	0.862	12.020	1313.000	642.200	0.726	1.937	1.437
%RSD		1.297	0.962	0.407	0.710	0.350	1.128	2.078	1.529

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:00	93.040	270.000	250.700	68.580	2.793	6.190	0.000	212.800
2	14:38:10	96.170	279.100	264.500	69.370	3.220	3.906	0.000	214.200
3	14:38:19	95.340	272.900	261.200	71.760	2.228	6.470	0.000	215.700
x		94.850	274.000	258.800	69.900	2.747	5.522	0.000	214.200
σ		1.620	4.667	7.220	1.657	0.497	1.407	0.000	1.461
%RSD		1.708	1.703	2.790	2.370	18.110	25.470	0.000	0.682

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:00	92.581%	4.634	4.569	64.252%	0.107	0.094	0.702	1.047
2	14:38:10	90.369%	4.825	4.778	63.859%	0.131	0.081	0.449	0.844
3	14:38:19	89.657%	4.167	4.610	63.838%	0.059	0.021	0.519	1.001
x		90.869%	4.542	4.652	63.983%	0.099	0.065	0.557	0.964
σ		1.525%	0.339	0.111	0.233%	0.036	0.039	0.131	0.106
%RSD		1.678	7.455	2.378	0.364	36.640	60.090	23.430	11.030

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:00	63.537%	25.400	2.984	3.205	355.700	363.600	73.988%	73.852%
2	14:38:10	65.073%	24.060	2.866	2.906	337.400	340.600	75.341%	74.037%
3	14:38:19	63.342%	25.370	3.174	2.940	336.500	351.500	74.958%	73.556%
x		63.984%	24.950	3.008	3.017	343.200	351.900	74.762%	73.815%
σ		0.949%	0.765	0.155	0.164	10.820	11.480	0.697%	0.242%
%RSD		1.483	3.066	5.167	5.429	3.152	3.263	0.932	0.328

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:00	0.821	0.806	142.000	129.900	135.700	70.018%
2	14:38:10	0.789	0.775	135.700	127.600	131.300	71.901%
3	14:38:19	0.795	0.794	137.900	124.800	131.500	72.155%
x		0.801	0.792	138.500	127.500	132.800	71.358%
σ		0.017	0.016	3.189	2.574	2.465	1.167%
%RSD		2.110	1.999	2.302	2.020	1.856	1.636

180-61163-B-11-O SD@5 12/6/2016 2:44:02 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:43:07	75.598%	1.000	1.516	1.244	0.000	75.630	3042.000	3013.000
2	14:43:16	77.911%	0.833	1.097	1.051	0.000	74.440	3067.000	3075.000
3	14:43:26	76.194%	0.890	1.811	1.315	0.000	75.090	3045.000	3036.000
x		76.568%	0.908	1.475	1.203	0.000	75.050	3051.000	3041.000
σ		1.201%	0.085	0.359	0.137	0.000	0.599	13.780	31.690
%RSD		1.569	9.326	24.330	11.340	0.000	0.797	0.452	1.042
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:43:07	13060.000	745.100	0.000	1544.000	9807.000	9245.000	69.210%	98.420
2	14:43:16	13240.000	753.200	0.000	1537.000	9933.000	9300.000	69.429%	97.500
3	14:43:26	13150.000	747.200	0.000	1554.000	9933.000	9405.000	69.068%	101.900
x		13150.000	748.500	0.000	1545.000	9891.000	9317.000	69.236%	99.270
σ		88.050	4.187	0.000	8.196	72.520	81.650	0.182%	2.313
%RSD		0.670	0.559	0.000	0.530	0.733	0.876	0.263	2.330
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:43:07	25.490	18.450	587.600	40020.000	38680.000	14.630	20.450	21.870
2	14:43:16	27.280	19.060	586.600	39930.000	38820.000	13.220	20.980	20.880
3	14:43:26	26.980	19.790	586.900	39960.000	39380.000	13.810	20.880	21.850
x		26.580	19.100	587.000	39970.000	38960.000	13.890	20.770	21.530
σ		0.957	0.670	0.533	43.820	371.500	0.708	0.281	0.567
%RSD		3.599	3.508	0.091	0.110	0.953	5.095	1.352	2.632
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:43:07	21.320	65.240	60.400	17.380	0.679	1.282	0.000	54.940
2	14:43:16	21.930	65.590	58.550	16.620	0.393	4.185	0.000	55.410
3	14:43:26	22.020	63.360	62.130	16.450	1.112	4.562	0.000	55.840
x		21.760	64.730	60.360	16.810	0.728	3.343	0.000	55.400
σ		0.378	1.199	1.791	0.493	0.362	1.795	0.000	0.449
%RSD		1.739	1.852	2.967	2.933	49.750	53.690	0.000	0.811
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:43:07	74.665%	0.441	0.192	69.638%	0.031	0.005	0.022	0.169
2	14:43:16	75.016%	0.204	0.323	69.903%	0.025	-0.006	0.078	0.136
3	14:43:26	74.125%	0.321	0.453	70.800%	0.019	-0.012	0.105	0.179
x		74.602%	0.322	0.323	70.114%	0.025	-0.004	0.068	0.162
σ		0.449%	0.119	0.131	0.609%	0.006	0.009	0.043	0.022
%RSD		0.602	36.840	40.490	0.869	23.310	195.900	62.440	13.860
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:43:07	69.771%	5.185	0.656	0.639	68.010	71.820	75.044%	74.591%
2	14:43:16	69.467%	4.509	0.605	0.530	73.350	72.020	74.473%	75.441%
3	14:43:26	70.201%	5.004	0.499	0.535	70.840	71.340	75.234%	75.460%
x		69.813%	4.899	0.587	0.568	70.730	71.730	74.917%	75.164%
σ		0.369%	0.350	0.080	0.061	2.670	0.352	0.396%	0.496%
%RSD		0.529	7.146	13.600	10.820	3.774	0.491	0.528	0.660
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:43:07	0.156	0.168	28.080	25.970	26.810	74.332%		
2	14:43:16	0.135	0.150	27.710	26.190	26.760	74.760%		
3	14:43:26	0.134	0.146	26.800	25.040	25.780	75.321%		
x		0.142	0.155	27.530	25.730	26.450	74.804%		
σ		0.012	0.011	0.658	0.607	0.576	0.496%		
%RSD		8.750	7.272	2.390	2.360	2.178	0.663		

180-61163-B-11-P MS 12/6/2016 2:49:07 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:48:12	72.001%	54.830	919.700	915.800	0.000	46130.000	60080.000	59760.000
2	14:48:22	70.090%	55.260	924.400	932.000	0.000	46020.000	59830.000	59770.000
3	14:48:31	71.952%	54.540	900.000	901.100	0.000	45860.000	59920.000	59840.000
x		71.348%	54.870	914.700	916.300	0.000	46000.000	59940.000	59790.000
σ		1.089%	0.362	12.940	15.460	0.000	138.400	124.900	42.280
%RSD		1.526	0.660	1.415	1.687	0.000	0.301	0.208	0.071

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:48:12	105400.000	9983.000	0.000	51110.000	64870.000	64110.000	67.373%	1417.000
2	14:48:22	104800.000	10010.000	0.000	51420.000	65090.000	67980.000	66.952%	1411.000
3	14:48:31	105100.000	9973.000	0.000	51280.000	64510.000	64440.000	67.333%	1417.000
x		105100.000	9990.000	0.000	51270.000	64820.000	65510.000	67.219%	1415.000
σ		319.700	21.490	0.000	152.600	294.600	2149.000	0.233%	3.486
%RSD		0.304	0.215	0.000	0.298	0.455	3.281	0.346	0.246

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:48:12	587.800	268.000	5692.000	173100.000	168900.000	488.400	517.200	282.400
2	14:48:22	589.000	270.800	5717.000	173100.000	169900.000	484.000	505.700	284.900
3	14:48:31	587.000	268.000	5688.000	171500.000	169500.000	480.700	496.600	278.500
x		587.900	268.900	5699.000	172600.000	169400.000	484.400	506.500	281.900
σ		1.002	1.620	15.700	929.600	513.800	3.863	10.350	3.241
%RSD		0.171	0.602	0.275	0.539	0.303	0.798	2.043	1.149

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:48:12	279.000	658.000	585.500	77.240	9.466	5.682	0.000	737.000
2	14:48:22	281.900	651.600	592.900	78.600	10.550	14.170	0.000	731.600
3	14:48:31	277.400	651.200	594.300	78.000	8.159	10.770	0.000	736.400
x		279.400	653.600	590.900	77.950	9.391	10.210	0.000	735.000
σ		2.305	3.844	4.731	0.679	1.196	4.271	0.000	2.992
%RSD		0.825	0.588	0.801	0.872	12.740	41.850	0.000	0.407

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:48:12	98.624%	790.200	874.700	61.270%	45.450	45.730	44.270	79.560
2	14:48:22	98.596%	792.200	869.600	60.903%	45.250	45.630	46.870	79.490
3	14:48:31	98.905%	789.000	872.200	61.806%	44.850	44.510	47.730	80.590
x		98.708%	790.500	872.200	61.327%	45.180	45.290	46.290	79.880
σ		0.171%	1.572	2.543	0.454%	0.306	0.679	1.799	0.618
%RSD		0.173	0.199	0.292	0.741	0.677	1.500	3.886	0.773

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:48:12	60.557%	1830.000	374.200	368.500	2610.000	2649.000	72.788%	72.287%
2	14:48:22	61.669%	1793.000	371.000	369.100	2579.000	2610.000	73.145%	72.060%
3	14:48:31	60.731%	1816.000	373.100	371.800	2584.000	2632.000	72.539%	71.592%
x		60.986%	1813.000	372.800	369.800	2591.000	2630.000	72.824%	71.980%
σ		0.598%	18.320	1.620	1.775	16.940	19.360	0.305%	0.355%
%RSD		0.981	1.010	0.435	0.480	0.654	0.736	0.418	0.493

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:48:12	47.700	47.540	140.400	131.000	135.900	65.454%
2	14:48:22	46.530	47.240	140.300	130.500	134.800	66.267%
3	14:48:31	46.310	47.510	138.900	130.700	135.100	66.097%
x		46.850	47.430	139.800	130.700	135.300	65.940%
σ		0.745	0.161	0.802	0.253	0.592	0.429%
%RSD		1.590	0.339	0.574	0.194	0.438	0.650

180-61163-A-11-F MSD 12/6/2016 2:54:18 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:21	69.281%	53.890	932.900	919.900	0.000	45420.000	62840.000	62430.000
2	14:53:30	69.614%	54.520	900.700	910.500	0.000	46050.000	63300.000	62830.000
3	14:53:40	68.068%	53.630	921.400	937.000	0.000	45550.000	62620.000	62560.000
x		68.988%	54.010	918.400	922.500	0.000	45680.000	62920.000	62610.000
σ		0.814%	0.456	16.330	13.440	0.000	331.600	349.800	205.300
%RSD		1.179	0.845	1.778	1.457	0.000	0.726	0.556	0.328

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:21	109200.000	10250.000	0.000	50700.000	84970.000	89740.000	64.395%	1596.000
2	14:53:30	109700.000	10100.000	0.000	51170.000	85570.000	90310.000	63.660%	1622.000
3	14:53:40	108500.000	10270.000	0.000	50930.000	85390.000	89500.000	64.068%	1591.000
x		109100.000	10210.000	0.000	50930.000	85310.000	89850.000	64.041%	1603.000
σ		587.100	88.480	0.000	236.700	306.800	415.600	0.368%	16.720
%RSD		0.538	0.867	0.000	0.465	0.360	0.463	0.575	1.043

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:21	633.400	286.000	6988.000	194800.000	191300.000	499.600	527.500	306.800
2	14:53:30	635.900	294.900	7019.000	195500.000	190900.000	503.600	536.200	306.100
3	14:53:40	627.100	284.500	6988.000	190100.000	186600.000	493.500	523.500	306.500
x		632.100	288.400	6998.000	193500.000	189600.000	498.900	529.100	306.500
σ		4.531	5.628	18.210	2955.000	2600.000	5.069	6.486	0.346
%RSD		0.717	1.951	0.260	1.528	1.371	1.016	1.226	0.113

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:21	310.900	700.700	642.200	98.450	10.120	11.340	0.000	805.700
2	14:53:30	314.700	701.500	642.500	98.380	9.594	11.890	0.000	789.600
3	14:53:40	303.700	699.300	631.800	97.360	12.620	14.280	0.000	785.400
x		309.700	700.500	638.800	98.070	10.780	12.510	0.000	793.600
σ		5.596	1.113	6.085	0.609	1.615	1.564	0.000	10.710
%RSD		1.807	0.159	0.953	0.621	14.980	12.510	0.000	1.349

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:21	86.601%	837.500	901.900	58.440%	46.540	46.610	44.900	82.440
2	14:53:30	87.123%	831.700	898.600	58.827%	45.100	44.940	45.820	81.150
3	14:53:40	87.887%	825.500	894.200	58.623%	45.340	45.120	45.670	81.020
x		87.204%	831.600	898.200	58.630%	45.660	45.560	45.460	81.540
σ		0.647%	6.020	3.853	0.193%	0.769	0.916	0.491	0.787
%RSD		0.742	0.724	0.429	0.330	1.684	2.011	1.080	0.965

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:21	58.583%	1820.000	372.200	368.400	2391.000	2407.000	69.289%	67.834%
2	14:53:30	59.075%	1787.000	368.700	366.200	2351.000	2371.000	69.014%	69.696%
3	14:53:40	58.128%	1822.000	371.600	368.400	2356.000	2376.000	69.505%	68.939%
x		58.595%	1810.000	370.800	367.700	2366.000	2385.000	69.269%	68.823%
σ		0.473%	19.800	1.887	1.258	21.930	19.290	0.246%	0.936%
%RSD		0.808	1.094	0.509	0.342	0.927	0.809	0.356	1.361

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:21	44.400	43.940	145.200	137.500	140.500	69.145%
2	14:53:30	49.240	48.300	160.300	151.400	155.600	61.689%
3	14:53:40	47.380	48.300	159.500	149.100	154.200	62.203%
x		47.010	46.840	155.000	146.000	150.100	64.346%
σ		2.439	2.516	8.516	7.494	8.350	4.164%
%RSD		5.188	5.371	5.495	5.132	5.564	6.472

CCV 2136057 12/6/2016 2:59:23 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:58:26	70.597%	102.500	97.880	99.120	0.000	50730.000	51300.000	51020.000
2	14:58:35	71.579%	102.200	96.910	97.220	0.000	50980.000	51640.000	51330.000
3	14:58:45	71.667%	102.800	102.600	99.990	0.000	51620.000	51680.000	51520.000
x		71.281%	102.507%	99.119%	98.777%	0.000	102.216%	103.078%	102.579%
σ		0.594%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.833	0.284	3.052	1.437	0.000	0.900	0.402	0.496

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:58:26	548.000	5325.000	0.000	48610.000	49670.000	48660.000	63.903%	106.500
2	14:58:35	541.400	5287.000	0.000	48840.000	49510.000	48630.000	63.589%	104.600
3	14:58:45	550.600	5372.000	0.000	49100.000	49920.000	49130.000	63.742%	105.100
x		109.326%	106.564%	0.000	97.701%	99.393%	97.614%	63.744%	105.402%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.157%	n/a
%RSD		0.865	0.797	0.000	0.501	0.416	0.567	0.246	0.944

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:58:26	109.700	105.400	478.700	27230.000	26450.000	107.400	101.200	107.100
2	14:58:35	107.900	106.100	479.500	26830.000	26000.000	106.400	104.600	104.000
3	14:58:45	112.100	106.900	483.600	27010.000	26600.000	106.400	107.200	106.000
x		109.901%	106.144%	96.123%	108.091%	105.409%	106.739%	104.334%	105.711%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.936	0.709	0.552	0.749	1.190	0.535	2.915	1.468

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:58:26	105.400	102.300	97.130	99.290	96.700	102.000	0.000	103.000
2	14:58:35	105.300	101.500	101.700	99.500	105.300	110.600	0.000	100.300
3	14:58:45	105.500	96.350	98.780	100.600	95.860	108.100	0.000	100.700
x		105.392%	100.030%	99.193%	99.788%	99.294%	106.918%	0.000	101.329%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.093	3.210	2.320	0.690	5.269	4.126	0.000	1.435

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:58:26	65.208%	103.000	104.600	63.741%	94.020	94.700	95.530	95.870
2	14:58:35	65.345%	102.200	101.800	64.245%	94.960	94.900	96.860	97.310
3	14:58:45	65.298%	103.500	102.300	63.846%	97.570	95.570	96.770	97.910
x		65.284%	102.904%	102.896%	63.944%	95.516%	95.053%	96.389%	97.027%
σ		0.070%	n/a	n/a	0.266%	n/a	n/a	n/a	n/a
%RSD		0.107	0.669	1.462	0.416	1.929	0.480	0.770	1.083

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:58:26	64.844%	98.010	96.710	96.730	95.670	101.600	68.947%	69.048%
2	14:58:35	63.777%	99.650	99.670	99.160	95.530	104.200	68.829%	67.465%
3	14:58:45	63.855%	98.610	97.340	100.900	102.400	99.790	68.769%	68.610%
x		64.159%	98.754%	97.906%	98.947%	97.881%	101.851%	68.848%	68.374%
σ		0.595%	n/a	n/a	n/a	n/a	n/a	0.091%	0.817%
%RSD		0.927	0.839	1.596	2.141	4.036	2.156	0.132	1.195

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:58:26	97.800	99.220	99.370	100.800	98.470	68.292%
2	14:58:35	100.400	99.890	98.350	99.920	98.480	67.922%
3	14:58:45	98.760	99.050	97.980	99.110	98.260	68.104%
x		98.975%	99.388%	98.567%	99.949%	98.403%	68.106%
σ		n/a	n/a	n/a	n/a	n/a	0.185%
%RSD		1.304	0.447	0.730	0.853	0.125	0.272

CCB6 12/6/2016 3:04:31 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:35	76.698%	0.174	0.505	0.071	0.000	103.500	65.860	63.410
2	15:03:45	78.246%	0.211	-0.396	0.076	0.000	98.170	59.540	62.600
3	15:03:54	79.731%	0.108	-0.073	0.045	0.000	95.200	60.800	58.900
x		78.225%	0.164	0.012	0.064	0.000	98.970	62.070	61.640
σ		1.517%	0.052	0.457	0.016	0.000	4.228	3.343	2.405
%RSD		1.939	31.530	3865.000	25.570	0.000	4.272	5.385	3.901
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:35	6.310	13.160	0.000	93.720	231.900	200.900	65.896%	0.332
2	15:03:45	5.963	12.150	0.000	90.890	163.000	196.000	66.414%	0.126
3	15:03:54	5.890	10.970	0.000	85.170	209.800	197.100	67.136%	0.203
x		6.054	12.090	0.000	89.930	201.600	198.000	66.482%	0.220
σ		0.224	1.096	0.000	4.358	35.200	2.559	0.623%	0.104
%RSD		3.707	9.059	0.000	4.847	17.460	1.292	0.937	47.310
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:35	0.061	0.120	2.352	39.230	50.170	0.140	0.220	0.276
2	15:03:45	0.040	0.129	2.479	39.430	46.460	0.103	0.127	0.193
3	15:03:54	0.117	0.147	2.416	37.740	33.020	0.151	0.126	0.096
x		0.073	0.132	2.416	38.800	43.210	0.131	0.158	0.188
σ		0.040	0.014	0.064	0.928	9.022	0.025	0.054	0.090
%RSD		55.120	10.430	2.641	2.391	20.880	19.000	34.170	47.900
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:35	0.284	0.189	0.354	0.261	1.053	0.934	0.000	0.478
2	15:03:45	0.091	0.128	0.597	0.098	0.285	0.930	0.000	0.476
3	15:03:54	0.376	0.068	0.129	0.083	-0.020	1.293	0.000	0.506
x		0.250	0.128	0.360	0.147	0.440	1.053	0.000	0.487
σ		0.146	0.060	0.234	0.099	0.553	0.209	0.000	0.017
%RSD		58.140	47.080	65.060	67.090	125.800	19.800	0.000	3.504
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:35	68.467%	0.346	-0.109	68.852%	0.138	0.114	0.108	0.059
2	15:03:45	68.794%	-0.166	-0.249	68.445%	0.087	0.096	0.136	0.092
3	15:03:54	68.296%	-0.265	-0.233	68.007%	0.065	0.097	0.136	0.013
x		68.519%	-0.028	-0.197	68.435%	0.097	0.102	0.127	0.055
σ		0.253%	0.328	0.077	0.423%	0.037	0.010	0.016	0.040
%RSD		0.369	1154.000	38.840	0.618	38.310	9.564	12.920	72.590
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:35	68.656%	0.310	0.276	0.382	0.167	0.337	70.006%	69.455%
2	15:03:45	69.143%	0.334	0.320	0.242	0.221	0.217	70.280%	69.712%
3	15:03:54	69.147%	0.084	0.265	0.254	0.111	0.277	70.040%	70.176%
x		68.982%	0.243	0.287	0.293	0.166	0.277	70.109%	69.781%
σ		0.282%	0.138	0.029	0.077	0.055	0.060	0.149%	0.366%
%RSD		0.409	56.720	10.080	26.460	33.210	21.790	0.213	0.524
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:03:35	0.065	0.104	0.142	0.113	0.148	71.274%		
2	15:03:45	0.119	0.079	0.161	0.080	0.132	71.250%		
3	15:03:54	0.090	0.116	0.137	0.151	0.139	71.109%		
x		0.092	0.100	0.147	0.115	0.140	71.211%		
σ		0.027	0.019	0.013	0.035	0.008	0.089%		
%RSD		29.560	18.820	8.734	30.790	5.516	0.126		

180-61163-B-11-O PDS 12/6/2016 3:09:39 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:08:42	74.007%	56.720	1032.000	1016.000	0.000	51100.000	66750.000	66410.000
2	15:08:51	73.178%	58.750	1033.000	1019.000	0.000	51100.000	66580.000	66270.000
3	15:09:01	73.169%	58.100	1026.000	1016.000	0.000	51760.000	67560.000	67120.000
x		73.451%	57.860	1030.000	1017.000	0.000	51320.000	66960.000	66600.000
σ		0.481%	1.040	4.086	1.590	0.000	380.200	522.100	453.400
%RSD		0.655	1.798	0.397	0.156	0.000	0.741	0.780	0.681

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:08:42	64270.000	14150.000	0.000	53990.000	94930.000	98870.000	65.886%	1513.000
2	15:08:51	63950.000	14170.000	0.000	54070.000	94220.000	98680.000	65.632%	1520.000
3	15:09:01	64740.000	14240.000	0.000	54850.000	95770.000	100300.000	65.012%	1517.000
x		64320.000	14190.000	0.000	54310.000	94970.000	99300.000	65.510%	1517.000
σ		400.100	47.130	0.000	475.400	779.700	913.000	0.450%	3.263
%RSD		0.622	0.332	0.000	0.876	0.821	0.919	0.686	0.215

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:08:42	623.400	280.900	3186.000	178600.000	177800.000	525.700	556.700	314.400
2	15:08:51	632.900	281.300	3192.000	178600.000	176200.000	533.800	568.600	317.900
3	15:09:01	647.400	286.900	3221.000	180300.000	176600.000	532.600	558.000	311.000
x		634.500	283.100	3200.000	179200.000	176900.000	530.700	561.100	314.400
σ		12.120	3.351	18.930	1022.000	800.000	4.373	6.508	3.487
%RSD		1.909	1.184	0.592	0.570	0.452	0.824	1.160	1.109

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:08:42	311.400	664.100	613.000	97.990	10.920	10.980	0.000	932.200
2	15:08:51	324.000	678.600	630.600	98.110	12.970	15.870	0.000	942.700
3	15:09:01	319.700	680.900	637.200	100.700	11.220	16.030	0.000	928.200
x		318.400	674.500	627.000	98.940	11.700	14.290	0.000	934.300
σ		6.410	9.119	12.520	1.542	1.106	2.875	0.000	7.452
%RSD		2.013	1.352	1.996	1.558	9.455	20.110	0.000	0.798

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:08:42	88.509%	940.100	1019.000	60.186%	47.270	47.600	49.600	87.980
2	15:08:51	87.303%	951.900	1018.000	59.881%	47.270	47.690	49.520	88.940
3	15:09:01	88.456%	947.700	1018.000	59.955%	47.800	47.010	51.690	90.090
x		88.090%	946.600	1018.000	60.007%	47.450	47.430	50.270	89.000
σ		0.681%	5.962	0.910	0.159%	0.303	0.370	1.233	1.059
%RSD		0.773	0.630	0.089	0.265	0.639	0.780	2.452	1.190

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:08:42	59.448%	2097.000	517.600	511.900	2297.000	2334.000	68.287%	67.581%
2	15:08:51	59.856%	2100.000	514.100	510.600	2312.000	2345.000	68.653%	68.113%
3	15:09:01	59.243%	2130.000	517.400	521.300	2319.000	2348.000	68.092%	67.694%
x		59.516%	2109.000	516.400	514.600	2309.000	2342.000	68.344%	67.796%
σ		0.312%	18.280	1.956	5.874	10.950	7.450	0.284%	0.280%
%RSD		0.525	0.867	0.379	1.141	0.474	0.318	0.416	0.413

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:08:42	52.270	52.470	156.100	147.400	151.600	61.029%
2	15:08:51	52.840	52.020	157.700	149.100	151.700	61.528%
3	15:09:01	51.910	52.120	157.300	145.300	150.600	61.858%
x		52.340	52.210	157.000	147.300	151.300	61.471%
σ		0.465	0.238	0.831	1.881	0.602	0.417%
%RSD		0.889	0.455	0.529	1.277	0.398	0.679

180-61163-C-12-E 12/6/2016 3:14:44 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:13:46	69.222%	3.787	40.730	42.780	0.000	1414.000	134600.000	133200.000
2	15:13:56	70.559%	3.550	42.510	43.390	0.000	1399.000	132800.000	131800.000
3	15:14:05	69.411%	3.531	43.750	44.090	0.000	1411.000	133600.000	132600.000
x		69.731%	3.622	42.330	43.420	0.000	1408.000	133700.000	132500.000
σ		0.724%	0.143	1.517	0.657	0.000	8.131	866.900	726.600
%RSD		1.038	3.942	3.585	1.514	0.000	0.577	0.649	0.548

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:13:46	51640.000	4386.000	0.000	4735.000	959800.000	975500.000	61.962%	465.500
2	15:13:56	51240.000	4308.000	0.000	4722.000	956300.000	975800.000	62.673%	477.000
3	15:14:05	51210.000	4341.000	0.000	4734.000	964500.000	973300.000	62.202%	488.700
x		51360.000	4345.000	0.000	4731.000	960200.000	974900.000	62.279%	477.100
σ		237.400	39.010	0.000	7.109	4119.000	1329.000	0.362%	11.590
%RSD		0.462	0.898	0.000	0.150	0.429	0.136	0.581	2.430

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:13:46	135.300	208.100	2839.000	239300.000	237300.000	49.770	139.100	467.300
2	15:13:56	136.000	206.300	2821.000	241700.000	239900.000	48.300	138.100	461.800
3	15:14:05	130.200	200.700	2838.000	235500.000	232600.000	47.980	132.600	454.200
x		133.900	205.000	2833.000	238900.000	236600.000	48.690	136.600	461.100
σ		3.178	3.887	9.745	3146.000	3664.000	0.954	3.491	6.588
%RSD		2.374	1.896	0.344	1.317	1.549	1.958	2.556	1.429

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:13:46	466.300	3696.000	3572.000	50.660	5.782	6.754	0.000	1581.000
2	15:13:56	456.300	3640.000	3523.000	49.870	3.799	7.334	0.000	1585.000
3	15:14:05	452.200	3584.000	3446.000	50.120	3.840	2.759	0.000	1591.000
x		458.300	3640.000	3514.000	50.210	4.473	5.616	0.000	1586.000
σ		7.256	55.990	63.560	0.403	1.133	2.491	0.000	5.423
%RSD		1.583	1.538	1.809	0.803	25.330	44.360	0.000	0.342

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:13:46	89.021%	23.770	24.560	57.128%	5.159	4.839	23.530	29.110
2	15:13:56	89.885%	22.570	24.900	57.194%	5.228	5.444	23.610	30.360
3	15:14:05	88.869%	22.890	24.670	57.188%	5.059	4.908	24.330	29.200
x		89.258%	23.080	24.710	57.170%	5.149	5.064	23.820	29.560
σ		0.548%	0.619	0.176	0.036%	0.085	0.332	0.438	0.695
%RSD		0.614	2.682	0.712	0.064	1.655	6.546	1.840	2.351

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:13:46	58.214%	388.800	9.944	10.350	2151.000	2180.000	66.329%	66.810%
2	15:13:56	58.243%	386.600	9.894	10.410	2155.000	2198.000	66.452%	66.625%
3	15:14:05	57.633%	386.000	9.680	9.867	2132.000	2170.000	66.663%	66.448%
x		58.030%	387.200	9.839	10.210	2146.000	2183.000	66.481%	66.628%
σ		0.344%	1.488	0.140	0.297	12.420	13.870	0.169%	0.181%
%RSD		0.593	0.385	1.423	2.906	0.579	0.635	0.255	0.272

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:13:46	0.966	0.946	1838.000	1706.000	1779.000	59.314%
2	15:13:56	0.868	0.891	1825.000	1708.000	1770.000	59.672%
3	15:14:05	0.911	0.912	1821.000	1705.000	1766.000	59.753%
x		0.915	0.916	1828.000	1707.000	1772.000	59.580%
σ		0.049	0.027	9.061	1.104	6.687	0.233%
%RSD		5.350	2.988	0.496	0.065	0.377	0.391

180-61163-B-13-G 12/6/2016 3:19:49 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:52	70.963%	2.606	43.050	41.900	0.000	784.700	111900.000	111000.000
2	15:19:01	70.296%	2.593	44.470	41.790	0.000	780.600	111600.000	110400.000
3	15:19:10	71.167%	2.699	44.100	41.650	0.000	778.600	111500.000	110900.000
x		70.809%	2.633	43.870	41.780	0.000	781.300	111700.000	110800.000
σ		0.456%	0.058	0.740	0.126	0.000	3.104	221.100	309.200
%RSD		0.644	2.197	1.687	0.301	0.000	0.397	0.198	0.279

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:52	24950.000	3582.000	0.000	4259.000	808600.000	808800.000	63.440%	680.700
2	15:19:01	24950.000	3594.000	0.000	4212.000	806300.000	808300.000	63.647%	679.400
3	15:19:10	25080.000	3491.000	0.000	4225.000	809100.000	810600.000	63.832%	677.700
x		24990.000	3556.000	0.000	4232.000	808000.000	809300.000	63.640%	679.300
σ		74.930	56.720	0.000	24.110	1479.000	1191.000	0.196%	1.541
%RSD		0.300	1.595	0.000	0.570	0.183	0.147	0.308	0.227

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:52	85.460	53.160	2220.000	83880.000	82650.000	38.590	92.660	196.000
2	15:19:01	83.410	52.960	2210.000	81980.000	81370.000	38.200	89.910	195.100
3	15:19:10	82.880	53.140	2218.000	82950.000	80890.000	36.550	88.810	192.900
x		83.920	53.090	2216.000	82930.000	81640.000	37.780	90.460	194.700
σ		1.365	0.111	5.201	952.000	910.500	1.081	1.981	1.596
%RSD		1.627	0.209	0.235	1.148	1.115	2.861	2.190	0.820

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:52	197.900	486.700	479.100	29.070	3.885	4.943	0.000	1549.000
2	15:19:01	195.300	478.400	451.100	28.880	4.245	8.206	0.000	1514.000
3	15:19:10	196.500	478.400	452.600	28.410	3.880	9.604	0.000	1546.000
x		196.600	481.200	460.900	28.790	4.003	7.585	0.000	1536.000
σ		1.327	4.759	15.780	0.344	0.209	2.392	0.000	19.050
%RSD		0.675	0.989	3.423	1.194	5.223	31.540	0.000	1.240

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:52	82.626%	6.960	7.267	57.170%	0.436	0.289	1.382	3.111
2	15:19:01	83.736%	7.425	7.274	57.300%	0.458	0.259	1.763	2.487
3	15:19:10	82.527%	6.767	7.668	57.099%	0.383	0.330	1.588	2.755
x		82.963%	7.050	7.403	57.190%	0.426	0.293	1.578	2.785
σ		0.671%	0.338	0.230	0.102%	0.039	0.036	0.191	0.313
%RSD		0.809	4.795	3.103	0.178	9.127	12.250	12.080	11.240

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:52	58.412%	74.390	4.879	4.054	703.000	703.400	67.221%	66.926%
2	15:19:01	59.634%	72.980	4.772	3.987	685.300	706.600	66.870%	67.564%
3	15:19:10	58.302%	73.100	4.371	4.295	686.200	704.000	66.291%	67.233%
x		58.783%	73.490	4.674	4.112	691.500	704.600	66.794%	67.241%
σ		0.739%	0.784	0.268	0.162	9.959	1.701	0.470%	0.319%
%RSD		1.257	1.066	5.732	3.945	1.440	0.242	0.704	0.475

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:52	0.883	0.947	442.200	409.700	424.200	61.434%
2	15:19:01	1.069	0.930	445.400	415.200	428.100	60.735%
3	15:19:10	0.936	1.002	442.500	409.000	424.000	61.345%
x		0.963	0.960	443.400	411.300	425.400	61.171%
σ		0.096	0.038	1.758	3.359	2.331	0.380%
%RSD		9.938	3.924	0.397	0.817	0.548	0.622

180-61163-C-14-E 12/6/2016 3:24:54 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:23:58	72.078%	5.244	16.100	15.810	0.000	455.800	17790.000	17750.000
2	15:24:07	73.295%	5.328	16.570	16.120	0.000	456.900	17730.000	17800.000
3	15:24:17	75.652%	5.210	15.760	15.800	0.000	452.900	17850.000	17760.000
x		73.675%	5.261	16.140	15.910	0.000	455.200	17790.000	17770.000
σ		1.817%	0.061	0.406	0.179	0.000	2.072	61.070	27.330
%RSD		2.467	1.155	2.517	1.126	0.000	0.455	0.343	0.154
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:23:58	71520.000	3425.000	0.000	5320.000	46970.000	46650.000	65.281%	683.100
2	15:24:07	71710.000	3379.000	0.000	5310.000	47410.000	46600.000	65.735%	672.400
3	15:24:17	71480.000	3338.000	0.000	5329.000	46910.000	46630.000	66.366%	675.800
x		71570.000	3381.000	0.000	5320.000	47100.000	46620.000	65.794%	677.100
σ		125.600	43.520	0.000	9.227	276.600	27.210	0.545%	5.446
%RSD		0.176	1.287	0.000	0.173	0.587	0.058	0.828	0.804
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:23:58	157.100	95.160	5248.000	184900.000	181000.000	61.720	115.300	163.300
2	15:24:07	158.800	95.170	5226.000	180900.000	182100.000	60.470	108.900	163.700
3	15:24:17	163.600	95.400	5227.000	179000.000	179100.000	61.480	112.700	161.900
x		159.800	95.240	5234.000	181600.000	180800.000	61.220	112.300	163.000
σ		3.366	0.138	12.630	3050.000	1511.000	0.662	3.185	0.962
%RSD		2.106	0.145	0.241	1.680	0.836	1.081	2.836	0.591
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:23:58	162.300	534.700	510.500	69.070	6.000	3.056	0.000	175.000
2	15:24:07	164.400	541.400	519.900	69.670	5.661	6.501	0.000	176.200
3	15:24:17	163.100	539.700	511.000	68.560	7.684	10.600	0.000	179.800
x		163.300	538.600	513.800	69.100	6.448	6.718	0.000	177.000
σ		1.052	3.513	5.306	0.552	1.083	3.775	0.000	2.512
%RSD		0.645	0.652	1.033	0.799	16.790	56.190	0.000	1.419
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:23:58	104.538%	6.020	6.267	63.454%	0.462	0.653	2.644	3.694
2	15:24:07	104.049%	5.612	6.556	63.012%	0.628	0.572	3.008	3.297
3	15:24:17	104.267%	5.062	6.074	63.851%	0.543	0.481	2.186	3.026
x		104.285%	5.565	6.299	63.439%	0.544	0.568	2.613	3.339
σ		0.245%	0.481	0.242	0.420%	0.083	0.086	0.412	0.336
%RSD		0.235	8.643	3.845	0.662	15.220	15.120	15.760	10.060
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:23:58	62.758%	41.130	4.619	5.222	800.100	813.200	71.838%	71.258%
2	15:24:07	63.305%	39.580	4.679	4.277	799.300	818.300	72.232%	70.851%
3	15:24:17	63.488%	41.900	4.507	5.019	819.200	836.100	71.320%	70.600%
x		63.184%	40.870	4.601	4.839	806.200	822.500	71.797%	70.903%
σ		0.380%	1.184	0.087	0.498	11.260	11.990	0.458%	0.332%
%RSD		0.601	2.898	1.899	10.280	1.397	1.458	0.637	0.468
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:23:58	1.542	1.553	515.400	478.100	495.100	66.097%		
2	15:24:07	1.688	1.609	522.000	486.600	501.300	65.159%		
3	15:24:17	1.364	1.409	499.300	461.100	478.000	68.863%		
x		1.531	1.524	512.200	475.300	491.400	66.707%		
σ		0.162	0.103	11.670	12.990	12.060	1.926%		
%RSD		10.590	6.766	2.279	2.734	2.454	2.887		

180-61163-C-15-D 12/6/2016 3:30:02 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:05	72.714%	6.075	21.980	22.810	0.000	563.800	38710.000	38360.000
2	15:29:15	70.344%	6.087	25.780	23.020	0.000	566.400	38710.000	38320.000
3	15:29:24	71.066%	6.319	21.790	22.470	0.000	570.400	39050.000	38540.000
x		71.375%	6.160	23.180	22.770	0.000	566.900	38820.000	38410.000
σ		1.215%	0.137	2.250	0.275	0.000	3.347	195.400	118.100
%RSD		1.702	2.228	9.705	1.210	0.000	0.590	0.503	0.308
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:05	84960.000	3512.000	0.000	6774.000	147400.000	153600.000	66.212%	826.000
2	15:29:15	85330.000	3648.000	0.000	6790.000	147800.000	153300.000	66.205%	826.800
3	15:29:24	85940.000	3522.000	0.000	6846.000	148900.000	154600.000	65.908%	828.100
x		85410.000	3561.000	0.000	6803.000	148000.000	153900.000	66.108%	827.000
σ		496.600	76.080	0.000	37.970	755.800	684.300	0.174%	1.063
%RSD		0.581	2.137	0.000	0.558	0.511	0.445	0.263	0.129
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:05	180.700	132.700	5736.000	198000.000	197400.000	73.160	137.300	270.500
2	15:29:15	178.700	131.900	5718.000	198500.000	196100.000	73.890	133.900	272.800
3	15:29:24	177.900	132.100	5775.000	198100.000	195600.000	72.560	136.300	274.800
x		179.100	132.300	5743.000	198200.000	196400.000	73.200	135.800	272.700
σ		1.476	0.419	28.880	267.300	953.700	0.667	1.749	2.143
%RSD		0.824	0.317	0.503	0.135	0.486	0.911	1.287	0.786
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:05	274.700	1031.000	992.300	87.000	6.656	10.620	0.000	423.300
2	15:29:15	274.600	1032.000	984.900	86.500	7.367	13.080	0.000	430.600
3	15:29:24	274.000	1041.000	988.000	84.890	7.192	8.881	0.000	428.600
x		274.400	1035.000	988.400	86.130	7.072	10.860	0.000	427.500
σ		0.403	4.972	3.720	1.106	0.371	2.109	0.000	3.772
%RSD		0.147	0.481	0.376	1.285	5.244	19.420	0.000	0.882
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:05	104.471%	10.200	11.080	60.411%	0.658	0.644	3.043	4.484
2	15:29:15	103.863%	9.760	10.140	60.356%	0.595	0.669	3.836	4.026
3	15:29:24	102.975%	9.857	10.950	60.323%	0.717	0.563	3.795	3.829
x		103.770%	9.941	10.720	60.364%	0.657	0.625	3.558	4.113
σ		0.753%	0.234	0.513	0.045%	0.061	0.056	0.447	0.336
%RSD		0.725	2.354	4.780	0.074	9.338	8.879	12.560	8.169
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:05	61.609%	50.780	8.020	8.219	1148.000	1144.000	69.000%	69.424%
2	15:29:15	61.843%	51.770	8.737	8.198	1151.000	1158.000	69.330%	68.468%
3	15:29:24	61.308%	50.140	8.025	8.679	1145.000	1152.000	70.356%	69.996%
x		61.586%	50.900	8.261	8.365	1148.000	1151.000	69.562%	69.296%
σ		0.268%	0.819	0.413	0.272	3.137	6.727	0.707%	0.772%
%RSD		0.436	1.608	4.993	3.250	0.273	0.584	1.017	1.114
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:29:05	2.040	1.922	1306.000	1226.000	1266.000	63.012%		
2	15:29:15	1.818	1.831	1269.000	1183.000	1224.000	65.860%		
3	15:29:24	1.828	1.936	1329.000	1235.000	1283.000	62.201%		
x		1.895	1.896	1301.000	1214.000	1258.000	63.691%		
σ		0.126	0.057	30.270	27.920	30.270	1.922%		
%RSD		6.625	3.005	2.327	2.299	2.406	3.017		

180-61163-C-16-D 12/6/2016 3:35:10 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:12	70.248%	3.213	21.520	22.450	0.000	1121.000	36390.000	36030.000
2	15:34:22	69.972%	3.014	24.620	22.130	0.000	1120.000	36370.000	36100.000
3	15:34:31	70.109%	3.314	22.420	22.130	0.000	1123.000	35840.000	36180.000
x		70.109%	3.181	22.850	22.240	0.000	1121.000	36200.000	36100.000
σ		0.138%	0.153	1.597	0.186	0.000	1.750	313.400	75.310
%RSD		0.197	4.800	6.986	0.838	0.000	0.156	0.866	0.209

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:12	30690.000	3658.000	0.000	4046.000	516500.000	524700.000	63.335%	1681.000
2	15:34:22	30810.000	3572.000	0.000	4036.000	521800.000	526800.000	63.160%	1680.000
3	15:34:31	30780.000	3544.000	0.000	4064.000	522100.000	528000.000	62.843%	1669.000
x		30760.000	3591.000	0.000	4049.000	520100.000	526500.000	63.113%	1676.000
σ		63.660	59.610	0.000	14.170	3173.000	1630.000	0.249%	6.295
%RSD		0.207	1.660	0.000	0.350	0.610	0.310	0.395	0.376

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:12	120.900	64.780	1807.000	96290.000	94410.000	36.020	84.320	194.900
2	15:34:22	117.600	63.470	1811.000	95600.000	93460.000	36.010	83.770	187.300
3	15:34:31	119.500	63.320	1823.000	95960.000	93910.000	36.100	84.000	196.500
x		119.300	63.850	1814.000	95950.000	93930.000	36.040	84.030	192.900
σ		1.636	0.803	8.427	343.100	476.500	0.052	0.280	4.874
%RSD		1.371	1.258	0.465	0.358	0.507	0.145	0.333	2.527

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:12	193.000	449.600	422.700	46.490	7.136	7.825	0.000	1243.000
2	15:34:22	190.400	452.800	428.400	47.160	5.930	8.733	0.000	1228.000
3	15:34:31	188.900	460.600	426.500	46.270	6.566	5.978	0.000	1215.000
x		190.800	454.300	425.900	46.640	6.544	7.512	0.000	1229.000
σ		2.036	5.667	2.891	0.465	0.604	1.404	0.000	14.310
%RSD		1.067	1.247	0.679	0.997	9.225	18.690	0.000	1.165

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:12	78.263%	11.330	11.470	57.371%	0.474	0.429	4.440	4.742
2	15:34:22	79.857%	11.480	12.490	57.174%	0.408	0.390	3.205	4.571
3	15:34:31	80.990%	11.200	12.320	57.633%	0.514	0.449	3.803	4.457
x		79.703%	11.340	12.090	57.392%	0.465	0.423	3.816	4.590
σ		1.370%	0.139	0.544	0.231%	0.053	0.030	0.618	0.143
%RSD		1.719	1.222	4.503	0.402	11.490	7.121	16.190	3.117

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:12	58.791%	44.720	4.778	5.320	736.600	752.100	67.107%	66.895%
2	15:34:22	58.588%	45.340	4.779	4.739	749.900	748.300	67.397%	67.507%
3	15:34:31	60.175%	43.670	4.940	4.289	736.300	737.400	67.069%	67.659%
x		59.185%	44.580	4.833	4.783	740.900	745.900	67.191%	67.354%
σ		0.863%	0.844	0.093	0.517	7.781	7.622	0.179%	0.405%
%RSD		1.459	1.894	1.931	10.800	1.050	1.022	0.267	0.601

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:12	1.264	1.290	540.600	503.300	520.600	62.211%
2	15:34:22	1.100	1.329	532.900	498.200	514.200	63.558%
3	15:34:31	1.254	1.297	540.100	503.500	520.900	62.677%
x		1.206	1.305	537.900	501.700	518.600	62.815%
σ		0.092	0.021	4.321	2.967	3.791	0.684%
%RSD		7.612	1.577	0.803	0.591	0.731	1.089

CCV 2136057 12/6/2016 3:43:37 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:42:40	75.424%	104.600	96.290	96.010	0.000	50850.000	51100.000	50760.000
2	15:42:50	73.798%	105.900	97.120	95.530	0.000	50550.000	50610.000	50500.000
3	15:42:59	76.633%	101.200	91.530	95.320	0.000	50570.000	50600.000	50480.000
x		75.285%	103.895%	94.980%	95.620%	0.000	101.312%	101.542%	101.165%
σ		1.422%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.889	2.329	3.175	0.369	0.000	0.332	0.566	0.310
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:42:40	537.400	5407.000	0.000	48880.000	49520.000	48880.000	67.995%	107.000
2	15:42:50	536.800	5433.000	0.000	48660.000	49410.000	48580.000	67.898%	110.000
3	15:42:59	540.900	5382.000	0.000	48650.000	49360.000	48780.000	68.302%	106.900
x		107.673%	108.145%	0.000	97.463%	98.859%	97.494%	68.065%	108.005%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.211%	n/a
%RSD		0.407	0.467	0.000	0.259	0.173	0.305	0.310	1.639
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:42:40	102.300	101.200	468.400	25630.000	25070.000	99.870	103.300	98.340
2	15:42:50	104.200	101.000	471.500	26050.000	25230.000	99.890	100.800	99.950
3	15:42:59	103.300	100.200	469.500	25710.000	25160.000	98.680	98.480	100.200
x		103.277%	100.812%	93.957%	103.195%	100.615%	99.481%	100.868%	99.505%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.914	0.502	0.332	0.867	0.317	0.700	2.406	1.022
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:42:40	95.280	92.660	92.390	94.390	96.400	84.270	0.000	95.270
2	15:42:50	102.600	98.020	92.610	97.580	98.790	102.700	0.000	94.840
3	15:42:59	98.780	95.740	93.420	95.890	89.320	90.090	0.000	94.750
x		98.898%	95.474%	92.806%	95.953%	94.838%	92.362%	0.000	94.952%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		3.720	2.816	0.586	1.661	5.196	10.220	0.000	0.298
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:42:40	72.204%	98.900	100.200	64.401%	93.810	93.280	91.920	93.420
2	15:42:50	71.751%	101.300	101.600	64.268%	91.650	92.790	98.780	96.260
3	15:42:59	72.163%	100.800	101.500	64.431%	92.540	92.900	93.540	94.390
x		72.039%	100.308%	101.128%	64.366%	92.667%	92.991%	94.746%	94.688%
σ		0.251%	n/a	n/a	0.087%	n/a	n/a	n/a	n/a
%RSD		0.348	1.241	0.753	0.135	1.174	0.277	3.783	1.521
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:42:40	65.588%	97.210	101.500	97.940	102.100	101.600	68.069%	67.865%
2	15:42:50	65.921%	98.770	97.660	96.830	98.950	100.500	69.615%	68.193%
3	15:42:59	65.871%	100.900	97.700	99.790	106.400	106.400	68.802%	68.605%
x		65.793%	98.944%	98.945%	98.186%	102.504%	102.814%	68.829%	68.221%
σ		0.180%	n/a	n/a	n/a	n/a	n/a	0.773%	0.371%
%RSD		0.273	1.849	2.213	1.521	3.668	3.041	1.123	0.544
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:42:40	99.070	97.720	96.620	97.220	96.450	67.773%		
2	15:42:50	97.700	98.880	98.390	97.920	98.400	67.494%		
3	15:42:59	98.230	98.150	97.490	99.080	97.380	67.705%		
x		98.333%	98.253%	97.501%	98.073%	97.412%	67.658%		
σ		n/a	n/a	n/a	n/a	n/a	0.146%		
%RSD		0.700	0.598	0.912	0.961	1.002	0.215		

CCB7 12/6/2016 3:48:45 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:47:49	90.741%	0.163	-0.496	-0.527	0.000	50.060	60.340	58.790
2	15:47:59	91.058%	0.204	-0.347	-0.451	0.000	50.720	60.210	62.260
3	15:48:08	92.391%	0.224	-0.789	-0.690	0.000	48.910	57.240	58.130
x		91.397%	0.197	-0.544	-0.556	0.000	49.900	59.260	59.730
σ		0.876%	0.031	0.225	0.122	0.000	0.915	1.749	2.220
%RSD		0.958	15.800	41.260	21.950	0.000	1.834	2.951	3.718
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:47:49	11.070	-4.402	0.000	10.960	86.010	144.600	92.197%	0.065
2	15:47:59	11.170	-3.895	0.000	12.910	64.200	151.200	91.594%	0.090
3	15:48:08	10.530	-5.512	0.000	12.040	79.360	147.400	92.358%	0.208
x		10.920	-4.603	0.000	11.970	76.520	147.700	92.050%	0.121
σ		0.347	0.827	0.000	0.977	11.180	3.333	0.403%	0.076
%RSD		3.178	17.970	0.000	8.159	14.610	2.256	0.437	62.850
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:47:49	0.138	0.136	2.125	46.620	52.110	0.155	0.226	0.284
2	15:47:59	0.115	0.130	2.225	46.390	42.770	0.182	0.194	0.035
3	15:48:08	-0.063	0.129	2.145	46.580	45.150	0.147	0.194	0.012
x		0.063	0.132	2.165	46.530	46.680	0.161	0.205	0.111
σ		0.110	0.004	0.053	0.126	4.854	0.019	0.019	0.151
%RSD		173.300	2.836	2.451	0.271	10.400	11.650	9.145	136.500
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:47:49	0.207	0.300	0.496	0.058	0.174	0.761	0.000	0.437
2	15:47:59	0.138	0.083	0.444	0.137	0.409	1.039	0.000	0.671
3	15:48:08	0.282	0.040	0.280	0.183	-0.055	-0.006	0.000	0.458
x		0.209	0.141	0.407	0.126	0.176	0.598	0.000	0.522
σ		0.072	0.139	0.113	0.063	0.232	0.541	0.000	0.129
%RSD		34.490	98.580	27.670	50.370	131.600	90.460	0.000	24.800
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:47:49	89.149%	-0.098	-0.347	77.842%	0.060	0.057	0.195	0.109
2	15:47:59	88.610%	-0.093	-0.354	77.328%	0.144	0.097	0.219	0.158
3	15:48:08	87.076%	-0.292	-0.312	77.619%	0.134	0.091	0.069	0.059
x		88.278%	-0.161	-0.338	77.596%	0.113	0.081	0.161	0.109
σ		1.076%	0.113	0.022	0.258%	0.046	0.022	0.081	0.050
%RSD		1.218	70.460	6.644	0.332	40.830	26.650	50.270	45.760
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:47:49	78.051%	0.357	0.284	0.318	0.246	0.455	78.416%	78.694%
2	15:47:59	78.752%	0.254	0.312	0.354	0.485	0.449	79.997%	77.974%
3	15:48:08	78.792%	0.230	0.216	0.184	0.293	0.399	78.907%	78.055%
x		78.532%	0.280	0.271	0.285	0.341	0.434	79.106%	78.241%
σ		0.417%	0.067	0.049	0.089	0.127	0.031	0.809%	0.395%
%RSD		0.531	24.080	18.260	31.330	37.130	7.062	1.023	0.504
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:47:49	0.106	0.115	0.138	0.118	0.154	80.101%		
2	15:47:59	0.110	0.109	0.151	0.133	0.160	79.985%		
3	15:48:08	0.081	0.090	0.174	0.163	0.155	79.407%		
x		0.099	0.105	0.155	0.138	0.156	79.831%		
σ		0.016	0.013	0.018	0.023	0.003	0.372%		
%RSD		15.800	12.150	11.860	16.530	1.974	0.465		

MB 180-196280/1-A 12/6/2016 3:53:52 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:52:56	82.909%	0.001	-0.908	-0.872	0.000	4.624	4.585	6.490
2	15:53:05	81.464%	0.091	-0.803	-0.652	0.000	5.594	3.680	5.585
3	15:53:15	79.632%	0.019	-0.820	-0.685	0.000	6.717	5.779	6.661
x		81.335%	0.037	-0.844	-0.736	0.000	5.645	4.681	6.245
σ		1.642%	0.047	0.056	0.119	0.000	1.047	1.053	0.578
%RSD		2.019	128.600	6.668	16.150	0.000	18.560	22.490	9.254

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:52:56	0.308	3.194	0.000	61.220	2.352	7.211	71.047%	-0.264
2	15:53:05	0.362	4.986	0.000	61.980	71.420	11.950	70.416%	-0.019
3	15:53:15	0.295	5.357	0.000	68.100	8.161	12.590	69.558%	-0.122
x		0.322	4.513	0.000	63.770	27.310	10.580	70.341%	-0.135
σ		0.036	1.157	0.000	3.776	38.310	2.936	0.747%	0.123
%RSD		11.070	25.630	0.000	5.921	140.300	27.750	1.063	91.000

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:52:56	0.183	0.018	0.304	4.710	-1.781	0.006	0.120	0.024
2	15:53:05	0.127	0.037	0.361	4.483	6.042	0.029	-0.010	0.069
3	15:53:15	-0.103	0.037	0.311	3.908	7.778	-0.005	0.121	0.056
x		0.069	0.031	0.325	4.367	4.013	0.010	0.077	0.050
σ		0.152	0.011	0.031	0.413	5.092	0.017	0.076	0.023
%RSD		219.800	36.280	9.401	9.456	126.900	176.900	98.170	47.400

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:52:56	0.021	0.726	1.031	0.036	-0.026	0.288	0.000	0.001
2	15:53:05	0.081	0.445	0.466	0.036	0.264	0.214	0.000	0.001
3	15:53:15	0.052	0.507	0.684	0.065	-0.172	1.247	0.000	0.027
x		0.052	0.559	0.727	0.046	0.022	0.583	0.000	0.009
σ		0.030	0.148	0.285	0.016	0.222	0.576	0.000	0.015
%RSD		58.520	26.390	39.240	35.900	1014.000	98.880	0.000	161.500

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:52:56	70.822%	-0.662	-0.726	70.741%	-0.008	-0.007	-0.007	-0.021
2	15:53:05	71.817%	-0.683	-0.772	70.402%	-0.003	-0.001	-0.007	-0.021
3	15:53:15	71.495%	-0.722	-0.772	70.898%	-0.003	-0.012	-0.007	-0.021
x		71.378%	-0.689	-0.757	70.680%	-0.005	-0.006	-0.007	-0.021
σ		0.508%	0.031	0.027	0.253%	0.003	0.006	0.000	0.000
%RSD		0.711	4.432	3.514	0.358	67.640	85.000	0.244	0.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:52:56	70.668%	-0.112	0.042	0.046	0.000	0.037	71.579%	71.199%
2	15:53:05	70.689%	0.024	0.016	0.013	0.000	0.038	70.237%	70.706%
3	15:53:15	69.814%	-0.070	-0.020	0.048	0.000	-0.021	71.327%	70.825%
x		70.390%	-0.053	0.013	0.036	0.000	0.018	71.048%	70.910%
σ		0.499%	0.070	0.031	0.020	0.000	0.034	0.713%	0.257%
%RSD		0.709	131.900	243.200	54.880	0.000	185.000	1.004	0.362

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:52:56	-0.006	0.001	0.073	0.058	0.074	71.625%
2	15:53:05	-0.018	-0.007	0.102	0.053	0.077	71.814%
3	15:53:15	-0.014	-0.001	0.093	0.064	0.076	71.394%
x		-0.013	-0.002	0.089	0.058	0.076	71.611%
σ		0.006	0.004	0.015	0.006	0.002	0.210%
%RSD		49.960	178.400	16.510	9.545	2.190	0.294

LCS 180-196280/2-A 12/6/2016 3:59:00 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:58:03	72.311%	52.660	1002.000	1006.000	0.000	52320.000	53050.000	52610.000
2	15:58:13	70.999%	53.890	995.400	1014.000	0.000	52470.000	52950.000	52320.000
3	15:58:22	73.211%	53.020	982.300	995.600	0.000	52760.000	53260.000	52570.000
x		72.174%	53.190	993.300	1005.000	0.000	52510.000	53090.000	52500.000
σ		1.112%	0.632	10.200	9.249	0.000	222.900	157.800	153.200
%RSD		1.541	1.187	1.026	0.920	0.000	0.424	0.297	0.292
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:58:03	2108.000	10810.000	0.000	50000.000	51030.000	50500.000	65.197%	1039.000
2	15:58:13	2113.000	10780.000	0.000	50250.000	51830.000	50320.000	64.859%	1033.000
3	15:58:22	2111.000	10640.000	0.000	50320.000	50890.000	50460.000	64.838%	1050.000
x		2111.000	10750.000	0.000	50190.000	51250.000	50430.000	64.965%	1041.000
σ		2.596	90.550	0.000	167.100	508.700	95.580	0.202%	8.427
%RSD		0.123	0.843	0.000	0.333	0.993	0.190	0.310	0.810
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:58:03	544.600	209.900	476.400	972.900	1098.000	520.800	525.200	263.200
2	15:58:13	556.800	212.000	477.100	978.500	1058.000	526.900	530.900	268.400
3	15:58:22	543.400	212.600	478.900	981.000	1037.000	528.100	531.200	270.000
x		548.300	211.500	477.500	977.500	1064.000	525.200	529.100	267.200
σ		7.402	1.411	1.266	4.148	30.730	3.930	3.367	3.543
%RSD		1.350	0.667	0.265	0.424	2.887	0.748	0.636	1.326
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:58:03	273.200	510.000	464.100	41.100	12.700	16.340	0.000	1009.000
2	15:58:13	267.200	511.600	466.500	40.880	9.461	13.860	0.000	1007.000
3	15:58:22	267.700	503.900	480.700	43.230	13.010	7.684	0.000	1025.000
x		269.400	508.500	470.400	41.740	11.720	12.630	0.000	1014.000
σ		3.347	4.056	8.970	1.301	1.965	4.456	0.000	9.729
%RSD		1.243	0.798	1.907	3.118	16.760	35.290	0.000	0.960
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:58:03	65.392%	1090.000	1095.000	62.991%	49.190	49.290	50.590	87.830
2	15:58:13	64.644%	1090.000	1104.000	62.309%	49.790	49.840	51.700	88.030
3	15:58:22	63.526%	1106.000	1098.000	61.627%	49.790	49.670	51.440	87.060
x		64.521%	1095.000	1099.000	62.309%	49.590	49.600	51.240	87.640
σ		0.939%	9.077	4.635	0.682%	0.347	0.283	0.582	0.510
%RSD		1.456	0.829	0.422	1.095	0.700	0.570	1.136	0.582
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:58:03	63.754%	2020.000	512.300	513.000	2027.000	2061.000	68.646%	68.565%
2	15:58:13	62.272%	2074.000	520.200	520.300	2037.000	2084.000	68.043%	67.730%
3	15:58:22	61.872%	2060.000	515.800	511.300	2049.000	2074.000	67.520%	68.380%
x		62.633%	2052.000	516.100	514.900	2037.000	2073.000	68.070%	68.225%
σ		0.991%	27.960	3.969	4.802	11.090	11.920	0.563%	0.439%
%RSD		1.582	1.363	0.769	0.933	0.545	0.575	0.827	0.643
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:58:03	50.910	50.570	20.480	20.730	20.590	66.983%		
2	15:58:13	51.490	51.540	20.860	21.320	20.970	66.672%		
3	15:58:22	51.300	50.890	20.270	20.350	20.210	67.103%		
x		51.240	51.000	20.540	20.800	20.590	66.919%		
σ		0.293	0.493	0.296	0.490	0.384	0.222%		
%RSD		0.572	0.966	1.439	2.356	1.863	0.332		

180-61317-J-1-B 12/6/2016 4:04:05 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:10	72.077%	0.046	1415.000	1433.000	0.000	7432.000	24890.000	24950.000
2	16:03:19	71.447%	0.055	1447.000	1446.000	0.000	7529.000	24990.000	25020.000
3	16:03:29	68.895%	0.100	1457.000	1496.000	0.000	7652.000	25410.000	25320.000
x		70.806%	0.067	1440.000	1458.000	0.000	7538.000	25100.000	25100.000
σ		1.685%	0.029	21.980	32.910	0.000	110.300	275.100	195.100
%RSD		2.379	43.620	1.526	2.256	0.000	1.463	1.096	0.777

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:10	22.160	6347.000	0.000	5166.000	182200.000	188500.000	64.323%	0.883
2	16:03:19	21.560	6347.000	0.000	5163.000	183100.000	189300.000	63.665%	1.165
3	16:03:29	23.150	6485.000	0.000	5292.000	186400.000	192200.000	62.785%	1.159
x		22.290	6393.000	0.000	5207.000	183900.000	190000.000	63.591%	1.069
σ		0.800	80.010	0.000	73.670	2194.000	1953.000	0.771%	0.161
%RSD		3.591	1.252	0.000	1.415	1.193	1.028	1.213	15.080

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:10	0.126	0.023	6349.000	86.080	122.100	4.206	7.870	0.231
2	16:03:19	-0.070	0.168	6387.000	84.340	181.300	4.343	8.937	0.287
3	16:03:29	0.370	0.149	6480.000	84.680	173.600	4.014	8.873	0.167
x		0.142	0.113	6405.000	85.030	159.000	4.187	8.560	0.228
σ		0.221	0.079	67.210	0.921	32.220	0.165	0.598	0.060
%RSD		155.400	69.700	1.049	1.084	20.260	3.947	6.987	26.350

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:10	0.306	9.604	9.697	0.409	-0.007	4.516	0.000	881.500
2	16:03:19	0.277	8.577	10.640	0.221	0.497	2.986	0.000	895.100
3	16:03:29	0.174	9.463	9.133	0.236	-0.006	5.699	0.000	866.900
x		0.252	9.215	9.822	0.289	0.161	4.400	0.000	881.200
σ		0.069	0.556	0.759	0.105	0.291	1.360	0.000	14.130
%RSD		27.490	6.039	7.729	36.190	180.400	30.920	0.000	1.603

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:10	62.366%	1.605	1.669	61.360%	0.006	-0.016	-0.007	0.092
2	16:03:19	61.575%	1.217	1.255	60.917%	-0.007	-0.016	0.186	0.170
3	16:03:29	62.513%	1.041	1.046	60.948%	0.006	-0.029	0.025	0.067
x		62.151%	1.288	1.323	61.075%	0.002	-0.020	0.068	0.110
σ		0.504%	0.289	0.317	0.247%	0.007	0.007	0.103	0.054
%RSD		0.811	22.430	23.960	0.405	433.500	36.380	151.300	48.970

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:10	62.349%	1.187	0.006	-0.014	32.160	38.240	68.123%	68.392%
2	16:03:19	61.343%	1.131	0.028	-0.001	31.620	35.770	67.805%	68.222%
3	16:03:29	62.233%	0.822	0.097	-0.026	33.040	34.040	67.770%	67.952%
x		61.975%	1.047	0.044	-0.014	32.270	36.020	67.899%	68.189%
σ		0.550%	0.197	0.048	0.013	0.715	2.114	0.195%	0.222%
%RSD		0.888	18.790	108.200	94.750	2.216	5.869	0.287	0.325

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:10	0.072	0.128	0.086	0.072	0.098	69.173%
2	16:03:19	0.080	0.102	0.141	0.127	0.102	69.489%
3	16:03:29	0.124	0.084	0.096	0.072	0.090	68.956%
x		0.092	0.105	0.108	0.091	0.097	69.206%
σ		0.028	0.022	0.029	0.032	0.006	0.268%
%RSD		30.280	21.200	26.900	35.090	6.601	0.388

LCS 180-196309/2-A 12/6/2016 4:09:11 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:16	68.448%	49.900	986.100	991.100	0.000	51040.000	51460.000	51380.000
2	16:08:25	69.604%	50.840	962.400	975.100	0.000	50600.000	50970.000	50870.000
3	16:08:35	70.226%	50.910	976.500	978.100	0.000	51050.000	51450.000	51540.000
x		69.426%	50.550	975.000	981.500	0.000	50890.000	51290.000	51260.000
σ		0.902%	0.566	11.940	8.520	0.000	258.000	280.700	351.200
%RSD		1.300	1.121	1.224	0.868	0.000	0.507	0.547	0.685
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:16	2042.000	8287.000	0.000	49470.000	50610.000	49160.000	59.903%	1041.000
2	16:08:25	2031.000	8286.000	0.000	49420.000	50480.000	48970.000	60.719%	1038.000
3	16:08:35	2055.000	8158.000	0.000	49730.000	50050.000	49280.000	60.964%	1051.000
x		2043.000	8244.000	0.000	49540.000	50380.000	49140.000	60.529%	1043.000
σ		12.260	74.480	0.000	166.700	291.900	156.200	0.555%	6.651
%RSD		0.600	0.904	0.000	0.337	0.579	0.318	0.918	0.638
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:16	514.500	201.300	485.700	943.600	981.000	506.900	522.600	263.000
2	16:08:25	510.800	201.600	483.000	946.300	1123.000	496.400	501.400	255.300
3	16:08:35	509.700	200.600	483.700	952.200	1007.000	506.900	506.600	255.000
x		511.700	201.200	484.200	947.400	1037.000	503.400	510.200	257.800
σ		2.511	0.482	1.436	4.374	75.420	6.059	11.010	4.546
%RSD		0.491	0.240	0.297	0.462	7.274	1.204	2.158	1.763
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:16	264.100	481.100	464.100	39.970	10.400	12.290	0.000	973.600
2	16:08:25	260.500	478.800	447.300	39.780	7.389	12.280	0.000	984.800
3	16:08:35	263.700	473.500	434.600	39.000	8.587	10.910	0.000	983.900
x		262.800	477.800	448.600	39.580	8.791	11.830	0.000	980.800
σ		1.996	3.918	14.810	0.514	1.515	0.796	0.000	6.195
%RSD		0.760	0.820	3.301	1.298	17.240	6.732	0.000	0.632
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:16	58.654%	1087.000	1094.000	58.313%	48.550	49.270	49.240	89.850
2	16:08:25	58.550%	1105.000	1103.000	58.272%	49.540	48.520	49.450	86.920
3	16:08:35	57.215%	1109.000	1098.000	57.879%	49.630	47.830	46.260	86.280
x		58.140%	1100.000	1098.000	58.154%	49.240	48.540	48.320	87.680
σ		0.802%	11.870	4.248	0.240%	0.597	0.724	1.784	1.902
%RSD		1.380	1.079	0.387	0.412	1.213	1.491	3.692	2.169
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:16	57.443%	2024.000	500.600	502.500	1942.000	1985.000	66.008%	66.703%
2	16:08:25	57.460%	2022.000	500.100	502.200	1981.000	2004.000	66.196%	67.219%
3	16:08:35	57.948%	2015.000	498.600	500.000	1969.000	1990.000	67.034%	67.813%
x		57.617%	2020.000	499.800	501.600	1964.000	1993.000	66.412%	67.245%
σ		0.287%	4.601	0.994	1.387	20.170	9.925	0.546%	0.555%
%RSD		0.497	0.228	0.199	0.277	1.027	0.498	0.822	0.826
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:08:16	51.010	50.690	20.090	21.070	20.520	66.015%		
2	16:08:25	51.380	51.640	20.940	20.480	20.620	65.891%		
3	16:08:35	49.000	48.550	19.400	19.220	19.260	69.790%		
x		50.460	50.290	20.140	20.260	20.130	67.232%		
σ		1.282	1.582	0.776	0.946	0.755	2.216%		
%RSD		2.540	3.146	3.851	4.668	3.750	3.296		

180-60897-C-13-A 12/6/2016 4:14:16 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:19	61.155%	7.898	392.400	405.300	0.000	122800.000	78230.000	78130.000
2	16:13:29	60.796%	7.963	397.600	411.100	0.000	124100.000	78380.000	78760.000
3	16:13:38	60.335%	7.678	399.700	412.100	0.000	124100.000	79080.000	78860.000
x		60.762%	7.846	396.600	409.500	0.000	123700.000	78560.000	78590.000
σ		0.411%	0.149	3.775	3.669	0.000	746.900	451.600	398.400
%RSD		0.676	1.903	0.952	0.896	0.000	0.604	0.575	0.507
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:19	132700.000	7398.000	0.000	33350.000	55750.000	55340.000	68.152%	7738.000
2	16:13:29	133400.000	7420.000	0.000	33710.000	56600.000	55440.000	68.485%	7686.000
3	16:13:38	133800.000	7675.000	0.000	34130.000	57740.000	56070.000	68.143%	7773.000
x		133300.000	7498.000	0.000	33730.000	56700.000	55620.000	68.260%	7732.000
σ		536.000	153.900	0.000	385.800	999.400	392.400	0.195%	44.190
%RSD		0.402	2.053	0.000	1.144	1.763	0.706	0.286	0.572
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:19	463.300	503.100	2667.000	261500.000	263400.000	77.750	227.800	297.000
2	16:13:29	473.300	498.000	2681.000	258900.000	261800.000	77.380	222.500	290.400
3	16:13:38	468.300	500.900	2716.000	261400.000	266400.000	77.200	221.800	298.100
x		468.300	500.600	2688.000	260600.000	263900.000	77.440	224.000	295.200
σ		5.029	2.578	25.400	1431.000	2345.000	0.281	3.281	4.150
%RSD		1.074	0.515	0.945	0.549	0.889	0.362	1.465	1.406
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:19	298.500	1087.000	1050.000	136.200	10.140	42.100	0.000	444.900
2	16:13:29	297.600	1056.000	1026.000	135.000	9.049	32.400	0.000	438.700
3	16:13:38	298.700	1089.000	1050.000	137.500	11.600	32.720	0.000	446.300
x		298.300	1077.000	1042.000	136.200	10.260	35.740	0.000	443.300
σ		0.566	18.540	13.840	1.249	1.280	5.509	0.000	4.056
%RSD		0.190	1.721	1.328	0.917	12.470	15.420	0.000	0.915
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:19	0.000	18.110	16.990	58.714%	5.295	5.194	3.705	5.095
2	16:13:29	0.000	17.150	17.520	59.526%	5.617	4.958	4.945	4.983
3	16:13:38	0.000	16.620	16.000	59.034%	5.174	5.188	4.628	5.192
x		0.000	17.290	16.840	59.091%	5.362	5.113	4.426	5.090
σ		0.000	0.756	0.771	0.409%	0.229	0.134	0.644	0.105
%RSD		0.000	4.373	4.577	0.693	4.272	2.626	14.550	2.054
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:19	59.565%	39.440	2.534	2.269	383.300	399.500	75.540%	76.780%
2	16:13:29	60.101%	38.440	2.040	1.781	396.300	390.300	76.130%	76.915%
3	16:13:38	60.135%	38.020	2.017	1.829	393.300	397.200	76.491%	76.180%
x		59.933%	38.630	2.197	1.960	391.000	395.600	76.054%	76.625%
σ		0.320%	0.729	0.293	0.269	6.817	4.795	0.480%	0.391%
%RSD		0.534	1.888	13.310	13.720	1.744	1.212	0.631	0.510
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:13:19	2.187	2.130	388.700	355.800	371.600	69.784%		
2	16:13:29	2.324	2.425	399.500	363.500	383.000	67.391%		
3	16:13:38	2.250	2.270	406.500	372.700	390.100	66.803%		
x		2.254	2.275	398.200	364.000	381.500	67.993%		
σ		0.069	0.148	8.976	8.493	9.311	1.579%		
%RSD		3.052	6.501	2.254	2.333	2.440	2.322		

180-60897-C-16-A 12/6/2016 4:24:10 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:23:11	60.176%	5.952	292.700	310.500	0.000	120600.000	66960.000	66530.000
2	16:23:21	60.440%	5.935	294.000	311.200	0.000	120200.000	66460.000	66410.000
3	16:23:30	59.525%	6.110	297.000	314.400	0.000	119300.000	66230.000	66260.000
x		60.047%	5.999	294.600	312.000	0.000	120000.000	66550.000	66400.000
σ		0.471%	0.097	2.193	2.098	0.000	663.300	369.500	134.100
%RSD		0.784	1.615	0.745	0.672	0.000	0.553	0.555	0.202

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:23:11	112400.000	3294.000	0.000	30000.000	40260.000	38900.000	67.817%	5816.000
2	16:23:21	112300.000	3272.000	0.000	29790.000	40440.000	38990.000	68.316%	5821.000
3	16:23:30	112100.000	3326.000	0.000	29820.000	40650.000	39040.000	67.906%	5803.000
x		112300.000	3297.000	0.000	29870.000	40450.000	38980.000	68.013%	5813.000
σ		138.600	27.270	0.000	112.800	191.700	69.030	0.266%	9.338
%RSD		0.124	0.827	0.000	0.378	0.474	0.177	0.391	0.161

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:23:11	360.600	428.700	1746.000	205900.000	206200.000	63.250	178.600	435.800
2	16:23:21	371.600	422.000	1738.000	203700.000	206500.000	63.410	181.100	431.400
3	16:23:30	364.300	424.200	1743.000	204700.000	205500.000	61.120	177.100	435.900
x		365.500	424.900	1742.000	204800.000	206100.000	62.590	178.900	434.400
σ		5.599	3.440	3.661	1071.000	546.500	1.274	1.989	2.539
%RSD		1.532	0.810	0.210	0.523	0.265	2.035	1.112	0.585

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:23:11	447.800	1251.000	1198.000	109.400	7.433	19.130	0.000	315.900
2	16:23:21	430.100	1216.000	1188.000	110.000	10.710	20.660	0.000	318.900
3	16:23:30	435.900	1227.000	1198.000	108.300	9.066	30.780	0.000	314.700
x		437.900	1231.000	1194.000	109.200	9.070	23.530	0.000	316.500
σ		8.999	17.980	5.986	0.895	1.639	6.332	0.000	2.176
%RSD		2.055	1.460	0.501	0.819	18.070	26.920	0.000	0.688

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:23:11	0.000	20.920	20.450	59.507%	3.445	3.431	3.012	4.167
2	16:23:21	0.000	22.090	20.870	59.481%	3.494	3.074	3.653	3.581
3	16:23:30	0.000	22.140	21.210	59.675%	3.402	3.550	2.991	3.920
x		0.000	21.720	20.840	59.554%	3.447	3.351	3.219	3.889
σ		0.000	0.691	0.382	0.105%	0.046	0.248	0.376	0.295
%RSD		0.000	3.179	1.830	0.176	1.334	7.400	11.680	7.573

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:23:11	60.052%	30.740	1.086	0.872	328.200	321.400	75.937%	76.391%
2	16:23:21	61.265%	30.060	0.874	1.117	317.600	317.400	76.225%	77.462%
3	16:23:30	59.606%	30.620	1.208	1.145	330.500	326.400	75.997%	76.619%
x		60.308%	30.470	1.056	1.045	325.400	321.800	76.053%	76.824%
σ		0.859%	0.363	0.169	0.150	6.852	4.508	0.152%	0.564%
%RSD		1.424	1.192	16.000	14.370	2.106	1.401	0.200	0.734

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:23:11	2.189	2.021	315.500	286.100	300.700	69.477%
2	16:23:21	2.014	1.992	312.300	286.600	299.200	69.582%
3	16:23:30	1.958	2.090	311.200	281.800	297.500	69.422%
x		2.054	2.034	313.000	284.900	299.200	69.494%
σ		0.120	0.050	2.241	2.634	1.607	0.081%
%RSD		5.854	2.462	0.716	0.925	0.537	0.117

180-60897-E-20-C 12/6/2016 4:28:52 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:27:54	58.813%	5.053	235.400	240.800	0.000	75910.000	53310.000	53610.000
2	16:28:03	56.451%	4.879	237.900	249.000	0.000	75440.000	53200.000	53120.000
3	16:28:13	58.549%	4.757	239.200	243.000	0.000	75740.000	53120.000	53090.000
x		57.938%	4.896	237.500	244.300	0.000	75700.000	53210.000	53270.000
σ		1.294%	0.149	1.907	4.281	0.000	238.100	99.770	295.100
%RSD		2.234	3.042	0.803	1.752	0.000	0.315	0.188	0.554
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:27:54	85760.000	3592.000	0.000	22250.000	158500.000	164100.000	62.531%	5362.000
2	16:28:03	85440.000	3893.000	0.000	22240.000	158100.000	162900.000	62.712%	5273.000
3	16:28:13	85050.000	3691.000	0.000	22310.000	158000.000	163600.000	62.750%	5314.000
x		85420.000	3725.000	0.000	22270.000	158200.000	163500.000	62.664%	5316.000
σ		356.000	153.500	0.000	39.060	283.400	596.800	0.117%	44.510
%RSD		0.417	4.121	0.000	0.175	0.179	0.365	0.187	0.837
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:27:54	309.100	319.800	2020.000	173200.000	174700.000	53.170	149.000	192.900
2	16:28:03	308.900	319.300	2014.000	172800.000	174700.000	52.900	146.200	192.400
3	16:28:13	310.300	318.200	2021.000	171100.000	173900.000	53.760	149.300	193.900
x		309.400	319.100	2018.000	172400.000	174500.000	53.280	148.200	193.100
σ		0.737	0.794	3.830	1099.000	456.100	0.438	1.702	0.771
%RSD		0.238	0.249	0.190	0.638	0.261	0.822	1.149	0.399
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:27:54	193.100	808.600	769.200	88.360	7.012	20.210	0.000	634.200
2	16:28:03	190.900	813.500	772.500	85.060	7.673	24.220	0.000	624.900
3	16:28:13	196.000	784.300	779.600	85.910	8.566	16.340	0.000	630.700
x		193.300	802.100	773.800	86.440	7.750	20.250	0.000	629.900
σ		2.570	15.660	5.307	1.717	0.780	3.941	0.000	4.739
%RSD		1.329	1.952	0.686	1.987	10.060	19.460	0.000	0.752
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:27:54	0.000	13.400	14.810	57.035%	3.173	3.323	2.905	4.190
2	16:28:03	0.000	14.040	14.260	57.410%	2.902	3.179	3.411	3.741
3	16:28:13	0.000	14.410	15.230	57.158%	2.850	2.798	2.973	4.393
x		0.000	13.950	14.770	57.201%	2.975	3.100	3.096	4.108
σ		0.000	0.512	0.489	0.191%	0.173	0.271	0.275	0.334
%RSD		0.000	3.670	3.308	0.334	5.826	8.750	8.866	8.123
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:27:54	57.496%	30.710	1.170	1.310	256.500	261.200	72.802%	74.380%
2	16:28:03	58.385%	29.750	1.172	1.093	257.300	259.700	74.290%	75.844%
3	16:28:13	58.467%	29.490	1.035	1.055	264.200	259.000	73.292%	74.930%
x		58.116%	29.980	1.125	1.153	259.400	259.900	73.462%	75.051%
σ		0.539%	0.646	0.079	0.138	4.237	1.128	0.758%	0.739%
%RSD		0.927	2.154	6.988	11.940	1.634	0.434	1.032	0.985
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:27:54	1.550	1.448	307.500	282.800	295.000	69.076%		
2	16:28:03	1.547	1.444	307.700	280.000	293.200	69.244%		
3	16:28:13	1.564	1.337	309.500	283.200	295.600	68.932%		
x		1.554	1.410	308.200	282.000	294.600	69.084%		
σ		0.009	0.063	1.091	1.746	1.207	0.156%		
%RSD		0.589	4.456	0.354	0.619	0.410	0.226		

180-60897-E-24-B 12/6/2016 4:33:54 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:32:59	58.875%	6.338	336.100	343.500	0.000	119900.000	72160.000	72410.000
2	16:33:09	59.540%	6.183	337.100	342.000	0.000	119300.000	72510.000	72130.000
3	16:33:19	58.942%	6.405	331.800	338.100	0.000	119400.000	72060.000	72190.000
x		59.119%	6.309	335.000	341.200	0.000	119500.000	72240.000	72240.000
σ		0.366%	0.114	2.815	2.788	0.000	342.600	235.900	151.000
%RSD		0.619	1.807	0.840	0.817	0.000	0.287	0.327	0.209
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:32:59	107100.000	2562.000	0.000	29210.000	62060.000	61390.000	66.183%	5562.000
2	16:33:09	107000.000	2534.000	0.000	28970.000	61950.000	61290.000	66.417%	5544.000
3	16:33:19	106200.000	2709.000	0.000	29000.000	61380.000	61100.000	66.462%	5515.000
x		106800.000	2602.000	0.000	29060.000	61790.000	61260.000	66.354%	5540.000
σ		491.900	94.000	0.000	131.500	366.900	143.600	0.150%	23.370
%RSD		0.461	3.613	0.000	0.453	0.594	0.235	0.226	0.422
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:32:59	370.100	404.900	2137.000	218100.000	220500.000	65.730	193.500	286.700
2	16:33:09	371.000	399.400	2137.000	219400.000	221900.000	67.150	190.900	292.100
3	16:33:19	358.300	399.300	2129.000	214800.000	215600.000	66.460	187.200	284.300
x		366.500	401.200	2134.000	217400.000	219300.000	66.450	190.500	287.700
σ		7.074	3.217	4.722	2354.000	3271.000	0.709	3.168	4.003
%RSD		1.930	0.802	0.221	1.083	1.491	1.067	1.663	1.391
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:32:59	291.400	929.800	908.600	106.200	9.949	30.430	0.000	411.000
2	16:33:09	284.100	935.200	890.900	106.100	8.404	29.360	0.000	402.700
3	16:33:19	288.800	913.500	889.000	106.600	8.640	25.750	0.000	405.200
x		288.100	926.200	896.100	106.300	8.998	28.510	0.000	406.300
σ		3.683	11.320	10.820	0.260	0.832	2.449	0.000	4.257
%RSD		1.278	1.222	1.207	0.244	9.251	8.589	0.000	1.048
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:32:59	0.000	15.210	14.570	58.494%	3.648	3.757	4.246	4.594
2	16:33:09	0.000	14.360	14.350	58.665%	4.216	3.938	3.128	4.411
3	16:33:19	0.000	14.450	13.870	57.882%	3.527	3.830	3.619	4.216
x		0.000	14.670	14.260	58.347%	3.797	3.842	3.664	4.407
σ		0.000	0.469	0.357	0.412%	0.368	0.091	0.561	0.189
%RSD		0.000	3.193	2.501	0.706	9.688	2.379	15.300	4.292
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:32:59	59.442%	31.430	0.953	1.111	320.500	322.200	75.462%	77.362%
2	16:33:09	59.991%	30.170	1.027	0.989	317.200	323.500	75.036%	75.986%
3	16:33:19	58.847%	30.690	0.765	1.139	320.000	328.500	73.741%	75.434%
x		59.427%	30.760	0.915	1.080	319.200	324.700	74.746%	76.261%
σ		0.572%	0.632	0.135	0.080	1.796	3.305	0.896%	0.993%
%RSD		0.962	2.055	14.760	7.383	0.563	1.018	1.199	1.302
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:32:59	2.157	2.081	308.700	281.700	295.100	69.295%		
2	16:33:09	2.212	1.979	308.300	281.000	294.100	69.303%		
3	16:33:19	2.076	1.895	301.700	273.400	287.500	70.376%		
x		2.148	1.985	306.200	278.700	292.200	69.658%		
σ		0.068	0.093	3.950	4.617	4.115	0.622%		
%RSD		3.185	4.688	1.290	1.657	1.408	0.892		

180-60897-C-27-C 12/6/2016 4:38:59 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:03	57.931%	7.269	351.800	368.000	0.000	112600.000	73820.000	73890.000
2	16:38:12	58.602%	7.072	346.300	362.300	0.000	113100.000	73870.000	74010.000
3	16:38:22	58.388%	6.222	347.300	362.100	0.000	114000.000	74030.000	74030.000
x		58.307%	6.854	348.500	364.200	0.000	113200.000	73910.000	73980.000
σ		0.343%	0.556	2.905	3.362	0.000	665.000	108.400	74.340
%RSD		0.588	8.118	0.834	0.923	0.000	0.587	0.147	0.101

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:03	117300.000	3581.000	0.000	29860.000	64040.000	63660.000	67.090%	6483.000
2	16:38:12	116800.000	3621.000	0.000	29930.000	64870.000	63720.000	66.871%	6494.000
3	16:38:22	116800.000	3659.000	0.000	30250.000	64540.000	64020.000	65.830%	6537.000
x		116900.000	3620.000	0.000	30010.000	64480.000	63800.000	66.597%	6505.000
σ		300.900	39.210	0.000	203.400	418.000	193.600	0.673%	28.740
%RSD		0.257	1.083	0.000	0.677	0.648	0.303	1.011	0.442

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:03	393.100	440.100	2312.000	239000.000	240900.000	72.190	198.600	323.500
2	16:38:12	385.800	437.900	2320.000	235500.000	236600.000	70.260	196.300	320.200
3	16:38:22	387.700	442.300	2339.000	236100.000	240200.000	70.340	202.800	325.100
x		388.800	440.100	2324.000	236900.000	239200.000	70.930	199.200	322.900
σ		3.809	2.193	13.650	1887.000	2337.000	1.093	3.334	2.495
%RSD		0.980	0.498	0.587	0.797	0.977	1.541	1.673	0.773

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:03	321.900	1054.000	1028.000	129.900	10.800	31.860	0.000	429.400
2	16:38:12	318.100	1045.000	1010.000	130.000	9.084	31.990	0.000	428.000
3	16:38:22	329.400	1062.000	1038.000	128.200	7.661	26.010	0.000	430.400
x		323.200	1054.000	1025.000	129.400	9.180	29.950	0.000	429.300
σ		5.706	8.266	14.320	0.996	1.570	3.414	0.000	1.170
%RSD		1.766	0.784	1.396	0.770	17.100	11.400	0.000	0.273

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:03	0.000	15.890	16.320	57.942%	3.920	3.842	3.627	4.630
2	16:38:12	0.000	16.010	15.680	58.323%	3.888	3.385	5.091	4.968
3	16:38:22	0.000	16.280	15.800	57.786%	4.049	3.552	4.529	4.563
x		0.000	16.060	15.940	58.017%	3.952	3.593	4.415	4.720
σ		0.000	0.199	0.337	0.276%	0.085	0.231	0.739	0.217
%RSD		0.000	1.239	2.117	0.477	2.150	6.426	16.730	4.595

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:03	58.625%	35.690	1.387	1.101	396.400	389.400	74.632%	75.266%
2	16:38:12	58.701%	36.130	1.374	1.460	385.900	387.900	75.305%	75.988%
3	16:38:22	58.829%	36.660	1.037	1.538	391.600	389.400	74.231%	74.935%
x		58.718%	36.160	1.266	1.367	391.300	388.900	74.723%	75.396%
σ		0.103%	0.486	0.198	0.233	5.296	0.879	0.543%	0.539%
%RSD		0.176	1.344	15.650	17.040	1.353	0.226	0.726	0.715

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:03	2.109	2.036	444.300	409.200	427.500	68.204%
2	16:38:12	2.064	1.976	432.300	395.500	414.000	69.805%
3	16:38:22	2.124	2.039	442.900	403.600	425.500	68.003%
x		2.099	2.017	439.900	402.800	422.300	68.671%
σ		0.032	0.035	6.599	6.916	7.317	0.987%
%RSD		1.506	1.759	1.500	1.717	1.733	1.438

180-61161-E-4-A 12/6/2016 4:44:05 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:07	60.975%	5.927	347.400	356.000	0.000	134500.000	72030.000	71860.000
2	16:43:17	58.787%	6.010	354.600	363.500	0.000	134700.000	71950.000	71500.000
3	16:43:26	59.491%	6.299	349.300	359.000	0.000	134300.000	71450.000	71490.000
x		59.751%	6.079	350.400	359.500	0.000	134500.000	71810.000	71620.000
σ		1.117%	0.195	3.708	3.759	0.000	190.600	316.200	210.000
%RSD		1.869	3.212	1.058	1.045	0.000	0.142	0.440	0.293

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:07	114900.000	3305.000	0.000	30310.000	50770.000	49410.000	67.211%	5982.000
2	16:43:17	114100.000	3391.000	0.000	30500.000	50410.000	49340.000	66.418%	5949.000
3	16:43:26	114000.000	3306.000	0.000	30370.000	50430.000	49490.000	66.524%	5978.000
x		114300.000	3334.000	0.000	30390.000	50540.000	49410.000	66.718%	5970.000
σ		528.600	49.530	0.000	99.140	200.600	73.930	0.431%	17.570
%RSD		0.462	1.486	0.000	0.326	0.397	0.150	0.646	0.294

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:07	358.600	391.600	1940.000	201100.000	200400.000	62.010	179.900	321.200
2	16:43:17	373.100	400.100	1948.000	203000.000	203200.000	62.010	185.300	317.100
3	16:43:26	359.300	393.100	1947.000	202600.000	203200.000	62.190	183.800	327.100
x		363.700	394.900	1945.000	202200.000	202300.000	62.070	183.000	321.800
σ		8.197	4.577	4.631	1019.000	1632.000	0.099	2.795	4.996
%RSD		2.254	1.159	0.238	0.504	0.807	0.160	1.527	1.552

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:07	320.300	853.000	831.400	93.070	7.056	33.390	0.000	351.800
2	16:43:17	325.600	857.000	837.000	90.250	9.286	17.930	0.000	354.600
3	16:43:26	327.100	851.600	818.900	91.080	7.957	25.710	0.000	351.300
x		324.300	853.900	829.100	91.470	8.100	25.680	0.000	352.600
σ		3.611	2.788	9.255	1.448	1.122	7.732	0.000	1.810
%RSD		1.113	0.327	1.116	1.583	13.850	30.110	0.000	0.513

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:07	0.000	14.480	15.270	58.238%	3.181	3.159	2.883	3.637
2	16:43:17	0.000	15.410	14.570	58.240%	3.356	3.087	2.955	3.373
3	16:43:26	0.000	14.510	15.270	57.910%	3.113	3.049	4.030	3.497
x		0.000	14.800	15.040	58.129%	3.217	3.098	3.290	3.502
σ		0.000	0.527	0.405	0.190%	0.125	0.055	0.642	0.132
%RSD		0.000	3.559	2.693	0.326	3.899	1.787	19.530	3.781

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:07	57.550%	29.480	1.039	0.951	313.700	316.700	73.924%	74.747%
2	16:43:17	58.435%	28.950	1.034	1.015	309.100	316.300	74.157%	74.980%
3	16:43:26	57.910%	28.150	0.799	1.038	319.700	309.800	73.425%	74.276%
x		57.965%	28.860	0.957	1.001	314.200	314.300	73.835%	74.668%
σ		0.445%	0.666	0.137	0.045	5.324	3.862	0.374%	0.358%
%RSD		0.768	2.309	14.310	4.521	1.695	1.229	0.506	0.480

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:07	1.688	1.817	279.700	258.100	267.800	66.803%
2	16:43:17	1.819	1.957	277.000	253.500	264.500	67.504%
3	16:43:26	1.840	1.838	276.200	254.400	265.200	67.243%
x		1.782	1.870	277.600	255.300	265.900	67.183%
σ		0.082	0.076	1.813	2.427	1.734	0.354%
%RSD		4.619	4.044	0.653	0.950	0.652	0.527

CCV 2136057 12/6/2016 4:51:44 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:50:48	62.140%	104.200	96.100	101.700	0.000	49330.000	49960.000	50120.000
2	16:50:57	62.452%	104.500	101.600	102.600	0.000	50180.000	50260.000	50240.000
3	16:51:07	62.624%	105.300	96.300	101.600	0.000	50190.000	50650.000	50420.000
x		62.405%	104.636%	98.012%	101.984%	0.000	99.804%	100.582%	100.520%
σ		0.245%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.393	0.536	3.198	0.535	0.000	0.987	0.687	0.305
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:50:48	547.500	5324.000	0.000	48700.000	48970.000	48100.000	61.005%	104.900
2	16:50:57	540.100	5321.000	0.000	49070.000	50170.000	48470.000	60.369%	103.300
3	16:51:07	542.700	5331.000	0.000	48900.000	49460.000	48550.000	60.533%	106.900
x		108.693%	106.506%	0.000	97.787%	99.065%	96.748%	60.636%	105.007%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.330%	n/a
%RSD		0.692	0.099	0.000	0.378	1.214	0.502	0.545	1.705
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:50:48	100.800	101.500	496.400	25600.000	25120.000	99.470	102.100	103.100
2	16:50:57	101.500	101.800	497.600	25730.000	25640.000	100.500	105.400	103.100
3	16:51:07	100.600	102.800	500.500	26120.000	25330.000	102.600	100.600	104.800
x		100.962%	102.037%	99.635%	103.268%	101.454%	100.865%	102.707%	103.664%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.441	0.651	0.414	1.049	1.035	1.607	2.386	0.909
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:50:48	98.730	100.800	95.010	97.270	101.000	109.200	0.000	98.750
2	16:50:57	104.300	106.700	102.900	100.100	98.560	104.700	0.000	95.910
3	16:51:07	111.300	106.100	104.200	102.500	94.780	107.400	0.000	100.200
x		104.764%	104.510%	100.701%	99.951%	98.103%	107.095%	0.000	98.270%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		5.998	3.129	4.944	2.606	3.177	2.106	0.000	2.202
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:50:48	59.923%	103.400	100.800	60.220%	90.090	91.130	94.180	101.800
2	16:50:57	60.259%	105.500	103.000	59.702%	91.700	90.890	95.980	96.760
3	16:51:07	58.034%	105.600	102.700	59.602%	89.950	91.420	96.620	99.940
x		59.405%	104.822%	102.153%	59.841%	90.580%	91.150%	95.594%	99.488%
σ		1.199%	n/a	n/a	0.332%	n/a	n/a	n/a	n/a
%RSD		2.019	1.156	1.121	0.554	1.072	0.291	1.324	2.549
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:50:48	60.502%	98.630	100.300	99.740	91.330	99.040	68.555%	69.400%
2	16:50:57	60.607%	99.950	99.920	100.300	100.200	99.450	68.240%	68.563%
3	16:51:07	59.650%	102.300	101.800	102.100	97.350	99.290	67.667%	68.586%
x		60.253%	100.296%	100.680%	100.732%	96.299%	99.260%	68.154%	68.850%
σ		0.525%	n/a	n/a	n/a	n/a	n/a	0.450%	0.477%
%RSD		0.871	1.857	1.011	1.249	4.711	0.210	0.660	0.693
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:50:48	98.900	98.800	100.100	99.220	99.230	71.119%		
2	16:50:57	98.600	98.230	99.840	98.550	98.030	71.093%		
3	16:51:07	99.590	99.070	99.310	100.600	98.950	70.624%		
x		99.032%	98.700%	99.743%	99.449%	98.741%	70.945%		
σ		n/a	n/a	n/a	n/a	n/a	0.279%		
%RSD		0.515	0.433	0.400	1.038	0.635	0.393		

CCB8 12/6/2016 4:56:49 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:53	85.103%	0.193	-0.647	-0.278	0.000	66.330	71.740	68.460
2	16:56:03	85.120%	0.167	-0.358	0.060	0.000	67.440	70.290	72.400
3	16:56:13	85.281%	0.166	0.133	-0.343	0.000	66.320	68.620	70.370
x		85.168%	0.175	-0.291	-0.187	0.000	66.700	70.220	70.410
σ		0.098%	0.015	0.394	0.216	0.000	0.647	1.558	1.973
%RSD		0.115	8.618	135.600	115.400	0.000	0.970	2.219	2.802

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:53	11.490	-13.710	0.000	-11.290	44.320	152.300	84.828%	-0.017
2	16:56:03	11.950	-11.970	0.000	-10.080	-0.081	158.500	84.405%	0.121
3	16:56:13	12.210	-9.643	0.000	-11.290	24.270	158.200	84.384%	0.031
x		11.880	-11.770	0.000	-10.890	22.830	156.300	84.539%	0.045
σ		0.367	2.041	0.000	0.701	22.230	3.461	0.251%	0.070
%RSD		3.086	17.330	0.000	6.435	97.370	2.214	0.297	155.200

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:53	0.235	0.098	2.260	55.350	56.480	0.114	0.482	0.165
2	16:56:03	0.100	0.122	2.292	54.070	68.960	0.214	0.142	0.260
3	16:56:13	0.302	0.138	2.313	51.840	52.740	0.194	0.104	0.112
x		0.212	0.119	2.289	53.760	59.390	0.174	0.243	0.179
σ		0.103	0.020	0.027	1.775	8.493	0.053	0.208	0.075
%RSD		48.440	17.000	1.164	3.301	14.300	30.510	85.840	41.980

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:53	0.168	0.222	0.106	0.262	0.096	1.494	0.000	0.482
2	16:56:03	0.303	0.473	0.359	0.173	0.097	0.856	0.000	0.608
3	16:56:13	0.034	0.324	0.213	0.160	0.367	-1.899	0.000	0.708
x		0.169	0.340	0.226	0.199	0.187	0.150	0.000	0.599
σ		0.135	0.126	0.127	0.056	0.156	1.804	0.000	0.113
%RSD		79.780	37.190	56.360	27.940	83.570	1198.000	0.000	18.850

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:53	75.172%	-0.160	-0.289	78.967%	0.099	0.194	0.198	0.153
2	16:56:03	74.937%	-0.176	-0.286	78.466%	0.124	0.082	0.121	0.193
3	16:56:13	74.876%	-0.359	-0.297	78.416%	0.080	0.093	0.045	0.175
x		74.995%	-0.232	-0.291	78.616%	0.101	0.123	0.121	0.174
σ		0.156%	0.111	0.005	0.304%	0.022	0.061	0.076	0.020
%RSD		0.208	47.830	1.784	0.387	21.840	49.770	63.090	11.480

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:53	75.954%	0.357	0.405	0.343	0.584	0.396	83.210%	84.738%
2	16:56:03	76.428%	0.279	0.353	0.310	0.532	0.471	83.696%	84.376%
3	16:56:13	75.545%	0.107	0.133	0.447	0.243	0.422	83.864%	83.128%
x		75.976%	0.248	0.297	0.367	0.453	0.430	83.590%	84.081%
σ		0.442%	0.128	0.144	0.072	0.184	0.038	0.340%	0.844%
%RSD		0.581	51.560	48.580	19.500	40.520	8.893	0.406	1.004

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:53	0.116	0.123	0.220	0.212	0.188	89.717%
2	16:56:03	0.083	0.120	0.162	0.187	0.196	89.551%
3	16:56:13	0.134	0.106	0.143	0.201	0.192	89.130%
x		0.111	0.116	0.175	0.200	0.192	89.466%
σ		0.026	0.009	0.040	0.013	0.004	0.302%
%RSD		23.360	8.000	22.800	6.371	2.304	0.338

180-61161-C-9-B 12/6/2016 5:01:54 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:59	63.317%	4.470	242.200	250.000	0.000	98930.000	55200.000	55250.000
2	17:01:09	61.407%	4.567	251.000	260.800	0.000	99010.000	55050.000	55140.000
3	17:01:18	61.400%	4.353	246.400	257.100	0.000	98960.000	54970.000	55000.000
x		62.041%	4.463	246.500	256.000	0.000	98970.000	55080.000	55130.000
σ		1.105%	0.107	4.428	5.477	0.000	41.790	117.700	125.100
%RSD		1.780	2.407	1.796	2.140	0.000	0.042	0.214	0.227
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:59	83370.000	3364.000	0.000	21710.000	65800.000	64890.000	65.586%	5028.000
2	17:01:09	82970.000	3349.000	0.000	21750.000	65840.000	65610.000	65.365%	5034.000
3	17:01:18	82390.000	3295.000	0.000	21660.000	65470.000	65030.000	65.161%	5008.000
x		82910.000	3336.000	0.000	21710.000	65700.000	65180.000	65.371%	5023.000
σ		489.800	36.690	0.000	41.670	203.000	380.500	0.212%	13.830
%RSD		0.591	1.100	0.000	0.192	0.309	0.584	0.325	0.275
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:59	293.700	285.800	2006.000	161100.000	160000.000	51.290	143.700	150.300
2	17:01:09	290.000	287.500	2007.000	157300.000	158000.000	49.970	133.800	146.800
3	17:01:18	285.400	286.500	2004.000	161700.000	160700.000	52.290	141.000	148.600
x		289.700	286.600	2006.000	160000.000	159600.000	51.180	139.500	148.600
σ		4.186	0.853	1.028	2381.000	1390.000	1.166	5.096	1.776
%RSD		1.445	0.298	0.051	1.488	0.871	2.277	3.653	1.196
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:59	150.900	701.200	708.300	89.740	5.890	15.450	0.000	471.100
2	17:01:09	148.900	708.100	688.400	88.460	6.266	17.560	0.000	468.800
3	17:01:18	146.300	714.300	694.700	89.780	5.294	20.560	0.000	471.600
x		148.700	707.800	697.100	89.320	5.817	17.850	0.000	470.500
σ		2.282	6.550	10.210	0.751	0.490	2.567	0.000	1.533
%RSD		1.535	0.925	1.464	0.841	8.421	14.380	0.000	0.326
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:59	0.000	7.985	8.168	59.021%	2.290	2.084	1.857	2.796
2	17:01:09	0.000	8.830	7.783	58.561%	2.006	2.249	2.392	2.580
3	17:01:18	0.000	9.078	8.559	57.875%	2.019	2.277	2.210	3.063
x		0.000	8.631	8.170	58.486%	2.105	2.203	2.153	2.813
σ		0.000	0.573	0.388	0.577%	0.161	0.104	0.272	0.242
%RSD		0.000	6.636	4.748	0.986	7.626	4.729	12.630	8.598
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:59	59.025%	21.090	1.248	1.088	240.200	237.100	72.135%	72.998%
2	17:01:09	59.163%	19.980	1.025	0.892	219.800	233.100	72.113%	73.419%
3	17:01:18	58.795%	20.920	1.115	1.221	234.700	236.800	72.261%	73.495%
x		58.994%	20.660	1.129	1.067	231.600	235.700	72.170%	73.304%
σ		0.186%	0.596	0.112	0.166	10.590	2.226	0.080%	0.268%
%RSD		0.315	2.882	9.912	15.520	4.572	0.944	0.110	0.365
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:00:59	1.270	1.348	193.800	174.700	184.800	67.224%		
2	17:01:09	1.440	1.321	190.500	175.000	182.000	68.083%		
3	17:01:18	1.344	1.295	192.800	177.300	184.500	67.171%		
x		1.351	1.321	192.400	175.700	183.800	67.493%		
σ		0.085	0.026	1.705	1.431	1.532	0.512%		
%RSD		6.293	1.980	0.886	0.814	0.834	0.759		

180-61161-C-13-B 12/6/2016 5:06:59 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:03	59.720%	4.662	264.100	272.400	0.000	89850.000	57230.000	57310.000
2	17:06:12	61.495%	4.095	269.000	272.000	0.000	89710.000	57390.000	56870.000
3	17:06:21	60.318%	4.816	265.200	275.800	0.000	89890.000	57280.000	57160.000
x		60.511%	4.524	266.100	273.400	0.000	89820.000	57300.000	57110.000
σ		0.903%	0.379	2.554	2.101	0.000	98.440	80.000	222.400
%RSD		1.493	8.385	0.960	0.769	0.000	0.110	0.140	0.390

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:03	87860.000	3777.000	0.000	22120.000	61950.000	62160.000	61.865%	5132.000
2	17:06:12	86550.000	3442.000	0.000	22000.000	62340.000	61770.000	62.266%	5110.000
3	17:06:21	87280.000	3819.000	0.000	22160.000	62130.000	62010.000	62.343%	5128.000
x		87230.000	3680.000	0.000	22090.000	62140.000	61980.000	62.158%	5124.000
σ		656.200	206.400	0.000	81.850	198.000	200.200	0.257%	11.750
%RSD		0.752	5.609	0.000	0.371	0.319	0.323	0.413	0.229

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:03	310.800	331.100	2026.000	185000.000	183600.000	52.130	159.200	239.400
2	17:06:12	312.500	324.200	2017.000	180900.000	180600.000	52.750	151.800	238.700
3	17:06:21	305.100	323.100	2025.000	182400.000	180400.000	51.960	157.500	238.500
x		309.400	326.100	2023.000	182800.000	181600.000	52.280	156.200	238.900
σ		3.859	4.313	4.930	2073.000	1796.000	0.414	3.864	0.470
%RSD		1.247	1.322	0.244	1.134	0.989	0.793	2.475	0.197

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:03	241.700	810.800	793.900	98.390	7.586	19.160	0.000	409.000
2	17:06:12	238.500	815.400	802.100	97.700	7.928	34.500	0.000	408.000
3	17:06:21	244.200	821.200	785.300	98.080	7.081	8.166	0.000	402.400
x		241.500	815.800	793.800	98.060	7.532	20.610	0.000	406.400
σ		2.834	5.209	8.386	0.347	0.426	13.230	0.000	3.558
%RSD		1.174	0.639	1.056	0.354	5.658	64.180	0.000	0.875

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:03	0.000	11.820	11.700	56.856%	3.399	3.236	2.903	4.290
2	17:06:12	0.000	11.830	11.110	56.724%	3.522	3.297	3.287	4.122
3	17:06:21	0.000	12.000	10.400	56.236%	3.186	3.101	2.904	3.945
x		0.000	11.880	11.070	56.605%	3.369	3.211	3.031	4.119
σ		0.000	0.102	0.648	0.327%	0.170	0.101	0.222	0.173
%RSD		0.000	0.854	5.853	0.577	5.041	3.131	7.316	4.192

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:03	56.651%	33.080	1.146	0.983	261.300	263.600	71.458%	72.770%
2	17:06:12	57.525%	33.430	0.884	0.760	255.200	261.300	70.223%	71.504%
3	17:06:21	56.938%	34.510	0.861	1.009	272.100	263.900	69.966%	71.156%
x		57.038%	33.670	0.963	0.917	262.900	262.900	70.549%	71.810%
σ		0.446%	0.745	0.158	0.137	8.582	1.429	0.798%	0.850%
%RSD		0.781	2.213	16.430	14.930	3.265	0.543	1.131	1.183

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:03	1.349	1.474	277.000	255.100	265.800	65.997%
2	17:06:12	1.444	1.529	273.200	251.100	261.600	66.780%
3	17:06:21	1.371	1.435	279.300	255.500	267.200	65.524%
x		1.388	1.480	276.500	253.900	264.800	66.100%
σ		0.049	0.047	3.097	2.430	2.911	0.634%
%RSD		3.556	3.203	1.120	0.957	1.099	0.959

180-61161-D-16-A 12/6/2016 5:12:04 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:11:08	57.825%	6.768	297.600	300.100	0.000	87660.000	68670.000	68470.000
2	17:11:18	57.954%	6.620	287.500	296.900	0.000	89780.000	69930.000	69830.000
3	17:11:27	57.188%	6.633	293.800	297.700	0.000	89000.000	69430.000	69610.000
x		57.656%	6.674	292.900	298.200	0.000	88810.000	69340.000	69310.000
σ		0.410%	0.082	5.081	1.684	0.000	1072.000	634.300	731.700
%RSD		0.711	1.230	1.734	0.565	0.000	1.207	0.915	1.056

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:11:08	108800.000	3039.000	0.000	27370.000	66700.000	65570.000	63.821%	5958.000
2	17:11:18	109900.000	3075.000	0.000	27830.000	67170.000	66470.000	62.814%	6008.000
3	17:11:27	109800.000	3113.000	0.000	27760.000	67240.000	66110.000	63.108%	5991.000
x		109500.000	3076.000	0.000	27650.000	67040.000	66050.000	63.248%	5985.000
σ		610.200	36.810	0.000	249.100	293.800	456.900	0.518%	25.440
%RSD		0.557	1.197	0.000	0.901	0.438	0.692	0.818	0.425

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:11:08	395.200	429.100	2469.000	232600.000	231600.000	68.800	198.200	253.800
2	17:11:18	407.200	435.200	2504.000	233900.000	235400.000	69.620	202.900	258.300
3	17:11:27	405.800	431.800	2504.000	233200.000	235300.000	70.190	200.500	258.800
x		402.700	432.000	2492.000	233200.000	234100.000	69.540	200.500	257.000
σ		6.528	3.092	20.080	644.500	2119.000	0.701	2.356	2.787
%RSD		1.621	0.716	0.806	0.276	0.905	1.008	1.175	1.084

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:11:08	251.300	1065.000	1035.000	116.700	8.225	24.150	0.000	431.100
2	17:11:18	265.200	1061.000	1019.000	117.000	10.430	31.670	0.000	427.200
3	17:11:27	261.500	1075.000	1037.000	118.500	7.431	24.400	0.000	427.700
x		259.300	1067.000	1030.000	117.400	8.696	26.740	0.000	428.700
σ		7.203	7.379	9.679	0.929	1.555	4.274	0.000	2.135
%RSD		2.778	0.691	0.939	0.791	17.880	15.980	0.000	0.498

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:11:08	0.000	15.240	16.070	56.397%	4.903	5.051	4.067	5.595
2	17:11:18	0.000	17.660	15.900	56.038%	4.842	4.876	3.948	5.802
3	17:11:27	0.000	15.610	14.990	55.823%	5.037	4.502	3.870	5.337
x		0.000	16.170	15.650	56.086%	4.928	4.810	3.962	5.578
σ		0.000	1.305	0.579	0.290%	0.100	0.280	0.099	0.233
%RSD		0.000	8.071	3.696	0.517	2.026	5.828	2.499	4.174

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:11:08	56.432%	35.550	1.552	1.468	320.900	337.000	72.339%	72.394%
2	17:11:18	56.176%	35.890	1.483	1.733	342.700	335.800	71.717%	73.085%
3	17:11:27	57.222%	35.900	1.479	1.518	334.600	332.100	71.809%	72.574%
x		56.610%	35.780	1.505	1.573	332.700	335.000	71.955%	72.684%
σ		0.545%	0.201	0.041	0.141	11.010	2.537	0.336%	0.359%
%RSD		0.963	0.563	2.713	8.933	3.309	0.757	0.467	0.493

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:11:08	1.847	1.917	376.800	348.500	362.200	66.134%
2	17:11:18	1.999	1.856	377.200	345.200	361.300	66.651%
3	17:11:27	1.814	1.817	379.200	349.000	363.600	66.210%
x		1.886	1.863	377.700	347.600	362.400	66.332%
σ		0.099	0.050	1.258	2.040	1.183	0.279%
%RSD		5.226	2.709	0.333	0.587	0.326	0.420

180-61161-D-17-A 12/6/2016 5:17:10 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:16:14	61.639%	3.139	151.500	159.500	0.000	83100.000	45620.000	45610.000
2	17:16:23	60.903%	3.522	157.200	160.400	0.000	82800.000	45760.000	45510.000
3	17:16:33	61.291%	3.714	151.100	158.800	0.000	83020.000	45740.000	45600.000
x		61.277%	3.459	153.200	159.600	0.000	82980.000	45710.000	45580.000
σ		0.369%	0.293	3.419	0.805	0.000	156.700	76.100	55.270
%RSD		0.601	8.462	2.231	0.504	0.000	0.189	0.167	0.121
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:16:14	69310.000	3261.000	0.000	17570.000	34530.000	33500.000	62.430%	4451.000
2	17:16:23	69520.000	3298.000	0.000	17560.000	34960.000	33550.000	63.061%	4516.000
3	17:16:33	69820.000	3230.000	0.000	17650.000	34730.000	33390.000	62.133%	4473.000
x		69550.000	3263.000	0.000	17590.000	34740.000	33480.000	62.542%	4480.000
σ		256.700	34.210	0.000	52.000	213.500	81.060	0.474%	33.130
%RSD		0.369	1.048	0.000	0.296	0.615	0.242	0.758	0.740
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:16:14	212.900	258.900	1221.000	130800.000	129500.000	42.870	113.400	128.900
2	17:16:23	208.400	253.700	1223.000	129000.000	127100.000	41.440	113.400	123.200
3	17:16:33	213.200	260.500	1227.000	129700.000	131000.000	42.250	115.500	128.300
x		211.500	257.700	1224.000	129800.000	129200.000	42.190	114.100	126.800
σ		2.642	3.535	3.027	929.700	1973.000	0.715	1.214	3.129
%RSD		1.249	1.372	0.247	0.716	1.527	1.694	1.064	2.468
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:16:14	125.700	525.500	525.700	80.320	4.912	23.610	0.000	218.900
2	17:16:23	127.500	510.300	506.900	77.650	4.374	17.190	0.000	223.200
3	17:16:33	126.100	525.900	522.300	79.040	6.024	12.770	0.000	221.700
x		126.500	520.600	518.300	79.010	5.103	17.850	0.000	221.300
σ		0.946	8.896	9.989	1.336	0.842	5.451	0.000	2.179
%RSD		0.748	1.709	1.927	1.691	16.490	30.530	0.000	0.985
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:16:14	0.000	11.760	11.220	57.051%	1.448	1.386	2.170	2.274
2	17:16:23	0.000	10.700	11.430	56.902%	1.508	1.507	1.853	2.398
3	17:16:33	0.000	11.330	11.680	56.299%	1.727	1.601	2.178	2.185
x		0.000	11.270	11.440	56.751%	1.561	1.498	2.067	2.286
σ		0.000	0.533	0.227	0.398%	0.147	0.108	0.185	0.107
%RSD		0.000	4.728	1.982	0.702	9.396	7.186	8.970	4.684
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:16:14	56.763%	14.410	0.547	0.541	188.100	185.000	70.082%	70.770%
2	17:16:23	57.119%	13.600	0.544	0.472	183.200	183.300	69.539%	70.730%
3	17:16:33	55.476%	13.790	0.449	0.514	184.200	186.500	69.185%	70.934%
x		56.453%	13.930	0.513	0.509	185.200	184.900	69.602%	70.811%
σ		0.865%	0.424	0.056	0.035	2.621	1.621	0.452%	0.108%
%RSD		1.532	3.045	10.820	6.863	1.415	0.877	0.650	0.152
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:16:14	1.314	1.413	135.500	121.800	128.900	65.783%		
2	17:16:23	1.389	1.285	133.200	121.700	127.100	66.729%		
3	17:16:33	1.266	1.347	136.100	121.000	128.600	66.182%		
x		1.323	1.348	134.900	121.500	128.200	66.231%		
σ		0.062	0.064	1.570	0.425	0.949	0.475%		
%RSD		4.693	4.748	1.164	0.350	0.740	0.717		

180-61161-C-18-A 12/6/2016 5:22:17 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:21:20	58.331%	6.152	295.900	317.800	0.000	132300.000	69390.000	69200.000
2	17:21:29	58.954%	5.974	304.800	311.200	0.000	130300.000	67970.000	68010.000
3	17:21:39	58.727%	5.539	300.700	309.900	0.000	131500.000	68380.000	68320.000
x		58.671%	5.889	300.500	312.900	0.000	131400.000	68580.000	68510.000
σ		0.315%	0.316	4.480	4.237	0.000	1013.000	728.000	617.600
%RSD		0.537	5.361	1.491	1.354	0.000	0.771	1.062	0.902
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:21:20	109300.000	4240.000	0.000	28250.000	45190.000	43830.000	62.476%	5878.000
2	17:21:29	107700.000	4162.000	0.000	27810.000	44220.000	43560.000	62.948%	5893.000
3	17:21:39	108100.000	4169.000	0.000	28020.000	44570.000	43740.000	62.827%	5899.000
x		108400.000	4190.000	0.000	28030.000	44660.000	43710.000	62.751%	5890.000
σ		831.400	43.370	0.000	220.300	493.300	139.300	0.245%	10.820
%RSD		0.767	1.035	0.000	0.786	1.104	0.319	0.391	0.184
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:21:20	364.100	418.000	1831.000	205100.000	205100.000	63.020	177.400	283.500
2	17:21:29	365.500	406.500	1815.000	201900.000	201100.000	58.480	173.800	289.600
3	17:21:39	356.800	408.200	1812.000	203400.000	203000.000	59.680	172.500	288.700
x		362.100	410.900	1819.000	203500.000	203100.000	60.390	174.600	287.300
σ		4.670	6.184	10.120	1582.000	2020.000	2.352	2.526	3.322
%RSD		1.289	1.505	0.556	0.777	0.995	3.894	1.447	1.156
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:21:20	292.500	885.900	879.300	86.040	7.837	28.600	0.000	347.900
2	17:21:29	289.200	890.300	846.400	85.260	5.182	28.100	0.000	338.200
3	17:21:39	285.300	884.500	856.300	86.810	6.393	23.640	0.000	344.200
x		289.000	886.900	860.600	86.040	6.471	26.780	0.000	343.400
σ		3.615	2.985	16.870	0.778	1.329	2.734	0.000	4.902
%RSD		1.251	0.337	1.960	0.904	20.540	10.210	0.000	1.427
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:21:20	0.000	13.020	13.520	55.591%	4.686	4.994	3.263	3.506
2	17:21:29	0.000	14.580	13.710	55.062%	4.674	4.749	3.469	3.957
3	17:21:39	0.000	13.670	12.600	55.664%	4.961	4.596	3.328	3.876
x		0.000	13.760	13.280	55.439%	4.774	4.780	3.353	3.780
σ		0.000	0.783	0.593	0.328%	0.162	0.201	0.105	0.241
%RSD		0.000	5.693	4.462	0.592	3.401	4.198	3.141	6.369
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:21:20	56.028%	30.430	1.313	1.077	300.500	300.300	70.603%	70.979%
2	17:21:29	55.562%	32.370	0.948	1.169	305.400	303.900	69.683%	70.766%
3	17:21:39	55.243%	31.570	0.954	1.191	316.100	312.200	69.057%	70.974%
x		55.611%	31.450	1.072	1.145	307.300	305.500	69.781%	70.906%
σ		0.395%	0.972	0.209	0.061	7.993	6.097	0.778%	0.122%
%RSD		0.710	3.091	19.510	5.297	2.601	1.996	1.114	0.172
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:21:20	1.681	1.877	347.100	315.800	330.600	64.304%		
2	17:21:29	1.714	1.789	345.600	315.700	329.400	64.461%		
3	17:21:39	1.837	1.949	348.200	321.500	334.200	63.694%		
x		1.744	1.872	347.000	317.600	331.400	64.153%		
σ		0.082	0.080	1.276	3.334	2.496	0.405%		
%RSD		4.720	4.269	0.368	1.050	0.753	0.631		

180-61161-E-21-B 12/6/2016 5:27:23 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:26:27	59.634%	6.099	305.600	318.700	0.000	111900.000	70690.000	70520.000
2	17:26:37	57.989%	6.607	314.000	330.400	0.000	111700.000	70390.000	70550.000
3	17:26:46	58.426%	6.349	321.100	323.900	0.000	111700.000	70640.000	70170.000
x		58.683%	6.352	313.500	324.300	0.000	111800.000	70570.000	70410.000
σ		0.852%	0.254	7.758	5.908	0.000	98.190	162.200	213.100
%RSD		1.452	3.997	2.474	1.822	0.000	0.088	0.230	0.303

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:26:27	113900.000	4123.000	0.000	28330.000	64610.000	64180.000	61.777%	6565.000
2	17:26:37	113900.000	4030.000	0.000	28340.000	64490.000	64160.000	61.563%	6613.000
3	17:26:46	113100.000	4031.000	0.000	28340.000	64830.000	63950.000	61.873%	6547.000
x		113600.000	4061.000	0.000	28340.000	64640.000	64100.000	61.738%	6575.000
σ		460.400	53.380	0.000	10.690	168.900	127.600	0.159%	33.790
%RSD		0.405	1.314	0.000	0.038	0.261	0.199	0.257	0.514

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:26:27	385.400	417.800	2017.000	225500.000	225300.000	65.930	196.500	236.300
2	17:26:37	384.900	417.500	2008.000	225800.000	225100.000	69.040	198.500	237.000
3	17:26:46	388.100	418.900	2003.000	222100.000	221400.000	66.860	187.700	235.800
x		386.100	418.100	2009.000	224500.000	223900.000	67.280	194.200	236.400
σ		1.695	0.728	7.393	2062.000	2228.000	1.596	5.765	0.620
%RSD		0.439	0.174	0.368	0.919	0.995	2.372	2.969	0.262

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:26:27	245.600	918.800	912.700	100.100	8.510	26.310	0.000	404.300
2	17:26:37	233.600	932.800	904.600	100.000	10.000	35.770	0.000	403.300
3	17:26:46	235.000	939.800	905.500	99.870	7.683	24.090	0.000	411.300
x		238.100	930.500	907.600	99.980	8.732	28.720	0.000	406.300
σ		6.542	10.650	4.471	0.107	1.176	6.201	0.000	4.344
%RSD		2.748	1.144	0.493	0.107	13.470	21.590	0.000	1.069

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:26:27	0.000	17.290	16.750	54.524%	4.275	4.534	3.799	4.153
2	17:26:37	0.000	16.640	16.980	54.230%	4.037	3.979	3.426	4.267
3	17:26:46	0.000	16.770	17.280	53.572%	4.387	4.290	3.979	4.124
x		0.000	16.900	17.000	54.108%	4.233	4.267	3.735	4.181
σ		0.000	0.342	0.264	0.488%	0.179	0.278	0.282	0.075
%RSD		0.000	2.026	1.553	0.901	4.218	6.523	7.558	1.804

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:26:27	54.806%	31.410	0.941	0.882	314.800	319.700	68.223%	69.795%
2	17:26:37	54.446%	30.390	1.002	0.872	320.700	320.700	68.883%	70.576%
3	17:26:46	53.062%	31.930	0.970	1.023	322.300	321.700	68.218%	68.406%
x		54.105%	31.250	0.971	0.926	319.300	320.700	68.442%	69.593%
σ		0.921%	0.782	0.031	0.084	3.950	0.974	0.382%	1.099%
%RSD		1.702	2.503	3.168	9.119	1.237	0.303	0.559	1.579

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:26:27	1.903	2.012	304.500	276.500	290.100	62.379%
2	17:26:37	1.854	2.065	297.800	272.600	285.500	63.244%
3	17:26:46	1.956	2.022	289.900	267.100	278.500	65.378%
x		1.905	2.033	297.400	272.100	284.700	63.667%
σ		0.051	0.028	7.324	4.726	5.855	1.544%
%RSD		2.674	1.371	2.463	1.737	2.057	2.425

180-61161-E-25-A 12/6/2016 5:32:28 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:31:31	57.214%	7.246	335.100	345.700	0.000	97500.000	72450.000	72470.000
2	17:31:41	56.789%	7.436	340.600	349.300	0.000	97700.000	72650.000	72470.000
3	17:31:50	57.005%	7.495	329.900	342.500	0.000	97950.000	73190.000	73400.000
x		57.003%	7.392	335.200	345.800	0.000	97710.000	72770.000	72780.000
σ		0.213%	0.130	5.333	3.383	0.000	222.000	383.200	536.000
%RSD		0.373	1.761	1.591	0.978	0.000	0.227	0.527	0.737
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:31:31	127300.000	4527.000	0.000	30090.000	47130.000	46450.000	61.920%	6784.000
2	17:31:41	127000.000	4651.000	0.000	30230.000	47540.000	46700.000	62.186%	6856.000
3	17:31:50	128300.000	4554.000	0.000	30380.000	47380.000	46620.000	61.643%	6810.000
x		127500.000	4577.000	0.000	30230.000	47350.000	46590.000	61.917%	6817.000
σ		674.100	64.940	0.000	142.400	207.600	128.400	0.272%	36.330
%RSD		0.528	1.419	0.000	0.471	0.439	0.276	0.439	0.533
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:31:31	415.700	482.600	2067.000	234000.000	235800.000	71.010	207.500	385.300
2	17:31:41	422.100	480.300	2082.000	236700.000	237600.000	72.910	201.300	385.200
3	17:31:50	422.200	490.600	2094.000	236100.000	233300.000	72.980	205.000	374.300
x		420.000	484.500	2081.000	235600.000	235500.000	72.300	204.600	381.600
σ		3.711	5.417	13.570	1429.000	2150.000	1.120	3.104	6.305
%RSD		0.884	1.118	0.652	0.607	0.913	1.549	1.517	1.652
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:31:31	386.800	1123.000	1099.000	109.800	8.876	24.790	0.000	373.300
2	17:31:41	384.300	1128.000	1087.000	108.800	10.670	30.450	0.000	366.900
3	17:31:50	383.900	1119.000	1075.000	105.500	12.720	27.190	0.000	372.100
x		385.000	1123.000	1087.000	108.000	10.760	27.480	0.000	370.800
σ		1.587	4.456	12.240	2.246	1.924	2.838	0.000	3.397
%RSD		0.412	0.397	1.126	2.079	17.890	10.330	0.000	0.916
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:31:31	0.000	18.060	16.250	54.398%	5.640	5.442	3.617	4.842
2	17:31:41	0.000	17.440	16.670	54.382%	5.339	5.624	4.158	4.562
3	17:31:50	0.000	16.840	16.360	54.242%	6.034	5.509	3.818	5.027
x		0.000	17.450	16.430	54.341%	5.671	5.525	3.864	4.810
σ		0.000	0.609	0.213	0.085%	0.348	0.092	0.274	0.234
%RSD		0.000	3.488	1.297	0.157	6.138	1.670	7.080	4.869
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:31:31	54.941%	36.600	1.419	1.279	380.800	366.500	69.472%	70.278%
2	17:31:41	54.885%	35.870	1.208	1.115	379.800	372.600	68.959%	70.529%
3	17:31:50	53.770%	37.550	1.231	1.332	378.100	377.800	69.289%	70.922%
x		54.532%	36.670	1.286	1.242	379.600	372.300	69.240%	70.576%
σ		0.660%	0.844	0.116	0.113	1.409	5.638	0.260%	0.324%
%RSD		1.211	2.301	9.008	9.116	0.371	1.514	0.375	0.460
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:31:31	2.194	2.233	425.000	387.500	407.400	64.392%		
2	17:31:41	2.177	2.263	428.300	388.900	408.900	63.989%		
3	17:31:50	2.239	2.219	432.600	396.700	414.800	63.147%		
x		2.203	2.238	428.600	391.000	410.400	63.843%		
σ		0.032	0.022	3.816	4.948	3.941	0.635%		
%RSD		1.438	1.004	0.890	1.265	0.960	0.995		

180-61161-E-29-A 12/6/2016 5:37:33 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:36	58.698%	5.767	320.900	331.100	0.000	116600.000	66280.000	66570.000
2	17:36:45	57.480%	6.063	340.200	339.600	0.000	117900.000	66460.000	66530.000
3	17:36:55	59.407%	6.058	321.900	331.600	0.000	116600.000	66220.000	65900.000
x		58.528%	5.962	327.700	334.100	0.000	117000.000	66320.000	66330.000
σ		0.975%	0.170	10.890	4.782	0.000	735.800	124.300	379.900
%RSD		1.665	2.846	3.322	1.431	0.000	0.629	0.187	0.573

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:36	110800.000	4756.000	0.000	26860.000	43990.000	42520.000	61.565%	5441.000
2	17:36:45	110600.000	4731.000	0.000	26890.000	43720.000	42380.000	61.600%	5395.000
3	17:36:55	110300.000	4849.000	0.000	26730.000	43210.000	42180.000	62.147%	5417.000
x		110600.000	4779.000	0.000	26820.000	43640.000	42360.000	61.771%	5418.000
σ		224.400	62.150	0.000	84.430	398.300	169.200	0.326%	23.100
%RSD		0.203	1.301	0.000	0.315	0.913	0.399	0.528	0.426

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:36	377.100	403.400	1604.000	201300.000	202900.000	61.500	180.300	508.600
2	17:36:45	373.700	408.500	1610.000	200300.000	201800.000	58.260	183.100	516.700
3	17:36:55	384.900	408.200	1603.000	200500.000	203300.000	59.770	184.000	507.400
x		378.600	406.700	1606.000	200700.000	202700.000	59.840	182.500	510.900
σ		5.727	2.828	3.515	526.000	751.900	1.621	1.880	5.053
%RSD		1.513	0.695	0.219	0.262	0.371	2.708	1.030	0.989

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:36	513.800	1174.000	1158.000	95.470	8.220	23.200	0.000	343.500
2	17:36:45	515.100	1175.000	1166.000	90.140	6.931	50.260	0.000	337.200
3	17:36:55	520.300	1191.000	1158.000	97.450	11.650	28.620	0.000	341.700
x		516.400	1180.000	1161.000	94.360	8.934	34.030	0.000	340.800
σ		3.447	9.320	4.571	3.779	2.440	14.320	0.000	3.266
%RSD		0.667	0.790	0.394	4.005	27.310	42.080	0.000	0.958

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:36	0.000	32.680	34.520	53.868%	3.586	3.741	5.506	5.014
2	17:36:45	0.000	35.060	34.710	53.998%	4.180	3.857	4.647	4.947
3	17:36:55	0.000	35.410	35.660	52.446%	3.870	4.134	5.044	5.238
x		0.000	34.380	34.960	53.437%	3.879	3.911	5.065	5.066
σ		0.000	1.485	0.609	0.861%	0.297	0.202	0.430	0.152
%RSD		0.000	4.320	1.742	1.612	7.666	5.168	8.481	3.008

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:36	53.785%	31.460	1.889	1.664	305.400	295.400	67.188%	68.437%
2	17:36:45	54.046%	29.940	2.086	1.895	296.800	307.900	67.487%	68.844%
3	17:36:55	52.545%	32.600	2.168	1.860	293.700	311.100	66.490%	67.008%
x		53.459%	31.330	2.048	1.806	298.600	304.800	67.055%	68.097%
σ		0.802%	1.333	0.143	0.125	6.033	8.254	0.512%	0.964%
%RSD		1.500	4.256	6.982	6.901	2.020	2.708	0.763	1.416

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:36	2.180	2.196	516.800	475.500	496.700	61.766%
2	17:36:45	2.299	2.167	515.300	472.600	494.000	62.260%
3	17:36:55	1.884	2.097	475.900	438.400	455.800	68.463%
x		2.121	2.153	502.700	462.200	482.200	64.163%
σ		0.214	0.051	23.190	20.630	22.860	3.732%
%RSD		10.080	2.373	4.613	4.463	4.742	5.817

180-61161-D-32-B 12/6/2016 5:42:38 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:42	57.213%	5.399	282.000	278.700	0.000	110500.000	64110.000	64340.000
2	17:41:51	56.828%	5.543	276.700	283.400	0.000	110600.000	64340.000	64250.000
3	17:42:01	57.170%	5.375	273.300	280.500	0.000	111000.000	64510.000	64290.000
x		57.071%	5.439	277.300	280.900	0.000	110700.000	64320.000	64290.000
σ		0.211%	0.091	4.379	2.368	0.000	258.900	199.800	47.810
%RSD		0.369	1.672	1.579	0.843	0.000	0.234	0.311	0.074
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:42	96230.000	4303.000	0.000	24960.000	70790.000	74740.000	60.462%	5880.000
2	17:41:51	96300.000	4355.000	0.000	24970.000	71290.000	70780.000	60.533%	5891.000
3	17:42:01	96040.000	4132.000	0.000	25080.000	71570.000	71030.000	60.397%	5922.000
x		96190.000	4263.000	0.000	25000.000	71220.000	72180.000	60.464%	5897.000
σ		132.200	116.600	0.000	67.620	396.200	2217.000	0.068%	22.010
%RSD		0.137	2.735	0.000	0.271	0.556	3.071	0.112	0.373
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:42	322.500	329.700	1885.000	189000.000	188500.000	58.540	160.800	163.600
2	17:41:51	319.000	328.700	1894.000	189500.000	188500.000	59.350	164.800	164.000
3	17:42:01	322.200	331.700	1894.000	190600.000	191000.000	58.030	166.700	162.500
x		321.200	330.000	1891.000	189700.000	189300.000	58.640	164.100	163.400
σ		1.934	1.532	5.308	824.400	1457.000	0.664	2.999	0.788
%RSD		0.602	0.464	0.281	0.435	0.770	1.132	1.828	0.482
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:42	158.800	692.900	656.100	88.010	8.334	34.190	0.000	421.900
2	17:41:51	166.300	702.700	665.900	91.440	7.422	23.860	0.000	433.400
3	17:42:01	165.500	676.500	665.000	88.420	10.920	23.460	0.000	422.400
x		163.500	690.700	662.300	89.290	8.892	27.170	0.000	425.900
σ		4.163	13.220	5.404	1.874	1.815	6.082	0.000	6.537
%RSD		2.545	1.914	0.816	2.099	20.410	22.380	0.000	1.535
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:42	0.000	10.250	8.879	53.308%	2.163	2.212	2.704	3.289
2	17:41:51	0.000	9.685	9.512	53.127%	2.129	2.235	2.107	3.061
3	17:42:01	0.000	10.350	9.366	53.365%	2.466	2.292	2.584	3.619
x		0.000	10.090	9.252	53.267%	2.253	2.246	2.465	3.323
σ		0.000	0.358	0.332	0.125%	0.186	0.041	0.316	0.281
%RSD		0.000	3.546	3.583	0.234	8.243	1.840	12.800	8.445
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:42	53.805%	22.810	0.580	0.843	271.800	279.300	66.965%	67.978%
2	17:41:51	52.906%	23.040	0.788	0.440	280.200	282.000	66.981%	68.085%
3	17:42:01	54.090%	23.920	0.703	0.487	280.100	277.300	67.055%	67.240%
x		53.600%	23.260	0.691	0.590	277.400	279.600	67.000%	67.768%
σ		0.618%	0.586	0.105	0.221	4.837	2.341	0.048%	0.460%
%RSD		1.153	2.520	15.140	37.350	1.744	0.838	0.072	0.679
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:41:42	1.431	1.631	201.700	181.600	192.300	62.191%		
2	17:41:51	1.638	1.684	206.600	185.300	195.400	61.355%		
3	17:42:01	1.543	1.667	200.200	181.500	191.700	62.085%		
x		1.537	1.661	202.800	182.800	193.200	61.877%		
σ		0.104	0.027	3.348	2.185	2.006	0.455%		
%RSD		6.749	1.629	1.651	1.195	1.039	0.736		

CCV 2136057 12/6/2016 5:51:42 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:50:47	60.746%	107.400	106.200	102.400	0.000	50990.000	52130.000	52040.000
2	17:50:57	61.170%	105.100	102.300	99.930	0.000	51620.000	52920.000	52610.000
3	17:51:06	61.571%	107.100	96.730	101.000	0.000	51310.000	52390.000	52370.000
x		61.162%	106.515%	101.713%	101.094%	0.000	102.615%	104.957%	104.681%
σ		0.412%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.674	1.173	4.659	1.203	0.000	0.607	0.771	0.546
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:50:47	537.400	5334.000	0.000	47790.000	48340.000	47570.000	56.617%	104.700
2	17:50:57	533.600	5347.000	0.000	48400.000	49010.000	48360.000	56.048%	107.400
3	17:51:06	525.900	5316.000	0.000	48430.000	49100.000	48000.000	56.185%	105.000
x		106.458%	106.651%	0.000	96.417%	97.632%	95.957%	56.283%	105.684%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.297%	n/a
%RSD		1.097	0.295	0.000	0.748	0.857	0.826	0.528	1.424
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:50:47	101.300	104.100	484.500	26570.000	25910.000	101.200	102.400	102.900
2	17:50:57	106.800	106.600	491.700	27100.000	25920.000	103.300	100.800	106.100
3	17:51:06	107.500	101.400	488.200	26580.000	26260.000	105.000	107.300	105.100
x		105.211%	104.021%	97.629%	107.001%	104.123%	103.154%	103.478%	104.698%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		3.242	2.485	0.731	1.131	0.768	1.873	3.261	1.549
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:50:47	101.700	99.830	99.940	96.780	96.000	111.600	0.000	102.000
2	17:50:57	105.800	103.700	105.100	98.210	101.400	114.600	0.000	95.630
3	17:51:06	103.700	109.600	99.290	98.900	99.840	113.500	0.000	99.500
x		103.727%	104.371%	101.442%	97.965%	99.065%	113.240%	0.000	99.031%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.981	4.724	3.139	1.104	2.787	1.347	0.000	3.227
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:50:47	55.024%	107.400	108.200	51.541%	95.770	92.590	102.800	103.100
2	17:50:57	56.903%	106.300	105.300	51.808%	92.920	94.070	97.900	96.850
3	17:51:06	55.502%	103.500	107.700	51.379%	91.720	90.740	98.890	97.770
x		55.809%	105.724%	107.092%	51.576%	93.473%	92.468%	99.865%	99.246%
σ		0.977%	n/a	n/a	0.217%	n/a	n/a	n/a	n/a
%RSD		1.750	1.938	1.431	0.421	2.224	1.804	2.596	3.409
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:50:47	54.426%	100.800	98.160	100.900	97.980	98.680	61.759%	62.717%
2	17:50:57	56.046%	99.000	99.280	100.600	94.040	95.300	62.475%	63.582%
3	17:51:06	55.936%	99.040	100.500	98.480	92.680	102.600	61.486%	62.433%
x		55.469%	99.611%	99.302%	99.992%	94.903%	98.868%	61.906%	62.911%
σ		0.905%	n/a	n/a	n/a	n/a	n/a	0.511%	0.598%
%RSD		1.632	1.026	1.159	1.318	2.901	3.710	0.825	0.951
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:50:47	98.020	96.870	96.120	97.670	96.740	64.646%		
2	17:50:57	98.180	97.320	98.710	98.810	97.780	64.243%		
3	17:51:06	98.590	98.880	97.830	97.500	98.110	64.133%		
x		98.264%	97.692%	97.554%	97.995%	97.545%	64.341%		
σ		n/a	n/a	n/a	n/a	n/a	0.270%		
%RSD		0.299	1.082	1.352	0.725	0.735	0.419		

CCB9 12/6/2016 5:56:50 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:55:55	81.102%	-0.004	0.025	-0.573	0.000	-5.260	5.146	5.469
2	17:56:04	80.826%	0.038	-0.316	-0.659	0.000	-9.543	5.711	5.176
3	17:56:14	81.358%	0.016	-0.154	-0.605	0.000	-9.440	3.980	3.936
x		81.095%	0.017	-0.149	-0.612	0.000	-8.081	4.946	4.861
σ		0.266%	0.021	0.170	0.044	0.000	2.444	0.883	0.814
%RSD		0.328	122.300	114.700	7.125	0.000	30.240	17.850	16.740
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:55:55	-0.110	-17.820	0.000	-41.840	-184.400	-24.070	73.094%	-0.090
2	17:56:04	-0.377	-19.040	0.000	-43.340	-182.400	-22.920	74.301%	-0.046
3	17:56:14	-0.315	-19.660	0.000	-48.930	-162.100	-26.700	74.142%	-0.173
x		-0.267	-18.840	0.000	-44.700	-176.300	-24.560	73.846%	-0.103
σ		0.140	0.934	0.000	3.740	12.350	1.935	0.656%	0.064
%RSD		52.320	4.960	0.000	8.367	7.003	7.876	0.888	62.610
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:55:55	-0.061	0.008	0.098	9.314	2.919	0.029	0.077	-0.051
2	17:56:04	0.060	0.017	0.099	7.997	2.758	-0.005	-0.010	0.040
3	17:56:14	0.087	0.017	0.101	6.950	-0.301	0.006	-0.010	-0.098
x		0.029	0.014	0.099	8.087	1.792	0.010	0.019	-0.036
σ		0.079	0.005	0.002	1.185	1.814	0.018	0.051	0.070
%RSD		272.300	35.630	1.875	14.650	101.300	177.000	267.200	192.800
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:55:55	-0.100	-0.053	-0.021	0.010	0.137	-0.076	0.000	0.059
2	17:56:04	0.022	0.172	0.337	0.009	0.442	2.412	0.000	0.072
3	17:56:14	-0.039	0.116	0.482	0.068	-0.018	-1.177	0.000	0.016
x		-0.039	0.079	0.266	0.029	0.187	0.386	0.000	0.049
σ		0.061	0.117	0.259	0.034	0.234	1.838	0.000	0.029
%RSD		157.800	149.000	97.410	116.800	125.300	476.000	0.000	60.120
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:55:55	65.340%	-0.420	-0.548	67.694%	0.004	0.000	-0.007	0.014
2	17:56:04	65.671%	-0.483	-0.499	67.244%	0.021	0.001	0.053	0.027
3	17:56:14	65.503%	-0.397	-0.668	66.778%	0.004	0.001	-0.007	-0.009
x		65.504%	-0.433	-0.572	67.239%	0.010	0.001	0.013	0.011
σ		0.166%	0.045	0.087	0.458%	0.010	0.000	0.034	0.018
%RSD		0.253	10.350	15.190	0.681	105.200	46.340	258.800	170.500
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:55:55	67.265%	0.035	0.075	0.155	0.000	0.039	72.649%	73.282%
2	17:56:04	65.414%	0.012	0.204	0.149	0.000	0.070	72.269%	72.381%
3	17:56:14	65.661%	-0.047	0.098	0.136	0.000	0.099	72.746%	71.826%
x		66.114%	0.000	0.126	0.147	0.000	0.069	72.555%	72.496%
σ		1.005%	0.042	0.069	0.010	0.000	0.030	0.252%	0.735%
%RSD		1.520	16980.000	54.620	6.594	0.000	43.890	0.348	1.013
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:55:55	-0.011	-0.004	0.031	0.028	0.024	77.799%		
2	17:56:04	-0.011	-0.008	0.013	0.013	0.018	77.206%		
3	17:56:14	-0.011	0.001	0.023	0.009	0.017	76.736%		
x		-0.011	-0.003	0.022	0.017	0.020	77.247%		
σ		0.000	0.005	0.009	0.010	0.004	0.533%		
%RSD		1.263	134.900	39.760	60.880	19.810	0.690		

180-61161-D-36-A 12/6/2016 6:01:58 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:01:02	59.920%	6.125	338.400	341.500	0.000	122600.000	70040.000	69770.000
2	18:01:12	60.146%	6.330	336.300	339.300	0.000	122000.000	69380.000	69200.000
3	18:01:21	58.031%	6.346	340.400	350.000	0.000	125900.000	71500.000	71540.000
x		59.366%	6.267	338.400	343.600	0.000	123500.000	70310.000	70170.000
σ		1.161%	0.123	2.019	5.679	0.000	2087.000	1088.000	1224.000
%RSD		1.956	1.969	0.597	1.653	0.000	1.689	1.547	1.744
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:01:02	115900.000	7974.000	0.000	29080.000	33930.000	33140.000	62.767%	6208.000
2	18:01:12	114800.000	7916.000	0.000	28940.000	34160.000	33050.000	62.557%	6223.000
3	18:01:21	118100.000	8245.000	0.000	29940.000	35730.000	34150.000	61.140%	6423.000
x		116300.000	8045.000	0.000	29320.000	34610.000	33440.000	62.155%	6285.000
σ		1676.000	175.900	0.000	543.000	982.800	612.300	0.885%	120.100
%RSD		1.442	2.187	0.000	1.852	2.840	1.831	1.424	1.911
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:01:02	353.700	373.300	1718.000	211600.000	209600.000	60.810	176.000	222.000
2	18:01:12	353.400	371.900	1710.000	213900.000	211000.000	60.670	167.700	222.700
3	18:01:21	348.700	384.700	1783.000	217400.000	214200.000	61.550	178.300	227.900
x		351.900	376.600	1737.000	214300.000	211600.000	61.010	174.000	224.200
σ		2.758	7.023	40.000	2924.000	2330.000	0.477	5.563	3.204
%RSD		0.784	1.865	2.303	1.364	1.101	0.782	3.197	1.429
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:01:02	219.300	768.500	742.300	92.260	8.329	24.660	0.000	301.100
2	18:01:12	232.500	783.900	765.400	93.810	7.454	29.310	0.000	301.900
3	18:01:21	228.500	778.300	769.400	94.120	6.064	26.530	0.000	299.300
x		226.800	776.900	759.000	93.400	7.282	26.830	0.000	300.800
σ		6.746	7.758	14.590	0.995	1.142	2.339	0.000	1.329
%RSD		2.975	0.999	1.922	1.066	15.680	8.715	0.000	0.442
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:01:02	0.000	14.350	13.700	53.958%	3.018	2.926	2.950	3.303
2	18:01:12	0.000	12.570	14.060	53.722%	2.854	3.171	3.464	3.519
3	18:01:21	0.000	13.480	13.910	53.633%	2.972	3.010	3.300	3.237
x		0.000	13.470	13.890	53.771%	2.948	3.036	3.238	3.353
σ		0.000	0.892	0.182	0.168%	0.085	0.125	0.263	0.148
%RSD		0.000	6.622	1.307	0.312	2.871	4.102	8.107	4.399
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:01:02	53.747%	24.760	1.017	1.013	292.800	292.800	67.606%	67.633%
2	18:01:12	53.795%	21.970	1.051	0.999	288.300	295.800	67.155%	68.149%
3	18:01:21	53.394%	24.290	0.793	0.934	291.800	292.900	67.235%	67.564%
x		53.645%	23.670	0.954	0.982	290.900	293.800	67.332%	67.782%
σ		0.219%	1.495	0.140	0.042	2.338	1.688	0.241%	0.319%
%RSD		0.408	6.313	14.720	4.261	0.803	0.575	0.357	0.471
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:01:02	1.968	1.787	239.400	216.000	227.000	61.341%		
2	18:01:12	1.940	1.935	237.900	221.800	229.700	61.077%		
3	18:01:21	1.906	1.923	238.400	218.100	228.500	61.193%		
x		1.938	1.882	238.600	218.600	228.400	61.204%		
σ		0.031	0.082	0.776	2.952	1.364	0.133%		
%RSD		1.610	4.382	0.325	1.351	0.597	0.217		

180-61161-D-36-A SD@5 12/6/2016 6:07:03 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:07	63.473%	1.035	60.310	63.500	0.000	26130.000	13970.000	13910.000
2	18:06:16	64.076%	1.145	61.910	61.730	0.000	26200.000	13920.000	13940.000
3	18:06:25	63.944%	1.268	62.590	63.000	0.000	26300.000	14030.000	13990.000
x		63.831%	1.149	61.600	62.750	0.000	26210.000	13970.000	13950.000
σ		0.317%	0.116	1.174	0.912	0.000	84.690	51.870	40.650
%RSD		0.497	10.130	1.906	1.453	0.000	0.323	0.371	0.292
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:07	24480.000	1696.000	0.000	6282.000	7146.000	7001.000	59.602%	1303.000
2	18:06:16	24640.000	1648.000	0.000	6306.000	7015.000	6952.000	59.495%	1306.000
3	18:06:25	24840.000	1647.000	0.000	6324.000	7466.000	7026.000	59.548%	1321.000
x		24660.000	1664.000	0.000	6304.000	7209.000	6993.000	59.548%	1310.000
σ		180.100	28.140	0.000	20.980	232.300	37.170	0.054%	9.462
%RSD		0.730	1.692	0.000	0.333	3.223	0.531	0.090	0.722
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:07	77.310	82.500	345.200	47150.000	45760.000	12.770	38.390	48.010
2	18:06:16	76.220	84.850	347.700	46740.000	45240.000	12.990	37.730	47.520
3	18:06:25	76.160	83.630	350.100	46960.000	45760.000	13.100	38.630	50.590
x		76.560	83.660	347.700	46950.000	45590.000	12.950	38.250	48.710
σ		0.651	1.174	2.461	204.700	299.200	0.167	0.465	1.651
%RSD		0.850	1.404	0.708	0.436	0.656	1.290	1.215	3.390
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:07	49.720	191.600	194.200	18.700	1.955	9.522	0.000	61.060
2	18:06:16	49.560	188.300	194.100	19.270	0.538	8.704	0.000	62.200
3	18:06:25	51.410	186.200	179.900	20.180	1.957	3.838	0.000	60.170
x		50.230	188.700	189.400	19.380	1.483	7.355	0.000	61.140
σ		1.024	2.713	8.230	0.742	0.819	3.073	0.000	1.017
%RSD		2.039	1.438	4.345	3.830	55.180	41.780	0.000	1.663
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:07	0.000	2.296	1.830	57.875%	0.631	0.489	0.837	0.889
2	18:06:16	0.000	1.697	1.697	57.722%	0.676	0.562	0.677	0.727
3	18:06:25	0.000	2.421	2.281	57.796%	0.521	0.690	0.675	0.643
x		0.000	2.138	1.936	57.798%	0.609	0.580	0.730	0.753
σ		0.000	0.387	0.306	0.077%	0.080	0.101	0.093	0.125
%RSD		0.000	18.090	15.800	0.132	13.070	17.470	12.790	16.630
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:07	58.350%	4.923	0.087	0.203	61.420	60.050	64.850%	65.313%
2	18:06:16	57.397%	4.588	0.187	0.166	58.460	66.100	65.158%	65.386%
3	18:06:25	57.585%	4.873	0.143	0.139	60.300	61.310	64.705%	65.717%
x		57.777%	4.795	0.139	0.169	60.060	62.490	64.905%	65.472%
σ		0.505%	0.181	0.050	0.032	1.497	3.194	0.232%	0.215%
%RSD		0.874	3.775	36.130	19.000	2.493	5.112	0.357	0.329
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:06:07	0.398	0.346	47.650	43.520	45.440	64.754%		
2	18:06:16	0.329	0.340	47.820	42.900	44.850	64.971%		
3	18:06:25	0.324	0.354	47.510	43.890	45.250	65.009%		
x		0.350	0.347	47.660	43.440	45.180	64.911%		
σ		0.042	0.007	0.152	0.502	0.300	0.138%		
%RSD		11.890	2.051	0.320	1.156	0.664	0.212		

180-61161-D-36-B MS 12/6/2016 6:12:11 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:13	56.244%	61.420	1481.000	1483.000	0.000	172600.000	126300.000	125800.000
2	18:11:23	54.658%	63.690	1483.000	1523.000	0.000	154700.000	112900.000	112800.000
3	18:11:33	54.523%	64.420	1504.000	1520.000	0.000	170000.000	123800.000	123900.000
x		55.142%	63.180	1490.000	1509.000	0.000	165800.000	121000.000	120800.000
σ		0.957%	1.565	12.970	22.230	0.000	9649.000	7135.000	7018.000
%RSD		1.736	2.477	0.871	1.473	0.000	5.820	5.896	5.808

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:13	166000.000	9968.000	0.000	79780.000	84040.000	89020.000	60.921%	9317.000
2	18:11:23	148800.000	9436.000	0.000	71770.000	75640.000	80110.000	67.543%	8385.000
3	18:11:33	163100.000	9880.000	0.000	79460.000	84000.000	88520.000	61.215%	9249.000
x		159300.000	9761.000	0.000	77000.000	81230.000	85890.000	63.226%	8984.000
σ		9164.000	285.300	0.000	4540.000	4838.000	5006.000	3.741%	519.300
%RSD		5.753	2.923	0.000	5.896	5.956	5.828	5.918	5.780

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:13	903.000	635.900	2430.000	247400.000	248600.000	522.800	651.400	476.600
2	18:11:23	806.900	588.300	2185.000	232400.000	231400.000	490.000	619.300	443.400
3	18:11:33	875.800	630.900	2419.000	250500.000	250400.000	527.100	667.900	472.200
x		861.900	618.400	2345.000	243400.000	243400.000	513.300	646.200	464.100
σ		49.560	26.140	138.800	9694.000	10500.000	20.270	24.700	18.010
%RSD		5.750	4.227	5.921	3.982	4.314	3.949	3.822	3.881

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:13	477.300	1310.000	1274.000	139.000	21.580	28.360	0.000	1266.000
2	18:11:23	450.900	1244.000	1202.000	135.000	17.650	41.000	0.000	1253.000
3	18:11:33	477.200	1301.000	1263.000	139.800	19.560	48.810	0.000	1283.000
x		468.500	1285.000	1246.000	137.900	19.600	39.390	0.000	1267.000
σ		15.220	35.770	38.880	2.566	1.968	10.320	0.000	15.240
%RSD		3.249	2.784	3.119	1.861	10.040	26.210	0.000	1.202

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:13	0.000	1032.000	1044.000	50.364%	50.380	50.900	53.280	89.870
2	18:11:23	0.000	1024.000	1042.000	50.325%	51.120	50.460	54.270	89.610
3	18:11:33	0.000	1034.000	1049.000	49.911%	51.190	49.940	50.560	87.540
x		0.000	1030.000	1045.000	50.200%	50.900	50.430	52.700	89.000
σ		0.000	5.110	3.439	0.251%	0.449	0.477	1.922	1.277
%RSD		0.000	0.496	0.329	0.501	0.882	0.946	3.646	1.435

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:13	49.817%	1943.000	286.600	285.800	2229.000	2207.000	65.405%	66.259%
2	18:11:23	49.291%	1967.000	288.500	281.900	2203.000	2205.000	65.856%	66.895%
3	18:11:33	50.584%	1916.000	280.800	279.300	2186.000	2202.000	65.168%	66.663%
x		49.897%	1942.000	285.300	282.400	2206.000	2204.000	65.477%	66.606%
σ		0.650%	25.340	4.021	3.291	21.930	2.263	0.350%	0.322%
%RSD		1.303	1.305	1.409	1.165	0.994	0.103	0.534	0.483

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:13	51.100	51.920	302.700	278.600	289.300	57.384%
2	18:11:23	50.970	51.240	294.200	272.500	283.300	58.392%
3	18:11:33	51.750	50.790	297.000	271.700	283.900	58.679%
x		51.270	51.320	298.000	274.300	285.500	58.152%
σ		0.416	0.568	4.312	3.795	3.310	0.680%
%RSD		0.810	1.108	1.447	1.384	1.159	1.170

180-61161-D-36-C MSD 12/6/2016 6:17:16 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:21	56.272%	61.670	1468.000	1468.000	0.000	170600.000	121100.000	121300.000
2	18:16:30	54.488%	62.470	1495.000	1507.000	0.000	171800.000	121900.000	121700.000
3	18:16:40	54.306%	63.610	1508.000	1514.000	0.000	171600.000	122200.000	121500.000
x		55.022%	62.580	1490.000	1496.000	0.000	171300.000	121700.000	121500.000
σ		1.086%	0.971	20.550	24.890	0.000	681.800	562.300	197.900
%RSD		1.974	1.551	1.379	1.664	0.000	0.398	0.462	0.163

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:21	154900.000	10870.000	0.000	78150.000	81740.000	86740.000	60.450%	8696.000
2	18:16:30	154500.000	11160.000	0.000	78960.000	82490.000	87800.000	59.974%	10010.000
3	18:16:40	154700.000	11130.000	0.000	78540.000	82450.000	87220.000	60.587%	8680.000
x		154700.000	11060.000	0.000	78550.000	82220.000	87250.000	60.337%	9129.000
σ		204.700	158.800	0.000	405.500	422.800	530.800	0.321%	763.700
%RSD		0.132	1.436	0.000	0.516	0.514	0.608	0.533	8.366

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:21	874.500	620.400	2310.000	241200.000	237700.000	519.600	663.900	474.300
2	18:16:30	872.200	618.000	2346.000	240700.000	236400.000	527.500	673.800	470.900
3	18:16:40	873.600	617.500	2334.000	238600.000	234600.000	520.100	642.300	464.100
x		873.400	618.600	2330.000	240200.000	236200.000	522.400	660.000	469.800
σ		1.166	1.561	18.560	1393.000	1514.000	4.391	16.090	5.193
%RSD		0.134	0.252	0.797	0.580	0.641	0.841	2.437	1.105

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:21	473.700	1247.000	1213.000	131.300	19.200	44.120	0.000	1241.000
2	18:16:30	473.900	1280.000	1232.000	134.300	18.000	28.820	0.000	1251.000
3	18:16:40	467.300	1260.000	1201.000	129.400	17.380	45.000	0.000	1259.000
x		471.600	1262.000	1216.000	131.700	18.200	39.310	0.000	1250.000
σ		3.739	16.540	15.820	2.480	0.925	9.098	0.000	8.720
%RSD		0.793	1.310	1.301	1.883	5.085	23.150	0.000	0.698

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:21	0.000	1041.000	1056.000	51.009%	49.970	49.870	50.590	88.860
2	18:16:30	0.000	1045.000	1046.000	50.653%	49.520	48.820	51.800	88.000
3	18:16:40	0.000	1053.000	1048.000	50.564%	49.390	50.490	55.930	87.380
x		0.000	1046.000	1050.000	50.742%	49.630	49.730	52.770	88.080
σ		0.000	6.255	5.316	0.236%	0.305	0.843	2.803	0.742
%RSD		0.000	0.598	0.506	0.464	0.616	1.696	5.311	0.842

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:21	49.820%	1969.000	289.000	293.700	2223.000	2202.000	66.089%	67.340%
2	18:16:30	51.135%	1923.000	285.700	286.100	2184.000	2160.000	66.181%	67.306%
3	18:16:40	49.745%	1959.000	292.100	292.300	2186.000	2205.000	65.147%	66.620%
x		50.234%	1951.000	288.900	290.700	2198.000	2189.000	65.806%	67.089%
σ		0.782%	24.090	3.208	4.075	22.070	24.870	0.573%	0.406%
%RSD		1.556	1.235	1.110	1.402	1.005	1.136	0.870	0.605

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:21	51.250	51.430	279.600	258.900	268.800	59.084%
2	18:16:30	51.560	51.010	280.300	254.200	267.700	59.153%
3	18:16:40	50.270	51.090	277.700	256.800	268.500	59.163%
x		51.030	51.180	279.200	256.600	268.300	59.133%
σ		0.673	0.224	1.326	2.352	0.548	0.043%
%RSD		1.319	0.438	0.475	0.917	0.204	0.072

180-61161-D-36-A PDS 12/6/2016 6:22:24 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:21:28	54.852%	61.260	1420.000	1425.000	0.000	166000.000	117100.000	117000.000
2	18:21:37	53.774%	63.420	1440.000	1453.000	0.000	164700.000	115600.000	115600.000
3	18:21:46	55.443%	60.950	1392.000	1411.000	0.000	164400.000	115000.000	115200.000
x		54.690%	61.870	1417.000	1430.000	0.000	165000.000	115900.000	116000.000
σ		0.846%	1.345	24.330	21.630	0.000	863.500	1110.000	923.600
%RSD		1.547	2.174	1.717	1.513	0.000	0.523	0.958	0.797
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:21:28	113900.000	18670.000	0.000	73990.000	79140.000	86290.000	58.331%	6927.000
2	18:21:37	112200.000	18570.000	0.000	73140.000	80120.000	85710.000	57.600%	7002.000
3	18:21:46	112300.000	18130.000	0.000	73340.000	80270.000	79320.000	57.682%	6979.000
x		112800.000	18460.000	0.000	73490.000	79840.000	83770.000	57.871%	6970.000
σ		937.500	289.000	0.000	444.100	615.800	3867.000	0.401%	38.490
%RSD		0.831	1.566	0.000	0.604	0.771	4.616	0.692	0.552
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:21:28	814.800	546.500	2152.000	204600.000	203100.000	538.500	646.300	457.200
2	18:21:37	813.200	555.700	2128.000	208900.000	206500.000	543.500	654.400	467.000
3	18:21:46	812.900	549.700	2135.000	208300.000	205000.000	540.300	643.700	461.100
x		813.600	550.600	2138.000	207300.000	204800.000	540.700	648.100	461.800
σ		1.000	4.657	12.280	2302.000	1717.000	2.545	5.544	4.905
%RSD		0.123	0.846	0.574	1.111	0.838	0.471	0.855	1.062
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:21:28	459.900	1209.000	1159.000	129.400	16.470	34.000	0.000	1237.000
2	18:21:37	469.700	1217.000	1178.000	128.400	21.210	28.580	0.000	1248.000
3	18:21:46	457.100	1206.000	1167.000	125.500	18.330	42.100	0.000	1247.000
x		462.300	1211.000	1168.000	127.700	18.670	34.890	0.000	1244.000
σ		6.612	5.616	9.823	2.033	2.384	6.805	0.000	6.000
%RSD		1.430	0.464	0.841	1.591	12.770	19.500	0.000	0.482
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:21:28	0.000	1135.000	1139.000	50.598%	50.450	49.040	51.420	92.200
2	18:21:37	0.000	1152.000	1136.000	49.919%	49.250	49.520	54.470	92.180
3	18:21:46	0.000	1143.000	1145.000	49.580%	49.520	50.180	52.100	91.560
x		0.000	1143.000	1140.000	50.032%	49.740	49.580	52.670	91.980
σ		0.000	8.807	4.449	0.518%	0.631	0.574	1.599	0.361
%RSD		0.000	0.770	0.390	1.035	1.269	1.157	3.036	0.393
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:21:28	50.573%	2091.000	521.000	508.400	2136.000	2125.000	64.119%	65.911%
2	18:21:37	49.270%	2137.000	520.400	521.700	2166.000	2158.000	63.592%	65.445%
3	18:21:46	50.548%	2072.000	514.200	506.100	2126.000	2147.000	63.728%	65.237%
x		50.131%	2100.000	518.500	512.100	2143.000	2143.000	63.813%	65.531%
σ		0.745%	33.200	3.737	8.394	20.760	16.890	0.274%	0.345%
%RSD		1.486	1.581	0.721	1.639	0.969	0.788	0.429	0.527
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:21:28	51.840	51.240	249.100	230.400	239.300	59.544%		
2	18:21:37	51.900	51.850	251.100	229.300	240.800	59.473%		
3	18:21:46	51.490	51.980	251.200	230.800	242.300	59.204%		
x		51.740	51.690	250.500	230.200	240.800	59.407%		
σ		0.220	0.396	1.210	0.785	1.514	0.180%		
%RSD		0.425	0.765	0.483	0.341	0.629	0.302		

CRI 2136054 12/6/2016 6:32:00 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:31:05	63.043%	1.086	20.970	21.380	0.000	604.500	555.600	550.100
2	18:31:15	62.900%	1.150	20.910	20.910	0.000	607.200	558.400	566.700
3	18:31:24	62.445%	0.930	23.050	21.580	0.000	610.500	553.600	563.000
x		62.796%	105.566%	432.904%	425.802%	0.000	759.252%	555.855%	559.941%
σ		0.313%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.498	10.720	5.616	1.600	0.000	0.491	0.441	1.562
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:31:05	36.460	517.100	0.000	531.100	422.300	517.100	56.192%	5.603
2	18:31:15	36.280	518.600	0.000	536.300	439.000	518.300	55.680%	6.136
3	18:31:24	35.760	518.800	0.000	545.200	518.100	523.300	55.542%	5.607
x		120.544%	103.641%	0.000	537.526%	459.790%	519.562%	55.805%	115.641%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.343%	n/a
%RSD		1.006	0.182	0.000	1.327	11.130	0.627	0.614	5.300
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:31:05	0.680	2.445	5.939	63.300	55.390	0.731	1.361	2.923
2	18:31:15	0.438	2.378	5.900	67.090	51.720	0.719	1.090	2.369
3	18:31:24	1.536	2.447	5.971	64.100	54.000	0.446	0.819	2.675
x		88.466%	121.161%	118.735%	129.664%	107.407%	126.427%	109.006%	132.780%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		65.250	1.603	0.599	3.086	3.449	25.490	24.830	10.460
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:31:05	2.198	5.789	6.428	1.016	6.320	8.094	0.000	5.484
2	18:31:15	1.817	5.652	5.209	1.120	5.739	3.697	0.000	5.473
3	18:31:24	2.254	6.475	7.851	1.058	2.810	6.808	0.000	5.901
x		104.481%	119.445%	129.924%	106.470%	99.127%	123.990%	0.000	112.390%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		11.370	7.381	20.360	4.915	37.960	36.470	0.000	4.336
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:31:05	55.942%	5.361	3.732	57.469%	1.050	1.028	1.454	1.245
2	18:31:15	56.415%	4.714	5.110	57.435%	1.057	1.141	1.130	0.981
3	18:31:24	55.795%	4.040	4.699	56.409%	0.998	1.052	1.247	0.948
x		56.051%	94.099%	90.270%	57.104%	103.490%	107.369%	127.707%	105.773%
σ		0.324%	n/a	n/a	0.603%	n/a	n/a	n/a	n/a
%RSD		0.578	14.040	15.680	1.055	3.113	5.560	12.860	15.410
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:31:05	58.001%	5.317	2.284	1.905	10.090	10.110	61.336%	62.440%
2	18:31:15	56.851%	5.617	1.956	1.919	10.780	10.340	62.371%	62.698%
3	18:31:24	56.403%	5.090	2.140	1.936	10.040	9.922	61.597%	62.759%
x		57.085%	106.825%	106.326%	96.000%	103.023%	101.261%	61.768%	62.633%
σ		0.824%	n/a	n/a	n/a	n/a	n/a	0.538%	0.169%
%RSD		1.444	4.949	7.724	0.814	4.031	2.087	0.871	0.270
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:31:05	1.021	0.963	1.068	1.097	1.025	67.329%		
2	18:31:15	0.902	1.070	1.012	1.098	1.070	67.257%		
3	18:31:24	1.015	1.027	1.003	1.118	1.066	66.737%		
x		97.932%	101.985%	102.748%	110.431%	105.362%	67.107%		
σ		n/a	n/a	n/a	n/a	n/a	0.323%		
%RSD		6.872	5.281	3.420	1.058	2.372	0.482		

CRI 2136054 12/6/2016 6:37:10 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:14	60.679%	1.159	20.360	20.720	0.000	566.300	523.600	499.200
2	18:36:24	61.173%	1.221	19.950	20.380	0.000	568.000	513.800	519.500
3	18:36:33	62.396%	0.975	20.990	19.480	0.000	567.800	519.500	524.900
x		61.416%	111.867%	408.685%	403.863%	0.000	709.221%	518.947%	514.516%
σ		0.884%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.439	11.450	2.546	3.178	0.000	0.168	0.942	2.631
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:14	32.160	495.300	0.000	480.500	463.200	494.100	58.450%	4.945
2	18:36:24	32.280	498.000	0.000	480.900	390.000	487.000	58.298%	4.602
3	18:36:33	33.190	490.700	0.000	484.400	383.700	477.900	57.958%	5.286
x		108.482%	98.933%	0.000	481.941%	412.312%	486.338%	58.236%	98.887%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.252%	n/a
%RSD		1.739	0.740	0.000	0.448	10.720	1.676	0.432	6.913
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:14	1.209	1.840	5.539	54.550	63.150	0.772	1.594	2.486
2	18:36:24	1.685	2.121	5.328	57.770	87.440	0.513	1.180	2.067
3	18:36:33	0.780	2.309	5.724	62.320	67.840	0.575	0.986	1.880
x		122.462%	104.493%	110.600%	116.427%	145.617%	124.050%	125.353%	107.217%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		36.970	11.310	3.581	6.701	17.700	21.810	24.760	14.460
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:14	2.019	6.402	5.162	0.989	5.133	2.711	0.000	4.160
2	18:36:24	2.592	5.668	5.294	0.987	4.945	4.703	0.000	4.955
3	18:36:33	2.526	6.641	5.108	1.143	5.413	3.995	0.000	4.972
x		118.939%	124.739%	103.754%	103.964%	103.270%	76.056%	0.000	93.912%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		13.170	8.132	1.845	8.617	4.553	26.560	0.000	9.883
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:14	61.495%	4.981	4.446	59.334%	1.038	1.007	0.748	1.097
2	18:36:24	61.810%	4.744	4.064	58.508%	0.907	0.801	0.922	1.220
3	18:36:33	60.059%	4.236	3.968	58.661%	0.995	0.989	1.066	0.759
x		61.122%	93.070%	83.189%	58.834%	98.004%	93.243%	91.225%	102.549%
σ		0.933%	n/a	n/a	0.439%	n/a	n/a	n/a	n/a
%RSD		1.527	8.175	6.071	0.746	6.819	12.200	17.480	23.320
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:14	56.289%	5.178	2.194	2.222	9.184	10.300	62.774%	63.771%
2	18:36:24	56.421%	5.153	1.959	2.056	11.300	10.330	62.193%	63.606%
3	18:36:33	55.846%	4.811	2.391	2.351	9.838	9.982	62.418%	63.253%
x		56.185%	100.950%	109.076%	110.486%	101.067%	102.029%	62.461%	63.543%
σ		0.301%	n/a	n/a	n/a	n/a	n/a	0.293%	0.264%
%RSD		0.536	4.063	9.915	6.679	10.710	1.883	0.469	0.416
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:36:14	1.131	1.016	0.940	1.075	1.001	68.696%		
2	18:36:24	1.091	0.990	1.101	1.096	1.047	68.431%		
3	18:36:33	1.103	1.131	1.036	0.937	1.065	67.673%		
x		110.826%	104.592%	102.560%	103.597%	103.779%	68.267%		
σ		n/a	n/a	n/a	n/a	n/a	0.531%		
%RSD		1.825	7.186	7.921	8.352	3.227	0.777		

CCV 2136057 12/6/2016 6:42:18 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:22	56.944%	107.300	106.300	104.100	0.000	51310.000	52810.000	52590.000
2	18:41:32	57.391%	106.800	101.900	104.500	0.000	51330.000	52670.000	52540.000
3	18:41:41	59.224%	104.400	99.390	100.200	0.000	51410.000	52630.000	52260.000
x		57.853%	106.155%	102.545%	102.931%	0.000	102.703%	105.409%	104.921%
σ		1.208%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.088	1.459	3.436	2.330	0.000	0.107	0.177	0.340
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:22	547.400	5364.000	0.000	47860.000	48840.000	48060.000	52.924%	106.700
2	18:41:32	539.600	5304.000	0.000	47870.000	48520.000	47880.000	52.757%	105.300
3	18:41:41	523.900	5256.000	0.000	47630.000	48990.000	47720.000	52.893%	103.700
x		107.393%	106.156%	0.000	95.577%	97.563%	95.775%	52.858%	105.210%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.089%	n/a
%RSD		2.227	1.025	0.000	0.281	0.494	0.356	0.168	1.402
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:22	107.000	104.800	494.700	27040.000	26380.000	103.100	108.900	106.800
2	18:41:32	103.400	106.400	495.300	27510.000	26530.000	105.200	104.200	109.700
3	18:41:41	107.800	107.300	493.800	27510.000	26050.000	105.800	105.000	106.500
x		106.065%	106.148%	98.925%	109.414%	105.275%	104.656%	106.028%	107.666%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.218	1.168	0.149	1.008	0.924	1.353	2.362	1.647
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:22	109.100	107.100	96.750	101.400	90.880	105.500	0.000	99.320
2	18:41:32	108.000	100.600	98.840	99.460	99.420	123.000	0.000	101.400
3	18:41:41	106.900	110.600	99.490	97.990	93.350	99.760	0.000	98.840
x		108.005%	106.084%	98.360%	99.604%	94.550%	109.399%	0.000	99.869%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.024	4.805	1.454	1.698	4.646	11.060	0.000	1.389
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:22	53.400%	102.200	104.100	52.485%	87.480	84.350	99.140	99.240
2	18:41:32	52.511%	104.000	104.300	52.634%	85.950	85.370	96.250	99.820
3	18:41:41	52.714%	104.500	105.500	52.470%	87.840	85.800	96.320	99.990
x		52.875%	103.566%	104.649%	52.530%	87.090%	85.174%	97.237%	99.683%
σ		0.466%	n/a	n/a	0.091%	n/a	n/a	n/a	n/a
%RSD		0.882	1.172	0.740	0.172	1.151	0.873	1.698	0.393
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:22	53.264%	95.720	96.480	99.770	93.330	97.930	58.835%	60.940%
2	18:41:32	53.470%	97.110	99.980	99.510	94.710	98.650	60.449%	59.746%
3	18:41:41	52.934%	97.560	99.060	101.800	95.720	98.620	59.363%	60.888%
x		53.223%	96.799%	98.506%	100.348%	94.585%	98.399%	59.549%	60.525%
σ		0.270%	n/a	n/a	n/a	n/a	n/a	0.823%	0.674%
%RSD		0.508	0.991	1.844	1.222	1.271	0.410	1.383	1.114
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:41:22	97.830	96.630	96.320	99.310	97.770	62.767%		
2	18:41:32	97.870	97.470	98.800	98.520	98.250	62.710%		
3	18:41:41	98.460	98.740	98.910	97.480	97.820	62.635%		
x		98.055%	97.613%	98.009%	98.437%	97.948%	62.704%		
σ		n/a	n/a	n/a	n/a	n/a	0.066%		
%RSD		0.362	1.091	1.497	0.935	0.273	0.106		

CCB10 12/6/2016 6:47:26 PM QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:31	76.686%	0.009	-0.044	0.032	0.000	-0.900	5.384	6.160
2	18:46:40	76.200%	0.074	-0.631	-0.284	0.000	-0.637	8.309	7.107
3	18:46:50	77.685%	0.043	-0.385	-0.413	0.000	-2.614	7.245	7.623
x		76.857%	0.042	-0.353	-0.221	0.000	-1.384	6.979	6.963
σ		0.757%	0.033	0.295	0.229	0.000	1.073	1.481	0.742
%RSD		0.985	78.270	83.430	103.500	0.000	77.580	21.220	10.660

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:31	0.448	-18.750	0.000	-39.500	-169.800	-21.010	67.881%	-0.084
2	18:46:40	0.444	-17.850	0.000	-36.460	-215.600	-23.850	67.501%	-0.222
3	18:46:50	0.280	-20.150	0.000	-39.600	-217.400	-23.720	68.123%	-0.030
x		0.391	-18.920	0.000	-38.520	-200.900	-22.860	67.835%	-0.112
σ		0.096	1.161	0.000	1.780	26.970	1.600	0.313%	0.099
%RSD		24.540	6.135	0.000	4.622	13.420	6.999	0.462	88.510

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:31	0.074	0.070	0.069	9.427	10.460	0.019	0.177	-0.061
2	18:46:40	0.179	0.050	0.148	8.701	20.670	0.056	0.131	-0.028
3	18:46:50	0.046	0.040	0.129	7.779	8.756	0.007	0.083	0.038
x		0.099	0.053	0.116	8.636	13.300	0.028	0.130	-0.017
σ		0.070	0.015	0.041	0.826	6.441	0.026	0.047	0.050
%RSD		70.200	28.120	35.600	9.563	48.440	93.760	35.960	293.500

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:31	0.032	0.142	0.297	0.027	0.319	-1.178	0.000	-0.012
2	18:46:40	-0.034	0.206	0.145	0.012	-0.172	2.961	0.000	0.018
3	18:46:50	-0.067	0.568	0.142	0.011	-0.172	1.383	0.000	0.003
x		-0.023	0.305	0.195	0.017	-0.009	1.055	0.000	0.003
σ		0.050	0.230	0.089	0.009	0.284	2.089	0.000	0.015
%RSD		218.700	75.420	45.550	53.940	3309.000	197.900	0.000	574.100

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:31	62.073%	-0.347	-0.575	61.693%	0.080	0.016	-0.007	-0.021
2	18:46:40	61.574%	-0.459	-0.510	61.881%	0.086	0.028	-0.007	0.004
3	18:46:50	61.989%	-0.664	-0.587	61.342%	0.025	0.054	-0.007	0.004
x		61.879%	-0.490	-0.557	61.638%	0.064	0.032	-0.007	-0.004
σ		0.267%	0.161	0.042	0.273%	0.034	0.020	0.000	0.014
%RSD		0.432	32.830	7.512	0.444	53.370	60.260	0.262	353.400

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:31	61.944%	-0.036	0.169	0.150	0.120	-0.021	66.771%	68.514%
2	18:46:40	62.827%	0.007	0.116	0.085	0.000	-0.021	67.063%	67.826%
3	18:46:50	61.880%	-0.066	0.119	0.113	0.000	0.012	65.772%	68.210%
x		62.217%	-0.032	0.135	0.116	0.040	-0.010	66.535%	68.183%
σ		0.529%	0.037	0.030	0.033	0.069	0.019	0.677%	0.345%
%RSD		0.851	117.400	22.150	28.080	173.200	189.100	1.017	0.506

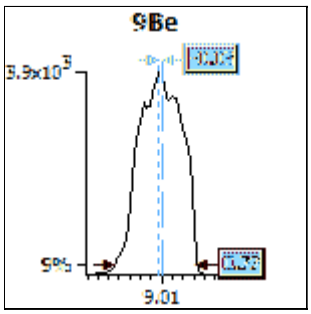
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:31	0.011	0.021	0.024	0.026	0.019	72.308%
2	18:46:40	-0.002	0.021	0.039	0.063	0.033	72.353%
3	18:46:50	0.007	0.012	0.039	0.005	0.019	71.895%
x		0.005	0.018	0.034	0.031	0.023	72.186%
σ		0.006	0.005	0.008	0.030	0.008	0.252%
%RSD		120.400	26.170	24.640	95.160	34.170	0.350

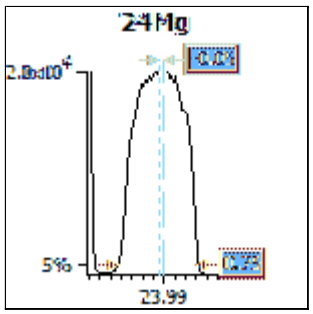
Performance Report

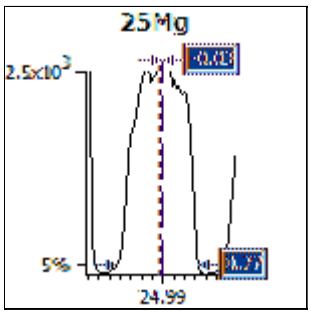
Sample details
Sample name : ITUNE
Acquired at : 12/6/2016 7:28:05 AM
Report name : EPA ILM05.2 / 6020A 2.1 [6/28/2016 12:34:31 PM]

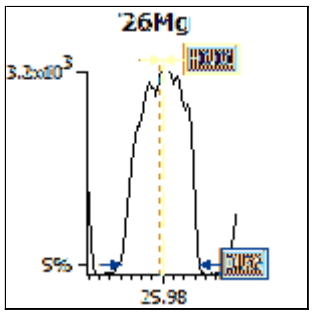
Mass Calibration verification

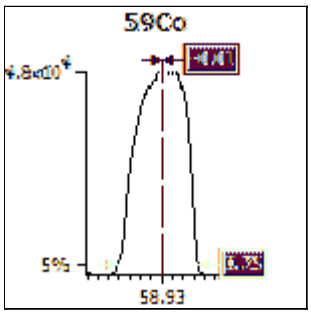
Acquisition parameters
Sweeps : 10
Dwell : 10.0 mSecs
Point spacing : 0.02 amu
Peak width measured at 5% of the peak maximum

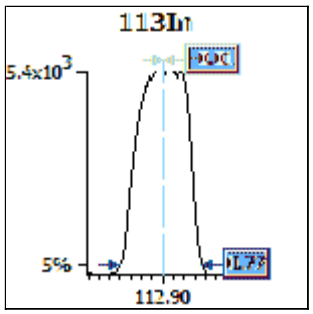


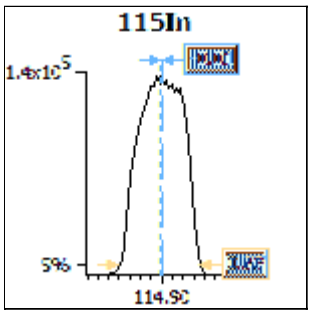


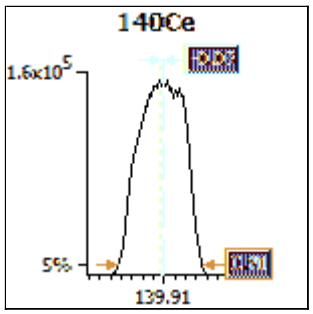


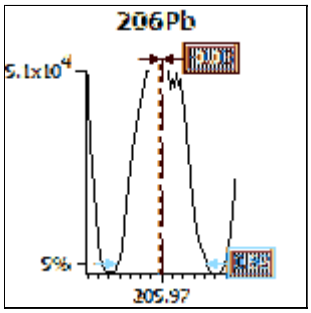


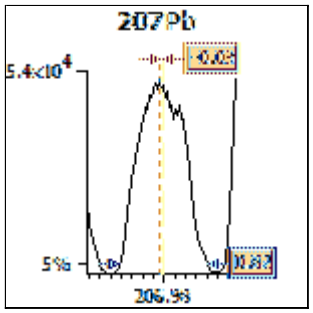


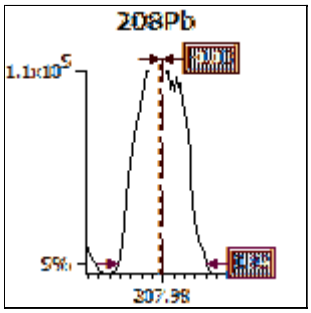












Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.90	0.40	0.10	0.77	-0.03
24Mg	0.90	0.40	0.10	0.75	-0.05
25Mg	0.90	0.40	0.10	0.77	-0.03
26Mg	0.90	0.40	0.10	0.75	-0.01
59Co	0.90	0.40	0.10	0.75	-0.01
113In	0.90	0.40	0.10	0.77	-0.01
115In	0.90	0.40	0.10	0.77	-0.01
140Ce	0.90	0.40	0.10	0.81	-0.03
206Pb	0.90	0.40	0.10	0.82	-0.03
207Pb	0.90	0.40	0.10	0.82	-0.03
208Pb	0.90	0.40	0.10	0.82	-0.03

Sample details
Sample name : ITUNE
Acquired at : 12/6/2016 7:28:05 AM
Report name : EPA ILM05.2 / 6020A 2.1 [6/28/2016 12:34:31 PM]

Tune conditions

Major	
Extraction	-157
Lens 1	2.9
Focus	22.7
D1	-36.9
Pole Bias	-1.0
Hexapole Bias	-3.0
Nebuliser	0.78
Sampling Depth	113

Minor	
Lens 2	-20.4
Lens 3	-194.5
Forward power	1404
Horizontal	47
Vertical	465
D2	-151
DA	-80.0
Cool	13.0
Auxiliary	0.80

Global	
Standard resolution	n/a
High resolution	n/a
Analogue Detector	n/a
PC Detector	n/a

Add. Gases	
CCT1	0.00
CCT2	0.00

Sensitivity and stability results

Acquisition parameters
Sweeps : 180

Run	Time	5Bkg	9Be	24Mg	25Mg	26Mg	59Co	113In	115In
Dwell (mSecs)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Limits	%RSD	-	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
	Countrate	-	>100	>500	>150	>150	>500	>500	>10000
1	7:29:39 AM	1	3827	23207	2702	3221	46716	5300	136062
2	7:30:51 AM	1	3718	22591	2555	3052	45309	5139	134884
3	7:32:04 AM	1	3722	22411	2602	2963	45024	5026	133727
4	7:33:16 AM	1	3737	22404	2621	3099	45355	5034	135086
5	7:34:28 AM	1	3565	22524	2647	3121	44916	5117	134751
x		1	3714	22627	2625	3091	45464	5123	134902
σ		0.19	94.49	333.32	54.33	94.46	724.34	110.78	834.28
%RSD		18.801	2.544	1.473	2.069	3.056	1.593	2.162	0.618

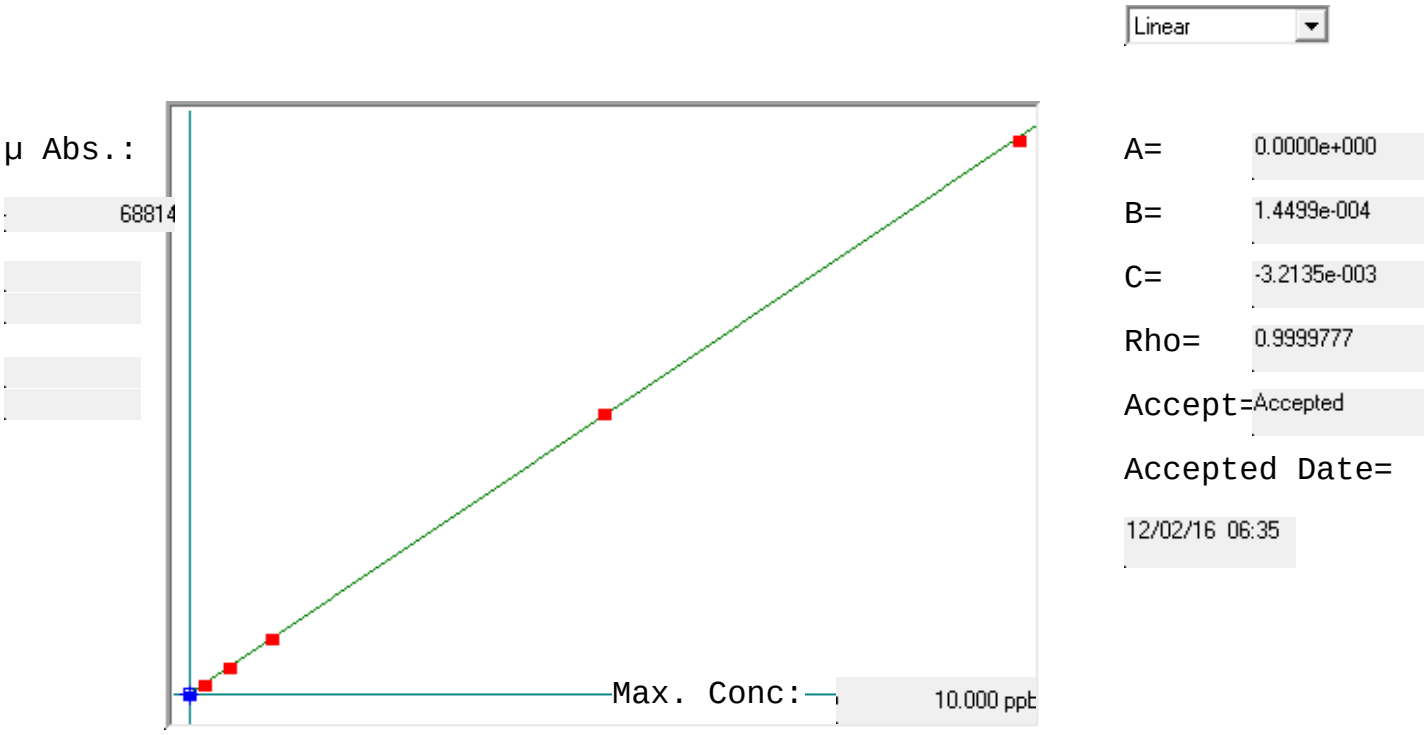
Run	Time	140Ce	156Ce O	206Pb	207Pb	208Pb	220Bkg
Dwell (mSecs)		0.0	0.0	0.0	0.0	0.0	0.0
Limits	%RSD	5.0%	-	5.0%	5.0%	5.0%	-
	Countrate	>10000	-	>1000	>1000	>5000	-
1	7:29:39 AM	147213	3239	58759	45631	129295	0
2	7:30:51 AM	143399	3164	58899	44760	129348	0
3	7:32:04 AM	141921	3141	58217	44451	128507	0
4	7:33:16 AM	143211	3120	58637	44240	128685	0
5	7:34:28 AM	141535	3183	58261	43879	127743	0
x		143456	3170	58554	44592	128716	0
σ		2248.63	45.63	302.99	663.31	656.67	0.06
%RSD		1.567	1.440	0.517	1.488	0.510	24.786

Ratio results

Run	Time	156Ce O/140Ce
Ratio limits		<0.0600
1	7:29:39 AM	0
2	7:30:51 AM	0
3	7:32:04 AM	0
4	7:33:16 AM	0
5	7:34:28 AM	0
x		0.0221
σ		0.00
%RSD		1.1549

Result : The performance report passed.

METHG



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0.0 ppb	0.000	-0.013	-0.013	-67	0.000	-67				
0.2 ppb	0.200	0.190	-0.010	1335	0.0 %	1335				
0.5 ppb	0.500	0.496	-0.004	3445	0.0 %	3445				
1.0 ppb	1.000	1.001	0.001	6924	0.0 %	6924				
5.0 ppb	5.000	5.051	0.051	34860	0.0 %	34860				
10 ppb	10.000	9.974	-0.026	68814	0.0 %	68814				

R61202A-Raw

Method: METHG Operator: Admin Date of Analysis: 02 Dec 2016 06:18:39

Seq ID	Type	Sample ID	Extended ID	Date	Conc.	Units	Stnd Conc	µ Abs	Method	Chapter
9493	Std	0.0 ppb - 1		02 Dec 2016 06:23:15	-	ppb	0.0000	-67	METHG	R61202A
9494	Std	0.2 ppb - 1		02 Dec 2016 06:25:17	-	ppb	0.2000	1335	METHG	R61202A
9495	Std	0.5 ppb - 1		02 Dec 2016 06:27:20	-	ppb	0.5000	3445	METHG	R61202A
9496	Std	1.0 ppb - 1		02 Dec 2016 06:29:23	-	ppb	1.0000	6924	METHG	R61202A
9497	Std	5.0 ppb - 1		02 Dec 2016 06:31:25	-	ppb	5.0000	34860	METHG	R61202A
9498	Std	10 ppb - 1		02 Dec 2016 06:33:29	-	ppb	10.0000	68814	METHG	R61202A
9499	CK STND	ICV - 1		02 Dec 2016 06:35:33	100.7% 2.5171	ppb	-	17382	METHG	R61202A
9500	CK STND	ICB - 1		02 Dec 2016 06:37:41	-0.0308	ppb	-	-190	METHG	R61202A
9501	CK STND	CRA - 1		02 Dec 2016 06:39:44	95.5% 0.1909	ppb	-	1339	METHG	R61202A
9502	CK STND	CCV - 1		02 Dec 2016 06:41:45	100.1% 5.0031	ppb	-	34528	METHG	R61202A
9503	CK STND	CCB - 1		02 Dec 2016 06:43:46	-0.0463	ppb	-	-297	METHG	R61202A
9504	SMPL	MB 180-195935/1-A - 1		02 Dec 2016 06:45:50	-0.0038	ppb	-	-4	METHG	R61202A
9505	SMPL	LCS 180-195935/2-A - 1		02 Dec 2016 06:47:51	2.3719	ppb	-	16381	METHG	R61202A
9506	SMPL	180-61206-A-1-B - 1		02 Dec 2016 06:49:52	-0.0216	ppb	-	-127	METHG	R61202A
9507	SMPL	180-61206-A-1-C MS - 1		02 Dec 2016 06:51:55	0.7191	ppb	-	4982	METHG	R61202A
9508	SMPL	180-61206-A-1-D MSD - 1		02 Dec 2016 06:53:56	0.6701	ppb	-	4644	METHG	R61202A
9509	SMPL	180-61206-A-3-B - 1		02 Dec 2016 06:55:57	0.0049	ppb	-	56	METHG	R61202A
9510	SMPL	180-61206-A-5-B - 1		02 Dec 2016 06:57:58	0.1135	ppb	-	805	METHG	R61202A
9511	SMPL	180-61206-A-7-B - 1		02 Dec 2016 07:00:00	0.1061	ppb	-	754	METHG	R61202A
9512	SMPL	MB 180-195864/1-A - 1		02 Dec 2016 07:02:01	-0.0038	ppb	-	-4	METHG	R61202A
9513	SMPL	LCS 180-195864/2-A - 1		02 Dec 2016 07:04:03	2.4280	ppb	-	16768	METHG	R61202A
9514	CK STND	CCV - 1		02 Dec 2016 07:06:05	100.3% 5.0128	ppb	-	34595	METHG	R61202A
9515	CK STND	CCB - 1		02 Dec 2016 07:08:10	-0.0460	ppb	-	-295	METHG	R61202A
9516	SMPL	180-61196-B-1-A - 1		02 Dec 2016 07:10:14	0.2750	ppb	-	1919	METHG	R61202A
9517	SMPL	180-61196-B-1-B MS - 1		02 Dec 2016 07:12:17	1.3319	ppb	-	9208	METHG	R61202A
9518	SMPL	180-61196-B-1-C MSD - 1		02 Dec 2016 07:14:20	1.4706	ppb	-	10165	METHG	R61202A
9519	SMPL	180-61196-B-2-A - 1		02 Dec 2016 07:16:21	0.6823	ppb	-	4728	METHG	R61202A
9520	SMPL	180-61196-B-3-A - 1		02 Dec 2016 07:18:23	1.2618	ppb	-	8725	METHG	R61202A
9521	SMPL	180-61196-B-4-A - 1		02 Dec 2016 07:20:24	0.2072	ppb	-	1451	METHG	R61202A
9522	SMPL	180-61196-B-5-A - 1		02 Dec 2016 07:22:26	0.4154	ppb	-	2887	METHG	R61202A
9523	SMPL	180-61196-B-6-A - 1		02 Dec 2016 07:24:27	0.1605	ppb	-	1129	METHG	R61202A
9524	SMPL	180-61196-B-7-A - 1		02 Dec 2016 07:26:28	0.1811	ppb	-	1271	METHG	R61202A
9525	SMPL	180-61196-B-8-A - 1		02 Dec 2016 07:28:29	1.6529	ppb	-	11422	METHG	R61202A
9526	CK STND	CCV - 1		02 Dec 2016 07:30:31	98.1% 4.9058	ppb	-	33857	METHG	R61202A
9527	CK STND	CCB - 1		02 Dec 2016 07:32:34	-0.0458	ppb	-	-294	METHG	R61202A
9528	SMPL	180-61196-B-9-A - 1		02 Dec 2016 07:34:37	0.5082	ppb	-	3527	METHG	R61202A
9529	SMPL	180-61196-B-10-A - 1		02 Dec 2016 07:36:40	0.1716	ppb	-	1206	METHG	R61202A
9530	SMPL	180-61196-B-11-A - 1		02 Dec 2016 07:38:42	0.0970	ppb	-	691	METHG	R61202A
9531	SMPL	180-61196-B-12-A - 1		02 Dec 2016 07:40:45	0.3107	ppb	-	2165	METHG	R61202A
9532	SMPL	180-61196-B-13-A - 1		02 Dec 2016 07:42:48	0.5388	ppb	-	3738	METHG	R61202A
9533	SMPL	180-61196-B-14-A - 1		02 Dec 2016 07:44:49	0.5241	ppb	-	3637	METHG	R61202A
9534	SMPL	180-61196-B-15-A - 1		02 Dec 2016 07:46:51	0.5610	ppb	-	3891	METHG	R61202A
9535	SMPL	180-61209-A-1-B - 1		02 Dec 2016 07:48:52	0.0684	ppb	-	494	METHG	R61202A
9536	SMPL	180-61209-A-2-B - 1		02 Dec 2016 07:50:53	0.3111	ppb	-	2168	METHG	R61202A
9537	SMPL	180-61209-A-3-B - 1		02 Dec 2016 07:52:54	0.1279	ppb	-	904	METHG	R61202A
9538	CK STND	CCV - 1		02 Dec 2016 07:54:55	101.0% 5.0505	ppb	-	34855	METHG	R61202A
9539	CK STND	CCB - 1		02 Dec 2016 07:56:57	-0.0416	ppb	-	-265	METHG	R61202A
9540	SMPL	180-61209-C-4-A - 1		02 Dec 2016 07:59:02	0.1656	ppb	-	1164	METHG	R61202A
9541	SMPL	180-61209-A-5-B - 1		02 Dec 2016 08:01:03	0.1084	ppb	-	770	METHG	R61202A
9542	SMPL	MB 180-195631/1-A - 1		02 Dec 2016 08:03:05	-0.0035	ppb	-	-2	METHG	R61202A
9543	SMPL	LCS 180-195631/2-A - 1		02 Dec 2016 08:05:07	1.9987	ppb	-	13807	METHG	R61202A
9544		180-61116-A-141-A - 1		02 Dec 2016 08:07:10	HIGH	ppb	-	753341	METHG	R61202A
9545		180-61116-A-141-B MS - 1		02 Dec 2016 08:08:53	HIGH	ppb	-	667907	METHG	R61202A
9546		180-61116-A-141-C MSD - 1		02 Dec 2016 08:11:35	HIGH	ppb	-	616753	METHG	R61202A
9547	SMPL	180-61116-A-142-A - 1		02 Dec 2016 08:14:07	9.1097	ppb	-	62851	METHG	R61202A
9548		180-61116-A-143-A - 1		02 Dec 2016 08:17:07	HIGH	ppb	-	679445	METHG	R61202A
9549		180-61116-A-144-A - 1		02 Dec 2016 08:18:55	HIGH	ppb	-	225116	METHG	R61202A
9550	CK STND	CCV - 1		02 Dec 2016 08:21:36	97.7% 4.8833	ppb	-	33702	METHG	R61202A
9551	CK STND	CCB - 1		02 Dec 2016 08:23:57	-0.0724	ppb	-	-477	METHG	R61202A
9552		180-61116-A-145-A - 1		02 Dec 2016 08:26:01	HIGH	ppb	-	442696	METHG	R61202A
9553		180-61116-A-146-A - 1		02 Dec 2016 08:27:42	HIGH	ppb	-	677904	METHG	R61202A
9554	SMPL	180-61127-B-1-A - 1		02 Dec 2016 08:30:01	-0.1180	ppb	-	-792	METHG	R61202A
9555	SMPL	180-61127-A-2-B - 1		02 Dec 2016 08:33:06	0.1200	ppb	-	850	METHG	R61202A
9556	SMPL	180-61127-C-3-A - 1		02 Dec 2016 08:35:07	0.0642	ppb	-	465	METHG	R61202A
9557	SMPL	180-61122-A-1-H - 1		02 Dec 2016 08:37:09	0.3642	ppb	-	2534	METHG	R61202A
9558	SMPL	180-61122-A-2-D - 1		02 Dec 2016 08:39:11	0.0454	ppb	-	335	METHG	R61202A
9559	SMPL	180-61116-A-141-A@100 - 1		02 Dec 2016 08:41:14	3.2311	ppb	-	22307	METHG	R61202A
9560	SMPL	180-61116-A-141-B MS@100 - 1		02 Dec 2016 08:43:15	2.4591	ppb	-	16982	METHG	R61202A
9561	SMPL	180-61116-A-141-C MSD@100 - 1		02 Dec 2016 08:45:20	2.5623	ppb	-	17694	METHG	R61202A
9562	CK STND	CCV - 1		02 Dec 2016 08:47:24	99.5% 4.9766	ppb	-	34345	METHG	R61202A
9563	CK STND	CCB - 1		02 Dec 2016 08:49:28	-0.0476	ppb	-	-306	METHG	R61202A
9564	SMPL	180-61116-A-143-A@100 - 1		02 Dec 2016 08:51:32	3.0979	ppb	-	21388	METHG	R61202A
9565	SMPL	180-61116-A-144-A@25 - 1		02 Dec 2016 08:53:34	1.7558	ppb	-	12132	METHG	R61202A
9566	SMPL	180-61116-A-145-A@50 - 1		02 Dec 2016 08:55:39	3.1254	ppb	-	21578	METHG	R61202A
9567	SMPL	180-61116-A-146-A@100 - 1		02 Dec 2016 08:57:43	2.9758	ppb	-	20546	METHG	R61202A
9568	SMPL	180-61122-A-3-D - 1		02 Dec 2016 08:59:49	0.1628	ppb	-	1145	METHG	R61202A
9569	SMPL	180-61122-A-4-D - 1		02 Dec 2016 09:01:55	0.4587	ppb	-	3186	METHG	R61202A
9570	SMPL	180-61157-A-1-A - 1		02 Dec 2016 09:03:56	-0.0042	ppb	-	-7	METHG	R61202A
9571	SMPL	180-61157-B-2-A - 1		02 Dec 2016 09:05:57	0.2144	ppb	-	1501	METHG	R61202A
9572	SMPL	180-61157-A-3-A - 1		02 Dec 2016 09:07:58	0.2404	ppb	-	1680	METHG	R61202A
9573	SMPL	180-61157-C-5-D - 1		02 Dec 2016 09:10:00	0.1571	ppb	-	1106	METHG	R61202A
9574	CK STND	CCV - 1		02 Dec 2016 09:12:01	101.0% 5.0482	ppb	-	34839	METHG	R61202A
9575	CK STND	CCB - 1		02 Dec 2016 09:14:03	-0.0450	ppb	-	-288	METHG	R61202A
9576	SMPL	180-61252-A-6-B - 1		02 Dec 2016 09:16:07	0.1444	ppb	-	1018	METHG	R61202A
9577	SMPL	MB 180-195865/1-A - 1		02 Dec 2016 09:18:09	-0.0051	ppb	-	-13	METHG	R61202A
9578	SMPL	LCS 180-195865/2-A - 1		02 Dec 2016 09:20:11	2.5514	ppb	-	17619	METHG	R61202A
9579	SMPL	180-61198-A-1-A - 1		02 Dec 2016 09:22:13	-0.0280	ppb	-	-171	METHG	R61202A
9580	SMPL	180-61198-A-1-B MS - 1		02 Dec 2016 09:24:17	0.8564	ppb	-	5929	METHG	R61202A
9581	SMPL	180-61198-A-1-C MSD - 1		02 Dec 2016 09:26:20	0.4090	ppb	-	2843	METHG	R61202A
9582	SMPL	180-61198-A-2-A - 1		02 Dec 2016 09:28:24	-0.0090	ppb	-	-40	METHG	R61202A
9583	SMPL	180-61198-A-3-A - 1		02 Dec 2016 09:30:27	-0.0047	ppb	-	-10	METHG	R61202A
9584	SMPL	180-61198-A-4-A - 1		02 Dec 2016 09:32:29	-0.0036	ppb	-	-3	METHG	R61202A
9585	SMPL	180-61198-A-5-A - 1		02 Dec 2016 09:34:31	-0.0035	ppb	-	-2	METHG	R61202A
9586	CK STND	CCV - 1		02 Dec 2016 09:36:32	99.9% 4.9959	ppb	-	34478	METHG	R61202A
9587	CK STND	CCB - 1		02 Dec 2016 09:38:34	-0.0476	ppb	-	-306	METHG	R61202A
9588	SMPL	180-61198-A-6-A - 1		02 Dec 2016 09:40:38	-0.0068	ppb	-	-25	METHG	R61202A
9589	SMPL	180-61198-A-1-A PDS - 1		02 Dec 2016 09:42:39	0.9144	ppb	-	6329	METHG	R61202A
9590	SMPL	180-61206-A-1-B PDS - 1		02 Dec 2016 09:44:42	0.3252	ppb	-	2265	METHG	R61202A
9591	CK STND	CCV - 1		02 Dec 2016 09:46:47	100.3% 5.0159	ppb	-	34616	METHG	R61202A
9592	CK STND	CCB - 1		02 Dec 2016 09:48:49	-0.0508	ppb	-	-328	METHG	R61202A

Rack	Cup	Sample ID	Wt.	Vol.	Cup Action
1	1	MB 180-195935/1-A	1.0000	1.0000	
1	2	LCS 180-195935/2-A	1.0000	1.0000	
1	3	180-61206-A-1-B	1.0000	1.0000	
1	4	180-61206-A-1-C MS	1.0000	1.0000	
1	5	180-61206-A-1-D MSD	1.0000	1.0000	
1	6	180-61206-A-3-B	1.0000	1.0000	
1	7	180-61206-A-5-B	1.0000	1.0000	
1	8	180-61206-A-7-B	1.0000	1.0000	
1	9	MB 180-195864/1-A	1.0000	1.0000	
1	10	LCS 180-195864/2-A	1.0000	1.0000	
1	11	180-61196-B-1-A	1.0000	1.0000	
1	12	180-61196-B-1-B MS	1.0000	1.0000	
1	13	180-61196-B-1-C MSD	1.0000	1.0000	
1	14	180-61196-B-2-A	1.0000	1.0000	
1	15	180-61196-B-3-A	1.0000	1.0000	
1	16	180-61196-B-4-A	1.0000	1.0000	
1	17	180-61196-B-5-A	1.0000	1.0000	
1	18	180-61196-B-6-A	1.0000	1.0000	
1	19	180-61196-B-7-A	1.0000	1.0000	
1	20	180-61196-B-8-A	1.0000	1.0000	
1	21	180-61196-B-9-A	1.0000	1.0000	
1	22	180-61196-B-10-A	1.0000	1.0000	
1	23	180-61196-B-11-A	1.0000	1.0000	
1	24	180-61196-B-12-A	1.0000	1.0000	
1	25	180-61196-B-13-A	1.0000	1.0000	
1	26	180-61196-B-14-A	1.0000	1.0000	
1	27	180-61196-B-15-A	1.0000	1.0000	
1	28	180-61209-A-1-B	1.0000	1.0000	
1	29	180-61209-A-2-B	1.0000	1.0000	
1	30	180-61209-A-3-B	1.0000	1.0000	
1	31	180-61209-C-4-A	1.0000	1.0000	
1	32	180-61209-A-5-B	1.0000	1.0000	
1	33	MB 180-195631/1-A	1.0000	1.0000	
1	34	LCS 180-195631/2-A	1.0000	1.0000	
1	35	180-61116-A-141-A	1.0000	1.0000	
1	36	180-61116-A-141-B MS	1.0000	1.0000	
1	37	180-61116-A-141-C MSD	1.0000	1.0000	
1	38	180-61116-A-142-A	1.0000	1.0000	
1	39	180-61116-A-143-A	1.0000	1.0000	
1	40	180-61116-A-144-A	1.0000	1.0000	
1	41	180-61116-A-145-A	1.0000	1.0000	
1	42	180-61116-A-146-A	1.0000	1.0000	
1	43	180-61127-B-1-A	1.0000	1.0000	
1	44	180-61127-A-2-B	1.0000	1.0000	
1	45	180-61127-C-3-A	1.0000	1.0000	

Rack	Cup	Sample ID	Wt.	Vol.	Cup Action
1	46	180-61122-A-1-H	1.0000	1.0000	
1	47	180-61122-A-2-D	1.0000	1.0000	
2	5	180-61116-A-141-A@100	1.0000	1.0000	
2	6	180-61116-A-141-B MS@100	1.0000	1.0000	
2	7	180-61116-A-141-C MSD@100	1.0000	1.0000	
2	8	180-61116-A-143-A@100	1.0000	1.0000	
2	9	180-61116-A-144-A@25	1.0000	1.0000	
2	10	180-61116-A-145-A@50	1.0000	1.0000	
2	11	180-61116-A-146-A@100	1.0000	1.0000	
1	48	180-61122-A-3-D	1.0000	1.0000	
1	49	180-61122-A-4-D	1.0000	1.0000	
1	50	180-61157-A-1-A	1.0000	1.0000	
1	51	180-61157-B-2-A	1.0000	1.0000	
1	52	180-61157-A-3-A	1.0000	1.0000	
1	53	180-61157-C-5-D	1.0000	1.0000	
1	54	180-61252-A-6-B	1.0000	1.0000	
1	55	MB 180-195865/1-A	1.0000	1.0000	
1	56	LCS 180-195865/2-A	1.0000	1.0000	
1	57	180-61198-A-1-A	1.0000	1.0000	
1	58	180-61198-A-1-B MS	1.0000	1.0000	
1	59	180-61198-A-1-C MSD	1.0000	1.0000	
1	60	180-61198-A-2-A	1.0000	1.0000	
2	1	180-61198-A-3-A	1.0000	1.0000	
2	2	180-61198-A-4-A	1.0000	1.0000	
2	3	180-61198-A-5-A	1.0000	1.0000	
2	4	180-61198-A-6-A	1.0000	1.0000	
2	12	180-61198-A-1-A PDS	1.0000	1.0000	
2	13	180-61206-A-1-B PDS	1.0000	1.0000	
2	14		1.0000	1.0000	
2	15		1.0000	1.0000	
2	16		1.0000	1.0000	
2	17		1.0000	1.0000	
2	18		1.0000	1.0000	
2	19		1.0000	1.0000	
2	20		1.0000	1.0000	
2	21		1.0000	1.0000	
2	22		1.0000	1.0000	
2	23		1.0000	1.0000	
2	24		1.0000	1.0000	
2	25		1.0000	1.0000	
2	26		1.0000	1.0000	
2	27		1.0000	1.0000	
2	28		1.0000	1.0000	
2	29		1.0000	1.0000	
2	30		1.0000	1.0000	

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-61122-1

SDG No.:

Project: U.S. Oil Recovery Superfund Site

Client Sample ID	Lab Sample ID
BGSB22-(0.0-0.5)-161122-S	180-61122-1
BGSB22-(1-2)-161122-S	180-61122-2
BGSB10-(0.0-0.5)-161122-S	180-61122-3
BGSB10-(1-2)-161122-S	180-61122-4

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-61122-1

SDG Number:

Matrix: Solid Instrument ID: NOEQUIP

Method: 2540G RL Date: 01/31/2010 13:27

Analyte	Wavelength/ Mass	RL (%)	
Percent Moisture		0.1	
Percent Solids		0.1	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-61122-1

SDG Number:

Matrix: Solid Instrument ID: NOEQUIP

Method: 2540G XRL Date: 01/31/2010 13:31

Analyte	Wavelength/ Mass	XRL (%)	
Percent Moisture		0.1	
Percent Solids		0.1	

FORM IX - IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2540G

Start Date: 11/25/2016 11:02 End Date: 11/25/2016 11:02

Lab Sample Id	D/F	Type	Time	Analytes																										
				% Sol	Moist																									
ZZZZZZ			11:02																											
180-61142-A-1 DU	1	T	11:02	X	X																									
ZZZZZZ			11:02																											
ZZZZZZ			11:02																											
ZZZZZZ			11:02																											
ZZZZZZ			11:02																											
ZZZZZZ			11:02																											
180-61122-1	1	T	11:02	X	X																									
180-61122-2	1	T	11:02	X	X																									
180-61122-3	1	T	11:02	X	X																									
180-61122-4	1	T	11:02	X	X																									
ZZZZZZ			11:02																											
ZZZZZZ			11:02																											
ZZZZZZ			11:02																											
ZZZZZZ			11:02																											
ZZZZZZ			11:02																											
ZZZZZZ			11:02																											
ZZZZZZ			11:02																											
ZZZZZZ			11:02																											
ZZZZZZ			11:02																											
ZZZZZZ			11:02																											

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-61122-1

SDG No.:

Batch Number: 195434 Batch Start Date: 11/25/16 11:02 Batch Analyst: Ruyechan, Roseann S

Batch Method: 2540G Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry		
180-61142-A-1 DU		2540G	T	C48hr 0.1154	2.54 g	7.89 g	5.43 g		
180-61122-A-1	BGSB22-(0.0-0.5) -161122-S	2540G	T	C48hk 0.1178	2.54 g	10.23 g	9.61 g		
180-61122-A-2	BGSB22-(1-2) -161122-S	2540G	T	C48hj 0.1164	2.56 g	8.44 g	7.28 g		
180-61122-A-3	BGSB10-(0.0-0.5) -161122-S	2540G	T	C48ht 0.1156	2.54 g	11.42 g	10.60 g		
180-61122-A-4	BGSB10-(1-2) -161122-S	2540G	T	C48hu 0.1169	2.52 g	8.52 g	7.97 g		

Batch Notes	
Balance ID	1126472457 No Unit
Date and Time Samples in Desiccator	11/26/16 05:40
Date and Time Samples out of Desiccator	11/26/16 16:49
Date samples were placed in the oven	11/25/16
Oven Temp In	105 Degrees C
Time samples were place in the oven	1140
Date samples were removed from oven	11/26/16
Oven Temp Out	105 Degrees C
Time Samples were removed from oven	05:40
Oven ID	5005
Thermometer ID	WET34
Uncorrected In Temperature	105 Celsius
Uncorrected Out Temperature	105 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

TestAmerica Pittsburgh
301 Alpha Drive
Pittsburgh, PA 15238
Phone: 412.963.7058 Fax: 412.963.2470

Chain of Custody Record

169682

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: April Ballweg	Site Contact: April Ballweg	Date: 11/22/2016	COC No:
Company Name: EA ENGINEERING	Tel/Fax: 817-707-3252	Lab Contact: Carrie Gamber	Carrier: TestAmerica	1 of 1 COCs
Address: 405 S. HIGHWAY 121; C-100	Analysis Turnaround Time			Sampler: A Ballweg
City/State/Zip: Lewisville, TX 75067	☐ CALENDAR DAYS ☒ WORKING DAYS			For Lab Use Only:
Phone: 972-459-5019	TAT if different from Below 5 days			Walk-in Client:
Fax: 972-315-5181	☐ 2 weeks			Lab Sampling:
Project Name: U9 Oil Recovery RIFS	☐ 1 week			
Site: USOR	☐ 2 days			
PO# 15807	☐ 1 day			

180-61122 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	SVOCs/BNA	Metals	Pesticides/Herbicides
BGSB22-(0.0-0.5)-161122-S	11/22/16	0935	G	S	1			X	X	X
BGSB22-(1-2)-161122-S	11/22/16	0940	G	S	1			X	X	X
BGSB10-(0.0-0.5)-161122-S	11/22/16	1530	G	S	1			X	X	X
BGSB10-(1-2)-161122-S	11/22/16	1535	G	S	1			X	X	X

Notes:

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:
FedEx Tracking No. 7777 7318 7010

Custody Seals Intact: ☒ Yes ☐ No | Custody Seal No.: 296951 | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
April Ballweg	EA	11/22/16/1730	FedEx Drop Off	FedEx	11/22/16 1730
Relinquished by:	Company:	Date/Time:	Received by: Dellie Watson	Company: TAP	Date/Time: 11-23-16
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time: 9:30

ORIGIN ID:KIPA (972) 315-3922
APRIL BALLWEG
EA ENGINEERING, SCIENCE & TECH
405 S. HWY 121 BYP BLDG. C, STE 100

LEWISVILLE, TX 75067
UNITED STATES US

SHIP DATE: 22NOV16
ACTWGT: 20.00 LB
CAD: 5881068/INET3790

BILL SENDER

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH
301 ALPHA DRIVE

PITTSBURGH PA 15238
(412) 963-7058 REF: 2141_14342144_B_3
INV:
PO: DEPT:

544J3/CBB1/14E9

FedEx Express

WED - 23 NOV 3:00P
STANDARD OVERNIGHT

TRK# 0201 **7777 7318 7010**

15238
PIT
PA-US

NA AGCA

Uncorrected temp 3.0/2.5 °C
Thermometer ID 9
CF -0.5 Initials JW

PT-WI-SR-001 effective 7/26/13

180-61122 Waybill

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read a

Warning Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, avai fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document yc timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for an value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage wh incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery c documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable i items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 180-61122-1

Login Number: 61122
List Number: 1
Creator: Watson, Debbie

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix C

Data Validation Report

This page intentionally left blank

DATA VALIDATION REPORT
U.S. Oil Recovery Superfund Site
Remedial Investigation/Feasibility Study Oversight
November 2016 Sampling Event

Site Name:	U.S. Oil Recovery Superfund Site Pasadena, Harris County, Texas
Laboratory:	TestAmerica Laboratories, Inc. (TestAmerica), Pittsburgh, PA
QA Reviewer:	Adrienne Fung, Engineer EA Engineering, Science, and Technology, Inc., PBC (EA)
Sample Delivery Group Nos.:	180-61122-1
Sample Identification:	See Table 1
Matrix:	Soil
QC Criteria Reviewed:	Section 2.0
Laboratory Report Date:	8 December 2016

1.0 INTRODUCTION

Four background soil samples were collected on 22 November 2016 in support of the U.S. Oil Recovery Superfund Site Remedial Investigation/Feasibility Study (RI/FS) Oversight Task Order. The samples were shipped via overnight courier to TestAmerica Laboratories, Inc. (TestAmerica) in Pittsburgh, Pennsylvania, for analysis. The respective analytical parameters and testing methods for the four soil samples are provided below.

- Semivolatile organic compounds (SVOCs)—U.S. Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846 (SW) 8270D low-level (LL) (EPA 2014)
- Organochlorine pesticides—EPA SW8081B LL (EPA 2007a)
- Chlorinated herbicides—EPA SW8151A (EPA 1996)
- Metals (project-specific list)—EPA SW6020A (EPA 1998)
- Mercury—EPA SW7471B (EPA 2007b)

- Percent moisture and solids—Standard Methods for the Examination of Water and Wastewater (SM) 2540G.

The analytical data were validated in accordance with requirements specified in the following documents:

- *EPA National Functional Guidelines for Inorganic Superfund Methods Data Review, 540-R-2016-001* (EPA 2016a)

- *EPA National Functional Guidelines for Superfund Organic Methods Data Review, 540-R-2016-002* (EPA 2016b)

- *Sampling and Analysis Plan (SAP), Remedial Investigation/Feasibility Study Oversight, U.S. Oil Recovery Superfund Site, Area of Investigation 1, Pasadena, Harris County, Texas* (EA 2016).

Section 2.0 of this validation report identifies the criteria reviewed for the analytical method as appropriate based on EPA guidelines. Section 3.0 contains the definitions of the qualifiers to be applied to the data results based on the validation process. Section 4.0 provides an assessment of the overall data quality, and Section 5.0 provides the references to the guidelines and documents used in performing the review of the data set.

Table 1, Sample Cross-Reference, provides a list of the field sample identification (ID), laboratory sample delivery group (SDG) and sample ID, sample matrix, sample collection date, and analytical parameters. No field quality control (QC) samples were collected in association with the background sampling.

2.0 DATA VALIDATION CRITERIA

The criteria listed below were evaluated as part of the validation process, as applicable to the analytical method.

- Deliverables
- Chain of custody and sample receipt
- Holding times
- Instrument performance checks
- Calibration (initial and continuing)
- Blank detections
- Surrogate recoveries
- Internal standards
- Laboratory control samples (LCS)
- Matrix spike (MS), matrix spike duplicate (MSD), and laboratory duplicate samples
- Post-digestion spike samples
- Interference check samples (ICS)

- Serial dilutions
- Sample quantitation and reported detection limits
- Target compound identification
- Overall assessment of data.

TABLE 1: SAMPLE CROSS-REFERENCE TABLE

Field Sample ID	Laboratory Sample ID	Matrix	Date Collected	Analysis Parameter (Method)
BGSB22-(0.0-0.5)-161122-S	180-61122-1	Soil	22 November 2016	SVOCs (SW8270D LL), organochlorine pesticides (SW8081B LL), herbicides (SW8151A), metals (SW6020A/7471B), and percent moisture (SM2540G)
BGSB22-(1-2)-161122-S	180-61122-2	Soil	22 November 2016	Same as above
BGSB10-(0.0-0.5)-161122-S	180-61122-3	Soil	22 November 2016	Same as above
BGSB10-(1-2)-161122-S	180-61122-4	Soil	22 November 2016	Same as above

NOTES:
SVOCs = Semivolatile organic compounds

3.0 GLOSSARY OF DATA QUALIFIERS

The following definitions provide a brief explanation for the data qualifiers that may be applied to the data during the data review process. The definitions are consistent with EPA guidance (2016a, 2016b).

No qualifier	Indicates that the data are acceptable both qualitatively and quantitatively.
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated concentration. The associated numerical value is the approximate concentration of the analyte in the sample. The data are valid for project use to achieve project data quality objectives (DQOs).
J+	The result is an estimated concentration, but the result may be biased high. The data are valid for project use to achieve project DQOs.
J-	The result is an estimated concentration, but the result may be biased low. The data are valid for project use to achieve project DQOs.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate. The data are valid for project use to achieve project DQOs.

R The sample result is not usable to achieve project DQOs based on certain QC criteria outside of acceptance limits. The analyte may or may not be present in the sample.

4.0 DATA ASSESSMENT

The analytical data in the SDG (180-61122-1) were reviewed for the criteria listed in Section 2.0. The review included those elements specified for a Stage 4 validation, which include sample results forms, chain of custody, laboratory receipt checklist, method QC forms, instrument QC forms, instrument and preparation logs, instrument quantitation forms (raw data), instrument chromatograms, and spectra. A discussion of the data is presented in this section.

4.1 Method and Project Specific Analytical Service Request

Soil samples were collected and analyzed for SVOCs, organochlorine pesticides, herbicides, project-specific list of metals, mercury, and percent moisture for dry-weight data reporting.

4.2 Deliverables

The data package and electronic deliverable for the SDG are complete.

4.3 Chain of Custody and Sample Receipt

The samples were received by TestAmerica under appropriate chain of custody, in good condition, and the cooler temperature was at 2.5 degrees centigrade.

4.4 Holding Times

The samples were prepared and analyzed within method-specific holding times.

4.5 Instrument Performance Check

Instrument performance checks are performed to ensure mass resolution, identification, and sensitivity for gas chromatography (GC) and gas chromatography/mass spectroscopy (GC/MS) methods. The instrument performance check criteria was within method control criteria.

4.6 Calibration (Initial and Continuing)

The initial and continuing calibrations for the target analytes are within method-specified QC limits with the exception of herbicide analysis (SW8151A). The continuing calibration verification percent differences for the primary and/or secondary columns are above QC limits for herbicide analytes 2,4,5-T, MCPA, MCPP, and dinoseb. Because the indicated bias is high and results of the associated samples are non-detect, no data qualification has been applied on the basis of the calibration verification results.

4.7 Blank Detections

Laboratory method and calibration blanks were prepared and analyzed along with project samples. Results are within method QC criteria with no exceptions.

4.8 Surrogate Recoveries

The surrogate percent recoveries are within method QC criteria with the following exceptions:

- SVOCs—the percent recoveries for 2-fluorophenol are below the method control limits for samples BGSB22-(0.0-0.5)-161122-S, BGSB10-(0.0-0.5)-161122-S, and BGSB10-(1-2)-161122-S. Since the percent recoveries for the other five surrogates are within control limits, no data qualification is required based on these single outliers.

- Pesticides—the percent recoveries for decachlorobiphenyl and/or tetrachloro-m-xylene are outside the method control limits for samples BGSB10-(0.0-0.5)-161122-S and BGSB10-(1-2)-161122-S as a result of sample dilution. No qualification of data is required.

- Herbicides—the percent recoveries for 2,4-dichlorophenylacetic acid are outside the method control limits for samples BGSB22-(0.0-0.5)-161122-S, BGSB22-(1-2)-161122-S, BGSB10-(0.0-0.5)-161122-S, and BGSB10-(1-2)-161122-S as a result of sample dilution. No qualification of data is required.

4.9 Internal Standards

Internal standards were prepared and analyzed in accordance with the analytical methods. Internal standard areas and retention times are within method control limits for applicable methods.

4.10 Laboratory Control Samples

LCSs were prepared and analyzed as required by the analytical method. The LCS percent recoveries are within method control limits for target analytes, with the following exceptions:

- SVOCs—the LCS percent recoveries are below method control limits for benzaldehyde and hexachloroethane. The benzaldehyde result for sample BGSB22-(0.0-0.5)-161122-S was already J-qualified because the result is an estimated value below the reporting limit. A J- qualifier was applied to reflect potential low bias of the result. The other project sample results for benzaldehyde, as well as the results for hexachloroethane, are non-detect and have been flagged as estimated with the UJ- qualifier due to evidence of potential low bias.

- Pesticides—the LCS percent recoveries are below method control limits for delta-BHC, 4,4'-DDT, and methoxychlor. The corresponding project sample results are UJ- and J-qualified, signifying estimated non-detect and detect values due to evidence of potential low bias.

- Herbicides—the LCS percent recoveries are above method control limits, but within project-specified QC limits for 2,4,5-T, 2,4-D, silvex (2,4,5-TP), and MCPA. No data qualification is required based on the elevated recoveries.

- Herbicides—the LCS percent recoveries are above project-specified QC limits for 2,4-DB, dinoseb, and MCPP. The associated project sample results are non-detect and, therefore, no data qualification is required based on the potential high bias.

4.11 Matrix Spike, Matrix Spike Duplicate, and Laboratory Duplicate Samples

MS, MSD, and laboratory duplicate samples were prepared and analyzed according to the analytical method and project requirements. The percent recoveries and relative percent difference (RPD) of the QC samples are within project-specified QC limits, with the following exceptions:

- SVOCs—the percent recoveries are below project-specified QC limits for the MS and/or MSD samples prepared with sample BGSB22-(0.0-0.5)-161122-S for SVOC analytes 1,4-dioxane, 2,4-dimethylphenol, 2,4-dinitrophenol, atrazine, benzaldehyde, benzo(b)fluoranthene, benzo(k)fluoranthene, bis(2-chloroethoxy)methane, bis(2-chloroethyl)ether, hexachlorobutadiene, hexachlorocyclopentadiene, hexachloroethane, naphthalene, nitrobenzene, phenol, pyrene, and 3,3'-dichlorobenzidine. The results for these analytes in the associated sample have been flagged UJ as estimated non-detect and J- for estimated detect values.

- SVOCs—the percent recoveries for caprolactam are below 10 percent for the MS and MSD samples prepared with sample BGSB22-(0.0-0.5)-161122-S. The caprolactam result for this sample has been R qualified signifying rejected and not usable data.

- Metals—the percent recoveries are outside project-specified QC limits for the MS and/or MSD prepared with sample BGSB22-(0.0-0.5)-161122-S for aluminum, manganese, and lead. The native analyte concentrations in the sample are greater than four times the spike amount; therefore, no data qualification has been performed on the basis of the MS and/or MSD results.

- Metals—the percent recoveries are below project-specified QC limits for the MS and/or MSD prepared with sample BGSB22-(0.0-0.5)-161122-S for arsenic, barium, and zinc. The results for these analytes in the associated sample are J- qualified due to low bias.

4.12 Post-Digestion Spike Samples

A post-digestion spike sample was prepared with sample BGSB22-(0.0-0.5)-161122-S. Percent recoveries are within method-specified control limits with the exception of manganese, which was reported

below method-specified QC limits. The result for manganese for BGSB22-(0.0-0.5)-161122-S has been qualified as estimated with the J- qualifier due to evidence of low bias.

4.13 Interference Check Samples

Inductively coupled plasma (ICP) ICSs were prepared and analyzed according to the analytical method for metals. Percent recoveries are within method-specified control limits.

4.14 Serial Dilutions

ICP serial dilution was prepared with sample BGSB22-(0.0-0.5)-161122-S, and the percent differences are within method-specified control limits with the exception of beryllium. The result for beryllium for sample BGSB22-(0.0-0.5)-161122-S has been qualified as estimated with the J- qualifier due to the serial dilution result.

4.15 Sample Quantitation and Reported Detection Limits

The samples in SDG 180-61122-1 were reported with appropriate sensitivity. Results are reported on a dry-weight basis, as applicable. The samples were analyzed without dilution unless required as a result of elevated target analyte concentrations or the nature of the sample matrix. Sample dilutions resulted in elevated reporting limits for specific samples and analytes; however, for high level samples there is no impact on data quality.

Samples requiring dilutions are listed below.

- Sample BGSB10-(0.0-0.5)-161122-S (10-fold dilutions for SVOCs, 5-fold dilutions for organochlorine pesticides, and 20-fold dilutions for herbicides)

- Sample BGSB10-(1-2)-161122-S (5-fold dilutions for SVOCs, 5-fold dilutions for organochlorine pesticides, and 20-fold dilutions for herbicides)

- Sample BGSB22-(0.0-0.5)-161122-S (5-fold dilutions for organochlorine pesticides and 20-fold dilutions for herbicides)

- Sample BGSB22-(1-2)-161122-S (5-fold dilutions for organochlorine pesticides, 20-fold dilutions for herbicides, and 10-fold dilution for manganese).

4.16 Target Compound Identification

Target compound identification was performed for GC and GC/MS methods. Mass spectra criteria were within acceptance limits for the detected target analytes. Second column confirmation criteria were within acceptance limits for detected target analytes for GC methods, unless otherwise noted.

The RPDs between the primary and confirmation column results for pesticide analysis for the following samples are outside laboratory QC method criteria. The lower values have been reported and were flagged by the laboratory with "P." These results are flagged with J qualifiers.

- BGSB22-(0.0-0.5)-161122-S—4,4'-DDD, 4,4'-DDE, 4,4'-DDT, heptachlor, and heptachlor epoxide
- BGSB10-(0.0-0.5)-161122-S—cis-chlordane, dieldrin, and heptachlor epoxide
- BGSB10-(1-2)-161122-S—cis-chlordane and 4,4'-DDD.

4.17 Overall Assessment of Data

Appropriate data flags were used and defined in the analytical report. The allowable final data qualifiers for definitive data and the hierarchy of data qualifiers, listed in order of the most severe through the least severe, are *J+* or *J-*, *J*, *U*, and *UJ*. For data with multiple qualifiers, the hierarchy listed above has been implemented for applying the final validation qualifier to the data.

Project deliverables were reviewed for completeness and compliance in accordance with the SAP (EA 2016). Based on the data review, the completeness of deliverables is 100 percent. One SVOC data result is R qualified, signifying rejected or unusable data; caprolactam for sample BGSB22-(0.0-0.5)-161122-S. The analytical data achieve greater than the 90 percent data completeness objective and the project DQOs. The November 2016 sample data are usable and meet the objectives of the site RI/FS oversight.

5.0 REFERENCES

EA Engineering, Science, and Technology, Inc., PBC (EA). 2016. *Sampling and Analysis Plan, Remedial Investigation/Feasibility Study Oversight, U.S. Oil Recovery Superfund Site, Area of Investigation 1, Pasadena, Harris County, Texas.*

U.S. Environmental Protection Agency (EPA). 1996. *Method 8151A, Chlorinated Herbicides by GC Using Methylation or Pentafluorobenzylation Derivatization*. Revision 1. December.

-----. 1998. *Method 6020A, Inductively Coupled Plasma – Mass Spectrometry*. Revision 1. January.

-----. 2007a. *Method 8081B, Organochlorine Pesticides by Gas Chromatography*. Revision 2. February.

-----. 2007b. *Method 7471B, Mercury in Solid or Semisolid Waste (Manual Cold-Vapor Technique)*. Revision 2. February.

-----. 2014. *Method 8270D, Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry*. Revision 5. July.

-----. 2016a. *National Functional Guidelines for Inorganic Superfund Methods Data Review*. EPA-540-R-2016-001. September.

-----. 2016b. *National Functional Guidelines for Superfund Organic Methods Data Review*. EPA-540-R-2016-002. September.

TA Sample ID	Field Sample ID	Analytical Method	Analyte	CAS Number	Lab Qualifier	Data Qualifier	Qualification Comments
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW6020A	ARSENIC	7440-38-2	F1	J-	MS and/or MSD %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW6020A	BARIUM	7440-39-3	F1	J-	MS and/or MSD %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW6020A	BERYLLIUM	7440-41-7		J	Serial dilution %D less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW6020A	MANGANESE	7439-96-5		J-	Post-digestion spike %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW6020A	ZINC	7440-66-6	F1	J-	MS and/or MSD %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8081B	4,4'-DDD	72-54-8	P	J	Primary and secondary columns RPD outside QC limits
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8081B	4,4'-DDE	72-55-9	P	J	Primary and secondary columns RPD outside QC limits
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8081B	4,4'-DDT	50-29-3	P	J-	LCS %R less than lower QC limit; Primary and secondary columns RPD outside QC limits
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8081B	DELTA-BHC	319-86-8	U	UJ	LCS %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8081B	HEPTACHLOR	76-44-8	J P	J	Primary and secondary columns RPD outside QC limits
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8081B	HEPTACHLOR EPOXIDE	1024-57-3	P	J	Primary and secondary columns RPD outside QC limits
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8081B	METHOXYCHLOR	72-43-5	U	UJ	LCS %R less than lower QC limit
180-61122-2	BGSB22-(1-2)-161122-S	SW8081B	4,4'-DDT	50-29-3	U	UJ	LCS %R less than lower QC limit
180-61122-2	BGSB22-(1-2)-161122-S	SW8081B	DELTA-BHC	319-86-8	U	UJ	LCS %R less than lower QC limit
180-61122-2	BGSB22-(1-2)-161122-S	SW8081B	METHOXYCHLOR	72-43-5	U	UJ	LCS %R less than lower QC limit
180-61122-3	BGSB10-(0.0-0.5)-161122-S	SW8081B	4,4'-DDT	50-29-3	U	UJ	LCS %R less than lower QC limit
180-61122-3	BGSB10-(0.0-0.5)-161122-S	SW8081B	CIS-CHLORDANE	5103-71-9	P	J	Primary and secondary columns RPD outside QC limits
180-61122-3	BGSB10-(0.0-0.5)-161122-S	SW8081B	DELTA-BHC	319-86-8	U	UJ	LCS %R less than lower QC limit
180-61122-3	BGSB10-(0.0-0.5)-161122-S	SW8081B	DIELDRIN	60-57-1	P	J	Primary and secondary columns RPD outside QC limits
180-61122-3	BGSB10-(0.0-0.5)-161122-S	SW8081B	HEPTACHLOR EPOXIDE	1024-57-3	J P	J	Primary and secondary columns RPD outside QC limits
180-61122-3	BGSB10-(0.0-0.5)-161122-S	SW8081B	METHOXYCHLOR	72-43-5	U	UJ	LCS %R less than lower QC limit
180-61122-4	BGSB10-(1-2)-161122-S	SW8081B	4,4'-DDD	72-54-8	J P	J	Primary and secondary columns RPD outside QC limits
180-61122-4	BGSB10-(1-2)-161122-S	SW8081B	4,4'-DDT	50-29-3	U	UJ	LCS %R less than lower QC limit
180-61122-4	BGSB10-(1-2)-161122-S	SW8081B	BETA-BHC	319-85-7	U	UJ	LCS %R less than lower QC limit
180-61122-4	BGSB10-(1-2)-161122-S	SW8081B	CIS-CHLORDANE	5103-71-9	P	J	Primary and secondary columns RPD outside QC limits
180-61122-4	BGSB10-(1-2)-161122-S	SW8081B	METHOXYCHLOR	72-43-5	U	UJ	LCS %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8151A	2,4,5-T	93-76-5	U *	U	QC sample limits within project-specified QC limits
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8151A	2,4-D	94-75-7	U *	U	QC sample limits within project-specified QC limits
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8151A	2,4-DB	94-82-6	U *	U	LCS %R above upper QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8151A	DINOSEB	88-85-7	U *	U	LCS %R above upper QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8151A	MCPA	94-74-6	U *	U	QC sample limits within project-specified QC limits
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8151A	MCPP	93-65-2	U *	U	LCS %R above upper QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8151A	SILVEX (2,4,5-TP)	93-72-1	U *	U	QC sample limits within project-specified QC limits
180-61122-2	BGSB22-(1-2)-161122-S	SW8151A	2,4,5-T	93-76-5	U *	U	QC sample limits within project-specified QC limits
180-61122-2	BGSB22-(1-2)-161122-S	SW8151A	2,4-D	94-75-7	U *	U	QC sample limits within project-specified QC limits
180-61122-2	BGSB22-(1-2)-161122-S	SW8151A	2,4-DB	94-82-6	U *	U	LCS %R above upper QC limit
180-61122-2	BGSB22-(1-2)-161122-S	SW8151A	DINOSEB	88-85-7	U *	U	LCS %R above upper QC limit
180-61122-2	BGSB22-(1-2)-161122-S	SW8151A	MCPA	94-74-6	U *	U	QC sample limits within project-specified QC limits
180-61122-2	BGSB22-(1-2)-161122-S	SW8151A	MCPP	93-65-2	U *	U	LCS %R above upper QC limit
180-61122-2	BGSB22-(1-2)-161122-S	SW8151A	SILVEX (2,4,5-TP)	93-72-1	U *	U	QC sample limits within project-specified QC limits
180-61122-3	BGSB10-(0.0-0.5)-161122-S	SW8151A	2,4,5-T	93-76-5	U *	U	QC sample limits within project-specified QC limits
180-61122-3	BGSB10-(0.0-0.5)-161122-S	SW8151A	2,4-D	94-75-7	U *	U	QC sample limits within project-specified QC limits
180-61122-3	BGSB10-(0.0-0.5)-161122-S	SW8151A	2,4-DB	94-82-6	U *	U	LCS %R above upper QC limit
180-61122-3	BGSB10-(0.0-0.5)-161122-S	SW8151A	DINOSEB	88-85-7	U *	U	LCS %R above upper QC limit
180-61122-3	BGSB10-(0.0-0.5)-161122-S	SW8151A	MCPA	94-74-6	U *	U	QC sample limits within project-specified QC limits
180-61122-3	BGSB10-(0.0-0.5)-161122-S	SW8151A	MCPP	93-65-2	U *	U	LCS %R above upper QC limit
180-61122-3	BGSB10-(0.0-0.5)-161122-S	SW8151A	SILVEX (2,4,5-TP)	93-72-1	U *	U	QC sample limits within project-specified QC limits
180-61122-4	BGSB10-(1-2)-161122-S	SW8151A	2,4,5-T	93-76-5	U *	U	QC sample limits within project-specified QC limits
180-61122-4	BGSB10-(1-2)-161122-S	SW8151A	2,4-D	94-75-7	U *	U	QC sample limits within project-specified QC limits
180-61122-4	BGSB10-(1-2)-161122-S	SW8151A	2,4-DB	94-82-6	U *	U	LCS %R above upper QC limit

TA Sample ID	Field Sample ID	Analytical Method	Analyte	CAS Number	Lab Qualifier	Data Qualifier	Qualification Comments
180-61122-4	BGSB10-(1-2)-161122-S	SW8151A	DINOSEB	88-85-7	U *	U	LCS %R above upper QC limit
180-61122-4	BGSB10-(1-2)-161122-S	SW8151A	MCPA	94-74-6	U *	U	QC sample limits within project-specified QC limits
180-61122-4	BGSB10-(1-2)-161122-S	SW8151A	MCPP	93-65-2	U *	U	LCS %R above upper QC limit
180-61122-4	BGSB10-(1-2)-161122-S	SW8151A	SILVEX (2,4,5-TP)	93-72-1	U *	U	QC sample limits within project-specified QC limits
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8270D	1,4-DIOXANE	123-91-1	U	UJ	MS and/or MSD %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8270D	2,4-DIMETHYLPHENOL	105-67-9	U	UJ	MS and/or MSD %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8270D	2,4-DINITROPHENOL	51-28-5	U	UJ	MS and/or MSD %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8270D	3,3'-DICHLOROBENZIDINE	91-94-1	U F1	UJ	MS and/or MSD %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8270D	ATRAZINE	1912-24-9	U	UJ	MS and/or MSD %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8270D	BENZALDEHYDE	100-52-7	J	J-	LCS, MS and/or MSD %Rs less than lower QC limits
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8270D	BENZO[B]FLUORANTHENE	205-99-2		J-	MS and/or MSD %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8270D	BENZO[K]FLUORANTHENE	207-08-9		J-	MS and/or MSD %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8270D	BIS(2-CHLOROETHOXY)METHANE	111-91-1	U	UJ	MS and/or MSD %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8270D	BIS(2-CHLOROETHYL)ETHER	111-44-4	U	UJ	MS and/or MSD %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8270D	CAPROLACTAM	105-60-2	U F1	R	MS and/or MSD %R less than 10%R
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8270D	HEXACHLOROBUTADIENE	87-68-3	U	UJ	MS and/or MSD %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8270D	HEXACHLOROCYCLOPENTADIENE	77-47-4	U F1	UJ	MS and/or MSD %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8270D	HEXACHLOROETHANE	67-72-1	U	UJ	LCS, MS and/or MSD %Rs less than lower QC limits
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8270D	NAPHTHALENE	91-20-3	U	UJ	MS and/or MSD %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8270D	NITROBENZENE	98-95-3	U	UJ	MS and/or MSD %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8270D	PHENOL	108-95-2	U	UJ	MS and/or MSD %R less than lower QC limit
180-61122-1	BGSB22-(0.0-0.5)-161122-S	SW8270D	PYRENE	129-00-0		J-	MS and/or MSD %R less than lower QC limit
180-61122-2	BGSB22-(1-2)-161122-S	SW8270D	BENZALDEHYDE	100-52-7	U	UJ	LCS %R less than lower QC limit
180-61122-2	BGSB22-(1-2)-161122-S	SW8270D	HEXACHLOROETHANE	67-72-1	U	UJ	LCS %R less than lower QC limit
180-61122-3	BGSB10-(0.0-0.5)-161122-S	SW8270D	BENZALDEHYDE	100-52-7	U	UJ	LCS %R less than lower QC limit
180-61122-3	BGSB10-(0.0-0.5)-161122-S	SW8270D	HEXACHLOROETHANE	67-72-1	U	UJ	LCS %R less than lower QC limit
180-61122-4	BGSB10-(1-2)-161122-S	SW8270D	BENZALDEHYDE	100-52-7	U	UJ	LCS %R less than lower QC limit
180-61122-4	BGSB10-(1-2)-161122-S	SW8270D	HEXACHLOROETHANE	67-72-1	U	UJ	LCS %R less than lower QC limit

NOTES:
%R = Percent recovery
J = Estimated concentration
J- = Estimated concentration biased low
LCS = Laboratory control sample
MS = Matrix spike
MSD = Matrix spike duplicate
QC = Quality control
SW = SW-846 Test Methods for Evaluating Solid Waste, Third Edition and Updates
TA = TestAmerica Labortories, Inc.
R = Not usable
UJ = Not detected; quantitation limit is approximate

This page intentionally left blank